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Strengthening the backbone

Reimagining NHS diagnostics in England

June 2026 | Magentus.com

Contents

Acknowledgements

This report examines the current pressures facing diagnostics in England and provides actionable recommendations for change. It draws on new analysis of NHS England performance data and the expertise of a steering group.

The report has been commissioned by Magentus. We would like to thank the following individuals for their expert contributions:

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This report has been written by ZPB Associates, a London-based strategy and data-led healthcare consultancy.

Foreword

Diagnostics plays a critical role across almost every aspect of healthcare. From supporting earlier diagnosis and treatment decisions to enabling disease management, these services are the backbone of modern clinical care. As demand grows and policy increasingly focuses on prevention and personalised care, diagnostics is becoming even more important to the future of the NHS.

This growing role presents a significant opportunity. Advances in genomics, greater use of data, the emergence of AI-assisted diagnostics and expanding access through community models all have the potential to create a more connected, responsive and patient-centred diagnostic system. Used effectively, these developments could improve patient experience, support earlier intervention and enable better use of NHS resources.

Diagnostic services are operating under significant pressure, with rising demand, workforce shortages and fragmented systems creating strain across pathways. While progress has been made in many areas, variation in access, disconnected data and operational inefficiencies continue to affect both patient experience and system performance.

Meeting future ambitions requires more than increasing activity alone. It will need services that are designed to work more effectively at scale, make better use of information and technology, and deliver more joined-up pathways of care for patients.

The future opportunity for diagnostics to transform patient care and system performance is substantial but realising it will depend on how effectively the system responds to the challenges it faces today. This will require addressing fragmentation, improving data connectivity and prioritising more joined-up, patient centred pathways at scale.

Guided by our expert panel, this report sets out recommendations for how diagnostic services can evolve to become more connected, resilient and better equipped to support patients and clinicians in the years ahead.

Marlen Suller,
Managing Director,
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Magentus

Executive summary

Diagnostics sits at the centre of modern healthcare. It informs almost every clinical decision, shapes how quickly patients access treatment, and increasingly determines how effectively the NHS can deliver on its ambitions for earlier diagnosis, prevention and more personalised care.

But demand for diagnostic services is now growing faster than the NHS's ability to meet it. Despite record levels of testing and sustained efforts from frontline teams, pressure on the system continues to increase. Delays in diagnostics are creating knock-on impacts across wider pathways including cancer, cardiology and elective care.

The challenge is no longer simply one of capacity. The NHS needs a more connected diagnostic model: one that links services across organisations, makes better use of workforce and technology, and creates clearer, more joined-up pathways for patients.

Recommendations for change

This report sets out recommendations NHS leaders can act on to improve performance and create a more resilient diagnostic system. They are:

1. Design diagnostic services as connected pathways, rather than isolated services or departments
2. Tactically expand workforce capacity, particularly in reporting roles and specialist diagnostic expertise
3. Improve interoperability and data sharing across systems and organisations
4. Use existing capacity more effectively, including Community Diagnostic Centres and networked working models
5. Move diagnostics earlier in pathways to support prevention and faster intervention
6. Improve patient communication and navigation, making diagnostic journeys clearer and easier to understand
7. Align incentives and funding models to support integrated, whole-pathway care
8. Raising the quality of referrals

Improving diagnostics is not simply about increasing activity. It is about building a more connected, coordinated and patient-centred system that supports better outcomes across the NHS.

1.92 million people are currently waiting for a diagnostic test - 83% higher than before the pandemic

More than one in five patients (21.2%) waits longer than six weeks for a test

Median waiting times have increased by 56% since pre-pandemic levels

Despite delivering over 2.6 million tests in a single month, demand continues to outpace capacity - since January 2022, the waiting list has grown by almost half a million patients

Significant regional variation persists, with long waits ranging from around 13% to nearly 30% depending on where patients live

Diagnostic demand has grown more than twice as fast as reporting workforce capacity, contributing to delays across wider treatment pathways

Why diagnostics matters

Diagnostics are the backbone of modern healthcare, providing the imaging, testing and analysis that underpin clinical decisions and patient management. The NHS delivered around 2.4 million diagnostic tests in the last month,[1] reflecting the scale at which these services support almost every part of the health system. Hospitals in England also conduct over 1 billion laboratory pathology tests each year.

Diagnostics is not a single, uniform service. It includes a range of disciplines with distinct workflows and operational pressures. For the purposes of this report, we focus primarily on radiology and pathology services, which together support most diagnostic decision-making within the NHS.

Radiology includes imaging-based diagnostics such as X-ray, CT, MRI and ultrasound, supporting pathways including cancer, stroke, fractures and cardiovascular disease.

Pathology includes laboratory-based diagnostics such as histopathology, blood sciences and microbiology, supporting diagnosis and monitoring across cancer, infection, diabetes and genetic disease.

Diagnostics operate across multiple referral routes. Some tests are requested through GP or consultant referral pathways, with services delivered through acute hospitals, Community Diagnostic Centres (CDCs), screening programmes and direct digital access models, often initiated by patients themselves.

