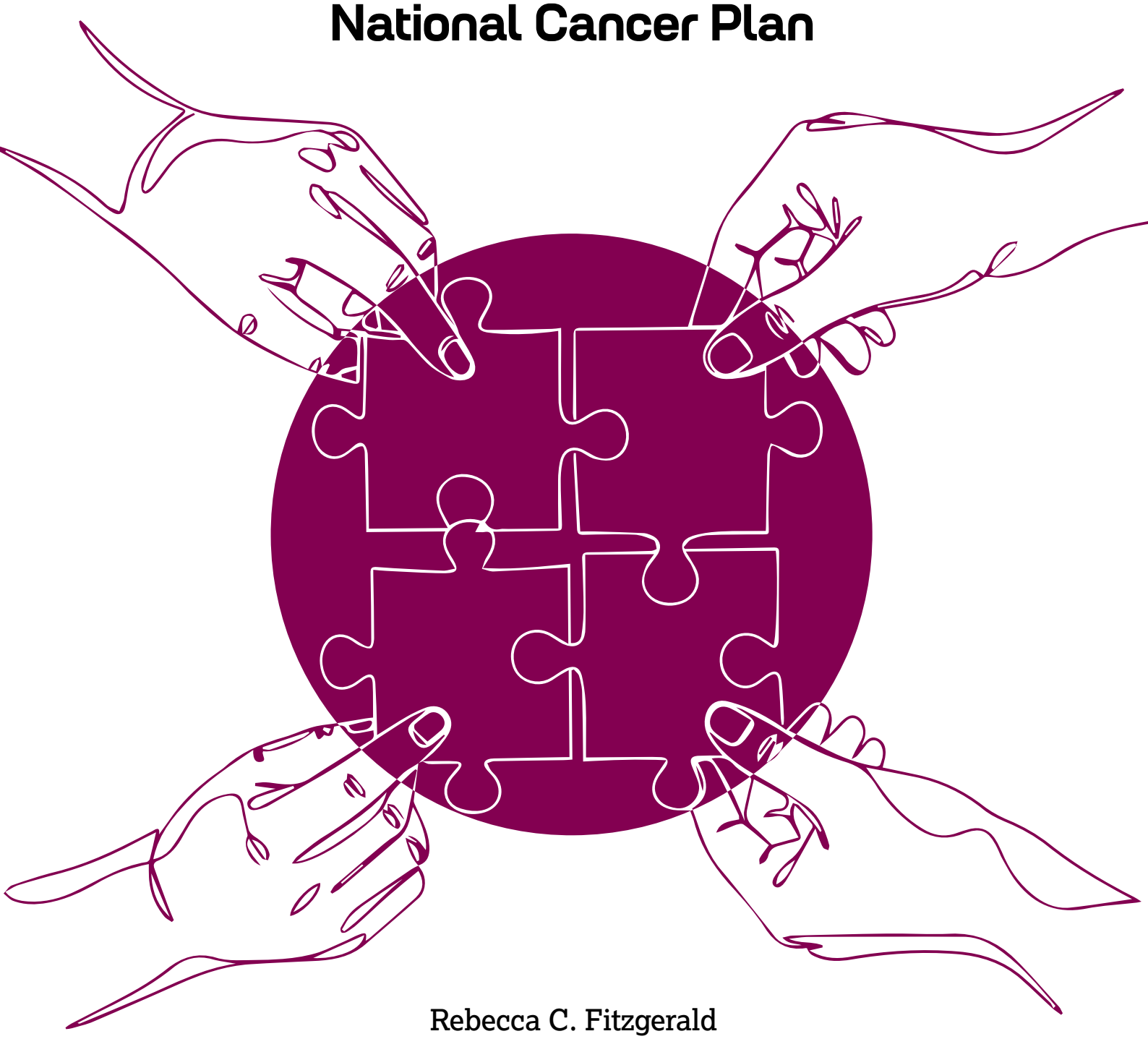
From Pilots to Patients:

Scaling Innovation to Deliver the National Cancer Plan



Rebecca C. Fitzgerald
(Professor of Cancer Prevention and Director of the Early Cancer Institute, University of Cambridge)

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The National Cancer Plan sets out an ambitious vision for improving cancer outcomes through earlier diagnosis, greater use of technology and wider adoption of innovation.[i] These ambitions create a clear test of delivery: whether proven innovation can move from pilots into routine pathways quickly enough to increase the proportion of cancers diagnosed at an earlier stage, reduce late diagnosis and improve outcomes.

Yet a persistent challenge remains. Too often, innovations that have been shown to work fail to spread beyond a small number of sites. The question facing cancer care is not whether innovation exists, but whether the NHS can deliver it consistently and at scale.

