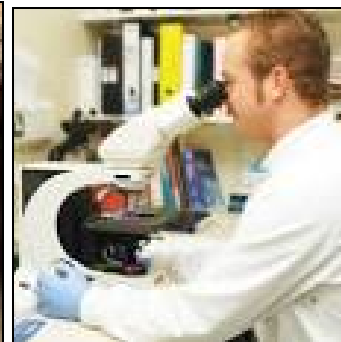
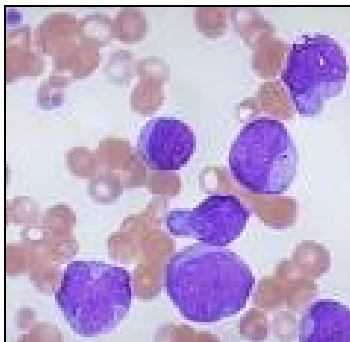


HAEMATOLOGY & BLOOD TRANSFUSION SERVICE (Including Phlebotomy)

USER GUIDE



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1 INTRODUCTION

This user guide is designed to help you get the most from the Haematology, Blood Transfusion and Phlebotomy Services.

- **Department Overview & Current Context**

The Haematology and Blood Transfusion Laboratory Service, including Phlebotomy, which operates within East Kent Hospitals University NHS Foundation Trust (EKHUFT) covers 5 hospital sites including:

1. William Harvey Hospital, Ashford – Hub Blood Sciences laboratory and Phlebotomy Service
2. Kent & Canterbury Hospital, Canterbury – Cross Trained spoke laboratory with Phlebotomy Services. Serving an array of specialist hospital services including Renal/Vascular and Haemato-Oncology and supporting an Emergency Care Centre (ECC). The diagnostics base for the Flow Cytometry Service and large scale research activities with in EKHUFT.
3. Queen Elizabeth the Queen Mother Hospital, Margate – Cross Trained spoke laboratory and Phlebotomy Service – Base for East Kent’s Haemoglobinopathy Service
4. Royal Victoria Hospital Folkestone – Phlebotomy Service Only
5. Buckland Hospital, Dover – Phlebotomy Service Only

There is a 24-7 / 365 diagnostic laboratory service offered on sites 1-3 with full Blood Transfusion and Haematology cover during these times supported by Biomedical and Assistant Health Care Scientists.

The Trusts Blood Transfusion Service maintains MHRA compliance and actively supports the Kent Surrey and Sussex Air Ambulance Service.

All of our hospital Haematology & Transfusion laboratories and Phlebotomy services are UKAS ISO 15189; 2012 compliant for the tests which are listed in our scope of practice on the UKAS.com website or section 25 of this document. For further detailed information on which tests are accredited please visit <https://www.ukas.com/search-accredited-organisations> and search East Kent Hospitals for a detailed record of our test scope against record (9400).

Haematology & Transfusion Laboratory Locations

WHH laboratory is located on the ground floor in the green zone at the rear of the hospital.

KCH laboratory is located in the corridor between Outpatients and Clarke Ward.

QEQM laboratory is located in the St Peter’s Road wing on the ground floor.

See section 22 for Phlebotomy Services

2 LABORATORY OPENING HOURS

The laboratories are operational 24-7 / 365 days a year.

Weekdays

A routine fully staffed Haematology and Blood Transfusion Service operates between 08:00 and 20:00 Monday to Friday.

An emergency laboratory service with out of hours cover being between 20:00 and 08:00 covered by a single out of hours Biomedical Scientist operates outside of routine hours.

Out of Routine working hours the duty biomedical scientist may be contacted as shown below:

Laboratory Contact Details

WHH	Bleep 8646	Or contact via switchboard
K&CH	Bleep 7022	Or contact via switchboard
QEOMH	Bleep 6131	Or contact via switchboard

Weekends

At weekends an out of routine hour's laboratory service operates in Haematology and Blood Transfusion on all 3 sites and operated by a single biomedical scientist.

Please do not telephone the normal routine contact numbers during out-of-hours periods as they may not be heard or the BMS may be attending to duties within another laboratory area.

The duty Biomedical Scientist will undertake any emergency investigations required for the immediate diagnosis and treatment of the patient and must be contacted personally by the requesting doctor / nurse practitioner on each occasion. Samples for testing should be sent immediately to the laboratory after collection either by porter or air-tube system where available.

Patients being admitted for routine elective treatment are not considered urgent and should not be bled for testing during out-of-hours periods.

Bank Holidays

During bank holidays the laboratory service operates in Haematology and Blood Transfusion on all 3 sites and operated by a single biomedical scientist.

3 CONTACT NUMBERS AND KEY PERSONNEL

The main hospital switchboard number is: 01227 766877

If calling from outside the hospital, dial the main switchboard number and then once prompted add the appropriate extension number as below.

If calling from within the hospital then dial the extension number directly.

The following prefixes apply: **WHH (723)** **KCH (722)** **QEQMH (725)**

Contact	Position	Extension Number
Haematology Laboratory		
WHH	Main Laboratory	8065
KCH	Main Laboratory	3173
QEQMH	Main Laboratory	3200
Blood Transfusion Laboratory		
WHH	Main Laboratory	6017
KCH	Main Laboratory	2719
QEQMH	Main Laboratory	4429
Clinical Haematology Team		
Dr Gillian Evans	Head of Laboratory Service	722 5137
Dr Christopher Pocock	Haematology Consultant	722 2766
Dr Jindriska Lindsay (KCH)	Haematology Consultant	722 4093
Dr Sreeth Munisamy(WHH)	Haematology Consultant	725 5167
Dr Moya Young (QEQMH)	Haematology Consultant	725 3178
Dr Anandika Liyanage (WHH)	Associate Haematology Specialist	723 1822
Laboratory Service Management		
Mr Marcus Coales	General Manager for Pathology	723 8400
Mr Steven Rew	Head Biomedical Scientist Haematology & Transfusion Pathology & Care Group H&S Lead	723 1865
Mrs Angela Green	Phlebotomy Service Delivery Manager, Trust Blood Transfusion Coordinator and Quality Lead for Haematology & Transfusion	723 6718
Mrs Catherine Lorenzen	Chief Biomedical Scientist	722 5064

	Transfusion (KCH & QEPMH)	
Mrs Sue Mitchell	Chief Biomedical Scientist Transfusion (WHH)	723 6607
Mr Mike King	Chief Biomedical Scientist Haematology (KCH & QEPMH)	725 3620 (QEPMH) 722 5064 (KCH)
Mr Patrick Ruffle	Chief Biomedical Scientist Haematology (WHH)	723 8066
Mrs Danielle Greensmith	Blood Science Service Operations Support Officer	725 3620 (QEPMH) 722 5064 (KCH)
Phlebotomy Service Management		
Mrs Elizabeth Brown	Blood Transfusion Practitioner and Phlebotomy site lead (WHH & RVHF)	723 6713
Mr Keith Kolsteren	Blood Transfusion Practitioner and Phlebotomy site lead (K&CH)	722 8759
Mrs Lisa March	Blood Transfusion Practitioner and Phlebotomy site lead (QEPMH & BHD)	725 5118

Blood Bank Emergency Direct Dial:

WHH (01233) 616017, KCH (01227) 783124, QEPMH (01843) 227297

For advice on Haemostasis & Thrombosis contact Dr Gillian Evans on 722 5137 or Dr Kim Elliott on 722 5299

4 CLINICAL INFORMATION

It is particularly helpful to us to receive as much clinical information as possible on the laboratory request form as this ensures that the appropriate diagnostic tests are performed on your behalf.