Every clinical pathway depends on timely, accurate diagnostic insight. As care becomes more complex and data-driven, diagnostics is evolving into a connected, system-wide capability that shapes decision-making across the patient journey.

Diagnostics has always been important, but it is now becoming critical to the future sustainability of the NHS. It acts as:

- The gateway to care, determining how and when patients enter clinical pathways
- The pacesetter for the system, with delays in diagnostics having downstream impact
- A multiplier of clinical effectiveness, enabling earlier, more accurate intervention

Patient experience of diagnostics

> “Improving diagnostics is not only about increasing capacity or reducing waits. It is also about creating pathways that are easier for people to navigate, with clear communication and support at every stage.

Jacob Lant,
CEO, National Voices

From a patient perspective, diagnostics can be a multi-step process involving GP appointments, referrals, specialist review, follow-up investigations and ongoing communication across multiple organisations. When these pathways work well, they provide reassurance, clarity and rapid access to treatment. But where pathways are fragmented, the impact on patients can be significant.

[1] NHS England, Monthly Diagnostic Waiting Times and Activity, DM01 return, March 2026 data, published 14 May 2026. Available at: https://www.england.nhs.uk/statistics/statistical-work-areas/diagnostics-waiting-times-and-activity/monthly-diagnostics-waiting-times-and-activity/. Accessed 14 May 2026.

Research from National Voices brings together evidence highlighting:

- In an Age UK survey, 37% of those asked said shorter waiting times for diagnosis would change confidence in accessing NHS services
- In a study of endometriosis diagnosis in Scotland, 75% of patients received no written information at the point of diagnosis
- Of the minority who did receive information, only 17% were satisfied with it, while 56% were dissatisfied or very dissatisfied
- Alzheimer's Society reported that less than 2% of people living with dementia get the advanced diagnostic tests needed to get an accurate subtype diagnosis, making it more difficult to access appropriate medication

Patients frequently describe delays, poor communication and the need to repeat information, and often tests, across organisations, creating uncertainty and additional burden.

The experience of diagnostic services can therefore shape not only operational performance, but also patient confidence, trust and long-term engagement with care. Delays, lost referrals, duplicate tests and poor communication can create anxiety and place additional burdens on patients, particularly those with complex conditions, communication needs or limited digital access.

Changes in diagnostics must mean clearer, more connected and more patient-centred pathways that reduce uncertainty and help patients move through the system more smoothly.

Diagnostics at the heart of healthcare policy

National policy sets out a fundamental redesign for the NHS, with diagnostics playing a central role. Across key policy documents including the 10 Year Health Plan, the National Cancer Plan and the Neighbourhood Health Framework, a consistent direction emerges:

- Care will shift closer to home, with greater access to diagnostics in community settings – with significant investment in Community Diagnostic Centres
- Patients will have direct and digital access to tests, supported by integrated data systems, with many key diagnostic tests delivered through the NHS app
- Diagnostics will be used earlier and more proactively, enabling prevention and early diagnosis, with ambitious targets around genomics
- Services will operate across networks rather than individual organisations, improving access to capacity and expertise

Current NHS performance

Demand for diagnostics is increasing faster than workforce and infrastructure capacity, creating delays and inefficiencies despite record activity levels. Our analysis highlights several key areas of concern:

The diagnostic waiting list is growing:

- The overall diagnostic waiting list reached 1.92 million patients in March 2026
- The waiting list is projected to pass 2 million in March 2027 if demand continues at the recent pace
- The current waiting list is 83 per cent higher than pre-pandemic levels
- In March 2026 alone, the waiting list increased by more than 55,000 patients

Activity levels are exceptionally high. In March 2026, over 2.61 million diagnostic tests (excluding pathology) were delivered, making it the second highest total on record. This reflects the huge effort across the NHS to increase throughput and expand access to testing.

Chart 1: Total diagnostic waiting list in England. The solid line is the actual figure to March 2026. The dashed line and shaded band are the projection and its range. On current trends the list passes two million during 2027. Source: NHS England Monthly Diagnostics (DM01); ZPB projection.

But despite these efforts, the growth of the waiting list shows demand continues to outstrip delivery. Stopping the gap between demand and delivery would take around 18,000 extra tests per month. But clearing the backlog built up above pre-pandemic levels within a year would take an estimated 90,000 additional tests per month, an uplift of around 3.5 per cent.