This is not a new problem. The NHS has several mechanisms intended to support wider uptake, from NICE guidance and commissioning policies to clinical networks and programmes such as Getting It Right First Time.

Yet, as Sir Stephen Powis reflects below, successful pilots and best practice still do not spread consistently across the system. Having spent more than a decade developing and implementing Cytosponge™, I have seen both the opportunities and challenges involved in translating innovation into routine clinical practice. Demonstrating clinical benefit is only part of the task. Ensuring patients can benefit in everyday care is often harder.

THE CYTOSPONGE JOURNEY

Cytosponge™, and EndoSign™ were developed to support earlier detection of Barrett's oesophagus and oesophageal cancer. This matters because oesophageal cancer remains one of the UK's deadliest cancers: around 9,200 people are diagnosed each year and almost 7,900 die from the disease.[ii] Early diagnosis is critical: while 85% of patients diagnosed at the earliest stage survive for at least one year, this falls to just 21% for those diagnosed at the most advanced stage.[iii]

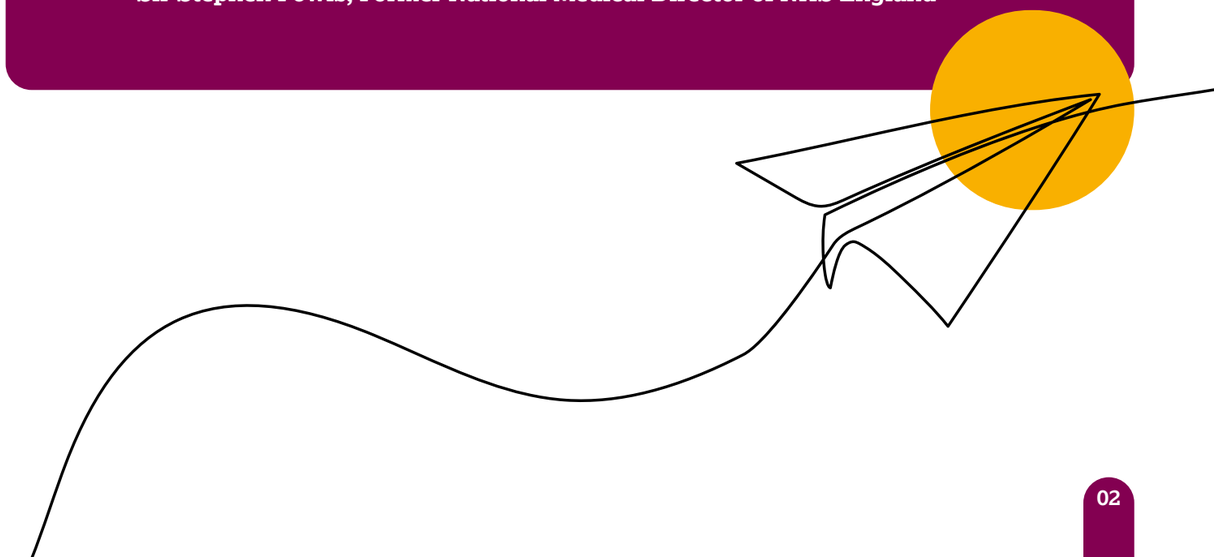
Over more than a decade, my team and collaborators developed Cytosponge, a minimally invasive test that can be delivered in primary care to identify patients at risk of Barrett's oesophagus and early-stage cancer. In the BEST3 trial involving more than 13,000 patients, Cytosponge identified ten times more cases of Barrett's oesophagus than standard of care and detected five early cancers compared with one in the control group.[iii]

Despite these results, moving from successful research to routine NHS adoption required almost a decade of evidence generation, commissioning discussions, pathway redesign, workforce training and implementation support.

> **Our key NHS pilot spanned 30 hospital sites across 17 areas in England including Manchester, Plymouth, London, Kent and Cumbria.**

The National Cancer Plan and 10-Year Health Plan provide an opportunity to address some of the challenges we experienced. Their success will depend not only on generating innovation, but on ensuring proven technologies can be adopted consistently across routine care.

> I know the NHS can deliver world-class healthcare because I witnessed it on so many of the visits I undertook as National Medical Director. But it needs to be everywhere, not just somewhere. Far too often successful pilots, innovation and best practice fail to spread. The NHS does have much in place to support wider uptake, such as NICE guidelines, commissioning policies, clinical networks and the Getting It Right First Time programme. But the hard truth is we need to do a lot better because it is unacceptable and inexcusable when the very best of modern medicine is not available to everyone.
>
> **Sir Stephen Powis, Former National Medical Director of NHS England**



WHY PROMISING INNOVATION STILL FAILS TO SCALE

Delayed adoption has real consequences for patients, limiting access to earlier diagnosis, faster pathways and potentially better outcomes, while also risking widening existing inequalities.[iv]

> The Cytosponge experience demonstrates that strong clinical evidence is rarely sufficient to drive widespread adoption. In practice, three barriers continue to slow the transition from successful pilot to routine delivery.

