Laboratory Guide

2026

THE DOCTORS LABORATORY

Contents

The TDL Laboratory Guide Is designed to give you an easy-to-use reference for the most regularly requested services, pathology profiles and tests. If you are not able to find details of the tests and services you need, please contact the laboratory on **020 7307 7373** for advice and information.

For details about all services, please contact the laboratory on **020 7307 7373**, or visit **www.tdlpathology.com**

TDL services include:

- Comprehensive, multidisciplinary pathology services
- Specialist diagnostic analysis for other laboratories
- Pathology partnerships with NHS Trusts
- Support for CRO and pharmaceutical companies

Sonic Healthcare core values

Sonic Healthcare's core values were created by our staff more than 20 years ago, and act as guiding principles for how we conduct ourselves as an organisation.

Our core values set the standard for the collegiate and supportive way in which we behave towards one another, as well as the professionalism with which we conduct ourselves in our day-to-day duties. Individually, our core values articulate our commitment to medical excellence. Collectively, they empower our people to deliver exceptional medical services to doctors and patients.

Since their inception, Sonic Healthcare's core values have been embraced by Sonic Healthcare staff around the world as a unifying code of conduct.

Commit to service excellence

- To willingly serve all those with whom we deal, with unsurpassed excellence.

Treat each other with respect and honesty

- To grow a workplace where trust, team spirit and equity are an integral part of everything we do.

Demonstrate responsibility and accountability

- To set an example, to take ownership of each situation to the best of our ability and to seek help when needed.

Be enthusiastic about continuous improvement

- To never be complacent, to recognise limitations and opportunities for ourselves and processes and to learn through these.

Maintain confidentiality

- To keep all information pertaining to patients, as well as professional and commercial issues, in strict confidence.

Complaints policy/procedure

It is the aim of the company to maintain its core values. Two of these core values are to commit to service excellence, and to be enthusiastic about continuous improvement.

Where a doctor or patient needs to raise a complaint about service levels they should contact **Cyril Taylor**, Laboratory Service Compliance Director, or **Annette Wilkinson**, Director of Business Development and Service at **tdlservice@tdlpathology.com** giving details of the complaint.

The initial complaint will be acknowledged within 3 working days and the investigation, and any follow up actions will be completed within 30 days.

The information forwarded will be treated as confidential and investigated by the above persons. This process will link into Quality Management procedure for incident investigation and subsequent corrective and preventative actions will be introduced where needed.

Internally, any complaints received will be shared and discussed at Executive Director level where appropriate, as it is the intention of TDL to provide unsurpassed excellence of service.

Helpful information

The Doctors Laboratory
The Halo Building, 1 Mabledon Place
London, WC1H 9AX, UK

Tel: +44 (0)20 7307 7373 – 24 hour telephone (Main switchboard/All services)

Email: tdl@tdlpathology.com

Laboratory times: 24 hours

Samples can be delivered at any time to this location.

Patients' samples cannot be taken at The Halo Building. This service is undertaken at 76 Wimpole Street, London W1G 9RT

SCAN ME

To download a location map or to get directions visit:

www.tdlpathology.com/about-us/locations/

TDL Manchester
Regents Place, 4 Windsor Street
Salford, M5 4HB, UK

Tel: +44 (0)161 332 7181

Email: tdlmanchester@tdlpathology.com

Laboratory times: 24 hours

Samples can be delivered at any time to this location.

There is no phlebotomy or sample taking service at TDL Manchester.

TDL Manchester Couriers
Direct Tel: +44 (0)161 332 7187
Email: couriersman@tdlpathology.com

Patient Reception/ Phlebotomy Services

Patient Reception provides a sample collection service for patients attending at the request of their doctor/clinic.

Patients, of all ages, are welcome to attend Patient Reception, 76 Wimpole Street, London W1G 9RT for their samples to be taken. Patients need to be referred by their clinic or doctor and are required to bring a request form or letter of referral.

Appointments are only necessary if a patient needs specialised investigations or care. No appointments are needed for children under the age of 14, but children below this age need to avoid Sundays. For convenience, instructions can be telephoned or emailed ahead of the patient's attendance.

Sample-taking is undertaken by qualified phlebotomy staff for which a standard sample-taking fee of £65.00 is charged to patients. Doctors and clinics are charged £45.00 for each patient. Sample-taking services for Extended Tests and Drugs of Abuse with Chain of Custody, and Semen Analysis are routinely available.

Cervical cytology, HVS and cervical swabs are not taken at Patient Reception.

Patient Reception sample-taking services are not available in Manchester.

TDL Patient Reception
76 Wimpole Street,
London, W1G 9RT, UK

Tel: +44 (0)20 7307 7383

Email: patientreception@tdlpathology.com

Out of hours samples can be dropped off at this location. **Phlebotomy Services are only available at this location**. Patients' samples cannot be taken at the main laboratory.

Opening times

Monday to Friday 7am – 7pm

Saturday 7am – 1pm

Sunday 8am – 11am **NEW**

Closed Public holidays

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To download a location map or to get directions visit:

www.tdlpathology.com/patients/patient-reception/

TDL Collect: specimen collection services by courier

TDL Collect provides a dedicated medical sample collection service (vans by arrangement) on a scheduled or ad hoc basis.

No charge is made for collections from practices within the M25. Courier collections from private addresses are not undertaken.

The courier collection service for inner London postcodes operates on a 24/7 basis, as shown. Postcodes extending beyond to the M25 operate from 9am to 8pm. Outside the M25, and throughout the UK, sample collections are by arrangement and may incur courier charges.

TDL Collect Online Courier Booking is a time-saving option for arranging couriers for sample collection: **www.tdlpathology.com/services/tdl-collect/**

Please contact **couriers@tdlpathology.com** for your practice's secure login and password.

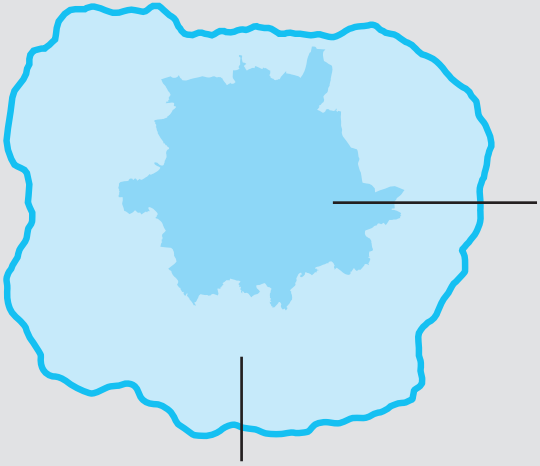
High-risk samples should be clearly labelled and packed separately from other samples.

TDL's couriers cannot transport samples containing Hazard Group 4 Pathogens such as Ebola Fever or Haemorrhagic Fever.

SCAN ME

Use the TDL Collect Online Courier Booking service to arrange a courier for sample collection:

www.tdlpathology.com/services/tdl-collect/



Courier collection from postcodes extending beyond Inner London to within the M25 operate from 9am to 8pm

Courier collection from Inner London postcodes (see below) operates 24/7:

E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11, E12, E13, E14, E15, E16, E17, E18, E20

EC1, EC2, EC3, EC4

N1, N2, N3, N4, N5, N6, N7, N8, N9, N10, N11, N12, N13, N14, N15, N16, N17, N18, N19, N20, N21, N22

NW1, NW2, NW3, NW4, NW5, NW6, NW7, NW8, NW9, NW10, NW11

SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE8, SE9, SE10, SE11, SE12, SE13, SE14, SE15, SE16, SE17, SE18, SE19, SE20, SE21, SE22, SE23, SE24, SE25, SE26, SE27, SE28

SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9, SW10, SW11, SW12, SW13, SW14, SW15, SW16, SW17, SW18, SW19, SW20

W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, W11, W12, W13, W14

WC1, WC2

Semen Analysis

Semen samples need specialist and immediate handling within the laboratory. For this reason, all requests for Semen Analysis must be made by appointment. Practices or patients can make an online appointment at **www.tdlpathology.com/andrologybooking** or call **020 7025 7940** to make appointments and confirm instructions for sample collection. There is an attendance fee of £50.00.

- Patients must abstain from ejaculation for at least 2 days but not longer than 5 days before the test. Instructions will be given to patients at the time of arranging their appointment.
- Semen samples should be produced at The Doctors Laboratory, 76 Wimpole Street, unless there are exceptional circumstances. If there are exceptional circumstances please contact **TDL Andrology** on **020 7025 7940** for special arrangements and instructions. Refer to Andrology, see page 65.

Semen collection and analysis services are not provided at TDL Manchester.

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To make an appointment for Semen Analysis online please visit:

www.tdlpathology.com/andrologybooking

Patient request form

To comply with good clinical practice it is important that there is one request form for each patient's request, and specimens and form are correctly matched, fully labelled, and include three unique patient identifiers and other relevant Information.

- First name, Surname, Date of birth, Hospital/Clinic Number, Medical Record Number (MRN) are examples of patient identifiers
- Time and Date of collection of samples
- Type of sample and Anatomical site, where appropriate (e.g. swabs)
- Relevant clinical information
- Relevant details of medication
- High-risk samples should be clearly identified on the form and individually packed separately from other samples
- Known cases of Hazard Group 4 pathogens such as Ebola or Viral Haemorrhagic Fever must NOT be sent to the laboratory. If there is doubt about a patient's symptoms and presentation please contact the Imported Fever Service on 0844 778 8990 for advice before sending samples to TDL or any laboratory.

If additional tests are required for a sample already received please contact the laboratory on **020 7307 7373** with your request for specific further analysis. Samples are stored within timeframes according to their discipline. Laboratory staff will advise on the ability to undertake further testing from samples already received in the laboratory.

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Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

Emailed requests for add ons

The majority of samples received in the laboratory are kept for one week. If sample type and volume allow, further testing can be requested by telephone on **020 7307 7373** or by email to **addons@tdlpathology.com**. Please specify the details of the test(s) to be added.

If requests for **Add ons** are made by email, the **patient's details** and **Laboratory Number** need to be referenced.

Home visits

This service is available for patients who, for whatever reason, prefer samples to be taken at home or at locations other than a doctor's practice or TDL's Patient Reception at 76 Wimpole Street, London. This is a service that is used regularly to save time for both doctors and patients, and ensures that results can be made available before consultation is undertaken.

There is a visit fee from £175.00 to patients within the M25, and from £275.00 for children when two nurses need to attend. Home visits outside the M25, for weekends, bank holidays and night fees are by special arrangement. To arrange a home visit please telephone Patient Reception on **020 7307 7383** or email **homevisits@tdlpathology.com**.

Sample packing

Samples need to be packed and transported appropriately for subsequent processing and testing. Transport systems will be various and cover both long and short distances.

Samples need to be collected and packed into appropriate sample containers provided by the laboratory in order to maintain integrity. Attention needs to be given to temperature, special transport containers and time limitations. Each testing has a different sample requirement, which should be referenced prior to sample taking.

Clinics, practices and laboratories who are posting or transporting samples by air, sea, rail and road between local, regional and reference laboratories, or between laboratories in other countries, must adhere to a number of regulations. These regulations are designed to deal with transportation accidents and spills, reduce biohazards and keep samples intact for testing.

Regulations are given by several sources including:

- National transport regulations
- International air transport regulations
- Rail and road traffic agencies
- Postal services

Compliance is mandatory in order to reduce risk to couriers, carrier, laboratory staff and passengers.

Sample transport requirements are based on the category of samples being transported. Infectious substances are classified as Category A (for example a substance that causes viral haemorrhagic fevers) or Category B.

TDL does not arrange for transport of Category A samples (infectious substances capable of causing permanent disability or life-threatening or fatal disease to humans or animals).

Instruction and packaging for Category B is provided, covering Biological Substances, UN3373.

Packaging requirements

There are specific labelling and triple packaging requirements for Category B samples such that it meets packaging instruction P650:

- Primary receptacle – tube or vial containing the sample which is placed in the secondary packaging.
- Secondary packaging – for example, a protective packaging case or ziplock bag with absorbent material.
- The outer packaging – intended to protect the entire contents.
- There may also be additional postal envelopes to place the entire package in for postal return. The external surface of the package must be labelled with UN3373 and clearly state BIOLOGICAL SUBSTANCE CATEGORY B.

There are additional packaging requirements for frozen samples requiring shipment using BioFreeze bottles or Dry Ice.

For information please contact the Referrals Dept (**ReferralsOffice@tdlpathology.com**).

Postal pathology

Postal pathology services should be considered by all practices in the UK who need a rapid delivery service to the laboratory as it is a quick and efficient method of sample return, which causes little to no disruption to the patient. Royal Mail require that ALL pathology postal packs are sent using Tracked 24 returns. This provides a particularly suitable method of transport for any healthcare organisation. Royal Mail postal pathology with Tracked 24 returns provides:

- Simple and convenient sample handling throughout the UK for most tests. It is not suitable for samples that need to be received within 24 hours of sample taking (e.g. coagulation, Quantiferon TBQ).
- Scope for large and small numbers of samples.
- Next morning delivery.
- Allows patients and practices to track samples to the Distribution Office through the Royal Mail system.
- Samples can be posted from any Royal Mail post box.
- There is a charge for each Royal Mail Tracked 24 pack and this charge will be itemised in monthly invoices to the practice or patient, as requested.

DX System

DX is a well known next-day courier of Category B specimens – transporting biological samples in compliance with the industry's highest regulations. DX is compliant to IATA regulations, is audited independently by Dangerous Goods Safety Advisors. They work with a combination of large health organisations and smaller, independent laboratories to ensure the safe delivery of specimens every year.

TDL's DX Address is **DX 340201, St Pancras 90 WC**.

Pathology consumables / Request forms / Postal packs

TDL Supplies Department provides all appropriate sample collection consumables required for sample collection. Orders will be dispatched on the same or next day and can be made by email to **supplies@tdlpathology.com**. A Supplies Order Form is available from the TDL website.

SCAN ME

Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

Requesting and reporting options

We continually review and update our IT Services for receiving requests and reporting results electronically between practices and the laboratory. A number of innovative report formats are now available.

Encrypted Email

Results will be sent in encrypted format to any number of predetermined email addresses. Copy reports will be emailed automatically to email addresses on the system.

Link to Practice Management System

Bidirectional requests and results can be received and delivered electronically using a number of integrated practice systems. Practice software that accepts data in an HL7 format can be linked to securely receive results from the laboratory.

Security of information in TDL systems and processes is managed by our Information Security Management System, which is certified to the latest International Standard for Information Security ISO/IEC 27001:2013.

TDL eViewPlus

Provides the most accurate requesting option for clinics who don't have a practice management system. As well as producing QR coded forms to accompany samples to the laboratory, registered users of this secure login/password protected system can request self-collection kits to be sent directly to their patients.

eViewPlus users can also view their results online, with cumulative reporting, anytime, anywhere.

For information about eViewPlus please contact **eviewplus@tdlpathology.com**.

TDL website

The TDL website gives updated details of our tests – sample types, turnaround times and special instructions. The Specialities section provides a new way to find tests you need, and a Services section has additional information for TDL Collect and Postal Pathology. Reference Ranges can be requested by emailing **refranges@tdlpathology.com**.

Visit the TDL website at:

www.tdlpathology.com

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Printed Copy

Printed results will only be sent, as standard, if requested.

Emailed results incorporating your logo

If a practice or company receives results by email, and would like these to be personalised with the practice's logo, please email your company details and logo in GIF format to **logo@tdlpathology.com**.

Fees for pathology

Fees can be paid directly by patients or by the practice, clinic or requesting organisation. A payment instruction clearly identifying to whom invoices need to be sent must be given with each patient's request.

Patients are normally invoiced within 7 days to the address provided by the patient or practice. Their pathology fees include a standard credit/ administration charge.

Receipts for insurance purposes are sent, if requested. Patients visiting Wimpole Street for sample-taking have the opportunity to settle their pathology fees at the time of their visit. A credit/ administration fee is raised if invoices are sent to patients. All normal credit, debit or charge cards are accepted and payment can be made by following the telephone payment instructions given with each invoice.

The Terms and Conditions of Business appearing on pages 215-224 of this Laboratory Guide shall apply to the services we provide to you, unless otherwise agreed.

TDL eViewPlus

Provides the most accurate requesting option for clinics who don't have a practice management system. As well as producing QR coded forms to accompany samples to the laboratory, registered users of this secure Login/Password protected system can request self-collection kits to be sent directly to their patients.

eViewPlus users can also view their results online, with cumulative reporting, anytime, anywhere.

For information about eViewPlus please contact **eviewplus@tdlpathology.com**.

Protection of personally identifiable information

The General Data Protection (GDPR) and UK Data Protection Act 2018 came in to force in 2018 and have had significant impact upon the way that personal data is managed; placing legal requirements upon data processors and controllers to manage that information securely, maintain records of the processing that is carried out, and report when breaches of the regulation do occur.

This has impacted the way many businesses operate, and is not restricted to the healthcare sector.

At TDL, these requirements have been implemented within the context of a mature ISO 27001 Information Security Management System – the globally accepted standard by which information is secured.

This ensures that senior management have regular visibility of the threats to the confidentiality, availability and integrity of the information that we process, and are able to steer the efforts of their teams to provide an efficient service that places the confidentiality of our customers and their patients at the heart of everything we do.

In order to support our customers compliance with the regulation and as a part of a wider GDPR compliance project TDL has updated its standard terms and conditions to include revised data processing clauses, which are mandatory when providing personal data to another organisation. Customers can find out more about how TDL protects their data by reading the TDL Privacy Notice at www.tdlpathology.com/about-us/corporate-information/tdl-group-privacy-notice.

Key contacts

24 HOUR TELEPHONE (MAIN SWITCHBOARD / ALL SERVICES): 020 7307 7373

CEO
David Byrne
david.byrne@tdlpathology.com

Group Commercial Director
Brian Madden
brian.madden@tdlpathology.com

Chief Medical Officer
Dr Rachael Liebmann OBE
rachael.liebmann@tdlpathology.com

Group Laboratory Director
Tim Herriman
tim.herriman@tdlpathology.com

Director of Sales / Service
Annette Wilkinson
annette.wilkinson@tdlpathology.com

Director of Genetics & Molecular Pathology
Dr Lisa Levett
lisa.levett@tdlpathology.com

Chief Information Officer (IT)
John Matthews
john.matthews@tdlpathology.com

Director of Group Laboratory Operations
Lisa Manze
lisa.manze@tdlpathology.com

Heads of Support and Service Departments

Director of Laboratory Compliance
Cyril Taylor
Cyril.taylor@tdlpathology.com

Director of Governance
Emer Nestor
emer.nestor@tdlpathology.com

Credit Control Manager
William Howard
william.howard@tdlpathology.com

Logistics / Couriers
Edward Thompson
Edward.Thompson@tdlpathology.com

Patient Reception
patient.reception@tdlpathology.com

Call and Service Centre
Chris Tanalega
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IT Operations / Customer Service
Rochelle Fakhri
rochelle.fakhri@tdlpathology.com

Sample Reception
Amy Scott
amy.scott@tdlpathology.com

Referrals Department
Maulik Trivedi
maulik.trivedi@tdlpathology.com

Heads of Laboratory Departments (London)

Haem / Bio / Automated Pathology
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Immunology / Virology
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Molecular Genetics
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TDL Trials
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TDL Manchester

Operational Site Lead
Diane Çamliyer
diane.camliyer@tdlpathology.com

Deputy Site Lead
Andy Leeson
andy.leeson@tdlpathology.com

SRA and Kit Distribution Manager
Georgina Taylor
georgina.taylor@tdlpathology.com

Quality Manager
Carol Tonge
carol.tonge@tdlpathology.com

Courier Control
Marc Rennard
marc.rennard@tdlpathology.com

Quality assurance

The Doctors Laboratory is committed to providing doctors with pathology of the highest quality.

The quality of results is of fundamental importance, and the laboratory operates to stringent technical and administrative standards.

Internal quality assurance is achieved by strict adherence to standard operating procedures for all analytical processes. TDL participates in recognised National External Quality Assessment Schemes; these schemes are subscribed to by NHS and private laboratories. The United Kingdom Accreditation Service (UKAS) provides accreditation to the internationally recognised ISO 15189 Medical Laboratories: Requirements for Quality and Competence standard. Results are subjected to strict internal and external quality control.

Details of the laboratories to whom TDL refers specialist testing are available from TDL Referrals. These laboratories are UKAS accredited or of equal accreditation status.

Quality assurance is administered by TDL's Quality Management Group (QMG), who also adhere to regulatory and accreditation requirements.

BIOCHEMISTRY

UKNEQAS, WEQAS, RIQAS, BIORAD, LABQuality for

ACE

Acute and Chronic Kidney Disease

AFP/CEA & HCG

Antibiotics (Gentamicin, Vancomycin and Amikacin)

Anti-Hbs Detection

Ammonia

Autoimmune (RF and TPO)

B2 Microglobulin

Cardiac Markers

Clinical Chemistry

CMV IgG/IgM

CRP & Ultra-Sensitive CRP

CSF

Cyclosporin and Tacrolimus

DEQAS

Diagnostic Serology Exanthem

Diagnostic Serology Hepatitis

Drugs of Abuse

Ethanol

Faecal Markers for Inflammation (Calprotectin)

Free Beta HCG and PAPP-A

GFR

Glucose/Glucometer

Glycated Haemoglobins

Guildford Peptides

Haematinics

HcG

Healthcontrol Therapeutic Drugs Screen (TDM)

Hepatitis A (with B and C)

Hepatitis B Serology

Hepatitis C Serology

HIV Serology

Homocysteine

HTLV

IGF-1

Infectious Immunology

Lipase

Lipid Investigations

NT-Pro BNP

Paediatric Bilirubins

Parasitology

Peptide Hormones

PSA, Free PSA

PTH, ACTH and hCT

QFIT

Rubella IgG Serology

Salicylate and Paracetamol

Serum Indices

Specific Proteins

Steroid Hormones

Quality assurance

Syphilis Serology
Thyroglobulin Surveys
Thyroid Hormones
Total IgE
Tumour Markers
Toxoplasma IgG Serology
Toxoplasma IgM Serology
Trace Elements
Urine Chemistry
Vitamin D (25 OH)

HAEMATOLOGY

UKNEQAS

Automated Differential Leucocyte Count
Blood Film Morphology
Blood Transfusion Laboratory Practice Scheme (BTLP)
Coagulation (Including PoCT Coagulation)
EBV Mononucleosis
ESR and NRBC (nucleated Rbc)
Flow Cytometry:
- Leukaemia immunophenotyping
- Myeloperoxidase
- Iron stain

Full Blood Count
Haematology
Haematology Analysis
Malaria
Parasite Films
Reticulocyte
Sickle Screening
Thrombophilia Screening

Special Coagulation

Anti-Xa Assays
ADAMTS-13 Activity
ADAMTS-13 Antibody
Heparin/Platelet Factor 4
Induced Antibodies
Lupus Anticoagulant:
- DRVVT Assay
- Taipan Venom Time

Plasma Viscosities
Platelet Function Analysis (RCPA)
Von Willebrand (vWD) screen

GENETICS AND MOLECULAR VIROLOGY

Molecular Genetics and Cytogenetics

GENQA, EMON, UKNEQAS, ECAT, LABQuality for

Acquired Array (CLL/MDS)
Acute Lymphoblastic Leukaemia (ALL) – G-banding and FISH
Antithrombin AT3 (SERPINC1)
BCR ABL1 and AML Translocation Identification
BCR ABL1 Kinase Domain Variant
BCR ABL1 Major Quantification
BCR ABL1 Minor Quantification
BRAF p.Val600Glu (V600E) Mutation Status for Hairy Cell Leukaemia
Chlamydia & Gonorrhoea Detection by PCR
Chronic Lymphocytic Leukaemia (CLL)
Constitutional Clinical Cytogenetics (Rounds for Amniocentesis, CVS, Solid Tissue, Blood, Array)
Cystic Fibrosis
Duchenne/Becker Muscular Dystrophy
Factor VII (F7)
FLT3 Mutation Status
Genetics of Heritable Bleeding Disorders
Haematological Technical FISH
Hereditary Haemochromotosis (C282Y+H63D) genotyping + reporting
HLA Class I (HLA-A, HLA-B, HLA-C) Tissue Typing (low resolution)
HLA Class II (HLA-DRB1, HLA-DQB1) Tissue Typing (low resolution)
HLA-B27 Genotyping
HLA-B57*01 Genotyping

Quality assurance

HLA+ Disease Typing Cytochrome P450 2C19 genotyping

Human Papillomavirus DNA

IG/TCR Clonality Status

IGHV for CLL

Inborn Errors of Metabolism

KIT p.Asp816Val (D816V) Mutation Status for Mast Cell Disease

Lymphoid Gene Panels

Lymphoma

Lymphoplasmacytic Lymphoma / Waldenstrom Macroglobulinaemia

Measurable Residual Disease for AML by Molecular Methods

Myeloid (AML/MDS/CML) – G-banding and FISH

Myeloid Gene Panels

Myeloma – sample FISH set up and analysis plus online

Myeloproliferative Neoplasms Diagnostic Testing

NGS AML Gene Panel

NGS Myeloid Target Panel

NIPT for Aneuploidies and Sexing

NMP1 Mutation Status

Paediatric Acute Leukaemia Translocations

QF-PCR Aneuploidy Detection

Sexually Transmitted Diseases (CT/NG/MGEN/TV/UU/UP)

Spinal Muscular Atrophy

Thrombophilia (Factor II, V, MTHFR)

TP53 for CLL

Y Microdeletion PCR Assay

Molecular Virology

QCMD, INSTAND, LAB QUALITY/Aurevia for

Adenovirus DNA Viral load and Qualitative PCR

Bacterial 16S

B19 virus DNA Viral load

BK virus DNA Viral load

CMV DBS (dried blood spots)

CMV DNA Plasma Viral load

CMV DNA Whole Blood Viral load

CMV Resistance

EBV DNA Plasma Viral load

EBV DNA Whole Blood Viral load

Enterovirus RNA

Gastroenteritis Virus Panel

HBV Qualitative PCR

HCV Qualitative PCR

HIV Qualitative PCR

Hepatitis B Genotyping

Hepatitis B Drug Resistance Typing

Hepatitis B Viral Load

Hepatitis C Genotyping

Hepatitis C Resistance Genome Detection (NS5a & b)

Hepatitis C Resistance Typing (NS3 & NS5a)

Hepatitis C Viral Load

Hepatitis D Virus Viral load and Qualitative PCR

Hepatitis E Virus Viral load and Qualitative PCR

HIV-1 DNA Genome Detection

HIV-1 Drug Resistance (Integrase)

HIV-1 Drug Resistance (Pol)

HIV-1 RNA Viral load and Qualitative PCR

HIV-1 Tropism Genome Detection

HIV-2 Viral Load

HSV 1&2 DNA

HSV 1&2 DNA HSV Drug Resistance

Human Herpes Virus 6 DNA

Human Herpes Virus 8 Viral Load and Qualitative PCR

Influenza Haemagglutinin Typing

JC Virus DNA

Measles and Mumps PCR

MERS Coronavirus

Parechovirus RNA

Respiratory Panel I

Respiratory Panel II

SARS-CoV-2 (COVID-19) PCR/NAAT

Sexually Transmitted Disease:
- CT/GC/TV/MGen
- Fast CTGC (Rectal/Throat Swab, Urine)
- LGV PCR
- Mycoplasma Genitalium Resistance
- Qualitative HIV (Cepheid)
- Quantitative HIV (Cepheid)
- Syphilis PCR

Transplantation Virus Panel

VZV DNA

INFECTION SCIENCES

Aurevia (Formerly LabQuality), BMS Micro, QCMD, UK NEQAS and WEQAS

AAFB Microscopy

Acanthamoeba

Antibacterial Susceptibility

Antifungal Assays

Antifungal Susceptibility

Antimicrobial Susceptibility

Aspergillus spp. DNA

Aspergillus PCR

Bacterial Vaginosis

Blood Culture and Gram Stain

Bordetella pertussis DNA

Candida auris

Candida PCR

Candida spp.

Central Nervous System II
(Non-viral meningitis and encephalitis)

Chlamydophila pneumoniae

Clostridioides difficile Detection and Toxin Testing

CSF

Cryptosporidia and Giardia in Faeces

Dermatophytosis

Faecal Parasitology

Fungal Biomarkers

General Bacteriology

Genital Pathogens

Group A Streptococcus (GASDNA)

Helicobacter pylori Drug Resistance
Nucleic Acid Detection

Helicobacter pylori Antigen from Faeces

Legionella PCR

MSSA/MRSA Screening

Mycobacteria Blood Culture

Mycobacteria (Molecular)

Mycology Microscopy and Culture

Mycoplasma PCR

Mycoplasma pneumoniae

Pneumocystis jirovecii Pneumonia (PCP) DNA

POCT Urinalysis

Polarising Crystal Microscopy from Synovial Fluid

Quantitative Urine Analysis

Rapid MRSA (Cepheid)

Sterile Body Fluid

Streptococcus pyogenes (Group A)
detection in pharyngeal samples

Surveillance for multidrug resistant bacteria, VRE

Trichomonas vaginalis

Urine Analysis

Urine Antigen

IMMUNOLOGY

UKNEQAS – General Immunology

Allergen Component Testing

Allergen Specific IgE Antibodies

Anti-Phospholipid Antibodies (B2GP)

Autoimmune Serology ANCA/GBM Antibodies

Bullous Dermatosis Antibodies

Coeliac Disease (Endomysium, Tissue transglutaminase)

COVID-19 Antibodies

Diabetic Marker (Islet Cell Antibodies)

Faecal Markers (Calprotectin)

General Autoimmune Serology

Hepatitis E (IgG and IgM)

IGRA (Interferon gamma release assay)
Intrinsic Factor Antibodies
Lyme (IgG + IgM)
Myositis Associated Antibodies
Nuclear and Related Antigens
Specific Microbial Antibodies
Syphilis (THPA and RPR)
Tryptase

UKNEQAS – Infectious Immunology

Anti-Hbs Detection
CMV IgG/IgM
Diagnostic Serology Hepatitis
Helicobacter pylori Antigen from Faeces
Hepatitis B Serology
Hepatitis C Serology
HIV Serology / POCT
HTLV
Measles and Mumps Serology
Parasite Serology
Parvovirus and Rubella Serology
Syphilis Serology
Toxoplasma IgM Serology
Toxoplasma IgG Serology

RCPAQAP Scheme

Chlamydia Serology
Legionella (IgG) Serology
Striated Muscle Antibodies

INSTAND Scheme

Adrenal Antibodies
HDV Serology and Functional Complement
Hepatitis E Serology

CSCQ Scheme

Lyme Borrelia Serology

Laboratory Quality Scheme

Antistreptolysin O Titre
Cytomegalovirus Antibodies
EBV Serology
Euroimmun ifQ-Lubeck (Liver) Autoimmune Disease Scheme
Helicobacter pylori IgG Antibodies
Herpes Simplex 1 & 2 Antibodies
Measles Serology
Mumps Serology
Mycoplasma Serology
RNA Polymerase III
VZV Serology

ENDOCRINOLOGY

UKNEQAS

AFP / CEA
Allergens Scheme
Peptide Schemes 1 to 4
Prostate Specific Antigen
PTH
SHBG
Specific IgE / Total IgE
Steroid Hormones
Thyroid Scheme
Tumour Markers

CERVICAL SCREENING

NHS England

Gynaecological Cytopathology EQA Scheme (GEQA)
National EQA Scheme for the Preparation and Staining of Cervical Liquid Based Cytology Samples (TEQA)

HOLOGIC EQA scheme for

ThinPrep Stain

UKNEQAS for Microbiology

Molecular Detection of HPV

Quality assurance

DIAGNOSTIC CYTOLOGY

UKNEQAS for CPT

Stained Non-Gynaecological Cytology Module

All non-gynaecological (diagnostic cytology), including Urine Cytology, are referred to a UKAS accredited laboratory for reporting.

ANDROLOGY

UKNEQAS

Semen Analysis Scheme

INFORMATION SECURITY

Accredited by British Standards Institute ISO/IEC 27001:2022

Links to the UKAS Schedules of Accreditation

HSL Blood Sciences (8169)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8169-Medical-Single.pdf

HSL Infection Sciences (8860)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8860-Medical-Single.pdf

HSL Molecular Pathology and Genetics (8059)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8059-Medical-Single.pdf

TDL Manchester (8812)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8812-Medical-Multiple.pdf

TDL Andrology (10199)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/10199-Medical-Single.pdf

HSL Cervical Screening (8511)

https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8511-Medical-Single.pdf

Measurement Uncertainty

Medical laboratories are responsible for ensuring that test results are fit for clinical application by defining analytical performance goals, selecting and qualifying appropriate measurement procedures. All measurement results have some inaccuracies due to analytical bias and imprecision; therefore a measurement result is an estimate at the time of undertaking such measurements. To properly use such results, medical laboratories and their clinical users need some knowledge of the accuracy of such estimates and the uncertainty it may have on the interpretation of patient results.

This estimate of such uncertainties is referred to as Measurement Uncertainty (MU) which incorporates the cumulative range of factors involved in the examination procedure, which may potentially influence the overall test result and thus the interpretation of patient results.

The complete result of a measurement is a value, a unit and an estimate of uncertainty. Medical laboratories consider the impact of such uncertainties on the interpretation of patient results and ensure uncertainties are minimised through control measures such as standardised procedures, Internal Quality Control monitoring and trending and routine evaluation of MU. Evaluating measurement uncertainty is an ISO 15189:2022 accreditation requirement.

It should be noted that all assays within the TDL/HSL group of laboratories use standard operating procedures followed by trained and competency assessed scientists.

The MU is initially estimated for each assay during the qualification of the selected examination procedure and is evaluated against the pre-defined maximum allowable measurement uncertainty. Each MU is then re-estimated at regular intervals with additional data and reviewed against the pre-defined maximum allowable measurement uncertainty to ensure uncertainty values and therefore errors and inaccuracies are minimised.

Overall assay performance is also regularly monitored through internal quality control (IQC) and external quality assessment (EQA) schemes and incorporated in test result interpretation. MU for individual assays is available upon request.

Sample rejection criteria

Sometimes tests cannot be performed in the laboratory if samples fall short of the quality, volume or other eligibility criteria such as clear sample labelling. In these cases, the potential risk to the patient management is that the laboratory may need to reject the samples, and not carry out processing. Sometimes the laboratory can rectify a situation where a sample falls short of the sample acceptance criteria though in this case the risk to the patient management may be a breach of stated turnaround time and a delay to provision of the result. In order to reduce the risk of sample rejection or delay to provision of results, please ensure all sample taking criteria are met.

Summary list for sample rejection

- Incorrect sample types received:
  - Basic incorrect blood tube/other sample.
  - Samples without the appropriate preservative (e.g. acidified urine samples).
  - Samples that are received ambient, when a frozen sample is required.
  - Samples that are received unprotected from light, when they are required to be covered at the point of venepuncture.
- Samples in incorrect containers (e.g. cervical cytology must be a ThinPrep vial; urine cytology must be in a uricyte container).
- Insufficient sample received.
- No sample received.
- Labelling or form issues (mislabelled/unlabelled/no forms/no clinical information).
- Clotted/haemolysed/lipaemic/icteric samples.
- Sample is broken or has leaked in transit.

- Stability time has been exceeded. Stability time is test dependant, and also refers to tests that can only be carried out on certain days of the week.
- Sample contamination (e.g. being in the same bag as a leaking sample).
- Samples are high risk or infectious.
- Samples that are received in expired tubes.
- Discontinued tests.

Department specific

- Sample Reception will not accept samples packaged with needles of any kind.
- Haematology cannot accept frozen whole blood for testing.
- Coagulation cannot accept over or under filled samples for testing.
- Coagulation cannot accept previously frozen samples that have thawed in transit.
- Biochemistry cannot accept previously frozen samples that have thawed in transit.
- Biochemistry cannot accept samples that display antibody interference.
- Biochemistry cannot accept samples that have had separation delays/un-centrifuged samples that have been stored in the fridge.
- Biochemistry cannot accept paraprotein resulting in viscous samples.
- Biochemistry cannot accept CSF protein that is blood stained.
- Immunology cannot accept TBQ kits that:
  - Do not contain all of the appropriate tubes.
  - Are incubated for more than the specified 16 hours.
  - Have passed the incubation time period.
  - Are over or under filled.
- Microbiology cannot accept samples in non-sterile containers or in formalin.
- Referrals cannot accept samples without three points of identification for DRP testing.
- Referrals cannot accept samples that are not labelled by hand for blood group testing.
- Molecular Pathology cannot accept samples for Haemophilia testing without informed consent.
- Genetics also require consent forms for processing some samples.
- Cervical Cytology cannot accept over or under filled samples for testing.
- Cervical Cytology cannot accept samples received within three months of the previous test in order to allow epithelial cells to regenerate.
- Cervical Cytology cannot accept samples containing a sample broom.
- Cervical Cytology can only accept samples received in a Hologic ThinPrep Vial.
- Cervical Cytology cannot accept samples received in an expired ThinPrep Vial.
- Urine Cytology cannot accept delayed samples unless they have been refrigerated.

Samples deemed to be unrepeatable (e.g. CSF, fluid, tissue, bone marrow and paediatric samples) will not be discarded by the laboratory. Results will include a comment relating to the condition of the sample (e.g. sample unlabelled).

Consultant advice and opinion

Each department in the laboratory is consultant led. The TDL Consultants listed below have defined advice or professional support, TDL consultants can be contacted via the laboratory.

TDL Consultants

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Dr Rajesh Rajendran
MB, BS, FRCPath

Special instructions for samples

1 Contact the laboratory for special sample tubes/containers/instructions.

2 Confirmation of not negative drug screens by LCMS/MS may take up to 5 days.

3 Clinical history essential and protect from light.

4 Send to the laboratory same day.

5 Do not send sample to the laboratory between Friday noon and Monday morning.

6 Contact the Referrals Department before taking and sending sample to the laboratory.

7 Sample should be separated and frozen if sending overnight.

8 DRP Form required. DRP Form can be found at the back of the guide.

9 Clinical history must be provided.

10 Contact the laboratory for special stability tubes for lymphocyte subsets – or take an EDTA sample and ensure same day delivery to the laboratory, Monday to Friday noon (do not send sample between Friday noon and Monday morning).

11 Patient consent required. Consent Form can be found at the back of the guide.

12 Please provide one sample for each person being tested.

13 Protect from light.

14 Provide details of travel history.

15 Ammonia
Sample: EDTA plasma only. Full tubes and tightly stoppered. On ice, centrifuged and analysed 20-30 mins post venepuncture (or plasma can be frozen). If haemolysed gives falsely high results.
Patient: Fasting. Avoid smoking.

16 Lactate sample: Fluoride oxalate plasma only. On ice and separate from cells within 15 mins, analyse promptly. Handle with care as sweat contains large amounts of lactate. No tourniquet.
Patient: Rest 30 mins prior to test.

17 Homocysteine: Spin, separate serum or plasma from cells within 1 hour of collection, or place unspun sample on ice to be received within 6 hours of collection for the laboratory to separate.

18 Citrate samples: Samples should be double spun and separated and frozen within 4-8 hours of sample taking, if a delay is expected with transportation to the laboratory, samples must be transported as frozen.

19 Must include patient's age, height and weight.

21 Urine cytology container, ideally first catch, mid-morning specimen.

22 Must be fresh.

30 Collect sample at end of exposure.

33 Sample must be labelled by hand with first name, family name, gender and date of birth detailed on sample and form. Do not use labels other than the tube label.

34 Samples must arrive in the laboratory on the same day of sample taking or contact the laboratory.

35 Patient should be fasting and resting for 30 mins before sample taking. Samples need handling urgently.

36 Renin: Sample collected either upright/active (after 1 hour) or resting/supine (3 hours lying). EDTA Plasma must be frozen within 2 hours.

37 Provide sample time and date of collection.

38 EDTA sample should not be separated: send whole blood.

40 Informed Consent is required for these tests.

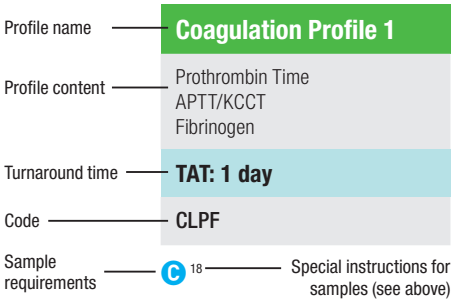
41 Recommendation for patient to attend Patient Reception for sample taking.

42 LGV can be added to a positive chlamydia sample using the same swab if requested within 4 days of receipt of result.

43 Please contact lisa.levett@tdlpathology.com for details for referring samples to the laboratory for sequencing testing.

44 Please separate and freeze EDTA plasma within 3 hours of collection.

Profile panel information



TDL Screening Profiles DL1-DL12

DL1 Biochemistry Profile

Urea and Electrolytes: Sodium, Potassium, Chloride, Bicarbonate, Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alkaline Phosphatase, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Bone Markers: Calcium, Phosphate, Uric Acid, Magnesium

Glucose
Triglycerides / Cholesterol
Iron (TIBC included)

TAT: 1 day

DL1

DL1L
Incl. HDL, LDL and Non-HDL

B G

DL2 Biochemistry (24 Parameters) & Haematology Profile

HAEMATOLOGY

Full Blood Count (FBC), ESR

BIOCHEMISTRY

Urea and Electrolytes: Sodium, Potassium, Chloride, Bicarbonate, Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alkaline Phosphatase, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Bone Markers: Calcium, Phosphate, Uric Acid, Magnesium

Glucose
Triglycerides / Cholesterol
Iron (TIBC included)

TAT: 1 day

DL2

DL2L
Incl. HDL, LDL and Non-HDL

A B G

DL3 Haematology Profile

Full Blood Count (FBC)
ESR

TAT: 1 day

DL3

A

DL4 Biochemistry (16 Parameters) & Haematology Profile

HAEMATOLOGY

Full Blood Count (FBC), ESR

BIOCHEMISTRY

Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alkaline Phosphatase, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Bone Markers: Calcium, Phosphate, Uric Acid, Magnesium

Glucose
Triglycerides / Cholesterol

TAT: 1 day

DL4

DL4L
Incl. HDL, LDL and Non-HDL

A B G

DL5 Biochemistry & Haematology Postal Profile

AS DL4

DL5/DL5L do not include ESR and Phosphate as these results may be more affected by overnight transit times.

TAT: 1 day

DL5

DL5L
Incl. HDL, LDL and Non-HDL

A B G

DL6 General Well Person Profile

DL2
Free T4 / TSH
HbA1c
Ferritin

TAT: 1 day

DL6

DL6L
Incl. HDL, LDL and Non-HDL

A B G

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

TDL Screening Profiles DL1-DL12

DL7 Well Man Profile

DL2
Free T4 / TSH
Ferritin
HbA1c
Prostate Profile

TAT: 1 day

DL7

DL7L
Incl. HDL, LDL and Non-HDL

A B G

DL8 Well Person Profile

DL2
Free T4 / TSH
Ferritin
HbA1c
Vitamin D (25-OH)

TAT: 1 day

DL8

DL8L
Incl. HDL, LDL and Non-HDL

A B G

DL10 Cardiovascular Risk Profile 1

Lipid Profile
Apolipoprotein A1
Apolipoprotein B
ApoA/ApoB Ratio
Lipoprotein (a)
C Reactive Protein (High Sensitivity)
Lp-PLA2 (PLAC) Test

TAT: 3 days

DL10

B B

DL9F Senior Female Profile 60+

CHANGE
DL2L (Haem/Bio/Lipid)
Free T4 / TSH
HbA1c
C Reactive Protein (CRP)
C Reactive Protein (High Sensitivity)
Ferritin
Vitamin D (25-OH)
HE4
Lp-PLA2 (PLAC) Test

TAT: 2 days

DL9F

A B B G [4]

DL9M Senior Male Profile 60+

CHANGE
DL2L (Haem/Bio/Lipid)
Free T4 / TSH
HbA1c
C Reactive Protein (CRP)
C Reactive Protein (High Sensitivity)
Ferritin
Vitamin D (25-OH)
HE4
Lp-PLA2 (PLAC) Test
Total and Free PSA

TAT: 2 days

DL9M

A B B G [4]

DL11 Cardiovascular Risk Profile 2

Lipid Profile
Apolipoprotein A1
Apolipoprotein B
ApoA/ApoB Ratio
Lipoprotein (a)
Fibrinogen
C Reactive Protein (High Sensitivity)
Lp-PLA2 (PLAC) Test
Homocysteine (Quantitative)

TAT: 3 days

DL11

B B B C [17, 34]

DL12 7 STI Profile by PCR (7 PCR Tests from 1 Sample)

Chlamydia trachomatis
Mycoplasma genitalium**
Trichomonas vaginalis
Herpes Simplex I/II
Neisseria gonorrhoea
Ureaplasma urealyticum/parvum
Gardnerella vaginalis
***If MGEN is +ve this reflexes to MGR*

All tests can be requested individually

TAT: 2 days

DL12

FCRU / PCR Swab / TPV

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Stockholm3 test for early detection of Prostate Cancer

Stockholm3 is a blood test that helps to predict risk of clinically significant prostate cancer in men aged 45–74 years with a PSA level greater than 1.5 ng/ml where no previous diagnosis of prostate cancer has been made. Stockholm3 combines genetic markers, proteins and clinical data in an algorithm to help identify clinically significant prostate cancer. It allows for screening in primary or secondary care settings and is equivalent across diverse ethnicities. Apart from a strong health economic case, the result from a Stockholm3 test can be used to reduce unnecessary imaging or invasive diagnostic procedures.

Key characteristics of Stockholm3

- Increased early detection – increased sensitivity
- Increased specificity reduces over testing, unnecessary biopsies by 50% and treatment
- Higher accuracy compared to PSA, PSAD and prostate cancer risk calculator
- Can distinguish between aggressive and benign tumours in a way that PSA testing cannot
- Validated in combination with MRI and in multiple ethnicities
- Shown to detect clinically significant prostate cancers in PSA levels of 1.5–2.9 ng/ml
- Reduces healthcare costs.

Stockholm3: diagnostic patient pathway, including STKR (reflex testing to STK3 from PSA with results of >1.5)

Gender	Male
Intended age	45–74 years, not had prostate cancer, PSA > 1.5 ng/ml
Clinical data required	Age, family history of prostate cancer, previous biopsies, use of 5-alpha reductase inhibitors (Avodart [Dutasteride] or Proscar [Finasteride].
Test code STK3	2 x EDTA tubes must be received within 48 hours of sample taking. TAT up to 2 weeks
Test code STKR NEW	PSA levels of >1.5 combined with reflex testing to STK3. 1 x SST, 2 x EDTA tubes must be received within 48 hours of sample taking. TAT up to 2 weeks.

A Stockholm3 risk score of >11 is considered to be an indicator of clinically significant prostate cancer risk and referral to a urologist for further investigation is recommended.

For further information about the test please contact stockholm3@tdlpathology.com. Don't post samples to TDL as the timing for receipt of samples within 48 hours is important.

See page 102 for test information.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Biochemistry

TEST	CODE	SAMPLE REQS	TAT
5 HIAA	RU5H	**PU** (collect on acid)[1]	5 days
5' Nucleotidase	5NT	B	5 days
6-Thioguanine Nucleotides	TGN	A A	2 weeks
21 Hydroxylase Ab's	21HA	B (Frozen)	10 days
Acetylcholine Receptor Autoantibodies	ACRA	B[4]	5 days
Acid Phosphatase – Total	APT	B	5 days
Adenosine Deaminase	AD	A / B / **Fluid**	3 weeks
Adiponectin	ADIP	B	2 weeks
Albumin	ALB	B	1 day
Alcohol (Medical) [Do not use alcohol swab prior to sample taking]	ALCO	G[1]	1 day
Alcohol (Urine)	UALC	**RU**	1 day
Aldolase	ALDO	B	5 days
Alkaline Phosphatase	ALP	B	1 day
Alkaline Phosphatase Isoenzymes	APIE	B	5 days
Alpha-1-Antitrypsin (Serum)	A1AT	B	1 day
Alpha-1-Antitrypsin (Stool)	A1AF	**RF**	10 days
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z Requires patient informed consent.	GENE	A[9]	3 weeks
Alpha-1-Glycoprotein	OROS	B (Frozen)	5 days
Alpha-1-Microglobulin	A1MG	**RU**[1,22]	10 days
Alpha-2-Macroglobulins	A2MG	B	5 days
Alpha-Fetoprotein	AFP	B	1 day
ALT (Alanine Aminotransferase) (SGPT)	ALT	B	1 day
Aluminium (Blood)	ALUM	K	7 days
Amino Acid (EDTA Plasma)	AMIN	A (Frozen EDTA Plasma)	7 days
Amino Acid Quantitative (Urine)	UAAQ	**RU** (Frozen)	2-3 weeks
Aminolevulinic Acid (Urine)	RUAL	100mls **PU**	5 days
Ammonia	AMMO	A (Frozen)[15]	1 day
Amylase (Urine)	UAMY	**CU**	1 day
Amylase	AMY	B	1 day
Amylase Isoenzymes	AMYI	B	5 days
Amyloidosis (Amyloid A Protein)	SAA	B	5 days
Androstanediol Glucuronide	ANDG	B	3 weeks

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Angiotensin II	ANG2	A (Frozen plasma)	2 weeks
Angiotensin Converting Enzyme	ACE	B	1 day
Angiotensin Converting Enzyme – CSF	ACEF	**CSF** (Frozen)	2 weeks
Antimony (Urine)	ANTI	**RU** [30]	10 days
Antimullerian Hormone (AMH)	AMH	B	1 day
Samples can be taken, at any time during a patient's monthly cycle. For repeat testing and comparison, it is advisable to standardise testing to a particular time of the cycle; generally day 6 is recommended. Ambient, unspun sample stability has been validated for up to 5 days (Venous).			
AP50 Alternative Hemolytic Complement	AP50	B (Frozen)	2 weeks
Apolipoprotein A1	APOA	B	3 days
Apolipoprotein B	APOB	B	3 days
Apolipoprotein C	APOC	B	3 months
Apolipoprotein E (12 hours fasting)	APOE	B (fasting)	5 days
Arsenic (Blood)	ARS	A or H	5 days
Arsenic (Urine)	ARSE	**RU** [30]	5 days
Arylsulphatase A	ARYL	H [5,6]	8 weeks
Aspartate Transaminase (AST) (SGOT)	AST	B	1 day
Bence-Jones Protein	RBJP	**RU** or **CU**	5 days
Beta 2 Microglobulin (Serum)	B2MG	B	2 days
Beta 2 Microglobulin (Urine)	UB2M	**RU**	3 days
Beta-Glucuronidase (Sly Disease)	BGLU	H H [9,4]	8 weeks
Bicarbonate	HCO3	B	1 day
Bile Acids – Serum	BILE	B	1 day
Bilirubin (Direct)	DBIL	B	1 day
Bilirubin (Indirect)	IBIL	B	1 day
Bilirubin (Total)	BILI	B	1 day
Biotinidase	BIOT	H (Frozen plasma)[4]	3 weeks
Bismuth	BISM	B	5 days
BNP (NT-pro BNP)	BNP	B	1 day
Bone Alkaline Phosphatase	BALP	B (Frozen)	2 weeks
Bone Screen	BONE	B **CU**	1 day
Bone Screen (Bloods only)	BON2	B	1 day
BUN (Blood Urea Nitrogen) (Calculated)	BUN	B	1 day
C Reactive Protein	CRP	B	1 day
C Reactive Protein (High Sensitivity)	HCRP	B	1 day

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See page 25 for sample-taking and special handling instructions.

Biochemistry

TEST	CODE	SAMPLE REQS	TAT
C1 Esterase: Function & Total	FC1E	C C (Plasma Frozen)[4,18]	10 days
C1q Binding Immune Complex	IMCP	B	5 days
Cadmium (Blood)	CADM	A or H	5 days
Cadmium (Urine)	URCD	**RU**[30]	5 days
Caeruloplasmin	CERU	B	1 day
Calcium (24 hour Urine)	UCA	**PU** or acid urine	1 day
Calcium	CA	B	1 day
Calcium + Vitamin D	CALD	B	1 day
Calcium/Creatinine Ratio	CACR	**CU** B	1 day
Calprotectin	CALP	**QFIT** sample collection device	5 days
Calprotectin (Serum) NEW	SCAL	B	5 days
Calprotectin/QFIT Profile (Combined) (QFIT)	QCAL	**QFIT**	5 days
Carbohydrate Deficient Glycoprotein	CDG	B	2 weeks
Carbohydrate Deficient Transferrin (CDT)	CDT	B	3 days
Cardiovascular Risk Profile 1	PP10	B B	3 days
Cardiovascular Risk Profile 2	PP11	B B B C[17,34]	3 days
Chest Pain Profile	CPP	B	STAT
Chloride	CL	B	1 day
Cholesterol	CHO	B	1 day
Cholesterol (Familial Hypercholesterolaemia) Requires patient informed consent.	GENE	A A[9]	7 weeks
Cholinesterase (Serum/Pseudo)	CHPS	B	1 day
Chromium (Blood)	CHRO	A / H	5 days
Chromium (Urine)	URCR	**RU**[30]	4 weeks
Chromogranin A	CGA	B	1 week
Chromogranin A & B	MTAB	A (Frozen plasma)	3 weeks
Citrate (Blood)	CITR	B	5 days
Citrate (Urine)	UCIT	**CU** (Frozen)	5 days
CK (MB Fraction)	CKMB	B	1 day
CK Isoenzymes	CKIE	B	5 days
Cobalt (Blood)	COB	A	5 days
Cobalt (Urine)	COBA	**RU**[30]	5 days
Coenzyme Q10	CQ10	B	2 weeks
Cold Agglutinin	CAGG	**J**[1]	5 days

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Complement C1q	C1Q	B	5 days
Complement C2	C2	A (Plasma fozen within <48 hrs)	3 weeks
Complement C3	C3	B	1 day
Complement C4	C4	B	1 day
Complement C5	C5A	B	2 weeks
Complement Factor H	FACH	B	3 weeks
Copper (Serum)	COPP	B or K	5 days
Copper (Urine) Non-acidified 24 hr urine collection.	URCU	**CU**	5 days
Cortisol Binding Globulin	CBG	B (Frozen)	1 month
Cotinine (Urine)	COTT	**RU**	2 days
Creatine Kinase (CK, CPK)	CKNA	B	1 day
Creatinine (including eGFR)	CREA	B	1 day
Creatinine (Urine)	UCR	**CU**	1 day
Creatinine Clearance	CRCL	B **CU**	1 day
Crosslaps (Serum DPD)	SDPD	B (Freeze within 8 hours)	4 days
Cryoglobulins	CRYO	**J** [6]	10 days
Cyclosporin	CYCL	A	1 day
Cystatin C	CYCC	B	5 days
Cystine – Quantitative (Beta-CTX)	QCYS	**PU**	5 days
Deoxypyridinoline (DPD) – Serum	SDPD	B (Freeze within 24 hours)	4 days
Deoxypyridinoline (DPD) – Urine	DPD	**EMU**	4 days
Diabetic Profile 1 Please clearly state fasting or non-fasting status.	DIAB	A G	1 day
Diabetic Profile 2 Please clearly state fasting or non-fasting status.	DIA2	A G **RU**	2 days
Diamine Oxidase Activity	DIAM	B	2 weeks
Elastase (RF)	ELAS	**RF**	5 days
Electrolytes	ELEC	B	1 day
Electrolytes (Urine)	UELE	**CU**	1 day
ELF/Enhanced Liver Fibrosis	ELF	B	5 days
Eosinophil Cationic Protein	ECP	B	7 days
Erythropoietin	ERY	B	4 days
Faecal Fat (1 day collection)	TFFA	**LF** [6]	5 days

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Faecal Fat (3 day)	FFAT	**LF** [6]	5 days
Faecal Lactoferrin	FLAC	**RF**	5 days
Faecal Sugar Chromatography	FCRO	**RF** (Frozen)	3 weeks
Ferritin	FERR	B	1 day
Fibrotest (Liver Fibrosis)	FIBT	B	2 weeks
Fluoride (Urine)	UFL	**RU**	5 days
Folate (Red Cell) Requires its own EDTA tube, if other tests require EDTA an extra EDTA sample should be taken for RBCF.	RBCF	A	2 days
Folate (Serum)	FOLA	B	1 day
Free Fatty Acids	FFA	B (Frozen) [1]	10 days
Fructosamine	FRUC	B	1 day
Galactose-1-Phosphate Uridyltransferase	GAL1	H [5,6]	2 weeks
Galactosidase – Alpha* *Sample must reach TDL Referrals Dept. urgently, to be tested within 24 hours of collection. Monday–Thursday only. Referrals to send Immediately.	GALA	J*	6 weeks
Gall Stone Analysis	RSTA	**STONE**	10 days
Gamma GT	GGT	B	1 day
Gastrin Sample to be spun, separate and freeze serum immediately.	GAST	B (Frozen serum)	5 days
Globulin (Calculated)	GLOB	B	1 day
Glucagon	GLUG	A (Plasma)	10 days
Glucose Please clearly state fasting or non-fasting status.	RBG	G	1 day
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days
Haemosiderin (Urine)	HSID	**EMU**	2 weeks
Haptoglobin	HAPT	B	5 days
HbA1c	GHB	A	1 day
HDL Cholesterol	HDL	B	1 day
Homocysteine (Quantitative)	HOMO	B or A (Plasma) [17]	1 day
Homocysteine (Urine)	HCYS	**CU**	2 weeks
Homovanillic Acid (HVA)	HVA	**PU**	5 days
Hyaluronic Acid	AHT	B	1 week
Hydroxybutyrate Dehydrogenase	HBD	B (Frozen)	1 week
Hydroxyprolene	UHYD	**CU**	2 weeks
IgG Subclasses	IGSC	B	5 days

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Immunoglobulin A	IGA	B	1 day
Immunoglobulin D	IGD	B	5 days
Immunoglobulin E – Total	IGE	B	1 day
Immunoglobulin G	IGG	B	1 day
Immunoglobulin M	IGM	B	1 day
Immunoglobulins (IgG, IgM, IgA)	IMM	B	1 day
Iodide – Urine	UIOD	**RU**	1 week
Iodine – Serum	IODI	B	1 week
Ionised Calcium	ICPA	B	5 days
Iron (TIBC included)	FE	B	1 day
Iron Overload Profile	IOP	A B [9]	3 days
Iron Status Profile	ISP	B	1 day
Lactate (Plasma)	LACT	G [16]	1 day
Lactate Dehydrogenase (LDH)	LDH	B	1 day
Lactate Pyruvate Ratio	LPR	**J** [1]	4-6 weeks
Lactose Tolerance Test Collection timings: 1 each at 0, 15, 30, 45, 60, 90 and 120 mins (post-50g Lactose). Lactose dose, calculated for paediatric patients (1g/kg in body weight) up to 50g: 7 separate samples, 7 time points.	LTT	7 x G	1 day
LDL7 Subfractions	LDL7	B	10 days
Lead (Blood)	LEAD	A	5 days
Lead (Urine)	URPB	**RU**	5 days
Leptin	LEPT	B (height & weight required) [19]	5 days
Lipase	LIPA	B	1 day
Lipid Profile	LIPP	B	1 day
Lipoprotein (a)	LPOA	B	1 day
Lipoprotein Electrophoresis	LEL	B	5 days
Lithium (take 12 hours after dose)	LITH	B	1 day
Liver Fibrosis (Enhanced Liver Fibrosis ELF)	ELF	B	5 days
Liver Fibrosis Fibrotest	FIBT	B	2 weeks
Liver Function Tests	LFT	B	1 day
Lp-PLA2 (PLAC) Test	PLA2	B	2 days
Lysosomal Enzyme Screen	LE	**J** [1]	2 months
Lysozyme	LYSO	B	5 days
Magnesium (Serum)	MG	B	1 day

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Magnesium (Urine)	URMG	**PU**	1 day
Manganese (Serum)	MANG	B	5 days
Mercury (Blood)	MERC	A or H	5 days
Mercury (Urine)	URHG	**RU** [1]	5 days
Methaqualone	METQ	**RU**	5 days
Methylmalonic Acid – Serum	MMAS	B	5 days
Methylmalonic Acid – Urine	MMA	**CU**	2 weeks
Mucopolysaccharides	MPS	**RU** (Frozen)	3 weeks
Myeloma Screen Please clearly state fasting or non-fasting status.	MYEL	A A B G	5 days
Myoglobin (Serum)	SMYO	B	1 day
Myoglobin (Urine)	UMYO	**RU**	5-10 days
Newborn Screening Panel	GUTH	**J** [1]	2 weeks
Nickel (Serum)	NICK	B	5 days
Nickel (Urine) Random early morning urine sample is preferable.	NICU	**RU**	4 weeks
Oligosaccharides	UOLI	**RU**	6 weeks
Orosomucoid (A1AG – Alpha 1 Glycoprotein)	OROS	B (Frozen)	5 days
Osmolality (Serum)	OSMO	B	1 day
Osmolality (Urine)	ROSM	**RU**	1 day
Osteoporosis Screen	OPS	B B	4 days
Oxalate (Plasma) Stability and storage conditions: Must be separated within 2 hours of venepuncture and immediately frozen (–20°C). The sample must be maintained frozen (on dry ice) during transportation to the laboratory. This precaution is necessary to prevent in vitro generation of oxalate from its precursors such as ascorbate and glyoxylate.	POXA	A (Frozen)	7 days
Oxalate (Urine)	UOXA	**PU**	5 days
Pancreatic Peptide	PP	**J**	4 weeks
Parathyroid Related Peptide	PTRP	2ml A Plasma frozen (Freeze immediately) [1]	2 weeks
PEth (Phosphatidylethanol)	PETH	A	5-7 days
Phencyclidine (PCP)	DUST	**RU**	5 days
Phosphate	PHOS	B	1 day
Phosphate (24 hour Urine)	UPH	**PU**	1 day
PLAC Test (Lp-PLA2)	PLA2	B	2 days
Plasminogen	PLAS	C (Frozen plasma) [4]	5 days
Plasminogen Activator Inhibitor – 1	PAI1	C (Frozen plasma)	2 weeks

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Porphyrin (Blood)	PORP	A [3]	15 days
Porphyrin (Stool)	FPOR	**RF** [3]	3 weeks
Porphyrin (Urine)	RPOR	**RU** [3]	3 weeks
Porphyrin Full Screen (Total: Urine, Stool, Blood)	PORS	A **RU**, **RF** [3]	3 weeks
Potassium	K	B	1 day
Prealbumin	PALB	B	3 days
Pregnancy (Serum) [Quantitative]	QHCG	B	1 day
Procalcitonin	PCAL	B (Frozen) [4,7]	1 day
Procollagen 1 Peptide N-Terminal (NTX)	P1NP	B	5 days
Procollagen 3 Peptide	PRCO	B	5 days
Propoxyphene	DPRO	**RU**	5 days
Prostatic Acid Phosphatase	PACP	B (Frozen)	3 days
Protein (Urine)	UPRT	**CU**	1 day
Protein 14.3.3 (Creutzfeldt–Jakob Disease)	CJD	**J**	5 weeks
Protein Electrophoresis incl. immunoglobulin	PRTE	B	5 days
Protein Total (Blood)	PROT	B	1 day
Protein/Creatinine Ratio (Urine)	UCPR	**RU**	1 day
QFIT/Calprotectin Profile (Combined) (QFIT)	QCAL	**QFIT**	5 days
Quantitative Faecal Immunochemical Test (QFIT)	QFIT	**QFIT**	1 day
Renal Calculi Screen (Metabolic)	RSPR	**J** [6]	5 days
Renal Stone Analysis	RSTA	**STONE**	10 days
Retinol Binding Protein	RBP	B	3 days
Salicylates	SALI	B	1 day
Selenium (Serum)	SELE	B	4 days
Serum Free Light Chains	SLC	B	5 days
Silver (Blood)	SILV	B	5 days
Silver (Urine)	USIL	**RU**	5 days
Sodium	NA	B	1 day
Superoxide Dismutase	SODI	A / H	5 days
Thiopurine Methyl Transferase	TPMT	A [5]	5 days
Tissue Polypeptide Antigen	TPA	B	1 week
Total Acid Phosphatase	APT	B	5 days
Total Bile Acid/Bile Salts	BILS	B	1 week

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Total IgE	IGE	B	1 day
Transferrin	TRAN	B	1 day
Transferrin Electrophoresis	TREL	B	2 weeks
Triglycerides	TRI	B	1 day
Trimethylaminuria (Fish Odour Syndrome)	FOS	**J**	6 weeks
Troponin I (High sensitive)	TROC	B	1 day
Troponin T (High sensitive)	TROT	B	1 day
Tryptase	STRY	B	2 days
Tumour Necrosis Factor – Alpha	TNF	B (Frozen)[4]	2 weeks
Urate (Uric acid)	UA	B	1 day
Urea	UREA	B	1 day
Urea (Urine)	UURE	**CU**	1 day
Urea and Electrolytes	U/E	B	1 day
Uric Acid (Serum)	UA	B	1 day
Uric Acid (Urine)	UURI	**CU**	1 day
Urinary Bladder Cancer Antigen ** It is recommended to collect mid-stream urine. Do not use first morning urine. Collection of urine specimen before any surgical intervention or treatment or 1–2 weeks after specimen shall not be collected with an instrument e.g. catheter.	UBC	**RU** (Freeze within 48 hours)**	5 days
Urine Microalbumin/Creatinine Ratio	UMA	**RU**	1 day
Urine Organic Acids	UORG	**RU** (Frozen)	3 weeks
Urine Steroid Screen (Steroid Hormones)	USTE	**CU**[9]	2 weeks
Urine Sugar Chromatography	UCRO	**RU** (Frozen)	3 weeks
Very Long Chain Fatty Acids	VLCF	A or H (Frozen)[9]	4-6 weeks
Vitamin B12 (Active)	B12	B	2 days
Vitamin B12 (Active)/Red Cell Folate	B12F	A B	2 days
Vitamin B12 (Total)	TB12	B	1 day
Vitamin D (25-OH)	VITD	B	1 day
VLDL Cholesterol	VLDL	B	1 week
VMA	UVMA	**PU**[1]	5 days

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Bone Screen

Calcium (24 hour urine)
Phosphate (24 hour urine)
Alkaline Phosphatase
Protein Total (Blood)
Albumin
Globulin
Calcium

TAT: 1 day

BONE

B **CU**

Bone Screen (Bloods only)

Urea and Electrolytes
Liver Function Tests (LFTs)
Calcium
Phosphate
Vitamin D (25-OH)

TAT: 1 day

BON2

B

Cardiovascular Risk Profile 1

Lipid Profile
Apolipoprotein A1
Apolipoprotein B
ApoA/ApoB Ratio
Lipoprotein (a)
C Reactive Protein (High Sensitivity)
Lp-PLA2 (PLAC) Test

TAT: 3 days

PP10

B B

Cardiovascular Risk Profile 2

Lipid Profile
Apolipoprotein A1
Apolipoprotein B
ApoA/ApoB Ratio
Lipoprotein (a)
Fibrinogen
C Reactive Protein (High Sensitivity)
Lp-PLA2 (PLAC) Test
Homocysteine (Quantitative)

TAT: 3 days

PP11

B B B C [17, 34]

Chest Pain Profile

Myoglobin (Serum)
CK (MB Fraction)
Troponin T (High sensitive)

TAT: STAT

CPP

B

Calprotectin/QFIT Profile (Combined)

Calprotectin

Quantitative Faecal Immunochemical Test (QFIT)

If CALP < 50ug/g then the below comment will be appended:

Calprotectin: < 50 ug/g- Not indicative of GI inflammation. Consider IBS, or quiescent IBD if this is a known patient.

