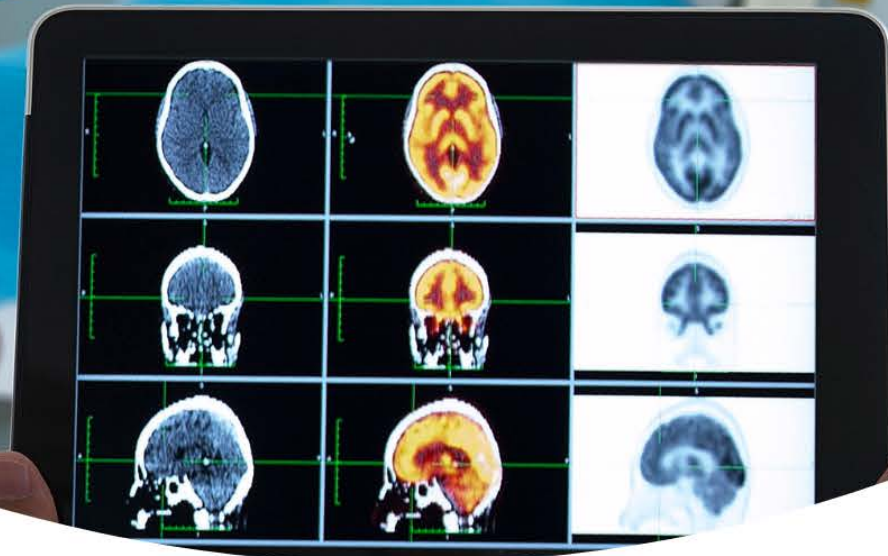


# NHS Cancer Programme – Innovation Open Call



February 2022



**ACCELERATED  
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# Early Detection and diagnosis of cancer

## Background

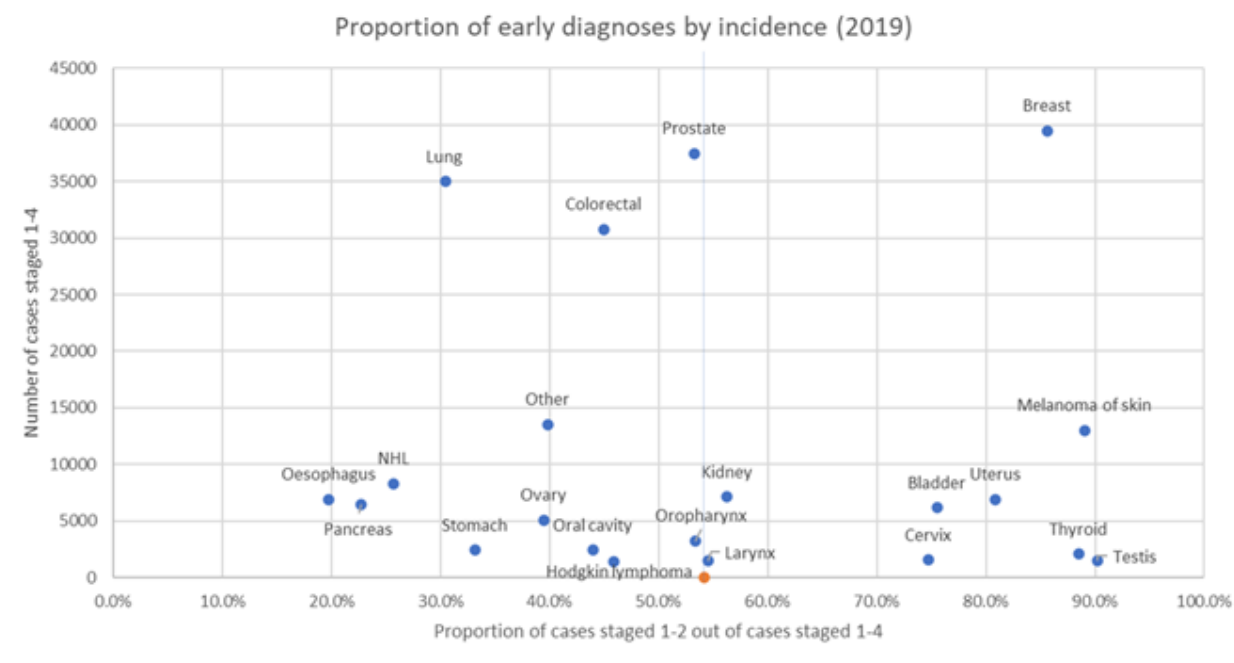
The [NHS Long Term Plan \(LTP\)](#) sets out stretching ambitions and commitments to improve cancer care outcomes and services in England. The key ambitions are:

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

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

In 2019, just over 50% (54.5%) 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, pancreatic, head and neck, oesophageal, stomach, non-Hodgkin's lymphoma and ovarian cancers.