5 CLINICAL ADVICE AND INTERPRETATION

Clinical advice and interpretation is available on request from the key medical personnel listed above. Clinical and interpretative comments are also added to the results if indicated. Out of hours clinical advice is available by contacting the on call Haematologist via the Switchboard

6 SPECIMEN AND REQUEST FORM LABELLING

Please help us to help you by completing request forms (electronic or conventional forms) legibly with all the necessary information. **It is essential** that the patient details are clear and accurate and also that we have a clear indication of the destination for the report and the requestor.

Specimens and request forms must be completed in accordance with the Pathology Directorate's Specimen Acceptance Policy DIR-LP-Q113. Blood transfusion samples must be hand written on the specimen

Requests for investigations must include the following information:

- Patient demographic details including NHS number where available
- Whether the patient is NHS or private
- Date of collection of specimen
- Requesting doctor with bleep number (junior doctors)
- Return destination for the report
- Relevant clinical details including current treatment. Please provide as much information as possible, including anticoagulant drugs
- Tests required

Correct samples for Blood Transfusion

NOTE All samples for analysis by the blood bank **MUST** be fully labelled with patients surname and forename(s), date of birth (not age), patients NHS number (hospital number if unavailable) (or full address for ante-natal samples at booking only) and the ward on which the patient currently resides. This information must be hand written (by the person drawing the blood **only**) and the label signed and dated. All patient details must be correct and thoroughly checked.

Any samples not meeting current guidelines as shown in the Pathology specimen and request form acceptance policy will not be processed.

This may result in delay of provision of blood for your patient. Please see below for details of specimen and request form requirements.

7 SAMPLE REQUIREMENTS

All samples should be transported promptly to the laboratory, at room temperature (except where specified see below) and away from direct sunlight. Appropriate boxes should be used for this purpose and the samples should be placed inside sample bags.

Haematology	Container	Minimum Volume	Comments
FBC Flow Cytometry	Purple top (EDTA)	1ML Paediatric tubes available minimum volume 0.5ml	All samples must be processed within 24 hours from collection.

			Samples should be kept between 4 and 25 C and away from direct sunlight.
Reticulocytes	Purple top EDTA	1ml	
Glandular fever	Purple EDTA or Red top	1ml	
Sickle cell screening	Purple top EDTA	1ml	
G6PD Screen	Purple top EDTA	4ml	Not to be analysed post haemolytic episode. Reticulocytosis may make G6PD activity appear close to normal due to content in these cells. A G6PD should therefore only be requested post haemolytic episode.
ESR *	Purple top EDTA	4ml	Samples must be tested within 24hrs
*Please note that as of April 1st 2018 Paediatric ESRs are only offered as automated tests. The minimum volume required is 1ml of whole blood. Please take in to account the additional volume required for any additional analysis e.g. FBC			
B12 and Folate	Red top /SST	4ml	
Ferritin	Red top/SST	4ml	
Malaria / other parasites	Purple top EDTA	4ml	
Blood Film	Purple top EDTA	4ml	Laboratory should be notified of any Urgent film requests
Blood Transfusion			
Group and Save	Pink top	5ml	
Crossmatch	Pink top	5ml	
Direct antiglobulin test (DAT)	Pink top or purple top	0.5ml	
Cold Agglutinins	Red top	5ml	Must be kept at 37C please discuss with laboratory prior to collecting the sample
Foetal-Maternal Haemorrhage (FMH)	Purple top	4.0ml	

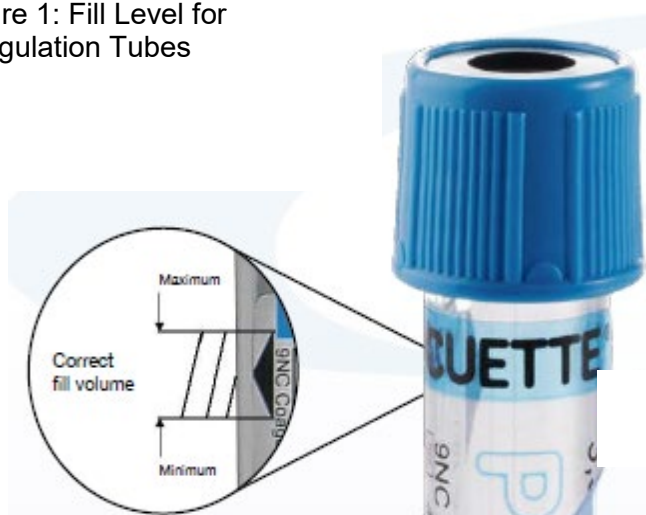
Routine Haemostasis			
Coagulation screen D-Dimer/INR	Blue top	Must be filled to line (See below figure 1)	All samples for coagulation must be processed within 4 hours of collection

For other specialist tests please discuss with the appropriate laboratory.

Results may be affected by factors such as **lipaemia** or **haemolysis**. The laboratory will advise you regarding this.

Additional investigations may be requested by telephoning the laboratory. Tests may be added to FBC samples within 24 hours of receipt of the sample. All coagulation tests must be performed within 4 hours of taking the sample. The laboratory will advise you on the suitability of the sample for performing additional tests.

Figure 1: Fill Level for Coagulation Tubes



NB: It has been observed that when collecting coagulation tubes as the first sample using the butterfly needle collection system the tubes may not always fill to the minimum line causing them to be rejected by the Laboratory. To avoid this please select a butterfly needle with the shortest possible tubing and allow the tubing to fill with blood and displace the air before inserting and filling the coagulation tube. If you experience any problems collecting or filling coagulation tubes then please contact the Haemostasis and Thrombosis Laboratory to discuss.

8 TURNAROUND TIMES (TAT)

Please notify the laboratory of samples during on call periods. Where final results are delayed due to the sample requiring further evaluation e.g. blood film examination, the basic

FBC parameters will be made available on Apex.