TAT: 5 days

QCAL

QFIT

Diabetic Profile 1

Glucose
HbA1c

Please clearly state fasting or non-fasting status

TAT: 1 day

DIAB

A G

Diabetic Profile 2

Glucose
HbA1c
Microalbumin

Please clearly state fasting or non-fasting status

TAT: 2 days

DIA2

A G **RU**

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Iron Overload Profile

Iron (TIBC included)
Ferritin
Transferrin Saturation
Haemochromatosis C282Y, H63D

TAT: 3 days

IOP

A B [9]

Iron Status Profile

Iron (TIBC included)
Ferritin
Transferrin Saturation

TAT: 1 day

ISP

B

Lipid Profile

Triglycerides
Cholesterol
HDL Cholesterol
LDL Cholesterol (Calculated)
Non-HDL Cholesterol

TAT: 1 day

LIPP

B

Liver Function Tests

ALT (Alanine Aminotransferase) (SGPT)
Aspartate Transaminase (AST) (SGOT)
Bilirubin (Total)
Total Protein
Alkaline Phosphatase
Albumin
Globulin
Gamma GT

TAT: 1 day

LFT

B

Myeloma Screen

Full Blood Count (FBC)
ESR
Plasma Viscosity
Biochemistry Profile
Protein Electrophoresis
Immunoglobulins (IgA, IgG, IgM)
Serum Free Light Chains

Please clearly state fasting or non-fasting status

TAT: 5 days

MYEL

A A B G

Osteoporosis Screen

Alkaline Phosphatase
Calcium
Albumin
Phosphate
Crosslaps (Serum DPD)
Vitamin D (25 OH)

TAT: 4 days

OPS

B B

Porphyrin Full Screen (Total: Blood, Stool, Urine)

Porphyrin Blood
Porphyrin Stool
Porphyrin Urine

TAT: 3 weeks

PORS

A **RU, RF** [3]

Urea and Electrolytes

Sodium
Potassium
Chloride
Bicarbonate
Urea
Creatinine

TAT: 1 day

U/E

B

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Haematology

All citrate samples (C) sent by post or with an overnight delay must be double spun and sent frozen.

TEST	CODE	SAMPLE REQS	TAT
Anaemia Profile	ANAE	(A)(A)(B)	2 days
Antenatal Profile	ANTE	(A)(A) 33 (B)(B)(B)(G)	3 days
APTT/KCCT	KCCT	(C) 18	1 day
Atypical Antibody Screen (handwritten tube label)	AASC	(A) 22,33	2 days
Blood Film Examination	FILM	(A)	1 day
Blood Group †	ABO	(A) 22,33	2 days
† The tube's own label must be completed by hand. This must correspond with same name and date of birth details as given on the request form. Do not affix additional computerised or hand written labels.			
Carboxyhaemoglobin	CBHB	(A)	1 week
Coagulation Profile 1	CLPF	(C) 18	1 day
Coagulation Profile 2	CLOT	(A)(C) 18	1 day
D-Dimers (Fibrinogen Degradation Products)	DDIT	(C) 4	1 day
DVT/Pre-travel Screen	DVT1	(A)(A)(B) 9	5 days
ESR	ESR	(A)	1 day
Fibrinogen	FIB	(C) 4,18	1 day
Full Blood Count	FBC	(A)	1 day
Glandular Fever	PAUL	(A) or (B)	1 day
Haematology Profile	PP3	(A)	1 day
Haemoglobin	HB	(A)	1 day
Immune Function Evaluation (Total)	TIE	(A) + (B) 5,10	7 days
INR	PTIM	(C) 18	1 day
Lymphocyte Subsets (CD3/CD4/CD8)	LYSS	(A)	1 day
Malarial Parasites	MALP	(A) 4,9,14	STAT
Malarial Parasites (visa, non-urgent)	MP48	(A)	2 days
Mean Cell Volume (MCV)	MCV	(A)	1 day
Microfilaria Blood Film	MICF	(A)	STAT
Natural Killer Profile 2	NKP2	(A) 10	2 days
PAI-1 4G/5G Polymorphism	PAIP	(A) *	10 days
Paul Bunnell (Monospot)	PAUL	(A) or (B)	1 day
Pre-Travel Screen (DVT)	DVT1	(A)(A)(B) 9	5 days
Prothrombin Time	PTIM	(C) 18	1 day

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Haematology

TEST	CODE	SAMPLE REQS	TAT
Recurrent Miscarriage Profile (female)	RMP	A A B C C C H [9,18]	21 days
Reticulocyte Count	RETC	A	1 day
Thrombin Time	THRO	C [18]	1 day

Special Haemostasis

TEST	CODE	SAMPLE REQS	TAT
Activated Protein C Resistance	APCR	C (Frozen) [4,18]	3 days
ADAMTS-13 Activity	CP13	C (Frozen) [4,18]	3 days
ADAMTS-13 Antibody	A13A	C (Frozen) [9,18]	2 weeks
Anti-Xa Apixaban Monitoring * Please state drug and time of dose on request.	APIX	C (Frozen)* [18]	3 days
Anti-Xa Edoxaban Monitoring *Please state drug and time of dose on request.	EDOX	C (Frozen)* [18]	3 days
Anti-Xa Fondapariux Monitoring * Please state drug and time of dose on request.	FOND	C Frozen)* [18]	3 days
Anti-Xa LMWH Monitoring * Please state drug and time of dose on request.	LMWX	C (Frozen)* [18]	3 days
Anti-Xa Rivaroxaban Monitoring * Please state drug and time of dose on request.	RIVA	C (Frozen)* [18]	3 days
Antithrombin III Activity	A111	C (Frozen) [4,9,18]	3 days
Factor II Assay	FAC2	C (Frozen) [9,18]	5 days
Factor V Assay	FAC5	C (Frozen) [9,18]	5 days
Factor VII Assay	FAC7	C (Frozen) [9,18]	5 days
Factor VIII Assay	FAC8	C (Frozen) [9,18]	5 days
Factor VIII Inhibiting Antibody	F8IA	C C [18]	2 weeks
Factor IX Assay	F1X	C (Frozen) [9,18]	5 days
Factor IX Inhibiting Antibody	F9IA	C C [18]	2 weeks
Factor X Assay	FX	C (Frozen) [9,18]	5 days
Factor XI Assay	FX1	C (Frozen) [9,18]	5 days
Factor XII Assay	FX11	C (Frozen) [9,18]	5 days
Factor XIII Assay	FA13	C (Frozen) [9,18]	5 days
FXIII A Subunit	F13S	C (Frozen) [9,18]	14 days
Hughes Syndrome	LUPA	B C C [4,18]	2 days
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C C [4,18]	2 days

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Haematology

TEST	CODE	SAMPLE REQS	TAT
Lupus Anticoagulant only	LUPC	C C [9,18]	2 days
Miscarriage/Thrombophilia Screen	PROP	A A B C C C [18]	5 days
P2Y12 Receptor Platelet Function Analysis (Functional Clopidogrel Resistance Test) ** Samples for testing by prior arrangement only with Haemostasis laboratory, contact UCLH.Haemostasis@tdlpathology.com	P2Y	C C C (Whole blood)**[1]	1 day
Platelet Aggregation Studies **Samples not processed at Halo, contact haemostasis lab on UCLH. Haemostasis@tdlpathology.com. Please contact Haemostasis laboratory prior to arranging patient appointment. Platelet aggregation studies are not processed without prior arrangement.	PLAG	J**[9]	3 days
Platelet Function Test Screen – PFA-100/200 ** Samples for testing by prior arrangement only with Haemostasis laboratory, contact UCLH.Haemostasis@tdlpathology.com	PFAT	J**[1]	1 day
Protein C Activity	PRC	C (Frozen)[4,9,18]	3 days
Protein S Activity	PS1	C (Frozen)[4,9,18]	5 days
Protein S Free Ag	FPRS	C (Frozen)[4,9,18]	3 days
Taipan Snake Venom Time	TTVT	C C [9,18]	2-3 weeks
Thrombophilia Screen	PROP	A A B C C C [18]	5 days
Viscosity (Plasma) *EDTA plasma must be separated within 24 hours of collection and sent at room temperature.	VISC	A *[4]	3 days
Von Willebrand Profile	FVWF	C C C [4,9,12]	5 days
Von Willebrands Multimers	VWM	C C C [18]	3 months

Special Haematology

TEST	CODE	SAMPLE REQS	TAT
Coombs (Direct Antiglobulin Test)	COOM	A	2 days
Eosin-5 Maleimide Dye binding test for Hereditary spherocytosis (EMA)* *Sample to be received by laboratory within 24 hours of being taken and the test is done Tuesday to Thursday (test must be performed within 48 hours of sample being taken.	EMA	A	2 days
G6PD	G6PD	A	4 days
Haemoglobin Electrophoresis	HBEL	A	4 days
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days
Thalassaemia Screen	HBEL	A	4 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Flow Cytometry

TEST	CODE	SAMPLE REQS	TAT
Bone Marrow (Aspirate)	**BMAS**	**J** [1,9]	14 days
CD3/CD4/CD8	**LYSS**	A	1 day
CD16	**CD16**	A [4]	1 day
CD19 B Cells	**CD19**	A [4]	1 day
CD25	**CD25**	A [10]	2 days
CD56	**CD56**	A [4]	1 day
CD57	**CD57**	A	1 day
Leukaemia Immunophenotyping	**LYPT**	A [4,5]	5 days
Paroxymal Nocturnal Haemoglobinuria	**PNH**	A (Whole blood)	1-2 weeks

Anaemia Profile

Full Blood Count (FBC)
ESR
Iron (TIBC included)
Ferritin
Vitamin B12 (Active)
Folate (RBC)

TAT: 2 days

ANAE

A A B

Antenatal Profile

Full Blood Count (FBC)
Blood Group and Rh Type
Atypical Antibody Screen
Haemoglobin Electrophoresis
Syphilis IgG/IgM
Glucose
Free T4 / TSH
Rubella Antibody (IgG)
Toxoplasma Antibodies (IgG, IgM)
Cytomegalovirus (IgG/IgM) Antibodies
Hepatitis B Surface Antigen
Hepatitis C Antibodies
Varicella Zoster Antibodies (IgG)
HIV 1 & 2 Abs

Please ensure the blood group (EDTA) tube label is handwritten. Do not affix a secondary label.

TAT: 3 days

ANTE

A A [33] B B B G

Coagulation Profile 1

Prothrombin Time
APTT/KCCT
Fibrinogen

TAT: 1 day

CLPF

C [18]

Coagulation Profile 2

Full Blood Count (FBC)
Prothrombin Time
APTT/KCCT
Fibrinogen

TAT: 1 day

CLOT

A C [18]

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DVT/Pre-travel Screen

Full Blood Count (FBC)
Factor II Prothrombin – G20210A Variant
Factor V Leiden – G1691A Variant
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

DVT1

A A B [9]

Haematology Profile

Full Blood Count (FBC)
ESR

TAT: 1 day

PP3

A

Miscarriage/ Thrombophilia Screen

Full Blood Count (FBC)
Coagulation Profile 1
Antithrombin III
Factor V Leiden – G1691A Variant
Factor II Prothrombin – G20210A Variant
MTHFR – common C677T + A1298C variants
Lupus Anticoagulant
Protein C
Free Protein S Ag
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

PROP

A A B C C C [18]

Natural Killer Profile 2

CD3
CD4
CD8
CD16/CD56
CD19

TAT: 2 days

NKP2

A [10]

Pre-Travel Screen (DVT)

Full Blood Count (FBC)
Factor II Prothrombin – G20210A Variant
Factor V Leiden – G1691A Variant
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

DVT1

A A B [9]

Recurrent Miscarriage Profile (female)

Full Blood Count (FBC)
Coagulation Profile
Antithrombin III
Factor V Leiden Common Variant
Factor II Prothrombin Common Variant
MTHFR Common Variants
Fibrinogen
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs
Chromosome Analysis

Please request Partner's Chromosome Analysis using a separate request form.

TAT: 21 days

RMP

A A B C C C H [9,18]

Von Willebrand Profile

Von Willebrand Factor
Von Willebrand Activity (GPIbM assay)
Factor VIII Assay

TAT: 5 days

FVWF

C C C [4,9,12]

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Infection Sciences

TEST	CODE	SAMPLE REQS	TAT
16S rRNA Bacterial Gene	16S	**J**	1 week
18S rRNA Fungal Gene	18S	**J**	1 week
Beta D Glucan	XBDG	(B)	3 days
Blood Culture#	BCUL	2 x **BC** [4]	6 days +
# Please contact Phlebotomy at Patient Reception 020 7307 7383 for further details, as needed. Blood cultures must be taken prior to any other blood samples. The aerobic bottle must be collected first, followed by the anaerobic bottle. Each bottle should be filled with 8-10 ml of blood, use the markings on the bottles to achieve this. • Other bloods can be collected but must be collected after the blood cultures. • Bottles must be labelled with the patient's identification details. • Bottles and Request Form need to give the time taken and the body site that the blood was taken from. Ensure that the bottle barcodes are not obscured when adding patient labels. • Send the blood cultures to the laboratory without delay.			
Candida (Culture for ID + Sensitivities)	CANC	**STM/CS**	2-4 days
Candida (Culture for ID Only)	CAND	**STM/CS**	2-4 days
Candida auris Screen	CANS	**STM/CS**	2-4 days
Carbapenemase producing organism screen ‡ Presumptive positive isolates will be sent to the UKHSA reference laboratory for confirmation.	MDR	**STM** (rectal)	4-5 days ‡
Clostridium Difficile Toxin by PCR * Not performed on formed stool specimens.	CLOS	**RF***	2 days
Cryptococcal Antigen	CRYC	**Serum** or **CSF**	1 day
Cryptosporidium	OCP	**RF**	2 days
CSF for Microscopy and Culture	CSF	1.5ml **CSF**	1-3 days
Fluid Culture Specify sample site and sterility of sample collection.	FLUD	**SC**	2-7 days
Fungal investigations (non-superficial extended culture) Please send in a dermaPak where possible.	FUN	All specimens other than Skin, Hair and Nails	3-21 days
Fungal investigations (superficial/ dermatophyte PCR test)	DERM	Skin, Hair, Nails	3-7 days
Galactomanan (Aspergillus Antigen)	SGAL	(B)	2 weeks
Gonorrhoea Culture – Cervix ‡ ‡ ‡ The optimal sample type from the female genital tract is an endocervical swab. Gonorrhoea does not survive well outside the endocervical epithelium; a negative gonorrhoea culture result from a vaginal swab is not reliable for excluding infection.	GONC	**CS**‡‡‡	3-5 days
Gonorrhoea Culture – Rectal	GONR	**CS**	3-5 days
Gonorrhoea Culture – Throat	GONT	**CS**	3-5 days
Gonorrhoea Culture – Urethral	GONU	**CS**	3-5 days
Gonorrhoea Culture – Other site	GONO	**CS**	3-5 days
Group B Strep – Vaginal and Rectal (STM)	GBSX	2 x **STM**	3-5 days
H. pylori Antigen – Stool (RF)	HBAG	**RF**	3 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

TEST	CODE	SAMPLE REQS	TAT
H. pylori Culture	HPCU	**J**	1 month
Histoplasma Antigen Fresh urine less than 24 hours, directly to Mycology.	HANT	**RU**	3 days
HVS	HVS	**STM / CS**	2-4 days
IUCD for Culture	IUCD	Send Device	11-12 days
Legionella Urine Antigen	LEGA	Urine with boric acid	1 day
MRSA (Rapid PCR) one swab per site	MRSA	Blue liquid Amies swab	1 day
MRSA (Rapid PCR) one swab per site x 2	MRS2	Blue liquid Amies swab x 2	1 day
MRSA Culture one swab per site	MRSW	Blue liquid Amies swab	2 days
MRSA Culture one swab per site x 2	MRW2	Blue liquid Amies swab x 2	2 days
Pleural Fluid for Culture	FLUP	**SC**	7 days
Pneumococcal Antigen	PNAG	**RU**	1 day
Pneumocystis jiroveci (PJP) PCR ‡ ‡ BAL: Induced sputum or bronchoalveolar larage.	MPCP	**SC BAL**‡‡	2-3 days
Rapid Strep PCR (incl. m/c/s) ** Do not use a black swab for RAPS. Use Blue only. Rapid PCR is reported within 4 hours with full culture to follow.	RAPS	Blue liquid Amies swab**	1-3 days**
Schistosoma (Urine)	USCH	Mid-morning terminal urine following exercise[14]	1-2 days
Sellotape Test *** Use clear Sellotape only and attach to slide.	SELL	Send Sample***	1 day
Semen Culture	SPCU	**Semen**	2-4 days
Skin Scrapings/Mycology by PCR	DERM	Send Sample	3-7 days
Sputum for Routine Culture	SPU1	**SC**	2-4 days
Sputum for TB Culture (AFB)	SPU2	**SC**	up to 8 weeks
Stool for OCP and Culture by PCR † † Please provide relevant travel history. If travel history is not provided, stool will be investigated for endemic pathogens only [Campylobacter, Salmonella, Shigella, Shigatoxin-producing E coli (VTEC), Cryptosporidium and Giardia]. Unless relevant clinical details are provided MOCP will not be done.	PENT	**RF**††	2-3 days
Stool for OVA Cysts & Parasites by Microscopy	MOCP	**RF**	2 days
Stool Reducing Substances	STRS	**RF**[7]	2-3 weeks
Swab (Cervical)	CERS	**STM / CS**	2-4 days
Swab (Ear) Includes fungal culture over 7 days.	EARS	**STM**	2-4 days (Culture) 8-9 days (Fungal) – same swab

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Infection Sciences

TEST	CODE	SAMPLE REQS	TAT
Swab (Eye)	EYES	**STM**	2-4 days
Swab (Nasal)	NASS	**STM**	2-4 days
Swab (Oral)	ORSW	**STM/CS**	2-4 days
Swab (Penile)	PENS	**STM/CS**	2-4 days
Swab (Skin) Specify sample site swab taken from.	SKIS	**STM**	2-4 days
Swab (Throat)	THRS	**STM**	2-4 days
Swab (Urethral)	URES	**STM/CS**	2-4 days
Swab (Vaginal)	VAGS	**STM/CS**	2-4 days
Swab (Vulval)	VULV	**STM/CS**	2-4 days
Swab (Wound) Specify sample site.	WOUS	**STM**	2-4 days
Synovial Fluid (for microscopy, crystals and culture) † † † If prosthetic joint is present please state in clinical details to ensure that enrichment culture is prolonged for 14 days.	FLU2	**SC** †††	14 days
TB (Pleural Fluid)	TBCU	**SC**	up to 8 weeks
TB Culture	SPU2	**SC**	up to 8 weeks
TB Culture (Urine)	TBUR	3 x **EMU**	up to 8 weeks
TB PCR (PCR detection of Mycobacterium tuberculosis complex and mutations for Rifampicin resistance) This test is automatically added if the direct auramine microscopy is positive on AFB culture requests and no known previous history.	TBPC	All samples except blood cultures and urine, as clinically requested.	1 day
TB Slopes – Confirmation and Sensitivity	TBSL	**TB slope** (LJ medium-green)[6]	up to 8 weeks
Tissue for culture Specify sample site.	TISS	**Tissue sample**	up to 14 days
Urine for Extended Culture † † † † Optimal sample type for urine culture is a mid-stream clean catch urine sent in a sterile pot containing boric acid preservative. Testing must be done within 24 hours due to stability.	UCXD	**MSU** ††††	up to 7 days
Urine for Microscopy and Culture † † † † Optimal sample type for urine culture is a mid-stream clean catch urine sent in a sterile pot containing boric acid preservative.	UCEM	**MSU** ††††	1-2 days
Urine Microscopy/Analysis	UMIC	**RU**	1 day

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Urine culture processing and results

All urine culture testing is performed using manual methods. The culture pathway adheres to national guidance and is a fully UKAS-accredited method.

Manual testing allows a larger amount of urine to be tested than previous automated method, which enables the laboratory to detect lower bacterial counts (as low as 103 cfu/mL) and also facilitates the follow up of significant organisms grown from mixed cultures.

If the culture result is indicative of urinary tract infection, antibiotic susceptibilities will be tested from the culture growth and will be available 24 hours after the culture result. 'Direct sensitivities' are no longer performed. Direct susceptibility testing is not inoculum-controlled, produces inaccurate results and is not UKAS-accredited.

Culture results should be interpreted alongside the microscopy WBC count and clinical signs and symptoms. Significant growth on culture in the absence of pyuria may be suggestive of contamination with regional flora rather than true infection. It should be noted, however, that WBC degrade in urine quite rapidly and delays between sample collection and microscopy may lead to falsely low WBC readings which may account for these findings.

What does the result 'No significant growth' mean?

The amount of growth falls below the threshold for urinary tract infection (< 103 cfu/mL). There is no laboratory evidence of urinary tract infection. Occasionally, this may be seen in very early stages of infection or in a partially treated urinary tract infection. Therefore, please send a repeat specimen if symptoms persist.

What does the result 'mixed growth doubtful significance' mean?

This means that the culture revealed a heavy growth of at least 3 organisms with no predominating organism; this represents contamination of the urine with the patient's flora during collection.

This result does not exclude urinary tract infection but it is not possible to determine the causative organism among the mixture of organisms.

If symptoms persist, please send a repeat urine specimen and ensure that patient understands optimal collection technique.

If you are receiving a lot of 'mixed growth of doubtful significance' results, please consider the following:

- **The instructions that patients are given to collect their urine sample**
  Poor collection technique is the most common reason for a heavily mixed growth in a urine sample. It is almost impossible to collect a urine sample without any contamination from the normal bacterial flora which inhabits the area surrounding the urethral opening, but optimal collection technique will minimise this contamination and allow the true infective cause to stand out and be identified (a patient instruction leaflet is available).
- **Delays between sample collection and laboratory processing**
  The time between sample collection and laboratory processing can allow small amounts of contaminating bacterial flora to multiply up to higher amounts prior to laboratory testing, which can result in heavy mixed growth of bacteria on culture. Using a red topped specimen pot containing boric acid preservative will minimise this.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

If, despite these measures, a patient has recurrent mixed growth reports from multiple urines, it may suggest that your patient has abnormal urinary tract architecture, immunosuppression or other non-infective cause that requires different laboratory investigations or referral to a specialist. If further information is required, please telephone the laboratory and ask to discuss the case with one of our consultant Microbiologists.

Red topped boric acid containers

The preservative reduces the overgrowth of organisms and, to a lesser extent, reduces the degradation of white cells during transit leading to a more accurate laboratory result for both microscopy and culture. UKAS recommends the use of boric acid containers for all urine sample for microscopy and culture (Urine M,C&S) to improve the quality of microbiological results.

Red topped boric acid containers are for requests for urine microscopy and culture (MC&S) ONLY. Boric acid container should NOT be used for:

- Other urine microbiology tests (e.g. investigations for Chlamydia, Mycobacterium, Schistosomiasis, urinary antigen testing)
- Urine samples being analysed by PCR methodology
- Urine samples for non-microbiology tests (e.g. biochemistry, virology, pregnancy testing)
- Very small urine volumes (<20ml) e.g. neonates

Use of urinary dipsticks: boric acid may inhibit leukocyte esterase dipstick readings; dipstick testing performed on a sample in a boric acid container should be interpreted with caution.

If additional tests are required in addition to urine microscopy and culture, an additional sample in a white-topped universal container should be sent. In this case, it is advised that the mid-stream clean catch urine is collected in a sterile bowl and then transferred to the necessary specimen containers.

Group B Streptococcus (GBS)

Group B Streptococcus (GBS or group B Strep) is the most common cause of severe infection in newborn babies, and of meningitis in babies under age 3 months. On average in the UK:

- 2 babies a day develop group B strep infection
- 1 baby a week dies from group B strep infection
- 1 baby a week survives group B strep infection with long term disability

Most GBS infection is of early onset, presenting in babies within the first 6 days of life, and usually within the first 12 hours after birth. Between age 7 days and 3 months, these infections are rare, and in babies over 3 months they are very rare indeed.

Most early-onset GBS infections (in babies aged 0-6 days) can be prevented by giving intravenous antibiotics in labour to women whose babies are at raised risk of developing GBS infection. In the UK, women are offered IV antibiotics in labour based on specific risk factors.

GBS is normal flora of the distal GI tract. Up to 30% of women carry it harmlessly in their vaginal tract. Vaginal carriage at the time of vaginal delivery can result in transmission of GBS to baby. Babies are more vulnerable to infection as their immature immune systems cannot fight off the multiplying bacteria. If untreated, GBS can cause serious infections, such as meningitis and septicaemia, which may lead to stillbirths, and newborn and infant deaths. If they survive, babies can develop permanent problems including hearing or vision loss, or cerebral palsy.

Current GBS prevention focuses on giving intravenous antibiotics to women in labour, aiming to reduce disease in infants at delivery. 2 x **Blue culture swabs** (lower vaginal and lower rectal) should ideally be taken from 35 weeks. Swabs will be placed in enrichment culture in the microbiology laboratory to ensure maximal detection.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Swabs: Types and Codes UPDATE

Patient Request Forms and **Swabs** must be labelled with the body site from which the sample was taken. **This is important**. The swab site determines the appropriate culture media required to target the most likely pathogens.

Culture Swabs – Bacterial Infections

SITE	CODE	SAMPLE TYPE
Candida only swab	**CANC**	**Black** or **Blue** Micro Swab
Cervical swab	**CERS**	**Black** or **Blue** Micro Swab
Ear swab	**EARS**	**Blue** or **Orange** Micro Swab
Eye swab	**EYES**	**Blue** or **Orange** Micro Swab
Gonorrhoea	**GONN**	**Black** Charcoal Swab (specify site)
High vaginal swab	**HVS**	**Black** or **Blue** Micro Swab
Nasal swab	**NASS**	**Blue** or **Orange** Micro Swab
Oral swab	**ORSW**	**Black** or **Blue** Micro Swab
Penile swab	**PENS**	**Black** or **Orange** Micro Swab
Skin swab	**SKIS**	**Blue** Micro Swab
Throat swab	**THRS**	**Blue** Micro Swab
Urethral swab	**URES**	**Orange** Micro Swab or **Orange** Charcoal Swab
Vaginal swab	**VAGS**	**Black** or **Blue** Micro Swab
Vulval swab	**VULV**	**Black** or **Blue** Micro Swab
Wound swab	**WOUS**	**Black** or **Blue** Micro Swab (specify site)

MRSA by Culture

CODE	SAMPLE TYPE
MRSW	**Blue** Micro Swab x 1 – state site
MRW2	**Blue** Micro Swab x 2 – state sites

Order code: **MW170**
Dark Blue Microbiology Swab (Culture)

Order code: **MW171**
Black Charcoal Microbiology Swab (Culture)

Rapid MRSA by PCR

CODE	SAMPLE TYPE
MRSA	**Blue** Micro Swab x 1 – state site
MRS2	**Blue** Micro Swab x 2 – state sites

Order code: **MW172C**
Orange Wire Shaft Microbiology Swab (Charcoal

Order code: **MW172P**
Orange Wire Shaft Microbiology Swab (Culture)

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PCR Swabs – Viral Infections

SITE	CODE	SAMPLE TYPE
Chlamydia – PCR Swab	SPCR	**PCR** Swab: **Aptima** Swab
Chlamydia/Gonorrhoea – PCR Swab	SCG	**PCR** Swab: **Aptima** Swab
Chlamydia/Gonorrhoea – Rectal	RSCG	**PCR** Swab: **Aptima** Swab
Chlamydia/Gonorrhoea – Throat	TSCG	**PCR** Swab: **Aptima** Swab
Chlamydia/Gonorrhoea/Trichomonas – PCR Swab	SCGT	**PCR** Swab: **Aptima** Swab
CT/GC/Trichomonas/Mgen – PCR Swab	SGTM	**PCR** Swab: **Aptima** Swab
Gardnerella vaginalis by PCR	GVPC	**PCR** Swab: **Aptima** Swab
Gonorrhoea – PCR Swab	SGON	**PCR** Swab: **Aptima** Swab
Haemophilus ducreyi by PCR	DUCR	**PCR** Swab: **Aptima** or **Green** Swab
Herpes Simplex (HSV) 1 & 2 (PCR/Self-collect) (Oral or Genital)	HERS	**PCR** Swab: **Aptima** or **Green** Swab
Lymphogranuloma Venerium (LGV) (PCR)	LGVP	**PCR** Swab: **Aptima** Swab
Macrolide Resistance Test (Mgen)	MGR	**PCR** Swab: **Aptima** Swab
Mpox Virus – Lesion	MPXV	**PCR** Swab: **Aptima** Swab
Mycoplasma genitalium by PCR	MGEN	**PCR** Swab: **Aptima** Swab
Mycoplasma genitalium/ Ureaplasma by PCR	MUPC	**PCR** Swab: **Aptima** Swab
Syphilis by PCR (chancre)	SYPS	**PCR** Swab: **Aptima** or **Green** Swab
Trichomonas vaginalis	TVPC	**PCR** Swab: **Aptima** Swab
Ureaplasma urealyticum by PCR	UGEN	**PCR** Swab: **Aptima** Swab
Vaginitis/BV Profile (Culture & PCR/Self-collect)	STD8	**PCR** Swab: **Aptima** Swab and **Blue** or **Orange** Micro Swab
Viral Respiratory RNA Screen by PCR	VPR	**PCR** Swab: **Aptima** or **Green** Swab
COVID-19 (SARS-CoV-2) RNA by PCR	NCOV	**PCR** Swab: **Aptima** or **Green** Swab
Whooping Cough (Pertussis) by PCR	PERP	**Orange** **PCR** Swab / Prenasal (posterior nasopharynx) Swab

Order code: **MW142**

Orange Aluminium Thin Wire Dry Swab (PCR)
Small sites: eg, Nasal, penile and eye

Order code: **PRD-03546**

Aptima Multitest Swab
All sites

Order code: **MW951S**

Green Sigma Virocult Swab (PCR)
All sites

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

PCR methods for the detection of Dermatophyte Fungal Cultures

The detection of Dermatophyte fungal cultures uses High Sensitivity PCR testing. This reduces the overall turnaround time by up to three weeks, and increases the detection of fungal infection compared to combined microscopy and culture. Furthermore the specific targeting pathogens associated with superficial fungal infection is increased which assists in preventing the over reporting of insignificant fungi that are contaminants.

Fungal test codes

	Investigation of Superficial Fungal Infection	Investigation of Non-Superficial Fungal Infection
Test code	DERM*	FUN*
Sample type	Skin, Hair and Nail.	All specimens other than Skin, Hair and Nail.
Turnaround time	72 hours for interim PCR report, and 7 days for final culture (unless the fungal culture needs to be extended for significant growth).	7 days (non-sterile e.g. ear swab) and 3 weeks (sterile i.e. CSF).
Notes	• Dermatophyte PCR has replaced microscopy for Skin, Hair and Nail (72 hour TAT). • Non-dermatophyte culture will take 7 days. • Microscopy is carried out to confirm significance of rare fungi. • Pseudomonas investigation in Nail specimens is available on request.	• Non-sterile specimen fungal cultures are performed on Sabouraud's agar plates for 7 days with no microscopy. • Sterile specimen fungal cultures have microscopy (Calcafluor) reported on the day of processing and culture on a Sabouraud's agar slope, incubated for 21 days.

Stool test codes

Traditional culture methods have been replaced by Real Time PCR for enteric pathogen testing. The benefits are increased sensitivity and a higher detection rate. Once received and processed in the microbiology lab, negative results will be available within 24 hours. Positive results will be followed up with culture and sensitivities for final reporting.

Stool OCP and Culture

Sample type		Comments
Stool	Please request as **PENT** Serosep EntericBio PCR **Bacteria/Bacterial Toxins** • Salmonella • Campylobacter • Shigella • VTEC **Parasites** • Cryptosporidium • Giardia	All stool samples will be tested for UK pathogens. Overseas pathogens will only be tested if specifically requested and travel history and clinical details are provided. Samples that are positive for the bacterial pathogens will be cultured to provide sensitivities and, if indicated, for PHE referral. Samples will be kept for 7 days after receipt to allow for additional testing if required.

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Stool for OCP

Sample type		Comments
Stool	Please request as **MOCP** Requests for MOCP only will include testing for cryptosporidium and giardia by PCR	Overseas pathogens will only be tested if requested and travel history and clinical details are provided.

C. Difficile detection

Sample type		Comments
Stool	Please request as **CLOS** Serosep Enteric Bio PCR Alere Techlab EIA (Toxin)	Two tier PCR and Toxin c.diff screening based on PHE guidance.

Enteric Organism Rapid Detection (RF)

Detection of Bacterial, Viral and Parasitic Infection by Multiplex Real-Time PCR

Bacteria and Bacterial Toxins

C. difficile Toxin A/B gene, Campylobacter spp., Enteroaggregative E.coli (EAEC), Enteroinvasive E.coli (EIEC)/Shigella, Enterotoxigenic E.coli (ETEC), Enteropathogenic E.coli (EPEC), Plesiomonas shigelloides, Salmonella, Shiga-toxin producing E.coli (STEC) stx1/stx2, Shiga-toxin producing E.coli (STEC) O157:H7, Vibrio cholerae, Vibrio parahaemolyticus, Vibrio vulnificus, Yersinia enterocolitica

Viruses

Adenovirus 40/41, Astrovirus, Norovirus GI, Norovirus GII, Rotavirus A, Sapovirus (I, II, IV, V)

Parasites

Cyclospora cayetanensis, Cryptosporidium spp., Entamoeba histolytica, Gardia lamblia

This does NOT include stool for m/c/s – this needs to be requested as a separate test. Please provide two samples if this is required.

TAT: 2 days

EORD

RF

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Endocrinology

TEST	CODE	SAMPLE REQS	TAT
11 Deoxycorticosterone	DEOX	B	10 days
11 Deoxycortisol	11DC	B (Frozen)	10 days
17 Hydroxyprogesterone	17OH	B	5 days
ACTH (Adrenocorticotropic Hormone)	ACTH	A (EDTA on ice, Plasma, spun and frozen within 2 hours)[41]	1 day
Aldosterone	ALDN	A (Plasma frozen within 3 hrs)[36]	5 days
Aldosterone (Urine)	UALD	**PU**	5 days
Alpha-Fetoprotein	AFP	B	1 day
Amenorrhoea Profile	AMEN	B	1 day
Andropause Profile	ANDP	B B	1 day
Androstenedione	ANDR	B	5 days
Antidiuretic Hormone	ADH	A A (Plasma frozen)[4]	10 days
Antimullerian Hormone (AMH) Samples can be taken, at any time during a patient's monthly cycle. For repeat testing and comparison, it is advisable to standardise testing to a particular time of the cycle; generally day 6 is recommended. Ambient, unspun sample stability has been validated for up to 5 days.	AMH	B	1 day
BNP (NT-pro BNP)	BNP	B	1 day
C Peptide	CPEP	B	3 days
Calcitonin	CATO	B (Frozen)[4]	1 day
Catecholamines (Plasma)	CATE	A A (Plasma frozen, freeze within 2 hrs of collection)[4]	5 days
Catecholamines (Urine)	UCAT	**PU** (collect on acid)[1]	5 days
Cortisol (Urine)	UCOR	**CU**	5 days
Cortisol	CORT	B	1 day
DHEA	DHEX	B	7-10 days
DHEA – Urine (Dehydroepiandrosterone)	UDHE	**CU**	3 weeks
DHEA Sulphate	DHEA	B	1 day
Dihydrotestosterone	DHT	B B	7 days
Down Syndrome Risk Bloods only (Risk to be calculated by clinician)	HCGF/ PAPA	B	1 day
Down Syndrome Risk Profile (2nd trimester) Quad	DRP	B DRP form[7,8]	5 days
Down Syndrome Risk Profile with risk calculation first trimester	DRP	B DRP form + image of scan[7,8]	5 days
Endotest® For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples can be collected in the clinic or at home following instructions provided.	ENDT	Endotest saliva collection kit	25 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Endocrinology

TEST	CODE	SAMPLE REQS	TAT
Erectile Dysfunction Profile Please clearly state fasting or non-fasting status.	IMPO	A B B G	3 days
Fasting Insulin Resistance Index (FIRI) Both samples taken at the same time and must be fasting. Please indicate fasting status clearly on request form.	FIRI	B G [7]	1 day
Female Hormone Profile	FIP	B	1 day
First Trimester Maternal Screen (PAPP-A/Free Beta-hCG)(Risk to be calculated by requesting clinician)	FTMS	B	1 day
Free T3	FT3	B	1 day
Free T4	FT4	B	1 day
FSH	FSH	B	1 day
Growth Hormone (Fasting)	GH	B [7,35]	1 day
Gut Hormone Profile	GUTP	A A (Frozen within 15 minutes)[41]	3 weeks
HCG (Quantitative)	QHCG	B	1 day
Hirsutism Profile	HIRP	B	1 day
HRT Profile 1	HRT	B	1 day
HRT Profile 2 Please clearly state fasting or non-fasting status.	HRT2	B G	1 day
IGF-1 (Somatomedin)	SOMA	B (Frozen)[4,7]	1 day
IGF-BP3	IGF3	B (Frozen)[4]	5 days
Impotence Profile Please clearly state fasting or non-fasting status.	IMPO	A B B G	3 days
Inhibin A	INIA	B	1 month
Inhibin B	INIB	B (Day 3 of cycle, frozen)	5 days
Insulin	INSU	B [4,7]	1 day
Luteinising Hormone (LH)	LH	B	1 day
Macroprolactin	PRLD	B	4 days
Male Hormone Profile	MIPR	B	1 day
Melatonin (Serum)	MEL	B (Frozen)	5 days
Melatonin (Urine)	UMEL	**CU** [13]	2 weeks
Menopause Profile	MENO	B	1 day
Metabolic Syndrome Profile Please clearly state fasting or non-fasting status.	METS	A B B G [7]	9 days
Metanephrines (Plasma) Must be frozen within 2 hours.	PMET	A (Frozen plasma, must be frozen within 2 hours)	7 days
Metanephrines (Urine)	UMEX	**PU** (collect on acid)[1]	5 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Endocrinology

TEST	CODE	SAMPLE REQS	TAT
Oestradiol-17-Beta	OEST	B	1 day
Oestriol (Estriol)	E3	B B	4 days
Oestrone	E1	B B	4 days
Osteocalcin	OST	B (Frozen)[4]	4 days
Parathyroid Hormone (PTH) (Whole) CHANGE Requires its own EDTA tube, if other tests require EDTA an extra EDTA sample should be taken for PTHI.	PTHI	A [4]	1 day
Pituitary Function Profile	PITF	B B [7]	1 day
Polycystic Ovary Syndrome Profile Please clearly state fasting or non-fasting status.	PCOP	A B B B G [7]	5 days
Polycystic Ovary Syndrome SHORT Please clearly state fasting or non-fasting status.	PCOS	A B G [7]	1 day
Pregnancy (Serum) [Quantitative]	QHCG	B	1 day
Pregnenolone	PREN	B	15 days
Progesterone	PROG	B	1 day
Proinsulin	PROI	A (Frozen plasma)[4]	5 days
Prolactin	PROL	B	1 day
Prolactin (Macro)	PRLD	B	4 days
Renin	RENI	A (Frozen plasma)[36]	5 days
Renin, Aldosterone Activity	PRAA	A [44]	up to 5 weeks
Reverse T3	RT3	B [7,37]	15 days
Serotonin	SERT	H H (Frozen whole blood)[1]	10 days
Serotonin (Urine)	USER	**PU** 50mls (Frozen)[1]	5 days
Sex Hormone Binding Globulin	SHBG	B	1 day
Somatomedin (IGF-1)	SOMA	B (Frozen)[4,7]	1 day
T3	T3	B	1 day
T3 (Reverse)	RT3	B [7,37]	15 days
Testosterone (Total), LC MS Mass Spec	MSTT	B	5-7 days
Testosterone	TEST	B	1 day
Testosterone (Free)	FTES	B	3 days
Thyroglobulin Abs	TGAB	B	1 day
Thyroglobulin Assay	TGA	B	1 day
Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day
Thyroid Profile 1 (FT4/TSH)	TF	B	1 day

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Endocrinology

TEST	CODE	SAMPLE REQS	TAT
Thyroid Profile 2	TF2	B	2 days
Thyroid Profile 3 (FT3/FT4/TSH)	TF3	B	1 day
Thyroxine (T4)	T4	B	1 day
Thyroxine Binding Globulin	TBG	B (Frozen, freeze within 4 hrs of collection)	10 days
Total Testosterone, LC MS Mass Spec	MSTT	B	5-7 days
TSH	TSH	B	1 day
TSH-Receptor Antibodies	TSI	B	4 days
Ziwig Endotest®	ENDT	Endotest saliva collection kit	25 days
For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples can be collected in the clinic or at home following instructions provided.			

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Reproductive Immunology at Rosalind Franklin Laboratory, Chicago, USA

TEST	CODE	SAMPLE REQS	TAT
Reproductive Immunophenotype Panel Samples must reach TDL London within 24 hrs of sample collection.	3RF	H H H*	1 week
NK Assay/Cytotoxicity Panel Samples must reach TDL London within 24 hrs of sample collection.	4RF	H H H*	1 week
NK Assay Follow-Up Panel Samples must reach TDL London within 24 hrs of sample collection.	5RF	H H H*	1 week
TH1/TH2 Cytokine Ratio Samples must reach TDL London within 24 hrs of sample collection.	6RF	H H H*5	1 week
Leucocyte Antibody Detection Panel MALE Samples must reach TDL London within 24 hrs of sample collection.	7RF	H H H*6,34	1 week
Leucocyte Antibody Detection Panel FEMALE Samples must reach TDL London within 24 hrs of sample collection.	8RF	B*	1 week
HLA DR Antigens	9RF	A A*	2 weeks
HLA DQ Alpha Antigens	10RF	A A*	2 weeks
HLA DQ Beta Antigens	11RF	A A*	2 weeks
HLA A, B, C	14RF	A A*	2 weeks
NK Assay Panel + Intralipids Samples must reach TDL London within 24 hrs of sample collection.	16RF	H H H*	1 week
KIR (Killer-like Immunoglobulin-like Receptors) Genotyping	17RF	A A A*	2-3 weeks
TH1/TH2 Intracellular Cytokine Ratios with IVIG, Prednisolone Samples must reach TDL London within 24 hrs of sample collection.	20RF	H H H*5	1 week
TH1/TH2 Intracellular Cytokine Ratios with IVIG Samples must reach TDL London within 24 hrs of sample collection.	21RF	H H H*5	1 week
TH1/TH2 Intracellular Cytokine Ratios with Prednisolone Samples must reach TDL London within 24 hrs of sample collection.	22RF	H H H*5	1 week
T Regulatory Cells Samples must reach TDL London within 24 hrs of sample collection.	25RF	H*	3 days
HLA-C	26RF	A A*	3 weeks
Decidualization Score (DS)	DSRF	**J** (Contact lab)*	2-3 weeks
PAI-1 4G/5G Polymorphism	PAIP	A*	10 days

*Patients who have samples taken at TDL's Patient Reception at 76 Wimpole Street may attend any time during hours of opening on Mondays or Tuesdays, and by NOON on Wednesdays to allow for same day shipping to Chicago by Fed Ex. Samples for Rosalind Franklin are not accepted on Thursdays, Fridays or Saturdays. Fed Ex charges are included in these charges.

Reproductive Immunology at Reproductive Immunology Centre (RIC)

TEST	CODE	SAMPLE REQS	TAT
NK (CD69) Cell Assay	CD69	H*	2 days
NK (CD69) and NK Cytotoxicity	69C	HHH*	2 days
NK Cytotoxicity Assay	HSNK	HHH*	2 days
NK Cytotoxicity with suppression with steroid, IVIg and intralipin, and NK (CD69) cell assay	69CI	HHH*	2 days
NK Cytotoxicity with suppression, steroid, IVIg & Intralipin	NKCY	HHH*	2 days
Suppression with steroid, IVIg and intralipin, NK (CD69) cell assay, TH1/TH2 cytokines	NCIT	HHHH*	2 days
TH1/TH2 Cytokine Profile	1TH2	HHH*	2 days

*Patients need to attend Patient Reception at 76 Wimpole Street by 11am latest Mondays – Thursdays. Samples cannot be accepted on Fridays, Saturdays or Sundays. Allow 2 days for results.

Amenorrhoea Profile

Luteinising Hormone (LH)
FSH
Prolactin
Testosterone
Oestradiol-17-Beta
Sex Hormone Binding Globulin (SHBG)
Free Androgen Index

TAT: 1 day

AMEN

B

Andropause Profile

DHEA Sulphate
FSH
Testosterone
Free Androgen Index
Luteinising Hormone (LH)
Sex Hormone Binding Globulin (SHBG)

TAT: 1 day

ANDP

BB

Female Hormone Profile

FSH
Luteinising Hormone (LH)
Prolactin
Oestradiol-17-Beta

TAT: 1 day

FIP

B

Erectile Dysfunction Profile

Lipid Profile
Glucose
HbA1c
Free T4 / TSH
Prolactin
Total Testosterone
Free Testosterone
PSA
Sex Hormone Binding Globulin (SHBG)
Free Androgen Index

Please clearly state fasting or non-fasting status.

TAT: 3 days

IMPO

ABBG

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

First Trimester Maternal Screen (PAPP-A/ Free Beta-hCG) (Risk to be calculated by requesting clinician)

Free β-hCG
PAPP-A

Free β-hCG and PAPP-A in serum and sonographic determination of nuchal translucency (NT) are markers of choice to identify women at increased risk of Down Syndrome during the first trimester (week 11-13) of pregnancy.

TAT: 1 day

FTMS

B

Hirsutism Profile

DHEA sulphate
FSH
Luteinising Hormone (LH)
Sex Hormone Binding Globulin (SHBG)
Testosterone

TAT: 1 day

HIRP

B

HRT Profile 1

FSH
Oestradiol-17-Beta
Progesterone

TAT: 1 day

HRT

B

HRT Profile 2

Lipid Profile
Glucose
Free T4
TSH
FSH
Oestradiol-17-Beta

Please clearly state fasting or non-fasting status.

TAT: 1 day

HRT2

B G

Impotence Profile

Lipid Profile
Glucose
HbA1c
TSH
Prolactin
Total Testosterone
Free Testosterone
PSA
Sex Hormone Binding Globulin (SHBG)
Free Androgen Index

Please clearly state fasting or non-fasting status.

TAT: 3 days

IMPO

A B B G

Male Hormone Profile

FSH
Luteinising Hormone (LH)
Testosterone
Free Androgen Index
Prolactin
Sex Hormone Binding Globulin (SHBG)

TAT: 1 day

MIPR

B

Menopause Profile

FSH
Luteinising Hormone (LH)
Oestradiol-17-Beta
Free T4
TSH

TAT: 1 day

MENO

B

Metabolic Syndrome Profile

Lipid Profile
Glucose
HbA1c
Insulin
C Reactive Protein (High Sensitivity)
Adiponectin

Please clearly state fasting or non-fasting status. Insulin: sample should be separated and frozen if sending overnight.

TAT: 9 days

METS

A B B G[7]

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Pituitary Function Profile

TSH
FSH
Luteinising Hormone (LH)
Prolactin
IGF-1 (Somatomedin)
Cortisol

Please provide details of time of day sample is taken. Patient should be resting for 30 mins before sample taking.

TAT: 1 day

PITF

B B [7]

Polycystic Ovary Syndrome SHORT

Testosterone
Sex Hormone Binding Globulin (SHBG)
Free Androgen Index
FSH
Luteinising Hormone (LH)
Glucose
Insulin
Lipid Profile
Free T4 / TSH
HbA1c

Please clearly state fasting or non-fasting status. Insulin: sample should be separated and frozen if sending overnight.

TAT: 1 day

PCOS

A B G [7]

Polycystic Ovary Syndrome Profile

Testosterone
TSH
Glucose
HbA1c
FSH
DHEA Sulphate
Insulin
Luteinising Hormone (LH)
17 Hydroxyprogesterone
Lipid Profile
Prolactin
Cortisol
Antimullerian Hormone
Androstenedione
Sex Hormone Binding Globulin (SHBG)

A fasting 9am sample is recommended. Please clearly state fasting or non-fasting status. Insulin: sample should be separated and frozen if sending overnight.

TAT: 5 days

PCOP

A B B B G [7]

Thyroid Profile 1 (FT4/TSH)

Free T4
TSH

TAT: 1 day

TF

B

Thyroid Profile 2

T4
TSH
Free T3
Free T4
Thyroglobulin Abs
Thyroid Peroxidase

TAT: 2 days

TF2

B

Thyroid Profile 3 (FT3/FT4/TSH)

Free T3
Free T4
TSH

TAT: 1 day

TF3

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Ziwig Endotest®

Ziwig Endotest® is a non-invasive diagnostic test for reliable and rapid diagnosis for all types of endometriosis. The test relies on Next Generation Sequencing of micro RNA present in saliva and on the use of Artificial Intelligence to process the very large volume of data generated. Ziwig Endotest® is an in vitro diagnostic test for diagnosis of endometriosis on salivary samples with sensitivity >97% and specificity >93%.

About 10% of all women worldwide are affected by endometriosis with average times for diagnosis of around 9 years. Patients not infrequently see up to 10 doctors before being diagnosed with endometriosis (MRI, pelvic ultrasound, laparoscopy). Ziwig Endotest® is able to detect all types of endometriosis, mild and advanced. Endometriosis is not infrequently mistaken for other conditions that can cause pelvic pain, such as pelvic inflammatory disease (PID) or ovarian cysts. The effects of endometriosis range from asymptomatic, often identified during investigations for infertility, to chronic or progressively severe symptomatic related conditions. Once diagnosed, optimised clinical management of endometriosis would apply.

Laparoscopy is the gold standard for diagnosis of endometriosis but is relatively expensive, invasive, and requires an anaesthetic. The saliva sample required for the test is straight forward to collect, non-invasive and provides a definitive diagnosis even in the most complex cases. It has been validated by one of the largest clinical studies in the world.

Ziwig Endotest® provides a Bioinformatics Approach to microRNA sequencing analysis, from saliva.

For access to scientific publications visit: ziwig.com/en/our-publications/

- Clear Positive/Negative result
- Definitive diagnosis for all forms of endometriosis
- Non-invasive, saliva sample
- Cost contained single test outcome

For information about this test and to order kits please contact endotest@tdlpathology.com

The quality of the saliva sample collection is important. Samples can be collected under supervision of a referring clinician or self-collected at home following the instruction video:

www.tdlpathology.com/ziwig-endotest

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

LC MS Mass Spec Total Testosterone

Testosterone must be the world's most discussed hormone, but general understanding about testing is much less well known. Immunoassay methods are widely used to measure testosterone, providing a reliable method of measurement in many use cases. However, whilst this is accepted for standard testing, this methodology carries a possibility of analytical interference and cross-reactivity with structurally similar biological compounds, which can lead to a false, overestimation of circulating testosterone concentration.

Measurement of total testosterone by tandem mass spectrometry (LC-MS/MS) is a methodology with greater specificity, providing a more accurate measurement of testosterone, important when assessing lower levels of testosterone found in females, children and hypogonadal males.

The British Menopause Society recommends LC-MS/MS for the measurement of total testosterone levels, both to exclude high baseline concentrations before treatment is commenced and to ensure that levels remain within the female physiological range when monitoring supplementation (https://thebms.org.uk/wp-content/uploads/2022/12/08-BMS-TfC-Testosterone-replacement-in-menopause-DEC2022-A.pdf)

See page 57 for test information.

Female Reference Ranges		0.7–2.8 nmol/L (normal)
		0–0.7 (low)
Male Reference Ranges	15 years	0.9–2.7 nmol/L
	15–49 years	9.2–55.8 nmol/L
	50+ years	6.3–26.5 nmol/L

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See page 25 for sample-taking and special handling instructions.

TDL Andrology

The single most important factor determining a man's fertility potential is the production of healthy sperm. A semen analysis has classically been used as the marker of this potential, by providing information about the sperm count, motility and morphology. However, there are other parameters given in a semen analysis that are often neglected or overlooked, which may indicate important pathologies – such as infection, prostatic disease, immunological infertility, retrograde ejaculation, malformation or obstruction of the genital tract, tumour, and congenital or endocrine disorders.

Early diagnosis of the male factor is important in order to detect any underlying pathology, determine the extent of infertility and ensure appropriate treatment. It may also avoid unnecessary investigations for the female partner, particularly if her age is a limiting factor.

For men who have had a vasectomy, clearance should only be given when there is no evidence of presence of sperm in two consecutive semen samples. It is therefore vital to ensure that results are reported according to best practice guidelines. Special clearance may be given at the doctor's discretion when there are persistent non-motile sperm present.

Guidelines for Producing Samples

Ideally semen samples should be produced on-site at TDL's Patient Reception at 76 Wimpole Street. Ideally patients must abstain from ejaculation for 2-3 days prior to the test, generally no less than 2 days and no longer than 7 days before the test is acceptable. This requirement is important for semen analyses and post vasectomy analyses to ensure reliability of results. It is possible that samples that do not comply with guidelines for abstinence and collection may not be able to be processed. For other semen tests like ROS and DNA fragmentation the abstinence period is minimum 2 days but no more than 3 days. All semen samples must be produced directly into the sterile containers provided by The Doctors Laboratory.

All containers are weighed and batch tested for sperm cytotoxicity. In exceptional circumstances when semen samples are produced off-site, they can only be accepted by the Andrology Department in sample containers provided by TDL.

TDL Andrology provides reference values to those given in the most recent WHO guidelines (2021). WHO 2021 guidelines state that two semen analyses should be performed before any diagnosis is confirmed. This may require requests for two (separate) semen analyses.

Appointments

It is important to make an appointment for all semen samples (on or off site) whether for a comprehensive semen analysis or post vasectomy analysis. It may be necessary to give patients who attend without an appointment a specific time to re-attend. The first appointments for post vasectomy samples should usually be 12 weeks and 20 ejaculations after surgery.

Appointments can be made online at **www.tdlpathology.com/andrologybooking** or by calling **020 7025 7940**. There is an attendance fee of £50.00 in addition to pathology charges.

Please complete a Pathology Request Form for your patient. If you would like to request other pathology, you can use the same form or complete a second additional form. Results will usually be reported to you within 48 hours.

If you would like to discuss these tests, or any aspect of this service including clinical interpretation by the consultant please contact TDL Andrology on **020 7025 7940** or email **andrology@tdlpathology.com** for further information.

SCAN ME

Book an appointment online:

www.tdlpathology.com/andrologybooking

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TDL Andrology

TEST	CODE	SAMPLE REQS	TAT
Examen Exact® CHANGE	CMET	**Semen** [1]	1-2 weeks
Examen Extend® CHANGE	CMT3	**Semen** [1]	1-2 weeks
Examen Extensiv® CHANGE	CMT5	**Semen** [1]	1-2 weeks
Individual Semen Parameters*** *** Semen parameters may be requested individually (e.g. count only, vitality only, motility etc.). Please request as SPOD and indicate on the request form which parameter is required.	SPOD	**Semen** [1]	1 day
Oxidative Stress in Semen (ROS + MIOXSYS)	SROS	**Semen** [1]	1 day
Retrograde Ejaculation	RTRO	Contact lab	2 days
Semen Analysis, Comprehensive* * If required, comprehensive semen analysis can be reported within 4 hours, with morphology to follow.	SPER	**Semen** [1]	2 days*
Semen Analysis, Post-Vasectomy**	PVAS	**Semen** [1]	2 days

** For men who have had a vasectomy, clearance should only be given when there is no evidence of presence of sperm in a single ejaculate when recommendations are met. It is rare that a 'diagnosis' is made without confirmation, therefore patients/clinicians should be able to freely request a second confirmatory sample. Special clearance may be given at the doctor's discretion, when there are <100 000/ml non-motile sperm present after the assessment of two specimens in full accordance with recommendations. Recommendations, as given by the Association of Biomedical Andrologists, the British Andrology Society and the British Association of Urological Surgeons 2016, are as follows:

- Analysis of post vasectomy semen samples should not occur until 12 weeks post-surgery and after a minimum of 20 ejaculates
- Semen samples must be analysed within 4 hours of production, and in cases where sperm is found a repeat analysis must be performed within 1 hour of production
- Semen should be provided in weighed specimen containers provided by TDL Andrology
- Sexual abstinence should be between 2 and 7 days.

Semen Analysis, Vasectomy Reversal* * If required, comprehensive semen analysis can be reported within 4 hours, with morphology to follow.	SPER	**Semen** [1]	2 days*
Semen Culture	SPCU	**Semen**	2-4 days
Semen Fructose (Qualitative assessment)	SPCF	**Semen**	2 days
Semen Leucocytes	PMNS	**Semen**	2 days
Semen Zinc	SPCZ	**Semen**	up to 10 days
Sperm Aneuploidy	SPPL	**Semen** [1]	4 weeks
Sperm Antibodies (Serum)	ASAB	Ⓑ	2 weeks
Sperm Antibodies/MAR Test (Semen)† † Sperm antibodies in semen are measured as part of the routine semen analysis.	ASPA	**Semen**	1 day
Sperm Count (Post-Vasectomy)	PVAS	**Semen** [1]	2 days
Sperm DNA Fragmentation (SCSA type test)	SEXT	**Semen** [1]	1-2 weeks
Sperm Morphology (Kruger strict criteria)	MRPH	**Semen** [1]	2 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

By special arrangement

- Sperm swim test
- Sperm preparation for overnight survival
- Sperm motility and vitality testing for epididymal toxicity
- Sperm retrieval procedures (biopsy, PESA, MESA)
- Sperm cryopreservation and storage (undertaken by Andrology Solutions – HFEA licensed)

All men who store sperm must be screened for HIV 1&2, Hepatitis B, Hepatitis C and HTLV. Under HFEA regulations, sperm can be stored for an initial period of 10 years with formal consent. All patients are offered counselling prior to sperm cryopreservation.

These arrangements, and details for other specialist semen tests, are available on request. Please contact TDL Andrology on **020 7025 7940** or email **sheryl.homa@tdlpathology.com** for further information.

Sperm DNA fragmentation

High sperm DNA fragmentation (SDF) is associated with reduced natural pregnancy rates and assisted conception pregnancy rates as well as live birth rates. Sperm DNA fragmentation also leads to higher miscarriage rates, as published in the ESHRE Recurrent Pregnancy Loss 2017 Guideline. High levels of DNA fragmentation may be reduced by considering varicocele repair, treatment of underlying infections or inflammation, changes in lifestyle, or with antioxidant supplements. Sperm DNA can be damaged when sperm are being made in the testes or as they mature before ejaculation. This damage breaks the DNA into fragments, so sperm DNA tests are also known as sperm DNA fragmentation tests. Men with high levels of sperm DNA damage are less likely to get their partner pregnant and have increased risk of miscarriage and/or ART failure. Even if semen analysis results are 'normal', the sperm DNA could be damaged and therefore poor quality.

