The Royal College of Pathologists
Pathology: the science behind the cure

Summary report from the Royal College of Pathologists' Forum: Rapid Genomic Testing for Cancer Patients

May 2026

Introductory statement

This report is a summary of an event held at the Royal College of Pathologists (RCPath) on 24 November 2025. The event was entitled 'RCPath Forum: Rapid Genomic Testing for Cancer Patients'. This document summarises key points covered by the presentations and discussions at this one-day event. Within the document, the RCPath expresses its support for some of the views expressed by our Fellows at this event. However, the summary report should not be considered a position statement or official policy document of the RCPath.

Please note that 'the College', when mentioned below, refers to the RCPath.

Summary report

Recent advances in genomic technologies and clinical bioinformatics, together with the increasing approval of targeted therapies as front-line treatments and the expanding genetic classification of cancers, are enabling and driving the need for more rapid molecular and genomic contributions to diagnosis.

The UK Governments' policies for the next 10 years are to place genomics at the front and centre of healthcare. Implementation of these advances and innovations, however, may be limited by the current healthcare infrastructure; the current centralised configuration and funding of genomic testing in the UK may make it challenging to meet the increasing clinical need for more rapid molecular and genomic diagnosis and treatment decision making.

The Royal College of Pathologists, the professional body in the UK representing medical and scientific pathologists, acknowledges the impressive contribution, impact and improved service delivery of the NHS England's Genomic Unit (NSHE GU) in recent years. The College thinks that further improvements can be made through closer collaboration, increased workforce training and education, and decentralisation and democratisation of molecular testing for patients requiring urgent results.

Consensus-seeking

To capture the views of its Fellows, a workshop focused on 'Rapid Genomic Testing for Cancer Patients' was held at the Royal College of Pathologists in London on 24 November 2025. As well as speakers from the UK, delegates heard from Australian and American pathologists to gain insights from their international experience. There were 360 registrants of whom over 220, predominantly cellular pathologists, participated in various discussions and surveys. The workshop captured individual points of view and provided a clear viewpoint on: a need for de-centralised local testing for those cancer patients requiring urgent molecular and genomic test results; cellular pathology curricula with appropriate molecular pathology content, and review of the Higher Specialist Scientist Training (HSST) molecular pathology curriculum; and closer engagement and collaboration with the UK's centralised genomics laboratories.

While the creation of the Cellular Pathology Genomic Centres (CPGC) in England helps span the gap between Cellular Pathology and Genomics laboratories, the logistics of shipping samples between geographically separated laboratories prevents delivering the fast turnaround times required for some cancer patients. Further concerns have been raised about patient outcomes and workforce integration – particularly for urgent rapid cancer testing. Accordingly, the College will engage the UK governments, and wider

stakeholders to advocate for increased autonomy and democratisation of molecular and genomic pathology.

Workplace changes

The College supports its Fellows' view that pathologists are best placed to ensure that: (i) the right tests are performed at the right time for a particular cancer type and clinical scenario, (ii) molecular and genomic results are placed into the correct clinicopathological context and integrated with all other laboratory data, including morphological and immunohistochemical biomarkers, and (iii) the effectiveness, safety and clinical utility of molecular and genomic tests are established prior to their routine deployment.

The College supports its Fellows' view that pathologists, with an appropriate level of training, expertise and certification, should provide oversight and clinical governance of molecular and genomic cancer testing and advocates for all molecular and genomic laboratories to engage or employ at least one molecular pathologist.

The College will review its cellular pathology curricula to ensure that there is appropriate molecular pathology content. We also recognise that the Scientist Training Programme and HSST molecular pathology curricula require review and updating. The corresponding RCPath examinations also need to be revised.

Service reconfiguration

Pathology laboratories should be empowered, commissioned and funded to provide ultra-rapid (3-48 hr turn-around time) single gene tests or small next generation sequencing (NGS) panels, in-house, for those patients with cancer types with a high likelihood of having a targetable alteration (e.g. acute leukaemias, non-small cell lung cancer, melanoma, anaplastic thyroid cancer) and who are experiencing life-threatening emergencies (e.g., brain metastases, bone marrow failure).

Pathology laboratories should be empowered, commissioned and funded to provide rapid (3-7 day turn-around time) in-house testing, using approved NGS panels and bioinformatic pipelines, for cancers requiring a genetic test to make a morphomolecular diagnosis (e.g.

CNS tumours, sarcomas, haematological malignancies, endometrial cancer) or for which there are approved first or second-line targeted treatments available. All rapid test results, including the morphological diagnosis, immunohistochemistry and molecular / genomic tests, should be available prior to the patient's first appointment with their oncologist or MDT meeting.

Comprehensive genomic profiling (CGP) involving large NGS panels, requiring complex bioinformatic analysis, should continue to be performed in reference Genomic Laboratory Hubs with the required platforms and expertise. CGP is ideally suited to those cancer patients whose management plan and treatment can better afford to wait a longer time period for their genomic results.

The use of smaller targeted panels performed locally with 48-hour turn-around time should continue to be explored. Adjunctive technologies, such as ctDNA (liquid biopsies), should be considered and adopted where clinically useful. This currently should not preclude making a diagnosis based on morphology, immunocytochemistry and relevant genetic testing.

Any service reconfiguration would need the support of the oncology community and should address the needs of the pharmaceutical industry, to ensure the rapid screening of patients for clinical trials and rapid deployment of new biomarker assays in routine clinical practice following approval and funding of new therapies.