

# Genomic Test activity

## December 2023 Statistical Commentary

### Main Findings

This section will focus on main findings at a national level. Sub-national level data is available within the data set.

### Activity – test reports

- The total number of reports in September 2023 is 65,884, which is an increase of 7,844 (14%) in comparison to April 2023. This is a combined total of 393,319 reports year to date.
- The total number of cancer reports in September 2023 is 37,586, which is an increase of 5,871 (19%) in comparison to April 2023. This is a combined total of 226,773 reports year to date.
  - The total number of paediatric and TYA cancer reports in September 2023 is 3,770, which is an increase of 534 (17%) in comparison to April 2023. This is a combined total of 23,376 reports year to date.
  - The total number of adult cancer reports in September 2023 is 33,363, which is an increase of 5,338 (19%) in comparison to April 2023. This is a combined total of 202,555 reports year to date.
- The total number of rare and inherited disease reports in September 2023 is 27,004, which is an increase of 1,600 (6%) in comparison to April 2023. This is a combined total of 159,663 reports year to date.
  - The total number of paediatric rare and inherited disease reports in September 2023 is 9,058, which is an increase of 58 (1%) in comparison to April 2023. This is a combined total of 54,637 reports year to date.
  - The total number of adult rare and inherited disease reports in September 2023 is 17,606, which is an increase of 1,386 (9%) in comparison to April 2023. This is a combined total of 103,341 reports year to date.
- The total number of cancer whole genome sequencing reports in September 2023 is 332, which is an increase of 109 (49%) in comparison to April 2023. This is a combined total of 1,456 reports year to date. Cancer whole genome sequencing includes analysis of both the tumour and the individuals DNA (the germline).
- The total number of rare and inherited disease whole genome sequencing reports in September 2023 is 2,444, which is an increase of 515 (27%) in comparison to April 2023. This is a combined total of 13,695 reports year to date. Many rare and inherited disease whole genome sequencing includes analysis of both the patient and, where possible their parents.

## Background

The national genomic testing service is delivered through a network of seven NHS Genomic Laboratory Hubs (GLHs), each responsible for coordinating services for a particular part of the country.

The seven NHS GLHs are:

- Central and South Genomic Laboratory Hub led by Birmingham Women's and Children's NHS Foundation Trust
- East Genomic Laboratory Hub led by Cambridge University Hospitals NHS Foundation Trust
- North West Genomic Laboratory Hub led by Manchester University NHS Foundation Trust
- North Thames Genomic Laboratory Hub led by Great Ormond Street Hospital for Children NHS Foundation Trust
- South East Genomic Laboratory Hub led by Guy's and St Thomas' NHS Foundation Trust
- South West Genomic Laboratory Hub led by North Bristol NHS Trust
- North East and Yorkshire Genomic Laboratory Hub led by The Newcastle upon Tyne Hospitals NHS Foundation Trust

The published dataset includes monthly genomic test activity delivered by the 7 GLHs. This statistical commentary presents activity delivered during September 2023 and highlights comparison with April 2023 data.

Activity data is shown as the number of reports ("completed pathways") by the month they were reported in. This is further broken down into cancer and rare disease, and then subcategories as shown within the National Genomic Test Directory.

## Methodology

This data set is comparison of April 2023 to September 2023 PLCM datasets from all 7 GLHs.

Non-Genomics unit commissioned activity was removed from the data set which includes:

- Screening specialist test group
- Highly Specialised commissioning category
- Specific codes from the 6+1 commissioning group (M3.2, M3.3 and M3.4)

*Note: Test codes for screening and highly specialised groups can be found within the National Genomics Test Directory.*

Activity not related to the testing pathway were removed from the data set which includes:

- Activity related to the storage of samples (R322.1, R346.1, R373.1 and R374.1)

Activity data is based on "testreport" for the count of "completed' activity.

Categorisation of "Cancer" and "Rare and Inherited Disease" is as indicated in the National Genomic Test Directory.

Categorisation of cancer sub-categories are as indicated in the National Genomic Test Directory.

Identification of paediatric & TYA age bracket for cancer is taken from clinical discussion as patients aged <25 at the point the genomic test is requested.

Categorisation of rare and inherited disease sub-categories are as indicated in the “Specialist Test Group” field within the National Genomic Test Directory.

Identification of paediatric age bracket for rare and inherited disease is taken from clinical discussion as patients aged <18 at the point the genomic test is requested.

Activity data for whole genome sequencing has been calculated using the defined technology outlined in the National Genomic Test Directory.

At sub-National breakdowns, any activity that is  $\leq 7$  has been replaced with a \* to reduce the risk of identifying individuals from small numbers.

Only valid test codes have been used with this data set. Invalid test codes have been removed from the activity.