When requesting Sperm DNA Fragmentation there are two options. Please specify whether the request is for sperm DNA fragmentation by **SpermComet** or **SCSA** test.

Examen sperm DNA fragmentation (SDF) tests [CMET/CMT3/CMT5] CHANGE

Powered by SpermComet® technology, Examen sperm DNA fragmentation (SDF) tests directly measure SDF damage within the sperm cell itself (i.e. unlike some other tests which measure only an indirect proxy for SDF damage).

Examen's SDF tests provide one of the highest performance levels among commercially available SDF tests, directly measuring total single- and double-strand DNA breaks (CMET/CMT5), and also double-strand breaks only (CMT3/CMT5).

Use Examen's SDF tests for:

- couples struggling to achieve pregnancy (idiopathic infertility), especially where a semen analysis was 'normal', or where IVF cycles did not progress due to pre-implantation failures (Exact® CMET/Extensiv CMT5)
- couples struggling to keep the pregnancy/suffering recurrent pregnancy loss, where ART did not progress due to post-implantation failures, especially if multiple early losses <14 weeks, and female age >35 (Extend® CMT3/Extensiv CMT5)

Examen's tests have the advantage of requiring only very low numbers of sperm (<10K) and so are suitable for men with very low sperm counts (oligozoospermia) and can also be used for surgically retrieved sperm samples. The clinician must select the desired test prior to sending the patient as well as ensuring completion of the Examen test request form.

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Sperm Chromatin Structure Assay (SCSA-type test) [SEXT]

The SCSA is a highly validated test that measures DNA fragmentation in sperm by analyzing large numbers of cells (typically between 5,000 and 15,000 sperm) rapidly from an ejaculate sample. It uses Acridine Orange flow cytometry to detect both single- and double-strand DNA breaks, based on changes in fluorescence. Developed over the past 35 years using both human and animal models, SCSA is one of the most statistically robust and reproducible methods for assessing sperm DNA integrity. It is a standardized, CE Marked test known for its high reproducibility and low variability.

A minimum sperm concentration of approximately 100,000/mL is required for accurate testing.

Sperm Aneuploidy

Chromosomal abnormalities may be somatic cell in origin, in which case they can be detected by a simple blood karyotype analysis. However, most sperm chromosome anomalies arise as a result of errors during meiosis, which cannot be detected by a blood karyotype analysis. These anomalies can only be detected by looking at the sperm chromosomes directly. Studies have shown that sperm with a high rate of aneuploidy have a negative impact on pregnancy rate and are associated with recurrent pregnancy loss.

This test uses fluorescent in situ hybridisation (FISH) to label individual chromosomes with specific probes. Hundreds of sperm are assessed from one ejaculate. There are limitations to the test as only 5 probes are currently used routinely for analysis (three of the 22 autosomes: chromosomes 13, 18 and 21, and the sex chromosomes, X and Y), although others are available upon specific request. The results are reported showing incidence of disomy or nullisomy for each of the autosomes and for both sex chromosomes. A sex chromosome ratio is also reported. It is CE marked.

Instructions for collection of Sperm DNA Fragmentation and Aneuploidy specimens

Sperm DNA Fragmentation or Sperm Aneuploidy testing are not part of the Comprehensive Semen Analysis and need to be requested as a separate test, test code SEXT, CMET / CMT3 / CMT5 and SPPL, respectively.

Semen samples ideally need to be frozen as soon as possible after liquefaction, but not longer than 60 minutes post ejaculation. Samples must be snap-frozen for Sperm DNA Fragmentation and cryopreserved in TYB for Sperm Aneuploidy.

If samples are prepared by another laboratory:

Two cryovials containing not less than 0.25 mls of semen is required. Frozen samples can be sent to, or collected by TDL, by arrangement, and must be accompanied with relevant patient details and the sperm count. For Examen SpermComet® SDF tests please ensure a completed Examen test request form accompanies the TDL request form.

Oxidative Stress in Semen (ROS + MIOXSYS) and Male Infertility

There is now growing evidence to support a link between oxidative stress and male infertility. It is the underlying cause of sperm DNA damage and impairs semen parameters and fertilisation, adversely affects embryo development and is associated with reduced pregnancy rates. It may also increase the risk of miscarriage. High levels of ROS may be reduced by considering varicocele repair, treatment of underlying infections or inflammation, changes in lifestyle or with antioxidant supplements.

TDL provides a comprehensive assessment of oxidative stress by **combined measurement of Reactive Oxygen Species and Redox Potential**. Please request as oxidative stress test (code ROS).

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

The test includes combined testing for:

- **Chemiluminescence Assay for Reactive Oxygen Species**: Reactive Oxidative stress may be measured by a simple chemiluminescence test in semen, which measures the level of reactive oxygen species.
- **MIOXSYS Electrochemical Assay for Redox Potential**: Oxidative stress may be determined by an electrochemical assay which measures the redox potential in semen. This test measures the overall difference between total oxidants and antioxidants in the system.

If you would like to discuss these tests, or any aspect of this service, please contact TDL Andrology on **020 7025 7940** or **020 7307 7373**, or email **andrology@tdlpathology.com**.

Semen samples need specialist handling – for this reason all requests for semen analyses should be made by appointment. Practices or patients should contact TDL Andrology on **020 7025 7940** to make appointments and to confirm instructions for sample collection. Appointments can also be booked via **www.tdlpathology.com/andrologybooking**

Effects of ROS-induced Oxidative Stress on Sperm

- Lipid peroxidation which damages the sperm surface causing an abnormal morphology and impaired motility.
- Damage to proteins on cell surface responsible for cell signalling and may affect enzyme function inside the cell.
- Increased semen viscosity.
- Peroxidation of DNA and subsequent unravelling or fragmentation.
- Possible mutagenic effects.
- Damage to seminiferous epithelium, damage to tubules, testicular atrophy, reduced spermatogenesis.
- Decrease in sperm vitality, motility.
- Impaired fertilization by affecting sperm capacitation and the acrosome reaction.

Causes of Elevated ROS Levels

- Genito-urinary tract infection
- Prostatitis
- Vasectomy reversal
- Varicocele
- Cryptorchidism
- Chronic disease
- Xenobiotics
- Chemical pollutants and occupational hazards
- Heavy metal exposure
- Removal of seminal plasma during sperm preparation for assisted conception
- Drugs – cyclophosphamide, aspirin, paracetamol
- Smoking
- Excessive exercise
- Heat exposure
- Obesity
- Age

References

Vassiliou A, Martin CH, Homa ST, Stone J, Dawkins A, Genkova MN, Skyla Dela Roca H, Parikh S, Patel J, Yap T, Killeen AP. Redox potential in human semen: Validation and qualification of the MiOXsys assay. Andrologia. 2021 Mar;53(2):e13938. doi: 10.1111/and.13938. Epub 2020 Dec 30. PMID: 33377541.

Sexual Health

TEST	CODE	SAMPLE REQS	TAT
7 STI Profile by PCR (7 tests from 1 Sample)	DL12	**FCRU / PCR Swab / TPV**	2 days
Chlamydia – PCR swab	SPCR	**PCR**	2 days
Chlamydia – Thin Prep	TPCR	**TPV**	2 days
Chlamydia – Urine	CPCR	**FCRU**	2 days
Chlamydia/Gonorrhoea – PCR Swab	SCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Rectal (PCR)	RSCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Thin Prep	TCG	**TPV**	2 days
Chlamydia/Gonorrhoea – Throat (PCR)	TSCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Urine (FCRU)	CCG	**FCRU**	2 days
Chlamydia/Gonorrhoea/Trichomonas – PCR Swab	SCGT	**PCR**	2 days
Chlamydia/Gonorrhoea/Trichomonas – Thin Prep	TCGT	**TPV**	2 days
Chlamydia/Gonorrhoea/Trichomonas – Urine	CCGT	**FCRU**	2 days
CT/GC/Trichomonas/Mgen – PCR Swab	SGTM	**PCR Swab**	2 days
CT/GC/Trichomonas/Mgen – Urine	CGTM	**FCRU**	2 days
Gardnerella vaginalis by PCR	GVPC	**FCRU / PCR / TPV**	2 days
Gonorrhoea – PCR swab	SGON	**PCR**	2 days
Gonorrhoea – Thin Prep	TGON	**TPV**	2 days
Gonorrhoea – Urine	CGON	**FCRU**	2 days
Gonorrhoea Culture – Cervix	GONC	**CS**‡‡‡	3-5 days
‡ ‡ ‡ The optimal sample type from the female genital tract is an endocervical swab. Gonorrhoea does not survive well outside the endocervical epithelium; a negative gonorrhoea culture result from a vaginal swab is not reliable for excluding infection.			
Gonorrhoea Culture – Rectal	GONR	**CS**	3-5 days
Gonorrhoea Culture – Throat	GONT	**CS**	3-5 days
Gonorrhoea Culture – Urethral	GONU	**CS**	3-5 days
Gonorrhoea Culture – Other site	GONO	**CS**	3-5 days
Haemophilus ducreyi by PCR	DUCR	**PCR**	7 days
Hepatitis A Profile	HEPA	B	1 day
Hepatitis B Surface Antigen	AUAG	B	1 day
Hepatitis C Antibodies	HEPC	B	1 day
Hepatitis C Antigen (Early detection)	HCAG	B	1 day
Herpes Simplex (HSV) 1 & 2 (PCR) (Oral or Genital)	HERS	**PCR**	5 days
Herpes Simplex I/II by PCR (Urine)	HERD	**FCRU**	5 days
HIV 1 & 2/p24Ag	HDUO	B	1 day
HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis	STXX	B A 2 x 6mls or 2 x 4mls	3 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Sexual Health

TEST	CODE	SAMPLE REQS	TAT
HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)	STDX	A 2 x 6mls or 2 x 4mls (Vacutainer only)	3 days
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	1 day
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	1 day
HPV (28 individually typed low-risk (LR) & high-risk (HR) DNA subtypes and reflexed mRNA for types 16, 18, 31, 33 and 45)	HPVT	**TPV**	5 days
HPV (28 individually typed LR & HR DNA subtypes)	HP20	**TPV**	3 days
HPV (A group of 14 HR mRNA types)	HPVH	**TPV**	3 days
Lymphogranuloma Venerium (LGV) (PCR)	LGVP	**PCR*** [42]	1-2 weeks
* LGV can be added to a positive chlamydia sample using the same swab if requested within 4 days of receipt of result (PCR).			
Macrolide Resistance Test (Mgen)	MGR	**FCRU / PCR**	1-2 weeks
Mycoplasma genitalium by PCR	MGEN	**FCRU / PCR / TPV**	2 days
Mycoplasma genitalium/Ureaplasma by PCR	MUPC	**FCRU / PCR / TPV**	2 days
Rapid Xpert HIV-1 RNA Qualitative – Early Detection from 10 days	LHIV	A (Vacutainer only)	1 day
Rapid Xpert HIV-1 RNS Viral Load – Rapid Testing for HIV-Positive Patient Prognosis and Response To Antiretroviral Therapy	RHIV	A (Vacutainer only)	1 day
RPR (Syphilis)	RPR	B	2 days
STD1 M/F STD Quad (Urine and Serology)	STD1	B **FCRU**	2 days
STD2 M/F STI Profile Plus (Urine and Serology)	STD2	B **FCRU** (If culture swabs are needed please request separately)	4 days
STD3 Female STD Quad (PCR Swab and Serology)	STD3	B **PCR**	2 days
STD4 Female STI Profile Plus (PCR Swab and Serology)	STD4	B **PCR** (If culture swabs are needed please request separately)	4 days
STD5 Serology only	STD5	B	1 day
STD6 Serology only without HIV	STD6	B	1 day
STD8 Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR** and **STM**	3 days
STD9 Symptomatic lesion sample using PCR Swab from lesion	STD9	**PCR Swab**	7 days
STI Profile: MSM1	MSM1	B / **FCRU / PCR Swab Throat / PCR Swab Rectal**	2 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Sexual Health

TEST	CODE	SAMPLE REQS	TAT
STI Profile: MSM2	MSM2	Ⓑ / **FCRU / PCR Swab Throat / PCR Swab Rectal**	3 days
Syphilis by PCR (chancre)	SYPS	**PCR**	5 days
Syphilis IgG/IgM	SERJ	Ⓑ	1 day
TPHA	TPPA	Ⓑ	2 days
Trichomonas vaginalis (PCR)	TVPC	**FCRU / PCR / TPV**	2 days
Triple Swab Female STI Profile (Vaginal/ Throat/Rectal Swabs) (PCR)	3SWA	**PCR** swab x 3 (label by site)	2 days
Ureaplasma urealyticum/parvum by PCR	UGEN	**FCRU / PCR / TPV**	2 days
Vaginitis/BV Profile (Culture & PCR)	STD8	**PCR** and **STM**	3 days

STD1 M/F STD Quad (Urine and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Syphilis IgG/IgM

URINE
Chlamydia trachomatis
Neisseria gonorrhoea

TAT: 2 days

STD1

Ⓑ **FCRU**

STD3 Female STD Quad (PCR Swab and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Syphilis IgG/IgM

VAGINAL PCR SWAB
Chlamydia trachomatis
Neisseria gonorrhoea

TAT: 2 days

STD3

Ⓑ **PCR**

STD2 M/F STI Profile Plus (Urine and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Hepatitis B Surface Antigen
Hepatitis C Antibodies
Hepatitis C Antigen
Syphilis IgG/IgM

URINE
Chlamydia trachomatis
Neisseria gonorrhoea
Mycoplasma genitalium
Ureaplasma urealyticum/parvum
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II

TAT: 4 days

STD2

Ⓑ **FCRU** (If culture swabs are needed please request separately)

STD4 Female STI Profile Plus (PCR Swab and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Hepatitis B Surface Antigen
Hepatitis C Antibodies
Hepatitis C Antigen
Syphilis IgG/IgM

VAGINAL PCR SWAB
Chlamydia trachomatis
Neisseria gonorrhoea
Mycoplasma genitalium
Ureaplasma urealyticum/parvum
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II

TAT: 4 days

STD4

Ⓑ **PCR** (If culture swabs are needed please request separately)

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

STD5 Serology only

HIV 1&2/p24 Antigen
Hepatitis B Surface Antigen
Hepatitis C Antibodies
Hepatitis C Antigen
(Early detection)
Syphilis IgG/IgM

TAT: 1 day

STD5

B

STD6 Serology only without HIV

Hepatitis B Surface Antigen
Hepatitis C Antibodies
Hepatitis C Antigen
(Early detection)
Syphilis IgG/IgM

TAT: 1 day

STD6

B

STD8 Vaginitis/BV Profile using Culture & PCR Swab

Candida (Culture)
Gardnerella vaginalis by PCR
Mycoplasma genitalium by PCR
Trichomonas vaginalis by PCR
Ureaplasma urealyticum/
parvum by PCR

TAT: 3 days

STD8

PCR and **STM**

STD9 Symptomatic lesion sample using PCR swab from lesion

Syphilis by PCR (chancre)
Herpes Simplex I/II by PCR
(from single swab)

TAT: 7 days

STD9

PCR Swab

7 STI Profile by PCR (7 tests from 1 Sample)

Chlamydia trachomatis
Neisseria gonorrhoea
Mycoplasma genitalium**
Ureaplasma urealyticum/parvum
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II

***If MGEN is +ve this reflexes to MGR*

All tests can be requested individually

TAT: 2 days

DL12

FCRU / PCR / TPV

CT/GC/Trichomonas/ Mgen – PCR Swab

Chlamydia trachomatis
Neisseria gonorrhoea
Trichomonas vaginalis
Mycoplasma genitalium

All tests can be requested individually

TAT: 2 days

SGTM

PCR Swab

CT/GC/Trichomonas/ Mgen – Urine

Chlamydia trachomatis
Neisseria gonorrhoea
Trichomonas vaginalis
Mycoplasma genitalium

All tests can be requested individually

TAT: 2 days

CGTM

FCRU

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)

Positive findings will be reflexed for confirmatory testing

HIV1 and HIV2 (RNA)
Hepatitis B Virus (HBV DNA)
Hepatitis C Virus (HCV RNA)

Samples must be received in the laboratory within 2 days of sample taking

STDX provides diagnostic confirmatory testing only when used in addition to serology for Ag/Ab HIV-1&2, HBV, HCV

TAT: 3 days

STDX

A 2 x 6mls or 2 x 4mls (Vacutainer only)

HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis

HIV1 and HIV2 (RNA)
Hepatitis B Virus (HBV DNA)
Hepatitis C Virus (HCV RNA)
Syphilis IgG/IgM

Samples must be received in the laboratory within 2 days of sample taking

STXX provides diagnostic confirmatory testing only when used in addition to serology for Ag/Ab HIV-1&2, HBV, HCV

TAT: 3 days

STXX

B A 2 x 6mls or 2 x 4mls

HIV Rapid RNA HIV-1 QUALITATIVE

Early detection from 10 days

HIV-1 RNA

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 1 day

LHIV

A (Vacutainer only)

HIV Rapid RNA HIV-1 QUANTITATIVE

Rapid testing for HIV-positive patient prognosis and response to antiretroviral therapy

HIV-1 RNA VIRAL LOAD (40 copies/ml)

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 1 day

RHIV

A (Vacutainer only)

STI Profile: MSM1

HIV 1&2/p24 Ag
Syphilis IgG/IgM
Chlamydia trachomatis (Urine, Throat, Rectal)
Neisseria gonorrhoea (Urine, Throat, Rectal)

TAT: 2 days

MSM1

B **/ FCRU / PCR Swab Throat / PCR Swab Rectal**

STI Profile: MSM2

HIV 1&2/p24 Ag
Syphilis IgG/IgM
Hepatitis B Surface Antigen
Hepatitis C Antibodies
7 STI by PCR Screen
Chlamydia trachomatis (Throat, Rectal)
Neisseria gonorrhoea (Throat, Rectal)
Macrolide Resistance Test (M.gen)

TAT: 3 days

MSM2

B **/ FCRU / PCR Swab Throat / PCR Swab Rectal**

Triple Swab Female STI Profile (Vaginal/Throat/Rectal Swabs) (PCR)

Chlamydia trachomatis (Vaginal, Throat, Rectal)
Neisseria gonorrhoea (Vaginal, Throat, Rectal)

TAT: 2 days

3SWA

PCR Swab x 3 (label by site)

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

FAST Testing

TEST	CODE	SAMPLE REQS	TAT
FAST Chlamydia – PCR Swab CHANGE	FSCT	**PCR Swab**	6 hours
FAST Chlamydia – Urine CHANGE	FCT	**FCRU**	6 hours
FAST CT/GC – PCR Swab CHANGE	FSCG	**PCR Swab**	6 hours
FAST CT/GC – Rectal PCR Swab CHANGE	FRCG	**PCR Swab**	6 hours
FAST CT/GC – Throat PCR Swab CHANGE	FTCG	**PCR Swab**	6 hours
FAST CT/GC – Urine CHANGE	FCG	**FCRU**	6 hours
FAST Gonorrhoea – PCR Swab CHANGE	FSGN	**PCR Swab**	6 hours
FAST Gonorrhoea – Urine CHANGE	FGN	**FCRU**	6 hours
FAST Screen SHORT with Swab CHANGE	FSSS	(B) **PCR Swab**	6 hours
FAST Screen SHORT with Urine CHANGE	FSSC	(B) **FCRU**	6 hours
FAST Screen with Swab CHANGE	FSWS	(B) **PCR Swab**	6 hours
FAST Screen with Urine CHANGE	FUSC	(B) **FCRU**	6 hours

FAST Screen SHORT with Urine

CHANGE

HIV 1&2/p24 Ag
Syphilis IgM/IgG
FAST Urine CT/GC

TAT: 6 hours

FSSC

(B) **FCRU**

FAST Screen SHORT with Swab

CHANGE

HIV 1&2/p24 Ag
Syphilis IgM/IgG
FAST Swab CT/GC

TAT: 6 hours

FSSS

(B) **PCR Swab**

FAST Screen with Urine

CHANGE

HIV 1&2/p24 Ag
Hep B sAg
Hep C Abs
Syphilis IgG/IgM
FAST Urine CT/GC

TAT: 6 hours

FUSC

(B) **FCRU**

FAST Screen with Swab

CHANGE

HIV 1&2/p24 Ag
Hep B sAg
Hep C Abs
Syphilis IgG/IgM
FAST Swab CT/GC

TAT: 6 hours

FSWS

(B) **PCR Swab**

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STI	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
Chlamydia CT (Bacterial)	1–3 weeks, up to 6 weeks	Urine	Chlamydia trachomatis	**CPCR**	First catch Urine	2 days
		Cervix/Vagina	Chlamydia trachomatis	**SPCR**	PCR Swab	2 days
		Cervix/Vagina	Chlamydia trachomatis	**TPCR**	Thin Prep Vial	2 days
Gonorrhoea GC (Bacterial)	2–7 days, up to 1 month	Urine	Neisseria gonorrhoea by PCR	**CGON**	First Catch Urine	2 days
		Cervix/Vagina	Neisseria gonorrhoea by PCR	**SGON**	PCR Swab	2 days
		Cervix/Vagina	Neisseria gonorrhoea by PCR	**TGON**	Thin Prep Vial	2 days
		Cervix	Neisseria gonorrhoea by Culture	**GONC**	Black Charcoal swab	3-5 days
		Rectal	Neisseria gonorrhoea by Culture	**GONR**	Black Charcoal swab	3-5 days
		Throat	Neisseria gonorrhoea by Culture	**GONT**	Black Charcoal swab	3-5 days
		Urethral	Neisseria gonorrhoea by Culture	**GONU**	Black Charcoal swab	3-5 days
		Other site	Neisseria gonorrhoea by Culture	**GONO**	Black Charcoal swab	3-5 days
CT/GC Combined (Bacterial)	1–3 weeks, up to 6 weeks	Urine	CT/GC	**CCG**	First Catch Urine	2 days
		Cervix/Vagina	CT/GC	**SCG**	PCR Swab	2 days
		Cervix/Vagina	CT/GC	**TCG**	Thin Prep Vial	2 days
		Rectum	CT/GC	**RSCG**	PCR Swab	2 days
		Throat	CT/GC	**TSCG**	PCR Swab	2 days
Mycoplasma genitalium (Bacterial)	Symptoms develop at 1–3 weeks	Urine	Mycoplasma genitalium by PCR	**MGEN**	First Catch Urine	2 days
		GU Site	Mycoplasma genitalium by PCR	**MGEN**	PCR Swab	2 days
		Cervix/Vagina	Mycoplasma genitalium by PCR	**MGEN**	Thin Prep Vial	2 days
Ureaplasma urealyticum/ parvum (Bacterial)	Symptoms develop at 1–3 weeks	Urine	Ureaplasma by PCR	**UGEN**	First Catch Urine	2 days
		GU Site	Ureaplasma by PCR	**UGEN**	PCR Swab	2 days
		Cervix/Vagina	Ureaplasma by PCR	**UGEN**	Thin Prep Vial	2 days
Trichomonas vaginalis (Parasitic)	4–28 days, many patients are asymptomatic carriers	Urine	Trichomonas vaginalis by PCR	**TVPC**	First Catch Urine	2 days
		GU Site	Trichomonas vaginalis by PCR	**TVPC**	PCR Swab	2 days
		Cervix/Vagina	Trichomonas vaginalis by PCR	**TVPC**	Thin Prep Vial	2 days
Gardnerella vaginalis (Bacterial)	Imbalance of normal flora	Urine	Gardnerella vaginalis by PCR	**GVPC**	First Catch Urine	2 days
		GU Site	Gardnerella vaginalis by PCR	**GVPC**	PCR Swab	2 days
		Cervix/Vagina	Gardnerella vaginalis by PCR	**GVPC**	Thin Prep Vial	2 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.

See page 25 for sample-taking and special handling instructions.

STI	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
Bacterial Vaginosis (BV) (Bacterial)	Imbalance of normal flora	Cervix/Vagina	Bacterial Vaginosis (BV) Profile by both MICROSCOPY and PCR	**STD8**	Both Microscopy & PCR swab	3 days
Herpes Simplex Viral I/II (Viral)	2–14 days, testing is most appropriate for patients with symptomatic lesion(s)	Herpes lesion	Herpes by PCR Herpes by PCR	**HERS** **HERD**	PCR Swab First Catch Urine	5 days 5 days
Human Papillomavirus (Viral)	HPV is the most common sexually transmitted infection – usually asymptomatic	Cervical cells Cells/papilloma from site (anal)	HPV (28 individually typed LR & HR DNA subtypes)	**HP20**	Thin Prep Vial Brush sampler	3 days
Genital warts (Viral)	Weeks/months after exposure	GU Warts	HPV (28 individually typed LR & HR DNA subtypes)	**HP20**	Thin Prep Vial Brush sampler Cells/Papilloma	3 days
Syphilis/Herpes (Bacterial/Viral)	Whenever active lesions are present	Symptomatic lesion	Syphilis/Herpes Lesion Profile	**STD9**	PCR Swab	7 days
Syphilis (Bacterial)	9–21 days, but up to 90 days	Blood	Syphilis IgG/IgM	**SERJ**	B	1 day
Herpes Simplex Virus I/II (Viral)	IgG 4–6 weeks after exposure, IgM 5–35 days after exposure, after which test IgG	Blood	Herpes IgG (past infection Herpes IgM (current/recent)	**HERP** **HERM**	B B	2 days 2 days
HIV (Viral)	Usually 10–90 days, but up to 180 days	Blood	HIV I&II/p24 antigen (screening from 45 days post exposure (BHIVA))	**HDUO**	B	1 day

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STI	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
Hepatitis B (Viral)	Usually 45–180 days, average of 60–90 days	Blood	Hepatitis B surface antigen	**AUAG**	B	1 day
Hepatitis C Ab (Viral)	Usually 9–180 days, average of 45–65 days	Blood	Hepatitis C Antibodies	**HEPC**	B	1 day

EARLY DETECTION PROFILES BY PCR	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
7 STIs by PCR	One sample for 7 STI Tests	Urine Cervix Vagina	Chlamydia trachomatis Neisseria gonorrhoea Mycoplasma genitalium** Ureaplasma urealyticum/parvum Trichomonas vaginalis Gardnerella vaginalis Herpes Simplex I/II ***If MGEN is +ve this reflexes to MGR*	**PP12**	**Thin Prep Vial** or **First Catch Urine** or **PCR Swab** or **Aptima urine** or **multisite swab**	2 days
HIV/HBV/HCV	Early Detection Screen by PCR Multiplex	Blood	HIV 1&2 RNA Hepatitis B (HBV DNA) Hepatitis C (HCV RNA)	**STDX**	A 2 x 6mls or 2x4mls (Vacutainer only)	3 days

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See page 25 for sample-taking and special handling instructions.

Immunology

TEST	CODE	SAMPLE REQS	TAT
Acute Viral Hepatitis Screen	AHSC	B	1 day
Adrenal Cortex Antibodies	ACTX	B	5 days
Alzheimer's Phospho-TAU 217 NEW	P217	A A (4ml) plasma, spin separate and freeze, 2ml polypropylene tube, within 4 hours	4 weeks
ANCA (Anti-Neutrophil Cytoplasmic Abs)	ANCA	B	2 days
Anti-Actin Antibodies	AAA	B	5 days
Anti-Basal Ganglia Antibodies	ABGA	B	3 weeks
Anti-CCP Antibodies	CCP	B	2 days
Anti-Liver Cytosol Antibodies	ALCA	B	5 days
Anti-MOG [Myelin Oligodendrocyte Glycoprotein] Antibodies	AMOG	B	3 weeks
Anti-MUSK Antibodies	MUSK	B	2 weeks
Anti-Nuclear Antibodies (titre & pattern)	ANAB	B	2 days
Anti-Phosphatidylserine Antibodies	PHTS	B	5 days
Anti-Phospholipase A2 Receptor	AA2R	B	6 weeks
Anti-SLA (Soluble Liver Antigen) Abs	LSA	B	5 days
Anti-Staphylolysin Titre (SGOT)	ASTT	B	3 days
Anti-Streptolysin Titre/ASOT	ASLT	B	2 days
Anti-Sulfatide Antibodies	ASA	B	5 weeks
Aquaporin 4 Antibodies (Neuromyelitis Optica)	AQUA	B	2 weeks
Ascariasis Serology	ASC	B	5 days
Aspergillus Precipitins	ASPP	B	5 days
Autoantibody Profile I	AUTO	B	2 days
Autoantibody Profile II	ENDO	B	3 days
Avian Precipitins (11 Species)	AVIA	B	5 days
Babesia PCR	PCRB	A	7 days
Beta 2 Glycoprotein 1 Abs	B2GP	B	2 days
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days
Brucella Serology	BRUC	B [9]	2-3 weeks
C1 Esterase Inhibitor	C1EI	B	5 days
C3 Complement	C3	B	1 day
C3/C4 Complement	COMP	B	1 day

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Immunology

TEST	CODE	SAMPLE REQS	TAT
C4 Complement	C4	B	1 day
Campylobacter Jejuni Antibodies	CJAB	B	5 days
Candida Antibodies	CANA	B	5 days
Cardiolipin Antibodies (IgG+IgM)	ACAB	B	2 days
CCP Antibodies (RF)	CCP	B	2 days
CH50 (Classical pathway) Spin, separate and freeze within2 hours of sample taking.	CH50	B (Frozen)	4 days
Chagas Disease Serology (S.American Trypanosomiasis) T. Cruzi	CHGA	B [9,14]	10 days
Chlamydia Species Specific (MIF) Ab Screen	CHAB	B	5 days
Chronic Fatigue Syndrome Profile	VIP1	A + B [10]	5 days
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days
Coeliac/Gluten Genetic Profile 2 CHANGE See page 87	GSA2	A B	10 days
Coeliac/Gluten Sensitivity Profile CHANGE See page 87	GSA	B	3 days
Colloid Antigen-2 Antibodies	CA2A	B	2 weeks
Cotinine (Serum)	COT	B	4 days
COVID-19 (SPIKE) Antibodies	SCOV	**SST/Serum** B (Venous)	1 day
Diphtheria Antibodies	DIPH	B	5 days
DNA (Double Stranded) Antibodies IgG	DNAA	B	2 days
DNA (Single Stranded) Antibodies	DNAS	B	5 days
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days
Ehrlichiosis Antibodies	EHRL	B [9,14]	10 days
Endomysial Antibodies (IgA)	AEAB	B	2 days
Extractable Nuclear Antibodies (nRNP, Sm, Ro, La, Jo1, Scl70, CENP-B)	ENA	B	2 days
Farmers Lung Precipitins	FARM	B	5 days
Fasciola Hepatica Antibodies (Liver Fluke)	FASC	B	2 weeks
Ganglioside GM1, GD1B, GQ1B Abs	GANG	B	5 days
Gastric Parietal Autoantibodies	GASP	B	2 days
Gliadin Antibodies (IgG) (deamidated)	AGAB	B	2 days
Glomerular Basement Membrane Abs	AGBM	B	2 days
Glutamic Acid Decarboxylase Antibodies (GAD 65)	GAD	B	5 days
Gluten Sensitivity Evaluation CHANGE	GSA	B	3 days
Gluten/Coeliac Genetic Profile 2 CHANGE	GSA2	A B	10 days

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See page 25 for sample-taking and special handling instructions.

Immunology

TEST	CODE	SAMPLE REQS	TAT
Gluten Sensitivity Profile	GLUT	A B B	10 days
Granulocyte Immunology Please complete questionnaire, see Request Forms.	GRIM	A A (or 2 x 6ml) B	2 weeks
H. pylori Antibodies (IgG)	HBPA	B	2 days
Haemophilus B Influenzae Antibodies	HINF	B	5 days
Histamine (Blood)	HITT	A (Frozen plasma)	5 days
Histamine (Urine)	HITU	**RU**	5 days
Histamine Releasing Urticaria Test	CURT	B	3 weeks
Histone Antibodies	HISA	B	5 days
Histoplasmosis	HISP	B	10 days
HLA B27	HLAB	A [9]	3 days
IgE (Total)	IGE	B	1 day
Immune-Complexes	IMCP	B	5 days
Immunofluorescence in Skin Biopsies	IHCS	Skin sample in Michels solution	2 weeks
Immunoglobulins (IgG, IgM, IgA)	IMM	B	1 day
Insulin Antibodies	INAB	B	5 days
Interleukin 1 Beta	ILB	B (Frozen) [4,7]	1-2 weeks
Interleukin 2	IL2	B (Frozen) [4,7]	1-2 weeks
Interleukin 4	IL4A	B (Frozen) [4,7]	1-2 weeks
Interleukin 6	IL6	B (Frozen) [4,7]	1-2 weeks
Interleukin 8	IL8	B (Frozen) [4,7]	1-2 weeks
Interleukin 10	IL10	B (Frozen) [4,7]	1-2 weeks
Interleukin 28b Genotype	IL28	A	2 weeks
Intrinsic Factor Antibodies	IFAB	B	3 days
Islet Cell Antibodies	ICAB	B	5 days
Legionella Antibodies	LEGO	B	5 days
Legionella Urine Antigen	LEGA	Urine with boric acid	1 day
Leptospirosis (Weil's Disease) Abs (IgM)	LEP	B	5 days
Leukotriene E4	LTE4	**CU** (Frozen)	3 weeks
Liver Immunoblot	LIVI	B	3 days
Liver Kidney Microsomal Antibodies	LKM	B	2 days
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C C [4,18]	2 days
Lyme Disease (Borrelia Abs) IgG, IgM	BORR	B [9,14]	2 days
Lyme Disease (Borrelia Abs) IgM	BORM	B	2 days
Lyme disease (Borrelia Confirmation)	BORC	B [9,14]	10 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Meningococcal Serology (only serogroup C)	MENI	B	6 weeks
Mitochondrial Antibodies	AMIT	B	3 days
Mitochondrial Antibodies M2	MTM2	B	2 days
Myasthenia Gravis Evaluation	MGE	B	5 days
Myelin Associated Glycoprotein Antibodies	MAG	B	5 days
Myelin Basic Protein Antibodies	MBPA	B	2 weeks
Myeloperoxidase Antibodies	MPO	B	2 days
Myocardial Antibodies	MYO	B	1 week
Myositis Panel	MYOS	B	3 days
Neuronal Antibody (Hu, Ri, Yo, Cv2, Ma2)	NEUR	B	10 days
NMDA Receptor Antibodies	NMDA	B	3 weeks
Nucleic Acid Antigen Antibodies	DNA	B	2 days
Oligoclonal Bands	CSFO	2ml **CSF** + B	5 days
Ovarian Autoantibodies	OVAB	B	5 days
Paragomius Serology	PRGM	B	2 weeks
Parathyroid Antibodies	PTHA	B	3 weeks
Pemphigus/Pemphigoid Autoantibodies	SKAB	B	1-2 weeks
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days
Pertussis (Whooping Cough) by PCR	PERP	**Pernasal or dry swab**	2-3 days
Phospho-TAU 217 NEW	P217	A A (4ml) plasma, spin separate and freeze, 2ml polypropylene tube, within 4 hours	4 weeks
Pituitary Antibodies	PITU	B [4]	1 month
Pneumococcal Antibodies – Serotype Specific	PASS	B	5 weeks
Pneumococcal Antibody Screen	PNEU	B	1-2 weeks
Proteinase 3 Ab	PR3	B	2 days
Purkinje Cell Antibody (Hu and Yo)	PURK	B	10 days
Q Fever (C Burnetti) Antibodies	QFEV	B [9]	10 days
Rheumatoid Factor (Latex Test)	RF	B	3 days
Rheumatology Profile 1 (Screen)	RH	A B	2 days
Rheumatology Profile 2 (Connective Tissue)	RH2	A A B B	3 days
Rheumatology Profile 3 (Rheumatoid/Basic)	RH3	A B	2 days
Rheumatology Profile 4 (Systemic Lupus)	RH4	A B B	2 days
Rheumatology Profile 5 (Mono Arthritis)	RH5	A A B B	3 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Rheumatology Profile 6 (Rheumatoid Plus)	RH6	B	3 days
Rheumatology Profile 7 (Sjogren's Syndrome)	RH7	B	15 days
Rickettsial Species Antibody Profile	RICK	B	7 days
RNA Polymerase Antibodies	RNAP	B	3 days
RPR (Syphilis)	RPR	B	2 days
Saccharomyces Cerevisiae Antibodies	ASCA	B	2 weeks
Salivary Duct Antibodies	SAB	B	15 days
Scleroderma Immunoblot	SCLI	B	3 days
Sjogren's Syndrome	RH7	B	15 days
Skin (Pemphigus/Pemphigoid) Autoantibodies	SKAB	B	1-2 weeks
Skin Antibodies by Immunofluorescence	STSK	B	1 month
Sleeping Sickness Serology (African Trypanosomiasis)	TRYP	B [9]	10 days
Smooth Muscle Antibodies	ASMO	B	2 days
Sperm Antibodies (Serum)	ASAB	B	2 weeks
Steroid Cell Antibody	SCA	B	2 days
Striated/Skeletal Muscle Antibody	STRA	B	5 days
Strongyloides Antibodies	STGA	B	10 days
Syphilis IgG/IgM	SERJ	B	1 day
TB Quantiferon®-TB Gold* *Indicate clearly if samples have/have not been incubated prior to sending to the laboratory. Samples for TBQ4 must be received in the processing laboratory within 16 hours of sample taking.	TBQ4	**Special tubes** or H [1]	3 days
Tetanus Antibody	TETA	B	5 days
Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day
Tissue Transglutaminase IgA (Coeliac)**	TAA	B	3 days
Tissue Transglutaminase IgG	TAAG	B	5 days
Total Immune Function Evaluation	TIE	A + B [5,10]	7 days
Total Immunoglobulin E	IGE	B	1 day
Toxocara Antibodies (IgG)	TFAT	B [9]	5 days
Toxoplasma Antibodies (IgG, IgM)	TFAM	B [9]	1 day
Toxoplasma Antibody Full Evaluation (IgM, Dye Test, IgG Avidity)	TDYE	B [9]	10 days
Toxoplasma by PCR	TXAG	A	5 days
TPHA	TPPA	B	2 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Trichinella Serology	TRIC	B	5 days
Trypanosome (Chagas) Antibodies	CHGA	B [9,14]	10 days
TSH-Receptor Antibodies	TSI	B	4 days
Tularaemia Antibodies	TULA	B [14]	5 days
Urinary Methyl Histamine	UHIT	**RU** (Frozen)	2 weeks
Urticaria Test (Histamine Releasing)	CURT	B	3 weeks
Vascular Endothelial Growth Factor	VEGF	B	14 days
Voltage Gated Calcium Channel Antibodies	CCAB	B	3 weeks
Voltage Gated Potassium Channel Antibodies	VPCA	B	3 weeks
Whooping Cough (Pertussis) Antibodies	PERS	B	5 days
Whooping Cough (Pertussis) by PCR	PERP	**Pernasal or dry swab**	2-3 days
Yellow Fever Antibodies	YELL	B [9,14]	10 days
Yersinia Antibodies	YERS	B	4 days
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days

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Acute Viral Hepatitis Screen

Hepatitis A (IgM)
Hepatitis B Surface Antigen
Hepatitis C Antibodies

TAT: 1 day

AHSC

B

Autoantibody Profile I

Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)
Anti-Nuclear Antibodies
Mitochondrial Antibodies
Smooth Muscle Antibodies
Gastric Parietal Autoantibodies
Liver Kidney Microsomal Antibodies

TAT: 2 days

AUTO

B

Autoantibody Profile II

Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)
Islet Cell Antibodies
Adrenal Cortex Antibodies
Gastric Parietal Autoantibodies
Gonadal (Ovarian) Autoantibodies

TAT: 3 days

ENDO

B

Chlamydia Species Specific (MIF) Ab Screen

Chlamydia trachomatis (serovar A-K & L1-L3)
Chlamydia pneumoniae
Chlamydia psittaci

TAT: 5 days

CHAB

B

Chronic Fatigue Syndrome Profile

Epstein-Barr Virus Antibodies IgG/IgM
Lymphocyte Subsets (CD3/CD4/CD8)
C Reactive Protein (CRP)
Vitamin D (25-OH)

TAT: 5 days

VIP1

A + B [10]

Gluten Sensitivity Profile

Gluten Single IgE Allergen
Gliadin Antibodies (IgG) (deamidated)
HLA Tissue Typing Coeliac Disease – DQ2/DQ8
Immunoglobulin A
Tissue Transglutaminase IgA (Coeliac)

TAT: 10 days

GLUT

A B B

Coeliac/Gluten Sensitivity Profile

CHANGE
Immunoglobulin A
Gliadin Antibodies (IgG) deamidated
Tissue Transglutaminase IgA TAA*

*if the TAA is >7 U/ml reflex testing for Endomysial IgA will be undertaken.

TAT: 3 days

GSA

B

Coeliac/Gluten Genetic Profile 2

CHANGE
Immunoglobulin A
Gliadin Antibodies (IgG) deamidated
Tissue Transglutaminase IgA TAA*
HLA Tissue Typing Coeliac Disease DQ2/DQ8

*if the TAA is >7 U/ml reflex testing for Endomysial IgA will be undertaken.

TAT: 10 days

GSA2

A B

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Rheumatology Profile 1 (Screen)

Full Blood Count (FBC)
ESR
Uric Acid (Serum)
Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
C Reactive Protein (CRP)

TAT: 2 days

RH

A B

Rheumatology Profile 2 (Connective Tissue)

Full Blood Count (FBC)
ESR
Uric Acid (Serum)
Anti-Nuclear Antibodies
DNA (Double Stranded) Antibodies IgG
Antibodies to Extractable Nuclear Antigens (ENA):
- *Anti-nRNP*
- *Anti-Sm*
- *Anti-Ro (SS-A)*
- *Anti-La (SS-B)*
- *Anti-Jo-1*
- *Anti-Scl 70*
- *Anti-CENP*

Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
HLA B27
C Reactive Protein (CRP)
CENP-B

TAT: 3 days

RH2

A A B B

Rheumatology Profile 3 (Rheumatoid/Basic)

Full Blood Count (FBC)
ESR
Uric Acid (Serum)
Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
Anti-Nuclear Antibodies
C Reactive Protein (CRP)

TAT: 2 days

RH3

A B

Rheumatology Profile 4 (Systemic Lupus)

Full Blood Count (FBC)
ESR
Anti-Nuclear Antibodies
DNA (Double Stranded) Antibodies IgG
Antibodies to Extractable Nuclear Antigens (ENA):
- *Anti-nRNP*
- *Anti-Sm*
- *Anti-Ro (SS-A)*
- *Anti-La (SS-B)*
- *Anti-Jo-1*
- *Anti-Scl 70*
- *Anti-CENP*

Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
Anti-Cardiolipin Autoantibodies
Complement 3/4
C Reactive Protein (CRP)

TAT: 2 days

RH4

A B B

Rheumatology Profile 5 (Mono Arthritis)

Full Blood Count (FBC)
ESR
Uric Acid (Serum)
Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
Anti-Nuclear Antibodies
C Reactive Protein (CRP)
HLA B27

TAT: 3 days

RH5

A A B B

Rheumatology Profile 6 (Rheumatoid Plus)

Rheumatoid Factor (Latex Test)
Anti-CCP Antibodies
C Reactive Protein (CRP)

TAT: 3 days

RH6

B

Rheumatology Profile 7 (Sjogren's Syndrome)

Anti-Ro (SS-A)
Anti-La (SS-B)
Salivary Antibodies (SAB)
C Reactive Protein (CRP)

TAT: 15 days

RH7

B

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Coeliac Disease (CD)

Coeliac Disease (CD) is an immune-mediated disease of the intestines that is triggered by the ingestion of gluten in genetically susceptible individuals. Gluten is the major protein component of wheat, rye, and barley. Genetic predisposition does play a key role in CD, and it is well known that CD is strongly associated with specific HLA class II genes known as HLA-DQ2 and HLA-DQ8. Approximately 95% of CD patients express HLA-DQ2, and the remaining patients are usually HLA-DQ8 positive. The negative predictive value for both tests is higher than 99%. However, the HLA-DQ2 allele is common and is carried by approximately 30% of Caucasian individuals. Thus, HLA-DQ2 or HLA-DQ8 is necessary for disease development but is not sufficient for disease development; its estimated risk effect is only 36-53%.

Note: History taking is important if a patient has been on a gluten-free diet for 6-12 months, approximately 80% will lose their antibody response. After 5 years this increases to >90%.

Coeliac pathway

Tissue Transglutaminase IgA (TAA) as a single test. This can be requested as a single test as well as being included as one of the tests in the Coeliac/Coaelic Sensitivity Profile (GSA).

- Initial TTG IgA samples are received and tested
- If TTG IgA is LOW <0.2 U/ml reflex testing for Total IgA will be undertaken
- If Total IgA is LOW <0.1 g/L then reflex testing for Gliadin IgG test will be undertaken
- If TTG IgA is HIGH (>/= 10 U/ml) or in the equivocal range (7–10 U/ml) then reflex testing for Endomysial IgA will be undertaken as a confirmatory test for first time positive samples.

Endomysial IgA (AEAB) as a single test. This can be requested as a single test as well as being included as one of the tests in the Coeliac/Coaelic Sensitivity Profile (GSA).

- If TTG IgA is positive endomysial IgA will be carried out as a confirmatory test. This only needs to be done once in the patients history.

Deamidated Gliadin IgG (AGAB) as a single test. This can be requested as a single test as well as being included as one of the tests in the Coeliac/Coaelic Sensitivity Profile (GSA).

This may be useful when testing children's samples. Appropriate clinical comments will be added to results – see table below.

Gliadin IgG Requests

TTG IgA result U/ml	Total IgA result for new assay g/L	Deamidated gliadin IgG result U/ml	Comment
0.2 to 10	N/A	N/A	Coeliac disease unlikely (please note that if the patient has no dietary gluten results may appear false negative)
>/= 10	N/A	N/A	Suggestive of coeliac disease
<0.2	>/= 0.1	N/A	Coeliac disease unlikely (please note that if the patient has no dietary gluten, results may appear false negative)
<0.2	<0.1	>/=10	Consistent with coeliac disease in a patient with selective IgA deficiency
<0.2	<0.1	<7	Coeliac disease unlikely (please note that if the patient has no dietary gluten, results may appear false negative)
<0.2	<0.1	7-10	Result equivocal suggest referral to a gastroenterologist for consideration of duodenal biopsy

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Tropical and Travel-Related Immunology

TEST	CODE	SAMPLE REQS	TAT
Amoebic (E. histolytica) Antibodies	AFAT	B	1 week
Amoebic (E. histolytica) PCR	AMAG	**RF**	2 days
Bancroftia/Oncerciasis/Filarial Antibodies	TFIF	B [14]	2 weeks
Bilharzia (Schistosome) Antibody Screen	BILH	B [14]	10 days
Bilharzia (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days
Cryptosporidium Detection by PCR	CRPA	**RF**	2 days
Dengue Virus Serology	DENG	B [9,14]	5 days
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days
Enteric Organism Rapid Detection (RF)	EORD	**RF**	2 days
Filaria (Lymphatic and Non-Lymphatic) Antibodies	FIFA	B [9,14]	10 days
Insect/Worm/Ova/Cysts	FLEA	Send Specimen [9,14]	5 days
Leishmania Antibodies	LEIS	B	5 days
Malarial Antibodies (Pl. falciparum)	MALA	B [9,14]	5 days
Malarial Antibodies (species specific)	MALS	B [9,14]	10 days
Post-Travel Screen 1 (Up to 6 weeks post travel)	PTS	A A B G [14]	10 days
Post-Travel Screen 2 (6 weeks after travel)	PTS2	A A B B B G [14]	10 days
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days
Rickettsial Species Antibody Profile	RICK	B	7 days
Schistosome (Bilharzia) Antibodies	BILH	B [14]	10 days
Toxoplasma Antibodies (IgG, IgM)	TFAM	B [9]	1 day
Tropical Screen (from 6 weeks post-travel)	TROP	B B [9,14]	10 days
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days

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See page 25 for sample-taking and special handling instructions.

Post-Travel Screen 1 (Up to 6 weeks post travel)

Haematology Profile
Biochemistry Profile
Schistosome Abs
Malarial Abs

TAT: 10 days

PTS

A A B G [14]

Post-Travel Screen 2 (6 weeks after travel)

Haematology Profile
Biochemistry Profile
Schistosome Abs
Malarial Abs
Hepatitis A IgM Abs
Hepatitis B Surface Antigen
Hepatitis C Antibodies
HIV Duo

TAT: 10 days

PTS2

A A B B B G [14]

DVT/Pre-travel Screen

Full Blood Count (FBC)
Factor II Prothrombin – G20210A Variant
Factor V Leiden – G1691A Variant
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

DVT1

A A B [9]

Tropical Screen (from 6 weeks post-travel)

Amoebic (E. histolytica) Antibodies
Schistosome (Bilharzia) Antibodies
Echinococcus (Hydatid) Antibodies
Leishmania Antibodies
Malarial Parasites
Toxoplasma Antibodies (IgG, IgM)

TAT: 10 days

TROP

B B [9,14]

Enteric Organism Rapid Detection (RF)

Detection of Bacterial, Viral and Parasitic Infection by Multiplex Real-Time PCR

Bacteria and Bacterial Toxins

C. difficile Toxin A/B gene, Campylobacter spp., Enteroaggregative E.coli (EAEC), Enteroinvasive E.coli (EIEC)/ Shigella, Enterotoxigenic E.coli (ETEC), Enteropathogenic E.coli (EPEC), Plesiomonas shigelloides, Salmonella, Shiga-toxin producing E.coli (STEC) stx1/ stx2, Shiga-toxin producing E.coli (STEC) O157:H7, Vibrio cholerae, Vibrio parahaemolyticus, Vibrio vulnificus, Yersinia enterocolitica

Viruses

Adenovirus 40/41, Astrovirus, Norovirus GI, Norovirus GII, Rotavirus A, Sapovirus (I, II, IV, V)

Parasites

Cyclospora cayetanensis, Cryptosporidium spp., Entamoeba histolytica, Gardia lamblia

This does NOT include stool for m/c/s – this needs to be requested as a separate test. Please provide two samples if this is required.

TAT: 2 days

EORD

RF

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Phospho-Tau 217 (p217)

NEW See page 82 for test information

This blood test is available to TDL, and referred to the National Hospital for Neurology, Queens Square, London. A patient needs to present with some form of cognitive impairment that is under assessment for Alzheimer disease and other causes of cognitive decline. This test should not be considered as a predictive test – there is not enough data to demonstrate that a result could show risk of an asymptomatic individual developing symptoms related to Alzheimer disease in the future. **This test is not intended as a screening test** for Alzheimer disease in asymptomatic individuals. p-Tau217 has been shown to increase over time in people with brain atrophy and cognitive decline.

- This is a test for the evaluation of individuals, aged 50 years and older, already presenting with cognitive impairment who are being assessed for Alzheimer disease and other causes of cognitive decline.
- Results from the p-Tau217 test must be interpreted in conjunction with other diagnostic tools, such as neurological examination, neurobehavioral tests, imaging, and routine laboratory tests.
- Elevations of p-Tau217 may be seen in individuals with impaired renal function associated with chronic kidney disease and this should be interpreted with caution in these situations – false-positive or false-negative test results may occur.
- There is no multiethnicity data for this test performance and studies have been done on a white US population.
- This assay should not be used for cognitively unimpaired (asymptomatic) individuals to predict the development of dementia or other neurological conditions.
- The safety and effectiveness of this test have not been established for monitoring the effect of disease monitoring therapies or for predicting development of dementia or other neurologic conditions.
- p-Tau217 concentrations have not been established to correlate with disease severity.
- The test is accredited and performed on Fujirebio Lumipulse analysers. Results obtained with different assay methods or kits may be different and cannot be used interchangeably. There are other p-Tau assays (181 and 231) using plasma. The increases in p-Tau217 levels have been shown to be superior at detecting Alzheimer's Disease. P-Tau217 has also been show to increase in patients when correlated with brain atrophy and cognitive decline.

Results are reported as:

Negative: A normal (negative) phosphorylated Tau217 (p-Tau217) result is consistent with a negative (normal) amyloid-positron emission tomography (PET) scan result. This result indicates a reduced likelihood that an individual has neuropathological changes associated with Alzheimer disease.

Intermediate: An intermediate p-Tau217 result cannot accurately differentiate between the presence or absence of neuropathological changes associated with Alzheimer disease. Further testing, with PET scanning or cerebrospinal fluid Abeta42 and tau biomarkers, is needed to determine the likelihood of neuropathological changes associated with Alzheimer disease being present.

Positive: An elevated (positive) p-Tau217 result is consistent with a positive (abnormal) amyloid-positron emission tomography (PET) scan result. This result is consistent with the presence of neuropathological changes associated with Alzheimer disease. In the proper clinical context this test is supportive of Alzheimer disease being related to current clinical symptoms. This test has not been demonstrated to provide information on the risk of an asymptomatic individual developing symptoms related to Alzheimer disease in the future.

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See page 25 for sample-taking and special handling instructions.

Virology

Immune status

TEST	CODE	SAMPLE REQS	TAT
Hepatitis A Immunity (IgG/IgM)	HAIM	B	1 day
Hepatitis B Immunity (IgG)	HBIM	B	1 day
Measles Antibodies (IgG) Immunity	MEAS	B	1 day
Measles Antibodies (IgM)	MEAM	B [9]	2 days
Measles, Mumps, Rubella (MMR)	MMR	B	1 day
Mumps Antibodies (IgG and IgM)	MUMM	B	1 day
Mumps Antibodies (IgG)	MUMP	B	1 day
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days
Pneumococcal Antibody Screen	PNEU	B	1-2 weeks
Rabies Antibody	RABI	B	20 days
Rubella Antibody (IgG)	RUBE	B	1 day
Rubella Antibody (IgM)	RUBM	B	1 day
Rubella PCR	RUBP	A / **Amniotic Fluid**	5 days
Tetanus Antibody	TETA	B	5 days
Varicella zoster Antibodies (IgG)	VZOS	B	1 day

Hepatitis testing

TEST	CODE	SAMPLE REQS	TAT
Hepatitis (Acute) Screen	AHSC	B	1 day
Hepatitis A (IgM)	HAVM	B	1 day
Hepatitis A Immunity (IgG/IgM)	HAIM	B	1 day
Hepatitis A Profile	HEPA	B	1 day
Hepatitis A RNA by PCR	HAVR	A or B	3 weeks
Hepatitis A, B & C Profile	ABC	B B	1 day
Hepatitis B (PCR) Genotype	BGEN	A or B	7 days
Hepatitis B 'e' Antigen and Antibody	HEPE	B	1 day
Hepatitis B Core Antibody – IgM	HBCM	B	1 day
Hepatitis B Core Antibody – Total	HBC	B	1 day
Hepatitis B DNA (Viral load)	DNAB	A or B	5 days
Hepatitis B Immunity (IgG)	HBIM	B	1 day
Hepatitis B Profile	HEPB	B	1 day
Hepatitis B Resistant Mutation	HBRM	A or B	7 days
Hepatitis B Surface Antigen	AUAG	B	1 day

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Virology

TEST	CODE	SAMPLE REQS	TAT
Hepatitis C Abs Confirmation (RIBA)	RIBA	B	5 days
Hepatitis C Antibodies	HEPC	B	1 day
Hepatitis C Antigen (Early detection)	HCAG	B	1 day
Hepatitis C Genotype	CGEN	A or B	5 days
Hepatitis C Quantification (Viral Load)	QPCR	A or B	5 days
Hepatitis Delta Antibody	HEPD	B	5 days
Hepatitis Delta Antigen	HDAG	B	5 days
Hepatitis Delta RNA	DRNA	A	5 days
Hepatitis E IgG/IgM	HBE	B	5 days
Hepatitis E RNA (PCR)	EHEP	A	2 weeks
Hepatitis G (PCR)	HEPG	A (Frozen plasma)	2 weeks

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Hepatitis viral load sample instructions

Whole blood can be stored at 2°C to 30°C and must be centrifuged within 24 hours of specimen collection. Separate the plasma or serum from the pelleted red blood cells following the manufacturer's instructions for the tube used. Plasma or serum can be tested on the Panther system in the primary tube or transferred to a secondary Aptima Specimen Aliquot Tube (SAT) for testing on the Panther system. If not tested immediately, plasma and serum can be stored in accordance with the specifications below. If transferred to the SAT, plasma may be frozen at -20°C or -70°C, and serum may be frozen at -20°C. Do not freeze specimens in EDTA, ACD, or serum primary collection tubes.

After centrifugation: in the primary collection tube at 2°C to 8°C for up to 3 days.

In the Aliquoted Tubes:
at 2°C to 8°C for up to 5 days.

In the Aliquoted Tubes:
at -20°C or -70°C for up to 90 days.

Hepatitis B Immunity/ Vaccination Anti-HBs

less than 10 mIU/ml	Non-immune to Hepatitis B
10–50 mIU/ml	Borderline – booster indicated
50–100 mIU/ml	Low level immunity – booster suggested
100 mIU/ml and over	Immune to Hepatitis B

HAV, HBV and HCV assays

All virology samples are processed as per manufacturers sample requirements and guidelines.

Hepatitis virus is named in order of their discovery A, B, C, D, E and G.

Hepatitis A

Hepatitis A is spread through food and water that have been contaminated with the virus derived from human faeces and urine. Hepatitis A is an acute infection, not a chronic form of the disease.

HBV Assays

Hepatitis B surface antigen (HBsAg) (AUAG)

A protein on the surface of HBV; it can be detected in high levels in serum during acute or chronic HBV infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make Hepatitis B vaccine.

Hepatitis B surface antibody (anti-HBs) (HBIM)

The presence of anti-HBs is generally interpreted as indicating recovery and immunity from HBV infection. Anti-HBs also develops in a person who has been successfully vaccinated against Hepatitis B.

Total Hepatitis B core antibody (anti-HBc) (HBC)

Appears at the onset of symptoms in acute Hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with HBV in an undefined time frame.

IgM antibody to Hepatitis B core antigen (IgM anti-HBc) (HBCM)

Positivity indicates recent infection with HBV (≤6 months). Its presence indicates acute infection.

Hepatitis B e antigen and antibody (HEPE)

Hepatitis B e antigen (HbeAg): A secreted product of the nucleocapsid gene of HBV that is found in serum during acute and chronic Hepatitis B. Its presence indicates that the virus is replicating and the infected person has high levels of HBV.

Hepatitis B e antibody (HBeAb or anti-HBe): Produced by the immune system temporarily during acute HBV infection or consistently during or after a burst in viral replication. Spontaneous conversion from e antigen to e antibody (a change known as seroconversion) is a predictor of long-term clearance of HBV in patients undergoing antiviral therapy and indicates lower levels of HBV.

HBV Viral Load (DNAB)

This assay measures the concentration of Hepatitis B viral DNA in patient serum. The test enables the viral load at the beginning of treatment to be established and, thereafter, monitored to indicate treatment success.

HBV Genotyping (BGEN)

Identifies the hepatitis B genotype (A to H) in a patient's serum/plasma. This is critical for determining treatment and monitoring response.

HBV Drug Resistance Detection (HBRM)

Detects Hepatitis B virus wild-type and drug-induced mutations, associated with lamivudine, entecavir and tenofovir.

HCV Assays

HCV Antibody (HEPC)

The test indicates exposure to virus but does not necessarily signify current infection. The HCV antibody test may therefore be used to screen patients for possible HCV infection to detect the presence of antibodies to the virus, indicating exposure to HCV. This test cannot tell if the viral infection is active, only that you were exposed to the virus in the past.

HCV Antigen (HCAG)

HVC Antigen is detectable well before the occurrence of antibodies against HCV. When virus is present, but antibodies are not detectable, a negative antibody test does not rule out HCV infection. Active HCV infection, either acute or chronic is characterised by the presence of HCV Antigen. This is analogous to HepB sAg (AUAG) in active HBV Infection.

HCV Viral Load (QPCR)

Measures the concentration of Hepatitis C viral RNA in patient serum. This state-of-the-art assay enables the viral load at the beginning of treatment to be established and, thereafter, monitored to indicate treatment success.

HCV Genotype for Treatment (CGEN)

Determines the HCV genotype in a patient's serum. The result is presented as being of either Genotype [1, 5, 6], [4] or [2, 3]. This grouping reflects required treatment duration of the different genotypes.

HCV Drug Resistance

Detects hepatitis C wild-type or drug-induced mutations associated with resistance to HCV drugs including NS5A inhibitors, NS5B inhibitors or NS3 inhibitors.

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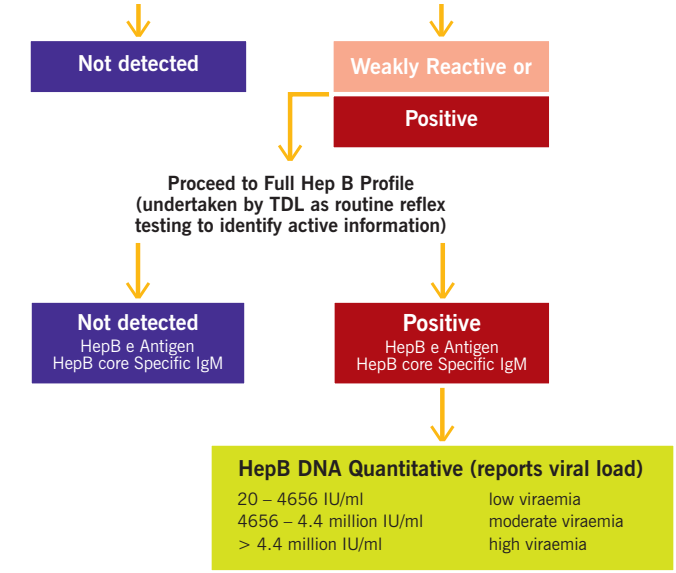
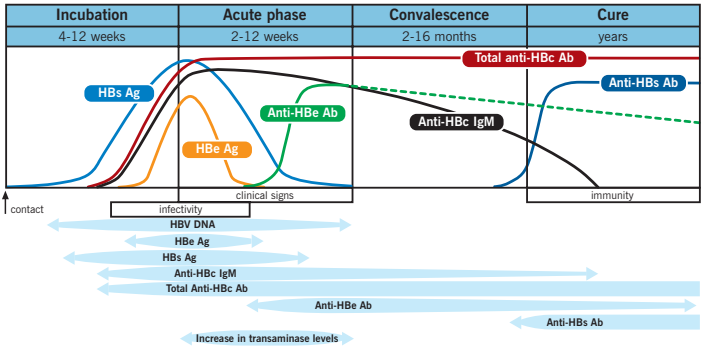
Hepatitis B Surface Antigen

Hepatitis B

- **Transmission**: Sexual, parenteral, perinatal, direct contact between individuals.
- **Clinical Signs**: Asymptomatic in 90% of cases.
- **Cure**: 95% of cases (adults).
- **Complications**: Cirrhosis and hepatocellular carcinoma.
- **Development of chronic form**: Yes (5% of adult cases).
- **Prevention**: Vaccination ++++; specific IgG.
- **Main Marker**: HBS Ag, anti HBc IgM, total anti HBc Ab, Anti-HBs Ab, HBe Ag, Anti-HBe Ab, HBV DNA.





