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	Approval	S Clark	Date of Issue	29/10/2018	
	Author	S Blake	Frequency	Annually	

Date of Review	Signed By	Date of Review	Signed By	Date of Review	Signed By	Date of Review	Signed By

Haematology User Guide

Contents

- [Overview](#)
- [Contact details of key members of staff](#)
- [The location of the laboratory](#)
- [Times of opening of the laboratory](#)
- [Details of out of hours service](#)
- [Services offered by the laboratory](#)
- [Referred Tests](#)
- [Instructions for requesting tests](#)
- [Instruction for transportation of samples](#)
- [Laboratory test repertoire, specimen requirements, turn around time and reference ranges](#)
- [Reporting of results](#)
- [Clinical advice and interpretation](#)
- [Common interferences in haematology tests](#)
- [Time limits for requesting additional examinations](#)
- [Comments / Complaints procedure](#)
- [Data Protection](#)
- [Names and addresses of referral laboratories](#)

Overview



Haematology forms part of the Blood Sciences Service, along with Blood Transfusion, Biochemistry, **Flow Cytometry** and Stem Cell Processing. All Services are provided by the Christie Pathology Partnership.

The information in this **user guide relates to Haematology services.**

The laboratory offers a comprehensive test repertoire for adult haematological investigation and treatment of patients including: Blood Counts, Coagulation, Stem Cell Therapeutics, Flow and Blood Transfusion services. The laboratory offers Blood Counts and Coagulation for paediatric patients.

There is a separate user guide for Biochemistry available via the Trust Intranet. Information relating to Blood Transfusion services can be found on the Trust Intranet. The Stem Cell Processing laboratory is closely linked with services provided by the Haematology Transplant Unit.

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Expert clinical and scientific advice is available on the investigation of haematological disorders, the interpretation of test results, and on any further investigations which may be required.

Contact details of key members of staff

Medical Staff	Name	Telephone	E-mail
Consultant Haematologist and Laboratory Lead	Dr Adrian Bloor	446 3657	Adrian.bloor@christie.nhs.uk
Consultant Haematologist	Dr Mike Dennis	446 3271	Mike.dennis@christie.nhs.uk
Consultant Haematologist	Dr Jim Cavet	446 3272	Jim.cavet@christie.nhs.uk
Consultant Haematologist	Dr Samar Kulkarni	446 3228	Samar.kulkarni@christie.nhs.uk
Consultant Haematologist	Dr Richard Chasty	446 3370	Richard.Chasty@christie.nhs.uk
Scientific staff			
Blood Sciences Service Manager	Mrs Sylvia Blake	446 3316	Sylvia.blake@christie.nhs.uk
Blood Transfusion Laboratory manager	Ms Debbie Seals	446 3287	Deborah.Seals@christie.nhs.uk
Stem Cell Laboratory manager	Mrs Diane Sweeney	446 8096	Diane.sweeney@christie.nhs.uk
Out of hours Biomedical Scientist (8pm – 8am)		07823 536085	

NB all telephone numbers should be prefixed with 0161 from outside Manchester



The contact number for the haematology department is 0161 446 3285.

The full contact details of all laboratory personnel can be found on the staff directory.

The location of the laboratory

The Haematology laboratory is situated within the Pathology Department (**Department 45**) located at the Wilmslow Road end of the 1st floor corridor, above main out-patients. Follow the silver signage throughout the hospital for Pathology. Alternatively, you could download the Christie app for real time navigation on your phone. Search for 'The Christie' on the App Store or Google Play.

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Times of opening of the Haematology/Transfusion laboratory

Monday to Friday 08:30 – 17:00	Routine service - Please ensure that samples for routine requests are sent to the laboratory within these hours
Monday to Friday: 17:00-21:00	Restricted service provided on site covering Haematology / Transfusion.
Saturday, Sunday & Bank holidays: 09:00-17:00	Restricted service covering Haematology / Transfusion
Mon – Fri 20:00 – 07:00 Weekends 17:00 – 08:00	One BMS providing a service for urgent work required for the immediate management of the patient. The BMS MUST be contacted prior to urgent samples being sent.

Please note: There is no out of hours service for flow cytometry. Specimens arriving on Saturday, Sunday or bank holidays will not be processed until the next normal working day

Haematology Medical staff are available for advice. During normal working hours they can be contacted using the phone numbers provided above and via switchboard at all other times.

