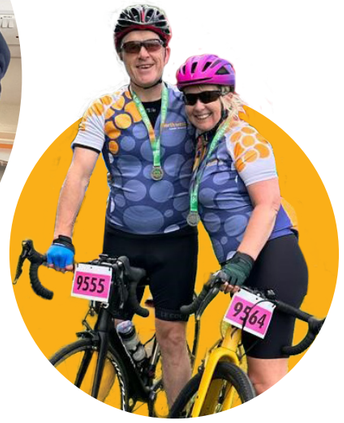

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Registered with FUNDRAISING REGULATOR
Registered Charity No. 519357

north west cancer research

ANNUAL REPORT 2023-2024

Registered with FUNDRAISING REGULATOR
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CHAIR'S REPORT

This is my final report for the Annual Review as, in April 2025, I will be stepping down as Chair, when my final term of office as a trustee of North West Cancer Research comes to an end.

I first joined the Board in 2016 and, since then, I have seen the charity change immensely. We've lived through the pandemic, wars, inflation and other challenges, but have always continued our essential work of funding research into cancer.

My own journey through and around cancer has been deeply personal. When I was a teenager, my Granny died of cancer, aged 73. I remember thinking, somewhat naively, how we'd have surely found the cure by the time I got to her age.

In 2012, I was diagnosed with breast cancer, which had spread to my lymph nodes. Following surgery, chemotherapy, radiotherapy and ten years of drug therapy, my cancer is in remission. Sadly, however, in the nine years in which I have been a trustee, I have lost my two older brothers – both in their early 60s – to cancer, one to lung cancer and one to oesophageal cancer. I've also lost one of my sisters-in-law, aged 58, to a rare cancer called adenoid cystic carcinoma.

Sadly, my family's experience with this terrible disease isn't unique. I'm sure you, too, have felt cancer's devastating impact.

The good news is that, even in the short time I have been a trustee, the way we diagnose cancer and treat it has progressed significantly.

A few short years ago, much of our funding was aimed at understanding and using proton beams. This technology promised more localised treatment, with reduced damage to the surrounding tissue.

Proton beam therapy is now in use and is benefitting many patients in our region. Our funding now includes work on such radical ideas as a vaccine to treat lung cancer using the power of the body's own immune system. This was unimaginable just a few years ago, but it is one of many new therapies which could fundamentally change the future of cancer treatment.

The cancer challenges we face as a region remain significant, with many areas seeing higher prevalence of several cancer types, delayed diagnosis and, sadly, higher mortality. If we can start to tackle these problems, then our impact could be significant. Changing this will take not only time and money, but also partnership working and collaboration with the NHS, public health bodies and many others.

Cancer affects people from every social background, of every age, race and gender and we can all contribute to work which seeks to change the future of our region. What we can do will vary, but we can all share in the benefits of a healthier North West and North Wales.

Looking at the numbers, the financial year covered by this report saw a pleasing growth in the level of donations received from the public in our region, even though our overall income was very slightly lower than in the previous year. We continue to direct this money into research, campaigns and outreach work to improve the health of those around us.

I should like to take this opportunity to express my profound gratitude to our supporters for their hard work, dedication and generosity, without which we would not be able to carry out our life-saving work. The time, money and effort they give to the charity is very much appreciated.

I should also like to thank the Board of Trustees, who continue to work hard on behalf of North West Cancer Research, supporting and guiding the charity in its mission of achieving a cancer-free future and providing valuable advice to me and to the charity's management team. Particular thanks go to Dr Phil Robertshaw and Mrs Hilary Atherton, who will step down from the Board at the same time as I do, and whose contributions have been invaluable over the last nine years.

As I hand over the role of Chair to Paul Moonan, I know that the charity is in safe hands, with a strong Board of Trustees who have drive and enthusiasm and are determined to improve the future health of the region. To them falls the role of working with the staff team to set the strategy and direction for the charity.

I also want to express my sincere gratitude to our CEO, Alastair Richards, to the whole staff team and to all those who have been involved with North West Cancer Research during 2023-24.

The challenge is big but, by working together, we can achieve much to change the future of our region. I wish the charity every success in its vital ongoing mission.

Miss C M Jones BA, ACG
Chairman

CEO'S REPORT

How long can a journey be?

North West Cancer Research was founded in its current form in 1948 and at that time the Trustees considered the challenge before them – to cure cancer. The Charity's minute books record that they felt that this was a significant task...one which might take as long as ten-years.

We can probably smile at the over-optimism that they felt and perhaps the way in which they had misjudged the challenge which they faced. However, we all know that when we take on a challenge it can take much longer than we envisaged.

Back in 2017, the Board of Trustees approved a strategy for North West Cancer Research – one which we re-wrote in the pandemic to guide us through to 2025. We are now at that point and the Board will shortly consider a new strategy out to 2030.

In many ways, we are still the same organisation that we were in 2017. We still fund world-class science in universities around the region aimed at increasing knowledge of the cause of cancer, improving treatments and ultimately looking for cures. That remains consistent. However, we have added campaign work, highlighting the cancers which are more prevalent than in other parts of the country. We've also added outreach work into schools and other community groups – helping people from age 3 to103 to eat healthier, stay sun safe, know their bodies and to learn about the warning signs of cancer.