Patients facing long waits

Alongside the growth in the number of patients on the diagnostic waiting list, the time those patients are waiting for their test has also lengthened:

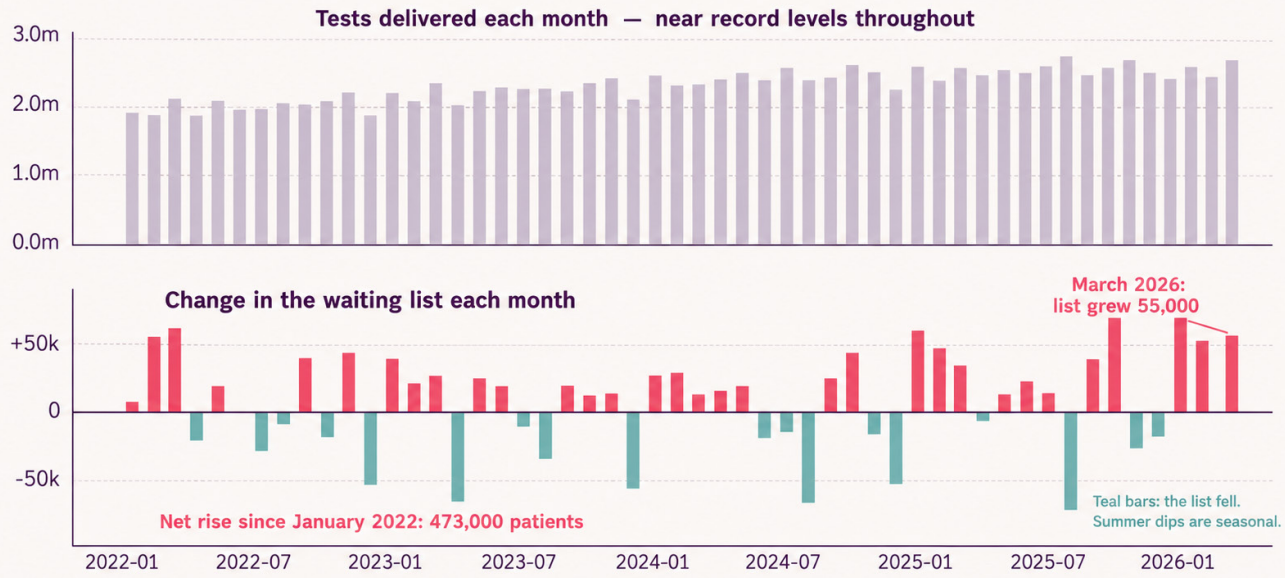
- The median wait for a diagnostic test now stands at 2.9 weeks, compared to 1.86 weeks before the pandemic (56 per cent increase)
- More than one in five patients wait longer than six weeks for a diagnostic test, equivalent to 21.2 per cent or over 400,000 people waiting at the end of March 2026
- This remains significantly above the NHS constitutional standard, which states that no more than 1 per cent of patients should wait beyond this threshold

A variable picture across regions

Beneath the national picture, there is considerable variation in access across England. In some regions, close to one in three patients are waiting longer than six weeks, while in others the proportion is closer to one in eight. For example, the East of England reports close to 30 per cent of patients waiting over six weeks, compared to around 13 per cent in the North West. At provider level, the proportion ranges from less than 1 per cent to over 30 per cent, even within the same region.

Record testing has not stopped the waiting list rising

Monthly diagnostic tests delivered, and the monthly change in the waiting list, England, 2022 to March 2026

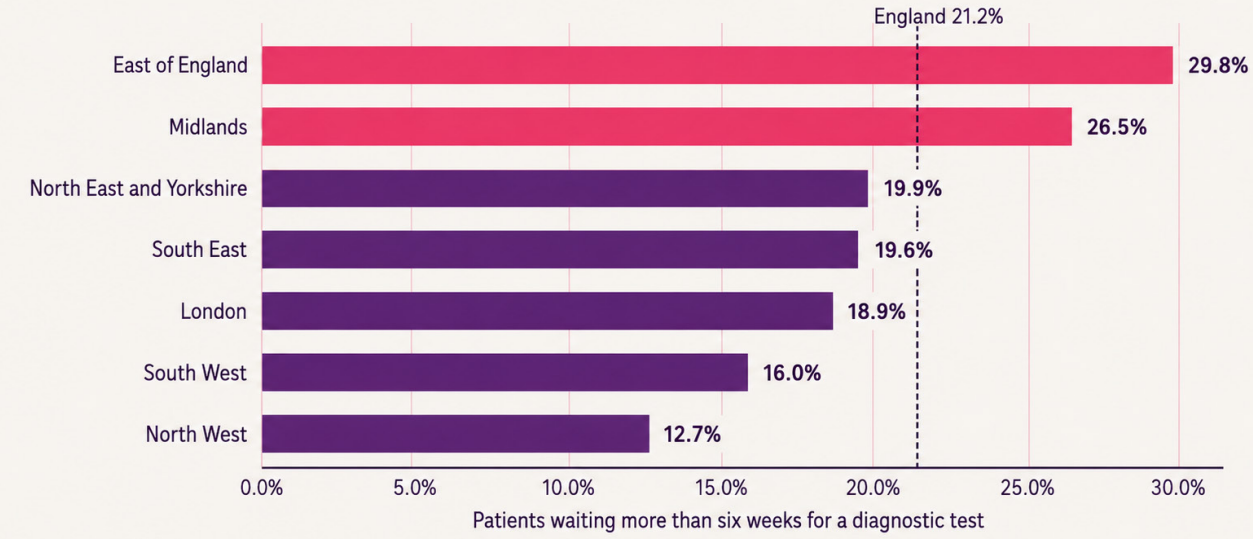


Source: NHS England Monthly Diagnostics (DM01). When a lower bar is positive (red), demand outstripped the tests delivered that month.