Details of out of hours service



Please send haematology and blood transfusion samples via the pneumatic tube system to reception number 111 or 222.

Results will be available on CWP; Request forms should have a contact number to advise of grossly abnormal results.

The out of hours service is for urgent work required for the immediate management of the patient. The following services are available:

- Full Blood Count & Coagulation Screen - For patients where this information is essential to their management before routine laboratory hours commence.
- Fibrinogen and D.Dimer - ? acute DIC, massive transfusion or active bleeding.
- Group and Save (G & S) – for patients where their group is unknown and who require blood, platelet and /or FFP transfusion.
- X - match - ONLY performed for those patients undergoing emergency surgery, who are bleeding or are emergency cases with haemoglobin < 8.0.
- Routine X-matches for theatre the following day and routine top up transfusions with haemoglobins of >9.0 will NOT be performed.
- Issuing FFP and ordering and issuing platelets for urgent cases in line with current guidelines.



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Services offered by the Haematology laboratory

GENERAL HAEMATOLOGY TEST REPERTOIRE TESTS	SPECIMEN REQUIRED	TURNAROUND TIMES (measured from receipt in lab)	SPECIAL INSTRUCTIONS	KEY FACTORS AFFECTING TEST PERFORMANCE OR INTERPRETATION
Full Blood Count (FBC)	3.4 ml red top EDTA	30 mins		Cold red cell autoagglutinins Lipaemia (these are corrected in lab)
Erythrocyte Sedimentation Rate (ESR)	3.5 ml purple top Citrate; fill exactly	6 hrs	Tube must be correctly filled	Cold red cell autoagglutinins (test will not be reported)
Reticulocyte count	3.4 ml red top EDTA	24 hrs		
Blood film (manual differential)	3.4 ml red top EDTA	24 hrs		Prolonged exposure to EDTA anticoagulant may result in abnormal cell morphology
Infectious mononucleosis screen (Glandular fever)	3.4 ml red top EDTA	8 hrs		Some patients do not produce antibody. In early stage antibody may be undetectable.
Malarial Parasites	3.4 ml red top EDTA	8 hrs		
Sickle screen	3.4 ml red top EDTA	8 hrs	Urgent requests should be notified to the lab by phone	Requestor should indicate if patient has been recently transfused
Bone marrow aspirate	Bone marrow in EDTA	7 days	Discuss with Haematologist	Refrigerate if not sending straight to lab Prolonged exposure to EDTA anticoagulant may result in abnormal cell morphology
CSF Cell count and Cytopathology	CSF fluid in plain bottle	Cell count same day Cytopathology – 7 days	Send samples to lab before 16:30	
Ascitic and Pleural Fluids	Fluid in plain bottle	Cytopathology – 7 days	patients with haematological malignancies only	
Flow Cytometry			Notify lab with urgent requests tel 3286	
CD34 enumeration	3.4 ml red top EDTA	90 mins	Specimens should arrive no later than 16:15	
CD4:8 ratio	3.4 ml red top EDTA		Specimens should arrive no	CD4 and CD8 subsets for monitoring HIV are

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Acute Panel (haematological malignancy diagnosis)	Bone marrow / Blood in EDTA	24hrs	Requests for Acute/Chronic panels should arrive before 3:30 pm. Monday to Friday.	later than 16:15 performed at Central Manchester NHS Trust.
Chronic Panel (haematological malignancy diagnosis)	Bone marrow / Blood in EDTA	24 hrs		



COAGULATION TEST REPERTOIRE TESTS	SPECIMEN REQUIRED	TURNAROUND TIMES	SPECIAL INSTRUCTIONS	KEY FACTORS AFFECTING TEST PERFORMANCE OR INTERPRETATION
Clotting Screen (PT + APTT)	2.9ml green top citrate; Fill exactly	60 mins	All coagulation tests require a good clean venepuncture to avoid sample activation.	Patient on any anticoagulants – please inform the lab Under filled samples may result in falsely prolonged clotting times and will not be processed. Contamination with heparin will result in a prolonged APTT
INR (oral anticoagulation)	2.9ml green top citrate	60 mins		
APTT ratio (unfractionated heparin)	2.9ml green top citrate	60 mins		
D-Dimer (DD)	2.9ml green top citrate	3 hours		
Fibrinogen (FIBC)	2.9ml green top citrate	3 hours		
Thrombin time (TT)	2.9ml green top citrate	3 hours		
Reptilase Time (REPT)	2.9ml green top citrate	3 hours		

Referred tests

Some specialized or low volume assays are referred to suitably accredited external laboratories for analysis. See [the list of referral laboratories](#).

