TITLE: Haematology Information for Patients and Users

Contents

Reference

Medical Laboratories – Requirements for quality and competence (BS EN ISO15189:2022), Clauses 4.3, 7.2, 8.6.2

Introduction:

This handbook has been provided to inform users of the Haematology laboratory about which services are available and how to obtain the services required.

Also provided are lists of relevant telephone numbers to facilitate easy access to the appropriate Consultant and senior staff for advice, as well as numbers for general and results enquiries.

Any suggestions from users on how this guide could be improved would be welcome for inclusion in future editions. Please forward any suggestions onto Ann Wallis Pathology Quality Manager (Ann.Wallis1@nhs.net)

The Haematology Laboratory is based over two sites University Hospital of North Tees (UHNT) and University Hospital Hartlepool (UHH). A 24/7 service is provided by the Haematology and Coagulation Laboratory at UHNT. There is a satellite laboratory at University Hospital Hartlepool where samples can be dropped off, full blood count processing is carried out on site at UHH Lab, however all other testing is referred to UHNT.

This user guide includes the test availability, sample and request form requirements as well as expected turnaround times.

The Haematology and Coagulation Laboratory participate in External Quality Assurance Schemes through UK NEQAS. Accreditation to UKAS ISO 15189:2012 standards is currently temporarily suspended pending re-assessment by UKAS. Work is ongoing to be accredited to ISO15189:2022. Quality is overseen by the Senior Biomedical Scientist (BMS) in Haematology and the department operates in accordance to the Clinical Pathology Quality Management System.

If you require any further information or advice or would like to visit the Haematology and Coagulation Laboratory, please contact the Senior BMS (contact details on page 5).

Departmental Telephone Numbers

General Pathology

Pathology Reception	01642 624464

Haematology and Coagulation Laboratory

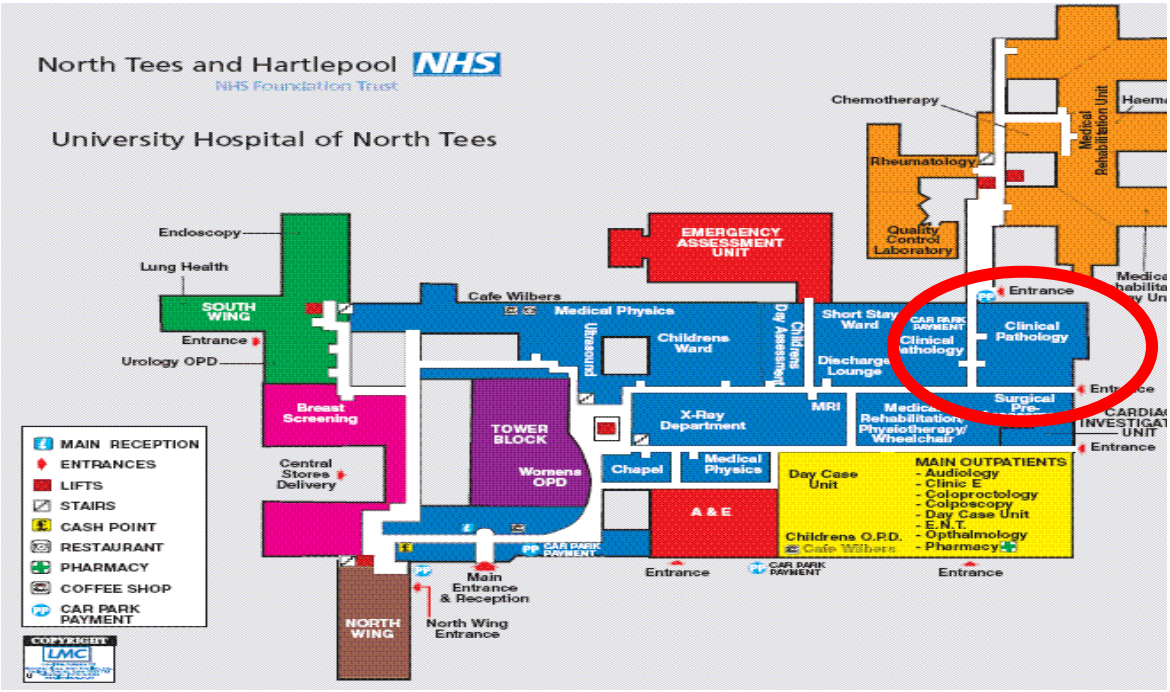
Haematology Laboratory (Mon-Fri 0900-1700)	24450
Haematology and Coagulation Laboratory (Mon-Fri 1700-0900 & all Weekend)	46350
Dr Gabriel (Consultant Haematologist)	Contact Switchboard (01624 617617)
Dr Noh (Consultant Haematologist)	Contact Switchboard (01624 617617)
On Call Consultant Haematologist	Contact Switchboard (01624 617617)
Daniella Winterburn – Blood Sciences Services Manager	01642 854613
Rebecca Gallagher – Haematology Operational Manager	01642 383753
Rachel Webb – Coagulation Technical Lead	01642 383753
Lorna Grange – Haematology Technical Lead	01642 854613
Helen Baxter – Blood Transfusion Operational Lead	01642 854613

