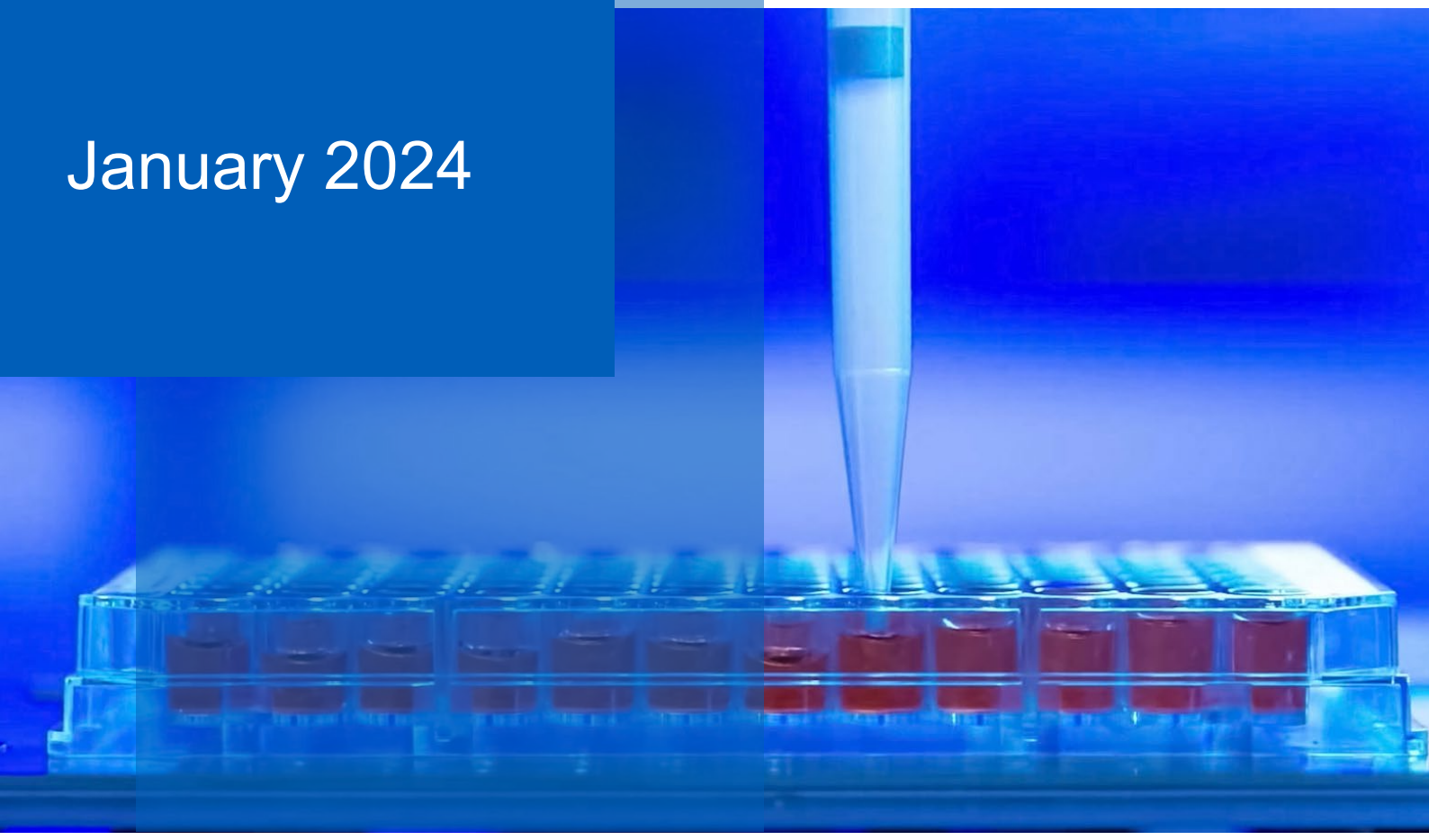
NHS Cancer Programme

Innovation Open Call 3

January 2024



SBRI HEALTHCARE

Accelerated Access Collaborative

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1. Introduction

The NHS Cancer Programme Innovation Open Call was developed by the NHS Cancer Programme in 2021 in order to support the NHS Long-Term Plan's (LTP) ambition for improving cancer care outcomes and services in England. The key ambitions are:

- by 2028, 75% of people with cancer will be diagnosed at an early stage (stages one or two); and,
- by 2028, 55,000 more people each year will survive their cancer for five years or more.