TEST	TAT	COMMENTS
FBC – (ED/SEAU/AMU)	within 1 hour of receipt	
FBC urgent (CDU/ITU)	2 hours	Grossly abnormal results on GP or outpatient samples will be phoned on the day of receipt. Out of hours to NHS 111 Service if GP closed.
FBC non urgent	24 hours	
Routine Coagulation (Urgent)	Within 1 hour of receipt	Routine Coagulation Screen / INR
Haematinics (B12, Folate and Ferritin)	1 week	
Blood Films (Non-referred)	72 Hours	72 Hours from blood film production in laboratory (not receipt).
Blood Films (Referred)	1 Week	Where films are referred to consultant haematologists for further comment and authorisation.
Plasma viscosity	1 week	Requires approval of Haematology Clinician
ESR – Routine	24 hours	
ESR – Urgent	Within 1 hour of receipt	For example – Query Giant Cell Arteritis (GCA), Temporal Arteritis (TA) from Ophthalmology/ED etc.
Sickle Cell Solubility Screen (Routine)	72 hours	
Flow Cytometry	72 hours	HLA B27 requests now sent to NHSBT
Haemoglobin Electrophoresis (HBEL)	2 weeks	
Antenatal Haemoglobinopathy Screens	3 working days	
Glandular Fever Screen	48 hours	
HLA B27	7 days	
Malaria and other blood parasites	24 hours	
Blood Group & Antibody Screen	24 hours	
Direct Antiglobulin Test (DAT)	4 hours	
Cold Agglutinins	1 week	Sent to Blood transfusion service

Once results are finalised they will be available on apex and available for viewing by the requesting consultant in charge of the patient or the requesting doctor in primary care.

Results cannot be given directly to patients. All test results must be obtained from the clinical requestor.

If you require more urgent results please discuss your requirements with the biomedical scientist or consultant haematologist.

9 SPECIALIST HAEMATOLOGY INVESTIGATIONS

The Haematology department offers a range of non-routine tests available by prior consultation with a clinical haematologist including:

Cell marker investigations

Lymphocyte subsets (CD4/CD8)

Leukaemia/Lymphoma markers (Immunophenotyping Studies)

HLA-B27

JAK 2 Mutation

Cytogenetics Analysis / Karyotyping/Chimerism

Paediatric Lymphocyte Markers (Subsets)

Investigations of Anaemia

Haemoglobinopathy studies e.g. Gene Sequencing

Red cell enzyme studies

Pyruvate Kinase analysis

Testing for Hereditary Spherocytosis

PNH screen (Paroxysmal Nocturnal Haemoglobinuria)

Cold agglutinins

Further more detailed information can be found in section 17.

10 BLOOD TRANSFUSION SERVICE SPECIFIC

It is extremely important that the patient is correctly identified at the time of blood sampling. This is the responsibility of the person collecting the blood. Samples should be correctly labelled (see section 6 & 7) at the bedside. The labelling of tubes **MUST NOT be delegated to a third party.**

Please remember **BLOOD CAN KILL**

Products issued by the Blood Transfusion laboratory comprise:

Cross-matched blood

Emergency group O (D) Negative blood

Uncross-matched group compatible emergency blood

Fresh frozen plasma

Platelet concentrate,

Human albumin solution (4.5% and 20%)

Cryoprecipitate

Anti-D immunoglobulin

Beriplex (for reversal of oral anticoagulants)

Other coagulation factors

Major haemorrhage units as part of the Major haemorrhage procedure

For full details of the Trust Blood Transfusion Policy please see the Trust Website or ask for a copy to be forwarded to you from any of our Blood Transfusion Laboratories.

Special requirements If your patient has special requirements please discuss these with the blood transfusion laboratory when requesting blood. If you are in any doubt regarding a patient's requirements please refer to the appropriate guidelines or discuss with a Consultant Haematologist.

Conditions which require special requirements include:

Cytomegalovirus (CMV) negative blood SaBTO guidelines:

- Neonates (children <1 month of full term delivery date)
- Intra-Uterine Transfusion (IUT)
- Planned transfusions during pregnancy
- Granulocyte transfusions

Irradiation Intrauterine transfusion top up transfusions where there has been a previous IUT Transfusion, Hodgkins disease, Post treatment with purine analogues eg fludarabine post bone marrow transplantation prior to bone marrow / stem cell harvesting, Inherited immunodeficiency states and patients treated with Anti-Thymocyte Globulin (ATG)

Patients requiring irradiated blood should carry a card stating their requirements.

ALWAYS TELEPHONE THE LABORATORY FOR URGENT BLOOD

Turnaround Times

Routine Crossmatch	24 hours	
Emergency Crossmatch	1 hour	From receipt of request and sample
Urgent group compatible uncrossmatched	15 minutes	From receipt of request and sample
O negative (flying squad)	Immediately available	
FFP	30 minutes	From receipt of request
Platelets	5 hours unless pre-ordered	From receipt of request

The provision of compatible crossmatched blood may be delayed where **atypical auto** or **allo antibodies** are detected in the patient's blood.

You will be informed if this occurs and additional samples may be requested for further analysis. Other blood products are normally available within 30 minutes from request unless the product is not a stock item (e.g. platelet concentrate) or if the blood group of the patient is unknown.

For routine blood crossmatching and the provision of non-urgent blood products please give the laboratory **at least 24 hours' notice**.

When requesting group and save or cross match of blood for patients going to theatre please refer to the standard blood ordering schedule (SSBOS).

11 HAEMOSTASIS AND THROMBOSIS LABORATORY TESTING

Please refer to the Haemostasis and Thrombosis Laboratory Service User Guide on Sharepoint

For further information contact:

Mrs Joanna Nightingale (Head Biomedical Scientist)
Miss Sarah Clarke (Chief Biomedical Scientist)
Dr Gillian Evans (Director of the Haemophilia Centre Service)
Dr Kim Elliott (Consultant for Haemostasis and Thrombosis and Laboratory Clinical Lead)

12 URGENT REQUESTS

- Please request tests to be performed urgently only when it is clinically essential.
- All of our work is processed rapidly and the results are available in a timely manner. The agreed turnaround times for each test are published within this user guide.

- If you wish for a sample to be analysed urgently, please make sure that the request form clearly states this and always contact the laboratory to discuss.
- These samples will be handled separately and the results telephoned to the requesting doctor/nurse as soon as possible.
- If the phlebotomist bleeds the patient, please ensure that the phlebotomist understands that the sample is urgent and needs to be transported immediately to the Haematology or Transfusion laboratory.

13 TELEPHONED RESULTS

- Please avoid asking us to telephone results if possible as this interferes with the work of the laboratory
- Significantly abnormal results will be telephoned to the ward and/or requesting clinician.
- The Haematology Laboratory services bases on each acute site have an agreed list of critical/alert results that will always be telephoned to the ward and/or requesting clinician (see table below)

14 TELEPHONING OF URGENT RESULTS TO A&E (PTL)

Pathology utilises the PTL to communicate the majority of critical results to the accident and emergency departments at William Harvey Hospital, Ashford and Queen Elizabeth the Queen Mother Hospital, Margate.

