

# Information for users of the Wirral Blood Sciences Laboratory At Clatterbridge Cancer centre

**This document is an appendix of the Clinical Biochemistry and Haematology User Guides and is intended for use only by users of the laboratory at the Clatterbridge Cancer Centre**

Date of Issue: July 2024  
Review Date: July 2025  
Author: M Naidoo

Version 7.2

This document is only a simple guide to laboratory services at Clatterbridge Cancer Centre (CCC), and should be viewed as an appendix of the detailed Wirral Clinical Biochemistry User Guide and Guide to the Haematology Laboratory Services available from the Wirral University Teaching Hospital Foundation Trust intranet or internet:

## 1. PATIENT CONFIDENTIALITY/PERSONAL

Wirral Hospitals adopts the NHS Information Governance framework to ensure patient, staff and other confidential information is handled securely and safely. The Wirral Hospitals Information Governance policy (ref 095) relates to all information used by the Trust and its employees and to other NHS policies and legislation. Through its mandatory staff induction programme, it ensures staff are made aware and follow procedures documented in this policy and subsequently annual mandatory assessments are required to allow the trust to monitor its compliance.

Consent – It is assumed by the laboratory that by sending specimens for analyses the requester has received consent from the patients.

Clinicians should be aware that the laboratory may undertake reflex tests where clinically indicated or to aid in interpretation.

## 2. LOCATION OF BLOOD SCIENCES LABORATORY

At the Clatterbridge Cancer Centre the Blood Sciences (satellite clinical Biochemistry and Haematology) laboratory is located on the first floor next to Delamere ward. The laboratory is accessed by ascending the stairs just off the main entrance to the Clatterbridge Cancer Centre and is sign posted Pathology Laboratory.

## 3. LABORATORY OPENING TIMES

Monday to Friday: 9-5 p.m. Specimen reception closes to receipt of specimens at 4:30pm. Please note, specimens for Biochemistry received after 1:30pm on Fridays will be sent to APH for analysis to enable preventative maintenance to be carried out on the analysers.

Weekend and Bank Holidays: Closed. On site Bank holiday cover by prior arrangement with laboratory management only.

Out of Hours: Please contact the Haematology or Biochemistry BMS on Call at Arrowe Park Hospital (APH) via switchboard.

Lunchtime and break periods:

For one hour every day, between 12 and 2 p.m., a qualified Biomedical Scientist in the laboratory will be at lunch. During this time samples will still be processed as usual, but any telephone enquiries will be directed to APH. The CCC staff will be informed that they are through to the APH laboratory when this is the case.

During break periods the staff will be on site; therefore, there will be no change to the service.

#### 4. LABORATORY TELEPHONE NUMBERS

LOCATION	CONTACT	EXTENSION
CCC Blood Sciences Laboratory		556 5942 or 556 5943
APH Biochemistry	Emergency Results	8353/2088
APH Haematology & Coagulation	Emergency Results	2093
Manager (Biochemistry)	Mrs D. Herbert	8280
Divisional Director	Mr P McNulty	2661
Pathology Manager	Mr A Warrington	7216
Consultant Clinical Scientist	Dr L. Rowbottom	2086
Consultant Haematologist	Dr E. Jones	2089 Sec 2658

A 24/7 diagnostic service is available:

There is no laboratory Consultant staff on site however, telephone clinical advice is available from Arrowe Park site Monday to Friday 9am – 5:00pm. To Contact the Consultant Haematologist during non-core hours, telephone Arrowe Park switchboard and ask to speak to the Consultant Haematologist on call.

During laboratory opening hours please contact the relevant consultant as indicated above.

For test advice out of hours, please contact switchboard at APH to speak to a Laboratory Biomedical Scientist.

## **5. RECEIPT AND PROCESSING OF BIOCHEMISTRY AND HAEMATOTOLOGY SAMPLES BY THE LABORATORY AT CCC.**

To enable the efficient processing of laboratory samples at the CCC laboratory, it is important that samples arrive in a timely manner.

- **Full Blood Counts (FBC):**

All samples for FBC must arrive in the laboratory before 4:30 p.m.

- **Coagulation:**

Samples for Coagulation must be received in the laboratory at CCC by 4.20 p.m. All samples are processed at APH.

- **Biochemistry:**

Routine gel tube samples must be received by 4p.m.

After 4p.m. biochemistry samples need to be collected into Lithium Heparin tubes (green top) and received in the laboratory at CCC no later than 4.30pm.

Please note, any routine sample taken after 4.30pm must not be kept on the wards and should be sent to the laboratory at Arrowe Park directly by the wards and the relevant laboratory contacted.

All samples and requests **MUST** be clearly labelled with the requesting Consultant and ward.

They **MUST** also be acknowledged as collected in the CCC Meditech computer system.

Failure to do so will result in a significant delay in processing samples.

### **Handling Hazardous Specimens**

Specimens arising from patients with a known or suspected transmissible disease (e.g., COVID-19) **MUST be clearly labelled** as such to prevent unnecessary risk to laboratory staff. Samples must be double bagged as per WUTH "Sampling instructions for cases who fulfil the PHE case definition for COVID-19"- available on the Trust Intranet.

