



WALES CANCER BIOBANK
BIOFANC CANCER CYMRU

Wales Cancer Biobank



Ymchwil Iechyd
a Gofal Cymru
Health and Care
Research Wales



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

2022 – 2023 Annual Report



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Foreword

2022/23 has been a transitional year for the Wales Cancer Biobank in the way that it engages with its research partners to deliver impact in cancer research.



In our 2020/21 report we stated that we had:

- adopted a collaborative ‘project-focused’ approach with our key research and NHS partners to drive forward new innovations in cancer treatment and diagnosis,

and that our aim for the next 4 years was:

- to engender this collaborative ethos across the cancer research community with patient involvement at its heart.

These ambitions are now reflected in our **new strategy for the Wales Cancer Biobank** which is published at the beginning of 2023.



You can read about our new strategic vision below and how this aligns with the Cancer Research Strategy for Wales (CRest) launched by Health and Care Research Wales and partners in 2022.

You will also find information on how we have implemented our new ‘project-focused’ approach and how this has contributed to cancer research, helping to deliver new innovations in cancer diagnosis and treatment over the past 12 months.

We hope you will enjoy reading the report.

Our new strategy and further details can be found on the Wales Cancer Biobank website (www.walescancerbank.com) and we’d be pleased to welcome you to our Facebook and Twitter ‘family’.



Professor Richard Clarkson
Scientific Director and
Principal Investigator



Dr Alison Parry-Jones
Operations Director



Professor Richard Adams
Clinical Director

Background

The Wales Cancer Biobank (WCB) approaches patients in Wales with known or suspected cancer to ask them to consent to donate biosamples and data for use in future cancer related research. The Wales Cancer Biobank is a Health and Care Research Wales Infrastructure group, funded by Welsh Government, hosted by Cardiff University, with the grant held within the School of Biosciences. The WCB works closely with a variety of stakeholders to facilitate the supply of biosamples and data from cancer patients in Wales to researchers worldwide.

The biobank has been consenting cancer patients from around Wales since 2005. The WCB is licensed by the Human Tissue Authority under the UK Human Tissue Act (2004) to store human samples for research and has ethics approval from Wales Research Ethics Committee 3 as a Research Tissue Bank.

WCB collects biosamples and data for use in research projects worldwide to help better understand cancer, how it starts, how it progresses and how it can be treated in new and improved ways for cancer patients in the future.

As one of the UK's largest and longest-established biobanks, with an international reputation for excellence, the Wales Cancer Biobank exemplifies how a centralised infrastructure adds value to the research community. WCB has spent 17 years establishing the know-how within Wales for sourcing and handling biosamples for research and in recent years WCB has adopted more efficient procedures to meet the needs of an increasing number of researchers applying for bespoke and archived tissues.



16,681

**Patients
Consented**



155

**Projects
Supported**



in 9

Countries

WCB is proud to be contributing to the training and development of new cancer researchers in Wales. We have trained seven early career professionals in a range of Biobanking associated skills including research ethics, consenting of patients, tissue handling and processing, with five achieving additional qualifications and/or securing established research posts in cancer research through the experience gained in WCB.

Highlights


✓ Publication of WCB's new Strategy aligned with CRcSt 

✓ New team videos on YouTube channel 

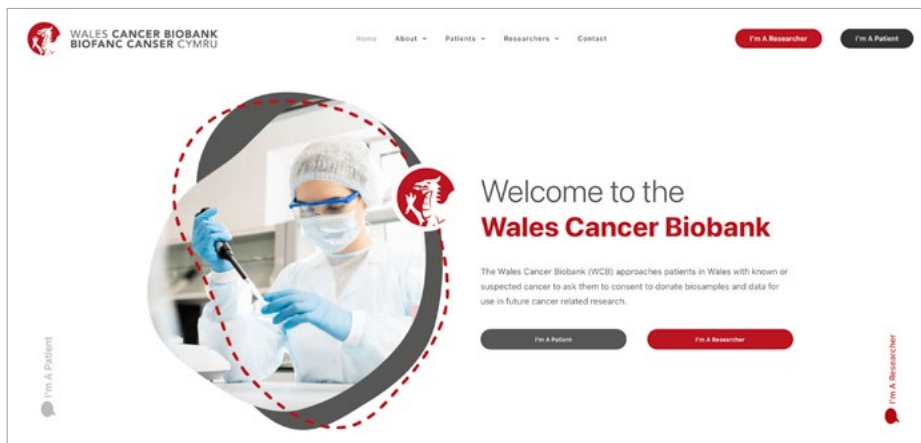
✓  Completion of ASTRA2 programme, in partnership with Cancer Research Wales, leading to innovation in routine practice and research

✓ **30%** Increase in number of samples issued to researchers 

✓ Embedding posts within leading cancer research laboratories 

✓ **£7.4M** Partner in 3 funding bids to major government and charity organisations totalling £7.4M 

✓ **£5.1M** Supported other funding bids totalling £5.1M 



Our New Strategy for 2023-2028

The primary aim of the 2020-2025 Infrastructure award from Health and Care Research Wales was to improve capacity to deliver the Wales Cancer Biobank service to the wider research community, thus increasing both the number and type of projects delivered and helping to develop a host of innovations leading to changes in routine clinical practice.

In 2022, Health and Care Research Wales and its partners published the Cancer Research Strategy for Wales which put forward six priority themes for cancer research in Wales that leans upon areas of strength and high impact academic research in Wales. WCB has responded to this new national strategic vision by publishing its own new strategy to align with the CReSt priorities, providing a route to sustainable delivery of cancer research resources in the future.

This is based on WCB's four strategic pillars:

Performance

We aim to ensure our core biobanking activity meets the changing needs of cancer research and aligns with CReSt priority areas.

People

We seek to increase patients' opportunities to be involved in cancer research and to foster the development of the next generation of cancer researchers in Wales.

Promotion

We aspire to maximise the potential of WCB resources and expertise by expanding our network of stakeholders and partners in Wales and internationally.

Partnership

We plan to use our expertise through collaboration and leadership to accelerate innovation in cancer research, diagnosis and treatment.

Our main strategic aims, which are predicated on the four strategic pillars as described on the previous page, will focus on:



Increasing Engagement with our research stakeholders.