TESTS REFERRED TO OTHER HOSPITALS TEST	SPECIMEN REQUIRED	TURNAROUND TIME	SPECIAL INSTRUCTIONS	REFERRED TO
Plasma viscosity (PV)	3.4 ml red top EDTA	2 weeks	DO NOT refrigerate	Central Manchester NHS Trust
Confirmation haemoglobinopathy screen	3.4 ml red top EDTA	2 weeks		Central Manchester NHS Trust
Glucose-6-phosphate dehydrogenase (G6PD)	3.4 ml red top EDTA	3 days	Raised reticulocyte count may result in false normal	



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PNH Screen (PNH)	3.4 ml red top EDTA	2-5 working days	result	HMDS St James's University Hospital, Leeds
Specialist Coagulation testing (listed below)			Discuss all with Haematologist	
Anti-factor Xa (Low molecular weight heparin)	2.9ml green top citrate	1 week		
Coagulation factors (II,V,VII,VIII,IX,X,XI,XII, FXIII:Ag)	2 x 2.9ml green top citrate	2 weeks		Central Manchester NHS Trust
Von Willebrand Screen (FVIII, FVIII:Ag, FVIII: Act)	2 x 2.9ml green top citrate	2 weeks		Central Manchester NHS Trust
Lupus anticoagulant screen	2 x 2.9ml green top citrate	2 weeks	Indicate if patient on anticoagulants	Central Manchester NHS Trust
Thrombophilia screen (AT, PC, FPS, APC, Lupus, TT)	3 x 2.9ml green top citrate	2 weeks	Patient should be 1 month post anticoagulant therapy or post thrombotic episode	Central Manchester NHS Trust
Factor VIII inhibitor screen	2.9 ml green CITRATE	4 weeks unless urgent		Central Manchester NHS Trust
Prothrombin gene variant	2.9 ml green CITRATE	2 weeks		Central Manchester NHS Trust
VWF Multimers (VWD)	2.9 ml green CITRATE	4 weeks		Central Manchester NHS Trust
Factor V Leiden	2.9 ml green CITRATE	2 weeks		Central Manchester NHS Trust
ADAMTS13	2 x 2.9ml green CITRATE plus %ml plain clotted		Discuss with Haematologist	Sheffield Royal Hallamshire
Molecular tests				
BCR-ABL	10.0 ml red top EDTA (3 tubes)	4 weeks		Central Manchester NHS Trust
JAK2 Gene analysis	10.0 ml red top EDTA (3 tubes)	4 weeks		Central Manchester NHS Trust
Haemochromatosis gene (HFE)	3.4 ml red top EDTA	3 weeks		Central Manchester NHS Trust
ALL MRD testing	EDTA – blood or BM		Completed request form required	Adult ALL MRD lab, UCL

For any test not listed, please contact Haematology (ext 3285) to discuss test availability and specimen requirements

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NORMAL ADULT HAEMATOLOGICAL REFERENCE INTERVALS

	Units	Male	Female	Range Basis
WBC	x10 ⁹ /l	4.0-11.0	4.0-11.0	
Hb	G/L	130-180	115-165	
PLATELETS	x10 ⁹ /l	150-400	150-400	
RBC	x10 ¹² /l	4.50-6.50	3.80-5.80	
MCV	fl	76.0 – 96.0	76.0 – 96.0	
HCT(PCV)	ratio	0.40-0.54	0.37-0.47	
MCH	pg	27.0-32.0	27.0-32.0	Haematological values for normal individuals taken from Dacie & Lewis *
MCHC	G/L	30.5-35.0	30.5-35.0	
RDW	%	12.0-16.0	12.0-16.0	
Differential				
Neutrophils	x10 ⁹ /l	2.0-7.5	2.0-7.5	
Lymphocytes	x10 ⁹ /l	1.5-4.0	1.5-4.0	
Monocytes	x10 ⁹ /l	0.20 – 0.80	0.20 – 0.80	
Eosinophils	x10 ⁹ /l	0.04 – 0.40	0.04 – 0.40	
Basophils	x10 ⁹ /l	0.00 – 0.10	0.00 – 0.10	
Reticulocytes	x10 ⁹ /l	9 - 130	8 - 116	Local range
ESR (Westergren, 1hr at RT)	mm	1 - 18	1 - 22	See * above
Plasma Viscosity	cp	1.45 - 1.8	1.45 - 1.8	From external provider
Blood coagulation				
Prothrombin Time	sec	9 – 14.0	9 – 14.0	
APTT	sec	18.5 – 30	18.5 – 30	
APTT Ratio for Heparin Dosage		1.50 - 2.50	1.50 - 2.50	Local range
Thrombin Time	sec	12 – 19	12 – 19	
Fibrinogen	g/L	2.0 - 4.0	2.0 - 4.0	See *above
D-Dimer	ng/ml	0 - 278	0 - 278	Local range
Serum B12, Serum Folate, Serum Ferritin		See Biochemistry ref. ranges		



