

FLOW CYTOMETRY USER GUIDE

The Flow laboratory is located in Haematology, Laboratory medicine, BRI Site.

It forms part of **UHBW Specialist Integrated Haematological Malignancies Diagnostic Services (SI-HMDS)**

Flow Laboratory: 0117 342 2596

Flow and SI-HMDS Office: 0117 342 0779

General enquiries: UHBWFlowCytometryLaboratory@uhbw.nhs.uk

Section Lead: Ulrika.Johansson@UHBW.nhs.uk

Operational lead: Natasha.Futhee@UHBW.nhs.uk

SI-HMDS Clinical Lead: Lisa.Wolger@UHBW.nhs.uk

Operating hours: Mondays –Fridays: 08.30-17.30 No routine service on weekends and Bank Holidays

Samples that arrive after 15.00 on Fridays are processed the following Monday: this is suboptimal.

Avoid sending samples on Friday afternoon

Request samples on ICE/Medway. **If no ICE/Medway access:** Use attached request form.

Results: On ICE/Medway. If no ICE/Medway access: Email/Fax. Urgent results: Telephoned.

Investigation	Sample type	Samples required	Turn-around time
Leukaemia & Lymphoma	Fine needle aspirate (FNA) (non-marrow tissue)	FNA transport media*	1-2 days
	Open biopsy (non-marrow tissue)	FNA transport media* or as last resort, saline.	1-2 days
	Bone Marrow (BM)	EDTA (1xpurple top, minimum 1 ml)	1-3 days
	Peripheral Blood (PB)	EDTA (1xpurple top)	7 days
	Cerebrospinal Fluid (CSF)	Minimum 600ul, no anticoagulant. Also request Automated WBC and Cytospin.	7 days
	Other Fluid Samples	No anticoagulant required.	7 days
Myeloma	Bone Marrow (BM)	EDTA (1xpurple top, minimum 1 ml)	1-3 days
MRD, Follow-up samples	As relevant: ALL, AML, MM: BM. CLL: PB	EDTA (1xpurple top)	1-3 days
Bone Marrow failure / MDS	BM and PB	BM: EDTA (1xpurple top, minimum 1 ml) PB: EDTA (1xpurple top)	1-3 days
Sezary count	PB	EDTA (1xpurple top)	7 days
CART19	PB, CSF, BM, FNA.	As for Leukaemia and lymphoma	7 days
PNH	PB	EDTA (1xpurple top)	7 days
CD34 count	PB	EDTA (1xpurple top)	1.5 hours
CD3 count	PB	EDTA (1xpurple top)	1 day
Monocytosis	PB	EDTA (1xpurple top)	7 days
Bleeding disorders	PB for platelet glycoprotein test. See information on next page	Citrate (1x light blue top)	7 days
URGENT	Ring the laboratory on 0117 342 2596 ask to speak to senior staff. Leave your contact details and explain the clinical request. We will email/telephone urgent results		2 hours-> same day

* Do you need FNA transport media? Ring the laboratory on 0117 342 2596

The Flow Laboratory is **ISO 15189 accredited by the United Kingdom Accreditation Service.**

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PLATELET GLYCOPROTEIN ANALYSIS FOR BLEEDING DISORDERS

Peripheral blood platelets are labelled with mAbs specific for platelet surface glycoproteins that are lost or reduced in Glanzmann's Thrombasthenia and Bernard Soulier Syndrome. Loss of antigen expression supports the diagnosis of these disorders.

Glycoproteins investigated

GP 3a	CD61, lost in Glanzmann's Thrombasthenia
GP 2b	CD41, lost in Glanzmann's Thrombasthenia
GP 1ba	CD42b, lost in Bernard Soulier Syndrome
CD36	Thrombospondin receptor. Used to gate platelets.

Specimen Criteria

Peripheral blood anti-coagulated with citrate.

A normal unspun control sample, also citrated peripheral blood, should always accompany the test sample. All samples should be labelled with appropriate patient identification. Control sample may be labelled with age and sex information only. It is imperative that samples are handled gently, and for example, not sent by pneumatic tube systems.

Samples must be analysed as soon as possible, and on the same day. Older samples will still be investigated but may reduce the assay sensitivity. Samples **may be sent by taxi or courier** to the address below, please phone the flow laboratory on 0117 342 2596 to let staff know a sample will be sent.