Embedding WCB activity within new and existing cancer infrastructures in Wales.



Expanding the reach and impact of WCB on cancer research across the UK and beyond.

Through these aims our aspiration is to promote cancer research activity and critical mass in Wales and to broaden our impact more widely across the UK and international cancer research communities.



More information on our new strategy can be found here:

Wales Cancer Biobank Strategic Plan 2023–2028 –
Wales Cancer Biobank (walescancerbank.com)



Partnership 

Our Impact on Cancer Research in Wales

In 2020, Wales Cancer Biobank partnered with **Cancer Research Wales** to co-ordinate and manage a second iteration of the “Access to Tissue Samples for Research Awards 2” (**ASTRA-2**) scheme.

The projects, which completed in April 2023, have contributed to our mission to support new Innovations in Routine Practice and Cancer Research.



The Remit:

To promote access to patient derived cancer samples, through WCB, to support Wales-based cancer research projects.



The Objective:

To support the development of future cancer treatments and routine clinical practice within Wales.



The Impact:

Five research projects (details below) we supported have led to ground-breaking innovations in cancer research, treatment, and diagnosis.



Implementation of a new diagnostic test for a range of cancer types into routine NHS practice in Wales. **PI - Dr Rhian White**



Data demonstrating a novel target for immune therapy of lung cancer. PhD awarded. **PI - Dr Rhian White**



Development of a genome array for detection of BRCA mutations in prostate cancer for future implementation into NHS routine practice. **PI - Dr Sian Morgan**



Data to support future implementation of a clinically accredited test (ISO17025: TeloNostiX Ltd) of prostate cancer samples as a prognostic marker. **PI - Prof Duncan Baird**



Optimisation of state-of-art preclinical platform for breast cancer research. New national/international collaborations formed. **PI - Prof Awen Gallimore**

“ We chose to work with WCB because of the availability of samples and the direct interaction with staff to help inform on sample acquisition, sample collection and preparation.”

Prof Duncan Baird, TeloNostiX Ltd

“ Wales Cancer Biobank and the ASTRA2 funding has facilitated the vital development of two new genomic services: a genomic assay for the detection of BRCA1/2 gene mutations for patients with mCRCP for the purpose of determining eligibility for Olaparib treatment in mCRCP and the validation and implementation into a diagnostic NHS laboratory, of which AWGL is the first in the UK, of a 500 gene panel using ctDNA which has enabled the launch of the QuicDNA project. ”

Dr Rhian White, All Wales Medical Genomics Service



Partnership 

Data Initiatives

Using WCB Pathology Images for Artificial Intelligence (AI)-based Diagnostics, WCB and the Centre for Trials Research (CTR) led on a £750K UKRI AI bid to develop new markers of treatment effectiveness and through this to improve early phase clinical trial delivery with swifter development of new cancer treatments.

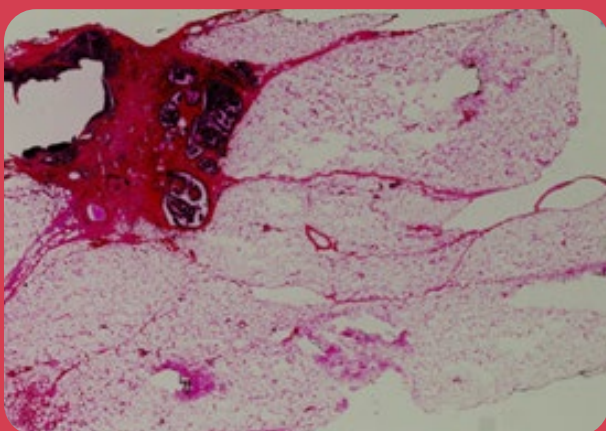
The project aims to adopt AI tools to simultaneously analyse pathology sample images, radiology images and genomics data from cancer patients alongside information on their clinical history to generate a novel diagnostic tool which will aid in their treatment journey.



Expanding the reach and impact of WCB on cancer research across the UK and beyond

Imaging collaboration with AI industry partner

This project aims to improve the accuracy, reduce costs and turnaround times for breast cancer diagnoses. Currently, cancer diagnoses require a visual assessment of a biopsy by a pathologist followed by subsequent molecular tests.

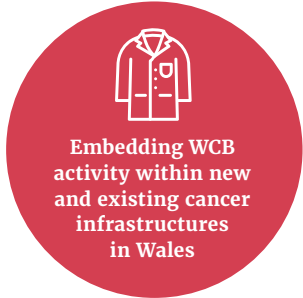


Given the increase in cancer incidence there is a need for solutions capable of relieving workload pressures in a cost- and time-effective way. WCB was approached by an AI development company for 1,550 high-resolution, quality assured breast tumour pathology images. The images were required to test and validate a novel method for pathology-based interpretation of biopsy samples which enables faster, cheaper, more accurate diagnosis.

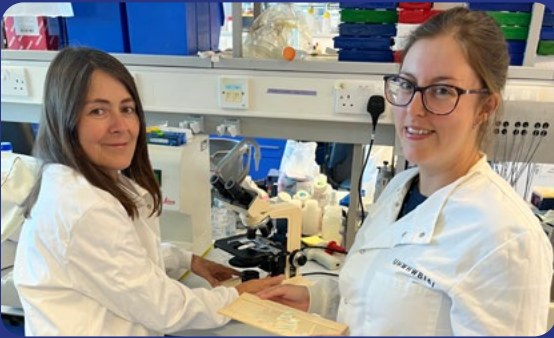
Building on a successful initial Proof of Concept (PoC) study demonstrating very promising results in terms of accuracy and reduced timeframes, the project aims to refine and validate this technology to reach a standard acceptable for clinical use.


Performance 

Partnership 




As a key part of our new strategy WCB is embedding its personnel within some of the top cancer research laboratories in Wales – providing its experience and know-how in biosampling to promote cutting edge research. Here we highlight two of the new collaborations with world-leading researchers based in Cardiff University.



