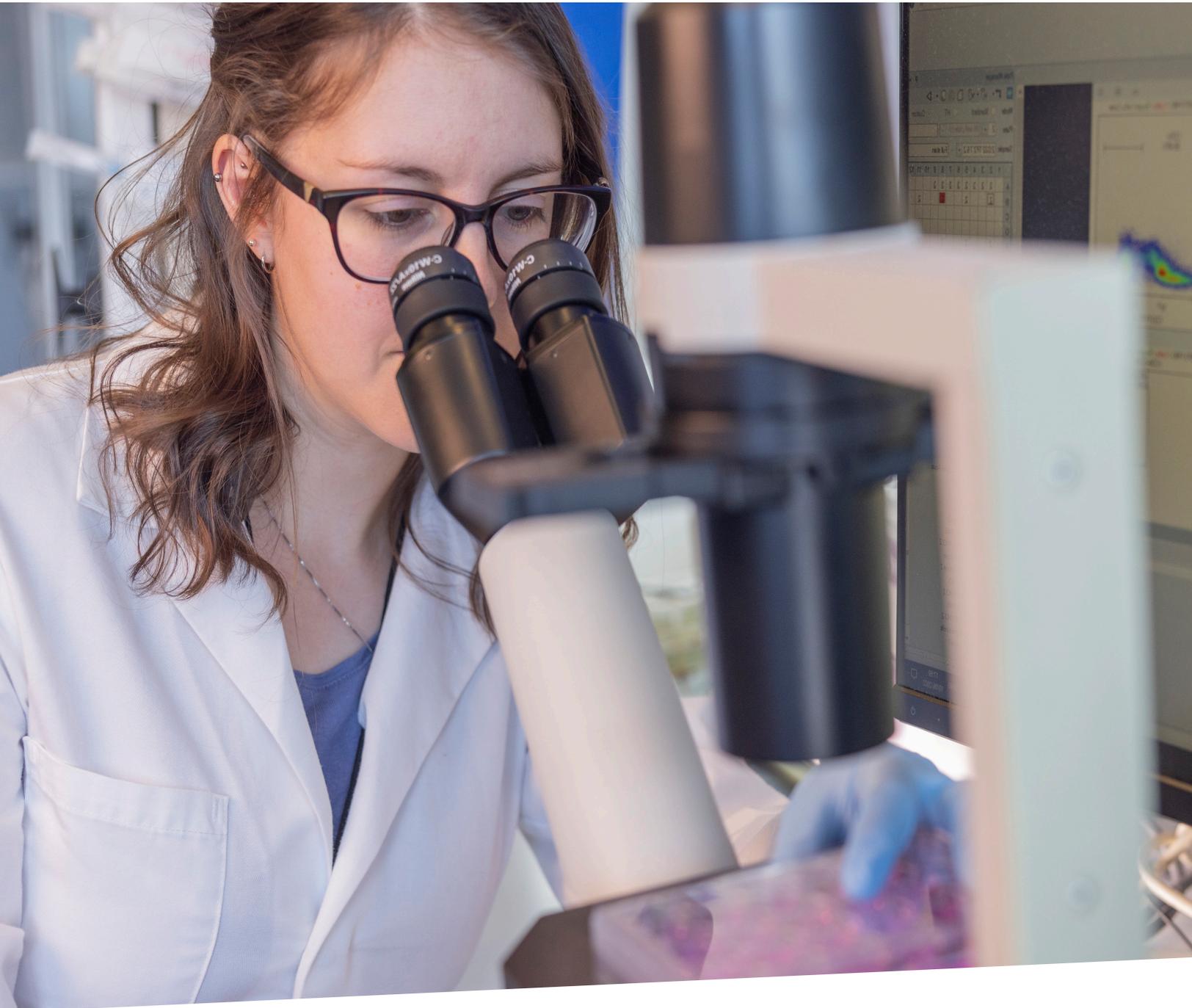


Moving Forward: A Cancer Research Strategy for Wales

July 2022





Eluned Morgan MS, Minister for Health and Social Services

As a government, we are committed to improving cancer services and outcomes in Wales.