Diagnosing cancer at an early stage increases chances of survival as it means patients can receive treatment when there is a better chance of achieving a cure.

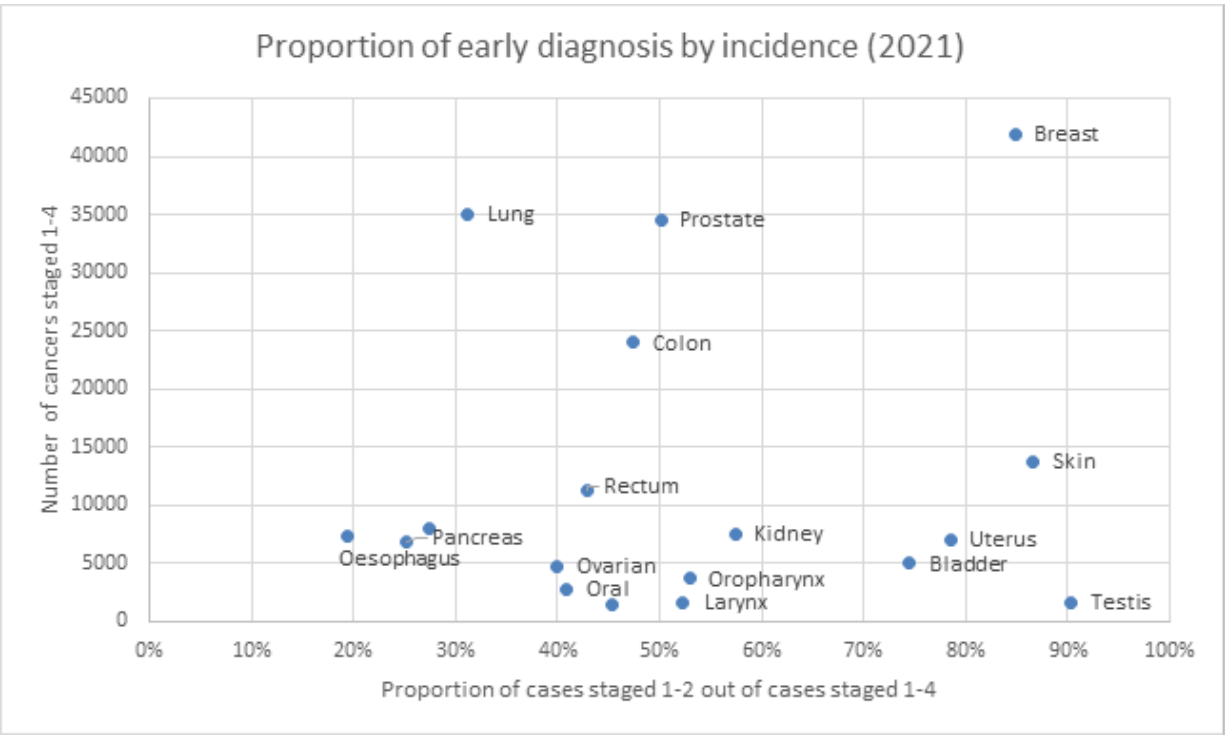
Innovation is a central part of the NHS Cancer Programme's strategy to achieve the Early Diagnosis ambition set out in the LTP. The aim of the NHS Cancer Programme Innovation Open Calls is to accelerate innovations that will improve early diagnosis into front-line clinical settings, by shortening the gap between the evidence collated from traditional safety/efficacy clinical trials typically required for regulatory approvals (CE marking or equivalent), and the evidence required for successful implementation, adoption and spread.