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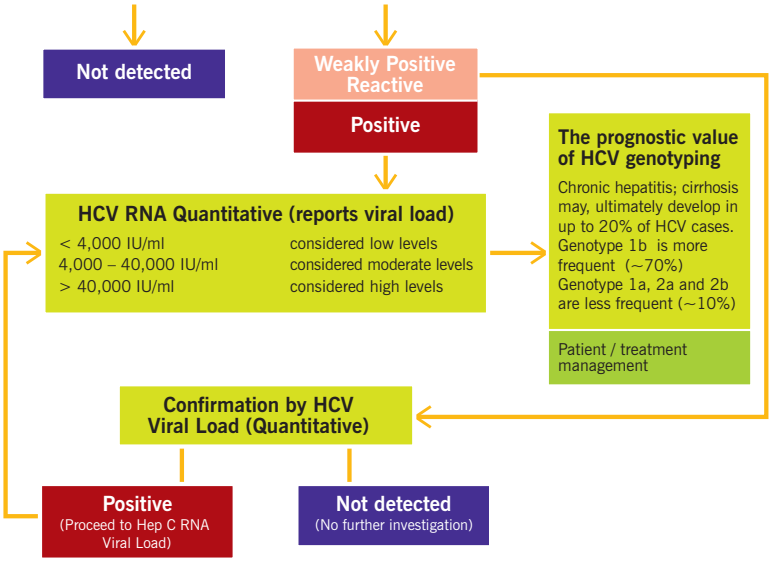
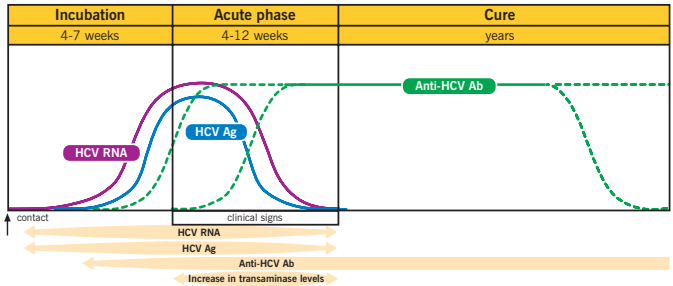
Hepatitis C Antibodies

Hepatitis C

- **Transmission**: Parenteral, nosocomial, sexual.
- **Clinical Signs**: Asymptomatic in 90% of cases.
- **Cure**: 95% of cases (adults).
- **Complications**: Cirrhosis and hepatocellular carcinoma.
- **Development of chronic form**: Yes (80% of adult cases).
- **Prevention**: Hygiene, no vaccination.
- **Main Marker**: Anti HCV Ab, HCV RNA





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HIV testing

TEST	CODE	SAMPLE REQS	TAT
HIV Confirmation of Positive Screens (3 methodologies)	HIVC	B	1 day
HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)	STDX	A 2 x 6mls or 2 x 4mls (Vacutainer only)	3 days
HIV Proviral DNA	HIVP	A	7 days
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	1 day
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	1 day
HIV Screening: HIV1 & 2 Abs/p24 Ag (4th Gen)	HDUO	B	1 day
HTLV 1 & 2 Abs. (Human T Lymphotropic Virus Type I-II)	HTLV	B	1 day
HTLV by PCR	HTLP	A	21 days

HIV positive patient monitoring

TEST	CODE	SAMPLE REQS	TAT
HIV-1 RNA Viral Load by PCR	HIV1	A A (2 x 6ml)	3 days
HIV-2 RNA by PCR	HIV2	A	10 days
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	1 day
HIV Therapeutic Drug Monitoring	TDM	J [1]	21 days
Lymphocyte Subsets (CD3/CD4/CD8)	LYSS	A	1 day

HIV-1 genotypic resistance testing

TEST	CODE	SAMPLE REQS	TAT
HIV-1 Genotypic Resistance (Integrase)	INTE	A A (2 x 6ml)	21 days
HIV-1 Genotypic Resistance (RT & Protease)	HIVD	A A (2 x 6ml)	21 days
HIV-1 Tropism	TRPM	A A (2 x 6ml)	28 days
HLA B*57:01	HL57	A [9]	10 days

HLA-B*57:01 should be tested before starting patients on an Abacavir (ABC) containing regimen to reduce the risk of hypersensitivity reaction. HLA-B*57:01-positive patients should not be prescribed ABC and a positive status should be recorded as an ABC allergy in the patient's medical record.

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Virology – General

TEST	CODE	SAMPLE REQS	TAT
Adenovirus by PCR	ADV	A / **PCR** / **VS**	7 days
Arbovirus Antibodies/Abs	ARBO	B [9,14]	3 weeks
Atypical Pneumonia Screen	APS	B	3 days
BK Polyoma Virus by PCR	BKPV	A /**RU**	5 days
Cat Scratch Fever (Bartonella IgG)	CAT	B	5 days
CD3/CD4/CD8	LYSS	A	1 day
Chikungunya Virus Abs	CHIK	B [9,14]	10 days
CMV IgM Antibodies	CMVM	A (Plasma) or B (Serum)	1 day
COVID-19 (SARS-CoV-2) (PCR) Contact Laboratory.	NCOV	**PCR Swab** (nasal/ pharyngeal)	1 day
CSF Screen by PCR	VPCR	**CSF**	2 days
Cytomegalovirus (CMV-DNA) Amnio	CMVD	**AF**	5 days
Cytomegalovirus (IgG/IgM) Antibodies	CMV	B	1 day
Cytomegalovirus (PCR) Semen	SCVM	**Semen**	7 days
Cytomegalovirus (PCR) Urine	CMVU	**RU**	5 days
Cytomegalovirus Avidity	CMAV	B	10 days
Cytomegalovirus DNA (PCR)	CMVP	A	5 days
Cytomegalovirus Resistance	CMVR	A (6mls)	21 days
Dengue Fever PCR	DPCR	A or B [9,14]	2 weeks
Epstein-Barr Virus Antibodies IgG/IgM	EBVA	B	2 days
Epstein-Barr Virus PCR	EBVQ	A	5 days
Hantavirus Serology	HANV	B [9]	10 days
Herpes Simplex (HSV) 1 & 2 (PCR) (Oral or Genital)	HERS	**PCR**	5 days
Herpes Simplex I/II Antibody Profile (IgG)	HERP	B	2 days
Herpes Simplex I/II by PCR (Urine)	HERD	**FCRU**	5 days
Herpes Simplex I/II IgM	HERM	B	2 days
HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)	STDX	A 2 x 6mls or 2 x 4mls (Vacutainer only)	3 days
Human Herpes Virus – 6 by PCR	HHV6	A	5 days
Human Herpes Virus – 8 (IgG)	HHV8	B	10 days
Human Herpes Virus – 8 by PCR	HV8D	A	5 days
Human Parvovirus B19 – DNA	PCRP	A	2 weeks
JC Polyoma Virus by PCR	JCPV	A / **CSF**	5 days

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Virology

TEST	CODE	SAMPLE REQS	TAT
Measles Antibodies (IgG) Immunity	MEAS	B	1 day
Measles Antibodies (IgM)	MEAM	B [9]	2 days
Measles PCR	MEAP	**Buccal swab**	48 hours
MERS Coronavirus Test	MERS	**J**	1 day
Mumps Antibodies (IgG and IgM)	MUMM	B	1 day
Mumps Antibodies (IgG)	MUMP	B	1 day
Mycoplasma pneumoniae IgM and IgG	MYCO	B	2 days
Mycoplasma species – DNA	MPCR	A	5 days
Needle Stick Injury Profile	NSI	B B	1 day
Neurological Viral Screen	NVIR	B B	2 days
Parvovirus Antibodies (IgG)	PARG	B	2 days
Parvovirus Antibodies (IgM)	PARV	B	2 days
Parvovirus IgG/IgM Abs	PARP	B	2 days
Pneumonia (Atypical) Screen	APS	B	3 days
Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (PCR)	FLU4	**PCR** nasopharyngeal swab	2 days
Rotavirus in Stool by PCR	ROTA	**RF**	1 day
Rubella Antibody (IgG)	RUBE	B	1 day
Rubella Antibody (IgM)	RUBM	B	1 day
Rubella Avidity	RUAV	B	1 week
Torch Screen	TORC	B	2 days
Varicella zoster – DNA	VZPC	A	5 days
Varicella zoster Antibodies (IgG)	VZOS	B	1 day
Viral Antibody Screen	VIRA	B B	2 days
Viral Eye by PCR	VPE	**PCR**	3 days
Viral Respiratory RNA Screen by PCR	VPR	**PCR** or as specified on the form	2 days
Viral Skin/Mucosa by PCR	VPSK	**PCR**	5 days
West Nile Virus Abs	WNV	B	2 weeks
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days

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Atypical Pneumonia Screen

Mycoplasma pneumonia Abs
Chlamydia pneumoniae (MIF)
Legionella pneumophila (IF)

TAT: 3 days

APS

B

Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (PCR)

Flu A
Flu B
Respiratory Syncytal Virus (RSV)
COVID-19

TAT: 2 days

FLU4

PCR nasopharyngeal swab

CSF Screen by PCR

Herpes Simplex Virus
Varicella Zoster Virus
Enterovirus
Parechovirus

TAT: 2 days

VPCR

CSF

Hepatitis (Acute) Screen

Hepatitis A (IgM)
Hepatitis B Surface Antigen
Hepatitis C Antibodies

TAT: 1 day

AHSC

B

Hepatitis A, B & C Profile

Hepatitis A Profile
Hepatitis B Profile
Hepatitis C Antibodies
Hepatitis C Antigen
Liver Function Tests (LFT)

TAT: 1 day

ABC

B B

Hepatitis B Profile

Hepatitis B Surface Antigen
Hepatitis B Surface Antibodies
Hepatitis B Core IgG/IgM

TAT: 1 day

HEPB

B

HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)

Positive findings will be reflexed for confirmatory testing

HIV1 and HIV2 (RNA)
Hepatitis B Virus (HBV DNA)
Hepatitis C Virus (HCV RNA)

Samples must be received in the laboratory within 2 days of sample taking

STDX provides diagnostic confirmatory testing only when used in addition to serology for Ag/Ab HIV-1&2, HBV, HCV

TAT: 3 days

STDX

A 2 x 6mls or 2 x 4mls (Vacutainer only)

HIV Rapid RNA HIV-1 QUALITATIVE

Early detection from 10 days

HIV-1 RNA

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 1 day

LHIV

A (Vacutainer only)

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HIV Rapid RNA HIV-1 QUANTITATIVE

Rapid testing for HIV-positive patient prognosis and response to antiretroviral therapy

HIV-1 RNA VIRAL LOAD (40 copies/ml)

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 1 day

RHIV

(A) (Vacutainer only)

Needle Stick Injury Profile

(Donor – Not recipient)

Hepatitis B Surface Antigen
Hepatitis C Antibodies
HIV 1 & 2/p24Ag

Serum saved for 2 years

TAT: 1 day

NSI

(B) (B)

Neurological Viral Screen

Measles IgG
Measles IgM
Mumps IgG
Mumps IgM
CMV IgG
HSV 1+2 IgG
HSV 1+2 IgM
VZV IgG

TAT: 2 days

NVIR

(B) (B)

Torch Screen

Toxoplasma Antibodies (IgG, IgM)
Rubella Antibody (IgG, IgM)
CMV Antibody (IgG, IgM)
HSV Antibody (HSV1/HSV2 IgG)

TAT: 2 days

TORC

(B)

Viral Antibody Screen

Cytomegalovirus Abs IgG/IgM
Herpes Simplex I/II IgM
Herpes Simplex I/II Antibody Profile IgG
Measles Antibodies IgG
Measles Antibodies IgM
Mumps Antibodies IgM
Mumps Antibodies IgG
Mycoplasma Pneumoniae IgG and IgM

TAT: 2 days

VIRA

(B) (B)

Viral Eye by PCR

Herpes Simplex Virus
Varicella Zoster Virus
Adenovirus

TAT: 3 days

VPE

PCR

Viral Respiratory RNA Screen by PCR

Throat swabs, nasopharyngeal aspirates

Adenovirus
Parainfluenza 1,2,3,4
Influenza A and B
Coronavirus (seasonal)
SARS-CoV-2 (COVID-19)
Parechovirus
Rhinovirus
Enterovirus
Respiratory Syncytial Virus A and B
Human Metapneumovirus

TAT: 2 days

VPR

PCR or as specified on the form

Viral Skin/ Mucosa by PCR

If chicken pox or shingles suspected, please indicate clearly on the request form

Herpes Simplex Virus
Varicella Zoster Virus

TAT: 5 days

VPSK

PCR

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Tumour Markers/Sites

TEST	CODE	SAMPLE REQS	TAT
Alpha-Fetoprotein	AFP	B	1 day
Breast Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
CA 15-3	C153	B	1 day
CA 19-9	C199	B	1 day
CA 50	CA50	B	5 days
CA 72-4	C724	B	5 days
CA 125	C125	B	1 day
Carcino Embryonic Antigen	CEA	B	1 day
Complex PSA (Prostate Specific Ag)	CPSA	B	3 days
Cyfra 21-1	CY21	B	4 days
HCG (Oncology)	HCGQ	B	1 day
HE4 + ROMA (Earlier Detection of Ovarian Tumour)	HE4	B	1 day
Neurone Specific Enolase	NSE	B	5 days
Osteocalcin	OST	B (Frozen)[4]	4 days
Prostate Profile (Total & Free PSA)	PR2	B	1 day
Prostate Specific Antigen (Total) * * Results that fall between 4.00 ug/L and 10.00 ug/L will automatically reflex to a Free PSA with a calculated ratio. The ratio of Free to Total PSA may help discriminate between prostate cancer and benign prostatic hyperplasia.	PSPA	B	1 day
Pyruvate Kinase (M2-PK)	M2ST	**RF**[4]	5 days
Pyruvate Kinase (M2-PK)	M2PK	A (Frozen plasma)[7]	5 days
S100 Malignant Melanoma	S100	B	4 days
Squamous Cell Carcinoma	SCC	B	4 days
Stockholm3 Ensure the two tubes are received by TDL within 48 hours of sample taking.	STK3	A A	2 weeks
Stockholm3 Reflex NEW If the PSA level is > 1.5 ng/ml, reflex testing for STK3 will be undertaken. Ensure the three tubes are received by TDL within 48 hours of sample taking.	STKR	A A B	2 weeks
Testicular Tumour Profile (LDH, AFP, HCQG)	TTP	B	1 day
Urinary Bladder Cancer Antigen ** It is recommended to collect mid-stream urine. Do not use first morning urine. Collection of urine specimen before any surgical intervention or treatment or 1–2 weeks after specimen shall not be collected with an instrument e.g. catheter.	UBC	**RU** (Freeze within 48 hours)**	5 days

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Tumour Markers/Sites

Site	Tumour marker	Sample type	Turnaround time
Oesophagus	CA19-9	serum	1 day
	CEA	serum	1 day
	SCC*	serum	4 days

Site	Tumour marker	Sample type	Turnaround time
Bronchial/ Lung	NSE*	serum	5 days
	SCC*	serum	4 days
	CEA	serum	1 day
	Cyfra 21-1	serum	4 days

Site	Tumour marker	Sample type	Turnaround time
Bile duct	CA19-9	serum	1 day
	CEA	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Pancreas	CA19-9	serum	1 day
	CEA	serum	1 day

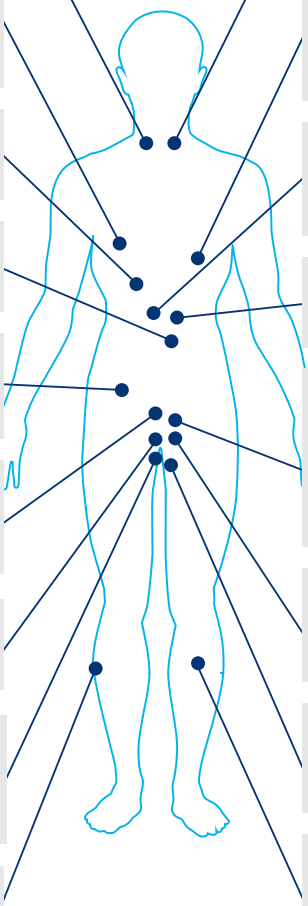
Site	Tumour marker	Sample type	Turnaround time
Carcinoid	5-HIAA	24 hour urine/ acidified	5 days

Site	Tumour marker	Sample type	Turnaround time
Bladder/ Chorion	CEA	serum	1 day
	CA 50	serum	5 days
	UBC	urine	5 days

Site	Tumour marker	Sample type	Turnaround time
Cervix/ Uterus	SCC*	serum	4 days
	CEA	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Prostate	Prostate Profile (Total + Free PSA)	serum	1 day
	Stockholm3 STK3/STKR	EDTA/ EDTA, SST	2 weeks

Site	Tumour marker	Sample type	Turnaround time
Melanoma	S-100	serum	4 days



Site	Tumour marker	Sample type	Turnaround time
Thyroid	CEA	serum	1 day
	Thyroglobulin	serum	1 day
	Calcitonin	1ml Frozen serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Breast	Breast Cancer NGS Panel	EDTA	4 weeks
	CA15-3	serum	1 day
	CEA	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Liver	AFP	serum	1 day
	CEA	serum	1 day
	Ferritin	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Gastro-intestine	CEA	serum	1 day
	CA19-9	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Ovary	Ovarian Cancer NGS Panel	EDTA	4 weeks
	CA125	serum	1 day
	CA15-3	serum	1 day
	HE4	serum	1 day
	AFP	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Colon	CEA	serum	1 day
	CA19-9	serum	1 day
	CA 50	serum	5 days

Site	Tumour marker	Sample type	Turnaround time
Testes	AFP	serum	1 day
	HCG (quantitative)	serum	1 day

Site	Tumour marker	Sample type	Turnaround time
	Osteocalcin	serum (frozen)	4 days

* NSE: Neurone Specific Enolase
SCC: Squamous Cell Carcinoma

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

HE4 + ROMA (Earlier Detection of Ovarian Tumour)

HE4
CA 125
ROMA

Calculated Algorithm for pre and post menopausal risk of malignant disease.

TAT: 1 day

HE4

B

Prostate Profile (Total & Free PSA)

Prostate Specific Antigen (Total)
Free PSA
Calculated Ratio

The ratio of Free to Total PSA may help discriminate between prostate cancer and benign prostatic hyperplasia.

TAT: 1 day

PR2

B

Testicular Tumour Profile

Lactate Dehydrogenase (LDH)
Alpha-Fetoprotein
HCG (Oncology)

TAT: 1 day

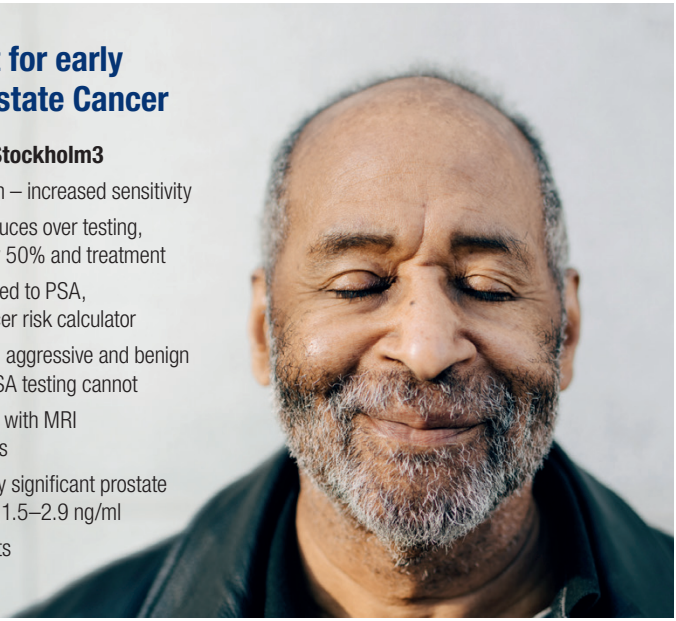
TTP

B

Stockholm3 test for early detection of Prostate Cancer

Key characteristics of Stockholm3

- Increased early detection – increased sensitivity
- Increased specificity reduces over testing, unnecessary biopsies by 50% and treatment
- Higher accuracy compared to PSA, PSAD and prostate cancer risk calculator
- Can distinguish between aggressive and benign tumours in a way that PSA testing cannot
- Validated in combination with MRI and in multiple ethnicities
- Shown to detect clinically significant prostate cancers in PSA levels of 1.5–2.9 ng/ml
- Reduces healthcare costs



Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

TDL Genetics

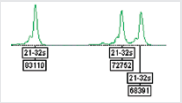
TDL Genetics is a consultant-led service which is able to provide extensive expertise in the testing, diagnosis and genetic counselling of inherited disorders. Genetic tests are performed on DNA for molecular genetic analysis and on whole chromosomes for cytogenetic analysis. Some tests are part of profiles that can be linked with assays from other TDL disciplines, such as biochemistry and haematology, to give more comprehensive results for the patient.

Genetic tests are available for:

- Prenatal diagnosis and rapid trisomy screening by QF-PCR (Amnio-PCR and CVS-PCR)
- Carrier screening
- Newborn chromosome analysis
- Confirmation of symptomatic individuals and pre-symptomatic testing
- Genetic variation that influences risk of disease
- Identity studies (paternity, zygosity, tissue typing)
- Fertility studies
- Products of conception
- Cancer

QF-PCR: DNA peaks from an unaffected fetus

QF-PCR: DNA peaks from a fetus with Down Syndrome



Genetic testing is sometimes complex and tests will vary in their ability to detect variants or to detect all patients who have, or will develop, the disease. Some tests are diagnostic for a condition, others are indicative or are associated with an altered risk for a condition. Results can affect the lives of individuals and have implications for their family, for insurance and employment. Where testing will predict the inheritance of a disease in a healthy person, counselling and consent are mandatory. For these tests, please complete the Genetic Request form (including informed consent). Our service provides result interpretation and risk assessment. Genetic counselling can be arranged by TDL's Consultant Clinical Geneticist.

SCAN ME

Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

To meet the increasing range and complexity of genetic testing we have developed an excellent collaboration with other specialist laboratories.

Tests marked GENE are sent to these laboratories within our network and have a fixed price.

GENE panel composition may change throughout the year to reflect new and improved developments. Turnaround times may be longer if follow-up studies are required.

Specimen Receipt at The Doctors Laboratory is 24 hours a day. Specifically, TDL Genetics results service is available Monday to Friday 8.30am–5.30pm with the laboratory also open for processing of samples on Saturdays from 9am–1pm. The Non-invasive prenatal testing (NIPT) laboratory is open Monday to Saturday.

Test codes, sample requirement codes and turnaround times may be found on the following pages.

All samples must be collected in the specified containers, as shown in the key at the back of this guide. Samples should be fresh and in good condition (e.g. not clotted if EDTA or heparinised whole blood is required) otherwise testing may be adversely affected and another sample may be required. Small DNA samples are stored routinely for one year, larger DNA samples can be stored by special arrangement.

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Instructions for transportation, sample labelling, and the completion of request forms can be found on the reverse of the TDL Genetics Request Form.

The locations of the Laboratory and Patient Reception are indicated on the map on the reverse of each request form. If you do not find the test you require in this directory or need more information and advice please telephone the laboratory on **020 7307 7409**.

Sending samples to the laboratory

Transport arrangements

All specimens should be kept at room temperature and despatched to the laboratory as soon as possible, by TDL/international courier, first class post, guaranteed next day delivery or a reliable alternative.

If a delay in sending the sample is unavoidable, please refrigerate overnight – DO NOT FREEZE. For NIPT sample stability see page 130, do not refrigerate or freeze NIPT bloods.

Specimens must not be allowed to come in contact with request forms, but should be kept separate by using dual – pocketed plastic bags. Specimens for inland postage must be packed in a rigid crush-proof container according to current Post Office guidelines.

IATA guidelines should be followed for international transport (advice is available from the laboratory).

Labelling of high-risk samples

Please note that it is the responsibility of the referring clinician to ensure that high-risk samples are clearly identified to reduce the risk of infection to staff and others.

Patient details on request forms and samples

Request and consent forms are available directly from TDL Genetics. In order to avoid unnecessary time spent in obtaining details please provide the following information:

Information for request forms

- Surname, forename (not initials), date of birth and birth sex of patient for postnatal referrals
- Full name (not initials) and location of referring clinician
- Full address of clinician to whom the result should be sent
- Legible clinical summary (reason for referral), including details of any relevant family history
- Address for billing – doctor, patient or other
- Gestation on prenatal samples
- Hospital or reference number
- Test required

Essential information on sample container label

- Patient's surname and forename (not initials)
- Date of birth
- Hospital number or reference number

Consent forms

Consent forms (see tdlpathology.com/tests/request-forms) are available for genetic testing. As genetic testing may have implications for other family members and is regarded as personal data, it is recommended that written consent is obtained wherever possible. In cases with predictive testing for severe disorders, as indicated in the laboratory guide, it is essential that patients should also be offered formal genetic counselling. It is the responsibility of the referring clinician to obtain appropriate consent from the patient.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

Unlabelled samples

Unlabelled samples will ONLY be processed if the individual who took the sample can confirm the sample is from the patient in question. In the absence of this assurance, the sample will be discarded and a repeat required.

Genetic testing

The importance of clinical details

Clinical details are very important when providing genetic analysis. The more clinical information that is available (e.g. details of ultrasound information, phenotypic features or family history) the better the service we can provide. Failure to provide this information for cytogenetic studies may result in an inaccurate analysis.

Molecular genetics

Clinical details can be extremely important for clinical interpretation of a molecular genetic test.

For example, the clinical comments accompanying a cystic fibrosis screening report will vary depending on whether the patient is a potential gamete donor or a person exhibiting a cystic fibrosis phenotype.

It may also be crucial, where a variant has already been shown to be segregating in a family, to be provided with information concerning the variant and a family pedigree to ensure the correct analysis is performed and reliable risk figures calculated.

Cytogenetics

Cytogenetic analysis is performed according to the Professional Guidelines for the Association of Clinical Genomic Science and the recommendations provided are dependent on the clinical indications given for each case.

Clinical details inform the investigation at all stages:

- Prior to analysis, clinical details may indicate, for example, that procedures such as chromosome breakage or leukaemic studies are required, which must be referred to the oncogenomic department or specialist centre.
- During analysis they may indicate that extra cells should be screened to investigate the possibility of mosaicism, for example in a diagnosis of suspected Turner syndrome, or that particular chromosomes must be targeted for high-resolution study, for example chromosome 22q11.2 in suspected DiGeorge syndrome.
- When the analysis has been completed they may help to provide an accurate interpretation of the findings and in some instances prompt further investigations, for example FISH or molecular genetic studies.

When clinical details are not available a routine analysis will be performed and a conditional report issued.

Sample Stability

Molecular Genetic Samples

Whole blood collected in EDTA should be sent to the laboratory between 4˚C-28˚C within 48 hours.

Long term storage should be at 2-8°C.

Extracted DNA samples should be sent to the laboratory between 4˚C-28˚C.

Cytogenetic Samples

Cytogenetic studies require living cells, please ensure that samples reach the laboratory as soon as possible. If a delay before dispatch is unavoidable, samples may be stored in a refrigerator (4°C) but they must not be frozen.

Samples sent more than 48 hours after sampling, or kept at temperatures below 4˚C and greater than 38˚C may have inhibited growth.

Information concerning packaging, transportation, and labelling of samples is provided on the reverse of our TDL Genetics Request Form.

Requesting additional tests

Any further tests not requested at the time of sample receipt must be requested within:

- 1 week for tests requiring prenatal culture or cultured cells
- 2 weeks for DNA testing
- 2 weeks for cell culture testing
- 3 months for FISH testing

Samples can be stored for longer periods if specifically requested at the time of sample receipt.

Postnatal Diagnosis (Blood Culture)

Reasons for analysis: Chromosome studies are requested where problems that may have a cytogenetic basis are suspected, e.g. babies with birth defects; children with developmental delay and physical handicaps, delayed puberty, or adults with fertility problems. Additionally, prospective gamete donors are screened to detect carriers of balanced chromosome rearrangements.

Sample requirements: Lithium heparin whole blood specimens are required – gently mixed to prevent clotting and must not be frozen. See sample stability section for cytogenetic samples. Sample volumes may be reduced for children (2-4ml) and neonates (1-2ml).

Turnaround time: The usual turnaround time is 2-3 weeks however the laboratory will endeavour to respond to urgent requests. Where a major trisomy is suspected, a rapid PCR screen may be performed to provide an urgent provisional result.

Notes

- Rarely, blood samples fail to culture (<1%);
- The culture may yield chromosomes of insufficient quality. This will be indicated on the report and a repeat study suggested;
- The laboratory should be informed if the patient has recently received a blood transfusion.
- The laboratory should be informed if the patient has EVER had a bone marrow transplant.
- The patient's birth sex should be included on the request form.
- For fetal blood samples a maternal blood sample must also be provided to confirm fetal origin.

Prenatal diagnosis

Reasons for analysis: Chromosome studies are requested where pregnancies are identified as being at risk of a cytogenetic abnormality e.g. positive maternal serum screening combined NT test; fetal abnormalities found on ultrasound; or where a parent is a known carrier of a chromosome anomaly, or where a high risk trisomy has been found by NIPT.

Sample requirements:

- Amniotic fluid – 10ml+ in a plain sterile, leak-proof container. Suitable containers can be provided by the laboratory. The specimen must not be frozen. See sample stability section for cytogenetic samples.
- Chorionic villus – 5mg+ in sterile transport medium. Suitable containers containing medium can be provided by the laboratory. The specimen must not be frozen. See sample stability section for cytogenetic samples.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

- Fetal blood – 1-2ml LITHIUM HEPARIN whole blood, gently mixed to prevent clotting. The specimen must not be frozen. See sample stability section for cytogenetic samples. For fetal blood samples a maternal blood sample must also be provided to confirm fetal origin.

Turnaround time: This is dependent on the rate of cell growth, however, the usual turnaround time is approximately 2 weeks. A number of circumstances now occur more frequently, as invasive prenatal diagnosis becomes less common, that may result in delayed reporting time. These include:

- A delay in transportation in order to collect a batch of samples to reduce courier costs. Even when couriered promptly, sample growth may be slower than that seen in samples sent immediately.
- Sampling at early or late gestations, for example to confirm non-invasive tests or follow up anomaly scans.
- A tendency to take smaller quantities of sample or to take insufficient sample for multiple techniques.
- The request for karyotyping as an add-on after an initial PCR test.

Fetal blood results will usually be reported by 10 calendar days. For all other prenatal tests, please contact the laboratory prior to taking samples.

Notes

- Maternal contamination, and mosaicism may complicate the analysis and may lead to the suggestion that a second invasive test is performed.
- Rarely, cultures fail to grow (overall <1%).
- Chromosome abnormalities smaller than resolution of G-band analysis may not be detected (higher resolution techniques such as Array-CGH may be more appropriate in certain circumstances).
- For TTTs or heavily blood stained amniocentesis samples, please provide a maternal EDTA blood sample for comparison studies.

Solid tissue

Reasons for analysis: Fibroblast cultures may be used in addition to blood cultures, for example where tissue specific mosaicism is suspected, or where blood samples cannot be obtained. POC samples may be requested for early spontaneous miscarriages, stillbirths, or to confirm a prenatal diagnosis.

SCAN ME

For more information on products of conception for genetic investigations

www.tdlpathology.com/poc

Sample requirements: All specimens should be placed in a sterile container, preferably containing transport medium. This can be supplied by the laboratory. Sterile normal saline can be used if transport medium is not available. Samples must not be placed in formaldehyde or other preservative and must not be frozen. See sample stability section for cytogenetic samples.

Turnaround time: This is dependent on the rate of cell growth, however, the usual turnaround time is approximately 4 weeks.

Notes

- Material from miscarriages has a relatively high culture failure rate (around 20%). Where failure occurs, alternative molecular methods may be attempted, usually this will be SNP Array CGH. This assay can detect chromosome losses and gains across all 23 pairs of chromosomes. It can detect extra or missing whole chromosomes, and smaller changes than is possible by conventional karyotyping. Using this method of testing we can also detect triploids and some types of mosaicism.
- If no placental villi or fetal remains are identified during dissection of POC material the tissue is likely maternal in origin and not representative of the conceptus (uninformative). A report relaying this information is sent to the referring

clinician and a small amount of tissue prepared and stored for 4 weeks. Testing of this tissue by molecular methods can be requested within this time; however, there is a high probability that any result will represent the maternal profile.

- If a request is made for remaining pregnancy loss tissue to be returned to the patient or hospital for burial or cremation, we will return the sample as soon as possible once adequate tissues have been removed for testing. Please ensure that this is communicated to the lab using a hospital consent form, noted on the referral form or by email. Patients can arrange to collect remaining tissues from TDL Patient Reception.
- The lab will send all remaining tissue for samples, without specific requests, for sensitive incineration. Please note that there is no distinction made between fetal and other pregnancy tissues for this process and there will be no ashes afterwards. The lab keeps detailed records of all pregnancy tissue sent for incineration including the date and location of incineration.

Fluorescence *in situ* hybridisation (FISH)

Where FISH studies for specific microdeletion syndromes are required this must be indicated on the request form.

Note: FISH studies for a rapid pre or postnatal aneuploidy screen have now been superseded in our laboratory by multiplex-PCR technology. Subtelomeric screens are now performed by Array CGH as part of developmental delay investigations. Common microdeletion syndrome testing is now performed by CGH analysis.

Statement regarding Measurement Uncertainty (MU)

Measurement Uncertainty is determined for each measurement procedure in the examination phase used to report measured quantity values on patients' samples. This is determined during verification of this assay for service introduction; creation of laboratory standard operating procedures (SOP) and interpretation of the results.

Where examinations include a measurement step but do not report a measured quantity value, the laboratory calculates the uncertainty of the measurement step where it has utility in assessing the reliability of the examination procedure or has influence on the reported result.

Estimates of measurement uncertainty are regularly reviewed and are available upon request to laboratory users.

Key Personnel

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
1p36 Deletion Syndrome – karyotype + CGH	KARY, FISH	**CVS** / **AF** / H [9]	12-17 days
21-Hydroxylase Deficiency (Congenital Adrenal Hyperplasia CYP21A2) Requires patient informed consent.	GENE	A [9,11]	5 weeks
22q11 & 10p14 deletion (Di George Syndrome) – CGH CHANGE	CGH	**CVS** / **AF** / A H [9]	10 days
Achromatopsia NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
Adenomatous Polyposis NGS Panel	GENE	A [9]	4 weeks
Aicardi-Goutières Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
Alagille Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Alpha Thalassaemia – alpha globin gene sequencing + deletions/duplications	GENE	A	4 weeks
Alpha Thalassaemia – multiplex PCR for common large deletions Requires patient informed consent.	GENE	A [9]	3 weeks
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z Requires patient informed consent.	GENE	A [9]	3 weeks
Alport Syndrome NGS Panel – full sequencing with deletions and duplications Requires patient informed consent.	GENE	A A [9]	5 weeks
Alzheimer and Dementia NGS Panel Requires patient informed consent.	GENE	A [9,11]	6 weeks
AML/ALL Molecular MRD – NPM1, PML-RARA, CBFB-MYH11, RUNX1-RUNX1T1, ETV6-RUNX1 Requires patient informed consent. Must arrive in the laboratory within 48 hours, before 12pm on Fridays. Contact lab for further information.	GENE	**Bone Marrow** / A [9]	5 days
Amniocentesis – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days
Amniocentesis culture (karyotype) only	ACUL	**AF** [9]	10-15 days
AmnioPCR only – rapid common aneuploidy diagnosis by QF-PCR	APC	**AF** [9]	2 days
Amyotrophic Lateral Sclerosis (Motor Neurone Disease) NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
Androgen Insensitivity – AR gene sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Angelman Syndrome (Primary Screen) – methylation test	GENE	A [9]	2-3 weeks

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Angelman/Rett Syndromes NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
Aniridia, Isolated – PAX6 gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Anophthalmia/Microphthalmia/ Coloboma NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Apolipoprotein E genotype – E2/E3/E4 For Alzheimer's disease requests please state if test is requested for Alzheimer disease diagnosis or eligibility for treatment with monoclonal antibodies e.g. lecanemab.	APEG	A [9,11]	2 weeks
Array-CGH (Comparative Genomic Hybridisation) SNP array	CGH	**CVS** / **AF** / A H [9]	10 days
Ashkenazi Breast Cancer Screen – common variants Requires patient informed consent.	GENE	A [9,11]	4 weeks
Ashkenazi Jewish Carrier Screen Requires patient informed consent. See Carrier Screen on page 129 for details	GENE	A [9]	4 weeks
Ataxia NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Autoinflammation/Periodic Fever NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Azoospermia – karyotype + Y deletions + cystic fibrosis screen (+ polyT(5T) when clinically relevant)	GRP	A H [9]	10-15 days
B cell Clonality Assay (IgH and IgK)	IGHA	A or **FFPE**	2 weeks
Bardet-Biedl Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Batten Disease (Neuronal Ceroid Lipofuscinosis) NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
BCR-ABL Diagnostic Assay	BCRD	A	2 weeks
BCR/ABL Quantitative – fusion gene sizes p190 + p210 MUST arrive in the laboratory within 48 hours, before 12pm on Fridays.	BCRQ	A A [9]	10 days
Becker/Duchenne Muscular Dystrophy – deletions/duplications	DMD1	A [9]	10 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Beckwith-Wiedemann Syndrome – methylation studies on 11p15 imprinting domains KvDMR + H19 Requires patient informed consent.	GENE	A [9,11]	6 weeks
Behcet's Disease – HLA Tissue Typing B*51	B51	A [9]	10 days
Beta Thalassaemia – beta-globin gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	4 weeks
Bleeding and Platelet Gene Panel Requires patient informed consent. Contact lab.	R90U	A A [9]	12 weeks
Blood PCR for Chromosome 13, 18, 21 and sex chromosomes	BPCR	A	5 days
Breast Cancer – BRCA1 + BRCA2 genes only Requires patient informed consent.	GENE	A [9,11]	4 weeks
Breast Cancer Ashkenazi Screen – common variants Requires patient informed consent.	GENE	A [9,11]	4 weeks
Breast Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Brugada Syndrome/Long QT Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	4-6 weeks
C-KIT D816V variant – Mastocytosis Requires patient informed consent.	GENE	**Bone Marrow** / A [9]	4 weeks
CADASIL – NOTCH3 gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
CAKUT (Congenital Anomalies of Kidney & Urinary Tract) NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Cancer, Comprehensive NGS Panel Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Cardiomyopathy, Dilated NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Cardiomyopathy, Hypertrophic NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Cardiovascular, Comprehensive NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Carrier Screen (Ashkenazi Jewish) Requires patient informed consent.	GENE	A [9]	4 weeks
Carrier Screen (Ashkenazi Jewish) – Partnered Report Requires patient informed consent. Please contact the lab for special requirements before sending.	GENE	A [9]	4 weeks

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Carrier Screen (Pan-Ethnic) Requires patient informed consent.	GENE	A [9]	4 weeks
Carrier Screen (Pan-Ethnic) – Partnered Report Requires patient informed consent. Please contact the lab for special requirements before sending.	GENE	A [9]	4 weeks
Charcot-Marie-Tooth Syndrome NGS Panel Requires patient informed consent. Contact lab prior to sending. Referral from clinical neurologist or clinical geneticist required with genetic consent form.	GENE	A A [9]	6 weeks
Charcot-Marie-Tooth Type 1A – PMP22 duplications Requires patient informed consent. Contact lab prior to sending. Referral from clinical neurologist or clinical geneticist required with genetic consent form.	GENE	A [9]	6 weeks
CHARGE Syndrome – CHD7 gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Cholestasis NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Chromosome Analysis (Amniocentesis) – culture only	ACUL	**AF** [9]	10-15 days
Chromosome Analysis (Amniocentesis) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days
Chromosome Analysis (Blood)	KARY	H [9]	3-4 weeks
Chromosome Analysis (Chorionic Villus) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days
Chromosome Analysis (Chorionic Villus) – culture only	CVSC	**CVS** [1,9]	10-15 days
Chromosome Analysis (Products of Conception)	PROC	**Placental Sample** [1,9]	20-25 days
Chromosome Analysis (Solid Tissue)	PROC	**Fetal tissue** [1,9]	20-25 days
Chromosome Y Deletion – AZFa, AZFb, AZFc + SRY	YDEL	A [9]	5 days
Clopidogrel Resistance Genetic Test (CYP2C19 genotype)	2C19	A [9]	10 days
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days
Colorectal Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Comparative Genomic Hybridisation (CGH) SNP array	CGH	**CVS / AF /** A H [9]	10 days
Congenital Absence of Vas Deferens – karyotype + Y deletions + cystic fibrosis screen (+ polyT(5T) when clinically relevant)	GRP	A H [9]	10-15 days

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Congenital Adrenal Hyperplasia NGS Panel	GENE	A [9]	6 weeks
Congenital Myopathy NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Connective Tissue Disorders NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Cornelia de Lange Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Craniosynostosis NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Cri du Chat Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
CVS PCR for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days
Cystic Fibrosis (139 common variants) – reflex to Poly T when required Please provide relevant clinical and family history.	CFS	A [9]	10 days
Diabetes – Obesity NGS Panel Requires patient informed consent.	GENE	A	6 weeks
DiGeorge Syndrome (22q11 & 10p14) – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Dihydropyrimidine Dehydrogenase deficiency screening (Fluoropyrimidine Toxicity)	5FU	A [9]	1-2 weeks
Dilated Cardiomyopathy NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
DNA Extraction & Storage – 3 years (longer upon request)	XDNA	A [9]	20 days
DNA Identity Profile – 15 STR markers	DNAF	A [9,11]	10 days
Duchenne Muscular Dystrophy – deletions/duplications only	DMD1	A [9]	10 days
Duchenne Muscular Dystrophy – full sequencing DMD1 gene Requires patient informed consent.	GENE	A [9]	6 weeks
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days
Ehlers-Danlos Syndrome NGS Panel	GENE	A [9,11]	6 weeks
Endometrial Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Endotest® For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples can be collected in the clinic or at home following instructions provided.	ENDT	Endotest saliva collection kit	25 days
Epidermolysis Bullosa NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks

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See page 25 for sample-taking and special handling instructions.

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Epilepsy, Adolescent/Adult Onset Panel Requires patient informed consent.	GENE	A	6 weeks
Epilepsy, Comprehensive NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Fabry Disease, X-linked – GLA gene sequencing	GENE	A [9]	4 weeks
Facioscapulohumeral Muscular Dystropy (FSHD) – D4Z4 repeat deletion Requires patient informed consent. Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required.	GENE	A A [9]	9 weeks
Factor II Prothrombin – G20210A Variant	FX2	A [9]	5 days
Factor V Leiden – G1691A Variant	FX5	A [9]	5 days
Familial Hypercholesterolaemia NGS panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Familial Hypocalciuric Hypercalcaemia (FHH) Panel Requires patient informed consent.	GENE	A A [9]	6-7 weeks
Familial Mediterranean fever MEFV gene sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Familial Medullary Thyroid Carcinoma – hotspot sequencing RET gene Requires patient informed consent.	GENE	A [9,11]	6-7 weeks
Fatty Acid Oxidation Deficiency NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
FLT3-ITD and FLT3-TKD screening assay	FLT3	A	24 hours
Fragile X Syndrome screen – FMR1 repeat analysis PCR Requires patient informed consent.	GENE	A A [9]	5 weeks
Friedreich Ataxia – frataxin gene repeat analysis Requires patient informed consent.	GENE	A [9]	5 weeks
Gaucher Disease (Full gene sequencing)	GENE	A [9]	4 weeks
Gaucher Disease Screen (Common variants) Requires patient informed consent.	GENE	A	3 weeks
Genetic Reproductive Profile (Male)	GRP	A H [9]	10-15 days
Gilbert Syndrome – common UGT1A1 repeat variation Requires patient informed consent.	GENE	A [9]	2-3 weeks
Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency – full G6PD gene sequencing Requires patient informed consent.	GENE	A [9]	3-4 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Glycogen storage disease type 2 (Pompe) variant analysis	POMP	A	4 weeks
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days
Haemophilia A (Factor VIII deficiency) – CVS	8CVS	**CVS** [40]	3 days
Haemophilia B (Factor IX deficiency) – CVS	9CVS	**CVS** [40]	3 days
Hearing Loss NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Hereditary Colorectal Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Hereditary Comprehensive Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Hereditary Neuropathy with Liability to Pressure Palsy – PMP22 deletion analysis Requires patient informed consent. Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required.	GENE	A [9]	6 weeks
Hereditary Spastic Paraplegia Comprehensive NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days
Hirschprung Disease NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
HLA Tissue Typing A	HLA	A [9]	10 days
HLA Tissue Typing A+B	HLBA	A [9]	10 days
HLA Tissue Typing A+B+C (Class I)	HABC	A [9]	10 days
HLA Tissue Typing A/B/DRB1/3/4/5	HLAF	A [9]	10 days
HLA Tissue Typing A/B/DRB1/3/4/5/DQB1	HLF	A [9]	10 days
HLA Tissue Typing A/B/C/ DRB1/3/4/5/DQB1 (Class I & II)	HLFC	A [9]	10 days
HLA Tissue Typing B	HLB	A [9]	10 days
HLA Tissue Typing B*27 only	HLAB	A [9]	3 days
HLA Tissue Typing B*51 (Behcet's Disease)	B51	A [9]	10 days
HLA Tissue Typing B*57:01 high resolution	HL57	A [9]	10 days
HLA Tissue Typing C	HLC	A [9]	10 days
HLA Tissue Typing Coeliac Disease – DQ2/DQ8	Q2Q8	A [9]	10 days
HLA Tissue Typing DRB1/3/4/5	DRB1	A [9]	10 days
HLA Tissue Typing DRB1/3/4/5/DQB1 (Class II)	HLDQ	A [9]	10 days

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

TEST	CODE	SAMPLE REQS	TAT
HLA Tissue Typing Narcolepsy – DQB1*06:02 Requires patient informed consent.	GENE	A [9]	3 weeks
Huntington Disease – HD gene repeat analysis PCR Requires patient informed consent. Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required.	GENE	A A [9,11]	5 weeks
Hyperinsulinism NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Hyperparathyroidism – CASR sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Identity Profile (DNA) – 15 STR markers	DNAF	A [9,11]	10 days
IDH1/2 Screening Assay Requires patient informed consent.	GENE	A	48 hours
IgVH variant analysis for CLL	IGMU	A	4 weeks
Inherited bleeding and platelet disorders (R90) Clinical synopsis, factor levels, bleeding history, family history and informed consent required. Please contact the laboratory for the request and consent forms, or for further guidance.	R90U	A A	12 weeks
Intellectual Disability NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Iron Overload Profile	IOP	A B [9]	3 days
JAK2 Gene Mutations – See Leukaemia (Rapid Acute) DNA and RNA NGS Panel / Myeloproliferative Neoplasm NGS Screening Panel			
Joubert/Meckel-Gruber Syndrome NGS Panel Requires patient informed consent.	GENE	A [9]	6 weeks
Kallmann Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Kennedy Disease (Spinal Bulbar Muscular Atrophy) – AR repeat expansion Requires patient informed consent.	GENE	A [9]	5 weeks
Kidney/Urinary Tract Comprehensive Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Lactose Intolerance Gene	LACG	A	2 weeks
Langer-Giedion Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Leber's Hereditary Optic Neuropathy – m.3460G>A + m.11778G>A + m.14484T>C common variants Requires patient informed consent.	GENE	A [9]	6 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Leukaemia (Rapid Acute) DNA and RNA NGS Panel Requires patient informed consent.	ALRP	A (3mL minimum) or bone marrow aspirate sample	3 days
Leukaemia Fusion Gene Screening Assay (Q30)	LMPX	A	24 hours
Leukaemia/Lymphoma RNA Sequencing (Fusion Gene and SNV/Indel) Panel Requires patient informed consent.	PHFP	A	2 weeks
Li-Fraumeni Syndrome (p53-related cancer predisposition) – TP53 sequencing + MLPA Requires patient informed consent.	GENE	A [9,11]	6 weeks
Limb-Girdle Muscular Dystrophy (LGMD) NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Lissencephaly NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Long QT Syndrome/Brugada Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	4-6 weeks
Lung Disorders NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Lynch Syndrome (HNPCC) NGS Panel Requires patient informed consent.	GENE	A [9]	4 weeks
Lysosomal Storage Disorders NGS Panel – full gene sequencing Requires patient informed consent.	LSDS	A A [9]	4-6 weeks
Male Genetic Reproductive Profile	GRP	A H [9]	10-15 days
Marfan Syndrome – FBN1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Marfan Syndrome and Thoracic Aortic Aneurysm and Dissection NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Maturity-Onset Diabetes of the Young (MODY) Diabetes NGS Panel Requires patient informed consent.	GENE	A [9]	12 weeks
Meckel-Gruber/Joubert Syndrome NGS Panel Requires patient informed consent.	GENE	A [9]	6 weeks
Medium-Chain Acyl-CoA Dehydrogenase Deficiency – ACADM sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Melanoma Comprehensive Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks

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See page 25 for sample-taking and special handling instructions.

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Microdeletion (common) Syndromes – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Microphthalmia/Anophthalmia/ Coloboma NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Miller-Dieker Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Mitochondrial Genome Sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Motor Neurone Disease (Amylotrophic Lateral Sclerosis) NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
MTHFR – common C677T + A1298C variants	MTHF	A [9]	5 days
Mucopolysaccharidosis NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Multiple Endocrine Neoplasia Type 1 – full MEN1 sequencing Requires patient informed consent.	GENE	A [9,11]	6-7 weeks
Multiple Endocrine Neoplasia Type 2 – RET gene hotspot sequencing Requires patient informed consent.	GENE	A [9,11]	6-7 weeks
Myeloid Gene Panel Requires patient informed consent.	MVPS	A (3mL minimum) or bone marrow aspirate sample	2 weeks
Myeloproliferative Neoplasm NGS Screening Panel Requires patient informed consent.	MPNS	A (3mL minimum) or bone marrow aspirate sample	1 week
Myotonic Dystrophy Type 1 – DMPK repeat PCR Requires patient informed consent.	GENE	A [9]	5 weeks
Myotonic Dystrophy Type 2 (PROMM) – CNBP repeat PCR Requires patient informed consent.	GENE	A [9]	6 weeks
Narcolepsy (HLA DQB1*06:02) Requires patient informed consent.	GENE	A [9]	3 weeks
Nephrotic Syndrome, Steroid-Resistant NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Nervous System/Brain Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Neurofibromatosis Type 1 – NF1 + SPRED1 sequencing + deletions/duplications Requires patient informed consent. Contact lab prior to sending.	GENE	A A [9,11]	8 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Neuronal Ceroid Lipofuscinosis (Batten Disease) NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Non-Invasive Prenatal Testing (NIPT) – common aneuploidy screening from maternal blood	NIPT	**J / Special tube** [1]	2-4 days
Noonan Syndrome and RASopathies NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Nystagmus, X-linked Infantile – FRMD7 gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Osteogenesis Imperfecta NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Ovarian Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
p53-related cancer predisposition (Li-Fraumeni Syndrome) – TP53 sequencing + MLPA Requires patient informed consent.	GENE	A [9,11]	6 weeks
Pancreatic Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Paraganglioma/Pheochromocytoma NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Parkinson-Alzheimer-Dementia NGS Panel Requires patient informed consent.	GENE	A [9,11]	6 weeks
Paternity Testing (postnatal and prenatal) – sample required from each person being tested (3 people)	PATT	A **/ AF / CVS** [1,12] **Contact Genetics lab**	5 days
Pelizaeus-Merzbacher Disease – PLP1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Pendred Syndrome – SLC26A4 gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Periodic Fever/Autoinflammation NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Peutz-Jegher Syndrome – STK11 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Phelan-McDermid Syndrome – karyotype + FISH	KARY, FISH	**CVS / AF /** H [9]	12-17 days
Pheochromocytoma/Paraganglioma NGS Panel Requires patient informed consent.	GENE	A A [9,11]	5 weeks

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

TEST	CODE	SAMPLE REQS	TAT
POLG-Related Disorders – full POLG sequencing + deletions and duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Polycystic Kidney NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Pontocerebellar Hypoplasia NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Postnatal SNP Array CGH	CGH	A H [9]	10 days
Prader-Willi Syndrome (Primary Screen) – methylation test	GENE	A [9]	2-3 weeks
Prenatal SNP Array CGH	CGH	**Amniotic fluid**, **CVS** or **POC** [9]	10 days
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days
Primary Ciliary Dyskinesia (PCD) NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Primary Hyperoxaluria NGS Panel Requires patient informed consent.	GENE	A	7 weeks
Products of Conception (Culture) CHANGE	PROC	**Placental Sample** or **Solid Tissue** [1,9]	20-25 days
Prostate Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
QF-PCR rapid common aneuploidy screen	APC	**AF** / A [9]	2 days
Recurrent Miscarriage Profile (female)	RMP	A A B C C C H [9,18]	21 days
Renal/Urinary Tract Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Retinoblastoma – RB1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Rett Syndrome (MECP2 gene only) – full sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9,11]	6 weeks
Rett/Angelman Syndromes NGS Panel Requires patient informed consent.	GENE	A A [9]	5 weeks
Short-Chain Acyl-CoA Dehydrogenase Deficiency – ACADS sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Short Stature – SHOX variant screening + deletions/duplications Requires patient informed consent.	GENE	A [9]	8 weeks
Skeletal Dysplasia NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Smith-Lemli-Opitz Syndrome – DHCR7 sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Smith-Magenis Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Sotos Syndrome (Cerebral Gigantism) – NSD1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Spastic Paraplegia NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Spinal Bulbar Muscular Atrophy (Kennedy Disease) – AR repeat analysis Requires patient informed consent.	GENE	A [9]	5 weeks
Spinal Muscular Atrophy – SMN1 deletions/duplications (exon 7+8)	SMA	A [9]	10 days
Spinocerebellar Ataxia – multiplex SCA1+2+3+6+7+8+10+12 +17 common repeat expansions Requires patient informed consent.	GENE	A [9]	5 weeks
Spinocerebellar Ataxia NGS Panel	GENE	A A [9]	6 weeks
SRY (Sex-determining Region Y)	SRY	A [9]	4 days
Systemic Mastocystosis – C-Kit common variants (KIT D816V) Requires patient informed consent.	GENE	A [9]	4 weeks
T cell Clonality Assay (TCR beta and TCR gamma)	TCRA	A or **FFPE**	2 weeks
Tay-Sachs Disease (HEXA gene) Requires patient informed consent. See also Carrier Screen (Ashkenazi Jewish/Pan-Ethnic).	GENE	A [9]	4 weeks
Thrombophilia Screen	PROP	A A B C C C [18]	5 days
Thrombophilia with a likely monogenic cause (R97) Clinical synopsis, levels of relevant proteins, thrombosis history, family history and informed consent required. Please contact the laboratory for the request and consent forms, or for further guidance.	R97U	A A	12 weeks
Thyroid Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Treacher Collins Syndrome and Related Disorders NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Urinary Tract/Renal Cancer NGS Panel Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Usher Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Very Long-Chain Acyl-CoA Dehydrogenase Deficiency – ACADVL sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Von Hippel-Lindau Syndrome – VHL sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Whole Genome Sequencing (solo/duo/trio) For whole genome sequencing please contact the lab prior to sending and for further information.	GENE	A [9,11]	5-8 weeks
Wolf-Hirschhorn Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days
Y chromosome microdeletions – AZFa + AZFb + AZFc + SRY	YDEL	A [9]	5 days
Zellweger Syndrome NGS Panel Requires patient informed consent.	GENE	A A [9]	6 weeks
Ziwig Endotest® For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples can be collected in the clinic or at home following instructions provided.	ENDT	Endotest saliva collection kit	25 days
Zygosity Testing – comparative DNA profile	DNAC	A (From each twin and both parents)[9]	5 days

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Carrier Screen (Ashkenazi Jewish)

This test is optimised for individuals and couples of Ashkenazi Jewish ancestry.**

Uses the same technology as the Pan-Ethnic Carrier Screen.

**Male patients will not be screened for X-linked conditions (e.g., FMR1, etc.).

Requires patient informed consent.

TAT: 4 weeks

GENE

A [9]

Carrier Screen (Pan-Ethnic)

Targets 400+ Autosomal Recessive and X-linked Inherited Disorders**

** Male patients will not be screened for X-linked conditions (e.g., FMR1, etc.).

Requires patient informed consent.

TAT: 4 weeks

GENE

A [9]

DVT/Pre-travel Screen

Full Blood Count (FBC)
Factor II Prothrombin – G20210A Variant
Factor V Leiden – G1691A Variant
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

DVT1

A A B [9]

Iron Overload Profile

Iron (TIBC included)
Ferritin
Transferrin Saturation
Haemochromatosis C282Y, H63D

TAT: 3 days

IOP

A B [9]

Male Genetic Reproductive Profile

Chromosome Analysis (Blood)

Cystic Fibrosis (139 common variants) – reflex to Poly T when required

Y chromosome microdeletions – AZFa + AZFb + AZFc + SRY

TAT: 10-15 days

GRP

A H [9]

Recurrent Miscarriage Profile (female)

Full Blood Count (FBC)
Coagulation Profile
Antithrombin III
Factor V Leiden Common Variant
Factor II Prothrombin Common Variant
MTHFR Common Variants
Fibrinogen
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs
Chromosome Analysis

Please request Partner's Chromosome Analysis using a separate request form.

TAT: 21 days

RMP

A A B C C C H [9,18]

Thrombophilia Screen

Full Blood Count (FBC)
Coagulation Profile 1
Antithrombin III
Factor V Leiden – G1691A Variant
Factor II Prothrombin – G20210A Variant
MTHFR – common C677T + A1298C variants
Lupus Anticoagulant
Protein C
Protein S Free Ag
Cardiolipin Antibodies (IgG+IgM)

TAT: 5 days

PROP

A A B C C C [18]

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

Leukaemia (Rapid Acute) DNA and RNA NGS Panel / Myeloproliferative Neoplasm NGS Screening Panel

This NGS assay allows for rapid generation of comprehensive profile of variants (both DNA and RNA) from a single NGS run. This assay can profile both DNA and RNA targets including DNA mutations and translocations detected from RNA targets and allows for simultaneous interrogation of 45 DNA target genes and 30 RNA fusion driver genes. The broad fusion panel enables sequencing of over 700 unique fusion transcripts.

The panel covers relevant targets for acute myeloid leukaemia, myelodyplastic syndromes and myeoproliferative neoplasms, including CML, CMML and JMML. Among the targets are Calreticulin (CALR), JAK2, MPL and NPM1, which were previously offered as individual tests.

Requires patient informed consent.

TAT: 3 days / 1 week

ALRP (DNA & RNA)

MPNS (DNA)

A (3mL minimum) or bone marrow aspirate sample

Leukaemia / Lymphoma RNA Sequencing (Fusion Gene and SNV/Indel) Panel

The Leukaemia / Lymphoma RNA Sequencing panel is an Anchored Multiplex PCR (AMP™)- based next-generation sequencing (NGS) panel to detect and identify fusions, point mutations and expression levels from ribonucleic acid (RNA) input. The panel encompasses targets in over 199 genes relating to lymphoid and myeloid malignancies. By using gene-specific primers to amplify into molecular barcodes ligated onto the cDNA fragment ends, both known and novel fusions can be identified.

Requires patient informed consent.

TAT: 2 weeks

PHFP

A

Lysosomal Storage Disorders NGS Panel – full gene sequencing

This is a 55 gene custom NGS panel which can be used to detect both pathogenic SNP / Indels and copy number variants (including whole exon insertions / deletions) which cause the various Lysosomal storage disorders.

All known lysosomal storage diseases are covered on this panel including:

Fabry disease, Gaucher disease, Pompe disease, metachromatic leukodystrophy, all the different mucopolysaccharidoses, fucosidosis, Krabbe disease, Tay-Sachs disease, Sandhoff disease, Danon disease, lysosomal acid lipase deficiency, Niemann-Pick disease types A, B and C, lipfuscinoses, prosaposin deficiency and Salla disease.

Requires patient informed consent.

TAT: 4-6 weeks

LSDS

A A [9]

Myeloid Gene Panel

This is a 75 gene targeted NGS panel for acute myeloid leukaemia, myeloproliferative neoplasms, myelodysplastic syndromes, and also contains a number of targets which are useful for lymphoid malignancies (ALL and lymphoma). It uses Anchored Multiplex PCR (AMPTM) chemistry which enables deep strand-specific amplification of molecular barcoded DNA fragments for sequencing.

Requires patient informed consent.

TAT: 2 weeks

MVPS

A (3mL minimum) or bone marrow aspirate sample

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SNP Array CGH testing

Chromosome abnormalities can be associated with developmental delay, autism spectrum disorder, learning difficulties, dysmorphic features and other congenital abnormalities. Array CGH can detect smaller genetic changes than is possible by conventional karyotyping and can provide accurate information on the size and possible consequences of the gains (duplications) or losses (deletions) identified. Multiple studies have shown that Array CGH, when applied to appropriate patients, will detect up to three times more pathogenic chromosome imbalances than karyotyping due to its greater precision and sensitivity. SNP (Single Nucleotide Polymorphism) arrays enable low-level mosaicism visualisation, loss of heterozygosity (LOH) and UPD detection, copy number change confirmation, triploidy detection and parent-of-origin analysis.

Array CGH testing is now considered to be the front line test for patients presenting with developmental delay (motor or growth), autism spectrum disorder, moderate to severe learning difficulties, dysmorphic features, with or without congenital abnormalities. Consortiums in the USA and many EU countries have adopted Array CGH as the front line test in this patient cohort.

Array CGH is now more frequently used for prenatal studies as an adjunct or replacement for conventional cytogenetic studies, particularly where structural fetal abnormalities are seen at ultrasound scan but also at a patient's or doctor's request. The technique may also be utilised as a follow up test to characterise anomalies detected by a previous study (e.g. an apparently balanced de novo rearrangement or marker chromosome).

Further information is provided by the UNIQUE website at www.rarechromo.org

When to use SNP Array?

In postnatal cases, patients should present with one or more of the following:

- Mental retardation
- Developmental delay
- Autism/autism spectrum disorder
- Dysmorphic features
- Congenital malformations

In prenatal cases, patients may present with:

- Abnormalities or increased nuchal translucency on ultrasound scan which may be associated with a chromosome imbalance.

Approximately 10-20% of results identify extra or missing DNA which may or may not be relevant to the clinical phenotype, and will require further family studies to assist with interpretation.

What can SNP Array detect?

Deletions and duplications with greater sensitivity than conventional karyotyping and loss of heterozygosity (LOH).

What does SNP Array not detect?

- Balanced chromosome rearrangements such as translocations or inversions. The chromosome location of duplications (this would require additional FISH testing).
- Fragile X syndrome, genetic diseases caused by point mutations or multifactorial inheritance.

TEST	CODE	SAMPLE REQS	TAT
Postnatal SNP Array CGH	CGH	A H [9]	10 days

Blood from both parents may also be provided in case of follow up studies.

TEST	CODE	SAMPLE REQS	TAT
Prenatal SNP Array CGH	CGH	**Amniotic fluid**, **CVS** or **POC** [9]	10 days

EDTA and heparin blood from both parents should be provided at the time of prenatal sampling, if possible, in case of follow up studies.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

Pan-ethnic carrier screening

The Fulgent Beacon carrier panel is a comprehensive genetic screen for people of all ethnic backgrounds. The panel analyses more than 400 genes, in which mutations may cause over 440 different recessive disorders. Testing includes Cystic Fibrosis, Sickle Cell Disease, Thalassemia and Spinal Muscular Atrophy. These conditions vary in morbidity, mortality and treatment.