Chart 2: Diagnostic tests delivered each month (upper panel) against the monthly change in the waiting list (lower panel). Red bars show months when the list grew and demand outstripped testing. Teal bars show months when the list fell, mostly seasonal summer dips. Despite near-record testing, the list has risen by 473,000 patients since January 2022. Source: NHS England Monthly Diagnostics (DM01), March 2026.

Six-week diagnostic breaches range from 13% to 30% across England

Proportion of the diagnostic waiting list waiting over six weeks, by NHS region, March 2026



Source: NHS England Monthly Diagnostics (DM01), March 2026. NHS constitutional standard: no more than 1% should wait beyond six weeks.

Chart 3: Share of the diagnostic waiting list waiting more than six weeks for a test, by NHS region, March 2026. The dashed line is the England average of 21.2 per cent. The Midlands and East of England, in red, are the clear outliers. Source: NHS England Monthly Diagnostics (DM01), March 2026.

This is compelling evidence that the "how" matters as much as the "how much". Performance is shaped not only by underlying demand, but by how services are organised, coordinated and delivered locally. Two ICBs facing similar demand pressures can produce very different waiting list outcomes depending on local service design. Differences in workforce capacity, pathway design, and the extent to which systems can share data and capacity all contribute to uneven performance across the country.[2]

Community Diagnostic Centres (CDC) utilisation:

CDCs are a key part of the NHS strategy to improve access to testing. However, our analysis suggests that capacity may not always be concentrated where pressure is greatest.

Our analysis shows:

- CDC capacity is not concentrated where the long-wait pressure is greatest – the waiting list is longest where there is less CDC capacity
- East of England Commissioning Region delivers roughly 3.4 CDC tests per patient on its waiting list, against 5.4 in South West Commissioning Region
- The regions with the longest waits also have the lowest CDC throughput per patient on the waiting list, suggesting CDC capacity is not following need

This suggests there is an opportunity to align CDC capacity more closely with patterns of demand, helping ensure diagnostic resources are targeted where they can have the greatest impact.

Downstream impact:

Delays in diagnostics do not remain isolated – they resonate across treatment pathways, with impact visible in wider system performance, particularly in cancer pathways.

Our analysis shows that ICBs with higher numbers of people waiting over six weeks for diagnostics are almost six times more likely to miss the government's 28-day Faster Diagnosis Standard.

The impact of delays is also clearly visible in other key therapeutic areas. Trusts with the longest diagnostic waits are around three times more likely to record the worst treatment waits in ENT and gastroenterology, in cardiology this is 2.5 times. This is a sign that diagnostic delay feeds directly into treatment delay.

The diagnostic workforce

Workforce capacity is a consistent challenge. This is particularly evident in areas such as pathology and histopathology, where reporting capacity is critical to turning test results into clinical decisions. Since January 2020 the diagnostic waiting list has grown by 83 per cent. Over the same period the medical reporting workforce grew by 33 per cent in clinical radiology and 24 per cent in histopathology. Demand has outpaced the reporting workforce by more than two to one.

The impact is shown in turnaround times, the share of histopathology cases reported within ten days rose only from 51 per cent in April 2025 to 55 per cent in February 2026, and ranges from 71 per cent in London to 46 per cent in the North East and Yorkshire.

[2] Data sources: NHS England Monthly Diagnostics Web File (Commissioner), March 2026. Sheet: ICB Summary, NHS England Cancer Waiting Times CRS Extract by ICB Sub-Location, March 2026. Standard: 28-day FDS.