 **CRcSt Priority Theme 1:**
Precision and mechanistic oncology

Professor Awen Gallimore’s laboratory in Cardiff University is focussed on understanding how the immune system eliminates cancer cells and using this information to guide the design of new treatments. The Wales Cancer Biobank has worked closely with Prof Gallimore and her team to supply fresh tumour tissue from colorectal patients. The tissue is processed in the lab and developed into organoids, also known as “3D mini-guts”. These organoids are important for drug development and exploring how the immune system might recognise and kill cancer cells, but not healthy cells. WCB now directly contributes to the development of this technology by supporting and training Dr Steph Burnell, a member of the Gallimore team, in patient consenting and tissue handling.

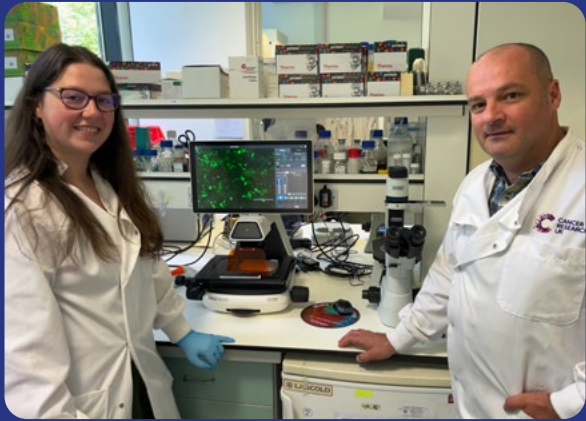
Dr Burnell commented that ‘the communication with the WCB team was exceptional – always working with us to help us make the most of the samples we received’.

 **CRcSt Priority Theme 1:**
Precision and mechanistic oncology

Research within Professor Alan Parker’s group in Cardiff University, focuses on several aspects of adenovirology, with the aim of developing better virotherapies for the treatment of cancer.

The lab specialises in engineering viruses to treat cancer. The viruses replicate inside cancer cells, which simultaneously kills the tumour cells and enhances the body’s immune system to fight the cancer.

New therapies for ovarian cancer are urgently needed, especially for chemotherapy-resistant advanced disease. One of Professor Parker’s early career researchers, Dr Tabitha Cunliffe is being supported by WCB to evaluate the potential for new types of viruses based on adenoviruses to kill ovarian cancer cells selectively. She will isolate cancer cells from patients with chemotherapy-resistant ovarian cancers and tailor viruses to selectively target these cancer cells in the laboratory.



Partnership 

Core Metrics
Reporting period: **2022/2023**



Health and Care Research Wales infrastructure award to the group

 Direct funding awarded **£452583**

Jobs created through direct funding  **8**

Grants won during reporting period

Grants won	Led by group	Group collaborating
Number	0	27
Value	£0	£5.11M
Funding to Wales	£0	£3.27M
Funding to group	£0	£65,800
Additional jobs created for Wales	0	3
Additional jobs created for group	0	0

 **8**
Number of publications

 **11**
Number of public engagement events

 **7**
Number of public involvement opportunities

Biobanking metrics

 **328**
Consents

 **16**
Research requests

 **15**
Research requests approved

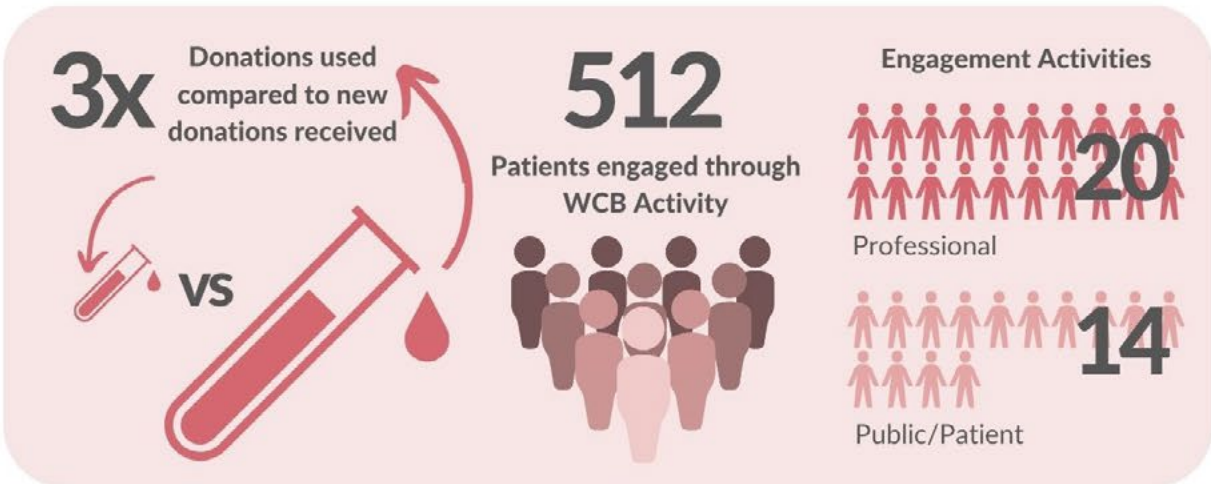
 **4174**
Samples issued to research projects