These results will appear on the PTL/whiteboards in the A&E departments where clinical staff are aware of the need to look for them. **All other critical results, and critical results to all other locations, remain unaffected by this change and continue to be telephoned.**

Should there be a failure of the PTL system, A&E staff will notify pathology staff and laboratory staff should revert to the telephone system until the situation resolves.

Routine Coagulation Telephone Alert Ranges

Telephone Urgently	Telephone Urgently and Inform Haemophilia Centre Consultant
Any INR > 4.5	Any INR >8.0
Any patient receiving unfractionated heparin and APTT ratio is <1.5 or >2.5	Any patient receiving unfractionated heparin and APTT ratio >3.5 Any patient receiving unfractionated heparin and the request form states the patient is bleeding.
Any fibrinogen <1.5g/L	Any patient with abnormal results and the request form states patient is bleeding
Any request form stating Disseminated Intravascular Coagulation (DIC) or ?DIC on the clinical details	Any request form stating DIC or ?DIC on the clinical details if the fibrinogen is <1.5g/L, or the PT or APTT are >5 seconds above the normal range, or if the patient is bleeding.

- We will always ask you to confirm any results that we do give you by telephone by reading the results back to us.
- We will always ask for the name of the person taking the results for audit purposes.
- The above protocol will also be applied if you telephone the laboratory for results.

15 HIGH RISK SAMPLES

The Laboratory operates a policy of **universal safety precautions** for all samples and we recommend that you regard all blood as being potentially infectious. High risk labelling of samples is **not required**.

16 MEASUREMENT UNCERTAINTY AND FACTORS AFFECTING COAGULATION RESULTS

The calculation of the measurement of uncertainty (MOU) is undertaken by the laboratory service through review and update at regular intervals. Information in relation to the MOU for the laboratory tests carried out within the Haematology and Blood Transfusion department of EKHUFT can be obtained by contacting a member of the laboratory team as listed in section 3 of the User Guide.

16.1 Pre Examination Factors Affecting Haematology & Transfusion Results

All Haematology results will be subject to variability arising from how the sample is collected and stored. Differences in patient preparation, specimen collection technique, time of sampling, transportation, storage time and preparation of the primary sample may all alter the results and the measurable amount of an analyte in a sample. Other factors that may influence coagulation results are generally patient specific and include stress, jaundice, underlying clinical conditions and certain drug therapies.

As users of the Haematology & Transfusion Laboratory Service you play a key role in reducing the effects of pre analytical variables on results by following the information and advice provided in this Users Guide to ensure that you collect a good quality sample at the appropriate time and for the appropriate tests. There are a number of steps that you can take to ensure the quality of the sample that you send to us:

- Always check the individual sample requirements
- Ensure the samples are taken in the correct order of draw – **1. Blood culture or no additive tubes, 2. Coagulation tubes, 3. Serum tubes with/without gel, 4. Heparin tubes with/without gel, 5. EDTA tubes, 6. Glucose tubes and 7. Other tubes**
- Do not take the sample from an arm with a drip.
- Do not tip blood from one bottle to another, as this will result in an incorrect blood to anticoagulant ratio or may contaminate the sample with an inappropriate anticoagulant
- Samples must be filled exactly to the level indicated on the bottle.
- Overfilled and under filled samples are unsuitable for analysis.
- As soon as the sample is in the bottle, mix thoroughly by gentle inversion. Do not shake.
- Ensure the samples are delivered promptly to the laboratory.
- Samples >6 hours old when they arrive in the laboratory are unsuitable for all coagulation testing and will be rejected.

16.2 Examination Factors Affecting Haematology & Transfusion Results

As with all examination procedures there are numerous analytical factors that may introduce variability into the results of our haematology tests. These include uncertainty of the calibrator value and dispensed volumes, reagent and calibrator batch variations, equipment maintenance and age, different operators, and environmental fluctuations. There may also be substances present in the sample that interfere with the test procedure such as certain drugs or bilirubin. The laboratory pays careful attention to these factors and takes a range of steps to minimise their effects on results including:

- Where available all tests are referenced to and calibrated against a known reference material or accepted standard
- Following national guidelines and protocols where available
- Annual commercial service and calibration of all laboratory pipettes and the laboratory balance and regular on-going in-house calibration checks
- A comprehensive internal and external quality control programme with careful monitoring of the accuracy, precision and bias of all assays
- Strict adherence to standard operating procedures and manufacturer's maintenance schedules
- Regular competency assessment of all staff
- Assessing the limitations, interfering substances and cross reactions affecting all assays.

16.3 Post Examination Factors Affecting Haematology & Transfusion Results

A number of factors can affect the interpretation of test results. Some assays produce raw numerical data that is then manipulated to produce a final result, and it is possible for calculations to introduce errors (e.g. rounding up numbers) and lead to variability of results. Disease and physiological factors such as biological variation, stress and pregnancy can all bring uncertainty to the interpretation of results. If the result is distinct from the clinical decision value then these factors are generally of little or no importance but as results approach clinical decision values they may significantly affect interpretation.

Automated analysers function within operating limits of accuracy and precision. This may produce slight variance in results if a sample is analysed more than once. These limits are generally very small and the resulting changes in results are not clinically significant. Common accuracy and precision values for our analysers are shown below.

Accuracy within FBC Parameters

Parameter	Accuracy
WBC	Within $\pm 3.0\%$ or within $\pm 0.20 \times 10^9/L$
RBC	Within $\pm 2.0\%$ or within $\pm 0.03 \times 10^{12}/L$
PLT	Within $\pm 5.0\%$ or within $\pm 10.0 \times 10^9/L$
Neut%	Coefficient correlation $r \geq 0.90$
Lymph%	Coefficient correlation $r \geq 0.90$
Mono%	Coefficient correlation $r \geq 0.75$
Eos%	Coefficient correlation $r \geq 0.80$
Baso%	Coefficient correlation $r \geq 0.50$
NRBC%	Coefficient correlation $r \geq 0.80$
Neut#	Within $\pm 3.0\%$ Neut%
Lymph#	Within $\pm 3.0\%$ Lymph%
Mono#	Within $\pm 2.0\%$ Mono%
Eos#	Within $\pm 1.0\%$ Eos%

Baso#	Within $\pm 1.0\%$ Baso%
Ret#	Within $\pm 20.0\%$ or $\pm 15.0 \times 10^9/L$