The first challenge is short-term funding. Annual contracting cycles make it difficult for systems to invest confidently in implementation and long-term transformation. Innovations may demonstrate strong early results, but without sustained support, their impact can remain localised, time-limited and difficult to scale consistently. If the Cancer Plan's ambitions for earlier diagnosis are to be realised, healthcare systems will need greater certainty and longer-term investment to move innovations beyond pilots and into sustainable, routine delivery. This also matters for the UK's competitiveness: if promising technologies cannot move from evidence generation to adoption, innovators may look to other health systems with clearer routes to implementation.

The second challenge is integration. Many cancer pathways still rely on fragmented systems, manual processes and inconsistent digital infrastructure, with limited interoperability between diagnostic technologies, NHS digital platforms and local clinical systems. For Cytosponge, this means not only demonstrating that the test works, but ensuring it can be ordered, reported, followed up and integrated into existing primary care and diagnostic workflows. If the Cancer Plan's ambition to make better use of data and technology is to be realised, greater progress will be needed on interoperability, digital infrastructure and pathway integration.

The third challenge is workforce and implementation capacity. Successful adoption requires time, training and support for frontline teams, alongside local leadership capable of redesigning pathways around new approaches. As our experience showed, implementation often depends not only on clinical evidence, but on whether healthcare workers are given the time to train in something new and learn a new workflow in a pressured healthcare system. Importantly, it isn't just about the test but also about the entire pathway, to ensure the test is used for the correct indication with relevant safety netting and onward referral for treatment. An earlier diagnosis doesn't cure anyone unless it is linked to prompt treatment. If the Cancer Plan's ambitions for earlier diagnosis and better survival rates are to be realised, equal attention will need to be paid to workforce readiness, pathway redesign and implementation support.