The Beacon carrier screen can also be filtered to report only on diseases common to the Jewish population – such as Bloom Syndrome, Canavan Disease, Gaucher Syndrome and Tay-Sachs Disease.

Indications for use

- Pre-pregnancy screening for couples that wish to check if they are silent carriers for a disease that would have serious implications for the future health of any children.
- For patients who are concerned about a family history of a particular disease, where common mutation detections are very high – such as Tay-Sachs Disease.

The report comes with a synopsis of any diseases for which a mutation was found, including prognosis, treatment and mode of inheritance. It includes a risk assessment and recommendations for further testing.

A full list of diseases covered by this test is available from the laboratory.

Male patients will not be screened for X-linked conditions. If an X-linked condition is suspected in a male patient please contact the laboratory or a genetics specialist about diagnostic testing for that particular condition.

Limitations

A normal result does not rule out the possibility that the patient carries a rare mutation not detectible by this particular assay. For this reason, this test is also not appropriate to use as a direct prenatal screen (both parents must be confirmed carriers for a particular disease before we can offer prenatal diagnosis). Screening is not designed to detect somatic mutations.

TEST	CODE	SAMPLE REQS	TAT
Carrier Screen (Ashkenazi Jewish) Requires patient informed consent.	GENE	A [9]	4 weeks
Carrier Screen (Ashkenazi Jewish) – Partnered Report Requires patient informed consent. Please contact the lab for special requirements before sending.	GENE	A [9]	4 weeks
Carrier Screen (Pan-Ethnic) Requires patient informed consent.	GENE	A [9]	4 weeks
Carrier Screen (Pan-Ethnic) – Partnered Report Requires patient informed consent. Please contact the lab for special requirements before sending.	GENE	A [9]	4 weeks

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Non-invasive prenatal testing (NIPT)

Non-invasive prenatal testing (NIPT) screens for the presence of specific chromosome disorders in the developing fetus. The test analyses fragments of cell-free DNA in maternal plasma that have been released from both maternal and placental cells.

By analysing the proportions of cell-free DNA fragments derived from different chromosomes or chromosome regions, NIPT can screen for the presence or absence of specific chromosome disorders.

NIPT is more accurate than first trimester maternal serum screening and ultrasound in identifying pregnancies with or without these disorders.

TDL Genetics uses the NIPT assay VeriSeq NIPT Solution v2, which is manufactured by Illumina and is processed at our laboratory in London.

Targeted screening for specific common chromosome disorders

Our NIPT assay is designed to screen for:

- Trisomy 21 (Down syndrome), which is associated with moderate to severe intellectual disability, congenital heart defects and other malformations;
- Trisomy 18 (Edwards syndrome) and trisomy 13 (Patau syndrome), which are associated with severe brain and cardiac malformations. There is a high risk of stillbirth or death during infancy; and
- Sex chromosome aneuploidy (abnormalities in the number of X or Y chromosomes), which can be associated with malformations and infertility, Turner syndrome (45,X) and Klinefelter syndrome (47,XXY). Triple X syndrome and XYY syndrome can also be detected. This screen is optional (no additional cost).

In addition, NIPT can also assess fetal sex. This is optional (no additional cost).

NIPT does not screen for non-chromosome disorders, familial mutations, malformations, fetal growth or fetal viability.

Accuracy of NIPT

NIPT provides fewer false-positive and false-negative results than combined first trimester screening for trisomy 21, 18 and 13.

It is important to note that NIPT is a screening test and does not provide a definitive genetic diagnosis, as NIPT cannot differentiate potential chromosome differences between the placenta and fetus.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

A definitive genetic diagnosis of the fetus requires cytogenetic analysis of either amniotic fluid or chorionic villus sampling (CVS).

When to perform NIPT

NIPT should not be performed before a gestational age of 10 weeks. However, it is suitable at any time after that, preferably while there is sufficient time for further investigation or decision-making (should this be required). An ultrasound scan is required prior to NIPT to confirm dates and fetal viability, and to check for twins. Performing first trimester screening before NIPT may provide supplementary information regarding the status of the fetus.

Who is eligible for NIPT?

Eligible patients:

- Women who are at least ten weeks pregnant
- Women with singleton or twin pregnancies
- Women with IVF pregnancies and non-IVF pregnancies

NIPT is not suitable for patients with:

- Recent maternal blood transfusion (within the last 4 months)
- Maternal mosaicism
- Maternal prior organ transplant/stem cell transplant
- Maternal copy number variations
- Chromosomal copy number variations
- Fetoplacental mosaicism/confined placental mosaicism
- Maternal autoimmune disease excluding IVIg treatments
- Maternal neoplasms (benign and malignant)
- Pregnancies with fetal demise/vanishing twin

Patients with a twin pregnancy are not eligible for the sex chromosome aneuploidy component of the screen.

Reporting results

Results will be ready within 2–4 business days upon receipt of sample in the laboratory.

TDL first checks that there is sufficient cell-free fetal DNA in the maternal sample and quality data to provide an accurate assessment. A re-collection may be recommended if the sample is not suitable or an assessment may not be feasible.

The report then summarises the screening assessment for each disorder specified by the requesting doctor (see example below).

Example report

Chromosome	Result	Recommendation
Trisomy 21	**HIGH PROBABILITY**	Genetic counselling and additional testing
Trisomy 18	Low probability <1:10,000	Review result with patient
Trisomy 13	Low probability <1:10,000	Review result with patient
Sex chromosome aneuploidy	Not requested	––
Fetal sex	Male	Review result with patient

A high probability NIPT result should always be confirmed by amniocentesis or CVS before making any decision regarding subsequent management of the pregnancy.

Limitations of NIPT

The VeriSeq NIPT Solution v2 is not validated for use in pregnancies with more than two fetuses, fetal demise, mosaicism, partial chromosome aneuploidy, triploidy, translocations, maternal aneuploidy, transplant or malignancy. VeriSeq NIPT Solution v2 does not detect neural tube defects. Certain rare biological conditions may also affect the accuracy of the test.

For twin pregnancies, HIGH PROBABILITY test results apply to at least one fetus; male test results apply to one or both fetuses; female test results apply to both fetuses. Due to the limitations of the test, inaccurate results are possible.

A LOW PROBABILITY result does not guarantee that a fetus is unaffected by a chromosomal or genetic condition. Some non-aneuploid fetuses may have HIGH PROBABILITY results. In cases of HIGH PROBABILITY results and/or other clinical indications of a chromosomal condition, confirmatory testing is necessary for diagnosis.

If an assessment cannot be provided

On rare occasions, NIPT is unable to provide an assessment of the probability of specific chromosome disorders. This usually reflects the complex biology of genetics and pregnancy, and is not due to a failing in the laboratory.

If NIPT cannot provide a specific assessment after a repeat blood draw, it is not worth repeating the NIPT (unless advised by the laboratory). A decision about other tests (maternal serum screening, detailed ultrasound, amniocentesis or CVS) should be based on the doctor's assessment of all risk factors identified,and may require specialist consultation.

Further information

- TDL Genetics website: www.tdlpathology.com/tdlgenetics
- Borth H, et al. Analysis of cell-free DNA in a consecutive series of 13,607 routine cases for the detection of fetal chromosomal aneuploidies in a single center in Germany. Arch Gynecol Obstet. 2021 Jun;303(6):1407-1414.

SCAN ME

Find out more about NIPT on the TDL website:

www.tdlpathology.com/non-invasive-prenatal-testing/

TEST	CODE	SAMPLE REQS	TAT
Non-Invasive Prenatal Testing (NIPT) – common aneuploidy screening from maternal blood	**NIPT**	**J / Special tube**[1]	2-4 days

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code.
See page 25 for sample-taking and special handling instructions.

In-vivo Tests

All *in-vivo* tests (except Glucose Challenge Test/Mini-GTT) require an appointment. Please email **phlebotomy@tdlpathology.com** or call **020 7307 7373** for details, information for patient preparation, and appointment times. Sample taking fees for LTT or SYNA are £100.00 per visit.

Extended testing

- 50g liquid glucose is consumed for the glucose challenge test/Mini-GTT.
- 75g liquid glucose is consumed for all other glucose tests.
- Each sample tube must be labelled with time of collection.

Glucose tolerance tests

TEST	CODE	SAMPLE REQS	TAT	COLLECTION TIME (MINUTES POST-GLUCOSE)
Glucose Tolerance Test/OGTT	GTT	3 x G, 3 x **RU**	1 day	1 each at 0, 60 and 120 mins (75gm glucose load)
Glucose Challenge Test/Mini-GTT	RBGM	G	1 day	1 at 60 mins (50gm glucose)
Glucose Tolerance with Insulin	GTTI	3 x B, 3 x G, 3 x **RU**	1 day	1 each at 0, 60 and 120 mins
Glucose Tolerance Test (Short)	GTTS	2 x G, 2 x **RU**	1 day	1 each at 0 and 120 mins
Glucose Tolerance Test (Extended)	GTTE	5 x G, 5 x **RU**	1 day	1 each at 0, 30, 60, 90 and 120 mins
Glucose Tolerance Test (Extended Plus)	GTTX	7 x G, 7 x **RU**	1 day	1 each at 0, 30, 60, 90, 120, 150 and 180 mins
Glucose Tolerance with Growth Hormone	GTT + GHDF	3 x B [35], 3 x G, 3 x **RU**	1 day	1 each at 0, 60 and 120 mins

Extended tests

TEST	CODE	SAMPLE REQS	TAT	COLLECTION TIME
Lactose Tolerance Test	LTT	7 x G	1 day	1 each at 0, 15, 30, 45, 60, 90 and 120 mins (post-50g Lactose).
Lactose dose, calculated for paediatric patients (1g/kg in body weight) up to 50g: 7 separate samples, 7 time points.				
Synacthen Stimulation Test	SYNA	By appointment only	1 day	

Antibiotic assays

TEST	CODE	SAMPLE REQS	TAT
Amikacin Level (State dose)	AMIK	B [4]	1 day
Gentamicin Assay	GENT	B [4]	1 day
Metronidazole Level	METR	B [4]	10 days
Teicoplanin Assay	TEIC	B	1 day
Tobramycin Assay (Provide Clinical Details)	TOBR	H	3 days
Vancomycin Hydrochloride	VANC	B	1 day

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Therapeutic Drug Assays

There are three different collection times for Therapeutic Drug Monitoring:

- **Trough Level**: Blood should be collected just before the next dose. Trough Levels check that the appropriate drug concentration is being maintained.
- **Peak Levels**: Sample collection time is dependent on specific drug type and method of administration. Peak levels check that the drug level is not in the toxic range.
- **Suspected Toxicity**: Blood can be collected any time.

All collections should have the following noted on the request form:

- Dosage schedule including the amount and frequency and time of the last dose
- Time of specimen collection
- Clinical status of patient (e.g. routine, suspected toxicity)
- Name(s) of other drugs being taken by the patient

TEST	CODE	SAMPLE REQS	TAT
Amitriptyline	AMTR	A [4]	5 days
Anafranil (Clomipramine)	CHLO	A	7 days
Carbamazepine (Tegretol)	CARB	B	1 day
Clobazam	CLOB	A	5 days
Clomipramine (Anafranil)	CHLO	A	7 days
Clonazepam	CLON	A	7 days
Diazepam (Valium)	DIAZ	A	7 days
Digoxin	DIGO	B	1 day
Epanutin (Phenytoin)	PHEN	B	1 day
Erythropoietin	ERY	B	4 days
Ethosuximide	ETHO	A	7 days
FK506 (Tacrolimus/Prograf)	FK5	A [4]	1-2 days
Flecainide (Tambocor)	FLEC	A	5 days
Fluoxetine (Prozac)	PROZ	A [4]	5 days
Gabapentin	GABA	B [4]	5 days
Imipramine	IMIP	A [4]	4 days
Lamotrigine	LAMO	B [4]	5 days
Levetiracetam (Keppra)	LEVE	B [4]	3 days
Lithium (take 12 hours after dose)	LITH	B	1 day
Lorazepam	LORA	A [4]	10 days
Methotrexate	METX	B	2 days
Mycophenolic Acid (Cellcept)	MYCP	A	5 days
Mysoline (Primidone)	PRIM	B [4]	3 days
Olanzapine	OLAN	A [4]	5 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Therapeutic Drug Assays

TEST	CODE	SAMPLE REQS	TAT
Paracetamol	PARA	B	1 day
Phenobarbitone	PHB	B	1 day
Phenytoin (Epanutin)	PHEN	B	1 day
Primidone (Mysoline)	PRIM	B [4]	3 days
Propanalol	PRO	B [4]	7 days
Risperidone	RISP	A [4]	7 days
Sinequan (Doxepin)	DOXE	A or B	10 days
Sirolimus	SIRO	A	3 days
Streptomycin Levels	STRM	F	5 days
Sulpiride	SULP	B [4]	4 days
Tacrolimus/Prograf (FK506)	FK5	A [4]	1-2 days
Tegretol (Carbamazepine)	CARB	B	1 day
Temazepam	TEMA	B [4]	4 days
Theophylline	THEO	B	1 day
Topiramate (Topamax)	TOPI	B [4]	4 days
Trimipramine	TRIM	A	5 days
Valium (Diazepam)	DIAZ	A	7 days
Valproic Acid (Epilim)	VALP	B	1 day
Vigabatrin (Sabril)	VIGA	A	10 days

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See page 25 for sample-taking and special handling instructions.

Allergy

For a list of individual allergens see page 143.

TEST	CODE	SAMPLE REQS	TAT
Allergy – Individual Allergens	ALLE	B	2 days
Allergy – 5 x Single Individual Allergens	5AL	B	2 days
Allergy – 10 x Single Individual Allergens	10AL	B	2 days
Allergy Profile 1 (Food & Inhalants)	1A	B B	2 days
Allergy Profile 2 (UK Aero Allergen)	2A	B B	2 days
Allergy Profile 3 (Food)	3A	B B	2 days
Allergy Profile 4 (Nuts & Seeds)	4A	B B	2 days
Allergy Profile 5 (Children's Panel)	5A	B B	2 days
Allergy Profile 6 (Shellfish)	6A	B B	2 days
Allergy Profile 7 (Finfish)	7A	B B	2 days
Allergy Profile 8 (Cereal – singles)	8A	B B	2 days
Allergy Profile 9 (Antibiotics)	9A	B B	2 days
Allergy Profile 10 (Insects)	10A	B B	2 days
Allergy Profile 11 (Combined Shellfish/Finfish)	11A	B B	2 days
Allergy Profile 12 (Milk & Milk Proteins)	12A	B B	2 days
Allergy Profile 13 (Stone fruit/Rosaceae family)	13A	B B	2 days
ALEX³ Allergy Test NEW	ALEX	B (Serum)	3-4 days
Allergic Rhinitis/Asthma Profile	ALRN	B B	2 days
Atopic Dermatitis/Eczema Profile (14 allergens)	ALEC	B B	2 days
Gluten Sensitivity Profile	GLUT	A B B	10 days
Histamine Releasing Urticaria Test	CURT	B	3 weeks
Total IgE	IGE	B	1 day
Tryptase	STRY	B	2 days

ALEX³ Allergy Test NEW

The multiplex allergy ALEX profile is being upgraded from ALEX² to ALEX³. ALEX³ is the third iteration of the test and includes a panel of 300 allergens, covering high-relevance allergen sources and 85 allergen families. It contains 218 molecular allergens, 107 of which are unique to the test providing a comprehensive sensitisation profile – it is the widest range of molecular allergens on the market. ALEX³ improves the quality of diagnosis and makes individualised and evidence-based therapy possible for every patient.

The benefit of the very small sample volume remains, and the price for the ALEX³ has not been increased. A total IgE will continue to be reported with the ALEX³.

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Component testing

Using ImmunoCAP Allergen Components can help refine the understanding of sensitisation, by assessing a person's sensitisation pattern at the molecular level. When used in conjunction with traditional extract-based IgE testing, these provide information at the individual component level.

For more information, please contact the Immunology Department on **020 7025 7917**.

SCAN ME

Find out more details about component testing:

www.tdlpathology.com/specialties/allergy/allergy-component-testing/

TEST	CODE	SAMPLE REQS	TAT
Alpha Gal Components (related to red meat)	ZZ37	B	2 days
Alternaria Components	ZZ1	B	2 days
Apple Components	ZZ36	B	2 days
Aspergillus Components	ZZ2	B	2 days
Birch Components	ZZ3	B	2 days
Brazil Components	ZZ4	B	2 days
Cashew Components	ZZ35	B	2 days
Cat Components	ZZ5	B	2 days
Celery Components	ZZ6	B	2 days
Cow's Milk Components	ZZ7	B	2 days
Dog Components	ZZ8	B	2 days
Egg Components	ZZ9	B	2 days
Fish Components	ZZ10	B	2 days
Glycan Determinants	ZZ27	B	2 days
Hazelnut Components	ZZ11	B	2 days
Horse Components	ZZ38	B	2 days
House Dust Mite Components	ZZ12	B	2 days
Kiwi Components	ZZ32	B	2 days
Latex Components	ZZ13	B	2 days
Lipid Transfer Proteins	ZZ23	B	2 days
Lipocalins	ZZ28	B	2 days
Olive Components	ZZ14	B	2 days
Parvalbumins	ZZ29	B	2 days
Peach Components	ZZ15	B	2 days
Peanut Components	ZZ16	B	2 days

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See page 25 for sample-taking and special handling instructions.

Allergy

TEST	CODE	SAMPLE REQS	TAT
Polcalcins	ZZ25	B	2 days
PR-10 Proteins	ZZ22	B	2 days
Profilins	ZZ24	B	2 days
Seed Storage Proteins	ZZ26	B	2 days
Serum Albumins	ZZ30	B	2 days
Sesame Components	ZZ39	B	2 days
Shrimp Components	ZZ17	B	2 days
Soybean Components	ZZ18	B	2 days
Timothy Grass Components	ZZ19	B	2 days
Tropomyosins	ZZ31	B	2 days
Venom Components	ZZ33	B	2 days
Wall Pellitory Components	ZZ20	B	2 days
Walnut Components	ZZ34	B	2 days
Wheat Components	ZZ21	B	2 days

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Allergy Profile 1 (Food & Inhalants)

Total IgE with individual IgE allergens for:

Grass Mix, inc.: Cocksfoot, Meadow fescue, Meadow, Rye, Timothy

Weed Mix, inc.: Common ragweed, Giant ragweed, Western ragweed

Dust Mix, inc.: Blatella germanica, Dermatophagoides pteronyssinus, Dermatophagoides farinae, Hollister-Stier Labs

Mould Mix, inc.: A. alternata, Aspergillus fumigatus, Candida albicans, Cladosporium herbarum, Helminthosporium halodes, Penicillium notatum

Tree Mix, inc.: Box elder, Common silverbirch, Hazel, Oak, London plane, Maple, Sycamore

Single Allergens (19): Beef, Bermuda grass, Cat dander, Clam, Common silver birch, Cow's milk, Crab, Dog dander, Egg white, Egg yolk, Fish (Cod), Hazelnut, Horse dander, Latex, Nettle, Peanut, Shrimp/Prawn, Soya bean, Wheat

TAT: 2 days

1A

BB

Allergy Profile 2 (UK Aero Allergen)

Total IgE with individual IgE allergens for:

Alternaria
Aspergillus
Birch pollen
Cat dander
Cladosporium
Common ragweed
Derma farinae
Dog dander
House dust mite
Horse dander
Timothy grass

TAT: 2 days

2A

BB

Allergy Profile 3 (Food)

Total IgE with individual IgE allergens for:

Codfish
Cow's milk
Egg white
Egg yolk
Kiwi
Peanut
Sesame
Soya
Wheat

TAT: 2 days

3A

BB

Allergy Profile 4 (Nuts & Seeds)

Total IgE with individual IgE allergens for:

Almond
Brazil nut
Cashew
Hazelnut
Macadamia nut
Peanut
Pecan
Pine nut
Pistachio
Poppy seed
Pumpkin seed
Sesame seed
Sunflower seed
Walnut

TAT: 2 days

4A

BB

Allergy Profile 5 (Children's Panel)

Total IgE with individual IgE allergens for:

Cat dander
Cod
Cow's milk
Dog dander
Dust mite
Egg white
Egg yolk
Hazelnut
Peanut
Silver birch
Soya bean
Timothy grass
Wheat flour

TAT: 2 days

5A

BB

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Allergy Profile 6 (Shellfish)

Total IgE with individual IgE allergens for:

Clam	Lobster	Scallop
Crab	Octopus	Squid
Crawfish/Crayfish	Prawns/Shrimp	

TAT: 2 days

6A

BB

Allergy Profile 7 (Finfish)

Total IgE with individual IgE allergens for:

Codfish	Sardine/Pilchard	Swordfish
Mackerel	Salmon	Tuna
Plaice	Sole	

TAT: 2 days

7A

BB

Allergy Profile 8 (Cereal – singles)

Total IgE with individual IgE allergens for:

Barley	Rye	Maize (Corn)
Oat	Wheat	Spelt Wheat

TAT: 2 days

8A

BB

Allergy Profile 9 (Antibiotics)

Total IgE with individual IgE allergens for:

Amoxicilloyl	Pen G
Ampicilloyl	Pen V
Cefaclor	

TAT: 2 days

9A

BB

Allergy Profile 10 (Insects)

Total IgE with individual IgE allergens for:

Common wasp – yellow jacket	Paper wasp
Bee	Yellow hornet
	White faced hornet

TAT: 2 days

10A

BB

Allergy Profile 11 (Combined Shellfish/Finfish)

Total IgE with individual IgE allergens for:

Cod	Scallop
Prawn/Shrimp	Squid
Salmon	Tuna

TAT: 2 days

11A

BB

Allergy Profile 12 (Milk & Milk Proteins)

Total IgE with individual IgE allergens for:

Alpha-lactalbumin – milk proteins	Cow's milk
Beta-lactoglobulin – milk proteins	Goat's milk
Casein – milk proteins	Mare's milk
	Sheep's milk
	Whey (cow and ewe)

TAT: 2 days

12A

BB

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Allergy Profile 13 (Stone fruit/Rosaceae family)

Total IgE with individual IgE allergens for:

- Almond
- Apple
- Apricot
- Cherry
- Peach
- Pear
- Plum
- Raspberry
- Strawberry

TAT: 2 days

13A

B B

ALEX³ Allergy Test

NEW

The multiplex allergy ALEX³ profile has upgraded from ALEX² to ALEX³. ALEX³ includes a panel of 300 allergens, covering high-relevance allergen sources such as animal dander, cereals, egg, legumes, milk, mites, molds, pollen, seafood, tree nuts, and venoms, supplemented with a Total IgE. It contains 218 molecular allergens, 107 of which are unique to the test providing a comprehensive sensitisation profile.

TAT: 3-4 days

ALEX

B (Serum)

Allergic Rhinitis/Asthma Profile

Total IgE with individual IgE allergens for:

- Cat dander
- Dog dander
- Common silver birch
- Timothy grass
- Dust mite – Dermatophagoides pteronyssinus
- Alternaria alternata
- Aspergillius fumigatus
- Cladosporium herbarum
- Mugwort
- London plane
- Peanut
- Egg white
- Cow's milk

TAT: 2 days

ALRN

B B

Atopic Dermatitis/Eczema Profile (14 allergens)

TOTAL IGE with individual IgE allergens for:

- Cod fish
- Cow's milk
- Egg white
- Soyabean
- Peanut
- Hazelnut
- Shrimp
- Wheat
- Apple
- Dust mite – dermatophagoides pteronyssinus
- Cat dander
- Dog dander
- Timothy grass
- Common silver birch

TAT: 2 days

ALEC

B B

Gluten Sensitivity Profile

- Gluten Single IgE Allergen
- Gliadin Antibodies (IgG) (deamidated)
- HLA Tissue Typing Coeliac Disease – DQ2/DQ8
- Immunoglobulin A
- Tissue Transglutaminase IgA (Coeliac)

TAT: 10 days

GLUT

A B B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Individual allergens

Allergens, when requested individually are priced as single tests, sample 1 x B (up to 5 allergens).

Protein allergens are manufactured by Thermofisher (Phadia) and are IgE specific.

GRASS POLLENS
Bahia grass g17
Barley g201
Bermuda grass g2
Brome grass g11
Canary grass g71
Cocksfoot g3
Common reed g7
Cultivated oat g14
Cultivated rye g12
Cultivated wheat g15
Johnson grass g10
Maize, Corn g202
Meadow fescue g4
Meadow foxtail g16
Meadow grass, Kentucky blue g8
Redtop, Bentgrass g9
Rye-grass g5
Sweet vernal grass g1
Timothy grass g6
Velvet grass g13
Wild rye grass g70

WEED POLLENS
Camomile w206
Cocklebur w13
Common pigweed w14
Common ragweed w1
Dandelion w8
Dog fennel w46
False ragweed w4
Firebush (Kochia) w17
Giant ragweed w3
Goldenrod w12
Goosefoot, Lamb's quarters w10
Lupin w207
Marguerite, Ox-eye daisy w7
Mugwort w6
Nettle w20
Parietaria officinalis w19
Parietaria judaica w21
Plantain (English), Ribwort w9
Rape w203
Rough marshelder w16
Saltwort (prickly), Russian thistle w11
Scale, Lenscale w15
Sheep sorrel w18
Wall pellitory w19
Wall pellitory w21
Western ragweed w2
Wormwood w5

TREE POLLENS
Acacia t19
American beech t5
Australian pine t73
Box-elder t1
Cedar t212
Chestnut t206
Common silver birch t3
Cottonwood t14
Cypress t222
Date t214
Elder t205
Elm t8
Eucalyptus, Gum-tree t18
European ash t25
Grey alder t2
Hazel t4
Horn beam t209
Horse chestnut t203
Italian/Mediterranean/Funeral cypress t23
Japanese cedar t17
Linden t208
Maple leaf sycamore, London plane t11
Melaleuca, Cajeput-tree t21
Mesquite t20
Mountain juniper t6
Mulberry t70
Oak t7
Olive t9
Pecan, Hickory t22
Peppertree t217
Pine t213
Privet t210
Queen palm t72
Spruce t201
Sweet gum t211
Walnut t10
White ash t15
White hickory t41
White pine t16
Willow t12
Virginia live oak t218

MICROORGANISMS
Acremonium kiliense m202
Alternaria alternata m6
Aspergillus flavus m228
Aspergillus fumigatus m3
Aspergillus niger m207
Aspergillus terreus m36
Aureobasidium pullulans m12
Botrytis cinerea m7
Candida albicans m5
Chaetomium globosum m208
Cladosporium herbarum m2
Curvularia lunata m16
Epicoccum purpurascens m14
Setomelanomma rostrata (Helminthosporium halodes) m8
Malassezia spp. m227
Mucor racemosus m4
Penicillium chrysogenum (P. notatum) m1
Penicillium glabrum m209
Phoma betae m13
Rhizopus nigricans m11
Staphylococcal enterotoxin A m80
Staphylococcal enterotoxin B m81
Staphylococcal enterotoxin C m223
Staphylococcal enterotoxin TSST m226
Stemphylium herbarum (S. botryosum) m10
Tilletia tritici m201
Trichoderma viride m15

Trichophyton mentagrophytes var. interdigitale m211
Trichophyton rubrum m205
Ulocladium chartarum m204

EPIDERMALS AND ANIMAL PROTEINS
Budgerigar droppings e77
Budgerigar feathers e78
Camel dander u328
Canary bird feathers e201
Cat dander e1
Chicken droppings e218
Chicken feathers e85
Chicken, serum proteins e219
Chinchilla epithelium e208
Cow dander e4
Dog dander e5
Duck feathers e86
Ferret epithelium e217
Finch feathers e214
Gerbil epithelium e209
Goat epithelium e80
Goose feathers e70
Guinea pig epithelium e6
Hamster epithelium e84
Horse dander e3
Mink epithelium e203
Mouse epithelium e71
Mouse epithelium, serum proteins and urine proteins e88
Mouse serum proteins e76
Mouse urine proteins e72
Parrot feathers e213
Pigeon feathers e215
Rabbit epithelium e82
Rabbit, serum proteins e206
Rabbit, urine proteins e211
Rat epithelium e73
Rat epithelium, serum proteins and urine proteins e87
Rat serum proteins e75
Rat urine proteins e74
Sheep epithelium e81
Turkey feathers e89

MITES
Acarus siro (Storage mite) d70
Blomia tropicalis (House dust mite) d201
Dermatophagoides farinae (House dust mite) d2
Dermatophagoides microceras (House dust mite) d3
Dermatophagoides pteronyssinus (House dust mite) d1
Euroglyphus maynei (House dust mite) d74
Glycyphagus domesticus (Storage mite) d73
Lepidoglyphus destructor (Storage mite) d71
Tyrophagus putrescentiae (Storage mite) d72

ALLERGEN COMPONENTS
See page 138 for Component Testing and Component Allergen Profiles

HOUSE DUST
Greer Labs., Inc. h1
Hollister-Stier Labs. h2

INSECTS
Berlin beetle i76
Blood worm i73
Cockroach, American i206
Cockroach, German i6
Fire ant i70
Grain weevil i202
Green nimitti i72
Horse fly i204
Mosquito i71

VENOMS
Bumblebee i205
Common wasp (yellow jacket) i3
European paper wasp i77
European hornet i75
Honey bee i1
Paper wasp i4
White-faced hornet i2
Yellow hornet i5

DRUGS
Amoxicilloyl c6
Ampicilloyl c5
Cefaclor c7
Chlorhexidine c8
Gelatin bovine c74
Insulin human c73
Penicilloyl G c1
Penicilloyl V c2
Pholcodine c261
Morphine c260
Suxamethonium (succinylcholine) c202

OCCUPATIONAL
Cotton seed k83
Ficus k81
Formaldehyde/Formalin k80
Isocyanate HDI (Hexamethylene diisocyanate) k77
Isocyanate MDI (Diphenylmethane diisocyanate) k76
Isocyanate TDI (Toluene diisocyanate) k75
Ispaghula k72
Latex k82
Methyltetrahydrophtalic anhydrid k211
Sunflower seed k84
Trimellitic anhydride, TMA k86

PARASITES
Anisakis p4
Ascaris p1
Echinococcus p2

MISCELLANEOUS
Cotton, crude fibers o1
Mealworm o211
MUXF3 CCD, Bromelain o214
Seminal fluid o70

FOODS – FRUITS & VEGETABLES
Apple f49
Apricot f237
Asparagus f261
Aubergine, eggplant f262
Avocado f96
Bamboo shoot f51

Banana f92
Beetroot f319
Blackberry f211
Blueberry f288
Broccoli f260
Brussel sprouts f217
Cabbage f216
Carrot f31
Cauliflower f291
Celery f85
Cherry f242
Cucumber f244
Date f289
Fennel, fresh f276
Fig f328
Garlic f47
Grape f259
Grapefruit f209
Kiwi f84
Lemon f208
Lettuce f215
Lime f306
Mandarin (tangerine, clementine, satsumas) f302
Mango f91
Melon f87
Olive (black, fresh) f342
Onion f48
Orange f33
Papaya f293
Passion fruit f294
Peach f95
Pear f94
Persimon (kaki fruit, sharon) f301
Pineapple f210
Plum f255
Potato f35
Pumpkin f225
Raspberry f343
Spinach f214
Strawberry f44
Sweet potato f54
Tomato f25
Watermelon f329

FOODS – SEED, LEGUMES & NUTS
Almond f20
Barley f6
Brazil nut f18
Buckwheat f11
Cashew nut f202
Chick pea f309
Coconut f36
Common millet f55
Fenugreek f305
Foxtail millet f56
Gluten f79
Green bean f315
Hazel nut f17
Lentil f235
Lima bean f182
Linseed f333
Lupin seed f335
Macadamia nut f345
Maize, Corn f8
Oat f7
Pea f12
Peanut f13
Pecan nut f201
Pine nut, pignoles f253
Pistachio f203
Poppy seed f224
Pumpkin seed f226
Quinoa f347
Rape seed f316
Red kidney bean f287
Rice f9
Rye f5
Sesame seed f10
Soybean f14
Spelt wheat f124
Sweet chestnut f299
Walnut f256
Wheat f4
White bean f15

FOODS – SPICES
Basil f269
Bay leaf f278
Black pepper f280
Caraway f265
Chilipepper f279
Clove f268
Coriander f317
Dill f277
Ginger f270
Green pepper (unripe seed) f263
Lovage f275
Mace f266
Mint f332
Mustard f89
Oregano f283
Paprika, Sweet pepper f218
Parsley f86
Tarragon f272
Thyme f273
Vanilla f234

FOODS – FISH, SHELLFISH & MOLLUSCS
Abalone f346
Anchovy f313
Blue mussel f37
Cat fish f369
Chub mackerel f50
Clam f207
Crab f23
Crayfish f320
Fish (cod) f3
Gulf flounder f147
Haddock f42
Hake f307
Halibut f303
Herring f205
Jack mackerel, Scad f60
Langust (spiny lobster) f304
Lobster f80
Mackerel f206
Megrim f311
Octopus f59
Oyster f290
Pacific squid f58
Plaice f254
Pollock f413
Red snapper f381
Salmon f41
Sardine (Pilchard) f308
Sardine, Japanese Pilchard f61
Scallop f338
Shrimp f24
Sole f337
Squid f258

Swordfish f312
Tilapia f414
Trout f204
Tuna f40
Walleye pike f415

FOODS – EGG & FOWL
Chicken f83
Egg f245
Egg white f1
Egg yolk f75
Turkey meat f284

FOODS – MEAT
Beef f27
Mutton f88
Pork f26
Rabbit f213

FOODS – MILK
Casein f78
Cheese, cheddar type f81
Cheese, mold type f82
Cow's whey f236
Goat milk f300
Mare's milk f286
Milk f2
Milk, boiled f231
Sheep milk f325
Sheep whey f326

FOODS – ADDITIVES
Guar, guar gum (E412) f246
Gum arabic (E414) f297
Cochineal extract (Carmine red) (E120) f340

FOODS – MISCELLANEOUS
Cacao f93
Coffee f221
Malt f90
Mushroom (champignon) f212
Tea f222
Yeast f45

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Vitamins, Nutrition and Lifestyle

Vitamins

TEST	CODE	SAMPLE REQS	TAT
1,25 Vitamin D *Serum sample stable for 2 days ambient.	D3	B*	5-8 days
Beta Carotene	CARO	B	5 days
Biotin	BIOS	B[7]	5 days
Carotenes	CARO	B	5 days
Vitamin A (Retinol)	VITA	B	5 days
Vitamin B (Functional)	FUNC	A A	5 days
Vitamin B Profile	VBP	A A B	5 days
Vitamin B1 (Thiamine)	VIT1	A	5 days
Vitamin B2 (Riboflavin)	VIB2	A	5 days
Vitamin B3 (Nicotinamide)	VIB3	B	5 days
Vitamin B5 (Pantothenic Acid)	VB5S	B	2 weeks
Vitamin B6 (Pyridoxine)	VITB	A	5 days
Vitamin B7 (Biotin)	BIOS	B[7]	5 days
Vitamin B9 (Folic acid) – Red cell	RBCF	A	2 days
Vitamin B9 (Folic acid) – Serum	FOLA	B	1 day
Vitamin B12 (Active)	B12	B	2 days
Vitamin B12 (Active)/Red Cell Folate	B12F	A B	2 days
Vitamin C (Active) *Serum should be separated and frozen within 3 hours of venepuncture.	VITC	B (spun and frozen within 3 hours)*	5 days
Vitamin D (1, 25 Dihydroxy) *Serum sample stable for 2 days ambient.	D3	B*	5-8 days
Vitamin D (25-OH)	VITD	B	1 day
Vitamin E (Alpha Tocopherol)	VITE	B	5 days
Vitamin K (Nutritional) * Sample should be light protected after collection, spun/ separated and frozen within 24 hours of collection.	VKN	Serum (SST or B) *	5 days
Vitamin Profile 1	VITS	A B B[7]	5 days
Vitamin Profile 2	VIT2	A A A[38] B B[7]	5 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Nutrition and lifestyle

This provides valuable diagnostic information, which can be assimilated with other diagnostic markers in the assessment of nutritional status, and compares favourably to semi-quantitative functional assays.

TEST	CODE	SAMPLE REQS	TAT
Caeruloplasmin	CERU	B	1 day
Copper (Serum)	COPP	B or K	5 days
Essential Fatty Acid Profile (Red Cell)	EFAR	A [4]	10 days
Folate (Red Cell) Requires its own EDTA tube, if other tests require EDTA an extra EDTA sample should be taken for RBCF.	RBCF	A	2 days
Magnesium (Whole blood)	RCMG	A or H	4 days
Mineral Screen	MINE	B K	5 days
Mineral Screen (Whole blood)	RMIN	H H	5 days
Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)	TRAC	A B H K	7-10 days
Omega 3/Omega 6	OMG3	A [4]	5 days
Selenium (Serum)	SELE	B	4 days
Sports/Performance Profile	SPOR	A A A B B B B G K [4]	5 days
Zinc (Serum)	ZINC	K	2 days
Zinc (Urine) 10 mls of plain 24 hr urine collection.	URZN	**CU**	5 days
Zinc (Whole Blood)	RBCZ	A or H	5 days

Patients taking supplements may be advised to stop medication prior to testing.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Mineral Screen

Calcium
Magnesium
Zinc
Iron
Copper
Chromium
Manganese

TAT: 5 days

MINE

B K

Mineral Screen (Whole blood)

Whole Blood Potassium
Whole Blood Magnesium
Whole Blood Calcium
Whole Blood Manganese
Whole Blood Zinc
Whole Blood Copper
Whole Blood Selenium
Whole Blood Chromium

TAT: 5 days

RMIN

H H

Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)

Aluminium
Manganese
Iron
Calcium
Zinc
Magnesium
Copper
Cadmium
Mercury
Lead
Chromium

TAT: 7-10 days

TRAC

A B H K

Sports/Performance Profile

Full Blood Count (FBC)
ESR
Biochemistry Profile
HDL/LDL Cholesterol (Calculated)
Ferritin
C Reactive Protein (CRP)
Omega 3/Omega 6
Mineral Screen
Vitamin B9 (Folic acid) – Red cell
Vitamin B12 (Active)

TAT: 5 days

SPOR

A A A B B B B G K [4]

Vitamin B Profile

Vitamin B1 (Thiamine)
Vitamin B2 (Riboflavin)
Vitamin B3 (Nicotinamide)
Vitamin B6 (Pyridoxine)
Vitamin B9 (Folic acid) – Red cell
Vitamin B12 (Active)

TAT: 5 days

VBP

A A B

Vitamin Profile 1

Vitamin A (Retinol)
Beta Carotene
Vitamin B1 (Thiamine)
Vitamin B2 (Riboflavin)
Vitamin B6 (Pyridoxine)
Vitamin D (25-OH)
Vitamin E (Alpha Tocopherol)

TAT: 5 days

VITS

A B B [7]

Vitamin Profile 2

Vitamin A (Retinol)
Beta Carotene
Vitamin B1 (Thiamine)
Vitamin B2 (Riboflavin)
Vitamin B3 (Nicotinamide)
Vitamin B6 (Pyridoxine)
Vitamin B9 (Folic acid) – Red cell
Vitamin B12 (Active)
Vitamin D (25-OH)
Vitamin E (Alpha Tocopherol)

TAT: 5 days

VIT2

A A A [38] B B [7]

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Essential Red Cell Fatty Acids Omega-3/Omega-6

Omega-3 is the name given to a family of polyunsaturated fatty acids, which the body needs but cannot manufacture itself. Omega-3 fats are used as the building blocks for fat derived hormones such as prostaglandins and leukotrienes.
The hormones with an Omega-3 base tend to reduce inflammation, while those that have an Omega-6 base increase inflammation. In the cell membrane the competition between these two essential fats has a direct bearing on the type of local hormone produced and the level of inflammation in the cell.

The Omega-6 to Omega-3 ratio in the cell membranes is key to the development of inflammatory disorders such as rheumatoid arthritis and heart disease. Diets low in oily fish and high in grains will promote inflammation and affect good health.

The ratio of Omega-6 to Omega-3 in the West is around 15 to 1, fifteen times more Omega-6 on the cell membrane promoting inflammation. Having twice as much Omega-6 is considered by most experts to be the optimal amount but a ratio of 2:1 is not easy to produce by diet alone. Many people are aware of the health benefits of Omega-3 but the supplementation to achieve optimal health is erratic. Being able to test for Essential Red Cell Fatty Acids (Omega-6/Omega-3 ratio) identifies a person's current status and is sufficiently specific to allow an accurate supplementation recommendation to be made.

Results show the Omega Ratio with a clear recommendation for the required level of Omega Supplementation (if any) to achieve optimal levels.

TEST	CODE	SAMPLE REQS	TAT
Omega 3/Omega 6	OMG3	A 4	5 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Self-Collect Tests

The TDL Self-Collect range of testing has been gathering increased and important attention for healthcare services. Self-collection is being adopted across different target areas of healthcare: sexual health screening, wellness testing, genetic conditions, lifestyle review, pre-operative work ups, etc. Self-collection sampling allows patients to collect samples at home, and together with Royal Mail Tracked postal returns, facilitates safe and effective delivery of samples throughout the UK to the laboratory.

As part of the ongoing development of the TDL self-collection service, the sample collection kits ensure that TDL is aligned with the regulatory requirements around ISO:13485 kit manufacture and UKCA marking across the UK. UKCA marked kits incorporate the required standard for clinically approved stability and comparative performance. The interest given to this service ensures best attention and continued development, with regular review of the repertoire, and more tests, once validated, being added to the available Self-Collection list.

The TDL Self-Collect capillary blood and sample kits include a helpful range of diagnostic and screening tests. These sample collection kits are not home test kits that provide an immediate result for the patient. Samples collected at home are all sent to the laboratory for testing, using Royal Mail Tracked 24 postal services from any Royal Mail post box in the country. Results are reported directly to the healthcare organisation, doctor or healthcare professional – not to the patient. Self-Collect kits need to be UKCA marked (or dual marked with UKCA/CE) to represent the product claims that kits are being used for the collection of samples in a non-clinic setting.

The Self-Collect kit itself allows for combinations of sample types (urine, stool, swabs) – and the range of UKCA marked kits are listed on page 153. Instructions for sample collection are enclosed with each collection kit. The best results are obtained by patients who closely follow the instructions that are provided, and by collecting enough blood drops to sufficiently fill the microtainer tube(s) in their kit. A request form or specially provided tube label must be returned with the collected sample. It is exciting to know that the scope of this service, together with its performance and quality standards, will be revised, developed, and updated on a regular basis.

For more details relating to this service, please email **UKCAkits@tdlpathology.com**

SCAN ME

Find out more information about the TDL Self-Collect kits:

www.tdlpathology.com/self-collect-kits/

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Quality is key

- **Components**: Verified for the specific intended use of the kit and linked to the accredited tests performed in the laboratory.
- **Instructions**: Monitored for ease of use, version controlled, with regular feedback for ongoing improvement.
- **Quality**: Management of technical files, regulatory submissions and manufactured to the required ISO:13485 medical device manufacturing standards.
- **Supply**: Assembled within the UK. Both individual kit fulfilment services and larger size kit orders are available.
- **Security**: Test kits are security sealed.
- **Accompanying information**: Request forms can be folded and inserted into the kit's specifically designed reveal opening. Further information can be included within the outer fulfilment packaging.
- **Laboratory testing**: Verified diagnostic tests performed in an ISO:15189 accredited clinical laboratory.

We recommend that all healthcare organisations and healthcare professionals using our TDL Tiny™ and TDL Self-Collect kits are up to date with latest diagnostic testing guidelines and relevant updates, including but not limited to those published by:

- UKHSA Standards for Microbiology Investigations (SMI)
- British Association of Sexual Health and HIV Guidelines (BASHH)
- Royal College of Obstetrics and Gynaecology Guidelines (RCOG)
- NICE Evidence-based recommendations on faecal immunochemical tests (DG30)
- British Society of Haematology Evidence Based Guidance (BSH)
- Association of Clinical Biochemistry (ACB)

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

TDL's range of kits

Respiratory virus PCR

KIT CODE	KIT TYPE	SAMPLE TYPE
KT293	**Respiratory Virus Swab Collection Kit (2mL)**	Oropharyngeal and Nasal swab

Capillary blood

KIT CODE	KIT TYPE	SAMPLE TYPE
KT353	**Capillary Blood Collection Kit (SST)**	Capillary blood (SST)
KT354	**Capillary Blood Collection Kit (EDTA)**	Capillary blood (EDTA)
KT466	**Capillary Blood Collection Kit (Plain Red)**	Capillary blood (Plain)
KT384	**Capillary Blood Collection Kit (SST x2)**	Capillary blood (SST x2)
KT355	**Capillary Blood Collection Kit (SST and EDTA)**	Capillary blood (SST and EDTA)
KT423	**Capillary Blood Collection Kit (SST x2 and EDTA)**	Capillary blood (SST x2 and EDTA)
KT445	**Capillary Blood Collection Kit (Plain Red and SST)**	Capillary blood (Plain and SST)

Sexual health

KIT CODE	KIT TYPE	SAMPLE TYPE
KT356	**Sexual Health Collection Kit (Urine)**	Aptima urine
KT357	**Sexual Health Collection Kit (Vaginal)**	Aptima multisite swab
KT358	**Sexual Health Collection Kit (Blood and Vaginal)**	Capillary blood and Aptima multisite swab
KT359	**Sexual Health Collection Kit (Throat and Rectal)**	Aptima multisite swab x2
KT360	**Sexual Health Collection Kit (Blood and Urine)**	Capillary blood and Aptima urine
KT361	**Sexual Health Collection Kit (Blood, Urine, Throat and Rectal – MSM)**	Capillary blood, Aptima urine and Aptima multisite swab x2
KT424	**Sexual Health Collection Kit (Blood, Vaginal, Throat and Rectal)**	Capillary blood and Aptima multisite swab x3
KT404	**Sexual Health Collection Kit (Oral lesion)**	Oral swab
KT405	**Sexual Health Collection Kit (Genital lesion)**	Genital swab
KT421	**Sexual Health Collection Kit (Urine, Throat and Rectal – MSM)**	Aptima urine and multisite swab x2
KT425	**Sexual Health Collection Kit (Throat)**	Aptima multisite swab
KT426	**Sexual Health Collection Kit (Rectal)**	Aptima multisite swab
KT428	**Sexual Health Collection Kit (Vaginal, Throat and Rectal)**	Aptima multisite swab x3

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

KT429	**Sexual Health Collection Kit (Blood, Urine, Vaginal, Throat and Rectal)**	Capillary blood, Aptima urine and Aptima multisite swab x3

Culture/Viral screening

KIT CODE	KIT TYPE	SAMPLE TYPE
KT364	**HPV Swab Collection Kit**	Qvintip swab
KT365	**MRSA Collection Kit (Nose and Groin)**	Purple liquid Amies swab x2
KT422	**MRSA Collection Kit (Nose, Groin and Axilla)**	Purple liquid Amies swab x3
KT366	**GBS Collection Kit (Vaginal and Rectal)**	Blue gel Amies swab x2
KT441	**Vaginitis Collection Kit (Vaginal – Culture and PCR)**	Aptima multisite swab and Blue gel Amies swab
KT385	**Urinalysis Collection Kit (Chemistry and Microscopy)**	Urine (Universal)
KT386	**Urinalysis Collection Kit (Chemistry, Microscopy and Culture)**	Urine (Universal and Boric)

Gastrointestinal

KIT CODE	KIT TYPE	SAMPLE TYPE
KT362	**QFIT Collection Kit**	QFIT sample collection device
KT363	**Faecal Collection Kit**	Stool/faecal container
KT472	**Faecal Collection Kit (Stool x2)**	Stool/faecal container x 2
KT430	**Faecal Collection Kit (QFIT and Stool x2)**	QFIT sample collection device and stool/faecal container x2

Please post self-collected samples on the same day they are taken, avoid posting over weekends and bank holidays.

TEST	CODE	SAMPLE REQS	TAT	KIT CODE
7 STI Profile by PCR (7 tests from 1 Sample)	DL12	Aptima urine or multisite swab	2 days	KT356 or KT357
ALEX³ Allergy Test NEW ALEX³ includes a panel of 300 allergens, covering high-relevance allergen sources such as animal dander, cereals, egg, legumes, milk, mites, molds, pollen, seafood, tree nuts, and venoms, supplemented with a Total IgE. It contains 218 molecular allergens, 107 of which are unique to the test providing a comprehensive sensitisation profile.	ALEX	B (TDL Tiny)	3-4 days	KT353
Amenorrhoea Profile (LH, FSH, PROL, TEST, TOES, SHBG, FAI) LH, FSH, PROL, TEST, TOES and SHBG now also available individually from a F (TDL Tiny) sample. Avoid taking samples from any area an HRT cream is applied.	TAME	F (TDL Tiny)	1 day	KT466

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Self-Collect Tests

TEST	CODE	SAMPLE REQS	TAT	KIT CODE
Amylase	AMY	B (TDL Tiny)	1 day	KT353
Antimullerian Hormone (AMH)	AMH	B (TDL Tiny)	1 day	KT353
Apolipoprotein A1	APOA	B (TDL Tiny)	3 days	KT353
Apolipoprotein B	APOB	B (TDL Tiny)	3 days	KT353
C Reactive Protein	CRP	B (TDL Tiny)	1 day	KT353
C Reactive Protein (High Sensitivity)	HCRP	B (TDL Tiny)	1 day	KT353
CA 125	C125	B (TDL Tiny)	1 day	KT353
Calprotectin	CALP	**QFIT** sample collection device	5 days	KT362 or KT430
Calprotectin/QFIT Profile (Combined)	QCAL	**QFIT** sample collection device	5 days	KT362 or KT430
Carbohydrate Deficient Transferrin (CDT)	CDT	B (TDL Tiny)	3 days	KT353
Chlamydia/Gonorrhoea – Rectal	RSCG	Aptima multisite swab	2 days	KT426
Chlamydia/Gonorrhoea – Throat	TSCG	Aptima multisite swab	2 days	KT425
Chlamydia/Gonorrhoea – Urine	CCG	Aptima urine	2 days	KT356
Chlamydia/Gonorrhoea – Vaginal	SCG	Aptima multisite swab	2 days	KT357
Cortisol	CORT	B (TDL Tiny)	1 day	KT353
COVID-19 (SARS-CoV-2) RNA by PCR Contact Laboratory.	NCOV	Aptima multisite swab of nose/throat	1 day	KT293
COVID-19 (SPIKE) Antibodies	SCOV	B (TDL Tiny)	1 day	KT353
Creatinine (including eGFR)	CREA	B (TDL Tiny)	1 day	KT353
DHEA Sulphate	DHEA	B (TDL Tiny)	1 day	KT353
DL12 7 STI Profile by PCR (7 PCR tests from 1 Sample)	DL12	Aptima urine or multisite swab	2 days	KT356 or KT357
Elastase	ELAS	Stool/faecal container	5 days	KT363 or KT472
Enteric Organism Rapid Detection	EORD	Stool/faecal container	2 days	KT363 or KT472
Female Hormone Profile (LH, FSH, PROL, TOES) Avoid taking samples from any area an HRT cream is applied.	TFIP	F (TDL Tiny)	1 day	KT466
Ferritin	FERR	B (TDL Tiny)	1 day	KT353
Free T3	FT3	B (TDL Tiny)	1 day	KT353
Free T4	FT4	B (TDL Tiny)	1 day	KT353
FSH	FSH	B (TDL Tiny)	1 day	KT353
Full Blood Count* (Haemoglobin, White Cell Count, Red Cell Count, Platelets) *Mix sample on collection.	TFBC	A (TDL Tiny)	1 day	KT354

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Self-Collect Tests

TEST	CODE	SAMPLE REQS	TAT	KIT CODE
Gastrointestinal Pathogen Profile by PCR	EORD	Stool/faecal container	2 days	KT363 or KT472
Gliadin Antibodies (IgG) (deamidated)	AGAB	B (TDL Tiny)	2 days	KT353
Group B Strep – Vaginal and Rectal	GBSX	Blue gel Amies swab x2	3-5 days	KT366
H. pylori Antigen – Stool	HBAG	Stool/faecal container	3 days	KT363 or KT472
HbA1c	GHB	A (TDL Tiny)	1 day	KT354
HCG (Quantitative)	QHCG	B (TDL Tiny)	1 day	KT353
Hepatitis B Immunity (IgG)	THBI	B (TDL Tiny)	1 day	KT353
Hepatitis B Surface Antigen	THBA	B (TDL Tiny)	1 day	KT353
Hepatitis C Antibodies	THCV	B (TDL Tiny)	1 day	KT353
Hepatitis C Antigen (Early detection)	TCAG	B (TDL Tiny)	1 day	KT353
Herpes Simplex (HSV) 1 & 2 – Genital lesion	HERS	Aptima multisite swab	5 days	KT405
Herpes Simplex (HSV) 1 & 2 – Oral lesion	HERS	Aptima multisite swab	5 days	KT404
HIV 1 & 2 Abs/p24Ag	THIV	B (TDL Tiny)	1 day	KT353
HPV (19 high-risk DNA subtypes, reported as types 16, 18 or Others)	HPVY	Qvintip vaginal swab	3 days	KT364
HPV (Individually typed high-risk DNA subtypes)	HPVZ	Qvintip vaginal swab	3 days	KT364
Lipase	LIPA	B (TDL Tiny)	1 day	KT353
Lipid Profile	LIPP	B (TDL Tiny)	1 day	KT353
Lipoprotein (a)	LPOA	B (TDL Tiny)	1 day	KT353
Liver Function Tests (Excluding ALT)	TLFT	B (TDL Tiny)	1 day	KT353
Luteinising Hormone (LH)	LH	B (TDL Tiny)	1 day	KT353
Lymphogranuloma Venerium (LGV) – Rectal * This test can be configured to be automatically reflexed as required.	LGVP	Aptima multisite swab	1-2 weeks	KT426
Menopausal Profile (FSH, LH, TOES, TSH, FT4) Avoid taking samples from any area an HRT cream is applied.	TMEN	F (TDL Tiny)	1 day	KT466
MPOX (Virus) – Lesion	MPXV	Aptima multisite swab	2 days	KT405
MRSA Culture	MRW2	Purple liquid Amies swab x2	2 days	KT365
MRSA PCR	MRS2	Purple liquid Amies swab x2	1 day	KT365

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Self-Collect Tests

TEST	CODE	SAMPLE REQS	TAT	KIT CODE
Mycoplasma genitalium by PCR – Urine and Vaginal	MGEN	Aptima urine or multisite swab	2 days	KT356 or KT357
Mycoplasma genitalium Resistance – Urine or Vaginal	MGR	Aptima urine or multisite swab	1-2 weeks	KT356 or KT357
Oestradiol-17-Beta	TOES	F (TDL Tiny)	1 day	KT466
Omega 3/Omega 6	OMG3	A (TDL Tiny)	5 days	KT354
PEth (Phosphatidylethanol)	PETH	A (TDL Tiny)	5-7 days	KT354
PLAC Test (Lp-PLA2)	PLA2	B (TDL Tiny)	2 days	KT353
Progesterone Avoid taking samples from any area an HRT cream is applied.	PROG	B (TDL Tiny)	1 day	KT353
Prolactin	PROL	B (TDL Tiny)	1 day	KT353
Prostate Specific Antigen (Total)	PSPA	B (TDL Tiny)	1 day	KT353
QFIT/Calprotectin Profile (Combined)	QCAL	**QFIT** sample collection device	5 days	KT362 or KT430
Quantitative Faecal Immunochemical Test (QFIT)	QFIT	**QFIT** sample collection device	1 day	KT362 or KT430
Respiratory PCR Panel (COVID-19, Flu A/B and RSV)	FLU4	Aptima multisite swab of nose/throat	2 days	KT293
Selenium (Serum)	SELE	B (TDL Tiny)	4 days	KT353
Sex Hormone Binding Globulin	SHBG	B (TDL Tiny)	1 day	KT353
STI Profile by PCR (7 tests from 1 sample)	DL12	Aptima urine or multisite swab	2 days	KT356 or KT357
STI Profile: MSM1 (Blood + Urine/ Throat/Rectal Swabs)	MSM1	B (TDL Tiny) / Aptima Urine / Aptima multisite swab x 2	2 days	KT361
STI Profile: MSM2 (Blood + Urine/ Throat/Rectal Swabs)	MSM2	B (TDL Tiny) / Aptima urine / Aptima multisite swab x 2	3 days	KT361
Syphilis IgG/IgM	TSYP	B (TDL Tiny)	1 day	KT353
Testosterone Avoid taking samples from any area an HRT cream is applied.	TEST	B (TDL Tiny)	1 day	KT353
Testosterone (Free) Avoid taking samples from any area an HRT cream is applied.	FTES	B (TDL Tiny)	3 days	KT353
Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B (TDL Tiny)	2 days	KT353
Thyroid Profile 1 (FT4/TSH)	TF	B (TDL Tiny)	1 day	KT353
Thyroid Profile 3 (FT3/FT4/TSH)	TF3	B (TDL Tiny)	1 day	KT353
Tissue Transglutaminase IgA (Coeliac)	TAA	B (TDL Tiny)	3 days	KT353

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Self-Collect Tests

TEST	CODE	SAMPLE REQS	TAT	KIT CODE
Trichomonas vaginalis (TV) – Urine or Vaginal	TVPC	Aptima urine or multisite swab	2 days	KT356 or KT357
Triple Swab Female STI Profile (Vaginal/Throat/Rectal Swabs)	3SWA	Aptima multisite swab x 3 (label by site)	2 days	KT428
TSH	TSH	B (TDL Tiny)	1 day	KT353
Urea	UREA	B (TDL Tiny)	1 day	KT353
Urea/Creatinine/eGFR	TCU	B (TDL Tiny)	1 day	KT353
Urine Chemistry and Microscopy	UMIC	Urine (Universal). Mid stream.	1-2 days	KT385
Urine Chemistry, Microscopy and Culture	UCEM	Urine (Universal & Boric). Mid stream.	1-2 days	KT386
Vaginitis/BV Profile using Culture & PCR Swab	STD8	Aptima multisite swab and Blue gel Amies swab	3-5 days	KT441
Viral Respiratory RNA Screen by PCR	VPR	Aptima multisite swab of nose/throat	2 days	KT293
Vitamin B12 (Active)	B12	B (TDL Tiny)	2 days	KT353
Vitamin D (25-OH)	VITD	B (TDL Tiny)	1 day	KT353

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Screening for Drugs of Abuse/Alcohol

TEST	CODE	SAMPLE REQS	TAT
Alcohol Profile	AP	A B B G	5-7 days
Alcohol Profile 2	ALCP	A A B B G **RU**	5-7 days
Amphetamines – Blood	AMPB	B B	5 days
Cannabinoids (Urine) Screen	CANN	**RU**	1 day
Cocaine (Urine) Screen	UCOC	**RU**	1 day
Drugs of Abuse from Blood Without Chain of Custody	DOAP	B	5 days
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody	DOA	**RU**	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody Plus Alcohol	DOA3	**RU**	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – With Chain of Custody* *Appointment required at 76 Wimpole Street and Photo ID to be shown.	DOAL	**RU/CoC Collection Containers** [1,2]	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – Without Chain of Custody	DOAN	**RU** [2]	2 days (5 days with LC-MS/MS confirmation)
Ketamine Screen	KETA	**RU**	7-10 days
LSD	LSD	**RU**	5 days
Opiate Screen (Urine)	UOPI	**RU**	2 days
PEth (Phosphatidylethanol)	PETH	A	5-7 days
Urine EtG (Ethyl glucuronide)	ETG	**RU**	1 week

Alcohol Profile

Liver Function Tests (LFT)
Alcohol Level
PEth (Phosphatidylethanol)
Carbohydrate Deficient Transferrin (CDT)
Mean Cell Volume (MCV)

TAT: 5-7 days

AP

A B B G

Alcohol Profile 2

Liver Function Tests (LFT)
Alcohol Level
PEth (Phosphatidylethanol)
Carbohydrate Deficient Transferrin (CDT)
Mean Cell Volume (MCV)
Urine Ethyl Gluconaride (EtG)

TAT: 5-7 days

ALCP

A A B B G **RU**

Drugs of Abuse from Blood without Chain of Custody

Amphetamines
Barbiturates
Tricyclic Antidepressants
Benzodiazepine
Cannabinoids
Opiates
Cocaine

TAT: 5 days

DOAP

B

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Screening for Drugs of Abuse/Alcohol

Drugs of Abuse Profile – Random Urine Sample/ No Chain of Custody

Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
MDMA
Methadone
Morphine – opiate

TAT: 2 days (5 days with LC-MS/MS confirmation)

DOA

RU

Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody Plus Alcohol

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
MDMA
Methadone
Morphine – opiate

TAT: 2 days (5 days with LC-MS/MS confirmation)

DOA3

RU

Drugs of Abuse Profile – With Chain of Custody*

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
Ketamine
LSD
MDMA
Methadone
Methaqualone
Morphine – opiate
Phencyclidine
Propoxyphene

*Appointment required at 76 Wimpole Street and Photo ID to be shown

TAT: 2 days (5 days with LC-MS/MS confirmation)

DOAL

RU/CoC Collection Containers [1,2]

Drugs of Abuse Profile – Without Chain of Custody

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
Ketamine
LSD
MDMA
Methadone
Methaqualone
Morphine – opiate
Phencyclidine
Propoxyphene

TAT: 2 days (5 days with LC-MS/MS confirmation)

DOAN

RU [2]

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Occupational Health

Trace metals in blood

TEST	CODE	SAMPLE REQS	TAT
Aluminium (Blood)	ALUM	K	7 days
Arsenic (Blood)	ARS	A or H	5 days
Cadmium (Blood)	CADM	A or H	5 days
Chromium (Blood)	CHRO	A / H	5 days
Copper (Serum)	COPP	B or K	5 days
Lead (Blood)	LEAD	A	5 days
Magnesium (Serum)	MG	B	1 day
Manganese (Serum)	MANG	B	5 days
Mercury (Blood)	MERC	A or H	5 days
Nickel (Serum)	NICK	B	5 days
Silver (Blood)	SILV	B	5 days
Trace Metal (Blood) Profile	TRAC	A B H K	7-10 days
Zinc (Serum)	ZINC	K	2 days

Trace metals in urine

TEST	CODE	SAMPLE REQS	TAT
Aluminium (Urine)	ALUU	**RU**	1-2 weeks
Arsenic (Urine)	ARSE	**RU** [30]	5 days
Cadmium (Urine)	URCD	**RU** [30]	5 days
Chromium (Urine)	URCR	**RU** [30]	4 weeks
Cobalt (Urine)	COBA	**RU** [30]	5 days
Copper (Urine) Non-acidified 24 hr urine collection.	URCU	**CU**	5 days
Lead (Urine)	URPB	**RU**	5 days
Magnesium (Urine)	URMG	**PU**	1 day
Mercury (Urine)	URHG	**RU** [1]	5 days
Nickel (Urine) Random early morning urine sample is preferable.	NICU	**RU**	4 weeks
Silver (Urine)	USIL	**RU**	5 days
Zinc (Urine) 10 mls of plain 24 hr urine collection.	URZN	**CU**	5 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Tests for specific exposure

TEST	CODE	SAMPLE REQS	TAT
2-Butanone GC Collect at end of work shift. Must be in plastic container.	BUTA	**RU**	7 days
Acetone – Blood	ACTB	A or H	6 weeks
Acetone – Urine	ACTU	**RU**	5 days
Alcohol Profile	AP	A B B G	5-7 days
Alcohol Profile 2	ALCP	A A B B G **RU**	5-7 days
Benzene	BENZ	**J** [1,6]	3 days
Beta 2 Microglobulin (Serum)	B2MG	B	2 days
Beta 2 Microglobulin (Urine)	UB2M	**RU**	3 days
Bromide	BROM	B	3 days
Cholinesterase (Serum/Pseudo)	CHPS	B	1 day
Doxepin Level (Sinequan)	DOXE	A or B	10 days
MBOCA in Urine	MBOC	**RU**	10 days
Molybdenum (Serum)	MOLY	B	5 days
Thallium (Blood)	THAL	A / H	1 week
Thallium (Urine)	URTH	**RU**	1 week
Toluene (Blood)	TOL	**J** (Contact Referrals)	10 days
Toluene (Urine)	UTOL	**RU** [30]	10 days
Trichloracetic Acid (Urine)	UTCA	**RU** [30]	5 days
Xanthine – Blood	XANB	H (Frozen plasma)	2 weeks
Xylene – Urine	UXYL	**RU** [30]	2 weeks

Alcohol Profile

Liver Function Tests (LFT)
Alcohol Level
PEth (Phosphatidylethanol)
Carbohydrate Deficient Transferrin (CDT)
Mean Cell Volume (MCV)

TAT: 5-7 days

AP

A B B G

Alcohol Profile 2

Liver Function Tests (LFT)
Alcohol Level
PEth (Phosphatidylethanol)
Carbohydrate Deficient Transferrin (CDT)
Mean Cell Volume (MCV)
Urine Ethyl Gluconaride (EtG)

TAT: 5-7 days

ALCP

A A B B G **RU**

Trace Metal (Blood) Profile

Aluminium
Iron
Zinc
Copper
Mercury
Chromium
Manganese
Calcium
Magnesium
Cadmium
Lead

TAT: 7-10 days

TRAC

A B H K

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Cervical Screening

The cervical cytology laboratory provides a rapid service for liquid based cervical samples.

