SBRI HEALTHCARE CANCER PROGRAMME – CALL 1

NHS ENGLAND AND NHS IMPROVEMENT'S NHS CANCER PROGRAMME AND SBRI HEALTHCARE

FEBRUARY 2021

SBRI HEALTHCARE

The AHSN Network

NHS

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NHS Strategy - The NHS Long Term Plan Targets

The NHS Long Term Plan (LTP) published in January 2019 set out two bold ambitions for improving cancer outcomes:

1. By 2028, 55,000 more people will survive cancer for five years or more each year; and
2. By 2028, 75% of people will be diagnosed at an early stage (stage one or two).

The ambitions will be delivered in a way that:

- Improves quality of life outcomes;
- Improves patient experience outcomes;
- Reduces variation; and
- Reduces inequalities.

These ambitions build on the significant progress made through the delivery of the Independent Cancer Taskforce (2015) recommendations, and this call is designed to support the early diagnosis ambition.

The Categories

Under the overall theme of improving cancer services, two categories have been identified via consultation with patients, clinicians, Cancer Alliances and other stakeholders working in the provision of care across the spectrum.
The two categories are **early detection and diagnosis of cancer**; and **diagnostic efficiency for cancer services**.

Applicants are expected to respond to one (or both) of the two categories, and in both categories should consider if their solution is specific to, or can be tailored to, one of the sub-categories, whilst being mindful of the broader impact on cancer services.

Those submitting applications are asked to consider:

- How will the proposed solution impact on cancer service and how will the system need to be changed (including people, processes and culture), in order 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 delivery of

impact will the NHS and wider system require before the technology can be fully adopted?

- How will applicants ensure that the innovation takes into account equity of access and addresses unwarranted variation (e.g. takes account of underserved ethnic or economic groups/digital poverty) and helps the NHS towards its target to reach net zero carbon?
- What is the likely impact of this innovation compared to the current patient pathway and what is the potential impact on stage distribution and survival based on current data?
- How the implementation of this innovation could develop in the long term, taking into account any relevant commitments in the NHS LTP?

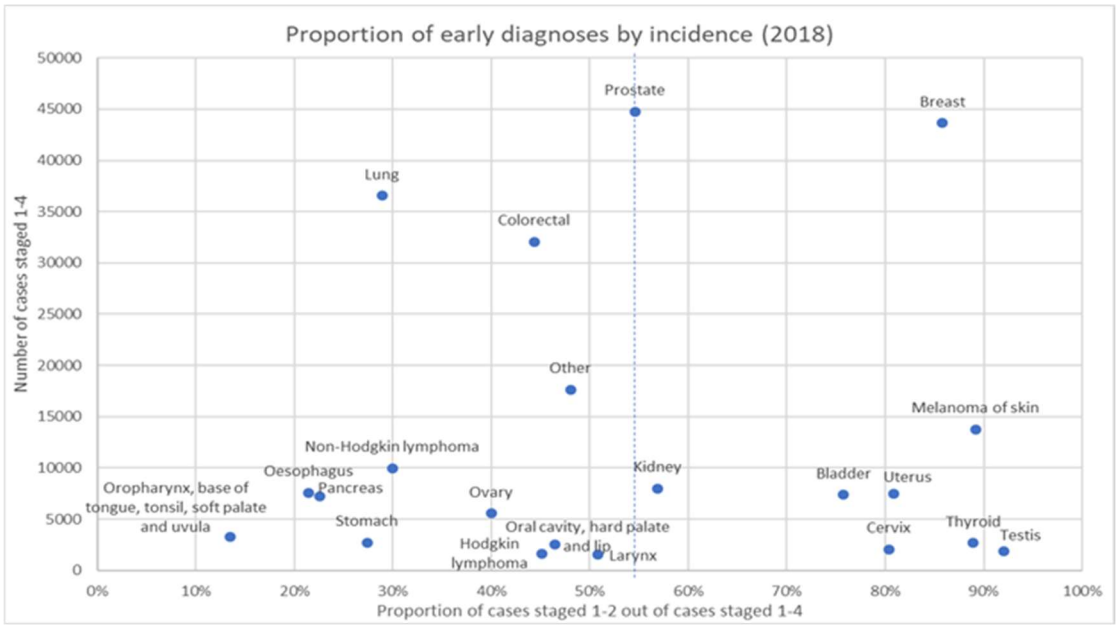
Improving staff working experience/practice and effects on patient perspective are also priorities for consideration.