Over the years, cancer has been the single biggest area of Welsh Government health research investment. Significant government funding has, for example: supported the delivery of clinical trials in NHS settings; funded project grants and personal awards; and built key research infrastructure through funding for the Wales Cancer Bank, the Wales Cancer Research Centre and, with Cancer Research UK, the Experimental Cancer Medicine Centre.

However, as we strive for improvements in prevention, diagnosis and treatment, and work hard to address inequality, including gender inequality, and deliver better patient outcomes, we have increasingly recognised the importance of focusing investment in areas where Welsh research is nationally and internationally competitive.

I am delighted to see that the Welsh cancer research community has responded to this challenge by coming together to produce and endorse this new strategy. It is a document that recognises both current and emerging strengths. In setting out our 'USP', I hope that research funders across the UK will be encouraged to invest, and that researchers will be attracted to Wales excited to be playing their part in our research effort.

I look forward to seeing the community working together to implement the strategy in ways that will drive growth in research excellence, research capability and, of course, patient and public benefit.

This strategy is supported by the following organisations:





Professor Kieran Walshe, Director, Health and Care Research Wales

Research plays an integral role in the fight against cancer in Wales. From the clinicians and lab technicians to supporting staff and members of the public who take part in studies, there is a large and thriving community dedicated to improving the lives of people across the nation.

The new Cancer Research Strategy is a crucial step forward for Wales and we are proud to support its development and implementation. The key recommendations outlined will help us work together on life-saving research, reinforcing our commitment to providing the best possible standard of cancer care to people in Wales.



Professor Tom Crosby, National Cancer Clinical Director for Wales

We know that participation in clinical research is one of the best measures of service quality and that patient outcomes are improved in research-rich environments.

There has never been a more important time to research and innovate to help reset and redesign a better system of cancer care. This strategy will aim to improve access to research for all of the public and patients in Wales across the cancer pathway.



Dr Tracey Cooper, Chief Executive, Public Health Wales

In the 2016 Cancer Delivery Plan we committed to delivering a comprehensive cancer research strategy for Wales, the aim being to bring the cancer community together to raise the profile of cancer research in Wales.

This new strategy will be key to embedding a vibrant culture of research into the prevention and treatment of cancer across Wales. This has always been key for us, but it is even more important to now move this forward at pace given the challenging environment for our population that has arisen as a result of the coronavirus pandemic.



Professor Mererid Evans, Director, Wales Cancer Research Centre

During the COVID-19 pandemic, we have faced huge challenges to our ways of working, but this has also led to opportunities to reshape cancer research in Wales. Our goal is to unite those involved in cancer research in Wales and focus on research excellence across six priority cancer themes. This will pave the way for further trailblazing studies and trials.

Above all, we will not lose sight of who we are working for: patients and public in Wales and beyond. People are at the core of what we do, and we are dedicated to building a cancer research landscape that best serves their needs.



A new chapter for cancer research in Wales

Cancer research is a key component of high quality cancer care. It provides the evidence needed to offer the best treatments, experience and services.

Patients treated in research-active settings have better outcomes, with benefits extending beyond those actively involved in studies. Participation in research empowers patients to become more involved in their treatment, helping to achieve the outcomes that matter to them the most.

Researchers in fields such as population health, prevention and early diagnosis help us understand how to increase public awareness of cancer risk factors and symptoms. This enables early detection of disease and prompt treatment to prevent disease progression and costly health outcomes.

Discovery and preclinical scientists, based in our universities, make new scientific breakthroughs. They develop new targeted cancer drugs, cancer vaccines and immunotherapies that are brought through to the clinic by translational researchers.

