

CANCER**RESEARCH**WALES
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Innovation Grant Funding Round 2021

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Cancer Research Wales is now accepting applications for its Innovation Grant funding round for 2021. These are intended to support small clinical, laboratory, or health systems research projects, or pump prime new scientific enquiry for the testing of proof-of-concept ideas.

Innovation Grant awards cannot be used to bridge funding between forthcoming and existing grant awards and cannot be used to support salaries.

Successful applications **will not normally exceed £25,000** and are anticipated to serve as forerunners for larger grant applications.

Strategic Aims of Cancer Research Wales

- Help eliminate inequalities of cancer incidence & mortality
- Improve patient outcomes through discovery & delivery of innovative treatments and strategies
- Increase the proportion of cancers diagnosed at an early stage
- Build clinical research capacity through embedding research into the heart of the NHS
- Create a strong brand that is nationally known, trusted and supported

Background of Cancer in Wales

There has never been a greater need for research. The incidence of cancer in Wales has risen by over 10% during the last decade, with 19,000 new cases diagnosed each year. By 2030 it is estimated that 230,000 people in Wales will be living with cancer. Although survival rates are improving, nearly 9,000 lives are still lost annually.

Wales currently has the lowest cancer survival rates, for the most common cancers types, when compared to other countries with similar healthcare systems across the globe. Late diagnosis is thought to be a significant factor in this. The backlog of referrals for suspected cancer and the reduced number of patients undergoing treatment for cancer due to the current pandemic will significantly exacerbate the issue of late diagnosis in Wales.

Many cancer-related issues are common across the UK, although several challenges exist that are unique, or greater in Wales. Current estimates suggest that an extra 300 lives would be saved every year if Wales just met the European average for cancer survival; a figure that could rise to 600 if we were to match the best performing countries.

Lung cancer and bowel cancer represent the two most common causes of cancer related deaths in Wales, with over 1800 lives lost annually to lung cancer alone. European comparison tables show that Wales is near the bottom of the league for lung cancer survival. The rates of

diagnosis and treatment of lung cancer continue to lag behind that of other cancers as cancer services recovered from the early impact of the pandemic. Colonoscopy services, the gold-standard diagnostic for bowel cancer, is forecast to remain chronically compromised for some time due to new working practices introduced to limit the spread of COVID-19 infection.

In addition, variations exist across Wales with respect to cancer incidence and mortality, with the observed inequalities mainly associated with deprivation status. For some common cancers the reported differences approach 25%, when the most and least deprived areas are compared. This represents a worrying gap that appears to be growing.

Health care provision that is made within a research-rich environment consistently demonstrates improved survival rates. With the recent introduction of the Single Cancer Pathway (SCP) and Rapid Diagnostic Centres (RDCs), Wales is uniquely positioned to take advantage of the strategic opportunities that have arisen. The SCP and RDCs represent critical components of the diagnostic and treatment pathways in Wales; these structures can be further improved by research, which can be tested and rapidly implemented within these settings.

Previous findings have suggested that cancer outcomes could be improved by as much of 30% if only the best research could be implemented into routine care and practice. For the reasons outlined here, Cancer Research Wales, is committed to improve service care and delivery through the funding of high-quality research.

We welcome applications in the following main areas.

- Prevention and Early Diagnosis
- Better Treatments
- Health Systems Research
- Basic Cancer Science and Translational Research

If principal investigators would like further information regarding eligibility of a proposed study, they should discuss the nature of the project with Dr Lee Campbell, Head of Research. Please note that Cancer Research Wales does not currently support projects that involve the direct use of animals in research. For further information on the 3Rs principle of replacement, refinement and reduction of animal use in research please refer to <https://nc3rs.org.uk/the-3rs>.

Prevention and Early Diagnosis

It is estimated that 40% of all cancers could be prevented through better life-style choices. Further, over 50% of some cancers are diagnosed at a late stage, stages 3 and 4, when they are more difficult to treat, manage and cure.

Cancer types commonly diagnosed late are cancers of the lung, bowel, stomach, ovary, oesophagus, pancreas and head and neck. Certain regions of Wales are disproportionately affected by these cancers, with their incidence and mortality up to 20%-30% greater in some areas compared to others.