*Local ranges are established from 20 – 50 normal samples

Lymphocyte Populations (Adult 18 – 70 years)

Lymphocyte Populations		
T cells (CD3+)	1100 – 1700 / uL	67 – 76%
B cells (CD19+)	200 – 400 / uL	11 – 16%
NK cells (CD3-CD56+)	200 – 400 / uL	10 – 19%
Helper T cells (CD3 +/CD4 +)	700 – 1100 / uL	38 - 46%
Cytotoxic T cells (CD3+/CD8+)	500 – 900 / uL	31 – 40%
CD4:CD8 ratio	0.9:1 – 1.9:1	

Ref Hannet et al; Immunology today 1992;13;215-218.

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PAEDIATRIC/ YOUNG ADULTS HAEMATOLOGICAL REFERENCE INTERVALS

	Birth (Term)	2-14 days	15-30 days	1-3 month	3-12 months	1-6 years	6-12 years	12-18 years (female)	12-18 years (male)
RBC x10 ¹² /L	3.7 - 6.5	3.9 - 6.0	3.3 - 6.0	3.1 - 4.5	3.8 - 4.9	3.9 - 5.1	3.9 - 5.2	4.1 - 5.1	4.2 - 5.5
Hb g/L	149 - 237	134 - 205	110 - 180	94 - 130	100-130	101-138	111-147	121-151	121-166
Hct L/L	0.47-0.75	0.41-0.68	0.3-0.5	0.28-0.42	0.30-0.38	0.3-0.4	0.32-0.43	0.35-0.44	0.35-0.49
MCV fL	100-130	95-120	90-105	84-98	73-95	73-88	77-91	78-95	78-95
MCH pg	32.0-39.0	30.0 - 40.0	30.0-36.0	27.5-34.0	23.0 - 31.5	24.0 - 30.0	24.0 - 30.0	26.0 - 32.0	26.0 - 32.0
MCHC g/L	300 - 360	300 - 365	300 - 360	300 - 350	330 - 360	310 - 350	310 - 350	310 - 360	310 - 360
WBC x10 ⁹ /L	6.0 - 26.0	6.0 - 21.0	5.0 - 20.0	5.0 - 17.0	6.0 - 17.0	6.0 - 17.0	4.5 - 14.5	4.5 - 13.0	4.5 - 13.0
Neuts x10 ⁹ /L	2.7 - 14.4	1.5 - 10.0	1.0 - 9.0	1.0 - 8.0	1.0 - 6.0	1.0 - 8.5	1.5 - 8.0	1.5 - 6.0	1.5 - 6.0
Lymphs x10 ⁹ /L	2.0 - 7.3	2.8 - 9.1	2.8 - 10.0	3.3 - 10.3	3.3 - 11.5	1.8 - 10.5	1.5 - 5.0	1.5 - 4.5	1.5 - 4.5
Monos x10 ⁹ /L	0.1 - 2.5	0.1 - 2.0	0.1 - 1.5	0.2 - 1.5	0.2 - 1.3	0.1 - 1.3	0.1 - 1.3	0.1 - 1.3	0.1 - 1.3
Eos x10 ⁹ /L	0.0 - 0.9	0.0 - 0.9	0.0 - 0.9	0.02 - 0.9	0.05 - 1.1	0.05 - 1.1	0.05 - 1.0	0.05 - 0.8	0.05 - 0.8
Baso x10 ⁹ /L	0.0 - 0.1	0.0 - 0.1	0.0 0.1	0.02 - 0.13	0.02 - 0.2	0.02 - 0.13	0.02 - 0.12	0.02 - 0.12	0.02 - 0.12
Plats x10 ⁹ /L	150 - 450	150 - 500	150 - 600	150 - 650	150 - 560	150 - 550	150 - 450	150 - 430	150 - 430
Ret %	2.0 - 6.0	2.0 - 6.0	1.0 - 3.0	0.2 - 2.0	0.2 - 2.0	0.2 - 2.0	0.2 - 2.0	0.2 - 2.0	0.2 - 2.0
Ret Abs x10 ⁹ /L	80 - 360	80 - 360	33 - 180	6 - 100	7 - 105	8 - 105	8 - 105	8 - 110	8 - 110
RDW-CV %									
IPF %									