For clinical indication code specific data, the following clinical indication codes were used:

- Acute Leukaemia – M80, M81, M89, M90, M91
- Lymphoma – M93, M95, M96, M97, M98, M99, M100, M101, M102, M103, M104, M105, M106, M107, M110, M111, M112, M114, M115, M116, M182, M225
- CNS Cancer – M20, M21, M22, M23, M24, M25, M26, M27, M28, M29, M30, M31, M32, M33, M34, M35, M36, M37, M38, M39, M126, M130, M132, M133, M137, M138, M139, M145, M146, M147, M148, M150, M153, M155, M156, M158, M159, M160, M168, M169, M170, M171, M172, M179, M183, M184, M185, M186, M189, M190, M191, M192, M193, M194, M195, M213
- Sarcoma - M42, M43, M44, M45, M46, M47, M48, M49, M50, M51, M52, M53, M54, M55, M56, M57, M58, M59, M60, M61, M62, M63, M64, M65, M66, M67, M68, M69, M70, M71, M72, M73, M74, M75, M76, M77, M78, M79, M120, M124, M167, M196, M197, M198, M199, M200, M201, M202, M203, M204, M205, M206, M207, M208, M209, M210, M211
- Colorectal Cancer – M1
- Lung Cancer – M4
- Melanoma – M7
- Endometrial Cancer – M215
- Inherited Cancers - R207, R208, R210, R21, R212, R213, R214, R215, R216, R219, R220, R224, R225, R254, R358, R359, R363, R364, R365, R366, R367, R404, R414, R422, R423, R430, R444

## Data availability

Genomics patient level contract monitoring (PLCM) data used for this publication is based on the M06 2023 (September 2023) data submissions from each provider.

Central and South GLH has one provider not included within their data. This is being worked on for future publications.

East GLH are currently in the process of implementing a new Laboratory Information Management System (LIMS). It is expected that the new LIMS will have a material impact on

the volume and type of testing activity reported. This will be worked on for future publications.

North Thames GLH has one provider with partial data. The cause for the missing data has been identified and will be resolved in the next publication.

South West GLH have identified an issue with a specific test method which has been undercounted. This will be worked on for future publication.

## Revisions

Revisions on this data is released quarterly as providers submit year to date data each month. There are currently no revisions to this data, however future revisions to this data will be highlighted here.

## Glossary

- **6+1 Commissioning:** Specific tests including NRAS/KRAS, BRAF, KIT testing, ALK testing (1 and 2), Oncotype DX, PD-L1, Prosigna and EnoPredict that are commissioned by separate mechanisms in NHS England.
- **Activity:** A count of the number of genomics tests for which test reports have been produced during the month.
- **NHS Genomics Laboratory Hubs (GLH):** A national network of seven NHS Genomics Laboratory Hubs, each responsible for coordinating services for a particular part of the country. More detail on the GLHs can be found here: <https://www.england.nhs.uk/genomics/genomic-laboratory-hubs/>
- **Highly specialist test:** a test that is commissioned by NHS England as part of a Highly Specialised Service
- **Local point of delivery code:** The code within the PLCM specification that determines the activity stage being reported (see, testprep, testtest and testreport). More details on the current PLCM specification can be found here: <https://www.england.nhs.uk/publication/genomics-testing-reporting-specification/>
- **Paediatric and TYA:** Paediatric and teenagers and young adults which is patients aged <25 at the point the genomic test is requested for cancer activity.
- **Patient Level Contract Monitoring dataset:** a dataset containing patient level identifiers used for analysis and monitoring of contractual information, support commissioning decisions and in future payment mechanisms.
- **Specialist Test:** a test that is not provided in all 7 NHS Genomic Laboratory Hubs due to low volume of genomic tests undertaken for the condition/disorder and/or specialist knowledge required for interpretation of results, aligned to a specialist clinical group (e.g. endocrinology, cardiology etc) and provided by designated NHS Genomic Laboratory Hubs.
- **Testprep:** One of the local points of delivery codes as outlined within the PLCM specification. This represents the “preparation” part of the sample pathway and includes the extraction of DNA/RNA. Testprep activity is not reflected within the published dataset.
- **Testreport:** One of the local points of delivery codes as outlined within the PLCM specification. This represents the dry lab activity from receipt of testing data through to distribution of a final report. Testreport is the activity reflected within the published dataset.
- **Testtest:** One of the local points of delivery codes as outlined within the PLCM specification. This represents the wet lab testing of the prepared sample to the

generation of data for interpretation and reporting. Testtest activity is not reflected within the published dataset.

- **Year to date:** refers to the period of time beginning the first day of the current financial year up to a specified date.

## Feedback Welcomed

We welcome feedback on this publication. If anyone has any comments on this, or any other issues regarding Genomics data and statistics, then please contact us at [england.genomics@nhs.net](mailto:england.genomics@nhs.net)

## Additional Information

For press enquiries contact the NHS England Media team on 0113 825 0958 or 0113 825 0959. Email enquiries should be directed to [nhsengland.media@nhs.net](mailto:nhsengland.media@nhs.net)

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