Bristol Genetics Laboratory is a UKAS accredited medical laboratory No.9307.

Oncology FISH Service

NHS North Bristol NHS Trust

Contact details:
Bristol Genetics Laboratory
Pathology Sciences
Southmead Hospital
Bristol, BS10 5NB
Enquiries: 0117 414 6168
FAX: 0117 414 6464

Head of Department:
Professor Rachel Butler, FRCPath
Consultant Clinical Scientist

Consultant Lead for Oncology:
Christopher Wragg, FRCPath

Service Lead:
Michael Nobbs
Email: Michael.Nobbs@nbt.nhs.uk

Sample Requirements:
Bone marrow and peripheral blood samples in transport media or Lithium Heparin

Fresh tissue in transport media or saline (no formalin)

FFPE: 4 µm thick formalin fixed paraffin embedded tumour tissue sections mounted on APES or 'sticky' slides for each test required with an accompanying H&E slide with regions of tumour highlighted.

All samples should be labelled with patient name, date of birth and pathology block number.

Samples should be accompanied by a FULLY completed request form (available as download at www.nbt.nhs.uk/genetics or from the laboratory).

Consent and Storage:
All genetic testing requires consent. **It is the responsibility of the referring clinician to ensure that appropriate consent has been obtained.**

DNA is stored from **ALL** patients undergoing DNA testing, unless consent for this is specifically denied.

Stored material from all referrals may be retained for quality assurance purposes and may be used anonymously for the development of new tests for the disorder in question.

Clinical Background and Genetics

FISH is used in Oncology to support diagnosis, provide prognostic information for risk stratification, allow tracking of disease status and monitoring transplant and treatment success.

Service Offered

We offer a range of testing using CE marked probes. Additional testing can be developed on request; please contact the laboratory if there are any further tests required that are not listed below.

Disease	Abnormality	Probe Set
Adipocytic tumours	MDM2 amplification	MDM2
ALL	t(9;22)	BCR/ABL1
	t(12;21)	ETV6/RUNX1 (TEL/AML1)
	11q23 translocation	KMT2A (MLL)
	12p13 rearrangements	ETV6 (TEL)
	19p13 rearrangements	E2A (TCF3)
	ABL1	ABL1 Breakapart
	ABL2 [1q25]	ABL2 Breakapart
Alveolar rhabdomyosarcoma	PAX3-FOXO1 [t(2;13)] PAX7-FOXO1 [t(1;13)]	FOXO1(FKHR)
		FOXO1/PAX3
		FOXO1/PAX7
AML	t(8;21)	RUNX1/RUNX1T1 (ETO/AML1)
	t(15;17)	PML/RARA
	inv(16)	CBFB
	11q23 translocation	MLL
	Inv(16)	CBFA2T3-GLIS2
	t(7;12)	MNX1-ETV6
	t(5;11)	NSD1-NUP98
AML/MDS	del(5q), monosomy 5	EGR1/D5S23, D5S721
	del(7q), monosomy 7	D7S522/CEP7 (D7Z1)
	del(20q)	20q- (PTPRT 20q12)/20q11
	t(3;3) or inv(3)	MECOM (EVI1)
Anaplastic Lymphoma	NPM-ALK (+variants)	ALK
	DUSP22/IRF4	DUSP22
Angiomatoid fibrous histiocytoma	EWSR1-CREB1	EWSR1
	FUS-ATF1	FUS
APML	t(15;17)	PML/RARA
BMT	Sex mismatch transplant	CEPX/CEPY
Bone tumour	(17p13.2)	USP6
Burkitt Lymphoma/HGBL/DLBCL	MYC [t(8;14) and variants]	MYC, MYC/ IGH
	BCL6 (3q27)	BCL2
	BCL2 (18q21)	BCL6
	Ig rearrangement	IGK/IGL/MYC
CLL	TP53 deletion	TP53/ATM
	Trisomy 12, del(13)	12CEN/D13S319/13q34
	11q deletion	ATM/TP53
	t(11;14)	IGH/CCND1

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CML	t(9;22)	BCR/ABL
	9q34	ASS
Desmofibrosarcoma protruberans	t(17;22)	COL1A1/PDGFRB
Endometrial Stromal Tumours	JAZF1, YWHAE	JAZF1, YWHAE
Ewings sarcoma	t(11;22) and variants	EWSR1 FUS
Follicular lymphoma	t(14;18)	BCL2
Glioma	1p/19q	1p36/19q13
	BRAF-KIAA1549	BRAF-KIAA1549
	EGFR amplification	EGFR/CEP7
HES	PDGFRA	FIP1L1-CHIC2-PDGFRA
	PDGFRB	PDGFRB
	FGFR1	FGFR1
	BCR-ABL1	BCR-ABL1
Low-grade fibromyxoid sarcoma	FUS-CREB3L2/1	FUS
Lung cancer (NSCLC)	ALK, ROS1	ALK, ROS1
MALT	t(11;18)	MALT1
Mantle cell Lymphoma	t(11;14)	IGH/CCND1
Mammary Analogue secretory carcinoma	ETV6-NTRK3	ETV6
MEC	MAML2	MAML2
MPN/MDS	PDGFRA	FIP1L1-CHIC2-PDGFRA
	PDGFRB	PDGFRB
	FGFR1	FGFR1
	BCR-ABL1	BCR-ABL1
Myeloma	del(17)	p53
	t(4;14)	IGH/FGFR3
	t(14;16)	IGH/MAF
	1p32.3/1q21	CKS1B/CDKN2C
Myxoid liposarcoma	FUS-DDIT3 EWSR1-DDIT3	DDIT3 (CHOP), FUS EWSR1
Medulloblastoma	MYC/MYCN amplification	MYC and MYCN
NSCLC	ALK-EML4 and variants	ALK FISH/IHC
Synovial sarcoma	SS18-SSX	SS18
T-cell NHL	14q11	TCR A/D
Uterine sarcoma	JAZF1, YWHAE	JAZF1, YWHAE

Target reporting Times
Urgent/rapid referrals ≤3 calendar days
Routine referrals ≤21 days
FFPE samples ≤14 days

Quality
- BGL participates in the *XEQA* scheme for this service.

Laboratory Contact
For enquiries/requesting contact Michael.Nobbs@nbt.nhs.uk

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