Human papilloma virus (HPV), Chlamydia and Gonorrhoea testing is carried out routinely from ThinPrep vials and can be requested at the time the cervical sample is taken.

Laboratory hours

The laboratory department is open 8am to 6pm. Out-of-hours results are available on 020 7307 7373.

Urgent samples

It is helpful if requests for urgent samples can be discussed with the Senior Management Team prior to sending. Please contact the laboratory on cytology.reporting@tdlpathology.com in the first instance.

Use of service/Information required

Request forms must include 3 patient identifiers (this can be patient's full name, date of birth, hospital number or reference number). Samples will not be processed without a request form. TDL Request forms do not include the information required for NHS requests for cervical cytology and should not be used for NHS requests. For further information on NHS requests please contact hsl.csl.queries@nhs.net

Appropriate clinical information providing previous treatment/histological diagnosis is essential to ensure correct management recommendations can be given in the patient report. Tick boxes are provided to assist you.

The specimen container must be clearly labelled with patient details. Forms and samples which are mismatched will result in the sample being returned to the sender for correction.

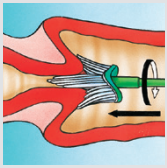
Sample takers are requested to check the expiry date of the vial prior to taking the sample. The laboratory is unable to process samples if the expiry date has passed.

Clinical advice

The Consultant Cytopathologists work together to provide clinical and technical advice, including recommendations for follow-up, HPV testing and management of complex cases. TDL will provide recommendation for patient management, but not undertake to provide a direct referral. No result will be entered onto the NHS CSP database and will therefore not be part of an individual's NHS screening record. Failsafe and management of the patient and their follow up, including referral for colposcopy where indicated, would need to be arranged by their referring clinician. To contact the department directly, please call 020 7307 7387 or email cytology.reporting@tdlpathology.com

RECORD…

…the patient's 3 identifiers to include date of birth on the vial, and the patient information and medical history on the cytology requisition form. TDL Request Forms do not include the information required for NHS requests and should not be used for NHS requests.



OBTAIN…

…an adequate sample from the cervix using a Cervex Brush (broom-like device). Insert the central bristles of the brush into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the brush in a clockwise direction five times.

RINSE…

…the Cervex Brush immediately into the PreservCyt Solution vial by pushing it into the bottom of the vial 10 times, forcing the bristles apart. As a final step, swirl the brush vigorously to further release material. Visually inspect the Cervex Brush to ensure that no material remains attached. Discard the brush.

Do not leave the head of the Cervex Brush in the vial. Check the vial is in date before use.

TIGHTEN…

…the cap so that the black torque line on the cap passes the black torque line on the vial. Do not over-tighten.

PLACE…

…the vial and request form in a specimen bag for transportation to TDL.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

ThinPrep® PAP Test Cervex Brush Protocol

Prepare all equipment before starting the procedure

- Note expiry date on sample collection vial. Do not use expired vials. Samples received in an expired vial will not be processed.
- Ensure the entire plastic seal is removed from the lid of the vial and discarded.
- Complete patient details on both the request form and the vial. Specimens may be returned or discarded if details are missing from the vial.
- Remove the lid from the vial before taking the sample.
- Use of lubricant is not recommended.

DO

- If excessive mucus is present, this should be gently removed before sampling.
- Use either the Cervex Brush (broom-like device) on its own or in combination with an endocervical brush.
- The Cervex Brush should be rotated 5 times in a clockwise direction. The Plastic spatula should be rotated through 360 degrees and the endocervical brush rotated through one quarter to one half turn.
- Immediately rinse the collected material into the vial.
- Replace the lid and tighten so that the black torque line on the cap passes the black torque line on the vial to avoid leakage.
- Keep the unlabelled portion of the sample vial free of labels so that the contents can be seen.
- If barcoded labels are used these must be applied horizontally around the vial.
- Samples should be sent to the laboratory without delay.

DON'T

- DO NOT leave the head of the Cervex Brush in the vial.
- DO NOT routinely clean the cervix or take a cervical swab before taking a cervical sample.
- An endocervical brush should never be used in isolation.
- DO NOT under any circumstances use a wooden spatula.
- DO NOT leave the collection device sitting in the vial whilst dealing with the patient.
- DO NOT over-tighten the lid on the vial.
- DO NOT place multiple labels on the outside of the vial.
- DO NOT apply barcoded labels vertically on the vial.
- DO NOT use expired vials.
- DO NOT delay the sending of vials to the laboratory. The sample needs to be processed within 6 weeks of collection.
- DO NOT use excessive lubricant – please avoid if possible.

Gynaecological Samples

The Cytology department processes cervical samples directly referred from all sectors of practice – Health screening, Occupational health, GP's, Consultants, Colposcopy units, Clinics, Hospitals and other Laboratories.

Liquid Based Cytology (LBC) is processed using the Hologic ThinPrep system.

Information for sample takers is available by contacting the department. Important: the head of the cervical broom must NOT be left in the vial. The use of lubricant interferes with LBC sampling and may result in an inadequate sample.

Use of lubricant is NOT recommended as it can affect the processing quality of the sample. Supplies of ThinPrep vials are available by contacting the Laboratory Service Centre on 020 7307 7373.

STI Screening from Hologic Thin Prep Vial

Tests are priced individually. Please request tests individually. Requests for additional test can be made by contacting the laboratory by telephone on **020 7307 7373** or by email to **addons@tdlpathology.com**.

Infection by PCR (single tests)

TEST	CODE	SAMPLE REQS	TAT
Chlamydia	TPCR	**TPV**	2 days
Chlamydia/Gonorrhoea	TCG	**TPV**	2 days
Chlamydia/Gonorrhoea/Trichomonas	TCGT	**TPV**	2 days
Gardnerella vaginalis	GVPC	**TPV**	2 days
Gonorrhoea	TGON	**TPV**	2 days
Herpes Simplex I/II	HERD	**TPV**	5 days
Mycoplasma genitalium	MGEN	**TPV**	2 days
Mycoplasma genitalium/Ureaplasma	MUPC	**TPV**	2 days
Trichomonas vaginalis	TVPC	**TPV**	2 days
Ureaplasma urealyticum/parvum	UGEN	**TPV**	2 days

Multiple tests from a single sample

TEST	CODE	SAMPLE REQS	TAT
7 STI Profile by PCR (7 tests from 1 Sample) Chlamydia trachomatis, Neisseria gonorrhoea, Mycoplasma genitalium**, Ureaplasma urealyticum/parvum, Trichomonas vaginalis, Gardnerella vaginalis, Herpes Simplex I/II ***If MGEN is +ve this reflexes to MGR*	PP12	**TPV**	2 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Human papillomavirus (HPV)

Human papillomavirus (HPV) is a common virus which infects the skin and may be transmitted through sexual contact. There are over 200 types of HPV which are split into two groups depending on whether they are linked to an increased risk of cervical cancer. These are described as high-risk HPV subtypes or low-risk HPV subtypes.

Infection with a high-risk HPV (HR-HPV) has been established as a necessary cause of cervical cancer. This has led in recent years to the inclusion of HR-HPV testing as an adjunct to cervical cytology in organised cervical screening programmes.

Compared to cervical cytology, HR-HPV testing has been shown to reduce the risk of developing cervical cancer through increased sensitivity. The high negative predictive value of HR-HPV testing and lower false negative rate provides assurance to woman and clinicians that the risk of developing cervical cancers between screening tests, is rare.

What does this change mean?

It means that HPV testing is the **FIRST LINE TEST**. It will be carried out as a single test, with a single result reported as DETECTED/Not Detected.

- If HR-HPV is NEGATIVE (Not Detected) – this means no further testing is needed for your patient and they may return to Routine Recall.
- If HR-HPV is POSITIVE (Detected) – this means that **CYTOLOGY** will be processed from the same ThinPrep Vial. **A further specimen is not required**. Patient recall (management) will be determined by the individual screening history and current test results.

All TDL requests for HPV are processed as follows:

- If HPV is requested as a single test and the result is Negative/Not Detected, cervical cytology (PAPT) would not be processed unless specifically requested. Should HPV and PAPT be undertaken, there would be a charge for both the HPV and the PAPT.
- If the HPV result is HR-HPV DETECTED, cervical cytology (PAPT) will be processed, even if the PAPT has not been requested. The PAPT will not be charged.

Understanding the significance of HPV testing

The benefit of a negative HPV result is its negative predictive value (NPP). A negative HPV result indicates that a patient is a very low-risk of developing cervical disease. However, neither HPV testing nor negative cervical cytology can reduce the risk to zero.The negative predictive value of both DNA and mRNA testing is the same.

Requests for Cervical Cytology as a single test are no longer processed without testing for HPV. In these circumstances, the HPV test will be charged in addition to the Cervical Cytology. Requests for HPV as the PRIMARY TEST will reflex to Cervical Cytology if HR-HPV is Detected/Positive at no additional charge.

Requests for HPV Primary Screening as a single test

TEST	CODE	SAMPLE REQS	TAT
HPV (A group of 14 HR mRNA types)	**HPVH**	**TPV**	3 days

If HR-HPV E6/E7 oncogene expression is DETECTED/POSITIVE, cervical cytology (PAPT) will be processed **without charge**. The PAPT will be processed from the same vial.

Requests for HP20 as a single test

TEST	CODE	SAMPLE REQS	TAT
HPV (28 individually typed LR & HR DNA subtypes)	**HP20**	**TPV**	3 days

HPV low and high-risk DNA subtypes will be reported individually (9 low and 19 high-risk). If high-risk DNA subtypes are positive then Cervical Cytology (PAPT) using the same vial will be processed **without charge**.

Requests for HPVT as a single test

TEST	CODE	SAMPLE REQS	TAT
HPV (28 individually typed low-risk (LR) & high-risk (HR) DNA subtypes and reflexed mRNA for types 16, 18, 31, 33 and 45)	**HPVT**	**TPV**	5 days

If one or more of DNA types 16, 18, 31, 33, 45 are DETECTED/POSITIVE, reflex testing for expression of E6/E7 oncogenes will be undertaken and Cervical Cytology (PAPT) will be processed **without charge**. The PAPT will be processed from the same vial.

Requests for Cervical Cytology (PAPT)

TEST	CODE	SAMPLE REQS	TAT
Cervical Cytology	**PAPT**	**TPV**	6 days (combined report)
Cervical Cytology + HPVH	**PAPT + HPVH**	**TPV**	6 days (combined report)

If PAPT is requested as a single test, HR-HPV will be undertaken additionally, and a combined report will be issued. **PAPT and HPVH will be charged as two separate tests**.

Requests for Cervical Cytology (PAPT) with selected HPV (HPVH or HP20 or HPVT)

TEST	CODE	SAMPLE REQS	TAT
Cervical Cytology + HPVH	**PAPT + HPVH**	**TPV**	6 days (combined report)
Cervical Cytology + HP20	**PAPT + HP20**	**TPV**	6 days (combined report)
Cervical Cytology + HPVT	**PAPT + HPVT**	**TPV**	6 days (combined report)

Where HPV result is reported with Cervical Cytology, a recommendation for patient management will be given, based on the combined findings.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Self-Collection HPV Samples

TDL Self-Collection HPV Test

Human Papillomavirus (HPV) is the primary cause of nearly all cervical cancer. In most cases, the HPV virus is harmless and causes no symptoms. Most women who acquire HPV are able to clear the infection through their own immune systems. Persistent presence of high-risk types of HPV can cause cervical lesions which over time may develop into cancer if untreated. Testing for HPV determines the presence, or absence, of HPV and will determine whether the HPV type present is high-risk for CIN and cervical cancer.

The Self-Collection HPV Test provides women with the option to self-collect a vaginal specimen that is then sent to the laboratory for testing. There is well documented high level of concordance between the HPV DNA results from self-collected and clinician-collected specimens.

The Self-Collection HPV Test is validated, using a CE marked sample collection device for vaginal cell collection. This sample is then sent to the laboratory for processing for 19 high-risk HPV DNA subtypes. A negative result means that these high-risk subtypes HPV were not detected and the patient is at extremely low-risk of developing high-grade cervical disease/CIN2+ before their next routine visit.

A positive HPV result might indicate an increased risk of developing CIN/cervical cancer, and the report from the laboratory will provide a clear recommendation for follow-up/colposcopy.

The value of HPV DNA testing in cervical cancer screening and disease detection has been proven over and over again. Self-collection of specimens for HPV testing is not intended to replace existing patient management pathways but allows for:

- Those who wish to test following a change of sexual partner
- Option for identifying individual high-risk DNA subtypes
- Personal preference to self-collect vaginal samples
- An acceptable option for women who avoid having regular cervical smears
- Self-collection for HPV increases acceptability and coverage rate of cervical cancer prevention

Results will always be sent to the requesting clinician, clinic or healthcare organisation.

HPVY
Self-Collected HPV DNA incorporating a collective of high-risk subtypes.

HPVZ
Self-Collected HPV DNA with **individual** reporting of all high-risk subtypes (16, 18, 31, 33, 45, 35, 39, 51, 52, 56, 58, 59, 66, 68, 26, 53, 69, 73, 82).

For more information, or to order Self-Collection HPV Test Packs, please contact Annette Wilkinson on **020 7307 7373** or **annette.wilkinson@tdlpathology.com**

TEST	CODE	SAMPLE REQS	TAT
HPV (19 high-risk DNA subtypes, reported as types 16, 18 or Others) (Self-collect)	HPVY	Qvintip vaginal swab	3 days
HPV (Individually typed high-risk DNA subtypes) (Self-collect)	HPVZ	Qvintip vaginal swab	3 days

Turnaround times are from the point at which samples are entered into TDL's laboratory information management systems, and provide a guide for the issue of results. Some tests are run in laboratory departments that do not operate at weekends.

Non-Gynae Cytology

Non-Gynaecological Cytology

Cerebrospinal fluid (CSF)

Ideally CSF should be submitted fresh or as an air dried cytospin slide, unstained and in a plastic transport slide box. A minimum of 3mls should be submitted either in fresh form or spun on multiple slides for cytopathologists' review and opinion. Please contact TDL Cytology for advice if required on 020 7307 7323 /7373.

Fluids

All available material should be submitted in a sterile container without fixative as quickly as possible. If any delay is anticipated, the material should be submitted in cytolyt fixative.

Sputum

Sputum should be collected on at least three occasions if underlying lung carcinoma is suspected. A single sputum is sufficient for microbiological assessment. Sputum should be sent to the laboratory immediately following production, or stored in a universal container containing cytolyt cell fixative if there is a likely delay. Please note that this is only acceptable if sputum is only for Cytology. Microbiology cannot be performed on fixed material. Early morning sputum is ideal, but contamination with food, toothpaste and tobacco should be avoided.

Urines

To prevent cell degeneration it is advisable to collect urine samples in a sample pot containing preservative (available from TDL Supplies). Use of preservative will ensure the cellular material is preserved up to 48 hours.

Ideally 10 mls (excluding preservative) from a freshly fully voided urine (when the bladder is emptied) mid-morning sample should be submitted for cytological assessment. If microbiology or chemistry investigations are also required, **please submit separate urine samples** and mark the vials accordingly. A mid-stream urine sample is NOT recommended for cytological assessment as it could lead to a low cellular yield. If a delay of greater than 24 hours in reaching the laboratory is anticipated samples should be refrigerated at 4°C.

Sample guidance

Standardised request form usage

All cytology specimens must be accompanied by the official TDL Request Form. Use of non-standard forms may result in processing delays or rejection of samples.

Mandatory clinical information

Clear and concise clinical details must be provided, including relevant history, suspected diagnosis, and anatomical site. Incomplete information may compromise diagnostic accuracy and turnaround time.

Specimen labelling and description

Each specimen container must be clearly labelled with patient identifiers and specimen type. Ambiguous or missing labels may lead to sample rejection.

Contact for clarification

For queries regarding request form completion or specimen submission, please call 020 7307 7323.

TEST	CODE	SAMPLE REQS	TAT
Fluid Cytology	CATF	**Fluid** [4]	3 days
Urine Cytology (Urine cytology containers available from TDL Supplies)	URCY	**Urine** (30mls)[21]	2 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Histopathology

TDL's Histopathology service supports a full range of pathology sub-specialities.

To prevent tissue degeneration, it is advisable to collect histopathology samples in sample pot(s) containing preservative, usually formalin, to at least ten times the volume of the tissue sample (available from TDL Supplies). Use of preservative will ensure that the tissue architecture and microscopic appearances of specimens are preserved.

Patient demographics, together with clinical and sample details need to be provided with the specimens. Testicular investigations for reproductive investigations are best submitted fixed in Bouins solution. Requests for products of conception require the patient's signed consent/instruction regarding sensitive disposal when the histopathology is complete. Please contact **020 7307 7380** or **020 7307 7373** for information or any query relating to histopathology.

All specimens are initially stained with H&E. However special stains and immunohistochemistry (IHC) may be recommended if additional information is needed to provide a more detailed analysis.

The choice of stain depends on the findings on initial assessment, the clinical context and the preference of the pathologist within their specialist expertise. IHC may be added when routine or regular histological testing is not sufficient to form a diagnosis. There are additional charges for special stains and immunohistochemistry.

CATEGORY	CODE	TISSUE SAMPLE	TAT
Breast	**HIS1**	Breast Capsule	7 days
Breast	**HIS4**	Breast Reduction (Bilateral)	7 days
Breast	**HIS3**	Breast Reduction (Unilateral)	7 days
Breast	**HIS2**	Breast Tissue	7 days
Breast	**HIS2**	Cavity Shavings	7 days
Breast	**HIS1**	Core Biopsy (1 Specimen)	7 days
Breast	**HIS2**	Core Biopsy (2 Specimens)	7 days
Breast	**HIS3**	Core Biopsy (3 Specimens)	7 days
Breast	**HIS4**	Core Biopsy (4 Specimens)	7 days
Breast	**HIS3**	Lumpectomy	7 days
Breast	**HIS5**	Mastecomy (simple)/Wide Local Excision (WLE)	7 days
Breast	**HIS5+HIS4**	Mastectomy + Axillary Clearance	7 days
Breast	**HIS4**	Microdochectomy	7 days

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
Breast	**HIS2**	Nipple	7 days
Breast	**HIS5**	Sentinal Nodes	7 days
Cardiac	**HIS3**	Aorta	1-2 weeks
Cardiac	**HIS2**	Cardiac Biopsy	1-2 weeks
Cardiac	**HIS3**	Cardiac Tumour Excision	1-2 weeks
Cardiac	**HIS2**	Heart Valves	1-2 weeks
Cardiac	**HIS2**	Mediastinal Tissue	1-2 weeks
Cardiac	**HIS2**	Pericardium	1-2 weeks
Cardiac	**HIS2**	Temporal Artery Biopsy	1-2 weeks
Endocrine	**HIS5**	Adrenal	7 days
Endocrine	**HIS4**	Parathyroid	7 days
Endocrine	**HIS4**	Thyroid (Lobe)	7 days
Endocrine	**HIS5**	Thyroid (Total)	7 days
ENT – Biopsy	**HIS2**	Bronchial Biopsy	7 days
ENT – Biopsy	**HIS1**	Cholesteatoma	7 days
ENT – Biopsy	**HIS1**	Dental Cyst	7 days
ENT – Biopsy	**HIS1**	Ear Canal Biopsy	7 days
ENT – Biopsy	**HIS1**	Ear Polyp	7 days
ENT – Biopsy	**HIS1**	Epiglottis	7 days
ENT – Biopsy	**HIS1**	Gingivial Tissue	7 days
ENT – Biopsy	**HIS1**	Laryngeal Biopsy	7 days
ENT – Biopsy	**HIS2**	Laryngeal Nodule (Bilateral)	7 days
ENT – Biopsy	**HIS1**	Laryngeal Nodule (Unilateral)	7 days
ENT – Biopsy	**HIS2**	Mandible Biopsy	7 days
ENT – Biopsy	**HIS2**	Maxillary Mucosa	7 days
ENT – Biopsy	**HIS2**	Mucocele	7 days
ENT – Biopsy	**HIS1**	Nasal Biopsy	7 days
ENT – Biopsy	**HIS1**	Nasal Polyps	7 days
ENT – Biopsy	**HIS1**	Oral Biopsy	7 days
ENT – Biopsy	**HIS1**	Palatal Biopsy	7 days
ENT – Biopsy	**HIS1**	Pharyngeal Biopsy	7 days
ENT – Biopsy	**HIS2**	Pleural Biopsy	7 days
ENT – Biopsy	**HIS1**	Thyroid Biopsy	7 days
ENT – Biopsy	**HIS1**	Tongue Biopsy	7 days
ENT – Biopsy	**HIS1**	Tonsil (1 Specimen)	7 days
ENT – Biopsy	**HIS2**	Tonsil Biopsy	7 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
ENT – Biopsy	**HIS2**	Tonsils (2 Specimens)	7 days
ENT – Biopsy	**HIS2**	Uvelectomy	7 days
ENT – Biopsy	**HIS1**	Vocal Chords	7 days
ENT – Resections	**HIS5+HIS2**	Glossectomy	up to 2 weeks
ENT – Resections	**HIS5**	Laryngectomy	up to 2 weeks
ENT – Resections	**HIS5+HIS2**	Maxillectomy	up to 2 weeks
ENT – Resections	**HIS5+HIS2**	Neck Dissection	up to 2 weeks
ENT – Resections	**HIS5+HIS5**	Neck Dissection (Bilateral)	up to 2 weeks
ENT – Resections	**HIS4**	Parotidectomy	7 days
ENT – Resections	**HIS4**	Partial Thyroidectomy	7 days
ENT – Resections	**HIS5+HIS5**	Pharyngectomy	7 days
ENT – Resections	**HIS5+HIS2**	Rhinectomy	7 days
ENT – Resections	**HIS3**	Submandibular Gland – Excision	7 days
ENT – Resections	**HIS2**	Thyroglossal Cyst	7 days
GI Endoscopic – Biopsy	**HIS1**	Bile Duct Biopsy	7 days
GI Endoscopic – Biopsy	**HIS1**	Colonic Polyp	7 days
GI Endoscopic – Biopsy	**HIS1**	Endoscopic Biopsy (1 specimen)	7 days
GI Endoscopic – Biopsy	**2H1**	Endoscopic Biopsy (2 specimens)	7 days
GI Endoscopic – Biopsy	**3H1**	Endoscopic Biopsy (3 specimens)	7 days
GI Endoscopic – Biopsy	**4H1**	Endoscopic Biopsy (4 specimens)	7 days
GI Endoscopic – Biopsy	**5H1**	Endoscopic Biopsy (5 specimens)	7 days
GI Endoscopic – Biopsy	**6H1**	Endoscopic Biopsy (6 specimens)	7 days
GI Endoscopic – Biopsy	**7H1**	Endoscopic Biopsy (7 specimens)	7 days
GI Endoscopic – Biopsy	**8H1**	Endoscopic Biopsy (8 specimens)	7 days
GI Endoscopic – Biopsy	**9H1**	Endoscopic Biopsy (9 specimens)	7 days
GI Endoscopic – Biopsy	**10H1**	Endoscopic Biopsy (10-15 specimens)	7 days
GI Endoscopic – Biopsy	**HIS5**	Liver Biopsy – Medical	7 days
GI Endoscopic – Biopsy	**HIS3**	Liver Biopsy – Tumour	7 days
GI Endoscopic – Biopsy	**HIS3**	Omental Biopsy	7 days
GI Endoscopic – Biopsy	**HIS1**	Pancreatic Biopsy	7 days
GI Endoscopic – Biopsy	**HIS1**	Perianal Biopsy	7 days
GI-Resection – Small	**HIS2**	Anal Fistula	7 days
GI-Resection – Small	**HIS2**	Appendix	7 days
GI-Resection – Small	**HIS3**	Endo Mucosal Resection (EMR/ESD)	7 days
GI-Resection – Small	**HIS2**	Gallbladder	7 days
GI-Resection – Small	**HIS2**	Haemorrhoidectomy	7 days

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
GI-Resection – Small	HIS2	Hernia Sac	7 days
GI-Resection – Small	HIS3	Meckel's Diverticulum	7 days
GI-Resection – Small	HIS2	Mesentery	7 days
GI-Resection – Small	HIS2	Perianal Biopsy/Warts	7 days
GI-Resection – Small	HIS2	Pilonidal Sinus	7 days
GI-Resection – Small	HIS2	Polypectomy	7 days
GI-Resection – Small	HIS2	Umbilical Lesion	7 days
GI Resection – Large	HIS5	Biliary Resection	7 days
GI Resection – Large	HIS5+HIS2	Colon	7 days
GI Resection – Large	HIS5	Distal Pancreatectomy	7 days
GI Resection – Large	HIS5+HIS2	Gastrectomy	7 days
GI Resection – Large	HIS5	Gastric Wedge Resection	7 days
GI Resection – Large	HIS5	Ileoanal Pouch Resection	7 days
GI Resection – Large	HIS4	Ileostomy	7 days
GI Resection – Large	HIS3	Ileum	7 days
GI Resection – Large	HIS5+HIS2	Large Bowel Resection – Benign/Malignant	7 days
GI Resection – Large	HIS4	Liver Wedge Resection	7 days
GI Resection – Large	HIS5+HIS2	Oesophagectomy	7 days
GI Resection – Large	HIS5	Partial Hepatectomy	7 days
GI Resection – Large	HIS5	Small Bowel Resection – Benign/Malignant	7 days
GI Resection – Large	HIS5+HIS5	Whipple's Procedure/ Pancreatectoduodenectomy	7 days
Gynaecology	HIS2	Cervical Biopsy	7 days
Gynaecology	HIS1	Cervical Polyp	7 days
Gynaecology	HIS4	Cervix	7 days
Gynaecology	HIS1	Curettings – Endocervical	7 days
Gynaecology	HIS1	Curettings – Endometial	7 days
Gynaecology	HIS2	Endometrial Biopsy	7 days
Gynaecology	HIS1	Endometrial Pipelle	7 days
Gynaecology	HIS1	Endometrial Polyp	7 days
Gynaecology	HIS2	Fallopian Tube	7 days
Gynaecology	HIS3	Fibroids	7 days
Gynaecology	HIS2	Fimbrial Cyst	7 days
Gynaecology	HIS4	LLETZ and/or Cone Biopsy	7 days
Gynaecology	HIS2	Mastoid	7 days

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See page 25 for sample-taking and special handling instructions.

Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
Gynaecology	**HIS2**	Ovarian Biopsy	7 days
Gynaecology	**HIS2**	Ovarian Cyst	7 days
Gynaecology	**HIS1**	Ovarian Pipelle	7 days
Gynaecology	**HIS5**	Ovaries (Bilateral)	7 days
Gynaecology	**HIS3**	Ovary (Unilateral)	7 days
Gynaecology	**HIS4**	Ovary and Tube (Unilateral)	7 days
Gynaecology	**HIS5**	Ovary and Tube (Bilateral)	7 days
Gynaecology	**HIS2**	Pelvic Mass	7 days
Gynaecology	**HIS1**	Peritoneal Biopsy	7 days
Gynaecology	**HIS5**	Placenta	7 days
Gynaecology	**HIS2**	Pouch of Douglas	7 days
Gynaecology	**HIS1**	Products of Conception	7 days
Gynaecology	**HIS2**	Uterine Polyp	7 days
Gynaecology	**HIS4**	Uterus	7 days
Gynaecology	**HIS5**	Uterus and Cervix	7 days
Gynaecology	**HIS5**	Uterus, Tubes and Ovaries	7 days
Gynaecology	**HIS1**	Vulval Biopsy	7 days
Haemato-Oncology	**HIS5**	Bone Marrow	7 days
Haemato-Oncology	**HIS2**	Lymph Node	7 days
Haemato-Oncology	**HIS3**	Lymph Node (Lymphoma)	7 days
Haemato-Oncology	**HIS3**	Lymph Node (Metastatic Disease)	7 days
Haemato-Oncology	**HIS5**	Spleen	7 days
Haemato-Oncology	**HIS5**	Thymus	7 days
Lung – Biopsy	**HIS3**	Lung Biopsy	7 days
Lung – Resections	**HIS3**	Lung Lesion Small Wedge Resection	7 days
Lung – Resections	**HIS5+HIS5**	Lung Resection	7 days
Lung – Resections	**HIS5**	Lung Tumour Resection +/- Nodes	7 days
Neurosurgery	**HIS3**	Brain Biopsy	7 days
Neurosurgery	**HIS3**	Brain Resection	7 days
Neurosurgery	**HIS5+HIS5**	Muscle Biopsy	7 days
Neurosurgery	**HIS3**	Pituitary Gland – Resection	7 days
Neurosurgery	**HIS3**	Spinal Tumour Biopsy	7 days
Neurosurgery	**HIS3**	Spinal Tumour Resection	7 days
Neurosurgery	**HIS4**	Vertebrea	7 days
Opthalmic	**HIS1**	Conjunctival Biopsy	1-2 weeks
Opthalmic	**HIS1**	Cornea	1-2 weeks

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
Opthalmic	**HIS4**	Globe/Removal of Eye	1-2 weeks
Opthalmic	**HIS2**	Lacrimal Gland Biopsy/Excision	1-2 weeks
Opthalmic	**HIS1**	Orbit Contents of Eye	1-2 weeks
Orthopaedic	**HIS1**	Bone Biopsy	7 days
Orthopaedic	**HIS2**	Bone Currettings	7 days
Orthopaedic	**HIS2**	Bursa	7 days
Orthopaedic	**HIS2**	Duputrenes Contracture	7 days
Orthopaedic	**HIS3**	Femoral Head Resection	7 days
Orthopaedic	**HIS1**	Ganglion Cyst	7 days
Orthopaedic	**HIS3**	Joint Resurfacing/Redo Prosthesis Capsule	7 days
Orthopaedic	**HIS1**	Neuroma	7 days
Orthopaedic	**HIS2**	Synovial Biopsy	7 days
Orthopaedic	**HIS3**	Tendon	7 days
Skin and Soft Tissue	**HIS2**	Abscess	7 days
Skin and Soft Tissue	**HIS3**	Alopecia Biopsies	7 days
Skin and Soft Tissue	**HIS1**	Cyst Excision	7 days
Skin and Soft Tissue	**HIS1**	Fossa	7 days
Skin and Soft Tissue	**HIS1**	Granuloma	7 days
Skin and Soft Tissue	**HIS3**	Lipoma	7 days
Skin and Soft Tissue	**HIS2**	Skin Excision BCC/SCC	7 days
Skin and Soft Tissue	**HIS1**	Nail	3-4 weeks
Skin and Soft Tissue	**HIS1**	Pilonidal Sinus	7 days
Skin and Soft Tissue	**HIS5**	Sentinel Nodes in Skin Cancer (Melanoma)	7 days
Skin and Soft Tissue	**1SK**	Skin Biopsy (1 specimen)	7 days
Skin and Soft Tissue	**2SK**	Skin Biopsy (2 specimens)	7 days
Skin and Soft Tissue	**3SK**	Skin Biopsy (3 specimens)	7 days
Skin and Soft Tissue	**4SK**	Skin Biopsy (4 specimens)	7 days
Skin and Soft Tissue	**5SK**	Skin Biopsy (5 specimens)	7 days
Skin and Soft Tissue	**6SK**	Skin Biopsy (6 specimens)	7 days
Skin and Soft Tissue	**7SK**	Skin Biopsy (7 specimens)	7 days
Skin and Soft Tissue	**8SK**	Skin Biopsy (8 specimens)	7 days
Skin and Soft Tissue	**9SK**	Skin Biopsy (9 specimens)	7 days
Skin and Soft Tissue	**10SK**	Skin Biopsy (10 specimens)	7 days
Skin and Soft Tissue	**11SK**	Skin Biopsy (11-15 specimens)	7 days
Skin and Soft Tissue	**HIS3**	Soft Tissue Tumour Biopsy	7 days
Skin and Soft Tissue	**HIS3**	Soft Tissue Tumour Resection	7 days

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See page 25 for sample-taking and special handling instructions.

Histopathology

CATEGORY	CODE	TISSUE SAMPLE	TAT
Urology – Biopsy	**HIS1**	Bladder Biopsy	7 days
Urology – Biopsy	**HIS1**	Core Biopsy (Urology)	7 days
Urology – Biopsy	**HIS2**	Hydrocele	7 days
Urology – Biopsy	**HIS2**	Penile Biopsy	7 days
Urology – Biopsy	**HIS1**	Prostate Biopsy	7 days
Urology – Biopsy	**2H1**	Prostate Biopsies x 2	7 days
Urology – Biopsy	**3H1**	Prostate Biopsies x 3	7 days
Urology – Biopsy	**4H1**	Prostate Biopsies x 4	7 days
Urology – Biopsy	**5H1**	Prostate Biopsies x 5	7 days
Urology – Biopsy	**6H1**	Prostate Biopsies x 6	7 days
Urology – Biopsy	**7H1**	Prostate Biopsies x 7	7 days
Urology – Biopsy	**8H1**	Prostate Biopsies x 8	7 days
Urology – Biopsy	**9H1**	Prostate Biopsies x 9	7 days
Urology – Biopsy	**10H1**	Prostate Biopsies x 10-12	7 days
Urology – Biopsy	**HIS5**	Testicular Biopsy (Bilateral)	7 days
Urology – Biopsy	**HIS4**	Testicular Biopsy (Unilateral)	7 days
Urology – Biopsy	**HIS1**	Urethral Biopsy	7 days
Urology – Biopsy	**HIS2**	Vasectomy	7 days
Urology – Resection	**HIS5+HIS5**	Cystoprostatectomy	7 days
Urology – Resection	**HIS3**	Epididymis	7 days
Urology – Resection	**HIS1**	Foreskin/Circumcision	7 days
Urology – Resection	**HIS5**	Nephrectomy/Kidney	7 days
Urology – Resection	**HIS5+HIS5**	Prostatectomy	7 days
Urology – Resection	**HIS5+HIS5**	Radical Cystectomy	7 days
Urology – Resection	**HIS3**	Testis	7 days
Urology – Resection	**HIS3 – HIS5+**	TURBT (dependent on number of blocks)	7 days
Urology – Resection	**HIS3 – HIS5**	TURP (dependent on number of blocks)	7 days

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Non-invasive prenatal testing

Non-invasive prenatal testing (NIPT)

Non-invasive prenatal testing (NIPT) screens for the presence of specific chromosome disorders in the developing fetus. The test analyses fragments of cell-free DNA in maternal plasma that have been released from both maternal and placental cells.

By analysing the proportions of cell-free DNA fragments derived from different chromosomes or chromosome regions, NIPT can screen for the presence or absence of specific chromosome disorders.

NIPT is more accurate than first trimester maternal serum screening and ultrasound in identifying pregnancies with or without these disorders.

TDL Genetics uses the NIPT assay VeriSeq NIPT Solution v2, which is manufactured by Illumina and is processed at our laboratory in London.

Targeted screening for specific common chromosome disorders

Our NIPT assay is designed to screen for:

- Trisomy 21 (Down syndrome), which is associated with moderate to severe intellectual disability, congenital heart defects and other malformations;
- Trisomy 18 (Edwards syndrome) and trisomy 13 (Patau syndrome), which are associated with severe brain and cardiac malformations. There is a high risk of stillbirth or death during infancy; and
- Sex chromosome aneuploidy (abnormalities in the number of X or Y chromosomes), which can be associated with malformations and infertility, Turner syndrome (45,X) and Klinefelter syndrome (47,XXY). Triple X syndrome and XYY syndrome can also be detected. This screen is optional (no additional cost).

In addition, NIPT can also assess fetal sex. This is optional (no additional cost).

NIPT does not screen for non-chromosome disorders, familial mutations, malformations, fetal growth or fetal viability.

SCAN ME

Find out more about NIPT on the TDL website:

www.tdlpathology.com/non-invasive-prenatal-testing/

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 25 for sample-taking and special handling instructions.

Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
1,25 Vitamin D	D3	B*	5-8 days	147
1p36 Deletion Syndrome – karyotype + CGH	KARY, FISH	**CVS / AF /** H[9]	12-17 days	112
2-Butanone GC	BUTA	**RU**	7 days	162
5 HIAA	RU5H	**PU** (collect on acid)[1]	5 days	29
5' Nucleotidase	5NT	B	5 days	29
6-Thioguanine Nucleotides	TGN	A A	2 weeks	29
7 STI Profile by PCR (7 tests from 1 Sample)	DL12	**FCRU / PCR Swab / TPV**	2 days	70, 73
7 STI Profile by PCR (7 tests from 1 Sample) (Thin Prep)	PP12	**TPV**	2 days	166
11 Deoxycorticosterone	DEOX	B	10 days	55
11 Deoxycortisol	11DC	B (Frozen)	10 days	55
16S rRNA Bacterial Gene	16S	**J**	1 week	45
17 Hydroxyprogesterone	17OH	B	5 days	55
18S rRNA Fungal Gene	18S	**J**	1 week	45
21 Hydroxylase Ab's	21HA	B (Frozen)	10 days	29
21-Hydroxylase Deficiency (Congenital Adrenal Hyperplasia CYP21A2)	GENE	A[9,11]	5 weeks	112
22q11 & 10p14 deletion (Di George Syndrome) – CGH CHANGE	CGH	**CVS / AF /** A H[9]	10 days	112
Acetone – Blood	ACTB	A or H	6 weeks	162
Acetone – Urine	ACTU	**RU**	5 days	162
Acetylcholine Receptor Autoantibodies	ACRA	B[4]	5 days	29
Achromatopsia NGS Panel	GENE	A A[9]	5 weeks	112
Acid Phosphatase – Total	APT	B	5 days	29
ACTH (Adrenocorticotropic Hormone)	ACTH	A (EDTA on ice, Plasma, spun and frozen within 2 hours)[41]	1 day	55
Activated Protein C Resistance	APCR	C (Frozen)[4,18]	3 days	41
Acute Viral Hepatitis Screen	AHSC	B	1 day	79, 85
ADAMTS-13 Activity	CP13	C (Frozen)[4,18]	3 days	41
ADAMTS-13 Antibody	A13A	C (Frozen)[9,18]	2 weeks	41
Adenomatous Polyposis NGS Panel	GENE	A[9]	4 weeks	112
Adenosine Deaminase	AD	A / B / **Fluid**	3 weeks	29
Adenovirus by PCR	ADV	A / **PCR / VS**	7 days	98
Adiponectin	ADIP	B	2 weeks	29
Adrenal Cortex Antibodies	ACTX	B	5 days	79
Aicardi-Goutières Syndrome NGS Panel	GENE	A A[9]	5 weeks	112
Alagille Syndrome NGS Panel	GENE	A A[9]	6 weeks	112
Albumin	ALB	B	1 day	29
Alcohol (Medical) [Do not use alcohol swab prior to sample taking]	ALCO	G[1]	1 day	29
Alcohol (Urine)	UALC	**RU**	1 day	29
Alcohol Profile	AP	A B B G	5-7 days	159, 162

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Alcohol Profile 2	ALCP	A A B B G RU	5-7 days	159, 162
Aldolase	ALDO	B	5 days	29
Aldosterone	ALDN	A (Plasma frozen within 3 hrs)[36]	5 days	55
Aldosterone (Urine)	UALD	PU	5 days	55
ALEX³ Allergy Test NEW	ALEX	B (Serum)	3-4 days	137, 142
Alkaline Phosphatase	ALP	B	1 day	29
Alkaline Phosphatase Isoenzymes	APIE	B	5 days	29
Allergic Rhinitis/Asthma Profile	ALRN	B B	2 days	137 , 142
Allergy – Individual Allergens	ALLE	B	2 days	137
Allergy – 5 x Single Individual Allergens	5AL	B	2 days	137
Allergy – 10 x Single Individual Allergens	10AL	B	2 days	137
Allergy Profile 1 (Food & Inhalants)	1A	B B	2 days	137, 140
Allergy Profile 2 (UK Aero Allergen)	2A	B B	2 days	137 , 140
Allergy Profile 3 (Food)	3A	B B	2 days	137 , 140
Allergy Profile 4 (Nuts & Seeds)	4A	B B	2 days	137 , 140
Allergy Profile 5 (Children's Panel)	5A	B B	2 days	137 , 140
Allergy Profile 6 (Shellfish)	6A	B B	2 days	137, 141
Allergy Profile 7 (Finfish)	7A	B B	2 days	137, 141
Allergy Profile 8 (Cereal – singles)	8A	B B	2 days	137, 141
Allergy Profile 9 (Antibiotics)	9A	B B	2 days	137, 141
Allergy Profile 10 (Insects)	10A	B B	2 days	137, 141
Allergy Profile 11 (Combined Shellfish/Finfish)	11A	B B	2 days	137, 141
Allergy Profile 12 (Milk & Milk Proteins)	12A	B B	2 days	137, 141
Allergy Profile 13 (Stone fruit/Rosaceae family)	13A	B B	2 days	137, 142
Alpha Gal Components (related to red meat)	ZZ37	B	2 days	138
Alpha-1-Antitrypsin (Serum)	A1AT	B	1 day	29
Alpha-1-Antitrypsin (Stool)	A1AF	RF	10 days	29
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z	GENE	A [9]	3 weeks	29, 112
Alpha-1-Glycoprotein	OROS	B (Frozen)	5 days	29
Alpha-1-Microglobulin	A1MG	RU [1,22]	10 days	29
Alpha-2-Macroglobulins	A2MG	B	5 days	29
Alpha-Fetoprotein	AFP	B	1 day	29, 55, 102
Alpha Thalassaemia – multiplex PCR for common large deletions	GENE	A [9]	3 weeks	112
Alport Syndrome NGS Panel – full sequencing with deletions and duplications	GENE	A A [9]	5 weeks	112
ALT (Alanine Aminotransferase) (SGPT)	ALT	B	1 day	29
Alternaria Components	ZZ1	B	2 days	138
Aluminium (Blood)	ALUM	K	7 days	29, 161
Aluminium (Urine)	ALUU	RU	1-2 weeks	161

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Alzheimer's Phospho-TAU 217 NEW	P217	A A (4ml) plasma, spin separate and freeze, 2ml polypropylene tube, within 4 hours	4 weeks	79
Amenorrhoea Profile	AMEN	B	1 day	55, 60
Amikacin Level (State dose)	AMIK	B [4]	1 day	133
Amino Acid (EDTA Plasma)	AMIN	A (Frozen EDTA Plasma)	7 days	29
Amino Acid Quantitative (Urine)	UAAQ	**RU** (Frozen)	2-3 weeks	29
Aminolevulinic Acid (Urine)	RUAL	100mls **PU**	5 days	29
Amitriptyline	AMTR	A [4]	5 days	134
Ammonia	AMMO	A (Frozen) [15]	1 day	29
Amoebic (E. histolytica) Antibodies	AFAT	B	1 week	88
Amoebic (E. histolytica) PCR	AMAG	**RF**	2 days	88
Amphetamines – Blood	AMPB	B B	5 days	159
Amylase	AMY	B	1 day	29
Amylase (Urine)	UAMY	**CU**	1 day	29
Amylase Isoenzymes	AMYI	B	5 days	29
Amyloidosis (Amyloid A Protein)	SAA	B	5 days	29
Anaemia Profile	ANAE	A A B	2 days	40, 43
Anafranil (Clomipramine)	CHLO	A	7 days	134
ANCA (Anti-Neutrophil Cytoplasmic Abs)	ANCA	B	2 days	79
Andropause Profile	ANDP	B B	1 day	55, 60
Androstanediol Glucuronide	ANDG	B	3 weeks	29
Androstenedione	ANDR	B	5 days	55
Angiotensin Converting Enzyme	ACE	B	1 day	30
Angiotensin Converting Enzyme – CSF	ACEF	**CSF** (Frozen)	2 weeks	30
Angiotensin II	ANG2	A (Frozen plasma)	2 weeks	30
Antenatal Profile	ANTE	A A [33] B B B G	3 days	40, 43
Anti-Actin Antibodies	AAA	B	5 days	79
Anti-Basal Ganglia Antibodies	ABGA	B	3 weeks	79
Anti-CCP Antibodies	CCP	B	2 days	79
Anti-Liver Cytosol Antibodies	ALCA	B	5 days	79
Anti-MOG [Myelin Oligodendrocyte Glycoprotein] Antibodies	AMOG	B	3 weeks	79
Anti-MUSK Antibodies	MUSK	B	2 weeks	79
Anti-Nuclear Antibodies (titre & pattern)	ANAB	B	2 days	79
Anti-Phosphatidylserine Antibodies	PHTS	B	5 days	79
Anti-Phospholipase A2 Receptor	AA2R	B	6 weeks	79
Anti-SLA (Soluble Liver Antigen) Abs	LSA	B	5 days	79
Anti-Staphylolysin Titre (SGOT)	ASTT	B	3 days	79
Anti-Streptolysin Titre/ASOT	ASLT	B	2 days	79
Anti-Sulfatide Antibodies	ASA	B	5 weeks	79
Anti-Xa Apixaban Monitoring	APIX	C (Frozen)* [18]	3 days	41

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Anti-Xa Edoxaban Monitoring	EDOX	C (Frozen)*[18]	3 days	41
Anti-Xa Fondapariux Monitoring	FOND	C Frozen)*[18]	3 days	41
Anti-Xa LMWH Monitoring	LMWX	C (Frozen)*[18]	3 days	41
Anti-Xa Rivaroxaban Monitoring	RIVA	C (Frozen)*[18]	3 days	41
Antidiuretic Hormone	ADH	A A (Plasma frozen)[4]	10 days	55
Antimony (Urine)	ANTI	RU[30]	10 days	30
Antimullerian Hormone (AMH)	AMH	B	1 day	30, 55
Antithrombin III Activity	A111	C (Frozen)[4,9,18]	3 days	41
AP50 Alternative Hemolytic Complement	AP50	B (Frozen)	2 weeks	30
Apolipoprotein A1	APOA	B	3 days	30
Apolipoprotein B	APOB	B	3 days	30
Apolipoprotein C	APOC	B	3 months	30
Apolipoprotein E (12 hours fasting)	APOE	B (fasting)	5 days	30
Apple Components	ZZ36	B	2 days	138
APTT/KCCT	KCCT	C[18]	1 day	40
Aquaporin 4 Antibodies (Neuromyelitis Optica)	AQUA	B	2 weeks	79
Arbovirus Antibodies/Abs	ARBO	B[9,14]	3 weeks	98
Array-CGH (Comparative Genomic Hybridisation) SNP array	CGH	CVS / AF / A H[9]	10 days	113
Arsenic (Blood)	ARS	A or H	5 days	30, 161
Arsenic (Urine)	ARSE	RU[30]	5 days	30, 161
Arylsulphatase A	ARYL	H[5,6]	8 weeks	30
Ascariasis Serology	ASC	B	5 days	79
Ashkenazi Jewish Carrier Screen	GENE	A[9]	4 weeks	113
Aspartate Transaminase (AST) (SGOT)	AST	B	1 day	30
Aspergillus Components	ZZ2	B	2 days	138
Aspergillus Precipitins	ASPP	B	5 days	79
Ataxia NGS Panel	GENE	A A[9]	6 weeks	113
Atopic Dermatitis/Eczema Profile (14 allergens)	ALEC	B B	2 days	137 , 142
Atypical Antibody Screen (handwritten tube label)	AASC	A[22,33]	2 days	40
Atypical Pneumonia Screen	APS	B	3 days	98, 100
Autoantibody Profile I	AUTO	B	2 days	79, 85
Autoantibody Profile II	ENDO	B	3 days	79, 85
Avian Precipitins (11 Species)	AVIA	B	5 days	79
Babesia PCR	PCRB	A	7 days	79
Bancroftia/Oncerciasis/Filarial Antibodies	TFIF	B[14]	2 weeks	88
Beckwith-Wiedemann Syndrome – methylation studies on 11p15 imprinting domains KvDMR + H19	GENE	A[9,11]	6 weeks	114
Bence-Jones Protein	RBJP	RU or CU	5 days	30
Benzene	BENZ	J[1,6]	3 days	162
Beta 2 Glycoprotein 1 Abs	B2GP	B	2 days	79
Beta 2 Microglobulin (Serum)	B2MG	B	2 days	30, 162

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Beta 2 Microglobulin (Urine)	UB2M	**RU**	3 days	30, 162
Beta Carotene	CARO	B	5 days	147
Beta D Glucan	XBDG	B	3 days	45
Beta-Glucuronidase (Sly Disease)	BGLU	H H [9,4]	8 weeks	30
Beta Thalassaemia – beta-globin gene sequencing + deletions/duplications	GENE	A [9]	4 weeks	114
Bicarbonate	HCO3	B	1 day	30
Bile Acids – Serum	BILE	B	1 day	30
Bilharzia (Schistosome) Antibody Screen	BILH	B [14]	10 days	88
Bilharzia (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days	88
Bilirubin (Direct)	DBIL	B	1 day	30
Bilirubin (Indirect)	IBIL	B	1 day	30
Bilirubin (Total)	BILI	B	1 day	30
Biotin	BIOS	B [7]	5 days	147
Biotinidase	BIOT	H (Frozen plasma) [4]	3 weeks	30
Birch Components	ZZ3	B	2 days	138
Bismuth	BISM	B	5 days	30
BK Polyoma Virus by PCR	BKPV	A/**RU**	5 days	98
Blood Culture#	BCUL	2 x **BC** [4]	6 days +	45
Blood Film Examination	FILM	A	1 day	40
Blood Group †	ABO	A [22,33]	2 days	40
BNP (NT-pro BNP)	BNP	B	1 day	30, 55
Bone Alkaline Phosphatase	BALP	B (Frozen)	2 weeks	30
Bone Marrow (Aspirate)	BMAS	**J** [1,9]	14 days	43
Bone Screen	BONE	B **CU**	1 day	30, 38
Bone Screen (Bloods only)	BON2	B	1 day	30, 38
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days	79, 88
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days	79, 88
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days	79, 88
Brazil Components	ZZ4	B	2 days	138
Breast Cancer NGS Panel	GENE	A A [9,11]	4 weeks	102
Bromide	BROM	B	3 days	162
Brucella Serology	BRUC	B [9]	2-3 weeks	79
BUN (Blood Urea Nitrogen) (Calculated)	BUN	B	1 day	30
C Peptide	CPEP	B	3 days	55
C Reactive Protein	CRP	B	1 day	30
C Reactive Protein (High Sensitivity)	HCRP	B	1 day	30
C1 Esterase Inhibitor	C1EI	B	5 days	79
C1 Esterase: Function & Total	FC1E	C C (Plasma Frozen) [4,18]	10 days	31
C1q Binding Immune Complex	IMCP	B	5 days	31
C3 Complement	C3	B	1 day	79

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TEST	CODE	SAMPLE REQS	TAT	PAGE
C3/C4 Complement	COMP	B	1 day	79
C4 Complement	C4	B	1 day	80
CA 15-3	C153	B	1 day	102
CA 19-9	C199	B	1 day	102
CA 50	CA50	B	5 days	102
CA 72-4	C724	B	5 days	102
CA 125	C125	B	1 day	102
CADASIL – NOTCH3 gene sequencing	GENE	A [9]	6 weeks	114
Cadmium (Blood)	CADM	A or H	5 days	31, 161
Cadmium (Urine)	URCD	**RU** [30]	5 days	31, 161
Caeruloplasmin	CERU	B	1 day	31, 148
Calcitonin	CATO	B (Frozen) [4]	1 day	55
Calcium	CA	B	1 day	31
Calcium (24 hour Urine)	UCA	**PU** or acid urine	1 day	31
Calcium + Vitamin D	CALD	B	1 day	31
Calcium/Creatinine Ratio	CACR	**CU** B	1 day	31
Calprotectin	CALP	**QFIT** sample collection device	5 days	31
Calprotectin (Serum) NEW	SCAL	B	5 days	31
Calprotectin/QFIT Profile (Combined) (QFIT)	QCAL	**QFIT**	5 days	31, 38
Campylobacter Jejuni Antibodies	CJAB	B	5 days	80
Cancer, Comprehensive NGS Panel	GENE	A A [9,11]	5 weeks	114
Candida (Culture for ID + Sensitivities)	CANC	**STM/CS**	2-4 days	45
Candida (Culture for ID Only)	CAND	**STM/CS**	2-4 days	45
Candida Antibodies	CANA	B	5 days	80
Candida auris Screen	CANS	**STM/CS**	2-4 days	45
Cannabinoids (Urine) Screen	CANN	**RU**	1 day	159
Carbamazepine (Tegretol)	CARB	B	1 day	134
Carbapenemase producing organism screen	MDR	**STM** (rectal)	4-5 days ‡	45
Carbohydrate Deficient Glycoprotein	CDG	B	2 weeks	31
Carbohydrate Deficient Transferrin (CDT)	CDT	B	3 days	31
Carboxyhaemoglobin	CBHB	A	1 week	40
Carcino Embryonic Antigen	CEA	B	1 day	102
Cardiolipin Antibodies (IgG+IgM)	ACAB	B	2 days	80
Cardiomyopathy, Dilated NGS Panel	GENE	A A [9]	6 weeks	114
Cardiomyopathy, Hypertrophic NGS Panel	GENE	A A [9]	6 weeks	114
Cardiovascular, Comprehensive NGS Panel	GENE	A A [9]	6 weeks	114
Cardiovascular Risk Profile 1	PP10	B B	3 days	31, 38
Cardiovascular Risk Profile 2	PP11	B B B C [17,34]	3 days	31, 38
Carotenes	CARO	B	5 days	147
Cashew Components	ZZ35	B	2 days	138
Cat Components	ZZ5	B	2 days	138

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Cat Scratch Fever (Bartonella IgG)	CAT	B	5 days	98
Catecholamines (Plasma)	CATE	A A (Plasma frozen, freeze within 2 hrs of collection)[4]	5 days	55
Catecholamines (Urine)	UCAT	PU (collect on acid)[1]	5 days	55
CCP Antibodies (RF)	CCP	B	2 days	80
CD3/CD4/CD8	LYSS	A	1 day	43, 98
CD16	CD16	A[4]	1 day	43
CD19 B Cells	CD19	A[4]	1 day	43
CD25	CD25	A[10]	2 days	43
CD56	CD56	A[4]	1 day	43
CD57	CD57	A	1 day	43
Celery Components	ZZ6	B	2 days	138
Cervical Cytology	PAPT	TPV	6 days (combined report)	168
Cervical Cytology + HP20	PAPT + HP20	TPV	6 days (combined report)	168
Cervical Cytology + HPVH	PAPT + HPVH	TPV	6 days (combined report)	168
Cervical Cytology + HPVT	PAPT + HPVT	TPV	6 days (combined report)	168
CH50 (Classical pathway)	CH50	B (Frozen)	4 days	80
Chagas Disease Serology (S.American Trypanosomiasis) T. Cruzi	CHGA	B[9,14]	10 days	80
Chest Pain Profile	CPP	B	STAT	31, 38
Chikungunya Virus Abs	CHIK	B[9,14]	10 days	98
Chlamydia – PCR swab	SPCR	PCR	2 days	70
Chlamydia – Thin Prep	TPCR	TPV	2 days	70, 166
Chlamydia – Urine	CPCR	FCRU	2 days	70
Chlamydia Species Specific (MIF) Ab Screen	CHAB	B	5 days	80, 85
Chlamydia/Gonorrhoea – PCR Swab	SCG	PCR	2 days	70
Chlamydia/Gonorrhoea – Rectal (PCR)	RSCG	PCR	2 days	70
Chlamydia/Gonorrhoea – Thin Prep	TCG	TPV	2 days	70, 166
Chlamydia/Gonorrhoea – Throat (PCR)	TSCG	PCR	2 days	70
Chlamydia/Gonorrhoea – Urine (FCRU)	CCG	FCRU	2 days	70
Chlamydia/Gonorrhoea/Trichomonas – PCR Swab	SCGT	PCR	2 days	70
Chlamydia/Gonorrhoea/Trichomonas – Thin Prep	TCGT	TPV	2 days	70, 166
Chlamydia/Gonorrhoea/Trichomonas – Urine	CCGT	FCRU	2 days	70
Chloride	CL	B	1 day	31
Cholesterol	CHO	B	1 day	31
Cholesterol (Familial Hypercholesterolaemia)	GENE	A A[9]	7 weeks	31
Cholinesterase (Serum/Pseudo)	CHPS	B	1 day	31, 162
Chromium (Blood)	CHRO	A / H	5 days	31, 161
Chromium (Urine)	URCR	RU[30]	4 weeks	31, 161

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Chromogranin A	CGA	B	1 week	31
Chromogranin A & B	MTAB	A (Frozen plasma)	3 weeks	31
Chromosome Analysis (Blood)	KARY	H [9]	3-4 weeks	115
Chronic Fatigue Syndrome Profile	VIP1	A + B [10]	5 days	80, 85
Citrate (Blood)	CITR	B	5 days	31
Citrate (Urine)	UCIT	CU (Frozen)	5 days	31
CK (MB Fraction)	CKMB	B	1 day	31
CK Isoenzymes	CKIE	B	5 days	31
Clobazam	CLOB	A	5 days	134
Clomipramine (Anafranil)	CHLO	A	7 days	134
Clonazepam	CLON	A	7 days	134
Clostridium Difficile Toxin by PCR	CLOS	RF*	2 days	45
CMV IgM Antibodies	CMVM	A (Plasma) or B (Serum)	1 day	98
Coagulation Profile 1	CLPF	C [18]	1 day	40, 43
Coagulation Profile 2	CLOT	A C [18]	1 day	40, 43
Cobalt (Blood)	COB	A	5 days	31
Cobalt (Urine)	COBA	RU [30]	5 days	31, 161
Cocaine (Urine) Screen	UCOC	RU	1 day	159
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days	80, 115
Coeliac/Gluten Genetic Profile 2 CHANGE	GSA2	A B B	10 days	80, 85
Coeliac/Gluten Sensitivity Profile CHANGE	GSA	B B	3 days	80, 85
Coenzyme Q10	CQ10	B	2 weeks	31
Cold Agglutinin	CAGG	J [1]	5 days	31
Colloid Antigen-2 Antibodies	CA2A	B	2 weeks	80
Complement C1q	C1Q	B	5 days	32
Complement C2	C2	A (Plasma fozen within <48 hrs)	3 weeks	32
Complement C3	C3	B	1 day	32
Complement C4	C4	B	1 day	32
Complement C5	C5A	B	2 weeks	32
Complement Factor H	FACH	B	3 weeks	32
Complex PSA (Prostate Specific Ag)	CPSA	B	3 days	102
Congenital Adrenal Hyperplasia NGS Panel	GENE	A [9]	6 weeks	116
Congenital Myopathy NGS Panel	GENE	A A [9]	6 weeks	116
Connective Tissue Disorders NGS Panel	GENE	A A [9]	6 weeks	116
Coombs (Direct Antiglobulin Test)	COOM	A	2 days	42
Copper (Serum)	COPP	B or K	5 days	32, 148, 161
Copper (Urine)	URCU	CU	5 days	32, 161
Cornelia de Lange Syndrome NGS Panel	GENE	A A [9]	6 weeks	116
Cortisol	CORT	B	1 day	55
Cortisol (Urine)	UCOR	CU	5 days	55
Cortisol Binding Globulin	CBG	B (Frozen)	1 month	32

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Cotinine (Serum)	COT	B	4 days	80
Cotinine (Urine)	COTT	**RU**	2 days	32
COVID-19 (SARS-CoV-2) (PCR)	NCOV	**PCR Swab** (nasal/pharyngeal)	1 day	98
COVID-19 (SPIKE) Antibodies	SCOV	**SST/Serum** B (Venous)	1 day	80
Cow's Milk Components	ZZ7	B	2 days	138
Craniosynostosis NGS Panel	GENE	A A [9]	6 weeks	116
Creatine Kinase (CK, CPK)	CKNA	B	1 day	32
Creatinine (including eGFR)	CREA	B	1 day	32
Creatinine (Urine)	UCR	**CU**	1 day	32
Creatinine Clearance	CRCL	B **CU**	1 day	32
Crosslaps (Serum DPD)	SDPD	B (Freeze within 8 hours)	4 days	32
Cryoglobulins	CRYO	**J** [6]	10 days	32
Cryptococcal Antigen	CRYC	**Serum** or **CSF**	1 day	45
Cryptosporidium	OCP	**RF**	2 days	45
Cryptosporidium Detection by PCR	CRPA	**RF**	2 days	88
CSF for Microscopy and Culture	CSF	1.5ml **CSF**	1-3 days	45
CSF Screen by PCR	VPCR	**CSF**	2 days	98, 100
CT/GC/Trichomonas/Mgen – PCR Swab	SGTM	**PCR Swab**	2 days	70, 73
CT/GC/Trichomonas/Mgen – Urine	CGTM	**FCRU**	2 days	70, 73
Cyclosporin	CYCL	A	1 day	32
Cyfra 21-1	CY21	B	4 days	102
Cystatin C	CYCC	B	5 days	32
Cystine – Quantitative (Beta-CTX)	QCYS	**PU**	5 days	32
Cytomegalovirus (CMV-DNA) Amnio	CMVD	**AF**	5 days	98
Cytomegalovirus (IgG/IgM) Antibodies	CMV	B	1 day	98
Cytomegalovirus (PCR) Semen	SCVM	**Semen**	7 days	98
Cytomegalovirus (PCR) Urine	CMVU	**RU**	5 days	98
Cytomegalovirus Avidity	CMAV	B	10 days	98
Cytomegalovirus DNA (PCR)	CMVP	A	5 days	98
Cytomegalovirus Resistance	CMVR	A (6mls)	21 days	98
D-Dimers (Fibrinogen Degradation Products)	DDIT	C [4]	1 day	40
Decidualization Score (DS)	DSRF	**J** (Contact lab)*	2-3 weeks	59
Dengue Fever PCR	DPCR	A or B [9,14]	2 weeks	98
Dengue Virus Serology	DENG	B [9,14]	5 days	88
Deoxypyridinoline (DPD) – Serum	SDPD	B (Freeze within 24 hours)	4 days	32
Deoxypyridinoline (DPD) – Urine	DPD	**EMU**	4 days	32
DHEA	DHEX	B	7-10 days	55
DHEA – Urine (Dehydroepiandrosterone)	UDHE	**CU**	3 weeks	55
DHEA Sulphate	DHEA	B	1 day	55
Diabetic Profile 1	DIAB	A G	1 day	32, 38
Diabetic Profile 2	DIA2	A G **RU**	2 days	32, 38
Diamine Oxidase Activity	DIAM	B	2 weeks	32