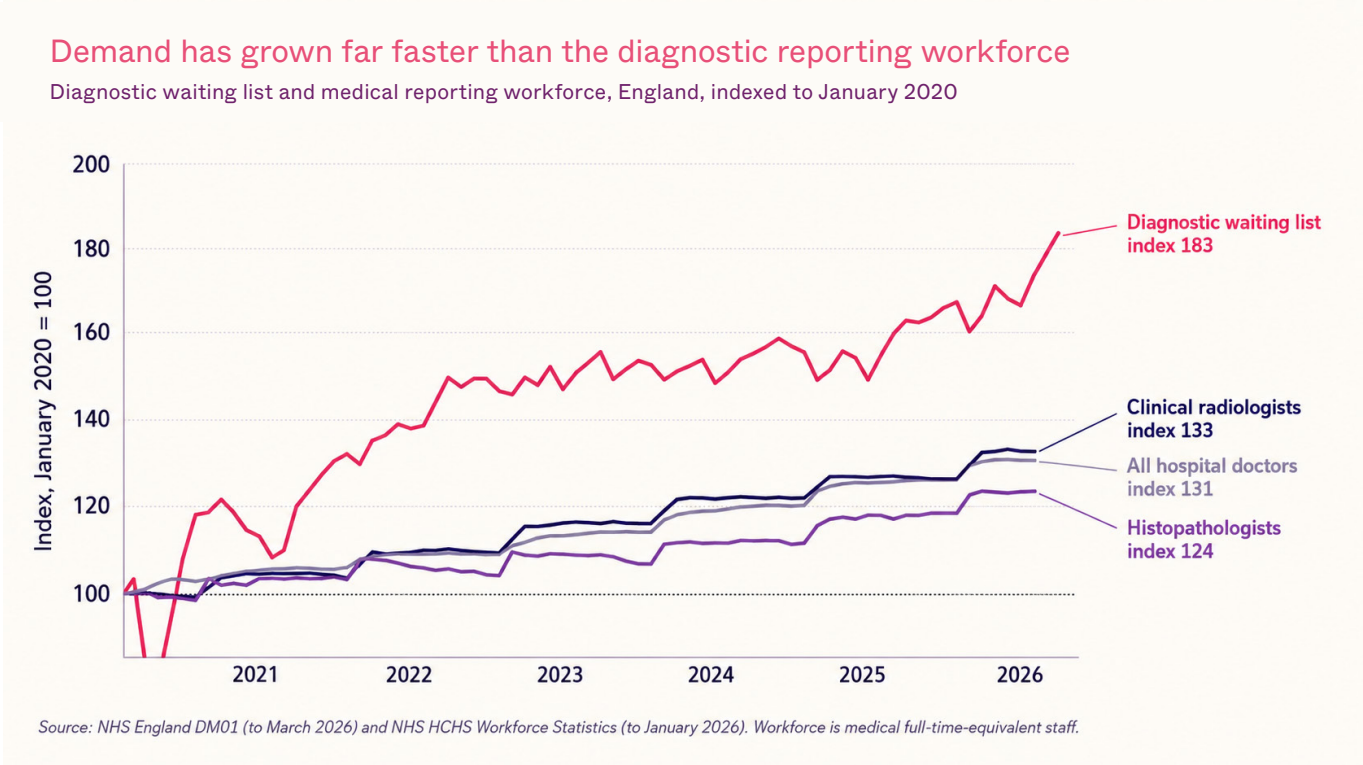


Chart 4: Diagnostic waiting list and medical reporting workforce, indexed to January 2020 = 100. Demand, the waiting list, has risen to 183, while the radiology, histopathology and wider medical workforce sit between 124 and 133. Source: NHS England Monthly Diagnostics (DM01) and NHS HCHS Workforce Statistics.

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From my perspective, particularly in histopathology, the biggest issue is workforce. We simply do not have enough people to do the work, and that has a direct impact on patients, especially those waiting for cancer diagnoses.

Alongside that, we have very variable adoption of technology and networking, which means we are not making the most of the tools that could help us address those pressures.

Professor Erika Denton,
Professor of Radiology,
NHS Norfolk and Norwich University Hospital

Examples of success

Despite these system-wide challenges, there are examples across the NHS where diagnostic services are evolving to better meet demand.

How Cheshire and Merseyside Pathology Network is building a connected diagnostic service at scale

Serving 2.7 million people across five NHS Trusts, the Cheshire and Merseyside Pathology Network (CAM) is delivering one of the NHS's most ambitious pathology transformation programmes. At its centre is a unified Laboratory Information Management System (LIMS), designed to create a more connected, resilient and efficient diagnostic service across the region.

The programme reflects a broader NHS shift towards networked diagnostics. As demand for testing rises, pathology services are moving away from isolated organisational models towards approaches that enable shared capacity, standardised workflows and improved access.

Once fully implemented, the system is expected to reduce duplicate testing, improve turnaround times, improve equity of access. and support more consistent reporting across participating Trusts. For patients, this means faster and more reliable diagnostic results regardless of where samples are processed.

The programme has been designed around the needs of patients, clinicians and laboratory teams, with strong emphasis on clinical engagement and co-design. Hundreds of hours of workshops, laboratory visits and Clinical Reference Group meetings have helped ensure the system reflects frontline realities while identifying opportunities to redesign workflows and improve efficiency.

Workforce engagement has also been central. Communication materials, explainer videos and workflow updates have helped staff understand both how processes will change and why those changes matter.

Alongside workflow redesign, the programme has aligned test catalogues, coding and reporting standards and operational processes across all five Trusts. This standardisation is essential to supporting a true networked model where work can move flexibly across sites while maintaining clinical consistency.

The programme is supported by a governance structure including a Programme Board, Project Delivery Group and clinical working groups, ensuring accountability and strong clinical ownership. Integration with NHS systems, cloud infrastructure and cybersecurity requirements and EPR planning have also been embedded from the outset.

For NHS leaders, the programme highlights that large-scale diagnostic transformation depends as much on governance, collaboration and workforce engagement as on technology itself.

Key takeaways for NHS systems

1. Transformation must be clinically led
   Successful change depends on engaging frontline teams early and designing workflows around operational reality rather than organisational structures.
2. Governance and workforce engagement are critical
   Clear accountability, clinical ownership and sustained staff engagement are essential to delivering change safely at scale
3. Networked diagnostics requires standardisation
   Shared capacity and flexible service models rely on aligned coding, reporting standards and operational processes.