Clinical trials ensure research is available and accessible to the population. They also provide clear evidence of successful outcomes for NHS clinicians and scientists, which then feed into further research opportunities.

There is a strong record of cancer research in Wales. This has been achieved in part through investment into research infrastructure groups, supported and funded by Welsh Government via Health and Care Research Wales (HCRW).

These groups work in tandem to:

- Provide equitable, inclusive opportunities for patients to take part in research trials
- Empower Wales-based clinicians to take part in research activity
- Drive forward groundbreaking innovations in cancer research.

There is a crucial need to map the way forward for cancer research in Wales which, in turn, will help address the significant burden of cancer within the nation's population.

The COVID-19 pandemic has exacerbated the pressures on cancer patients and services in Wales, but has also highlighted the potential to develop new therapies in record time. It is time to do the same for cancer research in Wales.

The aims of the Cancer Research Strategy for Wales (CRest) are to:

1. Develop a collaborative, efficient, well-supported and focused research community, which will in turn...
2. Increase research grant income from all sources to expand the research base, which will in turn...
3. Improve prevention, diagnosis and treatment for all patients with cancer.

Key principles

Cancer research in Wales must:

- Contribute to building an evidence-based approach to cancer policies, health and care services, and a culture in NHS organisations which supports and embeds research to meet the needs of the people of Wales
- Work closely in partnership with key collaborators at a UK and international level, and seek to build strong and enduring partnerships
- Focus on building research themes in which there is a critical mass of researchers in Wales based on collaborative working and sustainable workforce investment and planning.

Future research must focus on areas where:

- There is a strong track record of excellence, with Welsh researchers leading and contributing to the global understanding of cancer at a UK and international level
- There are opportunities for wider cross-cutting collaboration in cancer and non-cancer research across Wales, the UK and internationally
- There is alignment with the strategic priorities of major UK cancer research funders (charities, government agencies and industry) with existing and potential opportunities for investment in Wales.



FUNDERS

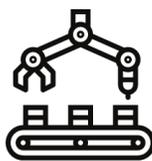
The Wales Cancer Research Landscape



HIGHER EDUCATION



CENTRAL BODIES



INDUSTRY



PATIENTS AND PUBLIC



THIRD SECTOR



HEALTHCARE

The state of cancer research in Wales

There is a long and distinguished history of cancer research in Wales across a range of areas, including immunology, drug development and clinical trials. This has improved cancer care for patients in the UK and internationally.

Research infrastructure

Welsh Government invests approximately £9M per year into supporting research infrastructure groups in Wales, including for cancer:

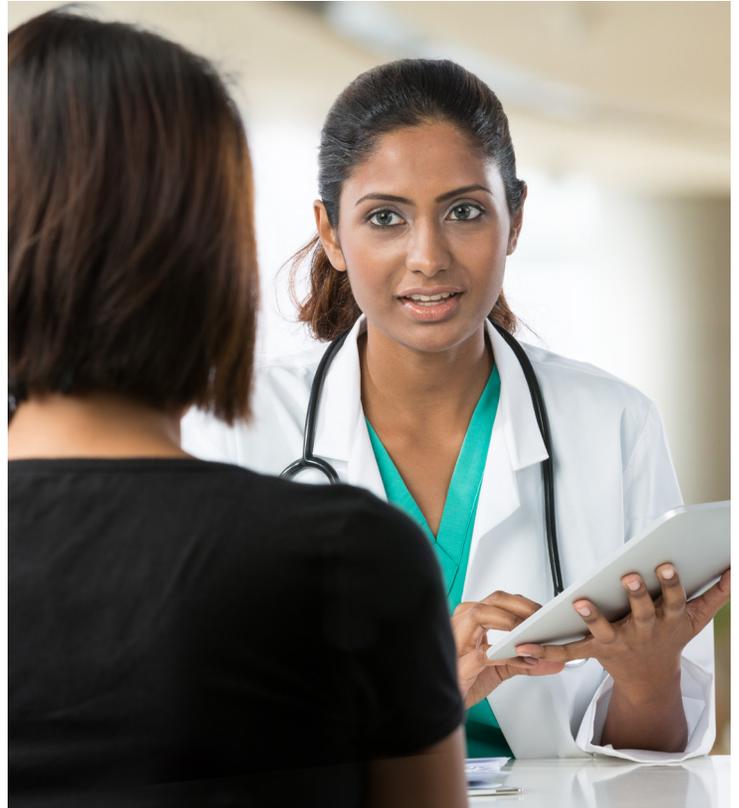
- Wales Cancer Research Centre (WCRC)
- Wales Cancer Bank (WCB)
- Wales Centre for Primary and Emergency Care Research (PRIME)
- Brain Repair and Intracranial Neurotherapeutics (BRAIN) Unit.