We welcome cancer prevention and early diagnosis research initiatives that seek to better understand the causes of cancer in the broadest sense, ranging from molecular mechanisms to population attitudes and behaviours. The overall aim should be the early development of key interventions and methods that have the potential to help prevent or diagnose cancer at an earlier stage.

We welcome studies that seek to:

- Develop interventions that address the root causes of cancer inequalities in Wales
- Increase awareness of cancer symptoms in patients and hard to reach communities
- Discover and develop new point of care diagnostic cancer tests for potential use in primary and secondary care
- Improve primary care detection of cancer in patients with vague symptoms
- Challenge age thresholds and develop risk stratification for targeted screening and improvement of the cervical, bowel and breast national cancer screening programmes
- Understand behaviours that influence public participation in national cancer screening programmes

Better Treatments

This category covers basic and translational cancer biology and science. Potential projects may include the discovery of new therapeutic targets, and the development of much needed predictive biomarkers to measure treatment response (including drug combinations). All projects must demonstrate high translational value.

We welcome studies in the following areas:

- **Radiotherapy and medical imaging**
Proof-of-concept, radiotherapy-related research and associated imaging modalities, such as PET and Radiomics. Prospective applications should seek to improve radiotherapy treatment plans that will ultimately lead to better disease control and reduced side effects.
- **Basic cancer discovery and translational research**
Research supported in this area must show clear and demonstrable translational value that has the potential to quickly impact clinical practice with further funding.
- **Cancer immunotherapy**
Innovation Grants in this area will provide opportunities for basic, translational, and systems-based research in cancer immunology that will lead to a better understanding of the dynamic relationship between the immune system and cancer. Studies that seek to identify the unknown factors that influence treatment response to immunotherapy and contribute to the generalised immunosuppressive phenotype observed in advanced cancers are considered important.

- **Drug discovery and drug development**

This area may include the development of novel high-throughput drug screens, computer aided drug design, or early hit to lead validation studies.

Health Systems Research

The recent pandemic has exposed several gaps and limitations within the current health system and cancer pathways in Wales, and across the UK. Studies that seek to increase resilience and flexibility in cancer pathways in Wales, with the overall aim to reduce time to diagnosis and treatment will serve to future-proof cancer pathways and optimise service delivery.

We welcome studies that seek to:

- Improve communication between primary and secondary care
- Develop innovations and interventions that seek to streamline and optimise components of the Single Cancer Pathway, including patient, primary care, diagnostic and treatment intervals
- Use health informatics and cancer data to generate robust evidence for the identification of system gaps and causes of poor performance, and projected modelling for targeted improvement

Innovation Grants - the Application Process

Cancer Research Wales provides grants for cancer research which **must** be carried out in Wales. Principal investigators must hold a tenured position within a Welsh University or hold a consultant level post within a Welsh NHS Institution. Less senior appointees may be included as co-investigators or collaborators.

Innovation Grant Funding Timeline

Innovation Grant Call Opens	29th March 2021
Expression of Interest Deadline	10th May 2021
Invitation to Submit Full Innovation Grant	7th June 2021
Innovation Grant Deadline	19th July 2021
Funding Decision	30th October 2021

* Cancer Research Wales reserves the right to be flexible concerning exact timings

Two Stage Application Process

Cancer Research Wales will run a two-stage process. Applications for the Expression of interest will be reviewed by the scientific committee for strategic fit. The principal investigator of applications that pass this stage will be invited to submit a Full Application which must be received by 5.00pm on Monday 19th July 2021.

External Peer Review

Full Applications will be subject to expert review based on the principles set down by the [AMRC](#). All applications will be subject to a rigorous external peer review by recognised experts in the particular area of research. Normally applications are only considered for potential funding when they meet our strategic criteria **and** the external reviewers rate the project as **outstanding** or **forefront**.

Trustees' Decision

The Trustees will meet to consider the recommendations of the scientific committee that are made to them. The Trustees decision is final and there is no appeal process.