 **20**
Projects receiving samples

 **7**
Publications using samples

Additional Metrics

Reporting Period: 2022/2023



Performance 

Our Key Outputs – Samples for Research

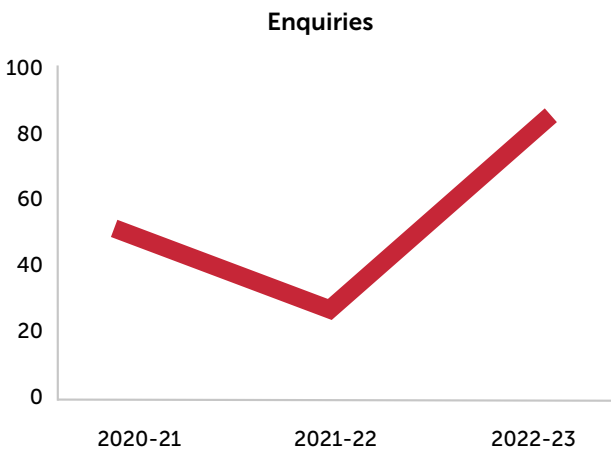
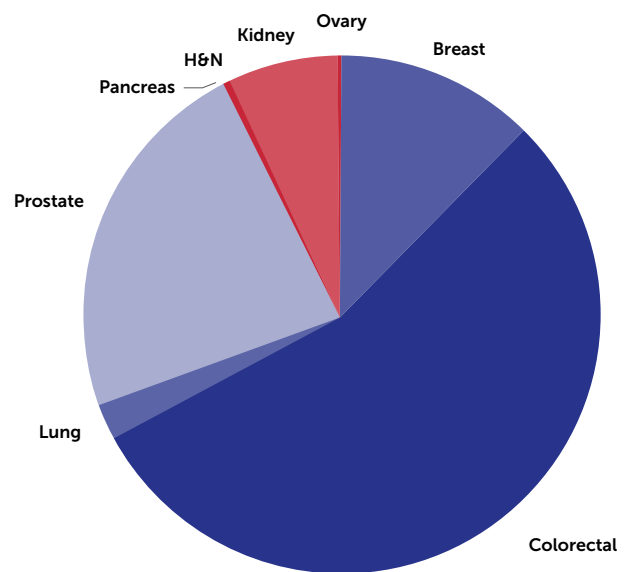
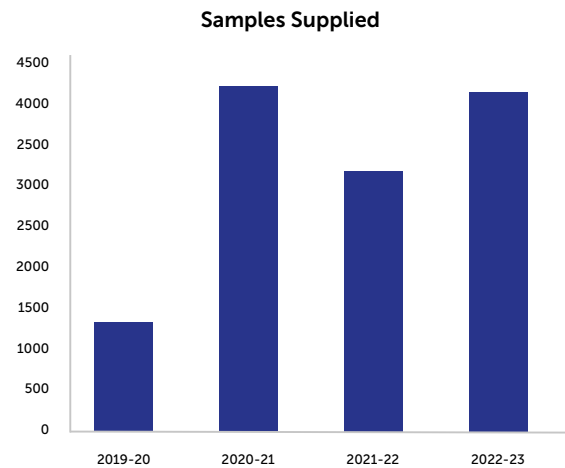
WCB continues to collect samples for approved projects and also to add to the archive to be readily available for future projects. Over 16,500 patients in Wales have donated samples for use in future, cancer related research and samples are available from over 20 solid tumour types.

The largest collections are in breast, colorectal, prostate and lung cancers where tissue and blood are processed and annotated with pathology data, treatment and outcome data and molecular data. The richness of the data sets and the availability of matched sample sets varies by tumour type.

Sample Utilisation

The biobank has focused on expanding its reach with researchers and building awareness of the services available through WCB. Inclusion on a variety of internet platforms has provided additional visibility of the resource, increasing the number of enquiries from researchers wishing to access the biobank to an all-time high of 89 in the last year.

4,174 samples were issued to projects during the year. This is a **30%** increase in sample numbers issued on the previous year (3181). **82%** of samples were issued to researchers in Wales and researchers in Wales accounted for **75%** of the projects supplied with samples. The majority of samples issued (92.8%) were either breast, colorectal, prostate or lung samples where the project was tumour specific.



Our Key Outputs – Research Publications

The Wales Cancer Biobank recently published the first of a series of papers describing the genetic analysis of a cohort of colorectal cancer samples from its archive.

‘Clinical Analysis of the Colorectal Cohort within the Wales Cancer Biobank: A study of outcomes and genetic screening’ was accepted in the Journal of Cancer Therapy (JCT).

Clinical data was collated from more than 2,000 colorectal patients and analysed to identify correlation between disease grade and outcome. WCB performed genetic analysis on patient primary tumour samples, identifying and characterising mutations in five genes on a cohort of 407 patients. The majority of patients were male with the mean age of 69 years and had received surgery as the primary treatment for their disease. Heterogeneity within the primary tumour was explored in a subgroup of patients.

Analysis of two genes confirmed that more than 40% of patients tested harboured a genetic mutation within these genes in their primary tumour. Due to the limited sample size tested, most mutations did not show significant differences in disease free survival. However, mutation of one (the BRAF gene) did show a decrease in the disease specific survival, in keeping with published data.

Development of new drugs that are tailored to the genetics of a cancer are emerging and at WCB we are focusing our collections on samples and data that meet the needs of this ever-evolving field.



Highlight publications arising from research using samples from WCB

‘HGF/cMET in the Osteoblastic Metastasis of Prostate Cancer, Molecular, Cellular and Therapeutic Implications’

doi: 10.3390/biom12020338

Principal Investigator – Professor Wen Jiang, Cardiff University

Prostate cancer is one of the most commonly diagnosed male cancers and a leading cause of male cancer deaths in the UK. Progression of prostate cancer can be difficult to predict, varying from an indolent course to a more aggressive metastatic outcome, making disease management difficult.

Prostate cancer metastases, similar to those from breast cancer, tend to establish in the bones though bone metastases of prostate cancer tend to be osteoblastic rather than osteolytic, as in breast cancer. Metastatic disease is associated with poor patient outcomes.

Our current research focuses on the identification of pathways and proteins, such as the hepatocyte growth factor pathway, that are involved in prostate and breast cancer cell dissemination, establishment at secondary sites and advance disease. Our research also focuses on the subsequent elucidation of the mechanisms that enable these cancer cells to disseminate away from the primary tumour and colonize new sites such as the bones.

Greater understanding of key factors contributing to cancer progression will facilitate better disease prognosis, aiding patient management and will also highlight new therapeutic strategies to slow or prevent cancer metastases.




biomolecules



Article

Hepatitis A Virus Cellular Receptor 1 (HAVcr-1) Initiates Prostate Cancer Progression in Human Cells via Hepatocyte Growth Factor (HGF)-Induced Changes in Junctional Integrity

Emily A. Telford, Andrew J. Sanders, Sioned Owen, Fiona Ruge, Gregory M. Harrison, Wen G. Jiang  and Tracey A. Martin *

'Identification of an early peritoneal biomarker in CRC patients with an anastomotic leak'

doi: 10.1101/2022.08.05.22278403v1

Principal Investigator – Dr N Reeves (Cardiff and Vale University Health Board)

Patients with colorectal cancer often undergo surgical removal of the bowel tumour with the bowel being joined together at the time of the first operation.