Location and Map

The postal address is: -

Clinical Pathology- Haematology and Coagulation
University Hospital of North Tees
Hardwick
Stockton On Tees
TS19 8PE

Clinical Pathology is located just off the main corridor in-between the cardiac investigation unit and the elderly care entrances.



Hours of Opening

Monday – Friday 8.00am – 5.00pm (Pathology Reception)

The Haematology and Coagulation Laboratory provides a 24/7 service and can always be contacted by telephone.

The Satellite Laboratory at UHH is located within the X-ray Department and is open Monday – Friday 9.00am – 17.00pm (outside these hours contact the Haematology and Coagulation Lab UHNT)

Requesting Analyses

Reference should also be made to the Trust policy C47 – Management of Diagnostic Testing Procedures.

ICE test requests are the preferred option; however, paper request forms are accepted. All specimens must be accompanied by a fully completed request form.

The patient must be uniquely identified on the form and on the specimen. For inpatients the form must show the patient's NHS or hospital number as well as the name and date of birth.

Failure to do so can cause results to be allocated to the wrong patient. The addressograph label should always be used for hospital patients. The sample itself must be labelled with the patient's first name, surname, date of birth, hospital or NHS number and the date and time of the specimen – this may be different to the time / date printed on the addressograph label.
The source of the specimen (ward or department and Consultant or GP) must be given.

The name of the requesting doctor and the doctor's bleep number (when indicated on the request form) must be clearly shown. This reduces delays when the laboratory needs to contact the clinician either because of a problem with the specimen or request or because of abnormal or unexpected results. All the data on the form and specimen must be legible.

Send the specimen and the request form together to the laboratory in the clear transparent plastic bags provided (sample within sealed zipper section and request form in separate outer pocket).

Requesting Urgent Analyses

When urgently testing is required, please phone the Haematology and Coagulation Laboratory to inform them when the request has been sent.

Sample Bottles

4.0ml Purple top EDTA sample
4.0ml Blue top Citrate sample
4.0ml Green top Lithium sample
6.0ml Red top Clotted sample

Please refer to request forms for the number of samples required for requested tests. Please phone the Haematology and Coagulation Laboratory if required.

Testing Performed On-site

- Full Blood Count
- Reticulocyte Count
- Blood Morphology
- Erythrocyte Sedimentation Rate
- Glandular Fever Screen

- Thromboelastography (TEG)
- Platelet Mapping
- Coagulation Screen
- INR
- D-Dimer
- APTR
- Mixing Studies
- Thrombin Time
- Anti-Xa
- Reptilase

The above tests have been verified for clinical application, but are currently outside the scope of accreditation pending UKAS assessment.

Further specialist testing is available by referral. For further information please telephone the Haematology and Coagulation Laboratory.