External infrastructure investments in cancer research in Wales include:

- Marie Curie Palliative Care Research Centre, Cardiff University
- Cancer Research UK (CRUK) Centre for Trials Research, Cardiff University
- CRUK Experimental Cancer Medicine Centre (ECMC), Cardiff University (with Welsh Government co-funding)
- EU funded Institute for Life Science 1 & 2 and Centre for Nanohealth, Swansea University.

Other research assets that can support cancer research in Wales include:

- Data infrastructure: including the Secure Anonymised Information Linkage (SAIL) Databank for collecting routine anonymised data and the Welsh Cancer Intelligence and Surveillance Unit (WCISU) for patient data
- Genomics facilities: Wales Gene Park and All Wales Medical Genomics Service
- National advanced imaging facilities: including the Cardiff University Brain Research Imaging Centre and the Wales Research and Diagnostic Positron Emission Tomography Imaging Centre
- Novel drug discovery: Medicines Discovery Institute, Cardiff University.



Research grant income

Research funding enables new discoveries and generates evidence for better treatments.

Data from the National Cancer Research Institute shows that around £40m was awarded in cancer research grants to Wales between 2013/14 and 2019/20.

CRUK is the largest single funder of cancer research grants in Wales, and other charities also make an important contribution.

Research delivery

NHS Wales supports recruitment into around 160 cancer studies annually, with approximately 3000 participants recruited across Wales in 2019/20.

The COVID-19 pandemic has had a significant impact on cancer research. Most cancer studies were paused to recruitment during 2020. Although the situation is improving, there is an ongoing impact on the workforce and funding for cancer research in Wales.

Key issues for cancer research in Wales

Despite the previous successes of cancer research in Wales, there are issues that must be addressed to create a thriving and successful cancer research environment in Wales for the future.

- ◆ Wales attracts less than half its proportionate population share of funding from UK cancer funders.
- ◆ Wales is losing ground in an increasingly competitive funding environment.
- ◆ Lower patient participation in clinical trials than in England.
- ◆ Inequalities in access for patients to research across Wales.
- ◆ A relative lack of cancer research leaders in Wales.
- ◆ Declining investment in cancer research workforce and career pathways particularly in key areas to translate basic science into clinical practice.
- ◆ A need for urgent investment in posts within those research themes which currently have the greatest potential.



Priority research themes for Wales

An ambition to develop a Cancer Research Strategy was set in the 2016 Cancer Delivery Plan for Wales.

The CRcSt strategy was developed by HCRW, the Wales Cancer Network, cancer research leads and research partners in Wales, with advice from an External Expert Review Panel.

It identifies six priority research themes where there is a strong track record of research excellence and future opportunity in Wales:

THEME 1 Precision & mechanistic oncology		THEME 2 Immuno-oncology	
THEME 3 Radiotherapy		THEME 4 Cancer clinical trials	
THEME 5 Palliative & supportive oncology		THEME 6 Population health-based cancer prevention, early diagnosis, primary care & health services research	

The aim is to develop critical mass and a sustainable platform for cancer research in each of the priority themes, from which other future strengths can emerge. The six themes provide opportunities for cross-theme collaboration and for collaboration with non-cancer research, as well as third sector and industry partners.