Since 2021, 14 projects have been awarded funding via our calls. You can read more about these projects here.

2. The Challenge

Rates of early diagnosis have started to improve for the first time in a decade. However, there is recognition that this improvement needs to accelerate. Full cancer registration data reports that, in 2021, 54% of staged cancers were diagnosed at stage one or two. Figure 1 shows the variation across the tumour types. Some tumour types are particularly challenged, for example, lung, pancreatic, oesophageal, non-Hodgkin's lymphoma, and ovarian cancers.

Figure 1, the proportion of cancer diagnosed in stages 1 and 2 *(data source National Disease Registration Service, NDRS)*



The NHS Cancer Programme is looking for **innovations or new approaches that will diagnose cancer earlier and increase the proportion of cancers that are diagnosed at stage one or two.**

The NHS Cancer Programme is committed to tackling health inequalities. Individuals living in the least deprived areas have consistently had a higher rate of early cancer diagnosis than those living in the most deprived areas (Nuffield Trust, 2023). It has been calculated that if all inequalities in early diagnosis for the ten solid tumour sites relating to sex, age, and deprivation were removed, there would be a four-percentage point improvement in national early diagnosis rates (Barclay, M. E. et al, 2021). The NHS Cancer Programme is seeking innovations that will support efforts to address these health inequalities and all applicants are asked to consider the impact of their innovation on health inequalities.

3. Eligibility Criteria – Innovations

This section provides information on the types of innovations that are eligible for this Open Call. Please refer to section 4. Eligibility Criteria – Projects for more information on the specific types of projects that are eligible.

3.1. Types of innovations

The Cancer Programme Innovation Open Call is open to all types of innovations, including but not limited to, medical devices, *in vitro* diagnostics, digital health solutions, behavioural interventions, software, artificial intelligence, or new models of care. The competition welcomes innovations in the broadest possible sense, as long as they are supported by a commercial strategy and there is a clear intention for market scale up or adoption.

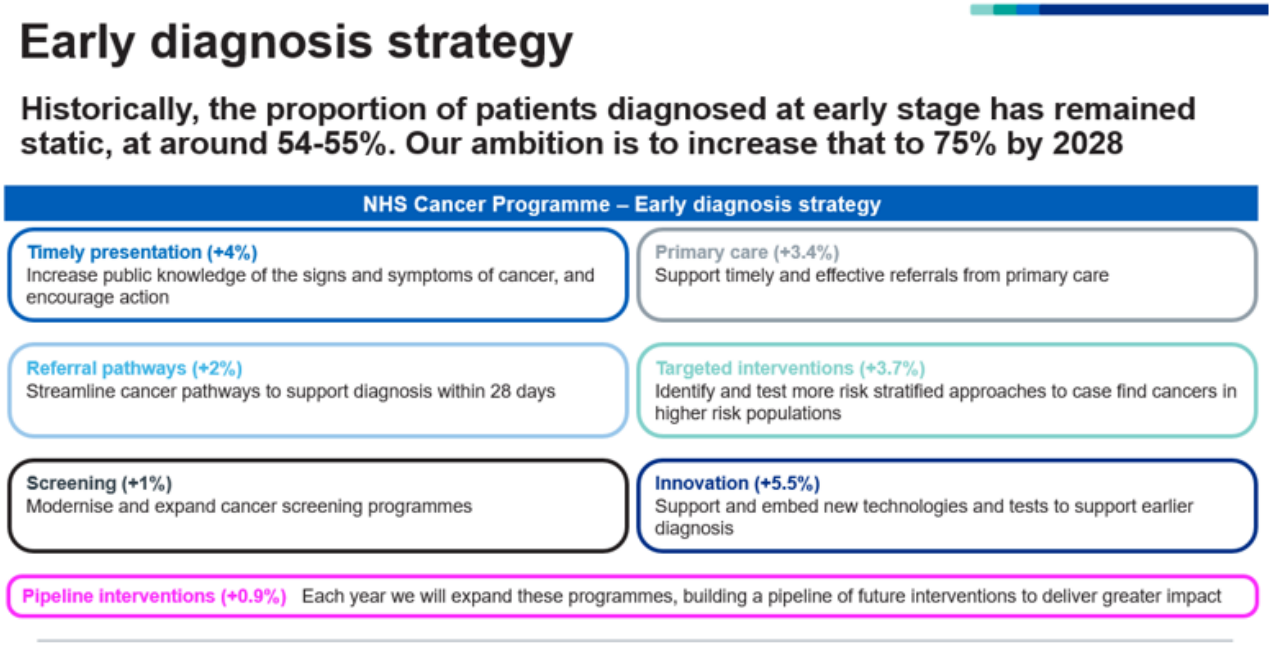
The priority for this call is diagnosing cancer early at stages one or two, but the NHS Cancer Programme will also consider applications for innovations which reduce the proportion/absolute number of people diagnosed at stage four.