The join in the bowel sometimes can break down, allowing bowel contents to leak into the abdomen, resulting in sepsis and possible re-operation. This has a significant effect on the patient, initially with the prolonged recovery and longer hospital admission, but also in the long term by delaying any further treatment. Currently patients are monitored after their operation for signs that they may have had a leak from the bowel join as there is no good test to identify these patients earlier.

Some research has started to identify markers in the fluid around the join in the abdomen that could be tested to help identify those who have had a leak. This study adds to this research and helps to design and refine a test to identify these patients.

medRxiv

THE PREPRINT SERVER FOR HEALTH SCIENCES



Cardiff
School of
Health
Laboratory

BMJ Yale

Inflammatory biomarker signatures in post-surgical drain fluid may detect anastomotic leaks within 48 hours of colorectal resection

Simone M. Cuff, Nicola Reeves, Eifion Lewis, Eleri Jones, Sarah Baker, Athanasios Karatagos, Rachel Morris, Jared Torkington, Matthias Eberl

doi: <https://doi.org/10.1101/2022.08.05.22278403>



Publications Audit

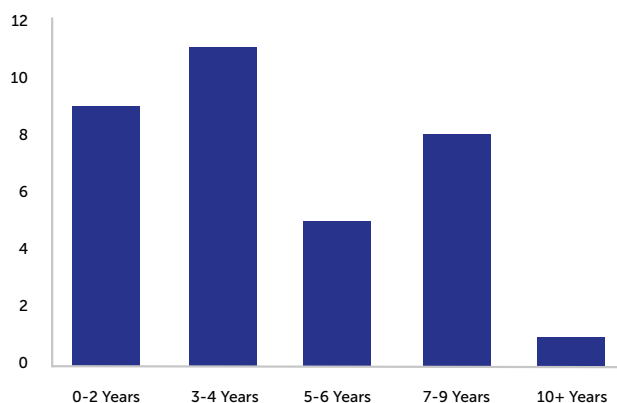
WCB undertook an audit of publications in March 2023 to capture data on all publications referencing the biobank since sample supply started.

The publications range from a number of research fields:

- research groups using samples supplied by WCB,
- clinical trials where WCB hosted the trial samples and was actively involved,
- WCB-led research on operational or biobanking community topics,
- other biobanking partners using WCB as a case study in comparative or state of the sector articles.

Year	2009 – 2019	2020 – 2023	Total
Publications using WCB samples	26	10	36
Higher degree thesis using WCB samples	11	4	15
Publications from trials hosted by WCB	3	4	7
Biobanking publications	10	1	11
Publications citing WCB as a case study	10	2	12
Total	60	21	81

Manuscripts arising from projects using WCB samples are challenging to track and report as several years often elapse between supply of samples and publication. The publication audit showed that the mean time from supply to publication is 4 years, with 27% taking seven or more years to publish. Most applications result in one publication, but samples supplied to seven applications have been used in projects that gave rise to multiple publications.



“ I’m glad that they are able to use my tissue In whatever way is necessary. ”

Patient feedback



Performance 

Promotion 

Clinical Trial Activity

WCB hosts samples from three live clinical trials, STAMPEDE, Add-Aspirin and iNATT and has adopted two clinical trial sample collections into the biobank at the end of ethics (FOCUS4 and SCALOP2).

Hosting

STAMPEDE¹ – The trial aims to provide evidence as to what is the best way of treating men with newly diagnosed advanced prostate cancer. Since 2005, almost 12,000 participants joined the trial. Practice changing results have already been reported to improve disease control and life-expectancy. The trial closed in March 2023.

Add Aspirin² – is a large randomised clinical trial taking place in the UK, Republic of Ireland and India. It will recruit 11,000 participants to help find out whether regular aspirin use after treatment for an early stage cancer can prevent the cancer from coming back and preventing deaths.

iNATT³– this project is collecting tissue, blood and clinical data from patients with anaplastic thyroid cancer in order to facilitate research opportunities.

Adopted

FOCUS4⁴ – was a molecularly stratified trial programme in colorectal cancer designed to enrol patients into a specific randomised trial based on the results of the molecular tests on their tumour tissue.

SCALOP2⁵ – investigated whether particular chemotherapy and chemoradiotherapy treatments could improve outcomes for patients with locally advanced inoperable pancreatic cancer that has not spread beyond the pancreas.



Samples from the adopted trials are now available for use via WCB.

Three clinical trials hosted or supported by WCB have published recently, including the STAMPEDE and SCALOP trials and the Cancer Research UK Stratified Medicine programme, for which WCB acted as the Cardiff Clinical hub.



Trials funded by:

- ¹ Cancer Research UK (CRUK). ² CRUK, National Institute for Health Research (NIHR), Tata Memorial Centre. ³ Thyroid Cancer Support Group Wales. ⁴ NIHR/Medical Research Council Efficacy and Mechanism Evaluation programme, CRUK. ⁵ CRUK, Celgene.

Partnership 

Promotion 

Leadership and National/International Involvement

The Wales Cancer Biobank's ongoing contribution to the strategic leadership of biobanking maintains WCB's high profile on the national and international biobanking stage.




Expanding the reach and impact of WCB on cancer research across the UK and beyond



Leadership on International Biobanking Network

WCB Operations Director, Dr Alison Parry-Jones was elected President of the International Society of Biological and Environmental Repositories (ISBER) in May 2022, having previously been Director-at-Large for Europe, the Middle East and Africa for the previous five years.

ISBER is the leading global society promoting and focusing on Quality in Biobanking, with the mission to 'Advance the expertise and quality of biorepositories and biobanking science worldwide'. The society has members in 58 countries and hosts webinar series, jointly developed the Qualification in Biorepository Science, responds to worldwide biobanking related policy consultations and publishes the ISBER Best Practices: Recommendations for Repositories.

The 5th Edition of the Best Practices is in development and will be released later in 2023. www.isber.org



Alison (2nd from right) received the chair from previous incumbent (Clare Allocca, NIST, USA, far right) and is pictured with the outgoing Past President (Piper Mullins, Smithsonian Institution USA, second left) and Prof Dayong Gao, incoming President Elect (University of Washington, USA, far left).