Att. Ulrika Johansson / Natasha Futhee

Flow Cytometry Laboratory

Bristol Royal Infirmary

Queen's Building, Level 8

Upper Maudlin Street

BRISTOL

BS2 8HW

UK

Contacts

Flow Cytometry Laboratory: 0117 342 2596;

Ulrika.Johansson@UHBW.nhs.uk; Natasha.Futhee@UHBW.nhs.uk;

UHBWFlowCytometryLaboratory@uhbw.nhs.uk

Clotting Laboratory: 0117 342 2595.

Christopher.Doherty@uhbw.nhs.uk; Donna.Connolly@uhbw.nhs.uk

Consultant Haematologist: Sarah.Westbury@uhbw.nhs.uk

Address/Send samples to:
SI-HMDS
Queen's Building, Level 8
Bristol Royal Infirmary
Bristol, BS2 8HW

Contact Details:
Office Tel: 0117 342 0779
Laboratory Tel: 0117 342 2596

SI-HMDS Referral Form

Hospital No:
Patient Name:
Gender: M / F
DOB:
NHS No:
(Use Label if available)

New Patient / **Follow-up**

Previously investigated by UHB HMDS: Yes / No
Post-Transplant: Auto / Sib / VUD / Cord / Haplo
Donor: Male/Female BMT Date: _____

Clinical Details / Suspected Diagnosis:
(If diagnosis known, please specify)

(On GCSF: Y / N / unknown)
(Recent Chemotherapy? Y / N/ unknown)

Blood count:
Hb:
WBC:
Ne:
Ly:
Plts:
Other
.....

Organomegaly:

Spleen	Y / N
Liver	Y / N
Lymph Nodes	Y / N

Paraprotein: Y / N
G / A / M / D / E κ / λ
Quantitation:g/l

Specimen taken by (FULL NAME REQUIRED IN ALL CASES):
.....
Contact details:.....
Date / Time of sample:
Referring Consultant:.....
Referring Hospital:.....
Infection Risk? Yes / No **If yes, specify:**

Specimens Referred:

- Peripheral blood (EDTA)
- Peripheral blood air-dried slide
- Bone marrow (BM) aspirate (EDTA/heparin)
- BM unstained air-dried slides
- BM Trepine
- Lymph Node
- FNA / Core
- Other (specify):

Indicate Required Tests

<ul style="list-style-type: none"> <input type="checkbox"/> Flow Immunophenotyping <input type="checkbox"/> PNH (Peripheral blood only) <input type="checkbox"/> Cytogenetics (Heparinised sample) <ul style="list-style-type: none"> <input type="checkbox"/> Store Karyotype: <input type="checkbox"/> Myeloid <input type="checkbox"/> Lymphoid <input type="checkbox"/> FISH (Heparinised sample) <ul style="list-style-type: none"> <input type="checkbox"/> CLL: Full CLL Panel / p53del only <input type="checkbox"/> Myeloma FISH <input type="checkbox"/> BCR/ABL <input type="checkbox"/> FGFR1, FIP1L1/PDGFR, PDGFRB <input type="checkbox"/> Urgent PML-Rara <input type="checkbox"/> Other: Please specify 	<ul style="list-style-type: none"> <input type="checkbox"/> Urgent Full ? Acute Leukaemia work-up / ? APLM <input type="checkbox"/> Histology/Cytopathology and Immunohistochemistry <input type="checkbox"/> Molecular genetics (EDTA sample) <ul style="list-style-type: none"> <input type="checkbox"/> Store <input type="checkbox"/> T/ B cell clonality <input type="checkbox"/> MyD 88 <input type="checkbox"/> BRAF V600E <input type="checkbox"/> IgVH mutation <input type="checkbox"/> p53 mutation (NGS) <input type="checkbox"/> BCR ABL p190 / p210 <input type="checkbox"/> ABL Kinase mutations for non-response to TKIs <input type="checkbox"/> SF3B1 <input type="checkbox"/> JAK2 V617F <p>will proceed to: Exon 12 variants for PRV if JAK2 neg will proceed to: CALR/MPL for ET/MF if JAK2 neg</p> <ul style="list-style-type: none"> <input type="checkbox"/> SF3B1 <input type="checkbox"/> KIT mutation <input type="checkbox"/> Myeloid NGS panel
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