Innovations can be tumour specific or multi-cancer. Applications that address specific tumour sites where early diagnosis rates are poorest, and applications from multi-cancer innovations which could have a bigger impact on early diagnosis rates, are particularly welcome.

3.2. Potential solutions

The NHS Cancer Programme is implementing an ambitious six-pillar early diagnosis strategy to deliver on the LTP stage ambition (see Figure 2 below). This strategy has been underpinned by work to estimate the potential impact of different interventions or acting at different points in the pathway on early diagnosis. Applicants will be expected to articulate how their innovation contributes to the early diagnosis strategy.

Figure 2, Overview of the early diagnosis strategy



Delivering programmes and activities which support earlier diagnosis requires diagnostic and other capacity within the system. Innovations which support risk stratification or triage, to identify and prioritise those who stand to gain from urgent suspected cancer referral and those who do not, thus supporting diagnostic and pathway efficiency, are also included within the scope of this call.

The NHS Cancer Programme are looking for proposals that support:

1. Identifying and testing asymptomatic patients who are most at risk. This includes:

    a. Innovations that proactively case find and/or risk stratify populations for whom there is no current NHS screening programme.
    b. Innovations to more effectively target, improve uptake/adherence, or reduce unwarranted variation in NHS screening, including Targeted Lung Health Checks.

2. Encouraging early symptomatic patients to notice health changes and present to primary care or other appropriate services. This includes:

    a. Innovations that proactively case find those with early signs and symptoms associated with risk of cancer.
    b. Innovations to improve awareness/vigilance of the signs and symptoms of cancer (including vague or non-specific symptoms), particularly for those cancers, or specific populations, where early presentation is still very low.
    c. Innovations that encourage patients to seek health advice, including in specific populations that typically under present.
    d. Innovations that support ongoing engagement and completion of diagnostic pathways (can

also apply to screening pathways).

e. Innovations that support timely and effective referrals from primary care or create new ways into the system through community care settings (i.e., community diagnostic centre).

3. Streamlining referral pathways through risk stratification of symptomatic patients. This includes:

    a. Innovations that might accelerate or triage urgent suspected referrals.
    b. Innovations that have the potential to deliver quick and easy 'rule in/rule out' tests that help prioritise and diagnose at-risk patients and support efficiencies within pathways.
    c. Innovations that risk stratify patients or diagnose cancers in higher risk populations.
    d. Innovations that reduce unwarranted variation in referrals, including for diagnostic tests, such as chest x-ray, and urgent suspected cancer referrals.
    e. Innovations that streamline cancer pathways to result in earlier diagnosis and/or a reduction in health inequalities in stage of disease at diagnosis (i.e., non-symptom specific pathways, self-referral pathways, or multi-cancer innovations).