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Diazepam (Valium)	DIAZ	A	7 days	134
Digoxin	DIGO	B	1 day	134
Dihydrotestosterone	DHT	B B	7 days	55
Dilated Cardiomyopathy NGS Panel	GENE	A A [9]	6 weeks	116
Diphtheria Antibodies	DIPH	B	5 days	80
DL1-DL12 Screening Profiles				26-27
DNA (Double Stranded) Antibodies IgG	DNAA	B	2 days	80
DNA (Single Stranded) Antibodies	DNAS	B	5 days	80
Dog Components	ZZ8	B	2 days	138
Down Syndrome Risk Bloods only (Risk to be calculated by clinician)	HCGF/ PAPA	B	1 day	55
Down Syndrome Risk Profile (2nd trimester) Quad	DRP	B DRP form [7,8]	5 days	55
Down Syndrome Risk Profile with risk calculation first trimester	DRP	B DRP form + image of scan [7,8]	5 days	55
Doxepin Level (Sinequan)	DOXE	A or B	10 days	162
Drugs of Abuse from Blood Without Chain of Custody	DOAP	B	5 days	159
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody	DOA	RU	2 days (5 days with LC-MS/MS confirmation)	159-160
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody Plus Alcohol	DOA3	RU	2 days (5 days with LC-MS/MS confirmation)	159-160
Drugs of Abuse Profile – With Chain of Custody*	DOAL	RU/CoC Collection Containers [1,2]	2 days (5 days with LC-MS/MS confirmation)	159-160
Drugs of Abuse Profile – Without Chain of Custody	DOAN	RU [2]	2 days (5 days with LC-MS/MS confirmation)	159-160
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days	40, 44, 88-89, 116
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days	80, 88
Egg Components	ZZ9	B	2 days	138
Ehlers-Danlos Syndrome NGS Panel	GENE	A [9,11]	6 weeks	116
Ehrlichiosis Antibodies	EHRL	B [9,14]	10 days	80
Elastase (RF)	ELAS	RF	5 days	32
Electrolytes	ELEC	B	1 day	32
Electrolytes (Urine)	UELE	CU	1 day	32
ELF/Enhanced Liver Fibrosis	ELF	B	5 days	32
Endometrial Cancer NGS Panel	GENE	A A [9,11]	4 weeks	116
Endomysial Antibodies (IgA)	AEAB	B	2 days	80
Endotest®	ENDT	Endotest saliva collection kit	25 days	55
Enteric Organism Rapid Detection (RF)	EORD	RF	2 days	54, 88-89

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Eosin-5 Maleimide Dye binding test for Hereditary spherocytosis (EMA)*	EMA	A	2 days	42
Eosinophil Cationic Protein	ECP	B	7 days	32
Epanutin (Phenytoin)	PHEN	B	1 day	134
Epidermolysis Bullosa NGS Panel	GENE	A A [9]	6 weeks	116
Epilepsy, Adolescent/Adult Onset Panel	GENE	A	6 weeks	117
Epilepsy, Comprehensive NGS Panel	GENE	A A [9]	6 weeks	117
Epstein-Barr Virus Antibodies IgG/IgM	EBVA	B	2 days	98
Epstein-Barr Virus PCR	EBVQ	A	5 days	98
Erectile Dysfunction Profile	IMPO	A B B G	3 days	56, 60
Erythropoietin	ERY	B	4 days	32, 134
ESR	ESR	A	1 day	40
Essential Fatty Acid Profile (Red Cell)	EFAR	A [4]	10 days	148
Ethosuximide	ETHO	A	7 days	134
Examen Exact® CHANGE	CMET	**Semen** [1]	1-2 weeks	66
Examen Extend® CHANGE	CMT3	**Semen** [1]	1-2 weeks	66
Examen Extensiv® CHANGE	CMT5	**Semen** [1]	1-2 weeks	66
Extractable Nuclear Antibodies (nRNP, Sm, Ro, La, Jo1, Scl70, CENP-B)	ENA	B	2 days	80
Fabry Disease, X-linked – GLA gene sequencing	GENE	A [9]	4 weeks	117
Facioscapulohumeral Muscular Dystropy (FSHD) – D4Z4 repeat deletion	GENE	A A [9]	9 weeks	117
Factor II Assay	FAC2	C (Frozen) [9,18]	5 days	41
Factor V Assay	FAC5	C (Frozen) [9,18]	5 days	41
Factor VII Assay	FAC7	C (Frozen) [9,18]	5 days	41
Factor VIII Assay	FAC8	C (Frozen) [9,18]	5 days	41
Factor VIII Inhibiting Antibody	F8IA	C C [18]	2 weeks	41
Factor IX Assay	F1X	C (Frozen) [9,18]	5 days	41
Factor IX Inhibiting Antibody	F9IA	C C [18]	2 weeks	41
Factor X Assay	FX	C (Frozen) [9,18]	5 days	41
Factor XI Assay	FX1	C (Frozen) [9,18]	5 days	41
Factor XII Assay	FX11	C (Frozen) [9,18]	5 days	41
Factor XIII Assay	FA13	C (Frozen) [9,18]	5 days	41
Faecal Fat (1 day collection)	TFFA	**LF** [6]	5 days	32
Faecal Fat (3 day)	FFAT	**LF** [6]	5 days	33
Faecal Lactoferrin	FLAC	**RF**	5 days	33
Faecal Sugar Chromatography	FCRO	**RF** (Frozen)	3 weeks	33
Familial Hypercholesterolaemia NGS panel	GENE	A A [9]	6 weeks	117
Familial Hypocalciuric Hypercalcaemia (FHH) Panel	GENE	A A [9]	6-7 weeks	117
Familial Mediterranean fever MEFV gene sequencing	GENE	A [9]	5 weeks	117
Farmers Lung Precipitins	FARM	B	5 days	80

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Fasciola Hepatica Antibodies (Liver Fluke)	FASC	B	2 weeks	80
FAST Chlamydia – PCR Swab CHANGE	FSCT	**PCR Swab**	6 hours	75
FAST Chlamydia – Urine CHANGE	FCT	**FCRU**	6 hours	75
FAST CT/GC – PCR Swab CHANGE	FSCG	**PCR Swab**	6 hours	75
FAST CT/GC – Rectal PCR Swab CHANGE	FRCG	**PCR Swab**	6 hours	75
FAST CT/GC – Throat PCR Swab CHANGE	FTCG	**PCR Swab**	6 hours	75
FAST CT/GC – Urine CHANGE	FCG	**FCRU**	6 hours	75
FAST Gonorrhoea – PCR Swab CHANGE	FSGN	**PCR Swab**	6 hours	75
FAST Gonorrhoea – Urine CHANGE	FGN	**FCRU**	6 hours	75
FAST Screen SHORT with Swab CHANGE	FSSS	B **PCR Swab**	6 hours	75
FAST Screen SHORT with Urine CHANGE	FSSC	B **FCRU**	6 hours	75
FAST Screen with Swab CHANGE	FSWS	B **PCR Swab**	6 hours	75
FAST Screen with Urine CHANGE	FUSC	B **FCRU**	6 hours	75
Fasting Insulin Resistance Index (FIRI)	FIRI	B G [7]	1 day	56
Female Hormone Profile	FIP	B	1 day	56, 60
Ferritin	FERR	B	1 day	33
Fibrinogen	FIB	C [4,18]	1 day	40
Fibrotest (Liver Fibrosis)	FIBT	B	2 weeks	33
Filaria (Lymphatic and Non-Lymphatic) Antibodies	FIFA	B [9,14]	10 days	88
First Trimester Maternal Screen (PAPP-A/Free Beta-hCG)(Risk to be calculated by requesting clinician)	FTMS	B	1 day	56, 61
Fish Components	ZZ10	B	2 days	138
FK506 (Tacrolimus/Prograf)	FK5	A [4]	1-2 days	134
Flecainide (Tambocor)	FLEC	A	5 days	134
Fluid Culture	FLUD	**SC**	2-7 days	45
Fluid Cytology	CATF	**Fluid** [4]	3 days	170
Fluoride (Urine)	UFL	**RU**	5 days	33
Fluoxetine (Prozac)	PROZ	A [4]	5 days	134
Folate (Red Cell)	RBCF	A	2 days	33, 148
Folate (Serum)	FOLA	B	1 day	33
Free Fatty Acids	FFA	B (Frozen) [1]	10 days	33
Free T3	FT3	B	1 day	56
Free T4	FT4	B	1 day	56
Friedreich Ataxia – frataxin gene repeat analysis	GENE	A [9]	5 weeks	117
Fructosamine	FRUC	B	1 day	33
FSH	FSH	B	1 day	56
Full Blood Count	FBC	A	1 day	40
Fungal investigations (non-superficial extended culture)	FUN	All specimens other than Skin, Hair and Nails	3-21 days	45
Fungal investigations (superficial/ dermatophyte PCR test)	DERM	Skin, Hair, Nails	3-7 days	45
FXIII A Subunit	F13S	C (Frozen) [9,18]	14 days	41

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TEST	CODE	SAMPLE REQS	TAT	PAGE
G6PD	G6PD	A	4 days	42
Gabapentin	GABA	B [4]	5 days	134
Galactomanan (Aspergillus Antigen)	SGAL	B	2 weeks	45
Galactose-1-Phosphate Uridyltransferase	GAL1	H [5,6]	2 weeks	33
Galactosidase – Alpha*	GALA	J*	6 weeks	33
Gall Stone Analysis	RSTA	STONE	10 days	33
Gamma GT	GGT	B	1 day	33
Ganglioside GM1, GD1B, GQ1B Abs	GANG	B	5 days	80
Gardnerella vaginalis – Thin Prep	GVPC	TPV	2 days	166
Gardnerella vaginalis by PCR	GVPC	FCRU / PCR / TPV	2 days	70
Gastric Parietal Autoantibodies	GASP	B	2 days	80
Gastrin	GAST	B (Frozen serum)	5 days	33
Gaucher Disease (Full gene sequencing)	GENE	A [9]	4 weeks	117
Genetics: TDL Genetics				105-132
Genetic Reproductive Profile (Male)	GRP	A H [9]	10-15 days	117
Gentamicin Assay	GENT	B [4]	1 day	133
Gilbert Syndrome – common UGT1A1 repeat variation	GENE	A [9]	2-3 weeks	117
Glandular Fever	PAUL	A or B	1 day	40
Gliadin Antibodies (IgG) (deamidated)	AGAB	B	2 days	80
Globulin (Calculated)	GLOB	B	1 day	33
Glomerular Basement Membrane Abs	AGBM	B	2 days	80
Glucagon	GLUG	A (Plasma)	10 days	33
Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency – full G6PD gene sequencing	GENE	A [9]	3-4 weeks	117
Glucose	RBG	G	1 day	33
Glucose Challenge Test/Mini-GTT	RBGM	G	1 day	133
Glucose Tolerance Test (Extended)	GTTE	5 x G, 5 x RU	1 day	133
Glucose Tolerance Test (Extended Plus)	GTTX	7 x G, 7 x RU	1 day	133
Glucose Tolerance Test (Short)	GTTS	2 x G, 2 x RU	1 day	133
Glucose Tolerance Test/OGTT	GTT	3 x G, 3 x RU	1 day	133
Glucose Tolerance with Growth Hormone	GTT + GHDF	3 x B [35], 3 x G, 3 x RU	1 day	133
Glucose Tolerance with Insulin	GTTI	3 x B, 3 x G, 3 x RU	1 day	133
Glutamic Acid Decarboxylase Antibodies (GAD 65)	GAD	B	5 days	80
Gluten Sensitivity Evaluation CHANGE	GSA	B B	3 days	80
Gluten Sensitivity Profile	GLUT	A B B	10 days	81, 85, 137, 142
Gluten/Coeliac Genetic Profile 2 CHANGE	GSA2	A B B	10 days	80
Glycan Determinants	ZZ27	B	2 days	138

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Glycogen storage disease type 2 (Pompe) variant analysis	POMP	A	4 weeks	118
Gonorrhoea – PCR swab	SGON	PCR	2 days	70
Gonorrhoea – Thin Prep	TGON	TPV	2 days	70, 166
Gonorrhoea – Urine	CGON	FCRU	2 days	70
Gonorrhoea Culture – Cervix	GONC	CS‡‡‡	3-5 days	45, 70
Gonorrhoea Culture – Other site	GONO	CS	3-5 days	45, 70
Gonorrhoea Culture – Rectal	GONR	CS	3-5 days	45, 70
Gonorrhoea Culture – Throat	GONT	CS	3-5 days	45, 70
Gonorrhoea Culture – Urethral	GONU	CS	3-5 days	45, 70
Granulocyte Immunology	GRIM	A A (or 2 x 6ml) B	2 weeks	81
Group B Strep – Vaginal and Rectal (STM)	GBSX	2 x STM	3-5 days	45
Growth Hormone (Fasting)	GH	B [7,35]	1 day	56
Gut Hormone Profile	GUTP	A A (Frozen within 15 minutes) [41]	3 weeks	56
H. pylori Antibodies (IgG)	HBPA	B	2 days	81
H. pylori Antigen – Stool (RF)	HBAG	RF	3 days	45
H. pylori Culture	HPCU	J	1 month	46
Haematology Profile	PP3	A	1 day	40, 44
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days	33, 118
Haemoglobin	HB	A	1 day	40
Haemoglobin Electrophoresis	HBEL	A	4 days	42
Haemophilia A (Factor VIII deficiency) – CVS	8CVS	CVS [40]	3 days	118
Haemophilia B (Factor IX deficiency) – CVS	9CVS	CVS [40]	3 days	118
Haemophilus B Influenzae Antibodies	HINF	B	5 days	81
Haemophilus ducreyi by PCR	DUCR	PCR	7 days	70
Haemosiderin (Urine)	HSID	EMU	2 weeks	33
Hantavirus Serology	HANV	B [9]	10 days	98
Haptoglobin	HAPT	B	5 days	33
Hazelnut Components	ZZ11	B	2 days	138
HbA1c	GHB	A	1 day	33
HCG (Oncology)	HCGQ	B	1 day	102
HCG (Quantitative)	QHCG	B	1 day	56
HDL Cholesterol	HDL	B	1 day	33
HE4 + ROMA (Earlier Detection of Ovarian Tumour)	HE4	B	1 day	102, 104
Hearing Loss NGS Panel	GENE	A A [9]	6 weeks	118
Hepatitis (Acute) Screen	AHSC	B	1 day	91, 100
Hepatitis A (IgM)	HAVM	B	1 day	91
Hepatitis A Immunity (IgG/IgM)	HAIM	B	1 day	91
Hepatitis A Profile	HEPA	B	1 day	70, 91
Hepatitis A RNA by PCR	HAVR	A or B	3 weeks	91
Hepatitis A, B & C Profile	ABC	B B	1 day	91, 100

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Hepatitis B 'e' Antigen and Antibody	HEPE	B	1 day	91
Hepatitis B (PCR) Genotype	BGEN	A or B	7 days	91
Hepatitis B Core Antibody – IgM	HBCM	B	1 day	91
Hepatitis B Core Antibody – Total	HBC	B	1 day	91
Hepatitis B DNA (Viral load)	DNAB	A or B	5 days	91
Hepatitis B Immunity (IgG)	HBIM	B	1 day	91
Hepatitis B Profile	HEPB	B	1 day	91, 100
Hepatitis B Resistant Mutation	HBRM	A or B	7 days	91
Hepatitis B Surface Antigen	AUAG	B	1 day	70, 91
Hepatitis C Abs Confirmation (RIBA)	RIBA	B	5 days	92
Hepatitis C Antibodies	HEPC	B	1 day	70, 92
Hepatitis C Antigen (Early detection)	HCAG	B	1 day	70, 92
Hepatitis C Genotype	CGEN	A or B	5 days	92
Hepatitis C Quantification (Viral Load)	QPCR	A or B	5 days	92
Hepatitis Delta Antibody	HEPD	B	5 days	92
Hepatitis Delta Antigen	HDAG	B	5 days	92
Hepatitis Delta RNA	DRNA	A	5 days	92
Hepatitis E IgG/IgM	HBE	B	5 days	92
Hepatitis E RNA (PCR)	EHEP	A	2 weeks	92
Hepatitis G (PCR)	HEPG	A (Frozen plasma)	2 weeks	92
Hereditary Colorectal Cancer NGS Panel	GENE	A A [9,11]	4 weeks	118
Hereditary Comprehensive Cancer NGS Panel	GENE	A A [9,11]	5 weeks	118
Hereditary Neuropathy with Liability to Pressure Palsy – PMP22 deletion analysis	GENE	A [9]	6 weeks	118
Herpes Simplex (HSV) 1 & 2 (PCR) (Oral or Genital)	HERS	PCR	5 days	70, 98
Herpes Simplex I/II – Thin Prep	HERD	TPV	5 days	166
Herpes Simplex I/II Antibody Profile (IgG)	HERP	B	2 days	98
Herpes Simplex I/II by PCR (Urine)	HERD	FCRU	5 days	70, 98
Herpes Simplex I/II IgM	HERM	B	2 days	98
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days	42, 118
Hirsutism Profile	HIRP	B	1 day	56, 61
Histamine (Blood)	HITT	A (Frozen plasma)	5 days	81
Histamine (Urine)	HITU	RU	5 days	81
Histamine Releasing Urticaria Test	CURT	B	3 weeks	81, 137
Histone Antibodies	HISA	B	5 days	81
Histopathology				171-177
Histoplasma Antigen	HANT	RU	3 days	46
Histoplasmosis	HISP	B	10 days	81
HIV 1 & 2/p24Ag	HDUO	B	1 day	70
HIV Confirmation of Positive Screens (3 methodologies)	HIVC	B	1 day	97

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TEST	CODE	SAMPLE REQS	TAT	PAGE
HIV Proviral DNA	HIVP	A	7 days	97
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	1 day	71, 74, 97, 100
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	1 day	71, 74, 97, 101
HIV Screening: HIV1 & 2 Abs/p24 Ag (4th Gen)	HDUO	B	1 day	97
HIV Therapeutic Drug Monitoring	TDM	**J** [1]	21 days	97
HIV-1 Genotypic Resistance (Integrase)	INTE	A A (2 x 6ml)	21 days	97
HIV-1 Genotypic Resistance (RT & Protease)	HIVD	A A (2 x 6ml)	21 days	97
HIV-1 RNA Viral Load by PCR	HIV1	A A (2 x 6ml)	3 days	97
HIV-1 Tropism	TRPM	A A (2 x 6ml)	28 days	97
HIV-2 RNA by PCR	HIV2	A	10 days	97
HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis	STXX	B A 2 x 6mls or 2 x 4mls	3 days	70, 74
HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)	STDX	A 2 x 6mls or 2 x 4mls (Vacutainer only)	3 days	71, 74, 97-98, 100
HLA A, B, C	14RF	A A*	2 weeks	59
HLA B*57:01	HL57	A [9]	10 days	97
HLA B27	HLAB	A [9]	3 days	81
HLA DQ Alpha Antigens	10RF	A A*	2 weeks	59
HLA DQ Beta Antigens	11RF	A A*	2 weeks	59
HLA DR Antigens	9RF	A A*	2 weeks	59
HLA-C	26RF	A A*	3 weeks	59
Homocysteine (Quantitative)	HOMO	B or A (Plasma) [17]	1 day	33
Homocysteine (Urine)	HCYS	**CU**	2 weeks	33
Homovanillic Acid (HVA)	HVA	**PU**	5 days	33
Horse Components	ZZ38	B	2 days	138
House Dust Mite Components	ZZ12	B	2 days	138
HPV (19 high-risk DNA subtypes, reported as types 16, 18 or Others) (Self-collect)	HPVY	Qvintip vaginal swab	3 days	169
HPV (28 individually typed low-risk (LR) & high-risk (HR) DNA subtypes and reflexed mRNA for types 16, 18, 31, 33 and 45)	HPVT	**TPV**	5 days	71, 168
HPV (28 individually typed LR & HR DNA subtypes)	HP20	**TPV**	3 days	71, 168
HPV (A group of 14 HR mRNA types)	HPVH	**TPV**	3 days	71, 168
HPV (Individually typed high-risk DNA subtypes) (Self-collect)	HPVZ	Qvintip vaginal swab	3 days	169
HRT Profile 1	HRT	B	1 day	56, 61
HRT Profile 2	HRT2	B G	1 day	56, 61
HTLV 1 & 2 Abs. (Human T Lymphotropic Virus Type I-II)	HTLV	B	1 day	97
HTLV by PCR	HTLP	A	21 days	97
Hughes Syndrome	LUPA	B C C [4,18]	2 days	41

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Human Herpes Virus – 6 by PCR	HHV6	A	5 days	98
Human Herpes Virus – 8 (IgG)	HHV8	B	10 days	98
Human Herpes Virus – 8 by PCR	HV8D	A	5 days	98
Human Parvovirus B19 – DNA	PCRP	A	2 weeks	98
Huntington Disease – HD gene repeat analysis PCR	GENE	A A [9,11]	5 weeks	119
HVS	HVS	STM/CS	2-4 days	46
Hyaluronic Acid	AHT	B	1 week	33
Hydroxybutyrate Dehydrogenase	HBD	B (Frozen)	1 week	33
Hydroxyprolene	UHYD	CU	2 weeks	33
Hyperinsulinism NGS Panel	GENE	A A [9]	6 weeks	119
Hyperparathyroidism – CASR sequencing	GENE	A [9]	6 weeks	119
IDH1/2 Screening Assay	GENE	A	48 hours	119
IgE (Total)	IGE	B	1 day	81
IGF-1 (Somatomedin)	SOMA	B (Frozen) [4,7]	1 day	56
IGF-BP3	IGF3	B (Frozen) [4]	5 days	56
IgG Subclasses	IGSC	B	5 days	33
Inherited bleeding and platelet disorders (R90)	R90U	A A	12 weeks	119
Imipramine	IMIP	A [4]	4 days	134
Immune Function Evaluation (Total)	TIE	A + B [5,10]	7 days	40
Immune-Complexes	IMCP	B	5 days	81
Immunofluorescence in Skin Biopsies	IHCS	Skin sample in Michels solution	2 weeks	81
Immunoglobulin A	IGA	B	1 day	34
Immunoglobulin D	IGD	B	5 days	34
Immunoglobulin E – Total	IGE	B	1 day	34
Immunoglobulin G	IGG	B	1 day	34
Immunoglobulin M	IGM	B	1 day	34
Immunoglobulins (IgG, IgM, IgA)	IMM	B	1 day	34, 81
Impotence Profile	IMPO	A B B G	3 days	56, 61
Individual Semen Parameters***	SPOD	Semen [1]	1 day	66
Inhibin A	INIA	B	1 month	56
Inhibin B	INIB	B (Day 3 of cycle, frozen)	5 days	56
INR	PTIM	C [18]	1 day	40
Insect/Worm/Ova/Cysts	FLEA	Send Specimen [9,14]	5 days	88
Insulin	INSU	B [4,7]	1 day	56
Insulin Antibodies	INAB	B	5 days	81
Intellectual Disability NGS Panel	GENE	A A [9]	6 weeks	119
Interleukin 1 Beta	ILB	B (Frozen) [4,7]	1-2 weeks	81
Interleukin 2	IL2	B (Frozen) [4,7]	1-2 weeks	81
Interleukin 4	IL4A	B (Frozen) [4,7]	1-2 weeks	81
Interleukin 6	IL6	B (Frozen) [4,7]	1-2 weeks	81
Interleukin 8	IL8	B (Frozen) [4,7]	1-2 weeks	81
Interleukin 10	IL10	B (Frozen) [4,7]	1-2 weeks	81

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Interleukin 28b Genotype	IL28	A	2 weeks	81
Intrinsic Factor Antibodies	IFAB	B	3 days	81
Iodide – Urine	UIOD	**RU**	1 week	34
Iodine – Serum	IODI	B	1 week	34
Ionised Calcium	ICPA	B	5 days	34
Iron (TIBC included)	FE	B	1 day	34
Iron Overload Profile	IOP	A B [9]	3 days	34, 39, 119
Iron Status Profile	ISP	B	1 day	34, 39
Islet Cell Antibodies	ICAB	B	5 days	81
IUCD for Culture	IUCD	Send Device	11-12 days	46
JC Polyoma Virus by PCR	JCPV	A / **CSF**	5 days	98
Joubert/Meckel-Gruber Syndrome NGS Panel	GENE	A [9]	6 weeks	119
Kallmann Syndrome NGS Panel	GENE	A A [9]	6 weeks	119
Kennedy Disease (Spinal Bulbar Muscular Atrophy) – AR repeat expansion	GENE	A [9]	5 weeks	119
Ketamine Screen	KETA	**RU**	7-10 days	159
Kidney/Urinary Tract Comprehensive Cancer NGS Panel	GENE	A A [9,11]	4 weeks	119
KIR (Killer-like Immunoglobulin-like Receptors) Genotyping	17RF	A A A *	2-3 weeks	59
Kiwi Components	ZZ32	B	2 days	138
Lactate (Plasma)	LACT	G [16]	1 day	34
Lactate Dehydrogenase (LDH)	LDH	B	1 day	34
Lactate Pyruvate Ratio	LPR	**J** [1]	4-6 weeks	34
Lactose Tolerance Test	LTT	7 x G	1 day	34, 133
Lamotrigine	LAMO	B [4]	5 days	134
Latex Components	ZZ13	B	2 days	138
LDL7 Subfractions	LDL7	B	10 days	34
Lead (Blood)	LEAD	A	5 days	34, 161
Lead (Urine)	URPB	**RU**	5 days	34, 161
Leber's Hereditary Optic Neuropathy – m.3460G>A + m.11778G>A + m.14484T>C common variants	GENE	A [9]	6 weeks	119
Legionella Antibodies	LEGO	B	5 days	81
Legionella Urine Antigen	LEGA	Urine with boric acid	1 day	46, 81
Leishmania Antibodies	LEIS	B	5 days	88
Leptin	LEPT	B (height & weight required) [19]	5 days	34
Leptospirosis (Weil's Disease) Abs (IgM)	LEP	B	5 days	81
Leucocyte Antibody Detection Panel FEMALE	8RF	B *	1 week	59
Leucocyte Antibody Detection Panel MALE	7RF	H H H *[6,34]	1 week	59
Leukaemia Immunophenotyping	LYPT	A [4,5]	5 days	43
Leukotriene E4	LTE4	**CU** (Frozen)	3 weeks	81

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Leukaemia (Rapid Acute) DNA and RNA NGS Panel	ALRP	A (3mL minimum) or bone marrow aspirate sample	3 days	120
Leukaemia Fusion Gene Screening Assay (Q30)	LMPX	A	24 hours	120
Leukaemia/Lymphoma RNA Sequencing (Fusion Gene and SNV/Indel) Panel	PHFP	A	2 weeks	120
Levetiracetam (Keppra)	LEVE	B [4]	3 days	134
Li-Fraumeni Syndrome (p53-related cancer predisposition) – TP53 sequencing + MLPA	GENE	A [9,11]	6 weeks	120
Limb-Girdle Muscular Dystrophy (LGMD) NGS Panel	GENE	A A [9]	6 weeks	120
Lipase	LIPA	B	1 day	34
Lipid Profile	LIPP	B	1 day	34, 39
Lipid Transfer Proteins	ZZ23	B	2 days	138
Lipocalins	ZZ28	B	2 days	138
Lipoprotein (a)	LPOA	B	1 day	34
Lipoprotein Electrophoresis	LEL	B	5 days	34
Lissencephaly NGS Panel	GENE	A A [9]	6 weeks	120
Lithium (take 12 hours after dose)	LITH	B	1 day	34, 134
Liver Fibrosis (Enhanced Liver Fibrosis ELF)	ELF	B	5 days	34
Liver Fibrosis Fibrotest	FIBT	B	2 weeks	34
Liver Function Tests	LFT	B	1 day	34, 39
Liver Immunoblot	LIVI	B	3 days	81
Liver Kidney Microsomal Antibodies	LKM	B	2 days	81
Long QT Syndrome/Brugada Syndrome NGS Panel	GENE	A A [9]	4-6 weeks	120
Lorazepam	LORA	A [4]	10 days	134
Lp-PLA2 (PLAC) Test	PLA2	B	2 days	34
LSD	LSD	**RU**	5 days	159
Lung Disorders NGS Panel	GENE	A A [9]	6 weeks	120
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C C [4,18]	2 days	41, 81
Lupus Anticoagulant only	LUPC	C C [9,18]	2 days	42
Luteinising Hormone (LH)	LH	B	1 day	56
Lyme Disease (Borrelia Abs) IgG, IgM	BORR	B [9,14]	2 days	81
Lyme Disease (Borrelia Abs) IgM	BORM	B	2 days	81
Lyme disease (Borrelia Confirmation)	BORC	B [9,14]	10 days	81
Lymphocyte Subsets (CD3/CD4/CD8)	LYSS	A	1 day	40, 97
Lymphogranuloma Venerium (LGV) (PCR)	LGVP	**PCR*** [42]	1-2 weeks	71
Lysosomal Enzyme Screen	LE	**J** [1]	2 months	34
Lysosomal Storage Disorders NGS Panel – full gene sequencing	LSDS	A A [9]	4-6 weeks	120
Lysozyme	LYSO	B	5 days	34
Macrolide Resistance Test (Mgen)	MGR	**FCRU / PCR**	1-2 weeks	71
Macroprolactin	PRLD	B	4 days	56
Magnesium (Serum)	MG	B	1 day	34, 161

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Magnesium (Urine)	URMG	**PU**	1 day	35, 161
Magnesium (Whole blood)	RCMG	A or H	4 days	148
Malarial Antibodies (Pl. falciparum)	MALA	B [9,14]	5 days	88
Malarial Antibodies (species specific)	MALS	B [9,14]	10 days	88
Malarial Parasites	MALP	A [4,9,14]	STAT	40
Malarial Parasites (visa, non-urgent)	MP48	A	2 days	40
Male Genetic Reproductive Profile	GRP	A H [9]	10-15 days	120
Male Hormone Profile	MIPR	B	1 day	56, 61
Manganese (Serum)	MANG	B	5 days	35, 161
Marfan Syndrome – FBN1 sequencing + deletions/duplications	GENE	A [9]	6 weeks	120
Marfan Syndrome and Thoracic Aortic Aneurysm and Dissection NGS Panel	GENE	A A [9]	6 weeks	120
Maturity-Onset Diabetes of the Young (MODY) Diabetes NGS Panel	GENE	A [9]	12 weeks	120
MBOCA in Urine	MBOC	**RU**	10 days	162
Mean Cell Volume (MCV)	MCV	A	1 day	40
Measles Antibodies (IgG) Immunity	MEAS	B	1 day	91, 99
Measles Antibodies (IgM)	MEAM	B [9]	2 days	91, 99
Measles PCR	MEAP	**Buccal swab**	48 hours	99
Measles, Mumps, Rubella (MMR)	MMR	B	1 day	91
Melanoma Comprehensive Cancer NGS Panel	GENE	A A [9,11]	4 weeks	120
Melatonin (Serum)	MEL	B (Frozen)	5 days	56
Melatonin (Urine)	UMEL	**CU** [13]	2 weeks	56
Meningococcal Serology (only serogroup C)	MENI	B	6 weeks	82
Menopause Profile	MENO	B	1 day	56, 61
Mercury (Blood)	MERC	A or H	5 days	35, 161
Mercury (Urine)	URHG	**RU** [1]	5 days	35, 161
MERS Coronavirus Test	MERS	**J**	1 day	99
Metabolic Syndrome Profile	METS	A B B G [7]	9 days	56, 61
Metanephrines (Plasma)	PMET	A (Frozen plasma, must be frozen within 2 hours)	7 days	56
Metanephrines (Urine)	UMEX	**PU** (collect on acid) [1]	5 days	56
Methaqualone	METQ	**RU**	5 days	35
Methotrexate	METX	B	2 days	134
Methylmalonic Acid – Serum	MMAS	B	5 days	35
Methylmalonic Acid – Urine	MMA	**CU**	2 weeks	35
Metronidazole Level	METR	B [4]	10 days	133
Microfilaria Blood Film	MICF	A	STAT	40
Mineral Screen	MINE	B K	5 days	148-149
Mineral Screen (Whole blood)	RMIN	H H	5 days	148-149

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)	TRAC	A B H K	7-10 days	148-149
Miscarriage/Thrombophilia Screen	PROP	A A B C C C [18]	5 days	42, 44
Mitochondrial Antibodies	AMIT	B	3 days	82
Mitochondrial Antibodies M2	MTM2	B	2 days	82
Mitochondrial Genome Sequencing	GENE	A [9]	6 weeks	121
Molybdenum (Serum)	MOLY	B	5 days	162
Motor Neurone Disease (Amylotrophic Lateral Sclerosis) NGS Panel	GENE	A A [9]	5 weeks	121
MRSA (Rapid PCR) one swab per site	MRSA	Blue liquid Amies swab	1 day	46
MRSA (Rapid PCR) one swab per site x 2	MRS2	Blue liquid Amies swab x 2	1 day	46
MRSA Culture one swab per site	MRSW	Blue liquid Amies swab	2 days	46
MRSA Culture one swab per site x 2	MRW2	Blue liquid Amies swab x 2	2 days	46
MTHFR – common C677T + A1298C variants	MTHF	A [9]	5 days	121
Mucopolysaccharides	MPS	**RU** (Frozen)	3 weeks	35
Mucopolysaccharidosis NGS Panel	GENE	A A [9]	6 weeks	121
Multiple Endocrine Neoplasia Type 1 – full MEN1 sequencing	GENE	A [9,11]	6-7 weeks	121
Multiple Endocrine Neoplasia Type 2 – RET gene hotspot sequencing	GENE	A [9,11]	6-7 weeks	121
Mumps Antibodies (IgG and IgM)	MUMM	B	1 day	91, 99
Mumps Antibodies (IgG)	MUMP	B	1 day	91, 99
Myasthenia Gravis Evaluation	MGE	B	5 days	82
Mycophenolic Acid (Cellcept)	MYCP	A	5 days	134
Mycoplasma genitalium – Thin Prep	MGEN	**TPV**	2 days	166
Mycoplasma genitalium by PCR	MGEN	**FCRU / PCR / TPV**	2 days	71
Mycoplasma genitalium/Ureaplasma – Thin Prep	MUPC	**TPV**	2 days	166
Mycoplasma genitalium/Ureaplasma by PCR	MUPC	**FCRU / PCR / TPV**	2 days	71
Mycoplasma pneumoniae IgM and IgG	MYCO	B	2 days	99
Mycoplasma species – DNA	MPCR	A	5 days	99
Myelin Associated Glycoprotein Antibodies	MAG	B	5 days	82
Myelin Basic Protein Antibodies	MBPA	B	2 weeks	82
Myeloid Gene Panel	MVPS	A (3mL minimum) or bone marrow aspirate sample	2 weeks	121
Myeloma Screen	MYEL	A A B G	5 days	35, 39
Myeloproliferative Neoplasm NGS Screening Panel	MPNS	A (3mL minimum) or bone marrow aspirate sample	1 week	121
Myeloperoxidase Antibodies	MPO	B	2 days	82
Myocardial Antibodies	MYO	B	1 week	82
Myoglobin (Serum)	SMYO	B	1 day	35
Myoglobin (Urine)	UMYO	**RU**	5-10 days	35
Myositis Panel	MYOS	B	3 days	82
Myotonic Dystrophy Type 1 – DMPK repeat PCR	GENE	A [9]	5 weeks	121

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Myotonic Dystrophy Type 2 (PROMM) – CNBP repeat PCR	GENE	A [9]	6 weeks	121
Mysoline (Primidone)	PRIM	B [4]	3 days	134
Narcolepsy (HLA DQB1*06:02)	GENE	A [9]	3 weeks	121
Natural Killer Profile 2	NKP2	A [10]	2 days	40, 44
Needle Stick Injury Profile	NSI	B B	1 day	99, 101
Nephrotic Syndrome, Steroid-Resistant NGS Panel	GENE	A A [9]	6 weeks	121
Nervous System/Brain Cancer NGS Panel	GENE	A A [9,11]	4 weeks	121
Neurofibromatosis Type 1 – NF1 + SPRED1 sequencing + deletions/ duplications Contact lab prior to sending.	GENE	A A [9,11]	8 weeks	121
Neurological Viral Screen	NVIR	B B	2 days	99, 101
Neuronal Antibody (Hu, Ri, Yo, Cv2, Ma2)	NEUR	B	10 days	82
Neurone Specific Enolase	NSE	B	5 days	102
Newborn Screening Panel	GUTH	**J** [1]	2 weeks	35
Nickel (Serum)	NICK	B	5 days	35, 161
Nickel (Urine)	NICU	**RU**	4 weeks	35, 161
NK (CD69) and NK Cytotoxicity	69C	H H H*	2 days	60
NK (CD69) Cell Assay	CD69	H*	2 days	60
NK Assay Follow-Up Panel	5RF	H H H*	1 week	59
NK Assay Panel + Intralipids	16RF	H H H*	1 week	59
NK Assay/Cytotoxicity Panel	4RF	H H H*	1 week	59
NK Cytotoxicity Assay	HSNK	H H H*	2 days	60
NK Cytotoxicity with suppression with steroid, IVIg and intralipin, and NK (CD69) cell assay	69CI	H H H*	2 days	60
NK Cytotoxicity with suppression, steroid, IVIg & Intralipin	NKCY	H H H*	2 days	60
NMDA Receptor Antibodies	NMDA	B	3 weeks	82
Non-Invasive Prenatal Testing (NIPT) – common aneuploidy screening from maternal blood	NIPT	**J / Special tube** [1]	2-4 days	122, 130-132
Noonan Syndrome and RASopathies NGS Panel	GENE	A A [9]	6 weeks	122
Nucleic Acid Antigen Antibodies	DNA	B	2 days	82
Oestradiol-17-Beta	OEST	B	1 day	57
Oestriol (Estriol)	E3	B B	4 days	57
Oestrone	E1	B B	4 days	57
Olanzapine	OLAN	A [4]	5 days	134
Oligoclonal Bands	CSFO	2ml **CSF** + B	5 days	82
Oligosaccharides	UOLI	**RU**	6 weeks	35
Olive Components	ZZ14	B	2 days	138
Omega 3/Omega 6	OMG3	A [4]	5 days	148, 150
Opiate Screen (Urine)	UOPI	**RU**	2 days	159

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Orosomucoid (A1AG – Alpha 1 Glycoprotein)	OROS	B (Frozen)	5 days	35
Osmolality (Serum)	OSMO	B	1 day	35
Osmolality (Urine)	ROSM	RU	1 day	35
Osteocalcin	OST	B (Frozen)[4]	4 days	57, 102
Osteogenesis Imperfecta NGS Panel	GENE	A A [9]	6 weeks	122
Osteoporosis Screen	OPS	B B	4 days	35, 39
Ovarian Autoantibodies	OVAB	B	5 days	82
Ovarian Cancer NGS Panel	GENE	A A [9,11]	4 weeks	122
Oxalate (Plasma)	POXA	A (Frozen)	7 days	35
Oxalate (Urine)	UOXA	PU	5 days	35
Oxidative Stress in Semen (ROS + MIOXSYS)	SROS	Semen [1]	1 day	66
P2Y12 Receptor Platelet Function Analysis (Functional Clopidogrel Resistance Test)	P2Y	C C C (Whole blood)**[1]	1 day	42
p53-related cancer predisposition (Li-Fraumeni Syndrome) – TP53 sequencing + MLPA	GENE	A [9,11]	6 weeks	122
PAI-1 4G/5G Polymorphism	PAIP	A *	10 days	40, 59
Pancreatic Cancer NGS Panel	GENE	A A [9,11]	4 weeks	122
Pancreatic Peptide	PP	J	4 weeks	35
Paracetamol	PARA	B	1 day	135
Paragomius Serology	PRGM	B	2 weeks	82
Parathyroid Antibodies	PTHA	B	3 weeks	82
Parathyroid Hormone (PTH) (Whole) CHANGE	PTHI	A [4]	1 day	57
Parathyroid Related Peptide	PTRP	2ml A Plasma frozen (Freeze immediately)[1]	2 weeks	35
Paroxymal Nocturnal Haemoglobinuria	PNH	A (Whole blood)	1-2 weeks	43
Parvalbumins	ZZ29	B	2 days	138
Parvovirus Antibodies (IgG)	PARG	B	2 days	99
Parvovirus Antibodies (IgM)	PARV	B	2 days	99
Parvovirus IgG/IgM Abs	PARP	B	2 days	99
Paul Bunnell (Monospot)	PAUL	A or B	1 day	40
Peach Components	ZZ15	B	2 days	138
Peanut Components	ZZ16	B	2 days	138
Pemphigus/Pemphigoid Autoantibodies	SKAB	B	1-2 weeks	82
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days	82, 91
Pertussis (Whooping Cough) by PCR	PERP	Pernasal or dry swab	2-3 days	82
PEth (Phosphatidylethanol)	PETH	A	5-7 days	35, 159
Phencyclidine (PCP)	DUST	RU	5 days	35
Phenobarbitone	PHB	B	1 day	135
Phenytoin (Epanutin)	PHEN	B	1 day	135
Phosphate	PHOS	B	1 day	35
Phosphate (24 hour Urine)	UPH	PU	1 day	35

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Phospho-TAU 217 NEW	P217	A A (4ml) plasma, spin separate and freeze, 2ml polypropylene tube, within 4 hours	4 weeks	82
Pituitary Antibodies	PITU	B [4]	1 month	82
Pituitary Function Profile	PITF	B B [7]	1 day	57, 62
PLAC Test (Lp-PLA2)	PLA2	B	2 days	35
Plasminogen	PLAS	C (Frozen plasma) [4]	5 days	35
Plasminogen Activator Inhibitor – 1	PAI1	C (Frozen plasma)	2 weeks	35
Platelet Aggregation Studies	PLAG	**J**** [9]	3 days	42
Platelet Function Test Screen – PFA-100/200	PFAT	**J**** [1]	1 day	42
Pleural Fluid for Culture	FLUP	**SC**	7 days	46
Pneumococcal Antibodies – Serotype Specific	PASS	B	5 weeks	82
Pneumococcal Antibody Screen	PNEU	B	1-2 weeks	82, 91
Pneumococcal Antigen	PNAG	**RU**	1 day	46
Pneumocystis jiroveci (PJP) PCR	MPCP	**SC BAL** ‡‡	2-3 days	46
Pneumonia (Atypical) Screen	APS	B	3 days	99
Polcalcins	ZZ25	B	2 days	139
Polycystic Ovary Syndrome Profile	PCOP	A B B B G [7]	5 days	57, 62
Polycystic Ovary Syndrome SHORT	PCOS	A B G [7]	1 day	57, 62
Porphyrin (Blood)	PORP	A [3]	15 days	36
Porphyrin (Stool)	FPOR	**RF** [3]	3 weeks	36
Porphyrin (Urine)	RPOR	**RU** [3]	3 weeks	36
Porphyrin Full Screen (Total: Urine, Stool, Blood)	PORS	A **RU, RF** [3]	3 weeks	36, 39
Post-Travel Screen 1 (Up to 6 weeks post travel)	PTS	A A B G [14]	10 days	88-89
Post-Travel Screen 2 (6 weeks after travel)	PTS2	A A B B B G [14]	10 days	88-89
Potassium	K	B	1 day	36
PR-10 Proteins	ZZ22	B	2 days	139
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days	40, 44, 88, 123
Prealbumin	PALB	B	3 days	36
Pregnancy (Serum) [Quantitative]	QHCG	B	1 day	36, 57
Pregnenolone	PREN	B	15 days	57
Primidone (Mysoline)	PRIM	B [4]	3 days	135
Procalcitonin	PCAL	B (Frozen) [4,7]	1 day	36
Procollagen 1 Peptide N-Terminal (NTX)	P1NP	B	5 days	36
Procollagen 3 Peptide	PRCO	B	5 days	36
Products of Conception (Culture) CHANGE	PROC	**Placental Sample** or **Solid Tissue** [1,9]	20-25 days	123
Profilins	ZZ24	B	2 days	139
Progesterone	PROG	B	1 day	57
Proinsulin	PROI	A (Frozen plasma) [4]	5 days	57
Prolactin	PROL	B	1 day	57

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Prolactin (Macro)	PRLD	B	4 days	57
Propanalol	PRO	B [4]	7 days	135
Propoxyphene	DPRO	**RU**	5 days	36
Prostate Profile (Total & Free PSA)	PR2	B	1 day	102, 104
Prostate Specific Antigen (Total) *	PSPA	B	1 day	102
Prostatic Acid Phosphatase	PACP	B (Frozen)	3 days	36
Prostate Cancer NGS Panel	GENE	A A [9,11]	4 weeks	123
Protein (Urine)	UPRT	**CU**	1 day	36
Protein 14.3.3 (Creutzfeldt–Jakob Disease)	CJD	**J**	5 weeks	36
Protein C Activity	PRC	C (Frozen) [4,9,18]	3 days	42
Protein Electrophoresis incl. immunoglobulin	PRTE	B	5 days	36
Protein S Activity	PS1	C (Frozen) [4,9,18]	5 days	42
Protein S Free Ag	FPRS	C (Frozen) [4,9,18]	3 days	42
Protein Total (Blood)	PROT	B	1 day	36
Protein/Creatinine Ratio (Urine)	UCPR	**RU**	1 day	36
Proteinase 3 Ab	PR3	B	2 days	82
Prothrombin Time	PTIM	C [18]	1 day	40
Purkinje Cell Antibody (Hu and Yo)	PURK	B	10 days	82
Pyruvate Kinase (M2-PK)	M2PK	A (Frozen plasma) [7]	5 days	102
Pyruvate Kinase (M2-PK)	M2ST	**RF** [4]	5 days	102
Q Fever (C Burnetti) Antibodies	QFEV	B [9]	10 days	82
QFIT/Calprotectin Profile (Combined) (QFIT)	QCAL	**QFIT**	5 days	36
Quantitative Faecal Immunochemical Test (QFIT)	QFIT	**QFIT**	1 day	36
Rabies Antibody	RABI	B	20 days	91
Rapid Strep PCR (incl. m/c/s)	RAPS	Blue liquid Amies swab**	1-3 days**	46
Rapid Xpert HIV-1 RNA Qualitative – Early Detection from 10 days	LHIV	A (Vacutainer only)	1 day	71
Rapid Xpert HIV-1 RNS Viral Load – Rapid Testing for HIV-Positive Patient Prognosis and Response To Antiretroviral Therapy	RHIV	A (Vacutainer only)	1 day	71
Recurrent Miscarriage Profile (female)	RMP	A A B C C C H [9,18]	21 days	41, 44, 123
Renal Calculi Screen (Metabolic)	RSPR	**J** [6]	5 days	36
Renal Stone Analysis	RSTA	**STONE**	10 days	36
Renin	RENI	A (Frozen plasma) [36]	5 days	57
Renin, Aldosterone Activity	PRAA	A [44]	up to 5 weeks	57
Reproductive Immunophenotype Panel	3RF	H H H*	1 week	59
Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (PCR)	FLU4	**PCR** nasopharyngeal swab	2 days	99-100
Reticulocyte Count	RETC	A	1 day	41
Retinol Binding Protein	RBP	B	3 days	36
Retrograde Ejaculation	RTRO	Contact lab	2 days	66
Reverse T3	RT3	B [7,37]	15 days	57

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Rheumatoid Factor (Latex Test)	RF	B	3 days	82
Rheumatology Profile 1 (Screen)	RH	A B	2 days	82, 86
Rheumatology Profile 2 (Connective tissue)	RH2	A A B B	3 days	82, 86
Rheumatology Profile 3 (Rheumatoid/Basic)	RH3	A B	2 days	82, 86
Rheumatology Profile 4 (Systemic Lupus)	RH4	A B B	2 days	82, 86
Rheumatology Profile 5 (Mono Arthritis)	RH5	A A B B	3 days	82, 86
Rheumatology Profile 6 (Rheumatoid Plus)	RH6	B	3 days	83, 86
Rheumatology Profile 7 (Sjogren's Syndrome)	RH7	B	15 days	83, 86
Rickettsial Species Antibody Profile	RICK	B	7 days	83, 88
Risperidone	RISP	A [4]	7 days	135
RNA Polymerase Antibodies	RNAP	B	3 days	83
Rotavirus in Stool by PCR	ROTA	**RF**	1 day	99
RPR (Syphilis)	RPR	B	2 days	71, 83
Rubella Antibody (IgG)	RUBE	B	1 day	91, 99
Rubella Antibody (IgM)	RUBM	B	1 day	91, 99
Rubella Avidity	RUAV	B	1 week	99
Rubella PCR	RUBP	A / **Amniotic Fluid**	5 days	91
S100 Malignant Melanoma	S100	B	4 days	102
Saccharomyces Cerevisiae Antibodies	ASCA	B	2 weeks	83
Salicylates	SALI	B	1 day	36
Salivary Duct Antibodies	SAB	B	15 days	83
Schistosoma (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days	46
Schistosome (Bilharzia) Antibodies	BILH	B [14]	10 days	88
Scleroderma Immunoblot	SCLI	B	3 days	83
Screening Profile 1 – Biochemistry	PP1	B G	1 day	26
Screening Profile 2 – Haematology/Biochemistry	PP2	A B G	1 day	26
Screening Profile 3 – Haematology	PP3	A	1 day	26
Screening Profile 4 – Haematology/ Biochemistry (Short)	PP4	A B G	1 day	26
Screening Profile 5 – Haematology/ Biochemistry (Postal)	PP5	A B G	1 day	26
Screening Profile 6 – Well Person	PP6	A B G	1 day	26
Screening Profile 7 – Well Man	PP7	A B G	1 day	27
Screening Profile 8 – Well Person	PP8	A B G	2 days	27
Screening Profile 9F – Senior Female CHANGE	PP9F	A B B G [4]	2 days	27
Screening Profile 9M – Senior Male CHANGE	PP9M	A B B G [4]	2 days	27
Screening Profile 10 – Cardiovascular Risk 1	PP10	B B	3 days	27
Screening Profile 11 – Cardiovascular Risk 2	PP11	B B B C [17,34]	3 days	27
Screening Profile 12 – Sexual Health Screen	PP12	**FCRU / PCR / TPV**	2 days	27
Seed Storage Proteins	ZZ26	B	2 days	139
Selenium (Serum)	SELE	B	4 days	36, 148

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Self-Collect Tests				151-158
Sellotape Test	SELL	Send Sample***	1 day	46
Semen Analysis, Comprehensive*	SPER	**Semen** [1]	2 days*	66
Semen Analysis, Post-Vasectomy**	PVAS	**Semen** [1]	2 days	66
Semen Analysis, Vasectomy Reversal*	SPER	**Semen** [1]	2 days*	66
Semen Culture	SPCU	**Semen**	2-4 days	46, 66
Semen Fructose (Qualitative assessment)	SPCF	**Semen**	2 days	66
Semen Leucocytes	PMNS	**Semen**	2 days	66
Semen Zinc	SPCZ	**Semen**	up to 10 days	66
Serotonin	SERT	H H (Frozen whole blood) [1]	10 days	57
Serotonin (Urine)	USER	**PU** 50mls (Frozen) [1]	5 days	57
Serum Albumins	ZZ30	B	2 days	139
Serum Free Light Chains	SLC	B	5 days	36
Sesame Components	ZZ39	B	2 days	139
Sex Hormone Binding Globulin	SHBG	B	1 day	57
Short-Chain Acyl-CoA Dehydrogenase Deficiency – ACADS sequencing	GENE	A [9]	6 weeks	123
Short Stature – SHOX variant screening + deletions/duplications	GENE	A [9]	8 weeks	123
Shrimp Components	ZZ17	B	2 days	139
Silver (Blood)	SILV	B	5 days	36, 161
Silver (Urine)	USIL	**RU**	5 days	36, 161
Sinequan (Doxepin)	DOXE	A or B	10 days	135
Sirolimus	SIRO	A	3 days	135
Sjogren's Syndrome	RH7	B	15 days	83
Skeletal Dysplasia NGS Panel	GENE	A A [9]	6 weeks	123
Skin (Pemphigus/Pemphigoid) Autoantibodies	SKAB	B	1-2 weeks	83
Skin Antibodies by Immunofluorescence	STSK	B	1 month	83
Skin Scrapings/Mycology by PCR	DERM	Send Sample	3-7 days	46
Sleeping Sickness Serology (African Trypanosomiasis)	TRYP	B [9]	10 days	83
Smith-Lemli-Opitz Syndrome – DHCR7 sequencing	GENE	A [9]	6 weeks	124
Smith-Magenis Syndrome – CGH CHANGE	CGH	**CVS / AF /** A H [9]	10 days	124
Smooth Muscle Antibodies	ASMO	B	2 days	83
Sodium	NA	B	1 day	36
Somatomedin (IGF-1)	SOMA	B (Frozen) [4,7]	1 day	57
Soybean Components	ZZ18	B	2 days	139
Spastic Paraplegia NGS Panel	GENE	A A [9]	6 weeks	124
Sperm Aneuploidy	SPPL	**Semen** [1]	4 weeks	66
Sperm Antibodies (Serum)	ASAB	B	2 weeks	66, 83
Sperm Antibodies/MAR Test (Semen)†	ASPA	**Semen**	1 day	66
Sperm Count (Post-Vasectomy)	PVAS	**Semen** [1]	2 days	66
Sperm DNA Fragmentation (SCSA type test)	SEXT	**Semen** [1]	1-2 weeks	66

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Sperm Morphology (Kruger strict criteria)	MRPH	**Semen** [1]	2 days	66
Spinal Bulbar Muscular Atrophy (Kennedy Disease) – AR repeat analysis	GENE	A [9]	5 weeks	124
Spinal Muscular Atrophy – SMN1 deletions/duplications (exon 7+8)	SMA	A [9]	10 days	124
Spinocerebellar Ataxia – multiplex SCA1+2+3+6+7+8+10+12 +17 common repeat expansions	GENE	A [9]	5 weeks	124
Spinocerebellar Ataxia NGS Panel	GENE	A A [9]	6 weeks	124
Sports/Performance Profile	SPOR	A A A B B B B C K [4]	5 days	148-149
Sputum for Routine Culture	SPU1	**SC**	2-4 days	46
Sputum for TB Culture (AFB)	SPU2	**SC**	up to 8 weeks	46
Squamous Cell Carcinoma	SCC	B	4 days	102
STD1 M/F STD Quad (Urine and Serology)	STD1	B **FCRU**	2 days	71-72
STD2 M/F STI Profile Plus (Urine and Serology)	STD2	B **FCRU** (If culture swabs are needed please request separately)	4 days	71-72
STD3 Female STD Quad (PCR Swab and Serology)	STD3	B **PCR**	2 days	71-72
STD4 Female STI Profile Plus (PCR Swab and Serology)	STD4	B **PCR** (If culture swabs are needed please request separately)	4 days	71-72
STD5 Serology only	STD5	B	1 day	71, 73
STD6 Serology only without HIV	STD6	B	1 day	71, 73
STD8 Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR** and **STM**	3 days	71, 73
STD9 Symptomatic lesion sample using PCR Swab from lesion	STD9	**PCR Swab**	7 days	71, 73
Steroid Cell Antibody	SCA	B	2 days	83
STI Profile: MSM1	MSM1	B / **FCRU** / **PCR Swab Throat** / **PCR Swab Rectal**	2 days	71, 74
STI Profile: MSM2	MSM2	B / **FCRU** / **PCR Swab Throat** / **PCR Swab Rectal**	3 days	72, 74
Stockholm3	STK3	A A	2 weeks	102
Stockholm3 Reflex NEW	STKR	A A B	2 weeks	102
Stool for OCP and Culture by PCR	PENT	**RF** [††]	2-3 days	46
Stool for OVA Cysts & Parasites by Microscopy	MOCP	**RF**	2 days	46
Stool Reducing Substances	STRS	**RF** [7]	2-3 weeks	46
Streptomycin Levels	STRM	F	5 days	135
Striated/Skeletal Muscle Antibody	STRA	B	5 days	83
Strongyloides Antibodies	STGA	B	10 days	83
Sulpiride	SULP	B [4]	4 days	135
Superoxide Dismutase	SODI	A / H	5 days	36
Suppression with steroid, IVIg and intralipin, NK (CD69) cell assay, TH1/TH2 cytokines	NCIT	H H H H*	2 days	60
Swab (Cervical)	CERS	**STM** / **CS**	2-4 days	46

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Swab (Ear)	EARS	**STM**	2-4 days (Culture) 8-9 days (Fungal) – same swab	46
Swab (Eye)	EYES	**STM**	2-4 days	47
Swab (Nasal)	NASS	**STM**	2-4 days	47
Swab (Oral)	ORSW	**STM/CS**	2-4 days	47
Swab (Penile)	PENS	**STM/CS**	2-4 days	47
Swab (Skin)	SKIS	**STM**	2-4 days	47
Swab (Throat)	THRS	**STM**	2-4 days	47
Swab (Urethral)	URES	**STM/CS**	2-4 days	47
Swab (Vaginal)	VAGS	**STM/CS**	2-4 days	47
Swab (Vulval)	VULV	**STM/CS**	2-4 days	47
Swab (Wound)	WOUS	**STM**	2-4 days	47
Synacthen Stimulation Test	SYNA	By appointment only	1 day	133
Synovial Fluid (for microscopy, crystals and culture)	FLU2	**SC**†††	14 days	47
Syphilis by PCR (chancre)	SYPS	**PCR**	5 days	72
Syphilis IgG/IgM	SERJ	B	1 day	72, 83
T Regulatory Cells	25RF	H*	3 days	59
T3	T3	B	1 day	57
T3 (Reverse)	RT3	B [7,37]	15 days	57
Tacrolimus/Prograf (FK506)	FK5	A [4]	1-2 days	135
Taipan Snake Venom Time	TTVT	C C [9,18]	2-3 weeks	42
Tay-Sachs Disease (HEXA gene)	GENE	A [9]	4 weeks	124
TB (Pleural Fluid)	TBCU	**SC**	up to 8 weeks	47
TB Culture	SPU2	**SC**	up to 8 weeks	47
TB Culture (Urine)	TBUR	3 x **EMU**	up to 8 weeks	47
TB PCR (PCR detection of Mycobacterium tuberculosis complex and mutations for Rifampicin resistance)	TBPC	All samples except blood cultures and urine, as clinically requested.	1 day	47
TB Quantiferon®-TB Gold*	TBQ4	**Special tubes** or H [1]	3 days	83
TB Slopes – Confirmation and Sensitivity	TBSL	**TB slope** (LJ medium-green)[6]	up to 8 weeks	47
Tegretol (Carbamazepine)	CARB	B	1 day	135
Teicoplanin Assay	TEIC	B	1 day	133
Temazepam	TEMA	B [4]	4 days	135
Testicular Tumour Profile (LDH, AFP, HCQG)	TTP	B	1 day	102, 104
Testosterone	TEST	B	1 day	57
Testosterone (Free)	FTES	B	3 days	57
Testosterone (Total), LC MS Mass Spec	MSTT	B	5-7 days	57
Tetanus Antibody	TETA	B	5 days	83, 91
TH1/TH2 Cytokine Profile	1TH2	H H H*	2 days	60
TH1/TH2 Cytokine Ratio	6RF	H H H* [5]	1 week	59
TH1/TH2 Intracellular Cytokine Ratios with IVIG	21RF	H H H* [5]	1 week	59

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TEST	CODE	SAMPLE REQS	TAT	PAGE
TH1/TH2 Intracellular Cytokine Ratios with IVIG, Prednisolone	20RF	H H H *5	1 week	59
TH1/TH2 Intracellular Cytokine Ratios with Prednisolone	22RF	H H H *5	1 week	59
Thalassaemia Screen	HBEL	A	4 days	42
Thallium (Blood)	THAL	A / H	1 week	162
Thallium (Urine)	URTH	**RU**	1 week	162
Theophylline	THEO	B	1 day	135
Thiopurine Methyl Transferase	TPMT	A 5	5 days	36
Thrombin Time	THRO	C 18	1 day	41
Thrombophilia Screen	PROP	A A B C C C 18	5 days	42, 124
Thyroglobulin Abs	TGAB	B	1 day	57
Thyroglobulin Assay	TGA	B	1 day	57
Thyroid Abs (Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day	57, 83
Thyroid Cancer NGS Panel	GENE	A A 9,11	4 weeks	124
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day	57, 83
Thyroid Profile 1 (FT4/TSH)	TF	B	1 day	57, 62
Thyroid Profile 2	TF2	B	2 days	58, 62
Thyroid Profile 3 (FT3/FT4/TSH)	TF3	B	1 day	58, 62
Thyroxine (T4)	T4	B	1 day	58
Thyroxine Binding Globulin	TBG	B (Frozen, freeze within 4 hrs of collection)	10 days	58
Timothy Grass Components	ZZ19	B	2 days	139
Tissue for culture	TISS	**Tissue sample**	up to 14 days	47
Tissue Polypeptide Antigen	TPA	B	1 week	36
Tissue Transglutaminase IgA (Coeliac)**	TAA	B	3 days	83
Tissue Transglutaminase IgG	TAAG	B	5 days	83
Tobramycin Assay (Provide Clinical Details)	TOBR	H	3 days	133
Toluene (Blood)	TOL	**J** (Contact Referrals)	10 days	162
Toluene (Urine)	UTOL	**RU** 30	10 days	162
Topiramate (Topamax)	TOPI	B 4	4 days	135
Torch Screen	TORC	B	2 days	99, 101
Total Acid Phosphatase	APT	B	5 days	36
Total Bile Acid/Bile Salts	BILS	B	1 week	36
Total IgE	IGE	B	1 day	37, 137
Total Immune Function Evaluation	TIE	A + B 5,10	7 days	83
Total Immunoglobulin E	IGE	B	1 day	83
Total Testosterone, LC MS Mass Spec	MSTT	B	5-7 days	58
Toxocara Antibodies (IgG)	TFAT	B 9	5 days	83
Toxoplasma Antibodies (IgG, IgM)	TFAM	B 9	1 day	83, 88

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Toxoplasma Antibody Full Evaluation (IgM, Dye Test, IgG Avidity)	TDYE	B [9]	10 days	83
Toxoplasma by PCR	TXAG	A	5 days	83
TPHA	TPPA	B	2 days	72, 83
Trace Metal (Blood) Profile	TRAC	A B H K	7-10 days	161-162
Transferrin	TRAN	B	1 day	37
Transferrin Electrophoresis	TREL	B	2 weeks	37
Treacher Collins Syndrome and Related Disorders NGS Panel	GENE	A A [9]	6 weeks	124
Trichinella Serology	TRIC	B	5 days	84
Trichloracetic Acid (Urine)	UTCA	**RU** [30]	5 days	162
Trichomonas vaginalis – Thin Prep	TVPC	**TPV**	2 days	166
Trichomonas vaginalis (PCR)	TVPC	**FCRU / PCR / TPV**	2 days	72
Triglycerides	TRI	B	1 day	37
Trimethylaminuria (Fish Odour Syndrome)	FOS	**J**	6 weeks	37
Trimipramine	TRIM	A	5 days	135
Triple Swab Female STI Profile (Vaginal/ Throat/Rectal Swabs) (PCR)	3SWA	**PCR** swab x 3 (label by site)	2 days	72, 74
Tropical Screen (from 6 weeks post-travel)	TROP	B B [9,14]	10 days	88-89
Tropomyosins	ZZ31	B	2 days	139
Troponin I (High sensitive)	TROC	B	1 day	37
Troponin T (High sensitive)	TROT	B	1 day	37
Trypanosome (Chagas) Antibodies	CHGA	B [9,14]	10 days	84
Tryptase	STRY	B	2 days	37, 137
TSH	TSH	B	1 day	58
TSH-Receptor Antibodies	TSI	B	4 days	58, 84
Tularaemia Antibodies	TULA	B [14s]	5 days	84
Tumour Necrosis Factor – Alpha	TNF	B (Frozen) [4]	2 weeks	37
Urate (Uric acid)	UA	B	1 day	37
Urea	UREA	B	1 day	37
Urea (Urine)	UURE	**CU**	1 day	37
Urea and Electrolytes	U/E	B	1 day	37, 39
Ureaplasma urealyticum/parvum – Thin Prep	UGEN	**TPV**	2 days	166
Ureaplasma urealyticum/parvum by PCR	UGEN	**FCRU / PCR / TPV**	2 days	72
Uric Acid (Serum)	UA	B	1 day	37
Uric Acid (Urine)	UURI	**CU**	1 day	37
Urinary Bladder Cancer Antigen	UBC	**RU** (Freeze within 48 hours)**	5 days	37, 102
Urinary Methyl Histamine	UHIT	**RU** (Frozen)	2 weeks	83
Urinary Tract/Renal Cancer NGS Panel	GENE	A A [9,11]	4 weeks	124
Urine Cytology (Urine cytology containers available from TDL Supplies)	URCY	**Urine** (30mls) [21]	2 days	170
Urine EtG (Ethyl glucuronide)	ETG	**RU**	1 week	159

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Urine for Extended Culture	UCXD	**MSU** ††††	up to 7 days	47
Urine for Microscopy and Culture	UCEM	**MSU** ††††	1-2 days	47
Urine Microalbumin/Creatinine Ratio	UMA	**RU**	1 day	37
Urine Microscopy/Analysis	UMIC	**RU**	1 day	47
Urine Organic Acids	UORG	**RU** (Frozen)	3 weeks	37
Urine Steroid Screen (Steroid Hormones)	USTE	**CU** [9]	2 weeks	37
Urine Sugar Chromatography	UCRO	**RU** (Frozen)	3 weeks	37
Urticaria Test (Histamine Releasing)	CURT	B	3 weeks	84
Usher Syndrome NGS Panel	GENE	A A [9]	6 weeks	124
Vaginitis/BV Profile (Culture & PCR)	STD8	**PCR** and **STM**	3 days	72
Valium (Diazepam)	DIAZ	A	7 days	135
Valproic Acid (Epilim)	VALP	B	1 day	135
Vancomycin Hydrochloride	VANC	B	1 day	133
Varicella zoster – DNA	VZPC	A	5 days	99
Varicella zoster Antibodies (IgG)	VZOS	B	1 day	91, 99
Vascular Endothelial Growth Factor	VEGF	B	14 days	84
Venom Components	ZZ33	B	2 days	139
Very Long Chain Fatty Acids	VLCF	A or H (Frozen) [9]	4-6 weeks	37
Vigabatrin (Sabril)	VIGA	A	10 days	135
Viral Antibody Screen	VIRA	B B	2 days	99, 101
Viral Eye by PCR	VPE	**PCR**	3 days	99, 101
Viral Respiratory RNA Screen by PCR	VPR	**PCR** or as specified on the form	2 days	99, 101
Viral Skin/Mucosa by PCR	VPSK	**PCR**	5 days	99, 101
Viscosity (Plasma)	VISC	A *4	3 days	42
Vitamin A (Retinol)	VITA	B	5 days	147
Vitamin B (Functional)	FUNC	A A	5 days	147
Vitamin B Profile	VBP	A A B	5 days	147, 149
Vitamin B1 (Thiamine)	VIT1	A	5 days	147
Vitamin B2 (Riboflavin)	VIB2	A	5 days	147
Vitamin B3 (Nicotinamide)	VIB3	B	5 days	147
Vitamin B5 (Pantothenic Acid)	VB5S	B	2 weeks	147
Vitamin B6 (Pyridoxine)	VITB	A	5 days	147
Vitamin B7 (Biotin)	BIOS	B [7]	5 days	147
Vitamin B9 (Folic acid) – Red cell	RBCF	A	2 days	147
Vitamin B9 (Folic acid) – Serum	FOLA	B	1 day	147
Vitamin B12 (Active)	B12	B	2 days	37, 147
Vitamin B12 (Active)/Red Cell Folate	B12F	A B	2 days	37, 147
Vitamin B12 (Total)	TB12	B	1 day	37
Vitamin C (Active)	VITC	B (spun and frozen within 3 hours)*	5 days	147
Vitamin D (1, 25 Dihydroxy)	D3	B *	5-8 days	147
Vitamin D (25-OH)	VITD	B	1 day	37, 147

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Vitamin E (Alpha Tocopherol)	VITE	B	5 days	147
Vitamin K (Nutritional)	VKN	Serum (SST or B) *	5 days	147
Vitamin Profile 1	VITS	A B B [7]	5 days	147, 149
Vitamin Profile 2	VIT2	A A A [38] B B [7]	5 days	147, 149
VLDL Cholesterol	VLDL	B	1 week	37
VMA	UVMA	**PU** [1]	5 days	37
Voltage Gated Calcium Channel Antibodies	CCAB	B	3 weeks	84
Voltage Gated Potassium Channel Antibodies	VPCA	B	3 weeks	84
Von Hippel-Lindau Syndrome – VHL sequencing + deletions/duplications	GENE	A [9]	6 weeks	125
Von Willebrand Profile	FVWF	C C C [4,9,12]	5 days	42, 44
Von Willebrands Multimers	VWM	C C C [18]	3 months	42
Wall Pellitory Components	ZZ20	B	2 days	139
Walnut Components	ZZ34	B	2 days	139
West Nile Virus Abs	WNV	B	2 weeks	99
Wheat Components	ZZ21	B	2 days	139
Whole Genome Sequencing (solo/duo/trio)	GENE	A [9,11]	5-8 weeks	125
Whooping Cough (Pertussis) Antibodies	PERS	B	5 days	84
Whooping Cough (Pertussis) by PCR	PERP	**Pernasal or dry swab**	2-3 days	84
Xanthine – Blood	XANB	H (Frozen plasma)	2 weeks	162
Xylene – Urine	UXYL	**RU** [30]	2 weeks	162
Yellow Fever Antibodies	YELL	B [9,14]	10 days	84
Yersinia Antibodies	YERS	B	4 days	84
Zellweger Syndrome NGS Panel	GENE	A A [9]	6 weeks	125
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days	84, 88, 99
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days	84, 88, 99
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days	84, 88
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days	84, 88
Zinc (Serum)	ZINC	K	2 days	148, 161
Zinc (Urine)	URZN	**CU**	5 days	148, 161
Zinc (Whole Blood)	RBCZ	A or H	5 days	148
Ziwig Endotest®	ENDT	Endotest saliva collection kit	25 days	58, 125

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TDL Referral laboratories

For certain specialist tests TDL has developed a selected network of TDL Group and Reference Laboratories. These Group or specialist laboratories can be identified by a code assigned to reports. The quality of these laboratories is recognised by UKAS, or similar accrediting bodies for the laboratories outside the UK.