How the North East and North Cumbria Imaging Network is using AI to accelerate lung cancer diagnosis

Serving more than three million people, the North East and North Cumbria Imaging Network is using artificial intelligence technology to support earlier detection of lung cancer and improve diagnostic pathways across the region.

The programme combines Annalise.ai's chest CT solution with Magentus' Cris radiology information system (RIS), enabling radiologists to access AI-supported findings directly within their existing reporting workflow. Initially implemented at County Durham and Darlington NHS Foundation Trust, the project demonstrates how diagnostic networks can introduce innovative technologies while maintaining clinical oversight and governance.

The initiative reflects a wider NHS focus on using technology to address growing diagnostic demand, workforce pressures and cancer waiting times. By embedding AI into existing workflows, the programme aims to support faster identification of suspicious findings without creating additional systems or processes for clinicians.

The integration was designed with a strong focus on security, performance and information governance, ensuring the technology could be deployed safely and effectively within routine clinical practice.

For NHS leaders, the programme highlights how connected digital infrastructure can support the adoption of AI at scale, helping diagnostic services manage increasing demand while supporting earlier diagnosis and better patient outcomes.

Key takeaways for NHS systems

1 Innovation works best when integrated into existing workflows
Embedding new technologies within established clinical systems supports adoption and minimises disruption.
2 Connected infrastructure enables innovation at scale
Interoperable systems provide the foundation for introducing AI and other advanced technologies across organisations and networks.
3 Technology must support clinical decision-making
The greatest impact comes when AI enhances existing clinical expertise and is embedded within wider diagnostic pathways.

Recommendations for change

To realise the ambitions of the NHS and deliver the service that patients need, a step change is required. Diagnostic services are not homogeneous, and solutions must reflect the differing operational realities of radiology, pathology and other modalities. The following recommendations have been set out by our expert steering panel:

Redesign diagnostic services as an end-to-end, connected pathway

> We don't currently complete the circle when it comes to diagnostics. An end-to-end, connected pathway would allow us to understand what is being requested, what is needed, and how patients move through the system. Without that connectivity, we lose opportunities to improve efficiency and make better use of our workforce.

David Wells, CEO, Institute of Biomedical Science

We must redesign diagnostic services to deliver connected pathways in which the system takes responsibility for coordinating the full patient journey from presentation to resolution. This requires integrated digital systems that enable seamless information flow, clearer ownership across organisational boundaries, and mechanisms that automatically trigger follow-on actions such as further tests or referrals where clinically appropriate.

In practice, this means closer alignment between primary, community and secondary care, supported by interoperable systems that allow diagnostic data to follow the patient rather than remain siloed within individual providers. Stronger pathway and capacity management are needed to identify delays early and intervene before backlogs build. The Cheshire and Merseyside Pathology Network, profiled earlier in this report, shows what this looks like in practice: a unified Laboratory Information Management System serving 2.7 million people across five NHS Trusts, with clinical co-design and a programme board providing the governance and clinical ownership the model depends on.

The benefits would be significant: clinicians would see the full diagnostic picture and deliver more holistic care, with less duplication, fewer unnecessary appointments, and a more coordinated and predictable experience for patients, with each stage of care progressing logically to the next.

Tactically expand workforce capacity, particularly in reporting roles and specialist diagnostic expertise

Workforce constraints, particularly within pathology and histopathology, remain a major system limitation. While efforts have focused on increasing testing capacity, a critical challenge is ensuring sufficient capability to interpret and report results, the clinical reports that turn scan images and laboratory samples into actionable findings for the patient's care team.

We must strengthen workforce capacity through long-term planning and new workforce models. This includes expanding training pathways and developing roles such as advanced practitioners and clinical scientists to increase capacity for processing results.

Workforce planning must also anticipate that skills requirements may change as pathways evolve and new technologies are introduced. Technology should support clinical capacity and reduce administrative burden, rather than simply digitising existing inefficiencies.

Enable data connectivity at scale through interoperability and standardisation

Fragmented diagnostic data is a major barrier. The challenge extends beyond interoperability alone, to the ability to connect and use data effectively across organisations and pathways.

Diagnostic data often remains siloed, relying on local systems, manual processes or clinician knowledge to access information. This creates duplication, delays and incomplete clinical insight. We must enable data connectivity at scale, so information is accessible, shareable and usable by default. Achieving this requires interoperability, consistent standards and shared systems that allow clinicians to access relevant information regardless of where it was created. This will require coordinated technical, organisational and governance changes, supported by incentives that encourage system-wide data sharing rather than local optimisation.

Regional working has begun to deliver impact, with networked pathology and imaging services demonstrating what is possible when capacity and data flow across organisational boundaries.

Regional working is the starting point, not the destination. National-level data sharing will be crucial to unlock the full value of connected diagnostics, allowing every clinician in the country to draw on the same complete patient record regardless of where prior tests were carried out.

The benefits are substantial: reduced duplication, faster and more accurate decision-making, improved pathway management, and a stronger foundation for analytics, population health management and AI. For patients, it means information follows them through the system, improving continuity of care.

