



North East and Yorkshire  
Genomic Laboratory Hub

# Solid Cancer Genomics Referral Form

Testing Lab Use Only

Lab No:

Date received:

Reporting Lab:

LDS NCL SHF

<b>Patient Information</b> – use sticker if available				<b>Referring clinician:</b>	
Surname:		D.O.B:		Department and Hospital:	
Forename(s):		Sex:		Report destination (NHS.net email):	
Address/postcode:		Date of biopsy or resection:		Copies of reports to (NHS.net email):	
NHS no.:		Date sample sent for testing:		Pathologist:	
Hospital no.:		<input type="checkbox"/> NHS <input type="checkbox"/> Private		Billing details if not NHS:	

**CLINICAL DETAILS**

**TEST(S)** – please refer to National Genomic Test Directory (<https://www.england.nhs.uk/publication/national-genomic-test-directories/>).

Please tick	Test type	Further testing details, including M code. For full details of genes covered see national genomic cancer test directory ( <a href="https://www.england.nhs.uk/publication/national-genomic-test-directories/">https://www.england.nhs.uk/publication/national-genomic-test-directories/</a> )
<input type="checkbox"/>	DNA analysis	
<input type="checkbox"/>	RNA analysis (gene fusions, eg NTRK)	
<input type="checkbox"/>	DNA and RNA analysis	
<input type="checkbox"/>	FISH (please specify genes/probes)	
<input type="checkbox"/>	Methylation analysis (MGMT or MLH1)	
<input type="checkbox"/>	SNP arrays	
<input type="checkbox"/>	Methylation (EPIC) arrays	
<input type="checkbox"/>	Other (please specify)	
<input type="checkbox"/>	HRD and tumour BRCA testing (newly diagnosed ovarian carcinoma only)	
<input type="checkbox"/>	Tumour BRCA testing	

Please see solid cancer genomics guidance notes overleaf for details on requesting testing for DPYD, cell free DNA, whole genome sequencing, BRCA testing in prostate cancer, and tumour HRD/BRCA testing in ovarian carcinoma and related cancers

**Sample information** (please see sample requirements in the solid cancer genomics guidance notes overleaf)

<input type="checkbox"/> FFPE curls <input type="checkbox"/> FFPE sections <input type="checkbox"/> Fresh tissue <input type="checkbox"/> DNA	Assessing Histopathologist
Histopath. no. <input type="text"/> Block no. <input type="text"/>	
<b>TUMOUR TYPE</b> <input type="text"/> Estimated tumour cell percentage <input type="text"/> Percentage necrosis <input type="text"/> Cellularity (Very High/High/Medium/Low/Very Low)	<b>Sample Type:</b> Biopsy                      Resection                      Cytology Primary                      Metastasis                      Other

Once taken, samples should be sent to your local genomics Laboratory (see below for contact information).

<b>Newcastle Genetics Laboratory</b>	Newcastle Genetics Laboratory Central Parkway Newcastle upon Tyne Tyne and Wear NE1 3BZ	<a href="mailto:nuth.cancer.genomics@nhs.net">nuth.cancer.genomics@nhs.net</a>
		0191 241 8786
		<a href="http://www.newcastlelaboratories.com/lab_service/laboratory-cancer-services/">www.newcastlelaboratories.com/lab_service/laboratory-cancer-services/</a>
<b>Sheffield Genetics Laboratory</b>	Sheffield Diagnostic Genetics Service Sheffield Children's NHS Foundation Trust Western Bank Sheffield S10 2TH	<a href="mailto:scn-tr.sdgs.oncology@nhs.net">scn-tr.sdgs.oncology@nhs.net</a>
		0114 271 7014
		<a href="http://www.sheffieldchildrens.nhs.uk/SDGS.htm">www.sheffieldchildrens.nhs.uk/SDGS.htm</a>
<b>Leeds Genetics Laboratory</b>	Leeds Genetics Laboratory, Genomic Specimen Reception Bexley Wing (Level 5) St James's University Hospital Beckett Street Leeds, LS9 7TF	<a href="mailto:mod.lth@nhs.net">mod.lth@nhs.net</a>
		0113 206 5205
		<a href="http://www.leedsth.nhs.uk/a-z-of-services/the-leeds-genetics-laboratory/">www.leedsth.nhs.uk/a-z-of-services/the-leeds-genetics-laboratory/</a>

# Solid Cancer Genomics guidance notes

Please take note of these specific referral & sample guidelines to ensure that the correct testing is carried out and delays are avoided