Precision within FBC Parameters

Parameter	Precision
WBC	CV 3.0% (when WBC $\geq 4.0 \times 10^9/L$)
RBC	CV 1.5% (when RBC $\geq 4.0 \times 10^{12}/L$)
Hb	CV 1.0%
HCT	CV 1.5%
MCV	CV 1.0%
MCH	CV 1.5%
MCHC	CV 1.5%
PLT	CV 4.0% (when PLT $\geq 100 \times 10^9/L$)
Neut#	CV 1.4%
Lymph#	CV 2.33%
Mono#	CV 7.82%
Eos#	CV 5.66%
Baso#	CV 16.16%
RET	CV 15% (when RET = 1 – 4%)
NRBC	CV 25% (when WBC $\geq 4.0 \times 10^9/L$)

Linearity within FBC Parameters

Parameter	Linearity
WBC	Within $\pm 2.0\%$ or $\pm 0.2 \times 10^9/L$ (0 – $100 \times 10^9/L$) Within $\pm 6.0\%$ ($100.1 - 310 \times 10^9/L$) Within $\pm 11.0\%$ ($310.1 - 440 \times 10^9/L$)
RBC	Within $\pm 2.0\%$ or $\pm 0.03 \times 10^{12}/L$ (0 – $8.0 \times 10^{12}/L$)
Hb	Within $\pm 2.0\%$ or $\pm 2 \text{ g/L}$ (0 – 250 g/L)
HCT	Within $\pm 2.0\%$ (0 – 0.60)
PLT	Within $\pm 5.0\%$ or $\pm 10 \times 10^9/L$ (0 – $2000 \times 10^9/L$)
RET%	Within $\pm 20\%$ or $\pm 0.3 \text{ RET}\%$ (0 – 23%)
NRBC%	Within $\pm 20\%$ NRBC (0 – 464/100 WBCs)

Carryover < 0.5% for all parameters**Coagulation**

	Intra assay reproducibility CV %	Inter assay reproducibility CV %
PT (Neoplastine)	0.8 – 1.5	1.3 – 1.7
APTT (Cephascreen)	0.6 – 0.8	0.9 – 1.4
Thrombin Time	1.7 – 2.8	1.6 – 3.3
Reptilase Time	1.0 – 1.1	1.9 -2.2
Fibrinogen	2.3 – 3.4	2.0 – 3.7

	Intra assay reproducibility SD	Inter assay reproducibility SD
PT (Neoplastine)	0.2 – 0.2 s	0.2 – 0.4 s

APTT (Cephascreen)	0.19 – 0.40 s	0.42 – 0.44 s
Thrombin Time	0.53 – 0.55 s	0.29 – 1.09 s
Reptilase Time	0.20 – 0.23 s	0.34 – 1.19 s
Fibrinogen	4 – 7 mg/dl	5 – 6 mg/dl
D-Dimer (Liatest)	0.04 – 0.08 ug/ml	0.05 – 0.14 ug/ml

Glandular Fever Test (Monogen)

Sensitivity of 99 % and specificity of 93 % relative to EBV specific tests.

G6PD

No information available

Sickle Screening

False positives may occur in patients with erythrocytosis, hyperglobulinaemia, extreme leukocytosis or hyperlipidaemia. False positives or false negatives may occur in patients with severe anaemia.

False negatives may occur in infants under 6 months of age due to elevated levels of Haemoglobin F. Positive results may occur in patients with some rare sickling haemoglobin sub-types such as Hb C Harlem or Hb C Georgetown.

The screening test is a qualitative screening procedure and does not differentiate between sickle cell disease (S/S) and sickle cell trait (A/S).

Blood Transfusion and Manual Methods e.g. blood film reporting.

Automated methods for blood group and antibody screen are used in the majority of blood transfusion tests performed. Manual intervention, where needed, requires subjective decisions to be made by a Biomedical Scientist. This also applies to other manual methods such as blood film reporting. In these cases the quality of results is maintained by competency assessment and participation in external quality assurance schemes. Standard Operating Procedures (SOPs) are followed for all procedures.

17 REPORTS

Results will be available to view on Patient Centre and Dart OCM as soon as they have been authorised and paper copy of reports will be issued to the requestor if required. Not all primary care requestors have elected to receive paper copies of the reports.

Reference ranges are periodically re-evaluated and can be found on the paper (being phased out) and electronic report alongside each result. If a reference range has been recently altered a comment will be placed below the test for a period of **six months** to indicate this.

18 SAMPLES REFERRED TO OTHER TRUSTS/LABORATORIES FOR ANALYSIS:

There are a number of tests that it is not cost effective to perform in the Haematology or Transfusion laboratory and these are referred to specialist laboratories outside of the East Kent Hospitals Trust.

The Haematology and Transfusion Service ensures that each referral laboratory has UKAS ISO15189 accreditation for the tests referred and where available, participates in a recognised external quality control (EQA) scheme, and this status is checked annually.

NOTE REGARDING TURNAROUND TIMES (TAT) FOR REQUESTS SENT AWAY

Requestors should note that TATs stated in the table below are the times taken to turn the assays around by our referral partner laboratories once samples have arrived with them.

Please allow approximately **1 additional working day** for sendaway tests to be managed within East Kent for packaging and for onward transit to the referral laboratories listed below.

Please also note that some results are sent back by post to East Kent Pathology and as such time for this transit, the uploading of results on to hospital systems, also needs to be taken in to account.

For results sent to Viapath: For Haematology consultants who have access to the Viapath results portal online, please check this regularly.

If you have any queries please contact the Haematology or Blood Transfusion laboratories as in section 3 for further advice and support.

The table below lists the referral laboratories that we currently use;

Test	Referral Laboratory	Hospital	Reference Lab Turnaround Time
Immunophenotyping for Malignant Disease	Haematological Malignancy Diagnostic Centre (HMDC) Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	5 Working days from receipt or 24hrs if clinically agreed as URGENT
Specialist Coagulation following abnormal Routine Screening	Haemophilia Laboratory Service	Kent & Canterbury Hospital Ethelbert Road Canterbury Kent CT1 3NG	4 weeks for routine screening URGENT screening managed on case by case basis <ul style="list-style-type: none"> Discuss with Haemophilia Laboratory 722 - 5135
Plasma Viscosity	HSL The Halo Building	The Halo, 1 Mabledon Place, Kings Cross, London WC1H 9AZ	3-5 Working days from receipt
G6PD Quantitation	Red Cell Protein Laboratory Viapath Analytics	Kings Healthcare NHS Trust Denmark Hill	5 Working days from receipt

