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

RCPath briefing on the Government's National Cancer Plan for England

7 April 2026

The Royal College of Pathologists welcomes the ambition set out in the Government's National Cancer Plan for England, published on 4 February 2026. We submitted organisational written evidence to the Government's call for evidence, which incorporated contributions from the College's Speciality Advisory Committees. Members also responded individually to this important consultation. Our submission recommended focusing on prevention, early diagnosis and reducing cancer waiting times through investment in pathology services, digital technology and workforce expansion.

Our initial College response to the National Cancer Plan for England highlighted the importance of pathologists, laboratory scientists and support staff to cancer diagnosis, treatment and monitoring, and to interpreting, analysing and integrating results to produce a complete diagnostic report. This provides the basis of a treatment plan.

This more detailed response looks at some key areas of the plan and the College view on these issues.

Research, development and innovation

The commitment to deliver up to 10,000 cancer vaccines and speed up the roll out of other new technologies – including AI-assisted analysis of chest X-rays and pathology – is encouraging, and the plan has the potential to bring real benefits to patients.

Pathologists and laboratory staff are vital to the timely diagnosis and treatment of cancer. They are at the forefront of research to develop precise, tailored diagnostics and treatments, such as cancer vaccines, immunotherapies and liquid biopsies, speeding up targeted treatments for individual patients. Blood cancers are both diagnosed and treated by haematologists, and this has undoubtably made it possible to bring targeted treatments and advanced technologies, such as CAR-T therapy, from the bench to bedside. Advances in genomics have already led to new treatments, and advances in genomics will lead to new technologies, such as the development of cancer vaccine hubs and associated trials. Pathologists and clinical scientists are integral in all cancer trials, and hence also embrace the opportunity to help deliver these vaccine trials.

The roll out of mRNA cancer vaccines is an exciting development and ensuring rapid turn-around of samples for screening is essential. Establishment of the Cellular Pathology Genomic Centres (CPGCs) in England to invest in infrastructure within pathology to enhance deliver of genomic tests, and the aligned NHS Cancer Vaccine Launch Pad (CVLP) network for the rapid screening of patients for eligibility for vaccines, has been a very positive move; CPGCs have worked closely with NHSE genomics units to improve sample pathways and turnaround times. Committed ongoing support for CPGCs and CVLPs will be essential to support the ambitions of genomic testing and cancer vaccines. In some geographies, only half the planned CPGCs were funded. The expansion of these networks is important to support the expanding NHS Genomics Medicine Service and to address equity of access to testing and trials.

Early-stage cancer detection

While diagnosing and treating cancer at an early stage is quite rightly lauded as crucial to better outcomes, and is a benchmark of successful improvements, a ‘one-size-fits-all’ approach to diagnostic timelines does not help in certain cancer subtypes. This is alluded to in the plan, including the different way some rarer cancers are staged (which determines the size of the cancer and how far it has grown).

Some blood cancers require diagnosis (including ultra-rapid genomic testing) and treatment within hours of presentation. Many more indolent blood cancers (that grow and spread slowly) require no treatment at all, and swift diagnosis (and sometimes diagnosis at all) is of limited clinical benefit. Shoe-horning the evaluation of blood cancer pathways into

solid tumour metrics is both misleading and unhelpful. Bespoke measures of success are required to truly get to the task of improving outcomes.

Enabling expansion of diagnostic capacity with new histopathology capacity

We welcome the expansion of diagnostic capacity with new histopathology capacity. The aim for 98% of histopathology tests to be reported within 10 days by March 2029 is ambitious given the current state of consultant staffing in pathology departments. The level of vacancies and planned retirements within the profession is likely to be the most significant contributor to turnaround times.

We are pleased to see the commitment to £604m capital investment in digital diagnostics, including digital pathology, plus £96m to automate histopathology to speed up the processing and reporting of tissue samples. The plan aims to increase productivity by transitioning to digital and robotic automation-enabled histopathology pathways, with AI further enhancing capability. The Government estimates that investment in digital pathology, combined with this automation, will deliver up to a 21% productivity gain. The College would welcome rigorous real-world evaluation of these technologies to ensure that potential gains are realised in real laboratories.

The advantages of digital pathology in terms of turnaround time will only be realised if departmental systems are designed so that they can communicate easily with one another and form effective digital networks. Most current digital pathology systems funded by previous diagnostic capability funds have been deployed as silos, covering at most a small region. This is due to the fragmented nature of the funding and a lack of an overall strategy for national digital pathology.

At present, many departments are developing their own digital pathology systems, which may differ from those used by neighbouring trusts. A major barrier to the creation of fully functioning digital networks is information governance. Individual trusts are often reluctant to allow other organisations to access to patients' data. In a small number of areas, however, effective networks are being established. For example, the West Yorkshire area, which is part of the National Pathology Imaging Cooperative, has addressed concerns of data security while allowing wide collaborations across 15 hospitals over England, and could expand to add many more sites.