Key Opinion Lead on EU Research Programme

Dr Parry-Jones was invited to be the biobanking expert on the Scientific Advisory Board for ISIDORE – the Integrated Services for Infectious Diseases Outbreak Research (<https://isidore-project.eu/>). The programme received funding from the European Union’s Horizon Europe research and innovation programme, and provides free transnational access to research resources, services and expertise to support user projects and develop new services. ISIDORE is coordinated by the European Research Infrastructure on Highly Pathogenic Agents (ERINHA). The ISIDORE consortium aims to improve Europe’s global service and research capacities by becoming a key European Research Area-embedded instrument for supporting research on epidemic-prone pathogens by providing an integrated portfolio of cutting-edge research services and resources to study epidemic-prone pathogens, including SARS-CoV-2.

**BREAST
CANCER
NOW** The research
& care charity



New Chair of BCN Tissue Bank Advisory Committee

Professor Clarkson was elected in 2022 to Chair the Breast Cancer Now Tissue Bank Advisory Committee. The Breast Cancer Now Tissue Bank opened to researchers worldwide in 2012 and has more than 129,000 samples from almost 10,000 patients available to researchers.

Prof Clarkson’s role is to oversee the Committee’s 5-year funding review of the Biobank in 2024 and to sit on the Breast Cancer Now Strategy Committee during his tenure.

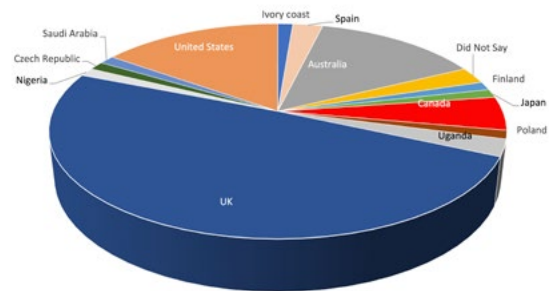
Promotion

WCB-Led Research: International Biobank Survey

To help inform the research community about best-practice in biobanking, including the different operating models and approaches to biobanking sustainability, an in-depth survey was carried out by WCB to provide a snapshot of worldwide biobanking activity and funding models. The survey which had 34 questions, was circulated worldwide through its biobanking networks LinkedIn and Twitter accounts.

Seventy-nine responses were received, 39 from the United Kingdom, 38 from other countries and 2 respondents did not specify a geographical location. Biobanks ranged in size and remit with some consenting fewer than 20 participants per year and some upwards of 3,000.

Origin of Responses n=79



Just over half (54%) of the biobanks were disease or condition specific, and half were based in academia.

Just over half (54%) of the biobanks worldwide were expected to cost recover to generate income, with 57% of the UK respondents not expected to cost recover. The range of cost recovery expected was considerable. This information was used to inform WCB’s new strategy and will be published by WCB in an international journal in 2024.

People 

Staff Development and Training

Qualification in Biorepository Science (QBRs)

Two more WCB staff applied and passed the Qualification in Biorepository Science in 2022/23. Abigail MacArthur and Paola Foulkes successfully took the exam in July 2022 and March 2023 respectively.



Abby has worked as a research co-ordinator with WCB since 2012 and was initially responsible for co-ordinating the Cardiff clinical hub of the CRUK Stratified Medicine Programme. Since the SMP programme ended, she has become more involved in training, communications, and outreach.

She managed the redevelopment of the website and the animations introduced in the previous period. She said, ‘I’ve learned a lot through my time working at Wales Cancer Biobank, so it is great to have a qualification in place that recognises this specialist knowledge’. Paola joined WCB in 2020 as a laboratory technician. She manages the clinical trial sample collections as well as facilitating the collection, processing, and storage of biosamples for WCB consents. She works closely with members of the applications team to ensure biosamples are suitably processed and shipped to researchers worldwide.



People 

Involvement and Engagement

The Wales Cancer Biobank has a broad range of engagement with patients and public alongside its professional engagement activities, working with the Health and Care Research Wales Public Engagement & Involvement forum/alliance to ensure public participation, involvement, and engagement (PPIE) activities are celebrated and shared across the Health and Care Research Wales network.

WCB engagement activities include:

- public events that WCB presented at or attended
- public and professional surveys
- newsletter editions
- presentations at biobanking or scientific conferences/events
- training workshops and lectures.

Number of Events/Activities	WCB Arranged	WCB Supported	WCB Presented	WCB Attended	TOTAL
Public/Patient Engagement	6	2	2	4	14
Professional Engagement	5	0	7	8	20

Public and Patient Involvement

Patients remain at the heart of everything that WCB does. Their donated samples are central to the biobank’s core remit and patient volunteers continue to be involved in the operational management and strategic development of the biobank by virtue of members of WCB’s lay group and volunteer consenters.

At the end of 2022, Mrs Sue Campbell stood down as the Chair of the lay group after six years of sterling service. During that time Sue has overseen the lay group through many challenges and she was instrumental in introducing the concept of a lay member sitting on each of the WCB committees. Sue is remaining on the group and will continue her excellent contribution to WCB. WCB would like to thank Sue for her excellent stewardship and unwavering support.

Mr Bob Hall took up the position of Chair of the lay group in January 2023. Bob has been a member of the WCB lay group since its inception and he was a full-time fire officer for over twenty years, serving in all parts of Gwent, South Wales.

He became a borough councillor with Blaenau Gwent, where his interest in community health led him to become the Chair of the Gwent Community Health Council and subsequently Vice Chair of the all-Wales Community Health Council. He has a vast experience of volunteering within his community, and we look forward to this new phase of leadership for the group.