**Figure 1, the proportion of cancer diagnosed in stages 1 and 2** (data source [PHE](#))



## The Challenge

The cancer community is making great strides towards delivering the LTP ambition for Early Diagnosis via a number of [national programmes](#). However, there is recognition that this effort needs to go further faster.

The NHS Cancer Programme at NHS England and NHS Improvement (NHSEI) are looking for **innovations or new approaches that will increase the proportion of cancers that are diagnosed at stage one or two**. This includes innovations in the broadest possible sense, including behavioural interventions, software, or new models of care.

The NHS Cancer Programme are committed to tackling health inequalities. If all inequalities in early diagnosis for the ten major tumour sites relating to sex, age, and deprivation were removed, there would be a 4.1% age point improvement in national early diagnosis rates ([Barclay, M. E. et al, 2021](#)). There is also some evidence to suggest cancers are diagnosed later in certain Black and Asian ethnic groups in breast, lung and colorectal cancers. Applicants are therefore strongly encouraged to consider the impact of their innovation on health inequalities, and applications that will support to address these inequalities are particularly welcomed.

## Potential solutions

The competition 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. Innovations can be tumour specific or multi-cancer. Applications from multi-cancer innovations which could have a bigger impact on early diagnosis rates are particularly welcome.

Potential solutions to the challenge include strategies 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 screening programme.
  - b. Innovations to more effectively target, improve uptake/adherence, or reduce unwarranted variation in screening.
2. Encouraging early symptomatic patients to self-assess and present to primary care or other appropriate services. This includes:
  - a. Innovations that proactively case find those with early signs and symptoms that put them at high risk.
  - b. Innovations to improve awareness/vigilance of the signs and symptoms of cancer (including vague symptoms), particularly for those cancers, or specific populations, where early presentation is still very low.
  - c. Innovations that encourage patients to self-present, including in specific populations that typically under refer.
  - d. Innovations that support ongoing engagement and completion of diagnostic pathways.
3. Assessment of risk in early symptomatic patients presenting to primary care. This includes:

- a. Innovations that risk stratify patients or diagnose patients that present with less severe symptoms.
- b. Innovations that reduce unwarranted variation in referrals.
- c. Innovations that have the potential to deliver quick and easy 'rule in/rule out' tests that help prioritise and diagnose at-risk patients.

As part of the application form, applicants will be invited to consider the impact of their innovation on the capacity of the system.

## Considerations

Applicants should address the following points in their proposals:

- What is the likely impact of the proposed innovation compared to the current patient pathway and what is the potential impact on stage distribution and survival based on current data?
- What will be the impact of the proposed solution on cancer services and how will the system need to be changed (including people, processes, and culture) to deliver system-wide benefits?
- How will applicants ensure that the innovation will be acceptable to patients (and their families and wider support network) and to clinician groups/health care professionals? How have these groups been involved in the design and development of the innovation?
- How will applicants ensure that the innovation is affordable to the NHS and wider system such as Integrated Care Systems (ICSs) both immediately and throughout the sustained life of the product? What evidence, both health economics and impact, will the NHS and wider system require before the technology can be fully adopted?
- For digital innovations, the [NICE Digital Health Technology Framework](#) should be consulted and your application should evidence your plan to meet the appropriate evidence guidelines. In addition, please consult the NHSX guidelines for "[Designing and building products and services](#)," for the latest links to relevant standards, guidelines and consultations.

## Innovations on the radar



Some examples of innovations with the potential for addressing the issues described in this briefing and have been funded previously are listed below:

- [Open Medical](#) developed Pathpoint eDerma, a centralised platform to help diagnose skin cancers. Using smart phones and tablets, dermoscopy images of the suspected skin cancer can be reviewed and triaged immediately, streamlining the patient pathway from referral to diagnosis and treatment.
- [The Royal Marsden NHS Foundation Trust](#) is implementing routine whole-body MRI in patients with Li-Fraumeni syndrome to help to detect cancers at an earlier stage when they are easier to treat. Li-Fraumeni syndrome is an inherited condition that puts people at a very high risk of developing certain types of cancer.
- [The Newcastle Upon Tyne Hospitals NHS Foundation Trust](#) and [Newcastle University](#) are piloting the use of the [MSI-Plus assay](#), which can be used to test colorectal cancer patients and their families for Lynch syndrome and inform their treatment and care options. Lynch syndrome is an inherited condition that significantly increases a person's

risk of developing certain types of cancer, particularly colorectal cancer. In the UK, less than 5% of individuals know they have the condition.

- [Endoscop-i](#) combines a medical device and software to capture high-definition endoscope images from suspected head and neck cancer patients. These images can then be transferred through a novel management pathway to specialist cancer consultants for a diagnosis within minutes, streamlining the cancer pathway for patients.