At the level of individual departments, digital pathology has improved flexibility for individual pathologists and has improved recruitment and retention, as well as the quality of working lives for pathologists. When implementing digital pathology, departments may have to design new ways of working to ensure the continuing involvement of resident doctors in case workflows and mitigate against a potential reduction in 'collegiate' working, as people are not physically in the laboratory as often. Successful digital deployments, however, have reported benefits for both training and improved communication, as well as making it easier to gain second opinions.

It should also be noted that advances in digital pathology technology that have so helped histopathology workflows are not replicated in other pathology disciplines. Funding streams focus on the 'big wins' of digital histopathology, while neglecting more difficult and smaller volumes elsewhere, such as cytology and haematology digitisation.

Increased automation within cellular pathology laboratories has the potential to reduce processing times. Equipment could operate over extended working days and possibly facilitate 24-hour operation. This machinery can carry out tasks such as embedding processed, wax-infiltrated tissue samples, which is currently a manual and labour-intensive process.

Artificial intelligence (AI) may act as an adjunct to pathologists in the assessment of digital pathology images, particularly for simple, repetitive tasks or those requiring quantification. But it is unlikely to replace a significant proportion of pathologists' work in the short to medium term, so the need for highly skilled consultant pathologists remains. At a local level, information governance and administrative issues are proving to be significant barriers to the implementation of AI tools. We would urge the relevant regulatory bodies to work with the College to streamline the process for the safe and ethical adoption of AI algorithms.

Digital pathology case study

In 2015, software and internet speeds were too slow for a busy lab like Peterborough to go digital. 4 years later, that had changed dramatically.

At Northwest Anglia NHS Foundation Trust (NWAFT), digitalisation delivered a rapid 10% efficiency and capacity gain. Within 6 months of introducing an AI tool for prostate biopsies algorithm, reporting turnaround times fell from 33 days to 7, significantly

reducing the Outpatient Department backlog. AI pre-reads of breast and prostate biopsies now help us predict required ancillary tests before a pathologist reviews the case, enabling single-pass reporting. In our department alone, this saves around £60,000 per year in processing costs. This more than covers the cost of the algorithms.

Cellular pathology is critical to cancer care, yet the workforce is in crisis. Across England and Wales, the specialty will require a 47% increase in staff to accommodate the predicted increase in workload by 2029; 97% of labs have pathologist vacancies and 60% of pathologists report working beyond their job plans. Half of pathologists are over 50, with an average projected retirement age of 63.[1] Without urgent action, the profession faces a retirement cliff within a decade, if burnout doesn't take its toll sooner.

We need the support of new technology to maintain the high-quality service in the UK, which is essential to the level of precision medicine increasingly being experienced by patients in this country.

Dr David Bailey, Consultant Histopathologist and Clinical Lead for Cellular Pathology, NWAFT

Review of multidisciplinary team meetings for cancer patients

Multidisciplinary team (MDT) working is increasingly essential as cancer care becomes more complex. However, the meetings need to be improved to effectively enable and empower clinicians to use them as spaces to rethink service design, drive quality improvement and generate care plans for complex patient cases.

The College supports a review of the way in which pathologists contribute to MDT meetings for cancer patients. MDT meetings require a significant level of resource in terms of staffing across many specialties; there are likely to be ways in which pathologists can provide contribute to these meetings in a more focused and time-efficient way, thereby releasing time for other activities, such as the preparation of reports for cancer specimens.

[1] Royal College of Pathologists Workforce Census 2025 https://www.rcpath.org/profession/workforce-and-engagement/workforce-planning/workforce-census.html

Every cancer patient who would benefit from a genomic test will get one in a clinically relevant timeframe

Pathology is at the core of genomic medicine. The expansion and embedding of genomic testing in patient care has been transformational; genomic medicine is already providing faster, more accurate diagnosis and tailored treatment for patients with cancer and inherited diseases, with new advances being made all the time. There needs, however, to be continued investment, innovation and research to ensure patients benefit from genomic tests no matter where they live, so that pathologists can identify and select the best treatments possible for each individual.

While there has been significant investment in genomics, there needs to be continued resource provision for the dramatically increasing workload genomics creates for cellular pathology to process and analyse histological samples for genomic testing. Without this being addressed, the ability to support the quality and level of genomic service desired will be severely limited. Standardisation of sample preparation and tumour assessment to optimise genomic testing is required. There needs to be a realistic view of cost-effective treatments with good benefit outcomes.

The College understands that the proposed increased centralisation of testing to Genomic Laboratory Hubs offers some advantages in terms of economies of scale and increased range of tests. However, we have listened to our members in differing subspecialties who are of the opinion that this is not a universal solution and that a broader portfolio of testing strategies, aligned locally to patient needs, is essential. The retention of local testing in certain situations provides the best solution for patients and, indeed, would be in alignment with the Government's 3 shifts in its 10-year plan – i.e. supporting national priorities for faster and earlier diagnosis closer to the community, providing personalised care and embedding innovation and AI into clinical practice.