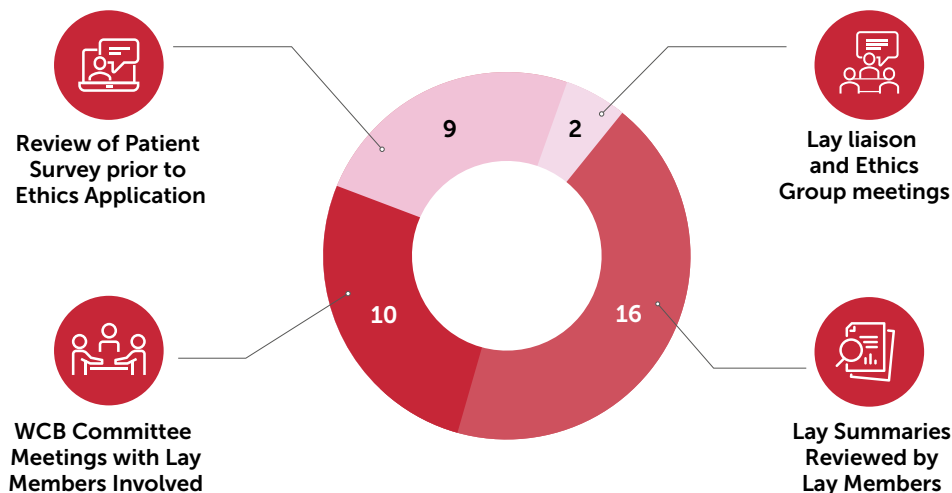
Over the last year members of the lay group have consulted on the content for the public/patient surveys, reviewed lay summaries in applications for biosamples, attended WCB committee meetings and met as an independent group.



Mrs Sue Campbell



Mr Bob Hall



People 

Patient Engagement

Patient surveys

Two surveys aimed at gathering feedback from patients and the public were circulated during the year via electronic newsletters. Patients who had consented to donate samples to WCB and had given their email address for future communications were sent a link to the surveys as part of regular WCB e-newsletters.

85 responses were received from the first survey aimed at establishing patient engagement in cancer research in Wales.

61% of respondents said that Donating to the Wales Cancer Biobank was the only opportunity they had to take part in cancer research.

Of the remaining **39%** who were able to take part in 'other' research:

- 42%** took part in a clinical trial
- 39%** completed a questionnaire
- 27%** took part in a research project

NB. Some took part in more than one research activity.

77.6% said they'd be willing to be involved in future research projects.

The second survey captured feedback from members of the public who had not necessarily donated to a biobank as well as patients who had donated. The survey asked for feedback around consent for biobanking.

Participants were asked:

- if they thought consent for biobanking should be a separate process to consent for their operation/biopsy,
- whether a patient's samples should automatically be made available for research without the need for a biobanking specific consent,
- whether a patient should be able to decide which research projects their samples were used in. Responses were received from 99 participants.

Nearly **93%** felt that a biobanking specific consent was unnecessary, with **58%** agreeing that surplus samples should be made routinely available for research. There was no overall consensus on the format of the consent form, but an overwhelming **88%** did not want to decide in which research projects their samples and/or data would be used.

“ Just such a simple way to advance our knowledge and should be supported at all levels by all parties. ”

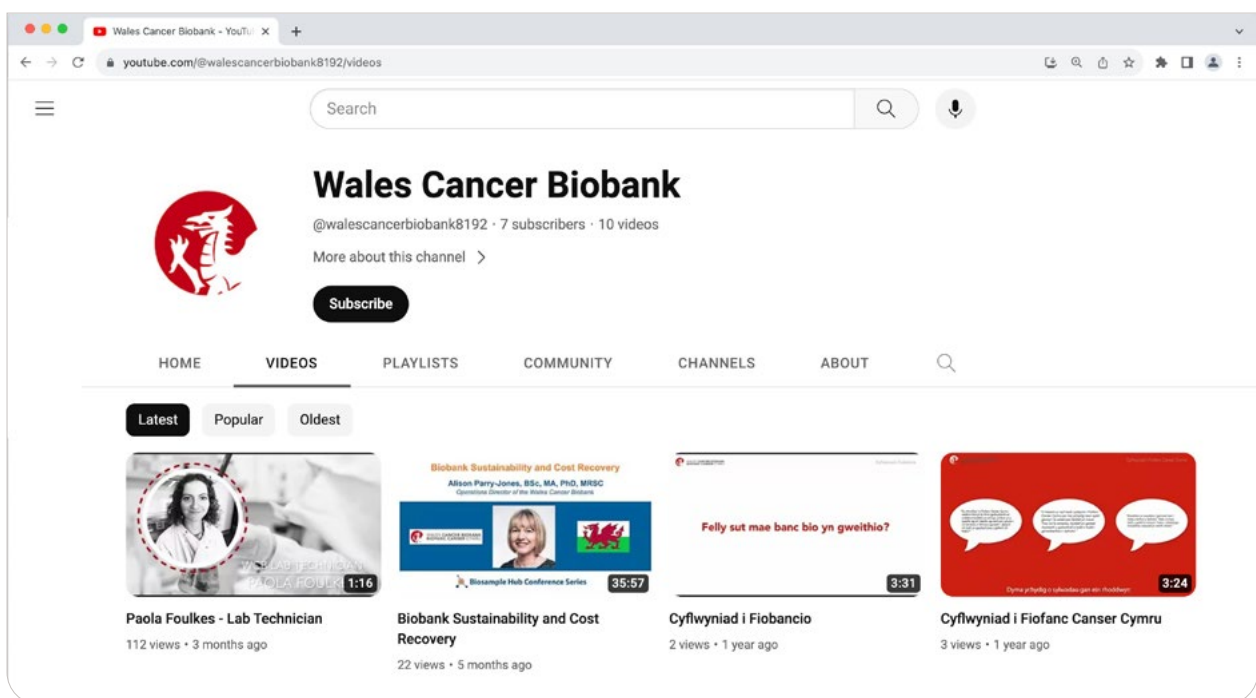
Survey respondent

People 

Public Engagement

Three electronic newsletters have been circulated during the year to inform recipients about the research supported by WCB. The e-newsletters are sent via email to donors who have previously signed up to receive communications from the biobank.

They are also distributed on the WCB’s Facebook page (www.facebook.com/thewalescancerbank) and Twitter account (www.twitter.com/walescancerbank).



Find us on YouTube!

YouTube@walescancerbiobank now also includes the first vlog in the ‘Meet the Staff’ series to introduce the WCB staff and show typical daily activity of various WCB roles. Follow Paola Foulkes, WCB Technician, to showcase her responsibilities around collecting, processing, and storing biosamples.