1. For further information on NEY GLH Services – please visit <https://ney-genomics.org.uk/>
2. For DPYD referrals please use the NEY GLH DPYD referral form at <https://ney-genomics.org.uk/wp-content/uploads/2022/02/411.028-DYPD-Referral-Form-v2.0web.pdf>
3. For Whole Genome Sequencing referrals please use the NHSE referral forms at [NHS England » NHS Genomic Medicine Service test order forms](#) and the record of discussion form at [NHS England » NHS Genomic Medicine Service record of discussion form](#)
4. For blood plasma cell free DNA testing, please use the NEY GLH circulating tumour DNA referral form at [The Leeds Genetics Laboratory, Referral Forms \(leedsth.nhs.uk\)](#)

## Sample Requirements

### FFPE material:

#### 1. FISH

Send 2-3 x 4µm FFPE sections on 'APES' or 'sticky' slides per test required with marked H&E slide with tumour rich area(s) marked.  
Minimum estimated tumour cell percentage 20%.

#### 2. For DNA or RNA extraction only – DNA NGS panels, Trusight RNA fusion panel, MGMT methylation testing, Sanger sequencing, HRD testing

Samples with >20% estimated tumour cell percentage: send one tube (Eppendorf or Universal) containing 5-10 x 10µm FFPE curls.

Samples for **tumour HRD/BRCA testing\*** (stage III or IV, high-grade serous or endometrioid ovarian cancer (HGSO), primary peritoneal cancer, or fallopian-tube cancer) require >30% estimated tumour percentage (see Exceptions below\*).

Samples with lower overall tumour cell percentage (with the exception of those **for tumour HRD/BRCA testing\*** and those with **prostate cancer\*\***): if there is a region of the block with >20% tumour, please either;

- a. macro dissect tumour-rich regions and send in a single tube (preferred), or
- b. send 10 x 5µm slide mounted sections along with a marked H&E with tumour rich area(s) marked.

If it is not possible to macrodissect out a tumour rich region of >20%, please contact the laboratory for further guidance as to whether the sample can still be tested.

### Exceptions:

a. **For MLH1 methylation testing** please send 10 x 5µm slide mounted sections along with a marked H&E with tumour rich area(s) marked.

Samples should have >20% estimated tumour cell percentage. Curls are not acceptable. If tumour content is <20%, please contact the laboratory for further guidance as to whether the sample can still be tested.

b. Where **methylation arrays** are also required, please send an additional 5-10 x 10 µm FFPE curls, as above.

\*c. For samples referred for **tumour HRD/BRCA testing with lower overall tumour cell percentage**: if there is a region of the block with >30% tumour, please either;

- i) macro dissect tumour-rich regions and send in a single tube (preferred), or
- ii) send 10 x 5µm slide mounted sections along with a marked H&E with tumour rich area(s) marked.

If it is not possible to macrodissect out a tumour rich region of >30%, please contact the laboratory for further guidance as to whether the sample can still be tested.

\*\*d. For **prostate cancers**, only curls with >20% estimated tumour cell percentage and ≤7 years old will be accepted for testing - requirement is therefore one tube (Eppendorf or Universal) containing 5-10 x 10µm FFPE curls. Slide mounted sections will not be accepted for testing.

#### 3. For DNA and RNA extraction – OncoPrint Focus, Genexus or Trusight Oncology 500 (TSO500) panel

Samples with >20% estimated tumour cell percentage: send two tubes (Eppendorf or Universal): each containing 5-10 x 10µm FFPE curls.

Please note that for suboptimal/limited samples for Genexus testing it is acceptable to only send one tube containing 5-10 x 10µm FFPE curls.

Samples with lower overall estimated tumour cell percentage: if there is a region of the block with >20% tumour, please either;

- a. macro dissect tumour-rich regions and split into two tubes (preferred), or
- b. send 20 x 5µm slide mounted sections along with a marked H&E with tumour rich area(s) marked

If it is not possible to macrodissect out a tumour rich region of >20%, please contact the laboratory for further guidance as to whether the sample can still be tested.

Testing pathways may change and updated guidance will be given on the NEY GLH Solid Tumour testing website – please click [here](#)

### Fresh frozen tissue:

Send either frozen tumour in dry ice or if refrigerated in stabilisation buffer (e.g. 'RNA later' or RLT buffer).

Please send at least 5mm<sup>3</sup> tumour tissue.