Specimens Referred to External Laboratories

All samples will be registered at North Tees. However, further work may be required. Please contact the laboratory for specific details of which reference laboratories individual specimens are sent to.

Summary of testing or part of testing performed at different laboratories:

- Heparin Induced Thrombocytopenia Screen (HIT) (South Tees NHS Foundation Trust)
- Thrombophilia Screen – Antithrombin III, Protein S and Protein C (South Tees NHS Foundation Trust)
- Factor II and Factor V Leiden (South Tees NHS Foundation Trust)
- Lupus Screen (South Tees NHS Foundation Trust)
- Malaria Screening (South Tees NHS Foundation Trust)
- HITT Screening (South Tees NHS Foundation)
- HPLC performed as part of Antenatal Sickle Cell and Thalassaemia Screening (South Tees NHS Foundation Trust)
- Haemoglobinopathy Testing (South Tees NHS Foundation Trust)
- Factor Assays and VW testing (South Tees NHS Foundation Trust)

Transport of Samples

Samples taken at UHNT
All samples should be delivered to Pathology Reception at either North Tees as soon as possible after they have been taken. The pneumatic pod system can be used for all Haematology and Coagulation samples or they can be hand delivered to Pathology Reception. Outside Monday to Friday 0800-1700 samples can be posted through the

letter box. If the request is urgent and is being hand delivered to Pathology Reception ring the doorbell and a member of staff will answer.

Samples taken at UHH
Samples must be delivered to the Pathology Laboratory at UHH during opening hours (Monday – Friday 0900 – 16:30). They will then be transported to UHNT for processing. Outside of opening hours any request for goes to the security department at the main entrance.

GP Surgeries
The laboratory operates a transport system to collect samples for analysis from GP surgeries in and around Teesside and east Durham. The service runs daily Monday to Friday. Contact the Haematology and Coagulation Laboratory if you require further information.

Discrepancies/Errors

This Trust operates a zero-tolerance policy of labelling errors. This means that labelling on samples and forms cannot be altered or added to retrospectively. All information required must be present and match on both sample and form.

Results

Electronic Transmission of Results
Almost all GP Practices receive their pathology results via the ICE system. Contact the Pathology IT & Information Manager for further details. Results for hospital wards and outpatients are also reported via the Trusts ICE system.

Direct Access to Results
Wards and GPs have access to results via the ICE web browser. Where available, this enquiry system, based on the NHS or hospital number, should be used rather than telephoning the Haematology and Coagulation Team. GP's and hospital users can view results can view all results on ICE. All tests can be ordered using electronic requesting. Sunquest ICE is now used by most GP Practices. All results are sent to ICE. This improves result retrieval as pathology reports become part of the electronic patient record.

Telephoning for Results
Please use the ICE web browser rather than telephoning for results, this reduces the following risks: -

1. Giving patient information to someone not authorised to receive it. This might include the patients themselves who may not identify themselves as such and for whom results should only be given by their treating clinician in the context of all the clinical information.
2. Transcription errors. These occur if the person taking the results does not hear properly what is said over the telephone, does not write the results down properly having heard them or writes them in such a way that they are subject

to misinterpretation by another person when reading them. This is most likely to occur when given results to those least familiar with their use and meaning.

Turnaround Times

The turnaround times stated in the table below are in hours from the date the specimen is received to the authorisation date.

Specimen Type	Turnaround Time
Urgent samples – A+E, Rapid Assessment and EAU	95% within 1 hour
In-patient Requests	95% within 4 hours
GP Requests	95% within 24 hours

Please note: All Urgent Coagulation Tests need to be received in the laboratory within 1 hour after venepuncture to ensure testing can be processed.

Safety Information

Potentially Infective Specimens
All specimens should be treated as if potentially infective, but specimens suspected or known to have certain infectious diseases constitute a hazard. Specimen containers and request forms from patients known to be Hepatitis B Surface Antigen (HBsAg) carriers, cases of suspected acute hepatitis, patients with Tuberculosis (TB), patients known or at risk of being HIV positive, Hepatitis C (HCV), Creutzfeldt-Jakob Disease (CJD) and variant CJD must be labelled with a “Danger of Infection” sticker.