### **DO NOT USE THE AIR TUBE SYSTEM**

Samples must be hand delivered in the transport bag to the Blood sciences department

Alert the reception staff that the samples are from a suspect COVID-19 patient

## 6. BLOOD SCIENCES TESTS ON SITE

The onsite laboratory at CCC offers a limited test repertoire, please see table below for tests which are processed on site. For all other tests, please refer to the appropriate departmental user guide.

**Haematology:** Full Blood Counts (FBC)

**Clinical Biochemistry:**

Chemistry Profile (P5)	Urea and Electrolytes (U/E)	Liver Function Tests (P3)	Bone Profile (P6)
Sodium Potassium Urea Creatinine Bilirubin Alkaline Phosphatase AST GGT Calcium Adjusted calcium Phosphate Total protein Albumin/ Globulin	Sodium Potassium Bicarbonate Urea Creatinine	Bilirubin Alkaline Phosphatase AST ALT GGT Total protein Albumin/Globulin	Calcium Adjusted Calcium Phosphate Albumin

### Other Clinical Biochemistry tests performed on site:

- ◆ Serum Uric Acid
- ◆ LD (Lactate Dehydrogenase)
- ◆ Magnesium
- ◆ Glucose
- ◆ Chloride

For information relating to sample container requirement and turnaround times of Blood Sciences samples please refer to the table below:

Test	Container	TAT Urgent	TAT Routine	Range
FBC	4 ml LAVENDER EDTA	30 mins	120 mins	Refer to main user guides
Chemistry Profile Urea & Electrolytes Bone profile Liver function tests Glucose LD Uric acid Magnesium	Green (lithium heparin) or ochre (gel)	60 mins <b>GREEN TUBE ONLY</b>	90 mins <b>OCHRE TUBE</b>	

### **SPECIAL REQUIREMENTS FOR BIOCHEMISTRY TESTS**

To ensure a prompt turnaround time for biochemistry samples we recommend that samples for urgent chemistry profiles be collected in lithium heparin tubes (green top). However, some tests cannot be processed on lithium heparin samples and should be collected in gel tube (ochre top). Please see below for details.

<b>GEL TUBE ONLY (OCHRE TOP)</b>
Protein Electrophoresis
Immunoglobulins
Lithium
Antibiotics

Samples for Glucose and HbA1C should be collected in Sodium Fluoride tubes (grey top).

Requests for tests NOT included in the above table will be sent to the main laboratory at Arrowe Park Hospital. If the test cannot be performed at the main laboratory, the laboratory will refer the sample and request to an appropriate referral laboratory.

All details and information relating to the departments full test repertoire, sample container requirements, reference ranges, time limits for requesting additional tests and factors affecting test performance of results can be found in the Clinical Biochemistry and Haematology Users Guides as published on the internet

## 7. LABORATORY SPECIMEN COLLECTION BY PORTER AT CLATTERBRIDGE SITE

The porter will collect samples from CGH wards at the following times:  
10:30 hrs., 11:30 hrs., 13:30 hrs., and 14:30hrs.

To ensure that samples reach their correct destination, they require to be separated into:

- ◆ **Red** pathology specimen biohazard bags for: Haematology, Biochemistry and Immunology.
- ◆ **Blue** pathology specimen biohazard bags for Microbiology for transporting direct to Liverpool CCC
- ◆ **White** pathology specimen biohazard bags for Histopathology

Failure to do so could result in delay in sample processing.

## GUIDE TO PATHOLOGY SAMPLE BAGS

To help us provide you with a more efficient service, please sort all pathology samples into the correct coloured bags as detailed below. Your cooperation is very much appreciated.

### Blood Sciences

Contact number 0151 678 5111 ext. 2104

**Please place all Haematology, Biochemistry and Immunology samples into the red bags.**

Blood Sciences comprises the departments of Biochemistry and Haematology. Although the majority of tests for Blood sciences require a blood Samples, we would like to draw your attention to the following tests which require a non-blood sample:

Urine tests **\*\*USE WHITE TOPPED URINE COLLECTION TUBES\*\***

Microalbumin (ACR) – Protein/Creatinine Ratio – Pregnancy Test – Myoglobin  
Bence Jones Protein – Osmolality – Urea & Electrolytes – Urinary Porphyrin

Faeces test: Faecal Reducing substances – Faecal Elastase – Faecal Calprotectin.

Others: Fluid Biochemistry – CSF Biochemistry (inc Xanthochromia) – Stone analysis

A list of the common Blood Sciences and Immunology tests is listed on the reverse page. For a complete list of tests and sample requirements please refer to the user guide on the Trust Internet and Intranet sites at [www.wuth.nhs.uk](http://www.wuth.nhs.uk).