	Kings	London SE5 9RS	
Malarial Parasite PCR Confirmation of Species	Malaria Reference Laboratory	London School of Hygiene and Tropical Medicine Keppel Street London WC1E 7HT	Results will be reported within agreed TATs of; <ul style="list-style-type: none"> - Microscopy 1-2 days - Telephoned results within 2 hrs of receipt - PCR 1-4 days. All results telephoned
Red Cell Grouping Anomalies & Antibody Investigation	The National Blood Service (NHSBT)	NHSBT Tooting London SW17 0RB	5 Working days from receipt
Cytogenetics for Malignant Disease	Haematological Malignancy Diagnostic Centre (HMDC) Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	AML, All & CML (3 working days) MDS & MPD (5 working days) CLL & Lymphoma (8 working days) Myeloma (10-15 working days)
Chimerism Studies	Haematological Malignancy Diagnostic Centre (HMDC) Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	3-5 Working days from receipt
T Cell Subsets (CD4) Immunophenotyping - GUM (if K&C analyser out of action)	Haematological Malignancy Diagnostic Centre (HMDC) Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	5 Working days from receipt
Paroxysmal Nocturnal Haemoglobinuria (PNH) Investigations	Haematological Malignancy Diagnostic Centre (HMDC) Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	5 Working days from receipt Or 24hrs if clinically agreed as URGENT
Lupus Anti-coagulant and Thrombophilia Screening	Haemophilia Laboratory Service	Kent & Canterbury Hospital Ethelbert Road Canterbury Kent CT1 3NG	4 weeks for routine screening URGENT screening managed on case by case basis

			<ul style="list-style-type: none"> Discuss with Haemophilia Laboratory 722 - 5135
EMA Dye Binding (Osmotic fragility)	Hammersmith Hospital Haematology Laboratory	Hammersmith Hospital G Block Du Cane Road London W12 08F	5 Working days from receipt
Pyruvate Kinase	Red Cell Protein Laboratory Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	10 Working days from receipt
Haemoglobinopathy Screening / Variant Confirmation	Red Cell Protein Laboratory Viapath Analytics Kings	Kings Healthcare NHS Trust Denmark Hill London SE5 9RS	5 Working days from receipt (Results available online)
HLA B27 Screening	The National Blood Service (NHSBT) RCI Laboratory	Tooting London SW17 0RB	5 Working days from receipt
Paediatric Lymphocyte Subsets CD4 Immunophenotyping	Department Of Immunology	Camelia Botnar Laboratories Level 4 Great Ormond Street Hospital London WC1N 3JH	3-5 Working days from receipt
JAK 2 Kinase	Viapath Analytics Guys Hospital	Guys & St Thomas' NHS Foundation Trust Westminster Bridge Road	2 weeks from receipt
Histo-Incompatibility & Immunology (Granulocyte Immunology)	H&I NHSBT	H&I NHSBT Filton, Bristol, BS34 7QH	28 days from receipt
Platelet Immunology	H&I NHSBT	H&I NHSBT Filton, Bristol, BS34 7QH	7 working days from receipt

19 TIME LIMITS FOR REQUESTING ADDITIONAL EXAMINATIONS

Due to the deterioration of liable clotting factors, there is a time limit on requesting additional examinations. Six hours after the original sample was taken, we will be unable to add additional examinations to the sample as the integrity of the sample may have become compromised.

20 REFERENCE RANGES**(EKHUFT) HAEMATOLOGY LABORATORY NORMAL RANGES**

The reference ranges which have been applied by the laboratories Haematology service for the reporting of Full Blood Count requests is based upon the parameter reference ranges quoted in the following text:

Lewis, S. M., Bain, B. J., Bates, I., Dacie, J. V., & Dacie, J. V. (2006). *Dacie and Lewis practical haematology*. Philadelphia: Churchill Livingstone/Elsevier

Reference ranges are reviewed at regular intervals according to local laboratory standard operating procedures.

Full Blood Count Parameters								
	Adult Male	Adult Female	10 Years	5 Years	1 Year	3 Months	1 Month	1 Week
Hb g/L	130–180	110–150	115- 155	110-140	110-140	111-141	115-165	150- 210
WBC X10 ⁹ /l	4.0-11.0	4.0-11.0	5.0- 13.0	5.0-15.0	6.0-16.0	6.0-18.0	5.0-19.0	10.0- 26.0
Rbc X10 ¹² / l	4.50-6.00	3.80-4.80	4.0- 5.20	4.0-5.20	3.9-5.1	3.1-5.30	3.0-5.40	4.0- 6.60
Plt X10 ⁹ /l	150-400	150-400	180- 400	200-450	200-550	150-550	150-500	150- 250
Hct	0.40-0.50	0.36-0.46	0.35 - 0.45	0.34 - 0.40	0.30 - 0.38	0.30 - 0.40	0.33 - 0.53	0.45 - 0.67
MCV fl	80.0- 100.0	80.0- 100.0	77.0- 95.0	75.0- 87.0	72.0 - 84.0	68.0- 84.0	92.0 - 116.0	92.0 - 118.0
MCH pg	27.0-32.0	27.0-32.0	25.0- 33.0	24.0– 30.0	25.0- 29.0	24.0- 30.0	29.0- 36.0	31.0- 37.0
MCHC g/L	320-360	320-360	320- 360	320-360	320-360	320-360	320-360	320- 360
Neut x10 ⁹ /l	2.0-7.5	2.0-7.5	2.0-8.0	1.5 – 8.0	1.0 – 7.0	1.0 – 6.0	3.0-9.0	3.0- 5.0
Lymph x10 ⁹ /l	1.5- 4.0	1.5-4.0	1.0 – 5.0	6.0 – 9.0	3.5 – 11.0	4.0 – 12.0	4.0-16.0	2.0 – 8.0
Mono x10 ⁹ /l	0.2 –1.0	0.2 –1.0	0.2 – 1.0	0.2-1.0	0.2-1.0	0.2 - 1.2	0.5 – 1.0	0.5 – 1.0
Eos x10 ⁹ /l	0.02-0.5	0.02-0.5	0.1-1.0	0.1 – 1.0	0.2 - 1.0	0.2-1.0	0.2-1.0	0.1-2.0
Baso	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-.1	0.0-0.1

x10 ⁹ /l								
Retics x10 ⁹ /l	50-100	50-100	50-100	50-100	50-100	50-100	20-50	50-350

Erythrocyte Sedimentation Rate Normal Ranges

AGE	MALE	FEMALE
17-50 years	1-10	1-12
51-60 years	1-12	1-19
61-70 years	1-14	1-20
>70 years	1-30	1-35

*Mm represents millimetres travelled per hour

Routine Coagulation Test Normal Ranges

Test Name	Normal Range
PT	12-16s
APTT	22-35s
FIBRINOGEN	1.9-4.3g/L
REPTILASE TIME	14-19s
THROMBIN TIME (TT)	13-20s
D-DIMER	0.05-0.5ug/ml

*s represents Seconds

Flow Cytometry (Adult Absolute Values Reference Range)

CD3 = 600-3100 cells/ μ l

CD4 = 360-1790 cells/ μ l

CD8 = 140-1600 cells/ μ l

21 SERVICE COMPLIMENTS AND COMPLAINTS

Should your experience of our services not reach the very high expectations we set out to achieve then we would appreciate you contacting one teams to discuss your complaint/concern:

For Informal Complaints

Please contact:

Pathology Operations Manager (Christiana Christodolou-Smith) or Ext 723-6133

Head Biomedical Scientist (Steven Rew) steven.rew@nhs.net or Ext 723 1865

Phlebotomy Service Delivery Manager & Blood Transfusion Coordinator (Angela Green)
a.green@nhs.net or Ext 723 6718

For Formal Complaints

Please use the following contact:

Patient Experience Team (PET)

Email: ekh-tr.patientexperienceteam@nhs.net#

Telephone Number: 01233 633 331

Extension: 722-3145

22 TRANSPORT OF SPECIMENS TO THE LABORATORY

GEOGRAPHICAL CATCHMENT

East Kent University Hospitals NHS Foundation Trusts Haematology & Blood Transfusion Laboratories and Support services are spread across a wide geographical area supporting over 110 primary care sites from Margate to the east, Faversham to the north, Tenterden to the west and Romney Marsh to the south.