TDL Referral laboratories

A3P Biomedical AB [980]

Addenbrooke's Hospital – BGU and Immunology [899]

Alder Hey Children's NHS Foundation Trust – Biochemistry Department [880]

Analytical Services International Ltd, St George's University of London – Forensic Toxicology Service [994]

Animal and Plant Health Agency – Veterinary Labs [911]

Bio Predictive [Original report]

Bioscientia (Germany) [868]

Birmingham Children's Hospital NHS Foundation Trust – Clinical Chemistry [970]

Birmingham University Hospital NHS Foundation trust [895]

Brucella Reference Unit – Liverpool Clinical Laboratories, Royal Liverpool and Broadgreen Hospital [947]

Cambridge Clinical Laboratory [867]

Cambridge Life Sciences [997]

Cambridge Nutritional Science Ltd [Original report]

Cardiff and Vale University Health Board – Porphyria Service Cardiff [834]

Cardiff and Vale University Health Board – The Analytical Toxicology Department [998]

Douglass Hanly Moir Pathology (Australia) [Original report]

Epsom and St Helier University Hospital NHS Trust – Biochemistry Department [968]

Epsom and St Helier University Hospital NHS Trust – Immunology Department [968]

Epsom and St Helier University Hospital NHS Trust – Microbiology Department [951]

Eurofins – Biomnis (France) [950]

Great Ormond Street Hospital – Department of Chemical Pathology [964]

Great Ormond Street Hospital – Enzyme Unit, Chemical Pathology [964]

Great Ormond Street Hospital – Immunology Department [924]

Great Ormond Street Hospital – Neurometabolic Unit [964]

Guildford RSCH Trace Element Laboratory, SAS Trace Element Centre [955]

HCA Healthcare UK – HCA Laboratories [982]

HFL Sport Science (LGC Group) [861]

Igenomix UK [Original Report]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Chemical Pathology Department [912]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Infection and Immunity Department [962]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Medical Oncology [912]

Imperial College Healthcare NHS Trust – Hammersmith Hospital, Molecular Endocrinology [931]

Imperial College Healthcare NHS Trust, St Mary's Hospital – Virology Department [912]

Institute of Aquaculture – University of Stirling [1000]

Institute of Neurology – Neurogenetics Unit [975]

King's College Hospital – HMDC Laboratory for Molecular Haemato-Oncology [943]

Labor Augsburg MVZ GmbH (Germany) [900]

LogixX Pharma Ltd [Original report]

London School of Hygiene & Tropical Medicine – Diagnostic Parasitology Lab [933]

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection.
See page 225 for sample-taking and special handling instructions. For details of Genetics tests please see Genetics, page 105.

TDL Referral laboratories

Matrix Diagnostics [896]

Mayo Clinic Laboratories (Netherlands [894]

Meningococcal reference unit (Men RU)
Manchester – Manchester Royal Infirmary [949]

Micropathology Ltd [920]

National Blood Service – Colindale,
Red Cell Immuno Haematology Department [910]

NHS Blood and Transplant – Birmingham [856]

NHS Blood and Transplant – H & I Laboratory [855]

NHS Blood and Transplant – Tooting [854]

Norfolk and Norwich University Hospital NHS Foundation Trust – SAS Metabolic Bone Laboratory [993]

Oxford University Hospital NHS Foundation Trust – Churchill Hospital [983]

Queens University Hospital, Belfast –
Institute of Clinical Science [853]

Reflab (Denmark) [988]

Reproductive Immunology Centre [839]

Rosalind Franklin University (USA) – [Original report]

Royal Berkshire Hospital NHS Foundation Trust – Clinical Biochemistry [849]

Royal Devon and Exeter NHS Foundation Trust [838]

Royal Surrey County Hospital –
SAS Peptide Hormone Section [959]

Sandwell and West Birmingham NHS Trust – City Hospital Birmingham,
Clinical Biochemistry Department [970]

Sheffield Children's NHS Trust –
Clinical Chemistry [847]

Sheffield Teaching Hospital NSH Foundation Trust – Protein Reference Laboratory Unit and Immunology Department [966]

Southmead Hospital – Antimicrobial
Reference Laboratory, Bristol [915]

St George's University Hospital NHS Foundation Trust – Cell Marker Department [846]

Synnovis – Guy's Hospital,
Biochemistry Genetics Laboratory [930]

Synnovis – King's College Hospital,
Clinical Biochemistry [914]

Synnovis – St Thomas' Hospital
Haemophilia Centre [956]

Synnovis – St Thomas' Hospital Immunohistology [961]

Synnovis – St Thomas' Hospital Purine
Research Laboratory [925]

The Epilepsy Society (Chalfont Centre) [837]

The Leeds Teaching Hospital NHS Trust – Endocrinology Laboratory (including SAS Steroid Centre), Department of Specialist Laboratory Medicine, St James University Hospital) [992]

The Leeds Teaching Hospitals NHS Trust – Mycology Reference Centre [973]

The Newcastle upon Tyne Hospitals –
Royal Victoria Infirmary [878]

The Royal Marsden Hospital –
Department of Haematology / Oncology [989]

The Royal Marsden Hospital –
Department of Pathology [990]

Toxoplasma Reference Unit, Public Health Wales Microbiology ABM, Singleton Hospital –
Swansea [969]

Trace Laboratories Ltd [955]

UCL Great Ormond Street Institute of Child Health [935]

UCL Queen Square Institute of Neurology –
Department of Neuroimmunology [975]

UKHSA – Bacteriology Reference
Department (BRD), Colindale [910]

UKHSA – Virus Reference Department (VRD) – Colindale [910]

UKHSA Mycology Reference Laboratory –
UKHSA South West Laboratory,
Southmead Hospital, Bristol [903]

UKHSA National Mycobacterium Reference Service
National Infection Service, Colindale [974]

UKHSA Rare and Imported Pathogens Laboratory – Porton Down [981]

University Hospital Birmingham NHS Foundation Trust – Heartlands Hospital [843]

TDL Referral laboratories

University Hospital of Wales – Cardiff
Medical Immunology Department [842]

Wythenshawe Hospital, Manchester University
NHS Foundation Trust, Manchester [835]

Ziwig [833]

Group laboratories

Royal Free London NHS Foundation Trust
– Haemostasis [984]

University College London Hospitals NHS Foundation
Trust (UCLH) – Cytology [Original report]

University College London Hospitals NHS Foundation
Trust (UCLH) – Hospital for Tropical disease [933]

University College London Hospitals NHS Foundation
Trust (UCLH) – Molecular Virology [999]

University College London Hospitals NHS Foundation
Trust (UCLH) – Special Chemistry [953]

TDL Genetics Referral laboratories

All Wales Medical Genetics Service

Anthony Nolan, Histocompatibility and Immunogenetics

Blueprint Genetics

Bristol Genetics Laboratory (North Bristol NHS Trust)

CentoGene

Diagenom GmbH

Exeter Genomics Laboratory,
(Royal Devon & Exeter) Fulgent Diagnostics

Health In Code

International Blood Group Reference Laboratory

London Southeast Genetics Service

Medical Genetics Laboratory – Central Manchester
University Hospitals NHS Foundation Trust

Micropathology Ltd

Newcastle Mitochondrial NGC Diagnostic Service

North Thames Genomic Laboratory Hub
(Great Ormond Street)North West Genomic
Laboratory Hub (Manchester)

Northern Genetics Service (Newcastle)

Oxford Genetics Laboratory –
Oxford University Hospitals

Sheffield Diagnostic Genetics Service

Wessex Region Genetics Service

West Midlands Regional Genetics Laboratory

TDL Terms and Conditions of Business from 1st Jan 2026

The definitions which apply to these Terms and Conditions are set out in clause 19. The Client's particular attention is drawn towards clause 6 (Liability).

1 THE SERVICES

1.1 These Terms and Conditions and any applicable Service-Specific Terms will apply to any services or consumables that The Doctors Laboratory Limited or TDL Genetics Limited provides to the Client, unless those services are the subject of a separate written agreement signed by TDL and the Client. These Terms and Conditions and any applicable Service-Specific Terms apply to the exclusion of any other terms presented by the Client or implied by custom or course of dealing.

1.2 By submitting a Pathology Request, a request for any other services described in the Laboratory Guide or in any other proposal provided by TDL, or an order for any Consumables described in the Laboratory Guide (in each case an '**Order**'), the Client offers to purchase those Tests, other services or Consumables on these Terms and Conditions and any applicable Service-Specific Terms from TDL. TDL may accept or reject any Order.

1.3 A contract between TDL and the Client for the provision of Services and / or Consumables, incorporating these Terms and Conditions, and any applicable Service-Specific Terms, and the Order (an '**Agreement**') takes effect when TDL confirms acceptance of the Client's Order in writing, logs the relevant Pathology Request in its laboratory information management system, or begins performing the Services (whichever occurs first). Any request for add-on Tests (as described in the Laboratory Guide) constitutes a request for further Services under that Agreement, which TDL may accept or decline. In the event of a conflict between the Order and these Terms and Conditions, the Terms and Conditions will take priority.

1.4 By Ordering a Service referred to in any Service-Specific Terms, the relevant Service-Specific Terms will apply to that Service in addition to these Terms and Conditions. In the event of a conflict between these Terms and Conditions or the Order and the Service-Specific Terms, the Service-Specific Terms will take priority.

1.5 TDL will provide the Services under the Agreement:

1.5.1 in accordance with Good Industry Practice;

1.5.2 in accordance with the UKAS medical laboratory accreditation standard (ISO 15189); and

1.5.3 using suitably skilled and experienced staff.

1.6 TDL will use reasonable efforts to achieve the Test turnaround times quoted in the Laboratory Guide, but does not warrant that it will achieve those times in the case of any particular Sample.

1.7 The Laboratory Guide sets out Sample rejection criteria. If the Sample meets those criteria, or if TDL considers that the Sample is otherwise unsuitable for Testing or TDL is unable to conduct the Testing then TDL may decline to carry out the Testing under the Agreement and will be entitled to dispose of the Sample.

1.8 As part of its Services TDL will, on request, arrange for collection of Samples from locations within the M25 motorway. Such collection service is included within the price of the Test unless otherwise specified by TDL. Collection of Samples from locations outside the M25 is by special arrangement, and may incur an additional charge. Where collection by TDL has not been requested and agreed, the Client will be responsible, at its own cost, for the transport of Samples to TDL. Where TDL arranges collection of Samples it will use reasonable efforts to achieve the timescales it quotes for collection, but does not warrant that it will achieve those timescales in the case of any particular collection.

1.9 TDL may destroy or dispose of a Sample after completing the Testing or on termination of the Agreement, unless otherwise agreed in writing with the Client.

1.10 In providing the Services, TDL shall comply with all Applicable Law relating to anti-bribery and anti-corruption, including the Bribery Act 2010. TDL shall not, and shall ensure that its staff do not, engage in any activity which would constitute an offence under the Bribery Act 2010.

1.11 TDL is committed to trading ethically, with zero tolerance for modern slavery (including forced labour or human trafficking of any kind), human rights violations, and child labour. In performing its obligations under the Agreement, TDL will comply with all Applicable Law and applicable internal policies relating to anti-slavery and human trafficking.

1.12 TDL's laboratories are operated by members of the TDL Group. TDL uses those laboratories to undertake the Tests, except where TDL refers the Tests to suitably accredited laboratories operated outside the TDL Group. The UKAS accreditation numbers for the TDL Group laboratories in the UK are as follows: 8059 (HSL Analytics LLP) Genetics and Molecular Sciences, 8169 (HSL Analytics LLP) Blood Sciences, 8860 (HSL Analytics LLP) Infection Sciences, 8812 (The Doctors Laboratory Limited) Haematology, Blood Transfusion, Biochemistry, Microbiology, Molecular Biology, 10199 (The Doctors Laboratory Limited) Andrology, 8511 (HSL Analytics LLP) Cytology, 9706 (The Doctors Laboratory Limited) Urine Cytology.

2 SUPPLY OF CONSUMABLES

2.1 TDL shall supply Consumables to the Client in accordance with the terms of the Agreement.

2.2 The Consumables shall: (i) be of satisfactory quality (within the meaning of the Sale of Goods Act 1979) and fit for any purpose held out by TDL; and (ii) comply with all Applicable Law.

2.3 TDL shall not be liable for Consumables' failure to comply with clause 2.2 if: (i) the Client makes any further use of those Consumables after notifying TDL of such failure; (ii) the defect arises because the Client or its patients failed to follow TDL's instructions for the storage, use or maintenance of the Consumables or (if there are none) good practice regarding the same; (iii) the Client or its patients alters or repairs those Consumables without TDL's prior written consent; (iv) the defect arises as a result of fair wear and tear, deliberate damage, negligence, or abnormal storage or working conditions; or (v) the Consumables differ from their description as a result of changes made to ensure they comply with Applicable Law.

2.4 In the event that (a) the Consumables do not comply with clause 2.2, or (b) the Postal Self-Collection Kit is missing an item which forms part of that kit or is not delivered in accordance with the Agreement, TDL shall provide replacement Consumables without undue delay. This shall be the Client's only remedy for such non-compliance. The terms of this clause 2 shall apply to any such replacement Consumables provided by TDL.

2.5 TDL shall ensure that the Consumables are properly packed and secured in a manner to enable them to reach the point of delivery in good condition, and in a manner which complies with Applicable Law.

2.6 If the Client or the Client's carrier will collect the Consumables from TDL's premises, delivery shall be completed when TDL places the Consumables at the Client's disposal at TDL's premises. Where the Client has ordered Postal Self-Collection Kits from TDL, then delivery shall be completed when TDL or TDL's carrier delivers the Postal Self-Collection Kits to the Client's premises (if the Client has ordered a bulk delivery) or to the patient address supplied by the Client (if the Client has ordered direct-to-patient fulfilment). In all other cases, delivery shall be completed on the loading of the Consumables at the premises where they are loaded onto transport for carriage.

2.7 TDL may deliver Consumables by instalments, which may be invoiced and paid for separately. Time for delivery of Consumables is not of the essence of the Agreement and delays in the delivery of Consumables shall not entitle the Client or its patients to refuse to take delivery. TDL shall have no liability for any failure or delay in delivering Consumables to the extent that any failure or delay is caused by the Client's failure to comply with its obligations under the Agreement.

2.8 Title and risk in the Consumables shall pass to the Client on delivery, except that any biofreeze bottles provided by TDL shall remain the property of TDL at all times, regardless of any use by the Client of the biofreeze bottles.

2.9 The Client must not resell the Consumables or provide them to any third party without TDL's prior written consent.

2.10 This clause 2.10 does not apply to Postal Self-Collection Kits. The Client shall ensure that: (i) any Consumables provided by TDL are only used by healthcare professionals who are appropriately qualified and trained in the proper use of such Consumables; and (ii) the healthcare professionals use the Consumables in accordance with any instructions relating to the use of the Consumables provided by TDL and in any event with the degree of skill and care reasonably to be expected of a healthcare professional experienced in the use of such Consumables.

2.11 TDL may issue a notice to recall or withdraw Consumables from use if (a) the manufacturer of distributor of the Consumables, or any relevant regulator requires the Consumables to be recalled or withdrawn, or (ii) if TDL reasonably considers that the Consumables are or may be unsafe or non-compliant with any Applicable Law (a '**Recall Notice**'). If TDL issues a Recall Notice the Client shall comply with TDL's reasonable instructions, including regarding the return of the Consumables, the provision of information to end-users, and the timescales for doing so.

3 PRICE AND PAYMENT TERMS

3.1 The price payable by the Client for the Services and / or the Consumables will be the most recent price confirmed by TDL to the Client in writing or by telephone prior to the Client submitting its Order. If TDL has not confirmed the price for the Services and / or Consumables, the price will be that indicated in the Laboratory Guide.

3.2 As at the date of these Terms and Conditions many of TDL's services are VAT exempt. All of TDL's prices are stated exclusive of VAT and where VAT is chargeable on the Services and/or Consumables the Client will pay it at the applicable rate.

3.3 Invoices are normally issued on a monthly basis, but TDL reserves the right to issue them more frequently. The Client will pay TDL's invoices under the Agreement within 30 days of the date of the invoice, without any deduction or set off. At TDL's option, interest may be charged on late payments at the statutory rate prescribed from time to time by regulations under the Late Payments of Commercial Debts (Interest) Act 1998. Invoices paid from outside the UK must be paid by either direct bank transfer or by cheque drawn on a UK branch. All payments will be made in pounds sterling.

3.4 If the Client disputes any invoice: (i) the Client shall notify TDL in writing as soon as practicably possible and in any event not later than 90 days after the date of the invoice, specifying the reasons for disputing the invoice; (ii) the Client shall pay to TDL all amounts not disputed by the Client as set out in clause 3.3 above; and (iii) the parties shall attempt to resolve the dispute promptly and in accordance with clause 18.1 below.

3.5 If the Client does not dispute an invoice in accordance with clause 3.4 above then the amount stated on the invoice shall be deemed payable by the Client and the Client shall not be entitled to dispute the amount invoiced.

3.6 Without affecting any of its other rights, TDL may suspend or cease provision of the Services and / or Consumables if the Client fails to pay an invoice due to TDL, or if the total of the sums payable by the Client to TDL under any agreements between the Client and TDL meets or exceeds any credit limit that TDL communicates to the Client from time to time.

4 CONFIDENTIALITY

4.1 TDL agrees that it will hold and maintain the confidence of:

4.1.1 all information of a confidential nature which is received by TDL from the Client or its patients in connection with the Services; and

4.1.2 all Test results, invoices and other information of a confidential nature issued by TDL to the Client or its patients in connection with the Services, and, save with the Client's consent or as otherwise permitted under the Agreement, will not disclose such information other than to its professional staff, independent consultants and/ or persons to whom it has delegated the performance of the Services and who require the information for such purpose. Where TDL has been provided with the details of a patient's private medical insurance in connection with the Services, TDL will be entitled to assume (and the Client so warrants) that both the Client and the patient consent to the disclosure of information relating to that patient to the insurer concerned.

4.2 The restrictions in clause 4.1 will not apply to information which: (i) was in TDL's possession prior to disclosure by the Client; or (ii) is now or hereafter comes into the public domain other than by default of TDL; or (iii) was lawfully received by TDL from a third party acting in good faith having a right of further disclosure; or (iv) is required by law to be disclosed by TDL; or (v) which is required by a regulatory or accreditation body to be disclosed to it for the purpose of regulating or accrediting the TDL Group.

5 CLIENT RESPONSIBILITIES

5.1 Except where TDL obtains the Sample directly from the patient during a home visit, through a Postal Self-Collection Kit, or at TDL's patient reception facility, the Client will ensure that the Sample is obtained from the patient, packaged, and labelled in accordance with Applicable Law, good clinical practice and, if applicable, TDL's written instructions.

5.2 Except where TDL agrees to arrange transport of the Sample to TDL's laboratory or where the patient returns the Sample to TDL using a Postal Self-Collection Kit, the Client will ensure that the Sample is transported to TDL's laboratory in accordance with Applicable Law and good clinical practice. Where TDL agrees to arrange transport of the Sample the Client will ensure that the Samples are ready for collection by TDL or its carrier at the agreed times.

5.3 The Client will ensure that all necessary consents and permissions are obtained and all necessary information provided to the patient, which is required under Applicable Law or good clinical practice in order to permit the performance of the Testing, and any other Services, and the use of the Protected Data as contemplated in the Agreement.

5.4 The Client will provide TDL with any information reasonably necessary for performing the Services and / or supplying Consumables, including by ensuring that the Pathology Request contains sufficient information regarding the Sample, the relevant patient, and the persons to whom the Test results are to be reported, and will ensure that any information the Client provides to TDL in connection with the Services and / or Consumables is accurate and complete.

6 LIABILITY

6.1 Nothing in the Agreement will limit or exclude any liability that cannot be limited or excluded under Applicable Law, for example liability for death or personal injury caused by negligence.

6.2 In these Terms and Conditions 'liability' means any liability whether in contract, tort (including negligence), misrepresentation, breach of statutory duty or otherwise, which arises in connection with the Services, the Consumables or under or in connection with any Agreement.

6.3 The liability of TDL and the Client will each be limited to £2,000,000 in total. This limit applies per Agreement and in aggregate for all Agreements made in a calendar year.

6.4 Neither TDL nor the Client will have any liability for:

6.4.1 loss of profit or revenue;

6.4.2 loss of anticipated savings;

6.4.3 loss of reputation or goodwill; or

6.4.4 indirect, special or consequential loss.

6.5 TDL will have no liability for any delay or failure in performance of the Services or provision of the Consumables arising from the Client's delay or failure in performing its obligations under the Agreement.

6.6 All of the warranties which TDL gives in relation to the Services and / or the Consumables are expressly set out in these Terms and Conditions. All other warranties, whether implied or express, are excluded from the Agreement where it is lawful to exclude them.

6.7 In this clause 6, references to TDL include the members of TDL's Group, and for the purpose of the

limit in clause 6.3 the liabilities of TDL and the TDL Group Members will be counted in aggregate. The members of TDL's Group may enforce this clause 6.

7 FORCE MAJEURE

If the performance of any obligation under the Agreement (except for an obligation to pay) is prevented, restricted or interfered with by reason of circumstances beyond the reasonable control of that party obliged to perform it (a '**Force Majeure Event**'), the party so affected will be excused from any resulting failure or delay in performance, and the time for performance will be extended by an amount of time equal to the duration of the Force Majeure Event. The party so affected will use reasonable endeavours to mitigate the effect of the Force Majeure Event on its performance of its obligations. If the Force Majeure Event delays or prevents performance of a party's obligations for more than three months, either party may terminate the Agreement on written notice to the other.

8 DATA PROCESSOR AND DATA CONTROLLER

8.1 When TDL processes Protected Data on behalf of the Client in providing the Services the parties agree that the Client will be the controller and TDL will be the processor. The Annex to these Terms and Conditions sets out when TDL processes Protected Data on behalf of the Client. Clause 17 describes the circumstances where TDL will use Protected Data on its own behalf as controller.

8.2 When TDL processes Protected Data as processor, clauses 9 to 16 will apply in relation to the Protected Data. Where TDL processes Protected Data as controller, clause 17 will apply instead.

8.3 The Client will comply with the Data Protection Laws in relation to the Protected Data, and ensure that all instructions given by it to TDL in respect of Protected Data will at all times be in accordance with Data Protection Laws.

9 DATA PROCESSING INSTRUCTIONS

9.1 When TDL processes Protected Data as processor, TDL will comply with the obligations of processors under the Data Protection Laws.

9.2 Unless required to do otherwise by Applicable Law, TDL will (and will take steps to ensure each person acting under its authority will) process the Protected Data only in accordance with the Client's documented instructions as set out in the Order, pursuant to these Terms & Conditions, and in the Annex (the '**Processing Instructions**').

9.3 If Applicable Law requires TDL to process Protected Data other than in accordance with the Processing Instructions, TDL will notify the Client of any such requirement before processing the Protected Data (unless Applicable Law prohibits TDL from doing so).

9.4 TDL will promptly inform the Client if TDL becomes aware of a Processing Instruction that, in TDL's opinion, infringes Data Protection Laws. TDL will have no liability for any processing in accordance with those Processing Instructions after giving the notice. TDL's obligations under this clause 9.4 do not limit the Client's obligations under clause 8.3.

10 DATA SECURITY MEASURES AND STAFF CONFIDENTIALITY

10.1 In relation to the processing of the Protected Data, TDL will implement and maintain, at its cost and expense, appropriate technical and organisational measures to ensure for the Protected Data a level of security appropriate to the risks presented by the processing, taking into account the state of the art, the cost of implementation and the nature, scope, context and purpose of the processing of the Protected Data, as well as the risk of varying likelihood and severity of the rights and freedoms of natural persons.

10.2 TDL will ensure that all individuals authorised by TDL to process Protected Data are subject to a binding obligation to keep the Protected Data confidential (except where disclosure is required in accordance with Applicable Law, in which case TDL will, where practicable and not prohibited by Applicable Law, notify the Client of any such requirement before such disclosure).

11 USING OTHER PROCESSORS

11.1 TDL will not engage any processor to process the Protected Data on the Client's behalf (a '**Sub-Processor**') without the Client's authorisation of that specific Sub-Processor. The Client will not unreasonably withhold, condition or delay such consent. By accepting these Terms and Conditions the Client authorises the appointment of the Authorised Sub-Processors.

11.2 TDL will ensure that each Sub-Processor is appointed under a written contract containing materially the same obligations as clauses 9 to 16 (inclusive).

11.3 Certain referral laboratories act as data controllers in relation to the Protected Data they process if Services are subcontracted to them. The Laboratory Guide notes which referral laboratories have informed TDL that they act as data controllers and which Tests those referral laboratories provide. If the Client orders one of those Tests then:

11.3.1 the Client authorises TDL to request the Test from the relevant Referral Laboratory on the basis that the Referral Laboratory will process the corresponding Protected Data as an independent data controller, not as TDL's Sub-Processor; and

11.3.2 TDL will appoint the Referral Laboratory on terms which require the Referral Laboratory to process the Personal Data only for the purposes of providing the referred Test and complying with the Referral Laboratory's obligations

under law and professional regulations applicable in the jurisdiction where the Referral Laboratory is located, and or maintaining the Referral Laboratory's accreditation to ISO15189 or any equivalent accreditation.

12 ASSISTANCE WITH THE CLIENT'S COMPLIANCE AND DATA SUBJECT RIGHTS

12.1 Taking into account the nature of the processing, TDL will implement and maintain reasonable measures to assist the Client to respond to the Data Subject Requests relating to the Protected Data that TDL processes on the Client's behalf. TDL will refer such Data Subject Requests it receives to the Client promptly, and in any event within five Business Days of receipt of the request.

12.2 TDL will provide such assistance as the Client reasonably requires (taking into account the nature of processing and the information available to TDL) to the Client in ensuring compliance with the Client's obligations under Data Protection Laws with respect to: (i) security of processing, (ii) data protection impact assessments, (iii) prior consultation with the relevant regulator regarding high risk processing, and (iv) notifications to the regulator and/or communications to data subjects by the Client in response to any Personal Data Breach. The Client will pay TDL's charges for providing the assistance in this clause 12, such charges to be calculated on a time and materials basis at TDL's applicable daily or hourly rates in force from time to time.

13 INTERNATIONAL DATA TRANSFERS

13.1 The Client agrees that TDL may transfer Protected Data to countries outside the United Kingdom for the purpose of providing the Services, provided all transfers by TDL of Protected Data to such recipients are in accordance with such safeguards or other mechanism(s) for transfers of personal data as may be permitted under the Data Protection Laws from time to time. The Client agrees that TDL may implement such safeguards by entering into standard data protection clauses authorised under the Data Protection Laws, subject to clause 13.2

13.2 Where the Client requires TDL to transfer Protected Data for the purpose of providing the Services to a country outside the United Kingdom which is not subject to an adequacy regulation under the Data Protection Laws (a **Third Country**) then, if and when necessary to comply with the Data Protection Laws:

13.2.1 the Client will enter into with the applicable third party recipient of the Protected Data standard data protection clauses authorised under the Data Protection Laws for the international transfer of personal data that provide sufficient safeguards for the relevant transfer, on terms acceptable to TDL (acting reasonably), and will provide evidence to TDL that it has done so, on request; and

13.2.2 where the data protection clauses referred to in clause 13.2.1 are not entered into, the Client will procure that prior to the transfer the relevant data subjects provide valid consent to the transfer for the purposes of the Data Protection Laws, and the Client will provide evidence of such consents to TDL on request.

14 RECORDS, INFORMATION AND AUDIT

14.1 TDL will maintain, in accordance with the Data Protection Laws binding on TDL, written records of all categories of processing activities carried out on behalf of the Client.

14.2 TDL will, in accordance with the Data Protection Laws, make available to the Client such information as is reasonably necessary to demonstrate TDL's compliance with its obligations as a processor under these Terms and Conditions and the Data Protection Laws and allow for and contribute to audits, including inspections, by the Client (or another auditor mandated by the Client) to the extent reasonably necessary for that purpose, subject to the Client:

14.2.1 giving TDL reasonable prior notice and in any event not less than 30 days' notice of such information request, audit and/or inspection required by the Client;

14.2.2 ensuring that all information obtained or generated by the Client or its auditor(s) in connection with such information requests, inspections and audits is kept strictly confidential (save for disclosure to the relevant regulator or as otherwise required by Applicable Law); and

14.2.3 ensuring that such audit or inspection is undertaken during normal business hours, with minimal disruption to TDL's business, any Sub-Processor's business and the business of other customers of TDL.

15 BREACH NOTIFICATION

TDL will, without undue delay, notify the Client of a personal data breach involving the Protected Data, and provide the Client with details of the personal data breach.

16 DELETION OR RETURN OF PROTECTED DATA AND COPIES

TDL will, at the Client's written request, either delete or return all of the Protected Data to the Client in such form as the Client reasonably requests within a reasonable time after the end of the provision of the relevant Services related to processing, and delete existing copies (unless storage of any data is required by Applicable Law, in which case TDL will inform the Client of any such requirement). Where TDL will process that Protected Data as controller under clause 17, TDL may retain the Protected Data.

17 PROTECTED DATA THAT TDL PROCESSES AS A CONTROLLER

17.1 TDL may process Protected Data as controller in the circumstances and for the purposes set out in TDL's Privacy Notice. In particular TDL may:

17.1.1 retain and submit the Protected Data to a Health Authority in the United Kingdom for the purposes of a Public Health Programme operated by that Health Authority, or to a regulator for the purpose of complying with regulatory obligations; and

17.1.2 retain and process Protected Data in its laboratory records in order to meet the requirements of the UKAS medical laboratory accreditation standard (ISO 15189) and implement the guidelines of the Royal College of Pathologists for the retention and storage of pathological records and specimens.

17.3 When TDL processes Protected Data to provide non-invasive prenatal tests, TDL does so as a controller.

17.4 When TDL processes personal data on its own behalf as controller, it will do so in accordance with the obligations of data controllers under the Data Protection Laws and with the applicable terms of the Agreement.

18 GENERAL

18.1 Disputes

18.1.1 If any dispute arises relating to the Agreement or any breach or alleged breach of the Agreement, the parties will make a good faith effort to resolve such dispute without recourse to legal proceedings. If, notwithstanding such good faith efforts, the dispute is not resolved either party may submit the dispute to the jurisdiction of the English Courts.

18.1.2 Except to the extent clearly prevented by the area of dispute, the parties will continue to perform their respective obligations in respect to any existing Agreements while such dispute is being resolved.

18.2 Variation

18.2.1 TDL may amend these Terms and Conditions by updating the Laboratory Guide and providing the Client with a copy of the update or publishing it on TDL's website. Such amendments will only apply to an Order submitted after the date of the update, and the Client will be deemed to accept those amendments by submitting an Order after that date.

18.2.2 Except as set out in clause 18.2.1, any amendments to the Agreement will not be effective unless in writing and signed by an authorised signatory on behalf of each of the parties. The terms of the Agreement may be varied by agreement of the parties but without the consent of any third party whether or not the rights of such third party are affected by such variation. The Client will not unreasonably withhold, delay or condition its agreement to any variation to the Agreement requested by TDL in order to ensure the Services and TDL (and each Sub-Processor) can comply with any change in Applicable Laws.

18.3 Rights and waiver

All rights granted to either of the parties will be cumulative and not exhaustive of any rights and remedies provided by law. The failure of either party to enforce (or delay in enforcing) at any time for any period any one or more of the terms of the Agreement will not be a waiver of such term or of the right of such party at any time subsequently to enforce all the terms of the Agreement.

18.4 Severability

If any provision of the Agreement is or becomes invalid, illegal or unenforceable in any respect under any law, the validity, legality and enforceability of the remaining provisions will not be in any way affected.

18.5 Sub-contracting and Assignment

TDL may assign or sub-contract the performance of the Agreement (in whole or in part) or any one or more of the Tests to be performed hereunder to any member of the TDL Group or any suitably accredited laboratories including those listed in the Laboratory Guide. The Client may not assign the Agreement or any of its rights or obligations hereunder without the prior approval of TDL.

18.6 Relationship of the parties

It is acknowledged and agreed that TDL and the Client are independent contractors and nothing in the Agreement will create or be construed as creating a partnership or a relationship of agent and principal between the parties. The Client acknowledges and agrees that, in requesting Services from TDL, it is not acting as agent for any patient or patients to which the Services relate.

18.7 Notices

All notices given under the Agreement will be in writing and will be delivered by hand or sent by prepaid first class post or by prepaid first class recorded delivery or by email transmission. All notices will be delivered at or sent, in the case of TDL, to: post The Halo Building, 1 Mabledon Place, London WC1H 9AX, email notices@tdlpathology.com and, in the case of the Client to the address and/or email address set out in the Order (or such other address as that party will notify in writing to the other for this purpose). A notice sent by post will be deemed to be served at 9.00 am on the second Business Day following the date of posting; a notice sent by email transmission will (provided the sender receives no error message indicating that delivery has been unsuccessful) be deemed to have been served at the time it is transmitted, if transmitted within business hours (9.00 am to 6.00 pm on a Business Day) or, if transmitted outside business hours, as soon thereafter as such business hours commence. This clause does not apply to the service of any proceedings or any documents in any legal action or, where applicable, any arbitration or other method of dispute resolution.

18.8 Entire agreement

The Agreement is the entire agreement between the Client and TDL and supersedes and extinguishes all

prior and contemporaneous agreements, promises, assurances, discussions, representations and understandings between them, whether written or oral, relating to its subject matter. Each party acknowledges that it has not entered into the Agreement in reliance on, and will have no remedies in respect of, any statement, representation, assurance or warranty (whether made innocently or negligently) that is not expressly set out in the Agreement except in the case of fraudulent misrepresentation.

18.9 Third parties

The Agreement is not intended to create any rights for, nor be enforceable by, any third party except as set out in clause 6, and where the Client and The Doctors Laboratory Limited agree that these Terms and Conditions will apply to any Orders, that agreement is also for the benefit of and enforceable by TDL Genetics Limited.

18.10 Governing law

The Agreement and any dispute arising out of or in connection with it (including non-contractual disputes and claims) or its subject matter or formation will be governed by and construed in accordance with English law and each of the parties submits to the exclusive jurisdiction of the English Courts.

19 INTERPRETATION

19.1 In these Terms and Conditions and the Annex:

'Agreement' has the meaning given in clause 1.3;

'Annex' means the annex to the Terms and Conditions;

'Applicable Law' means the laws, regulations and judgments binding on the relevant party, as amended from time to time;

'Authorised Sub-Processors' means:

a) Health Service Laboratories LLP and any other member of the TDL Group which provides the applicable Test or Service;

b) accredited specialist centres for onward referral of esoteric assays as identified in the TDL Laboratory Guide; and

c) persons who provide information technology services, systems, or laboratory equipment that TDL uses in the course of providing the Services; and

'Business Day' means a day other than a Saturday, Sunday, or public holiday in England;

'Client' means the person or organisation requesting Services and / or Consumables from TDL and for whom TDL has agreed to provide the Services and / or Consumables;

'controller', 'data subject', 'data protection impact assessment', 'personal data', 'personal data breach', 'process' and 'processor' have the meanings given to those terms in the Data Protection Laws;

'Consumables' means any goods to be provided by TDL in order for the Client to benefit from the Services;

'Data Protection Laws' means the UK GDPR, the Data Protection Act 2018, and any other Applicable Law having effect in the United Kingdom concerning privacy or the use of personal data;

'Data Subject Request' means a request made by a data subject to exercise any rights of data subjects under Data Protection Laws;

'Good Industry Practice' means the standard of skill and care reasonably to be expected from a professional provider of the Services;

'Group' in respect of any undertaking, means such undertaking and its group undertakings ('undertaking' and 'group undertaking' having the meanings given in the Companies Act 2006);

'Health Authority' means (i) a department of the UK government or of a devolved administration, (ii) an executive agency of such department, or (iii) a body exercising statutory functions in relation to public health in the UK or any part of the UK;

'Laboratory Guide' means TDL's Laboratory Guide current at the time the Client submits the Order, as supplied to the Client or, if not so supplied, available on request from TDL, including any updates or supplements issued by TDL;

'Order' has the meaning given in clause 1.2;

'Pathology Request' means a request for Testing submitted by the Client in a format TDL accepts from time to time and by any of the methods TDL accepts from time to time, whether in hard copy or via one of TDL's electronic portals;

'Postal Self-Collection Kit' means a kit which can fit through a standard letterbox which is designed for a patient to collect a Sample from themselves. Such a kit contains all the items which a patient needs for that self-collection and for return of the Sample to TDL.

'Privacy Notice' means TDL's detailed Privacy Notice available at tdlpathology.com;

'Processing Instructions' has the meaning given to that term in paragraph 8.2;

'Protected Data' means personal data provided to TDL by the Client or a third party on the instructions of the Client, or collected or generated by TDL in the course of providing the Services or Consumables;

'Public Health Programme' means a programme administered by a Health Authority to monitor or analyse health data for the purpose of public health or for statistical, scientific or research purposes in the public interest;

'Sample' means a pathology sample provided by the Client, or by the patient through use of a

Postal Self-Collection Kit, to TDL for Testing;

'Services' means the services to be provided under the Agreement;

'Service-Specific Terms' means any additional terms which are named as 'Service-Specific Terms' and which are provided to the Client by TDL or published by TDL which relate to specific Services ordered by the Client.

'Sub-Processor' has the meaning given in clause 11.1;

'TDL' means (i) The Doctors Laboratory Limited or, (ii) TDL Genetics Limited in the case of services offered under the TDL Genetics name;

'TDL Group' means TDL Genetics Limited and The Doctors Laboratory Limited and its Group and Health Service Laboratories LLP and its Group;

'Test' means a laboratory test to be carried out by TDL on a Sample, and 'Testing' means the process of conducting that Test and reporting the results;

'UKAS' means the United Kingdom Accreditation Service, or any successor to it;

'UK GDPR' has the same meaning as it does in section 3(10) of the Data Protection Act 2018, read with section 205(4) of that Act.

19.2 References to the singular include the plural and vice versa.

19.3 Clause headings and paragraph headings are for ease of reference only and are not part of these Terms and Conditions for the purpose of construction.

19.4 References to paragraphs are to paragraphs of the Annex.

19.5 Words following the terms 'including', 'include', 'in particular', 'for example' or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.

19.6 The Annex is incorporated into these Terms and Conditions.

ANNEX

1 Subject matter and nature of processing

1.1 TDL processes Protected Data as processor on behalf of the Client:

1.1.1 in the case of Testing, when TDL receives a Pathology Request and Sample and processes the corresponding Protected Data to carry out the Test and report the Test results in accordance with the Processing Instructions;

1.1.2 when TDL carries out the Client's 'fee to patient' instructions, as described below; and

1.1.3 in the case of any other Services or the provision of Consumables, when TDL is required to process Protected Data on the Client's behalf to fulfil the Client's instructions.

1.2 The subject matter and nature of TDL's processing of the Protected Data are:

1.2.1 Samples and Test results for the purpose of providing clinical pathology Services;

1.2.2 information about clinicians who order Tests, for the purposes of reporting the Test results to the Client;

1.2.3 information about a patient's health insurance for the purposes of administering payment for the Services; and

1.2.4 billing information for a patient where the Client has asked TDL to direct TDL's invoice to the patient.

2 Duration of processing

The duration of the processing is the time necessary to carry out the Services or provide the Consumables.

3 Types of personal data

3.1 The Protected Data may comprise the following types of personal data:

3.1.1 name

3.1.2 gender

3.1.3 date of birth

3.1.4 address

3.1.5 identity numbers assigned by TDL or the Client

3.1.6 types of Tests conducted

3.1.7 results of Tests

3.1.8 health insurance policy details

3.1.9 billing information

3.1.10 the types of data referred to in the TDL Laboratory Guide

4 Categories of data subjects

The Protected Data concerns patients in respect of whom TDL conducts Tests, and clinicians who request Tests.

5 Reporting Test results

5.1 TDL will report Test results using the method selected by the Client from the range of options offered by TDL or, if no method is selected by the Client, using a method selected by TDL from that range of options.

5.2 TDL will report the Test results using the contact details supplied to TDL in the relevant section of the Pathology Request. The Client will be responsible for ensuring that those contact details are correct.

5.3 Where TDL supplies Test results electronically it will ensure that the results are supplied in the format selected by the Client (from the range of options offered by TDL) and are supplied to the address indicated when the Client selects electronic results reporting. The Client will be responsible for ensuring that the selected format is compatible with the Client's information systems and for making the results available to the users of those systems.

6 Fee to patient

Where the Client selects the 'fee to patient' option in a Pathology Request form, the Client instructs TDL to seek payment from the patient of the fees owed by the Client in respect of that test. The Client confirms that the patient has agreed with the Client to pay those fees to TDL for the Client. The Client instructs TDL to recover the fees by invoicing the patient using the personal data provided by the Client. The Client instructs TDL on the Client's behalf to appoint debt collectors to recover the fees from the patient if the patient does not pay the invoice by the date payment falls due. The Client authorises TDL to appoint those debt collectors as Sub-Processors in accordance with clauses 9 to 16.

SERVICE-SPECIFIC TERMS OF THE DOCTORS LABORATORY FROM 1ST JAN 2026 FOR HISTOPATHOLOGY SERVICES

The definitions which apply to these Service-Specific Terms are set out in clause 6.

1 THE HISTOPATHOLOGY SERVICES

1.1 These Service-Specific Terms apply to any histopathology Services that the Client places an Order for, including any support for histopathology cases at multidisciplinary team ('MDT') meetings or preparation and investigation of frozen sections.

1.2 These Service-Specific Terms are in addition to the Terms and Conditions.

1.3 TDL reporting of Histopathology cases is guided by publications produced by the Royal College of Pathologists and published Cancer datasets and tissue pathways which can be found here: https://www.rcpath.org/profession/guidelines/cancer-datasets-and-tissue-pathways.html

1.4 In the event that TDL's pathologist reasonably determines that it is necessary for a histopathology Specimen to be referred for additional analyses including those detailed in 1.3 (including special staining, immunohistochemistry and molecular diagnostics or a super-specialist opinion), the Test Turnaround times referred to in the Terms and Conditions will not apply and instead TDL will carry out the necessary analyses as soon as reasonably possible. TDL will use reasonable endeavours to inform the requesting clinician that additional analyses have been requested on that Specimen. NOTE: Additional analyses may incur additional charges over and above those quoted for the initial report.

1.5 Where a Client requests an Urgent Test, TDL will use reasonable endeavours to contact the referring clinician promptly to provide the initial and supplementary reports as required. The Client is responsible for ensuring that TDL is notified when the Client considers that a Test is Urgent. TDL reserves the right to suspend this aspect of the Service if it considers that the Client is sending an unreasonable number of Urgent Tests and the position cannot be resolved through good faith discussions between the parties within 30 days. '**Urgent**' means a Test which has been marked as urgent in the manner and under any conditions that TDL informs the Client that Tests may be marked as urgent.

1.6 TDL will use reasonable efforts to make its pathologists available on reasonable notice to discuss histopathology Test results and Reports with the Client.

1.7 The Client acknowledges and agrees that TDL's consultants may report on Specimens by remotely reviewing digital images, provided that TDL will adopt Good Industry Practice in the production and review of such images.

2 STORAGE

2.1 TDL will store the Specimens in accordance with the guidelines of the Royal College of Pathologists for the retention and storage of pathological records and specimens.

3 SUPPORT FOR MULTIDISCIPLINARY TEAM MEETINGS

3.1 TDL will, where agreed between the parties, provide the Specimen slides and/or images and the relevant Report and associated documentation (together the 'Specimen Information') at the relevant MDT meeting, provided that the Client:

3.1.1 in relation to Specimen Information which has been tested less than six months ago: requests the Specimen Information no less than two Business Days in advance of the date of the MDT meeting where the Specimen Information is needed;

3.1.2 in relation to Specimen Information which has been tested six months or more ago: requests the Specimen Information no less than three weeks in advance of the date of the MDT meeting where the Specimen Information is needed.

3.2 TDL will, where between the parties, arrange for a pathologist to attend and participate in MDT meeting(s) at the Client's request, provided that:

3.2.1 the request for the pathologist to attend the MDT meeting is made no less than 10 Business Dats in advance of the date of that MDT meeting;

3.2.2 where the pathologist is asked to attend and participate in an MDT meeting which relates to a Specimen that the pathologist did not personally review or a Report that they did not personally provide, there will be an additional cost to be agreed by the parties in advance of the pathologist's attendance at the MDT meeting.

4 FROZEN SECTIONS

4.1 If the Client wishes TDL to provide a frozen section Service, the Client must submit an Order for that Service no less than 10 Business Days in advance

of the requested start date for the Service. The Client's Order must include details of the case and the clinical purpose of the frozen section, for example the margin clearance, the location where the Service is to be provided, whether the Client requires TDL to provide a cryostat and consumables, and any other information TDL reasonably considers necessary.

4.2 Where TDL provides a cryostat or other equipment or consumables in the course of the Service ('**TDL Equipment**'), title in the TDL Equipment will remain with TDL or TDL's lessor. Risk in the TDL Equipment will pass to the Client when TDL completes the delivery and (where relevant) installation of the equipment at the Client's Facility (as defined below) and will pass back to TDL when TDL removes the TDL Equipment from the Client's Facility. The Client will not permit any person to use, move or modify the TDL Equipment, except a person authorised by TDL. The Client will indemnify TDL against any costs, claims, damage or loss arising from the loss, theft or destruction of, or damage to, the TDL Equipment which occurs whilst risk in the TDL Equipment lies with the Client, except to the extent caused by TDL or TDL's personnel.

4.3 Where TDL has not agreed to provide a cryostat or other equipment or consumables necessary for performing the frozen section Service, the Client will be responsible, at its own cost, for providing those items for TDL to use. Title and risk in a cryostat or other equipment or consumables provided by the Client ('**Client Equipment**') will remain with the Client. The Client will ensure that the Client Equipment is fit for the purpose of providing the Services at all times, provided that the Client will not be liable for any failure in the Client Equipment caused by TDL or TDL's personnel.

4.4 Where the Client Orders a frozen section Service the Client will:

4.4.1 provide at the location where the Service is to be provided a room with a suitable water supply, sink and power supply, and access to a rest area and bathroom facilities for TDL personnel providing the Services at the location (the '**Facility**'). The Client will provide this Facility free of charge for the duration of the Services and a reasonable time after the end of the Services to allow TDL to recover any TDL Equipment from the Facility;

4.4.2 TDL has the right to decline to provide this Service with no liability to the Client if the Facility is not to TDL's reasonable satisfaction and/or the Facility does not meet the UKAS accreditation standard ISO15189;

4.4.3 ensure that the cryostat and associated Consumables and the Facility it is in are suitable for the purpose of TDL providing the Services required by the Client, to TDL's reasonable satisfaction;

4.5 TDL will provide a suitably skilled and experienced biomedical scientist at the Facility to prepare the Specimens, including preparing glass slides during the frozen section procedure.

5 PRICING

5.1 The price payable by the Client for the Services will be the price agreed between the parties. If the Client submits an Order before the price has been agreed, TDL will not carry out the Services and will not be responsible for the Specimen.

5.2 All prices for histopathology are inclusive of processing the specimen and providing an initial report only.

5.3 If additional analyses are requested by the histopathologist, as detailed in 1.3 and 1.4 then these will be chargeable to the client.

5.4 It is highly recommended that clients advise patients of this before entering into treatment pathway.

6 INTERPRETATION

6.1 In these Service-Specific Terms, any expressions defined in the Terms and Conditions and used in these Service-Specific Terms have the meaning set out in the Terms and Conditions.

6.2 In these Service-Specific Terms the 'Terms and Conditions' means the most recent version of the Terms and Conditions of Business of The Doctors Laboratory published on TDL's website.

Special instructions for samples

1 Contact the laboratory for special sample tubes/containers/instructions.

2 Confirmation of not negative drug screens by LCMS/MS may take up to 5 days.

3 Clinical history essential and protect from light.

4 Send to the laboratory same day.

5 Do not send sample to the laboratory between Friday noon and Monday morning.

6 Contact the Referrals Department before taking and sending sample to the laboratory.

7 Sample should be separated and frozen if sending overnight.

8 DRP Form required. DRP Form can be found at the back of the guide.

9 Clinical history must be provided.

10 Contact the laboratory for special stability tubes for lymphocyte subsets – or take an EDTA sample and ensure same day delivery to the laboratory, Monday to Friday noon (do not send sample between Friday noon and Monday morning).

11 Patient consent required. Consent Form can be found at the back of the guide.

12 Please provide one sample for each person being tested.

13 Protect from light.

14 Provide details of travel history.

15 Ammonia
Sample: EDTA plasma only. Full tubes and tightly stoppered. On ice, centrifuged and analysed 20-30 mins post venepuncture (or plasma can be frozen). If haemolysed gives falsely high results.
Patient: Fasting. Avoid smoking.

16 Lactate sample: Fluoride oxalate plasma only. On ice and separate from cells within 15 mins, analyse promptly. Handle with care as sweat contains large amounts of lactate. No tourniquet.
Patient: Rest 30 mins prior to test.

17 Homocysteine: Spin, separate serum or plasma from cells within 1 hour of collection, or place unspun sample on ice to be received within 6 hours of collection for the laboratory to separate.

18 Citrate samples: Samples should be double spun and separated and frozen within 4-8 hours of sample taking, if a delay is expected with transportation to the laboratory, samples must be transported as frozen.

19 Must include patient's age, height and weight.

21 Urine cytology container, ideally first catch, mid-morning specimen.

22 Must be fresh.

30 Collect sample at end of exposure.

33 Sample must be labelled by hand with first name, family name, gender and date of birth detailed on sample and form. Do not use labels other than the tube label.

34 Samples must arrive in the laboratory on the same day of sample taking or contact the laboratory.

35 Patient should be fasting and resting for 30 mins before sample taking. Samples need handling urgently.

36 Renin: Sample collected either upright/active (after 1 hour) or resting/supine (3 hours lying). EDTA Plasma must be frozen within 2 hours.

37 Provide sample time and date of collection.

38 EDTA sample should not be separated: send whole blood.

40 Informed Consent is required for these tests.

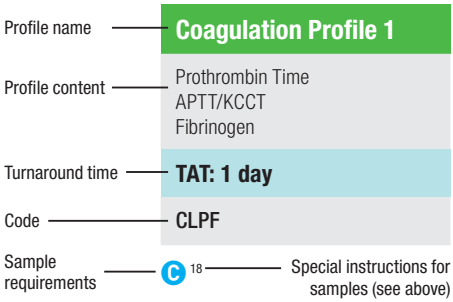
41 Recommendation for patient to attend Patient Reception for sample taking.

42 LGV can be added to a positive chlamydia sample using the same swab if requested within 4 days of receipt of result.

43 Please contact lisa.levett@tdlpathology.com for details for referring samples to the laboratory for sequencing testing.

44 Please separate and freeze EDTA plasma within 3 hours of collection.

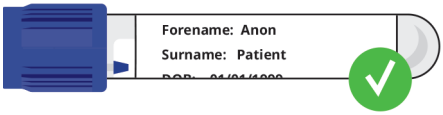
Profile panel information



Sample types, tube labelling and order of draw

Vacutainer tube labelling guidance UPDATE

To efficiently process blood samples, vacutainer tubes need to be labelled correctly:

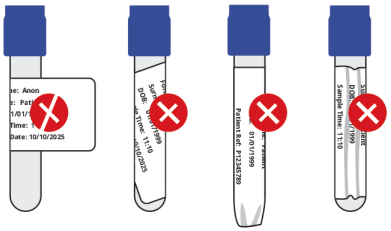


- The ideal size of label to use is 29mm x 51mm (h x w), use one label per tube.
- Apply the label along the length of tube as shown above, with the patient name at the top.
- The label should be straight, applied smoothly without wrinkles and wrapped around the tube.
- Make sure not to cover the fill level.
- Make sure that the label doesn't overlap or hang off the end of the tube.

Labels that are overlapping, lifting, wrinkled, damaged or placed incorrectly can jam or cause damage to the analyser equipment. These samples require relabelling and cause a delay in processing.

DO NOT

- Wrap the label around the tube like a flag or apply it so that it overlaps the end of the tube.
- Use a label that is too large for the tube.
- Apply a label so that it is wrinkled, overlapping or damaged.



Order of draw for blood samples UPDATE

Important mixing guidelines

Blood samples using vacutainers require immediate mixing following sample collection. Insufficient mixing can result in inaccurate test results and the need to re-draw. Correct mixing technique is to gently invert each tube the recommended number of times as shown.

Type		Determinations	Mix
BC	**Blood culture (blue/purple)**	Blue/Aerobic 8-10mL; Purple/Anaerobic 8-10mL	N/A
C	**Sodium citrate**	INR, APTT ratio, Thrombophilia screen, Coagulation studies, D-dimers	3-4
F	**Serum**	Cryoglobulins	5-6
B	**Serum gel**	General blood chemistry; Immunology	6
H	**Lithium heparin**	Specialised chemistry; Reproductive immunology	8-10
A	**EDTA**	FBC, ESR, HbA1C; Genetics; ABO/AASC; Viral PCRs, Genotyping and viral loads	8-10
G	**Fluoride oxalate**	Glucose; Lactate; Blood alcohol	8-10
K	**Trace elements**	Trace elements	8-10

Vacutainer	Anticoagulant	Capacity	SAMPLE TYPE
Lavender	EDTA	4ml / 6ml*	A
Gold	SST/Gel	5ml	B
Light blue	Citrate	4.5ml	C
Red	None	6ml	F
Grey	Fluoride oxalate	2ml, 4ml	G
Green	Lithium heparin	6ml	H
Dark blue	Trace metal	7ml	K

* 6ml EDTA tubes are used for specific PCR assays

Blood culture bottle: contact laboratory	**BC**
Contact laboratory for advice on sample taking	**J**
Test by appointment	**X**
Random faeces	**RF**
Faecal collection	**LF**
Random urine	**RU**
Mid stream urine	**MSU**
First catch random urine (for DL12/Chlamydia, etc.)	**FCRU**
30ml aliquot from a 24 hour urine collection – state total volume	**CU**
30ml aliquot from a 24 hour urine collection with 10ml of 0.1N hydrochloric acid added – state total volume	**PU**
Early morning urine (1st sample of the day)	**EMU**
60ml container (sterile)	**SC**
Cytyc thin prep vial	**TPV**
Orange/Blue swab for culture – swab in transport medium/Blue microswab	**STM**
Black charcoal swab	**CS**
Green viral swab	**VS**
PCR swab for Chlamydia/PCR infection screening	**PCR**
Tap/bottled water mouth wash – 20mls	**MW**
Ammotic fluid (5mls PCR – 10mls Karyotype)	**AF**
Chorionic villus (medium provided by laboratory)	**CVS**
Urine cytology container	**UCYT**

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