We also emphasise the considerable expertise in molecular pathology that exists across pathology departments in England, providing high-quality responsive services that enhance patient care. The proposed Genomic Medicine Service configuration threatens this highly skilled workforce and seriously compromises service resilience.

In the diagnosis of blood cancers, there are decades of experience of genomics 'hard-wired' into testing pathways, and those testing pathways are generally significantly more

complex than for solid tumours. The principles of the specialist integrated haematological diagnostic services (SIHMDSs), underpinned by NICE guidance (www.nice.org.uk/guidance/ng47) is big success story, putting key diagnostic components, including genomic testing, under 1 governance structure and improving diagnostic accuracy. Effort should be made to strengthen this successful system. Steps to separate and over-centralise genomics will only lead to delays and harm to patients.

Genomic testing for lynch syndrome

Lynch syndrome affects between 1 in 279–400 adults and greatly increases the risk of cancers like colorectal and endometrial, yet fewer than 5% of UK cases are diagnosed. The plan highlights the case study of the partnership between NHS England with the NHS Genomic Medicine Service Alliances and Cancer Alliances to launch a national transformation programme to tackle this. We agree that identifying a greater proportion of individuals who have Lynch syndrome would be a useful step. At present, all new colorectal cancers and endometrial cancers are tested for possible Lynch syndrome by cellular pathology laboratories.

We welcome the national training programme supporting the education and training of nurses and pathology staff through online modules and workshops. These efforts led to the creation of a national Lynch syndrome registry within the National Disease Registration Service and subsequently improved access to colonoscopy by digitising the referral pathway to the NHS Bowel Cancer Screening Programme.

Following the transformation programme, 94% of newly diagnosed colorectal and endometrial cancer cases are now tested for Lynch syndrome. This enables family members to access preventative genomic testing and surveillance pathways, improving early detection and care.

Workforce

Without a sustainable diagnostic pathology workforce, patients will not receive the diagnosis they need, delaying decisions about their treatment and leading to poorer outcomes. Pathology can best support the priorities for the National Cancer Plan if there is improved investment – in workforce, information technology (IT), digital capability and the laboratories we work in. New technology will only help if skilled staff are available to use it.

Cancer diagnosis, treatment and monitoring rely on pathologists to interpret, analyse and integrate results to produce a complete diagnostic report, which provides the basis of a treatment plan.

Diagnostic pathology services continue to face deep-rooted workforce shortages. With demand continuously increasing, this issue will need to be urgently addressed to realise the ambitions of the Government's National Cancer Plan for England.

Plans to target more clinical oncology training posts in areas with the worst staff shortages and encourage more graduates to specialise in oncology are important steps to tackle inequalities. However, we must train more pathologists and scientists in a range of specialties, or else plans to increase diagnostic capacity, expand screening and spot cancer earlier risk worsening backlogs and delays. It is worth noting that increasing haematology training numbers will provide doctors who diagnose and doctors who treat cancers.

Expanding and improving screening

We are pleased to see the commitment to tackle cancer screening inequalities through investment. Screening for cancer and early diagnosis are key to preventative healthcare, largely supported by pathology services. There must be parity in terms of access to screening and reduction of waiting times for referrals; the '2-week wait' is often longer in some parts of the country. There should be a review of current screening programmes to see if they still meet the needs of the affected populations.

However, a shortage of pathologists and other essential diagnostic professionals is a barrier to expanding cancer screening. Effective programs must ensure timely diagnosis and access to treatment, but each screening test has limitations, highlighting the need for improved methods.

Expansion of the Bowel Cancer Screening Programme by lowering the screening age from 60 to 50, with the faecal immunochemical test (FIT) offered to individuals aged 50 to 74, aims to detect bowel cancer earlier. The introduction of at-home FIT kits facilitates early detection, leading to more individuals being diagnosed at earlier stages and potentially increasing the volume of biopsies and subsequent histopathological examinations.

Conclusion

Improving performance in pathology depends on investment in both workforce and new technology. However, other barriers must also be addressed. For example, the implementation of new technologies, such as digital pathology, across the NHS has been inconsistent and fragmented. This has resulted in systems that may function adequately at a local level but are not typically designed from the outset to operate at a regional or national scale.

In addition, bureaucracy related to information governance – which would require national-level intervention to resolve – is currently creating a significant barrier to the implementation of technologies such as AI and to the transfer of digital pathology images between laboratories.

Reference

1. The Royal College of Pathologists. *Workforce Census 2025*. Available at: www.rcpath.org/profession/workforce-and-engagement/workforce-planning/workforce-census.html

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