Bristol Genetics Laboratory

North Bristol NHS Trust

Sarcoma FISH

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Sample Requirements:
Fresh tissue in transport media or saline (no formalin)

Fixed imprint slides

Frozen tissue

Formalin fixed paraffin embedded tumour (ffPET) tissue sections 2-4 µm thick 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 must be accompanied by a FULLY completed genetics request form including details of test, patient postcode, NHS number, referring clinician and unit/hospital (available as download at https://www.nbt.nhs.uk/severn-pathology/pathology-services/bristol-genetics-laboratory-bgl or from the laboratory).

Target Reporting Times:
7-14 days

Quality
The laboratory participates in UK NEQAS schemes

Laboratory Contact
For enquiries/requesting contact Christopher.Wragg@nbt.nhs.uk or Abigail.Palmer@nbt.nhs.uk

Introduction

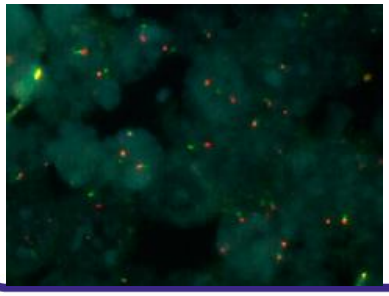
Soft tissue sarcoma and bone sarcomas are highly heterogeneous and rare, accounting for less than 1% of all malignancies diagnosed in the UK. Soft tissue sarcomas develop from soft tissue cells including smooth muscle cells, fat cells, fibrous connective tissue, skeletal muscles, synovium, blood vessels, breast ducts and nerves.
Sarcomas provide a particular diagnostic dilemma, not only due to their rarity, but also due to their wide diversity, with more than 100 different morphological sub-types of sarcoma.

Fluorescence in situ hybridisation (FISH) can be used in diagnosis and can applied to both fresh tissue (imprints) and formalin fixed paraffin embedded sections (ffPET).

Service offered

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

Disease	Test
Synovial Sarcoma	SS18 (18q11) rearrangement
Myxoid Liposarcomas	DDIT3 (CHOP) (12q13) rearrangement
Low grade fibromyxoid sarcoma, angiomatoid fibrous histiocytoma, myxoid liposarcoma	FUS (16p11) rearrangement
Inflammatory myofibroblastic tumour	ALK (2p23) rearrangement
Alveolar Rhabdomyosarcoma	FOXO1 (13q14) rearrangement
Well differentiated/de-differentiated liposarcoma & atypical lipomatous tumours	MDM2 (12q15) amplification
Dermatofibrosarcoma protuberans (DFSP) or giant cell fibroblastoma (GCF)	COL1A1/PDGFB t(17;22)
Various tumours including Ewings, DSRCT, extraskeletal myxoid chondrosarcoma	EWSR1 (22q12) rearrangement
Infantile fibrosarcoma	ETV6 (12p13) rearrangement



Reference

Bone and Soft Tissue Sarcomas. UK Incidence and Survival 1996 to 2010. National Cancer Intelligence Network, July 2013, version 2

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