Make better use of existing capacity

Making better use of existing capacity is equally important. Expanding capacity alone will not solve the challenge if the system cannot consistently direct patients into the services that already exist. Initiatives such as Community Diagnostic Centres (CDCs) have significant potential, but evidence across the system shows that their impact is uneven. In some areas, CDCs have not been established where underlying demand and deprivation are greatest, meaning new infrastructure is not always aligned to the populations with the highest unmet need. This reinforces the point that capacity planning must be driven by population health data and referral demand, rather than simply the availability of estate or local organisational priorities.

More broadly, capacity - whether new or existing - only delivers value when it is actively used by clinicians and embedded within referral pathways. Existing CDC and Trust capacity is often underused because referral behaviours lag behind service redesign, equipment sits idle outside of core hours, or local pathways have not evolved to reflect how services are now configured. In practice, this means that additional scanners or reporting capability may exist within a system, but patients are still routed inefficiently or continue to face delays because pathways remain fragmented.

Making better use of what is already in place therefore requires changes to both operational models and system incentives. This includes matching capacity to actual demand patterns, extending operating hours where evidence supports it, improving visibility of available slots across organisations, and embedding diagnostic decision-making earlier in the patient journey so clinicians draw on existing capacity rather than waiting for additional infrastructure to be built.

There is also a wider organisational challenge around fragmentation. Where services are planned and managed at a larger scale - for example through Imaging Networks or more coordinated ICB-led regional models - systems are often better able to reduce duplication, streamline administration, pool reporting and workforce resource, and direct activity to available capacity across organisational boundaries. This type of coordinated management can help ensure that existing diagnostic assets are used more efficiently before further expansion is commissioned.

Capacity expansion should therefore be viewed as one component of broader system redesign rather than a standalone intervention.

Many pathways currently require patients to attend a first specialist appointment before diagnostic testing begins, creating unnecessary delays. Embedding anticipatory diagnostics would ensure appropriate tests are completed before the first specialist consultation, enabling clinicians to make informed decisions sooner. Rather than requesting investigations, the first appointment can focus on interpreting results, confirming diagnoses and planning treatment.

> “It is difficult to justify a system where a patient waits months for an appointment, attends clinic, and is then simply sent away for basic tests. Much of that diagnostic work could have been anticipated earlier in the pathway, allowing for a more meaningful first consultation. If we embed diagnostics upfront, we can improve both patient experience and the efficiency of the system.

Sarah Curtis, Clinical Lead for Pathology IT, NHS Cheshire and Merseyside Pathology Network

This approach improves efficiency and quality by reducing time to diagnosis, minimising repeat appointments and making better use of specialist time. It also supports more effective triage by prioritising patients based on diagnostic findings rather than referral information alone. Delivering this model requires clear referral protocols and strong coordination between referrers and diagnostic services to ensure the correct tests are requested and results are available when needed.

Give patients clear, accessible and actionable diagnostic information

There is a significant opportunity to improve patient experience through better communication and access to information. Patients currently receive highly variable levels of information about tests, often presented in technical language that is difficult to understand without clinical support. In some cases, results are available through the NHS App without appropriate context.

Diagnostic outputs should include clear, patient-friendly information explaining results and next steps. This could include plain-language summaries delivered through digital tools such as the NHS App, potentially enhanced through AI-generated interpretations of complex reports. Clearer information would reduce anxiety, improve understanding, and help patients engage more effectively in their care.

This is likely to reduce unnecessary follow-up contacts with services such as GPs and NHS 111.

Align funding and incentives

Structural issues within funding and policy frameworks continue to limit progress. Current approaches are often fragmented, with responsibility for different elements of care separated and costs and benefits not always aligned.

We should move towards pathway-level funding models that allocate resources according to the needs of the full patient journey. This must include across existing budget siloes such as laboratories, radiology and endoscopy. This would support more integrated care and enable investment in interventions that deliver value across the system. Policy delivery must also be strengthened through clearer mandates, stronger accountability and greater implementation support.

Without alignment between incentives and delivery mechanisms, even well-designed reforms are unlikely to achieve their intended outcomes.

Where additional funding is allocated for diagnostic services better understanding of financial process would help systems and organisations utilise funding appropriately. The revenue consequences of capital investment are often poorly understood; including staffing and training requirements, consumables costs and annual capital depreciation costs which are dependent on the expected life expectancy of the equipment purchased.

Smarter referrals, sharper demand

> I think we need to better understand what is driving demand within the system. From a primary care perspective, a lot of this is shaped by how pathways are designed and how easy it is to access the right tests at the right time. If we can get that right, we can reduce unnecessary steps for patients and make much better use of the capacity we already have.

Dr Nav Chana, GP and Non-Executive Director, Lewisham and Greenwich NHS Trust

Consistency in referral and diagnostic requesting is a key driver of system efficiency. Diagnostic demand cannot be addressed through increased capacity alone, as demand itself is shaped by system behaviour, including how clinicians request tests, how pathways are designed, and how results are interpreted and acted upon.