Category 1: Early Detection and Diagnosis of Cancer

Background

Identifying cancer early (stage one or two) is key, so it can be treated and cured before it spreads. In 2018, just over 50% (54.5%) of staged cancers were diagnosed at stages one or two.

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



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, and faster.

NHS England and Improvement (NHSE&I) are looking for innovations or new approaches that can support the achievement of the 75% stage 1 and 2 ambition. In addition, innovations or interventions are needed, that will identify people with cancer significantly earlier than they would have presented in standard care, enabling earlier-stage diagnosis and subsequent treatment benefits to be realised. For example, this could be achieved by testing asymptomatic population, identifying high risk patients for surveillance, lowering the symptom threshold for referral, providing point of care tests in primary care to support referral of patients who might otherwise not qualify for referral, or improving the sensitivity of existing tests.

Applications for either generic or cancer site specific solutions will be considered. There are, however, some tumour sites which are particularly challenged and for which submissions would be welcomed (for example, pancreatic, head and neck, oesophageal, stomach, non-Hodgkin's lymphoma and ovarian cancers - Figure 1).

Challenges

Potential solutions to this challenge include strategies that support:

1. Identifying and testing asymptomatic patients who are identified as most at risk . This includes:
    a. Innovations that risk stratify populations for whom there is no current screening programme.
    b. Innovations to reduce unwarranted variation in screening uptake and/or improve completion through the screening pathway.
    c. Innovations to more effectively target and improve uptake for the populations that may benefit from current national screening programmes.
    d. Innovations to improve the uptake of cancer screening programmes in targeted populations.
2. Encouraging early symptomatic patients to self-assess and present to primary care or other appropriate services. This includes:
    a. Innovations to improve awareness/vigilance of the signs and symptoms of cancer (including vague symptoms), particularly for those cancers where early presentation is still very low.
    b. Innovations that encourage patients to self-present.
    c. 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 out' tests.
4. Increase/more effective referral rates in historically low referral rate areas. This includes:
   a. Innovations or behavioural interventions that encourage symptomatic patients to present to primary care.
   b. Innovations that support improved recognition of cancer symptoms.
   c. Innovations that increase efficiency of referrals, for example, triaging patients, workflow, interdisciplinary communication in MDTS, etc.
   d. Increases referrals in persistent under-referrers.
   e. Rapid optimal pathways from referral to treatment.

Category 2: Diagnostic Efficiency

Background

Enhanced earlier diagnosis efforts will bring more people with suspected cancer into the NHS and its diagnostic pathways. As such, there is a need to ensure there is capacity and operational resource in cancer diagnostic services to respond to this increase in volumes. This is especially relevant during and post the Covid-19 pandemic, where significant pressures across workforce and diagnostic capacity have been seen. Therefore, NHSE&I are looking for innovations or interventions that improve diagnostic efficiency for cancer services, for example, by triaging and risk-stratifying referrals, streamlining services, increasing productivity and supporting safety netting of patients.

Challenges

Potential solutions to this challenge include strategies that support:

1. Identification and triage of patients at the highest risk of developing cancer or which identify and triage patients with the greatest likelihood of benefit. This includes:
    a. Innovations that reduce referral variation in primary care.
    b. Innovations that support or enable joint working between primary and secondary care to improve pathway referrals.
2. Increasing diagnostic capacity. This includes:
    a. Rule in/out tests that help prioritise and diagnose at-risk patients.
    b. Innovations that improve workflow management.
3. Appropriate safety netting. This includes:
    a. Digital tools that support safety netting.