Events and Talks

WCB has participated in events throughout the year with both public/lay attendees and professional attendees. WCB's goal is to support initiatives, raise awareness and inform the various participants about biobanking and the work WCB does to facilitate cancer research.

WCB attended the Health and Care Research Wales annual conference with information, a 'Spin and Find the Tumour' game and a chance to win a wireless, noise cancelling headset with a sign up to the WCB newsletter via the website.



Winner of the Headset – Maddy Young from Tenovus Cancer Care



World Innovation Summit for Health

In October 2022, the WCB Operations Director Dr Alison Parry-Jones took part in a panel discussion at the World Innovation Summit for Health (WISH) in Qatar. She was invited, along with the President of ESBB, a representative of BBMRI-ERIC and the Head of Laboratory Services and Biobank Group at the International Agency for Research on Cancer at the World Health Organization, to join the Director of the Qatar Biobank to discuss the key role of biobanks.

Across the three days of events, over 1400 in person delegates (and many more virtual attendees) heard talks and panel discussions from 200 speakers from around the world, including Sir Mo Farah speaking about sport and impact on mental health.

“ I think it’s a great idea to help further research and help others in the future. ”

Patient feedback



CRUK Moveathon

On a very chilly day in March 2023, WCB supported the Cardiff Cancer Trials team Hybrid Moveathon to raise money for Cancer Research UK.

Starting from the Norwegian Church in Cardiff Bay participants could walk, run or cycle one of three routes varying in length from 2km to 10km. Researchers took family friendly exhibition stands and games to highlight ongoing research in Cardiff. Despite the cold day, a steady stream of children tried their hands at virus origami and cell sorting with ping pong balls!



Paola (WCB technician) attempting the cell sorting game under the watchful eye of Prof Richard Adams.



People 

Professional Engagement

WCB staff attended a variety of webinars and talks throughout the year as part of professional development and to inform best practice for the biobank. WCB's position in the biobanking community is recognised by the requests for individuals to share knowledge and expertise via invitations to present at meetings.

In May and July, WCB shared the impact of staff achieving the QBRs qualification by presenting to the ISBER and the Society for Cryobiology's annual meetings respectively, a talk entitled 'The value and the impact of the QBRs programme – a Biobank's perspective'.

In September, Dr Parry-Jones and Dr Spary were invited to participate in the 'Towards Excellence in Biobanking' online oncology conference organised by Łukasiewicz-PORT (Polski Ośrodek Rozwoju Technologii lukasiewicz.gov.pl) government institute in Poland. Dr Parry-Jones gave the keynote talk 'Lessons learned from 18 years of Cancer Biobanking' and Dr Spary's talk was 'Managing Applications for Sample Use'.

In December, the Biosample hub (biosamplehub.org) organised a webinar around sustainability and invited Dr Parry-Jones to speak about 'Biobank Sustainability and Cost Recovery'. The Biosample hub is an online portal to connect Biotech companies and Biobanks directly, for sample sharing with traceability. The webinar was broadcast to a worldwide audience and the talk can be found on the WCB YouTube channel.

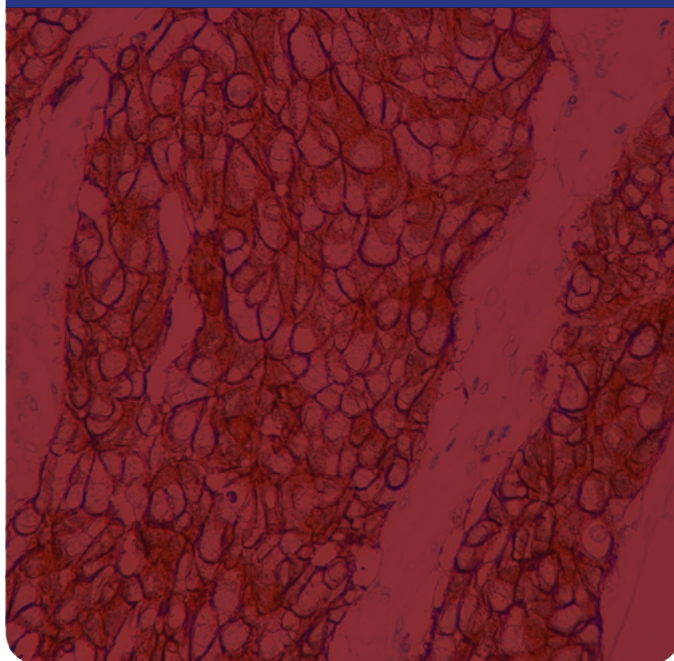
Dr Parry-Jones has delivered an 'Ethics of Biobanking' lecture to MSc Genomic medicine students in Imperial College for the last several years at their face-to-face teaching week in January.

Researcher survey

A survey of Welsh based cancer researchers was carried out to determine the demand for biosamples in Wales.

Responses were received from 47 groups, 45 of those based in Wales. Two thirds reported having previously used human cancer biosamples and associated data in their research with most setting up a project with individual ethics or collaborating with a colleague who had samples they could share. 28% reported using a biobank. Of those who reported not using human cancer biosamples (n=16), 3 cited availability of samples and/or data as the limiting factor, 2 cited cost and 1 said they were 'just not sure where to start'.

Participants were also asked whether they might benefit from Trusted Research Environments (TREs) or Secure Data Environments (SDEs), either now or in the future. Two thirds said it would be beneficial with 21% requiring more information.



Conclusion and Looking Forward

The past year has seen an increase in our delivery of biosamples to the research community, greater engagement with researchers and biobanks internationally and demonstrable impact on cancer research outcomes with potential to improve the prospects of patients with cancer.

Thanks go to many, but especially to the patients in Wales for their continued support and willingness to donate samples and data to the biobank.

We look forward to continuing to implement our new strategy aimed at increasing engagement with the research community to help deliver impact on diagnosis and treatments for cancer patients.

“ WCB offers a really valuable resource that should be widely promoted for its unique offering. ”

Quote from respondent





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BIOFANC CANCER CYMRU

Contact & Social Media

- ✉ walescancerbank@cardiff.ac.uk
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- 📺 <https://www.youtube.com/channel/UCtzbTXmr--nsVmB8aOEzz6w>