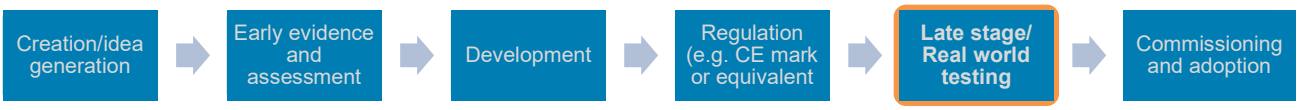
3.3. Stage of development

The competition is open to any mature innovation with proven safety and efficacy that is ready for real-world testing and roll out and that meets the following requirements:

- **CE mark or equivalent regulatory approval obtained (if required for your innovation), and / or**
- **In use in at least 1 NHS provider in standard routine care (non-research)**

The aim of the call is to produce and evaluate evidence in a real-world setting and build on the value proposition required by providers, commissioners and regulators for successful adoption and spread.

Applicants will be required to submit evidence of safety and efficacy (e.g., sensitivity, specificity, positive and negative predictive values (PPV and NPV respectively)) as part of the application process. This could include peer reviewed publications, conference proceedings and/or reports. All evidence should be clearly referenced. Please also include any preliminary evidence of clinical effectiveness, where available.



3.4. Eligible organisations

The NHS Cancer Programme Innovation Open Call is open to single organisations from across the globe that have a demonstratable partnership with an NHS organisation. Additional engagement with Cancer Alliances and/or Health Innovation Networks is encouraged.

The competition is open to single organisations (contracts are executed with individual legal entities) based in the UK or EU from the private, public and third sectors, including companies (large corporates and small and medium enterprises), charities, universities and NHS Foundation Trusts, as long as a strong implementation and commercial strategy is provided.

Organisations based outside the UK or EU with innovations in remit for this call can apply as subcontractors of a lead UK/EU based organisation or via a UK or EU subsidiary. However, due to the nature of the projects supported, all proposals are expected to have partnerships in place with at least one NHS organisation, if they are not already led by one, and engage with appropriate suppliers to cover the expertise required for the successful delivery of the project.

3.5. Exclusion criteria

The following innovations will be excluded from this round of the NHS Cancer Programme Innovation Open Call:

- Innovations that are in the ideation/creation phase and have not yet sought regulatory approval and do not have an evidence base. Types of regulatory approval include CE marking, DTAC (Digital Technology Assessment Criteria) and UKCA (UK Conformity Assessed). National guidance on regulatory approvals can be found here.
- Treatments. including small molecules therapeutics, drugs, vaccines and gene therapies.
- Workforce training solutions.
- Wellness or wellbeing digital applications.
- Innovations that do not comply with GDPR policies.
- Innovations that will exacerbate health inequalities (including digital exclusion or data inequalities) and inequity of access to care or innovations which have not appropriately mitigated against exacerbating health inequalities.

4. Eligibility Criteria – Projects

4.1. The scope of NHS Cancer Programme Innovation Open Call projects

NHS Cancer Programme Innovation Open Call projects must involve implementing and evaluating the feasibility of a solution in the NHS in England.

The aim of the NHS Cancer Programme Innovation Open Calls is to facilitate adoption and spread of early diagnosis of cancer innovations that have already proven clinical efficacy. The NHS Cancer Programme Innovation Open Call projects must, therefore, involve embedding the innovation into practice within the NHS in England. National projects involving multiple NHS sites are preferred, however smaller scale projects will also be considered if the reason for the smaller project is adequately justified (i.e., to reduce health inequalities, or the total target patient population is small). The project should be an

implementation study in real world settings, without requirements for a control arm or intervention vs non-intervention arms (comparator data can be included from retrospective data, an equivalent real-world data set or literature). Projects funded could focus on both initial real world implementation studies and regional/national implementations to generate real-world implementation evidence in different settings/patient populations in order to scale up an intervention.