To maintain confidentiality, specimen request forms may be sent in their plastic specimen bag inside an envelope. Delays may occur in processing these samples. Some investigations may not be possible owing to hazard to laboratory staff. For further advice, contact the laboratory.

Factors Known to Affect Processing

Samples must be labelled with at least 3 points of identification which must include full name, date of birth, NHS number and/or hospital number.
Haematology & Coagulation will NOT process the following samples:

- Haemolysed
- Underfilled
- Overfilled
- Clotted
- Lipaemic

Lysis of the red cell membranes causes haemolysis and may lead to pre-activation of the plasma sample, altering the coagulation parameters (increased PT and D-Dimer,

decreased APTT and fibrinogen). When an optical end point determination is used, haemolysis may interfere with light transmission.
Under-filled tubes contain proportionally more sodium citrate, which binds a greater amount of calcium leading to longer clot times. Dilution effect of the plasma from the liquid anticoagulant in under-filled tubes may also contribute to longer clotting times.
Lipaemic/icteric plasma may show interference with light transmission when an optical end point determination is used. Results are ok with mechanical methods of clot detection but as the Antithrombin III methodology uses colorimetric analysis lipaemic samples must be rejected.

Consent

Pathology receives specimens from many sources and does not have access to the patient to demonstrate consent has been given. The referral of a specimen into Pathology is a 'request for a consultation' relating to the specimen and the indications for the request given on the form accompanying the specimen. As such, the Pathology service may amend the request if a different test would be more appropriate, add or delete tests as required. Clinical protocols relating to this practice must be available to the requesting clinician if required.

Compliments/Complaints

Compliments
Compliments can be telephoned to the laboratory, emailed to the management team or Good Practice Event on InPhase can be raised.

Complaints
Minor complaints can be telephoned to the laboratory and we will attempt to immediately resolve the problem. If an InPhase Event is required, please telephone the laboratory to discuss the issue and to assign the correct investigating manager.

Serious complaints about the service delivered or other issues should be sent by letter or email to the Head of Department and a formal response will be made. Serious complaints may also be sent directly to the Patient Effectiveness Team (PET) or to the Chief Executive for the Trust.

Confidentiality

All patient information is protected within the department and will not be issued to third parties outside the NT&H NHSfT or requesting practitioner except when required for referred tests or statutory notification.

Uncertainty of Measurement

The Haematology and Coagulation Laboratory are responsible for ensuring that test results are fit for clinical application by defining analytical performance goals and

selecting appropriate measurement procedures. All types of measurement have some inaccuracy due to bias and imprecision; therefore, measurement results can only be estimates of the values of the quantities being measured. To properly use such results, medical laboratories and their clinical users need some knowledge of the accuracy of such estimates. The complete result of a measurement is a value, a unit and an estimate of uncertainty. This estimate of uncertainty is conventionally referred to as Measurement Uncertainty (MU) and incorporates the cumulative range of factors involved in the testing procedure itself in addition to consideration of the inter-individual and intra-individual biological variation which will potentially influence the overall test result.

Evaluating measurement uncertainty is an ISO 15189:2022 accreditation requirement. Measurement Uncertainty, which has been estimated for each assay during the verification procedure, is reviewed at regular intervals to ensure that Measurement Uncertainty values do not exceed the pre-defined maximum allowable uncertainty for each assay. Overall assay performance is also regularly monitored through internal quality control (IQC) and external quality assessment (EQA) schemes and incorporated in test result interpretation. Measurement Uncertainty for individual assays is available upon request.

Accreditation

All service areas participate in External Quality Assurance Schemes through UKNEQAS. Accreditation to UKAS ISO 15189:2012 standards is currently temporarily suspended pending re-assessment by UKAS. Work is ongoing towards accreditation to ISO15189:2022. Quality is overseen by our Quality Manager and operates in accordance to the Clinical Pathology Quality Management System.