A major challenge is unwarranted variation in diagnostic requesting and follow-on investigations, including low-value or unnecessary cascade testing, where an initial investigation leads to further tests with limited clinical value. This can result from uncertainty, defensive practice, fragmented pathways, or inconsistent access to guidance and prior diagnostic information.

> We need to be asking whether the test being requested is going to result in an action that benefits the patient. There are still too many referrals that are either incomplete or not aligned to the correct pathway, which adds pressure to the system. Improving the quality of referrals is therefore critical to improving overall diagnostic efficiency.

Philip Brentnall, Clinical Lead Radiology, Magentus

Diagnostic networks, Integrated Care Boards and NHS Regions should play a more active role in analysing patterns of test utilisation, identifying over-investigation, and supporting more evidence-based use of diagnostics across pathways.

This requires a shift in mindset. Rather than viewing demand as an external pressure, the system must recognise its role in shaping demand and take responsibility for managing it. This is essential to improving diagnostic accuracy, reducing unnecessary demand, and ensuring existing and future capacity delivers sustainable impact.

Conclusion

If taken forward these recommendations would enable the NHS to improve the outlook for diagnostic services. This includes reducing the number of people waiting for a test and the length of time that they wait, with significant downstream benefits. Crucially it would improve patient experience, and the experience of hard-working staff.

About Magentus

Magentus is empowering intelligent healthcare to create a healthier society. We are building a future where healthcare harnesses the full power of digital technology. Together with our customers across pathology, radiology and health informatics, we connect the health ecosystem to transform healthcare at scale. Our focus is on helping teams improve clinical workflows, strengthen collaboration and make better use of data. These advances enable clinicians to focus their expertise and resources towards improving patient care and delivering better healthcare outcomes.

Methodology

This section sets out the datasets, time periods, geographies and methods underpinning the findings.

Approach

Analysis draws on NHS England open data published between July 2021 and May 2026, with the March 2026 Monthly Diagnostics return (released 14 May 2026) as the primary reference. Findings are reported at national, NHS Commissioning Region (seven regions) and trust level (456 reporting providers in March 2026).

ICB level analysis is used only for the Faster Diagnosis Standard, the 62 day Combined Standard and CDC activity per waiting list patient, and is point in time using the 42 ICB structure to avoid distortion from the April 2026 reduction of ICBs from 42 to 26. January 2020 is the pre-pandemic reference point. The COVID period (April 2020 to December 2021) is excluded from all trend lines as a structural outlier.

Dataset	Metrics covered	Date range
Monthly Diagnostics Waiting Times and Activity (DM01)	Waiting list, activity, median wait and breach measures across 15 test types covering imaging, physiological measurement and endoscopy.	Jan 2020 (as anchor; excluding COVID period) to Jan 2022-Mar 2026
Cancer Waiting Times (CWT)	28 day Faster Diagnosis Standard and 62 day Combined Standard.	Oct 2025 to Mar 2026
Community Diagnostic Centre Management Information	Monthly CDC activity by provider, ICB and region. A CDC share of diagnostic activity is not calculated because the DM01 and CDC returns have different bases and carry a double-counting risk.	Jul 2021 to Feb 2026
Histopathology Performance Data (PQAD)	Cases reported within ten days of receipt.	Apr 2025 to Feb 2026
NHS HCHS Workforce Statistics	Clinical radiology, radiography and histopathology FTE. January 2020 is used as the growth comparator.	Jan 2022 to Jan 2026
National Imaging Data Collection (NIDC) Asset Count	Imaging equipment by trust.	2023 to 2024
Diagnostic Imaging Dataset (DID) Standardised ICB Rates	Age and sex standardised activity per 1,000 weighted population.	2022/23 to 2024/25
Referral to Treatment (RTT) Waiting Times	Provider level incomplete pathways in gastroenterology, ENT, cardiology and urology.	Feb 2026

Methods

Trends and projections. A linear regression on the 24 months of DM01 waiting list data from April 2024 to March 2026.

Variation, correlation and cascade. Trust level breach rates were tested for variation within and between regions, with providers below 1,000 waiting list patients excluded. Pearson and Spearman correlations tested associations between diagnostic and cancer pathway performance, between diagnostic and RTT performance in four specialties, and between trust level workforce density and waiting time performance. Trusts and ICBs were then grouped into quartiles by diagnostic breach rate, with downstream performance compared between the best and worst quartiles to test whether diagnostic pressure cascades into the cancer and elective pathways. Statistical significance is reported throughout. Correlations with a sample of seven are described as illustrative.

Modality breakdown. Six week and 13 week breach rates and waiting list size were calculated separately for each of the 15 DM01 test types. MRI is highlighted because 13 week MRI waits have continued to rise even as the aggregate 13 week figure has fallen.

Demand-capacity gap. Net monthly growth (the 12 month change from March 2025 to March 2026 divided by 12, approximately 18,000 patients per month) was added to the backlog clearance rate (the excess of approximately 873,000 over the January 2020 baseline divided by 12). The total, approximately 90,600 additional tests per month, represents 3.5 per cent of March 2026 monthly activity.