Bristol Genetics Laboratory

North Bristol NHS Trust

# Oncology FISH Service

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

**Head of Department:**
Eileen Roberts FRCPath

**Head of Oncology Genomics:**
Chris Wragg FRCPath

**Service Lead:**
Abby Palmer
Email: Abigail.Palmer@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:**
**(DNA and Cultured Cells)**

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

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.

## Introduction

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) |
| Alveolar rhabdomyosarcoma | PAX3-FOXO1 [t(2;13)]<br>PAX7-FOXO1 [t(1;13)] | FOXO1(FKHR) |
| AML | t(8;21) | RUNX1/RUNX1T1 (ETO/AML1) |
| | t(15;17) | PML/RARA |
| | inv(16) | CBFB |
| | 11q23 translocation | MLL |
| 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 |
| Burkitt Lymphoma/HGBL | MYC [t(8;14) and variants] | MYC, MYC/ IGH |
| | BCL6 (3q27) | BCL2 |
| | BCL2 (18q21) | BCL6 |
| CLL | TP53 deletion | TP53/ATM |
| | Trisomy 12, del(13) | 12CEN/D13S319/13q34 |
| | 11q deletion | ATM/TP53 |
| | t(11;14) | IGH/CCND1 |
| CML | t(9;22) | BCR/ABL |
| Desmofibrosarcoma protruberans | t(17;22) | COL1A1/PDGFRB |
| DLBCL/HGBL | MYC (8q24) | MYC |
| | BCL6 (3q27) | BCL6 |
| | BCL2 (18q21) | BCL2 |
| Ewings sarcoma | t(11;22) and variants | EWSR1<br>FUS |

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**DETAILS CORRECT AT DATE OF PRINTING ONLY.**
Approved by: Chris Wragg

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CPA
Accredited Medical Laboratory
Reference No: 2907

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

Fresh tissue in transport media or saline (no formalin)

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.

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| | | |
|---|---|---|
| Follicular lymphoma | t(14;18) | BCL2 |
| HES | PDGFRA | FIP1L1-CHIC2-PDGFRA |
| | PDGFRB | PDGFRB |
| | FGFR1 | FGFR1 |
| | BCR-ABL1 | BCR-ABL1 |
| Low-grade fibromyxoid sarcoma | FUS-CREB3L2/1 | FUS |
| MALT | t(11;18) | MALT1 |
| Mantle cell Lymphoma | t(11;14) | IGH/CCND1 |
| Mammary Analogue secretory carcinoma | ETV6-NTRK3 | ETV6 |
| 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<br>EWSR1-DDIT3 | DDIT3 (CHOP), FUS<br>EWSR1 |
| NSCLC | ALK-EML4 and variants | ALK FISH/IHC |
| Synovial sarcoma | SS18-SSX | SS18 |

## Target Reporting Time
Urgent/rapid referrals ≤3 calendar days
Routine referrals ≤21 days
FFPE samples ≤14 days
Please contact the laboratory for up to date prices

## Quality
The laboratory is CPA accredited and participates in UK NEQAS schemes.

## Laboratory Contact
For enquiries/requesting contact Abigail.Palmer@nbt.nhs.uk

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