Useful Information for Applicants

Innovations on the radar

Some examples of innovations that have been funded by National programmes with the potential for addressing the issues described in this briefing are listed below:

- In collaboration with the South East London Cancer Alliance, training is ongoing to implement the use of PrecisionPoint™, a technology to perform transperineal biopsies in outpatient setting without need of general anaesthetic. The device can be used by both doctors and Urology Nurse Specialists, and could determine a shift in the prostate cancer clinical pathway. The development of this innovation was supported by the NHS Innovation Accelerator.
- The Innovation and Technology Payment (ITP) programme in 2020/21 supported Endocuff Vision, a medical device which attaches to the distal end of an endoscope and improves colorectal examination for patients undergoing bowel cancer tests. NICE supported the case for adopting this technology in the NHS for people having a colonoscopy as part of their cancer screening test, as it improves the adenoma detection rate during colonoscopy in this population, and it is cost-effective.
- In collaboration with 18 Cancer Alliances, Colon Capsule Endoscopy (CCE) is being rolled out in the lower GI two week wait pathway to support the recovery of endoscopy services. CCE will be offered to those patients at low risk of cancer, as identified by their FIT score. CCE is a non-invasive technique in which a capsule is swallowed and produces images to enable diagnosis of abnormalities in the colon. CCE does not require air inflation or sedation.

For further examples, please also look at: the Skin Analytics' DERM AI (supported by SBRI Healthcare and the NHS Innovations Accelerator), C the signs (funded by SBRI Healthcare), Faculty's 'Platform' and Kheiron's 'Mia(™)' (both involved in the East Midlands Radiology Consortium, through the wave 2 of the NHS Test Beds programme), and the Galleri Test (currently in real world testing in the NHS).

Given the importance and long term nature of this challenge, there are many products already in 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.

Innovations excluded from this competition

The innovations below are excluded from the call:

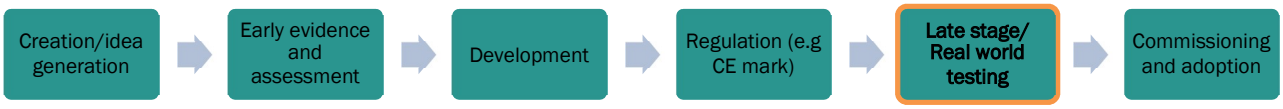
- Small molecules therapeutics.
- Drugs.
- Innovations based predominantly on artificial intelligence that were submitted to the Artificial Intelligence in Health and Care Award and were not funded (technologies that

were rejected for P3/P4 could apply for this call if the feedback provided are sufficiently addressed and further progress could be demonstrated).

- Digital efficiency tools, unless supported by pre-requisites such as DTAC (Digital Technology Assessment Criteria). Digital efficiency tool innovations with DTAC are welcome to apply.
- 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.

Eligibility and expected stage of development of technologies

The call is open to products at late stage of development. The aim is to accelerate these innovations into front-line clinical settings by shortening the gap between the evidence usually delivered by traditional safety/efficacy clinical trials typically required for regulatory approvals (CE marking or equivalent), and the evidence which is required by commissioners and regulators to be able to make purchasing or other recommendations/decisions. **By late stage we mean** innovations and technologies that have already proved their clinical effectiveness and are ready to be rolled out locally or nationally for real world testing.



The call is open to any innovation (e.g. medical device, *in vitro* diagnostic, digital health solutions, behavioural intervention, software, hardware, technology, new models of care etc.) **which meets the following requirements:**

- CE mark or equivalent regulatory approval obtained, and /or
- in use in at least 1 Trust (use in a large-scale research study would qualify for this criterion).

The aim of the funding is to generate evidence to support rapid local/regional/national spread (not classical RCT generated evidence).

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.
- Human factors.
- 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.