FBC Reference Ranges 2014 Central Manchester Foundation Trust. Paediatric Haematology, Chapter 37, Third Edition: Simpkin and Hinchliffe

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Consent

It is the responsibility of the requesting clinician to obtain consent from the patient for the collection of blood specimens. For certain tests (e.g. bone marrow aspiration) a consent form may be required in addition to the request form.

Instructions for requesting tests

Patient preparation and blood sampling:

Trust I.V. policies managed by clinical skills team can be found at the following link:
<http://intranet/departments/education/proed/IVTeam/policies.htm>

Any patient preparation requirements for tests are detailed in the Haematology Test Repertoire above

All specimens must be fully labelled and accompanied by a completed combined Blood Sciences request form. Inadequately or incorrectly labelled samples will not be processed

Request form:

Required:

- Forms should be labelled on both copies with an addressograph label showing patients full name, hospital number and date of birth.
- Hand written forms should have the full name and hospital number and / or date of birth.
- Test required must be clearly indicated.
- High risk status **MUST** be indicated where appropriate on the form.

Desirable:

- Consultant, location and date
- Reason for request / clinical information
- Requestor's contact number.
- The time the specimen was taken and signature of sample taker.

The specimen



Details of specimen type and volume required are detailed in the [Haematology Test Directory](#).

Check expiry dates on **the specimen tube** before use

Required:

- All specimens must have the full name, hospital number and /or date of birth completed by hand. These must match the details on the request form. Addressograph labels may only be used on samples from the Endocrine unit only.
- High Risk status must be indicated by a label on the sample if appropriate.
- Specimens from patients receiving GMOs as part of treatment must be

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identified with the 'GMO' label.

- Coagulation and ESR samples must be correctly filled.
- NB. At no time should blood be transferred from one container to another. This may result in contamination of the specimen with inappropriate anticoagulant and will invalidate the results obtained.
- Date and time specimens were taken
- Location of patient
- Signature of specimen taker.

Urgent Samples

Requests to process samples urgently should be conveyed by a phone call to the laboratory or a personal request when the sample is delivered

Non compliance:

1. Unlabelled specimens will be referred to designated senior staff and discarded unless it is not possible for them to be repeated. An attempt will be made to contact the requestor and request a repeat sample.
2. Specimens that cannot be easily repeated - an attempt will be made to contact the staff member who took the specimen so that the sample can be identified and labelled. The specimen will not be processed until it has been labelled. A note will be made on the final report that the specimen was received unlabelled and that the laboratory cannot take responsibility for actions taken as a consequence of the report.
3. Incorrectly / inadequately labelled specimens - an attempt will be made to contact the requestor to allow correction / completion of the labelling. Where there is conflicting information the person taking the specimen will be asked to re-label it. If the name is correct but other details are incorrect the specimen can be sent back for correction. If the name is incorrect the sample must be discarded
4. Incorrectly filled coagulation and ESR specimens - the ward will be informed and repeat samples requested. The specimen will only be processed in extreme cases where it is difficult to obtain another sample. The decision as to the suitability of the sample rests with senior laboratory staff. If processed, the results will state that the laboratory cannot guarantee the accuracy of the results.

Flow Cytometry Requests



For Flow Cytometry requests please use flow cytometry request forms (available from the laboratory). Request forms should be completed with – patient name, hospital number, date of birth, diagnosis if known, clinical details, specimen type and tests required ('markers' is insufficient).

Instruction for transportation of samples

Various personnel within the Trust will be involved in transport of specimens to and from the laboratory either by hand or via the POD system. In order to protect theirs and others safety the following guidelines should be followed.