## RED BAGS PATHOLOGY TESTS

BIOCHEMISTRY		HAEMATOLOGY
ACTH	Immunoglobulins	APTT
Alpha-1-Antitrypsin	Iron	Cell Markers
Alpha Fetoprotein (AFP)	Lactate	Coagulation Screen
Ammonia	Lactate Dehydrogenase (LDH)	ESR
Amylase	Lipids	Factor V Leiden
Androstenedione	Lithium	Full Blood Count (FBC)
B12	Liver Function Tests	Haptoglobin
Bile Acids	Oestradiol	HFE Gene
Bone Profile	Osmolality	HLA B27
Ca125, Ca153, Ca199, CEA	Parathyroid Hormone (PTH)	INR
Carbamazepine	Phenobarbitone	JAK2 V617F
Chemistry Profile	Phenytoin	Malaria Parasites
Cobalt/Chromium	Pro BNP	Paul Bunnell
Complement (C3, C4)	Progesterone	Plasma Viscosity
Copper/Caeruloplasmin	Prolactin	Prothrombin 20210A
Cortisol	Prostate Specific Antigen (PSA)	Sickle Screen
C-Reactive Protein (CRP)	Protein Electrophoresis	t(9;22)
Creatine Kinase (CK)	Theophylline	Thalassaemia Screen
Ciclosporin	Thyroid Function Tests	Thrombophilia Screen
Dehydroepiandrosterone (DHEAS)	Thyroid Receptor Antibody (TRAB)	
Digoxin	Tobramycin	
Ferritin	Transferrin	
Folate	Troponin T	
FSH/LH	Type III PCAP	
Gentamicin	U&E and Creatinine	
Glucose	Valproate	
HbA1c	Vancomycin	
HCG	Vitamins (A, B6, C, D, E)	
<b>Urine:</b>	Microalbumin(ACR), Amino Acids, Bence Jones Protein, Urea & Electrolytes, Myoglobin, Organic Acids, Osmolality, Porphyrin, Pregnancy Test, Protein Creatinine Ratio	
<b>Faeces:</b>	Elastase, Reducing substances, Calprotectin	
<b>Others:</b>	CSF Biochemistry (including Xanthochromia), Fluid Biochemistry, Stone Biochemistry	
<b>IMMUNOLOGY</b>		
ANCA (Anti Neutrophil Cytoplasmic Antibodies )	Coeliac Screen	
Anti-Cardiolipin Antibody screen	dsDNA Screen	
Anti CCP (Cyclic Citrullinated Peptide)	ENA (Extractable Nuclear Antibodies) {Ro, La, Sm, RNP, Scl-70, Jo-1}	
Anti-Intrinsic Factor Antibody screen	GBM (Glomerular Basement Membrane Antibodies)	
Aspergillus fumigatus antibody screen (Precipitins)	Total IgE	
Auto Antibody Screen (ANA, SMA, LKM, AMA, GPC)	Specific Allergens (Please specify allergens required and include relevant clinical data.)	
Avian antibody screen (Precipitins)		

## 8. SCHEDULES FOR INTERNAL TRANSPORT

There is a regular transport van operating for internal transport between CCC and APH sites. The times of transport runs are as follow:

Leaves CCC	Leaves APH
07:00hrs	07:20hrs
08:15hrs	08:35hrs
09:30hrs	09:55hrs
10:45hrs	11:05hrs
11:30hrs	12:10hrs
12:45hrs	13:25hrs
14:00hrs	14:20hrs
15:15hrs	15:55hrs
16:30hrs	17:00hrs
No Run	17:45hrs
No Run	18:20hrs

The last transport leaving CCC laboratory at 16:30hrs will call in at the CGH Post room at 16:35hrs to pick up any work from phlebotomy afternoon clinic and take it to APH.

### Weekend and Bank Holiday Runs

Leaves CGH	APH
08:00hrs	08:15hrs
10:30hrs	10:50hrs
12:30hrs	12:50hrs

## 9. MAINTENANCE DELAY

The laboratory at CCC is open for receipt of samples from 9am to 4:30pm Monday to Friday except on Bank and Public holidays.

The samples are booked in and prepared as required whilst the analyser maintenance is carried out:

### Clinical biochemistry:

On a daily basis the analyser in clinical biochemistry requires one hour of maintenance (between 9-10am) before being available to process patient's samples. On Friday afternoon from 13:30hrs all samples will be sent to APH for processing to allow for weekly/ monthly maintenance of the instrument.

Haematology:

Every morning Monday to Friday the haematology analyser undergoes an essential maintenance procedure. This lasts about 10 minutes, and the analyser is ready for use at 09:10hrs. Other maintenance will be conducted on an ad hoc basis when the laboratory is less busy.

Should essential maintenance disrupt the provision of the service the wards will be informed and if necessary, arrangements made for the transport of samples to APH.

## 10. DOWNTIME PROCEDURE

There may be occasions when the computer system or the analysers are not functioning, as they should, this is referred to as downtime. If the downtime has a significant effect on service provision the wards will be informed. The laboratory staff after consultation with the ward staff may then make arrangements to transport samples to APH.