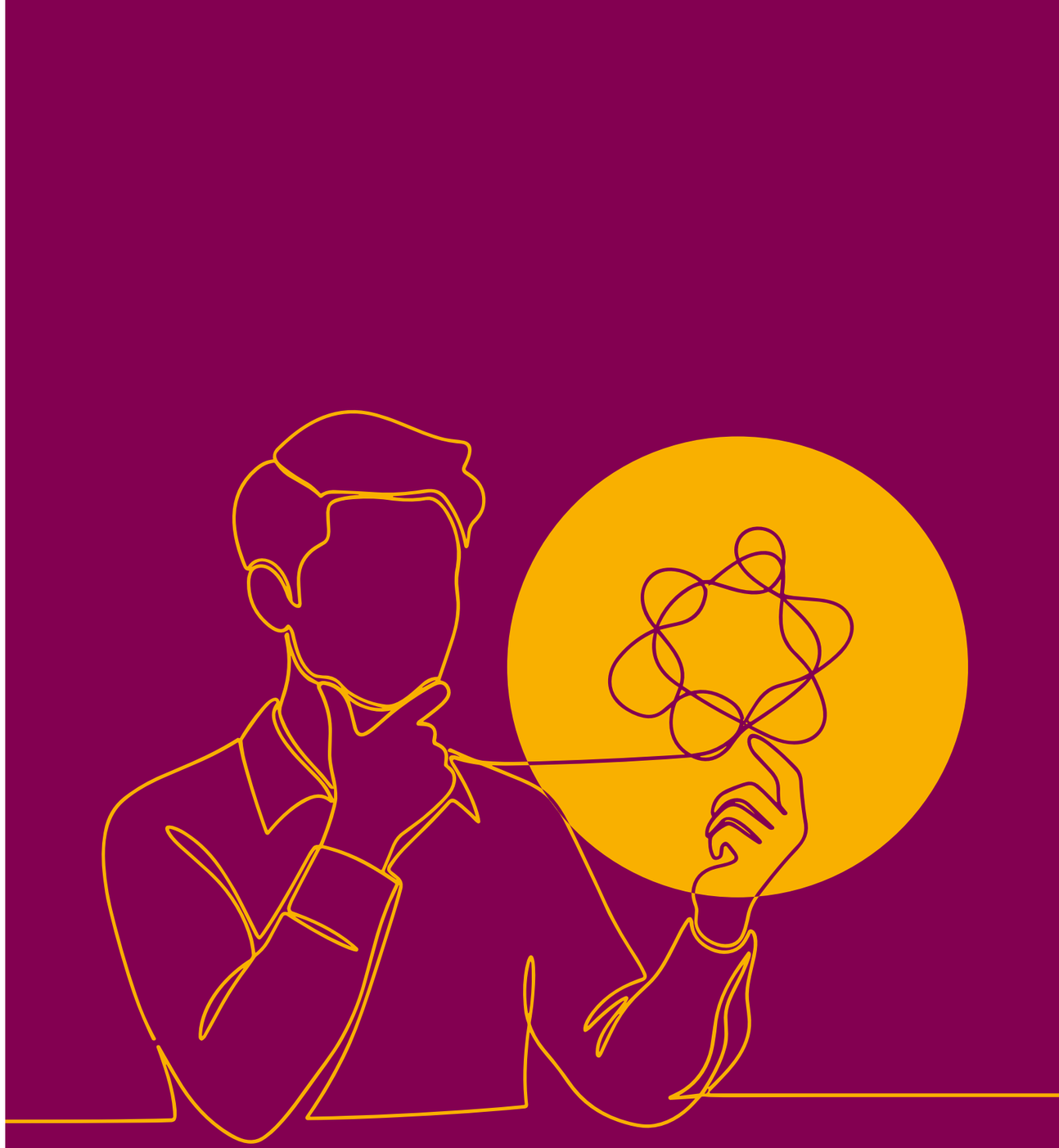
WHAT NEEDS TO CHANGE: MATCHING NATIONAL AMBITION WITH DELIVERY

Encouragingly, the wider policy environment is beginning to recognise that innovation adoption is a delivery challenge, not simply a discovery challenge. But this shift will only make a difference if policy mechanisms are linked directly to the barriers that prevent scale.

Multi-year planning models could help address the short-term funding cycles that prevent pilots from demonstrating longer-term value. NICE MedTech assessments and clearer innovation pathways could help reduce duplication in evidence requirements between systems, provided there is dialogue between NICE and other bodies issuing clinical guidelines.

Conflicting guidance, for example between Health Technology Assessment, Royal Colleges and NICE, can create confusion. Stronger support for data infrastructure, interoperability and implementation capacity could help local systems adopt proven innovation more consistently.

Cancer Alliances and system partnerships have an increasingly important role to play in turning these national enablers into practical delivery. Scaling innovation is rarely achieved by one organisation acting alone. It requires coordination across commissioning, diagnostics, primary care, community services and specialist providers, with clear ownership for pathway redesign, workforce engagement and implementation.



SCALING INNOVATION: LESSONS FOR DELIVERING THE NATIONAL CANCER PLAN

Our experiences reinforced several broader lessons that may apply across cancer innovation more widely, and which will be critical to delivering the Cancer Plan's ambitions in practice.

Firstly, wider-scale implementation must be designed in from the outset once a technology is shown to be promising from high-quality trials. A pilot that proves clinical benefit but does not answer questions about commissioning, workforce, logistics and delivery will always face barriers when moving into routine care.

Second, pathway ownership matters. Innovations are more likely to scale successfully when the teams expected to use them are involved early, understand the value for patients and services, and have the training and capacity to embed them into daily practice.

Third, adoption depends on fit. Innovations are more likely to endure when they make patient journeys simpler and clinical workflows more effective, rather than creating parallel processes that add pressure to already stretched services.

> National reporting of adoption rates could help identify unwarranted variation, highlight where proven innovation is not reaching patients and create stronger accountability for implementation.

SCALING INNOVATION THROUGH PARTNERSHIP

Greater Manchester Cancer Alliance and Qure.ai

AstraZeneca partnered with Greater Manchester Cancer Alliance and Qure.ai to support the use of AI-enabled triage to analyse chest X-rays and detect lung cancer earlier.

Across five main acute hospitals in Manchester, the pilot helped assess how AI could be integrated into routine clinical workflows and support faster patient management.

Successful outcomes from the pilot helped Greater Manchester secure national innovation funding to further scale the programme and share learnings with other systems across the NHS.

The example reflects wider ambitions within the National Cancer Plan around AI-enabled earlier diagnosis and demonstrates how partnership working, implementation support and evidence generation can help move innovation beyond isolated pilots into broader system adoption.

The challenge is not whether innovation exists. It is whether healthcare systems are prepared to deliver it consistently, sustainably and equitably across routine care.

> If the ambitions of the National Cancer Plan are to be realised, delivery and implementation will need to be treated as seriously as scientific discovery itself.

National and local leaders should make adoption of proven innovation a core measure of cancer system performance, backed by clear accountability, implementation resource and targeted support for systems that are struggling to scale what works.

Patients do not experience innovation through pilot programmes, funding announcements or policy documents. They experience it when they receive a diagnosis earlier, begin treatment sooner or avoid a cancer developing altogether. That should be our guiding light.

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