Cover any cuts and grazes with a waterproof dressing. Touch specimen containers as little as possible, washing hands as soon as practicable afterwards. Diagnostic

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samples must be sealed in the plastic bag attached to the request form. Carry all specimens in the trays or boxes, where provided, never in pockets. If a specimen leaks into a tray or box, tell the laboratory reception staff and ask them to make it safe.

If a specimen is dropped or broken, do not touch it or try to clear up the mess. Stay with the specimen to prevent other people touching it and send someone to the laboratory for help. If you spill the specimen onto your overall, you must remove it at once and then wash your hands and put on a clean overall. Report the accident to a supervisor as soon as possible. Handle specimen containers gently at all times. See Trust Procedures available under Trust Documents on the Intranet: Sharps policy - http://nww.christie.nhs.uk/documents/default.aspx?Details=Y&Doc_ID=666. (See also Trust Document on Intranet "Waste Management Policy").

The use of the pneumatic tube system for the transport of specimens to the Blood Sciences laboratory must be performed in accordance with Trust policy. Guidance on the use of the pneumatic tube transfer system can be found at: http://discover/documents/default.aspx?Details=Y&Doc_ID=80

Reporting of Results

Some results are automatically validated if they fulfil stringent pre-set criteria; otherwise they are clinically validated by appropriately qualified laboratory personnel. Comments may be appended and additional analyses undertaken based on the clinical details provided and on previous results.

Results are produced in electronic form in the electronic patient record (CWP). Interim and final results are flagged in the appropriate column. *Please note: If any element of the test is marked with an 'I' then final validation for the whole test is incomplete and results may be subject to change, therefore clinicians are advised to contact the laboratory before making any clinical decisions based on an interim result.*

The laboratory will endeavour to telephone results when they have changed significantly from a previous episode or are grossly abnormal, to facilitate this please ensure the correct patient location is provided on the request form.



We aim to provide a user-responsive service with rapid turnaround of accurate results:

Test	KPI	Target
FBC	95% reported in	30 Minutes
Coagulation Screen	95% reported in	60 Minutes

Telephoning Limits

The laboratory will endeavour to telephone results when they have changed significantly from a previous episode or are grossly abnormal; to facilitate this please ensure the correct patient location and contact number is provided on the request

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form. Note: except for wards that have requested us not to phone (see validation SOP).

The following results will be telephoned by the laboratory to the requesting location under the following circumstances:

Test		
Hb	< 80.0 G/L	If not previously at this level
Platelets	<10 x $10^9/l$	If not previously at this level
INR	> 5.0	

Please note that the primary method for transmission of all results is to the Clinical Web Portal (CWP).

Whilst internal and external quality assurance programmes are in operation to ensure accuracy and precision of results, occasionally random errors may occur and escape detection. The clinician is often best placed to detect such errors. Therefore if there is any doubt about a result, it is vital the laboratory is contacted (ext 3285) at once to investigate and re-test samples where possible.

Certain factors may affect and possibly invalidate some test results, causing potential biological and analytical interference. For example, blood transfusion and other intravenous fluids, anticoagulants, drugs, timing of specimen in relation to drug dose, type of tube. Please remember to give details of recent or current treatment on the request forms.

Uncertainty of measurement

All test results are subject to a degree of uncertainty of measurement. This may be due to a range of factors, including:



- Biological variation within individuals
- Analytical measurement imprecision
- Pre-analytical factors

If you require more information regarding the effects of these factors on the outcome of an individual test result please contact the lab on 3285.

Clinical advice and interpretation

Clinical advice on examinations and interpretation of results is available by contacting a Consultant Haematologist or Specialist Registrar via the HTU or direct dial / bleep Interpretative comments are included in the laboratory reports of a number of specialist tests.

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Anticoagulant control

Anticoagulant control (Warfarin, heparin etc.) is undertaken by the medical team managing the patient.

For patients on Warfarin, the request form must indicate that patient is on warfarin and that an INR is required. The INR result will be available on CWP to allow the patient to be dosed by the doctor responsible for their care.

A policy for the [Management of Patients on Anticoagulants](#) is on the Intranet under Trust documents.