All successful applicants are required to commission and deliver a comprehensive independent (service) evaluation to demonstrate the impact of the innovation in a real-world setting through cost-effectiveness and health outcomes. The evaluation should also consider the barriers and enablers to implementation, as well as resources required for large-scale commissioning. Further guidance on the evaluation requirements be available on the competition webpage from **w/c 5 February 2024**. Details on the evaluation plan will be requested as part of the application form and costs associated with this should be budgeted accordingly upon submission (see section 4.2 below).

At the end of the project, the innovation should be embedded into practice in a number of NHS locations, there should be a high-quality independent evaluation report, and a well-defined plan for further work and/or scale-up, as appropriate.

Examples of potential exit points include:

- Health economics assessment
- Innovation independently evaluated to demonstrate its impact in real-world settings
- Collation of evidence for NICE approval or endorsement (i.e., Health Technology Guidance)
- Completion of procurement business cases to support transition into business-as-usual via standard commissioning routes
- Evidence for national commissioning initiatives (e.g., MedTech Funding Mandate)
- Inclusion on national procurement frameworks
- Registration to Innovation Service website

4.2. Allowable project costs and duration

Projects will be **100% funded** up to the total value of **£4M (excluding VAT)** over a maximum of **24 months.**

4.3. Excluded projects

The NHS Cancer Programme Innovation Open Call is focused on adoption and spread of early diagnosis innovations. For this reason, the following types of projects are excluded from this competition:

- Clinical trials including randomised control trials aimed solely at determining effectiveness of a product.
- Basic research.
- Procurement exercises. Projects funding purchase of a product without plans to generate real-

world evidence and conduct implementation studies/evaluations.

- Projects that focus on improving efficiency only. Applicants with a diagnostic efficiency tool are encouraged to consider whether the proposed innovation can improve earlier diagnosis by implementing the tool earlier in the pathway, in a different setting or by designing a solution that improves access and/or uptake of their intervention.
- Research that only aims to inform or influence NICE guidelines. For example, innovations that mine GP and other records, to build the evidence on features of cancer risk.

5. About the NHS Cancer Programme Innovation Open Calls

This open call is funded by the NHS Cancer Programme, and supported by the Small Business Research Initiative (SBRI) Healthcare Programme and the NHS England Accelerated Access Collaborative (AAC).

About the NHS Cancer Programme

The NHS Cancer Programme leads the delivery of the NHS Long Term Plan ambitions for cancer. More information about the work of the programme can be found through this webpage.

About SBRI Healthcare

SBRI Healthcare is an AAC programme, aiming to address unmet health and care needs and enhance the uptake of known best practice whilst promoting UK economic growth. It aims to bring novel solutions to Government department issues by engaging with innovative companies that would not be reached in other ways.

About AAC

The AAC is a unique partnership between patient groups, government bodies, industry and NHS bodies, working together to streamline the adoption of new innovations in healthcare. The AAC has established a dedicated unit within NHS England. It is responsible for coordinating activities across the various AAC partner organisations and driving forward the AAC's priorities.

6. Application process

All applications should be made using the online portal which can be accessed through the Research Management System.

Applicants are invited to consult the Invitation to Tender and the Applicant and Portal Guidance; a template Application Form and Frequently Asked Questions will also be accessible. All documents will be available on the competition webpage from **w/c 5 February 2024**.

A **briefing webinar** for those interested in finding out more about this competition will be shortly advertised on the competition webpage, together with information on how to register and details of the agenda.

An **online innovation matchmaking event** will also be hosted to provide innovation companies with the opportunity to establish connections with Cancer Alliances and Health Innovation Networks to explore potential for clinical support and collaboration. Information on how to register for the event will be published on the competition webpage.

7. Key dates

Launch event	6 February 2024, 3-5 pm
Online Innovation matchmaking event	12 March 2024, 2-5 pm
Applications Open	8 April 2024
Deadline for applications	29 May 2024, 1pm
Assessment	May/June 2024
Peer review (if shortlisted)	July/September 2024
Interview Panel(s)	1-2 October 2024
Contracts awarded	October/November 2024

More information

For more information on this competition, visit the competition webpage.
For any enquiries e-mail: sbri@LGCGroup.com