Our services are reliant upon a specific and robust transport infrastructure in order to effectively support an ever growing population of 759,000 with East Kent.

These support services are located within equal distance of each other geographically but are constrained by the road network in places. Our services operate from:

1. The William Harvey Hospital, Ashford
2. The Kent & Canterbury Hospital, Canterbury
3. The Queen Elizabeth the Queen Mother Hospital, Margate
4. Royal Victoria Hospital, Folkestone (Phlebotomy Only)
5. Buckland Hospital, Dover (Phlebotomy Only)

The figure below demonstrates the wide geographical spread of East Kent's Pathology services as things stand.

FIGURE 1 – SPREAD OF MAIN NHS TRUST SITES



The Pathology department holds an SLA with EKHUFT transport services in order to cover all of the primary care sites in our catchment on a daily basis and provide assurance that samples will be delivered within any set turnaround time e.g. coagulation from source to laboratory result within 6 Hours. The pattern of delivery from GP surgery to laboratory will be dependent upon locality and based upon distance to the local hospital Pathology service laboratories in order to ensure optimum turnaround times and efficiency.

Internal Laboratory to Laboratory Sample Logistics

Some Pathology specimens are transferred to other sites within EKHUFT in order to be processed or to be collated centrally and sent off site to external pathology providers for analysis.

The transport between sites is captured below:

Sample Logistics by Pathology Discipline

Haematology

The Haematology laboratory services send a variety of samples between EKHUFT sites and can be best described by breaking down each site as below:

All Sites

Specialist Coagulation is handled and separated in the main Haematology laboratories on the WHH and QEQMH sites before being frozen and transported daily (internal transport) to the Kent, Surrey and Sussex Haemophilia and Thrombosis centre for analysis which is based opposite Pathology on the Kent & Canterbury site. Occasionally urgent specimens may be couriered across at a cost. Due to the proximity of the K&CH Haematology laboratory to the Haemophilia Centre coagulation specimens received do not require inter-site transport. Inter-site transport is also used throughout the month for inter-site IQC studies for Blood Coagulation and Full Blood Counts.

Blood films may also be sent to any site out of hours for review by local Haematology clinicians in the case of a new haematological malignancy e.g. AML/ALL

In addition to the above the sites send the following samples between sites on Trust transport:

WHH

The WHH Haematology laboratory sends samples to QEPMH for all Haemoglobin Electrophoresis studies on a daily basis.

The WHH Haematology laboratory sends blood films to K&CH for clinical review during times when consultant haematologist cover is not available at the WHH site.

CD4 samples are transferred to K&CH on a daily basis through WHH specimen reception and via Transport. These samples are 'Urgent' and are processed at the K&CH site by Flow Cytometry.

Rarely Plasma Viscosity samples sent to K&CH for transport to The Doctors Laboratory (TDL)

K&CH

The K&CH Haematology laboratory sends samples to QEPMH for all Haemoglobin Electrophoresis studies on a daily basis.

QEPMH

The QEPMH Haematology laboratory sends blood films to K&CH for clinical review during times when consultant haematologist cover is not available at the QEPMH site.

Rarely Plasma Viscosity samples sent to K&CH for transport to The Doctors Laboratory (TDL)

Blood Transfusion

The Trusts Blood transfusion laboratory service is reliant upon the transport infrastructure to deliver the following samples and blood products between sites on occasions:

- Routine antenatal blood group and antibody screening samples to WHH from K&CH and QEPMH on a daily basis
- HLA B27 samples to K&CH Flow Cytometry laboratory on a daily basis
- Blood & Blood Products as and when required during routine working hours.

Blood and Blood products includes (not exhaustively):

- a. Red Blood Cells (Packed)
- b. Fresh Frozen Plasma (FFP) / OCTAPLAS®
- c. Platelets
- d. Cryoprecipitate
- e. Factor Concentrates
- f. Anti-D Immunoglobulin

Ward to Laboratory Internal Sample Logistics

Specimens for Haematology and or Blood Transfusion testing can be transported to the laboratory using one of the following methods:

1. In person from ward to laboratory reception
2. Through use of the Trusts pneumatic tube system within a secure air-pod - where this option exists
3. Through the hospitals 2gether Solutions portering service

23 PHLEBOTOMY SERVICE

The Trust phlebotomy services are delivered by the Pathology Clinical Blood Transfusion team under the management of the 3 site based Blood Transfusion Practitioners who are based within Pathology and can be contacted as per section 3.

A weekday walk in phlebotomy service is available within the William Harvey, Kent and Canterbury, Queen Elizabeth Queen Mother, Royal Victoria and Buckland hospital sites.

Patients bled within the outpatient phlebotomy areas must be aged 7 or over. Patients under 7 are bled by paediatrics within the paediatric blood clinics e.g. Padua/Rainbow/Dolphin/Carousel.

Outpatient phlebotomy works on a ticket system where there are no booked appointments for GP patients apart from at the Queen Elizabeth Queen Mother hospital, where an appointment system exists for GP patients and out-patients are seen on a ticket system.

The Kent & Canterbury and Queen Elizabeth Queen Mother hospital sites have their outpatient phlebotomy rooms adjacent to the site Pathology laboratory. All other outpatient phlebotomy is situated within the hospitals main outpatient areas.

24 MANAGEMENT OF DATA AND INFORMATION

The proper management of data and information in the laboratory is essential for the provision of the service.

The department is committed to meeting its information security obligations to meet the needs of users, clients, patients and staff with respect to confidentiality, integrity and availability, which are defined as follows:

Confidentiality: protecting information from unauthorised disclosure

Integrity: safeguarding the accuracy and completeness of information and software

Availability: ensuring information and vital services are available to users when required

DIR-MP-Q107 [The Management of Data and Information](#) describes the department's adherence to this standard.