A full set of Anticoagulation guidelines is available on every ward. For any further advice, please contact the Haematology registrar or Consultants

Common interferences in haematology tests

Certain factors may affect some test results, causing potential biological and analytical interference. For example, intravenous fluids, anticoagulants, iv feed. Please remember to give details of recent or current treatment on the request forms See [Haematology Test Directory](#)



Time limits for requesting additional examinations

Requests for additional tests on haematology samples will normally only be available for the day the specimen was taken. However the following tests can be added on within the time limits stated

SPECIMEN TYPE IN LAB	TEST TO BE ADDED	TIME LIMIT FROM SAMPLE BEING TAKEN
EDTA	Reticulocytes	Same day
EDTA	Infectious Mononucleosis. screen	Same day
EDTA	Malarial Parasites	Same day
EDTA	Blood film	Same day
EDTA	Haemoglobinopathy screen	Within 2 days
EDTA	HFE gene	Within 2 days
EDTA	JAK2	Within 2 days
EDTA	BCR-ABL	Within 2 days
CITRATE	D-dimer, Fibrinogen and Thrombin time	Same day
EDTA	Flow Cytometry - Immunophenotyping	Within 2 days

Comments/Complaints Procedure

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	Approval	S Clark	Date of Issue	29/10/2018	
	Author	S Blake	Frequency	Annually	

Any complaints or concerns about any aspect of the service should be raised initially with the Blood Sciences Service manager, Mrs Sylvia Blake, telephone 0161 446 3316

We are keen to know about any problems arising from the laboratory service. Feedback from our users will help in our constant efforts to improve our service.

Feedback: There is a User Satisfaction Survey is available for completion.

Data Protection

Christie Pathology Partnership (CPP) is committed to deliver a first class confidential service ensuring that all patient information is processed fairly, lawfully and transparently. Confidential information about patients can only be used for healthcare and relevant business purposes. All staff are required to comply fully with The Trust Information Governance and Security Policy for handling of patient confidential information.

[http://discover/documents/upload/1/Information%20Security%20%20Governance%20Policy%20-v1%205%20FINAL%20\(approved%2020160128\).pdf](http://discover/documents/upload/1/Information%20Security%20%20Governance%20Policy%20-v1%205%20FINAL%20(approved%2020160128).pdf)

In addition to this all HCPC registered staff follow the HCPC confidentiality guidance for registrants

Quality assurance and Accreditation

Quality Statement: The laboratory examinations, procedures and reports of test results are compliant with the requirements for quality and competence in medical laboratories according to United Kingdom Accreditation Service against the International Standard ISO15189:2012. **UKAS Registration Number 9035**
The department participates in all appropriate National External Quality Assurance Schemes (NEQAS) where available. Documentation relating to Internal Quality Control and performance in NEQAS are available for scrutiny by users of the service.

Accreditation



The **Haematology department (including Flow)** is accredited by UKAS in conformance with 'Standards for the Medical Laboratory' incorporating ISO15189:2012.

The department is approved by the Institute of Biomedical Sciences (IBMS) as a **Training Laboratory** and all our qualified scientists are registered with the Health & Care Professions Council (HCPC).

The **Blood Transfusion** service conforms with the UK Blood Safety and Quality Regulations and is deemed compliant as such by the Medicines and Healthcare products Regulatory Agency (MHRA).

Our **Stem Cell** Therapeutics service is accredited by the Joint Accreditation Committee of ISCT and EBMT (JACIE) and holds an Establishment License issued by the Human Tissue Authority (HTA).

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The department participates in internal quality control (IQC) and external quality assurance (EQA) for all the tests undertaken within the laboratory. Performance is monitored and subject to rigorous control, to ensure that analyses are accurate, precise and results are comparable with other laboratories.

The lab also regularly monitors the **UKAS** accreditation status of the referral laboratories used for specialist testing.

Names and addresses of referral laboratories

Referral laboratory	UKAS Registration No.	Accreditation status
Haematology Department Manchester Royal Infirmary Oxford Road Manchester M13 9WH Tel: 0161 276	8650	Accredited
HMDS Leeds St James's University Hospital Beckett Street Leeds West Yorkshire LS9 7TF	8105	Accredited
Adult ALL MRD Laboratory UCL Cancer Institute Paul o'Gorman Building University College London 72 Huntley Street London WC1E 6DD	Research laboratory	URO MRD Consortium
Coagulation Lab Sheffield Royal Hallamshire Hospital Glossop Rd, Sheffield, S10 2JF	7873	Accredited

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Useful Links

Lab Tests Online: Lab Tests Online.org.uk

11. Document Locations

Hard copies are issued to the following locations:	1. Haematology
Electronic Version	1. Haematology Intranet Site
Any other printed copies of this document are unauthorised.	

12. Procedure Amendments

This replaces all previous versions of the document.

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