NHS
South East
Genomic Laboratory Hub

Guide to referring for Whole Genome Sequencing (WGS) for Solid Tumours

Before referring:

- Check patient is eligible for WGS and select appropriate M code using the National genomic test directory for cancer https://www.england.nhs.uk/publication/national-genomic-test-directories/
- Discuss patient feasibility and eligibility at MDT.

Referral Process:

1. Fill in a Record of Discussion with the patient https://southeastgenomics.nhs.uk/wp-content/uploads/2021/04/GMS-WGS-RoD-Pilot-April-2021.pdf
    - Information sheets available for patients here:
        - WGS https://southeastgenomics.nhs.uk/wp-content/uploads/2020/12/Patient_Information_Cancer_v2.2.pdf
        - National Genomic Research Library: https://southeastgenomics.nhs.uk/wp-content/uploads/2020/12/Patient_Information_Research_V1.3.pdf
2. Complete interventional radiology / surgery request with specific request for tissue to be **fresh frozen, and not to be placed in formalin**.
3. Request an EDTA blood sample.
4. Member of the clinical team to complete sections highlighted in yellow on the Test Order Form (details below).
5. Member of the pathology team will sample tumour appropriately for WGS and snap-freeze (OCT, iso-pentane cooled in dry ice/ LN2 (store in freezer at -80C)). Frozen section slide reviewed by histopathology team to confirm tumour and tumour cellularity.
6. Member of the pathology team to complete sections highlighted in blue on the Test Order Form.
7. Completed Test Order Form and Record of Discussion emailed to gst-tr.wgs@nhs.net with CANCER WGS NHS Number: XXX XXX XXXX in the subject.
8. Frozen tissue, blood sample and TOF sent to Guy's Hospital (Synnovis Genetics Laboratory, 5th Floor Tower Wing, Guy's Hospital, London SE1 9RT) on dry ice and DNA Duty Tech Lead emailed to inform the sample is on its way: DNADutyTechLead@viapath.co.uk
    a. The sample should ideally be sent with a morning courier, Monday-Thursday)

NHS South East Genomic Laboratory Hub

Genomic Medicine Service

Whole Genome Sequencing (WGS) Test Request
PLEASE DO NOT USE FOR NON-WGS TESTS

CANCER

NHS

Requesting organisation:
GLH laboratory to receive sample: | **Test Required** Whole Genome Sequencing

Patient first name
Patient last name
Date of birth (dd/mm/yyyy) | **Hospital number**
Gender ☐ Male ☐ Female ☐ Other
Postcode
NHS number
Reason NHS Number not available:
☐ Patient not eligible for NHS number (e.g. foreign national)
☐ Other (provide reason):

Ethnicity
Test Directory Clinical Indication & code (cancer type & sub-type)
The clinical indications listed at the bottom of the pick list under 'NEW INDICATIONS' are not live for all NHS GLHs. Please check with GLHs prior to ordering.
Presentation status ☐ First diagnosis ☐ Recurrence / Relapse ☐ Unknown
Additional clinical information (if required)
E.g. previous tumours, molecular testing, and relevant treatment history with date(s)

Solid tumour requests only
☐ Primary ☐ Metastatic ☐ Unknown ☐ Lymphoma
Histopathology Lab ID
Date of this diagnosis (dd/mm/yyyy)
Additional tumour information (if relevant)
E.g. site of metastasis (if metastatic), or unknown primary
Tumour topography | **Tumour morphology**

Haemato-oncology liquid tumour requests only
☐ AML ☐ ALL ☐ Other (please specify):
SIHMDS Lab ID | **Date of this diagnosis** (dd/mm/yyyy)

Complete for tumour samples *(being sent to GLH DNA extraction lab)*
☐ Fresh frozen tumour ☐ Bone marrow ☐ Blood (EDTA) ☐ Other (please specify):
% malignant nuclei / blasts or equivalent in this sample (refer to sample handling guidance) must be provided below

Sample ID	Collection date / time	% Malignant nuclei / blasts	If BM/PB provide volume and nucleated cell count

Complete for germline samples *(being sent to GLH DNA extraction lab)*
☐ Blood (EDTA) ☐ Saliva ☐ Fibroblasts ☐ Skin biopsy ☐ Other (please specify):

Sample ID	Collection date / time	Sample volume if applicable	Comments

Responsible consultant	Main contact (if different from responsible consultant)
Name:	Name:
Department address:	Department address:
Phone:	Phone:
Email:	Email:

☐ I have attached a copy of the Record of Discussion form
☐ Patient conversation taken place; Record of Discussion form to follow

Requesting organisation: **Your hospital**
GLH laboratory to receive sample: **South East GLH**

Providing ethnicity ensures that there is equity of access to genetic testing in the wider population and it also helps us to improve variant analysis and interpretation. Please select from the drop-down options.

Please select the appropriate M code using the drop-down options. If you need further guidance, please refer to the National Genomic Test Directory.

Please provide details of family history of cancer, details of any treatment including radiotherapy and previous chemotherapy, any concurrent or previous tumour

Important to include an NHS number as required for the WGS pipeline. If no NHS number is available a reason will need to be provided.

Please indicate whether the sample is: 'Primary, Metastatic, unknown, Lymphoma'. Please also indicate date of first diagnosis.
Histopathology Lab ID: this is based on patient and surgery

Sample ID: this is based on the particular block or sample. **Collection date / time:** when the tissue was removed. **% Malignant nuclei / blasts:** invasive malignant nuclei must account for at least 30% of the nuclei present in the tissue sample submitted for WGS. There should also be less than 20% necrosis.

Please add details of the germline sample (EDTA) if you have these details.

The 'responsible contact' should be filled in by the consultant who the report should be sent to, 'main contact' should have the histopathologist details.