The themes align with existing Wales and UK-wide programmes and reflect the priorities of the 2021 Welsh Government Quality Statement for Cancer¹. Along with enabling new research discoveries, supporting research delivery within our NHS is critically important so that patients benefit from new discoveries.

Wales needs to have a research-ready environment in health and social care settings where opportunities exist for researchers, clinicians and patients to participate in cancer research now and in the future.

The UK government and devolved nations have developed a bold vision for the future of UK Clinical Research Delivery² in the wake of the COVID-19 pandemic, which will help enable the clinical delivery aspects of the Wales Cancer Research Strategy.

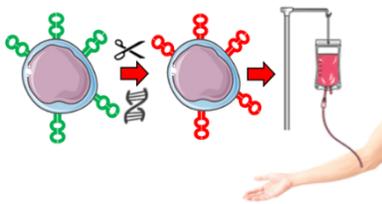
1 <https://gov.wales/quality-statement-cancer-html>

2 <https://healthandcareresearchwales.org/health-and-care-professionals/future-uk-clinical-research-delivery>

CANCER RESEARCH IN WALES: A SNAPSHOT

From discovery research that seeks to understand DNA biology, to research that aims to influence health behaviours and diagnose cancers earlier

Developing effective T-cell therapies for cancer



Bringing novel therapies to the clinic in Wales



Engineering viruses to become cancer vaccines



Combining antibodies with drugs to target cancer



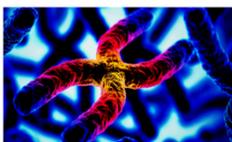
Leading UK & international clinical trials



Researching patient experiences & preferences for care



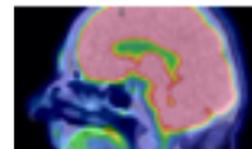
Exploring DNA to diagnose cancers & predict outcomes



Influencing health behaviours to prevent & diagnose cancers earlier



Imaging cancers & adapting radiotherapy to improve response



Using new tech & artificial intelligence (AI) to diagnose cancers earlier



Using AI to automate & set new standards in imaging & radiotherapy



Moving forward: Recommendations for the future of cancer research in Wales

Cancer research in Wales is at a crossroads. Focus and investment is now required to secure the future of cancer research across the nation and beyond. The strategy makes eight key recommendations to achieve this:

1. High level strategic support is needed from Welsh universities, NHS Health Boards and Trusts and Welsh Government agencies who need to work collaboratively with a collective responsibility for the future of cancer research in Wales.

2. Future focus and investment should principally be in the six priority research themes, whilst not precluding support for new areas of potential excellence.

3. A nominated research leader should be appointed to define research priorities and act as a champion and ambassador for each of the six themes.

4. A Wales Cancer Strategy Leadership group should be established to bring the research community together, develop costed plans and implement the key next steps.

5. This group should undertake a cross-cutting project to identify gaps in the cancer research workforce and career pathways in Wales across all disciplines.

6. The group should work with Welsh Government, Welsh institutions and with UK funders of cancer research to explore future opportunities for cancer funding.

7. Development of new cancer research infrastructure should be supported, including the tripartite NHS/Academic Cardiff Cancer Research Hub providing the translational pipeline between the laboratory and clinic.

8. Joint ventures/investment from industry and pharma, including spin out companies, should be explored as additional income sources for research.

Implementing the Wales Cancer Research Strategy is a crucial step towards redefining the cancer research landscape in Wales and improving cancer care for Welsh patients.

This work will be led by the Wales Cancer Research Centre (WCRC, funded by Welsh Government through Health and Care Research Wales), the Wales Cancer Network and NHS and Academic institutions and partners across Wales.