***Given the importance and long-term nature of this challenge, there are many products already on the market or in later development. Applicants are strongly encouraged to argue the proposed innovation's benefits and key competitive advantages over possible available alternatives.***

## Useful Information for Applicants

### Eligibility and expected stage of development of technologies

The call is open to products at **late stage of development**. Late-stage innovations and technologies should have proven efficacy and clinical effectiveness and be ready for real world testing and roll out. The aim of this programme is to accelerate these innovations 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 by commissioners to make purchasing decisions.



**The call is open to any innovation with proven efficacy and clinical effectiveness, which meets the following requirements:**

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

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 an 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. Engagement with Cancer Alliances and/or Academic Health Science Networks (AHSNs) is particularly encouraged. Please note that only NHS **clinical sites based in England** are eligible.

## Innovations excluded from this competition

The innovations below are excluded from the call:

- Small molecules therapeutics
- Drugs
- Tools only focused on increasing efficiency. If an efficiency tool will be deployed alongside the innovation to improve early diagnosis, appropriate standards such as DTAC (Digital Technology Assessment Criteria) should be provided to support the efficiency tool
- Innovations that are in the ideation/creation phase, have not yet sought regulatory approval (e.g., CE marking, MHRA, NHSX frameworks, etc.) and do not have an evidence base
- Applications funding purchase of a product without plans to generate real world evidence and conduct implementation studies/evaluations (i.e., procurement exercises)

In addition, the call will **not support** basic research; generation of scientific and technological knowledge, development of research ideas, hypotheses and experimental designs that have no practical commercial application, and clinical trials aimed solely at determining effectiveness of a product.

## What we expect the awards to have achieved by the end

The innovation should be embedded into practice in a number of NHS locations; there should be a clear, high quality, independent evaluation of the innovation against agreed criteria and a well-defined plan for further work to embed the innovation, including the plans for follow-on funding as appropriate.

Practical examples of potential exit points could be:

- Health economics assessment
- Innovation independently evaluated to demonstrate its impact in real world settings
- Collation of evidence for NICE approval or endorsement (i.e. Medtech innovation briefings)
- 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 [HealthTech Connect](#) / [Innovation Service](#) website

## Allowable costs and duration

Project activities and associated costs that applicants are encouraged to consider (as appropriate) are:

- Cost to supply the innovation
- Training costs
- Clinical staff time to administer the innovation
- Management costs for hospital trusts to implement the innovation
- Other implementation costs



- Independent evaluation costs including data collection and analysis, impact on care pathway, clinician and patient acceptability, health economics\*
- Minor technology development work (e.g., minor adaptations for user acceptability, system integration, etc.)

Eligible costs include salary, recruitment, consumable, overhead, estate, and contractor costs.

**\*Please note:** All successful applicants are required to commission and deliver a comprehensive independent (service) evaluation. The primary aim of the evaluation is to demonstrate the impact of the innovation in a real-world setting through cost-effectiveness and health outcomes. The evaluation may also consider the barriers and enablers to implementation, as well as resources required for large-scale commissioning. Further guidance on the evaluation requirements can be found [here](#). 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.

The project will be **100% funded** up to the value of **£4M (NET)** for a maximum of **18 months** in the first instance. Successful applicants will be selected by an open competition process and retain the intellectual property rights (IPR) generated from the project, with certain rights of use retained by the NHS.

Where appropriate, in-kind contributions and palatable, equitable and affordable innovation prices to the NHS should be considered.

Please ensure the proposed project deliverables could be reasonably achieved within the proposed contract duration, and all requested costs are justified.

Promising innovations may have the opportunity to bid for additional funding (for example scaling up implementation, supporting independent evaluations, etc.) at the end of the contract duration subject to an independent review process.

## NHS Cancer Programme

This open call is powered by the NHS Cancer Programme, and supported by the Small Business Research Initiative (SBRI) Healthcare Programme and the NHS England and NHS Improvement 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 the [latest quarterly report](#) which summarises the key achievements and milestones.

### About SBRI Healthcare

[SBRI Healthcare](#) is an NHS England and NHS Improvement initiative, aiming to promote UK economic growth whilst addressing unmet health needs and enhancing the take up of known best

practice. 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 and NHS Improvement. It is responsible for coordinating activities across the various AAC partner organisations and driving forward the AAC's priorities.

## 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](#) to help prepare the proposal closer to the date of competition launch.

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.

A **networking event** will be also hosted to provide innovation companies with the opportunity to establish connections with Cancer Alliances and AHSNs to explore potential for clinical support and collaboration. Information on how to register for the event will be published on the [competition webpage](#).

## Key dates

Competition launch	05 April 2022
Deadline for applications	24 May 2022, 1pm
Assessment	May/June 2022
Peer review (if shortlisted)	July/August 2022
Interview Panel(s)	Mid-September 2022
Contracts awarded	October 2022

## More information

For more information on this competition, visit the [competition webpage](#).  
For any enquiries e-mail: [sbri@LGCGroup.com](mailto:sbri@LGCGroup.com)