The call will not support:

Basic research; generation of scientific and technological knowledge, or 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 clear, high quality evaluation of the innovation against agreed criteria and a well-defined plan for further work to embed the innovation, including the possibility of follow-on funding.

Practical examples of potential project outputs/technology exit points could be: a ready market access dossier/procurement business case; entry point for national commissioning initiatives (e.g. MedTech funding mandate) and/or application to one of the national procurement frameworks; registration to HealthConnect website; evidence for NICE approval; NICE endorsement (i.e. Medtech innovation briefings); positive NICE approval and transition into Business-as-usual via standard commissioning routes/ AAC Funding mandate.

Additional Considerations

For any digital intervention, the NICE Digital Health Technology Framework should be consulted and your application should evidence your plan to meet the appropriate evidence guidelines. This comprised both clinical effectiveness and economic evaluation.

In addition, please consult the NHSX guidelines for "Designing and building products and services," which includes the latest links to all relevant standards, guidelines and consultations.

About the SBRI Healthcare Cancer Programme

The SBRI Healthcare Cancer Programme is an initiative developed by NHS England and NHS Improvement's NHS Cancer Programme working together with SBRI Healthcare programme. It is run in collaboration with the Cancer Alliances and the Academic Health Science Networks (AHSNs) to identify innovative new products and services. The funding is provided by the NHS Cancer Programme.

The projects will be selected primarily on their potential value to the health service and social care system and on the improved outcomes delivered for those in receipt of care.

The implementation will be **100% funded**, and the projects will be funded for a maximum of **18 months** in the first instance, and **up to £5M**. Please ensure the proposed project deliverables could be reasonably achieved within the proposed contract duration, and all requested costs are justified. The cost of proposed projects should be **inclusive of VAT** (contract value).

According to the SBRI Healthcare Phased approach, promising innovations will have the opportunity to bid for follow on funding (for example scaling up implementation, supporting independent evaluations, etc.) subject to independent scrutiny.

The competition is open to single companies or organisations from the private, public and third sectors, including charities, based in UK and/or Europe. However, due to the nature of the projects supported and the expected outcomes, **clinical partners based in England only** are eligible. Engagement with Cancer Alliances is strongly encouraged.

Suppliers for each project 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.

The competition opens on **Wednesday 17th March 2021**. The deadline for applications is **1pm Wednesday 21st April 2021**.

Application process

This competition is part of the Small Business Research Initiative (SBRI) programme which aims to bring novel solutions to Government departments' issues by engaging with innovative companies that would not be reached in other ways:

- It enables Government departments and public sector agencies to procure new technologies faster and with managed risk.
- It provides vital funding for a critical stage of technology development – especially for early-stage companies.

The SBRI scheme creates an opportunity for new companies to engage a public sector customer pre-procurement, and to establish partnerships with the NHS through real world validation studies. The intellectual property rights are retained by the company, with certain rights of use retained by the NHS and Department of Health. The application process is managed on behalf of NHS England and NHS Improvement by LGC Group. All applications should be made using the application 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 Frequent Asked Questions are also accessible. All documents are available on the SBRI Healthcare website to help prepare your proposal.

A briefing webinar for those interested in finding out more about this competition will be held on **Thursday 4th March 2021**. Please check the SBRI Healthcare website for information on how to register and details of the agenda.

Please complete your application using the online portal and submit all relevant forms by **1pm Wednesday 21st April 2021**.

Key dates

Competition launch	17 March 2021
Briefing event	**Thursday 4th March 2021, virtual event**
Deadline for applications	21 April 2021 (1:00pm)
Assessment	April/May 2021
Peer review (if shortlisted)	June/July 2021
Interview Panel	20 and 21 July 2021
Contracts awarded	August 2021

More information

For more information on this competition, visit: https://sbrihealthcare.co.uk/

For any enquiries e-mail: sbri@LGCGroup.com

For more information about the SBRI programme, visit:

https://www.gov.uk/government/collections/sbri-the-small-business-research-initiative

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