25 UKAS ISO15189; 2012 ACCREDITED TESTS

All of our hospital Haematology & Transfusion laboratories and Phlebotomy services are UKAS ISO 15189; 2012 compliant for the laboratory tests which are listed in the table below. For further detailed information on which tests are accredited please visit <https://www.ukas.com/search-accredited-organisations> and search East Kent Hospitals for a detailed record of our test scope against record (9400).

List of Tests for which our services hold UKAS ISO15189;2012 Accreditation
Haematology Laboratory
<p>Full Blood Count (FBC) <i>Including:-</i> Haemoglobin White Blood Count Platelet Count Red Blood Count Haematocrit MCV MCH MCHC RDW Neutrophil count Lymphocyte count Monocyte count Eosinophil count Basophil count Reticulocyte Count NRBC Count</p>
Blood Film for detection of abnormalities
Erythrocyte sedimentation rate (ESR)
Detection of infectious mononucleosis heterophile antibodies
<p>Blood Parasitology Malaria Parasite speciation (P falciparum, P. vivax, P ovale, P malariae)</p>
<p>Haemoglobinopathy: Quantitation of HbA2 Quantitation of HbF Quantitation of HbS Identification/Quantitation of other Variant Hb</p>
Glucose-6-Phosphate Dehydrogenase Deficiency Screen
Sickle cell screen
<p>Coagulation Clotting Screen Prothrombin time/INR APPT/APPTR Fibrinogen (Clauss) Thrombin Time Reptilase PT-50:50 Mixing Studies APTT 50:50 Mixing Studies D Dimer</p>
<p>Flow Cytometry for Immune Monitoring Lymphocyte Subsets CD-4 CD-8 CD-3</p>
Blood Transfusion Laboratory

<p>Blood Grouping ORhD positive ORhD negative ARhD positive A RhD negative B RhD positive B RhD negative AB RhD positive AB RhD negative</p>
<p>Antigen phenotyping C, c, E, e, K, Fya, Fyb, Jka, Jkb, M, N, S, s, Lea, Leb, P1, Kpa, Lua and Cw</p>
<p>Antibody Screen Rh – , C,D,E,c,e, Cw Kell – K, k, Kpa Duffy –Fya, Fyb MNSs M, N, S, s Kidd – JKa, Jkb Lutheran – Lua Lewis – Lea, Leb P – P1 A1</p>
<p>Antibody Identification (IAT) Rh – , C,D,E,c,e, Cw Kell – K, K, Kpa Duffy –Fya, Fyb MNSs M, N, S, s Kidd – JKa, Jkb Lutheran – Lua Lewis – Lea, Leb P – P1 A1</p>
<p>Antibody Identification (Enzyme) Rh – , C,D,E,c,e, Cw Kell – K, K, Kpa Kidd – JKa, Jkb Lutheran – Lua Lewis – Lea, Leb P – P1 A1</p>
<p>Direct Antiglobulin Test</p>
<p>Antigen phenotyping C, c, E, e, , Fya, Fyb, Jka, Jkb, M, N, S, s, Lea, Leb, P1, Kpa, Lua, Cw and K</p>
<p>Compatibility testing</p>
<p>Detection and Estimation of Foetal Maternal Haemorrhage Kleihauer technique</p>

Queen Elizabeth the Queen Mother Hospital Phlebotomy Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Out Patients 08h45 to 16h30	Out Patients 08h45 to 16h30	Out Patients 08h45 to 16h30	Out Patients 08h45 to 16h30	Out Patients 08h45 to 16h30	Closed	Closed
Wards 08h30 to 12h00 12h30 to 14h30	Wards 08h30 to 12h00 12h30 to 14h30	Wards 08h30 to 12h00 12h30 to 14h30	Wards 08h30 to 12h00 12h30 to 14h30	Wards 08h30 to 12h00 12h30 to 14h30	Wards - 6 Phlebotomists 07h30 to 10h30	Closed
Warfarin Clinic 13h30 to 16h00			Warfarin Clinic 13h00 to 15h30		Closed	Closed

Glucose Tolerance Tests (GTT) are by appointment only – Telephone number is 01843 235000

Buckland Hospital Dover Phlebotomy Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Outpatients 08h00 to 16h45	Outpatients 08h00 to 16h45	Outpatients 08h00 to 16h45	Outpatients 08h00 to 16h45	Outpatients 08h00 to 16h45	Closed	Closed
					Closed	Closed

Glucose Tolerance Tests (GTT) are appointment only – Telephone 01843 235000

Kent & Canterbury Hospital Phlebotomy Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Out Patients 08h30 to 16h30	Out Patients 08h30 to 16h30	Out Patients 08h30 to 16h30	Out Patients 08h30 to 16h30	Out Patients 08h30 to 16h30	Closed	Closed
Wards 08h30 to 12h00	Wards 08h30 to 12h00	Wards 08h30 to 12h00	Wards 08h30 to 12h00	Wards 08h30 to 12h00	Wards - 2 Phlebotomists	
Warfarin Clinic 08h30 – 13h00	Warfarin Clinic – at Deal Hospital 08h30 – 13h00		Warfarin Clinic 08h30 – 13h00			

Glucose Tolerance Tests (GTT) are done on Day Surgery Ward by appointment only – Telephone 01227 866445

Royal Victoria Hospital Folkestone Phlebotomy Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Out Patients 08h30 to 16h00	Out Patients 08h30 to 16h00	Out Patients 08h30 to 16h00	Out Patients 08h30 to 16h00	Out Patients 08h30 to 16h00	Out Patients 09h00 to 12h00	Closed
				Warfarin Clinic 08h30 to 12h45		

Glucose Tolerance tests (GTT) are appointment only - Telephone number is 01303 854484, call between 10h30 to 12h00 or 16h00 to 17h00 to book an appointment

William Harvey Hospital Ashford Phlebotomy Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Out Patients 08h30 to 17h30	Out Patients 08h30 to 17h30	Out Patients 08h30 to 17h30	Out Patients 08h30 to 17h30	Out Patients 08h30 to 17h30	Closed	Closed
Wards 08h00 to 13h00 14h00 to 16h30	Wards 08h00 to 13h00 14h00 to 16h30	Wards 08h00 to 13h00 14h00 to 16h30	Wards 08h00 to 13h00 14h00 to 16h30	Wards 08h00 to 13h00 14h00 to 16h30	Wards Team A 07h00 – 10h00 (2 phlebotomists) 11 wards, Team B 08h00 – 12h00 (2 phlebotomists) 8 wards,	Wards Team B 08h00 – 12h00 (2 phlebotomists) 9 wards,
	Warfarin Clinic 08h30 to 12h45			Warfarin Clinic 08h30 to 12h45		

Glucose Tolerance Tests (GTT) by appointment only - Telephone number is 01233 616060, call from 11h00 to 16h00, Monday to Friday