Our strategy to 2030 is still being written but I know that we will continue to build on the solid foundations we have and to try and do more – to go further and to reach more people.

Cancer remains a significant and growing challenge in our region. While the risk of cancer increases with age, it disproportionately affects those in the most deprived areas of society, who face a much higher cancer risk. This issue needs to be addressed. Additionally, certain groups within our society have an increased cancer risk due to their genetic history.

These disparities are evident in various ways. Early findings from a study we are funding on head and neck cancers reveal that risk correlates with age, gender, and socioeconomic status. For men, the risk of developing head and neck cancer is twice as high in the most deprived 20% of society compared to the wealthiest 20%. While the overall risk for women is lower, there is still a significant difference in risk between the wealthiest and most deprived. In absolute terms, the age-related risk of head and neck cancer ranges from approximately 9 per 100,000 to about 40 per 100,000, with risk rising as people get older.

The challenge ahead of us is significant. Cancer is a complex problem which exists across our region in many forms and with much greater prevalence in areas of deprivation. To tackle it we will continue to rely on your support, but we will also have to work closely in partnership with many others to ensure that we can reach the different and varied communities in the north west. It is unlikely that we will solve this by 2030 but we will keep working away at the problem, ensuring that we work for the good of our region and all of its people.

I want to take this opportunity to thank all of you who have supported us in 2023-24 and beyond. We are so grateful for the time and funds you have provided us with and we look forward to seeing you again in 2025-6.

Thank you too to Catherine Jones, Hilary Atherton and Phil Robertshaw as they step down from the Board after nine-years of service. They have been instrumental in supporting me and the team through a period of change from which we have emerged so much more stronger and engaged. Particular thanks are due to Catherine who has served as Chair since 2021 and who has given so much of her time. I look forward to working with the new Board of Trustees as we chart our way forwards.

I also want to thank the team at North West Cancer Research, our funded researchers and many others. Without you this would be a very lonely journey.

Alastair Richards
Chief Executive Officer

ACTIVITIES REPORT

North West Cancer Research is dedicated to putting the region's cancer needs first by tackling the cause, improving the care and finding the cure for cancer. These are big and ambitious goals which we aim to achieve through two charitable objectives:

Research

We are a research funder that funds work at all stages of the research pipeline from the earliest cancer discovery work to studies which address patient experiences, inequalities and the environmental factors behind cancer

Information, outreach and education

Our work in this area is growing as we seek to provide people of all ages and from varied backgrounds with information which will help them to live healthily, reduce their risk of cancer and recognise the signs and symptoms of different forms of the disease

Our organisational strategy supports these objectives and during 2020 the Board defined three key areas of work:

- **Understanding our region – We need to understand why cancer is a challenge within our region**
- **Undertaking research into the cause, care and cure for cancer**
- **Raising awareness of cancer in our region and helping to prevent it developing**

RESEARCH

At the end of the financial year the Charity had had almost 60 active research projects operating at 14 locations across the region. Projects are usually funded through universities and NHS Trusts but where applicable, patients are able to participate in them through a range of hospitals – including all of the major cancer treatment centres in the region. These projects had a cost of over £9m in total with the majority of them receiving funding over a number of years.

During the year we funded 16 new projects at a cost of £2.6m. All of the projects were focused on cancer types which impact people within our region including lung, prostate, breast and stomach. The largest grant approval during the year was £336,000 funded together with The Eve Appeal and focussed on ovarian cancer.. The largest new grant approval during the year was £500,000 for the Liverpool Head and Neck Centre.

All of our funded research is published and researchers are encouraged to author and publish papers, as well as visiting conferences and other research meetings to ensure that their work is known and benefits national and international knowledge around cancer.

Research Governance

North West Cancer Research is a member of the Association of Medical Research Charities (AMRC) and this means that we follow externally laid down principles when deciding which research applications to fund. All projects are subject to external review by experts from the UK and beyond, as we seek to ensure that we only fund the best work that breaks new ground in research.

Projects go before an independent research funding panel in order to rank them against other applications for funding, so that only the very best work is funded. These research panels are made up of experts from the academic and clinical communities across the UK.

We seek to ensure each advisory group is closely aligned with the work funded to make sure that their expertise is focused on relevant research applications. Each group oversees a funding round and then, based on the merits of the applications received, the advisory group makes recommendations to the Board. The final decision on how many projects to fund lies with the Board of Trustees.

The Charity would like to thank all of the researchers, scientists, academics and others who have given their time this year in order to review and report on the project applications received. This process for gaining funding is highly competitive and therefore the task of reviewing applications is one of growing complexity.

Public and patient representation in advisory groups

We strive to fund research that is relevant and important to our local population. The patient voice is vital to influence our decisions on the importance of the funding applications we receive, as well as contributing to our future objectives.

We have engaged with public and patient representatives and are moving towards fully embedding them in our activities in order to bring the patient voice and perspective into our decision-making more fully. We are grateful for the time and effort these 'experts by experience' give and for their valuable contributions.

Working in partnership with others

The Charity recognises the importance of working with others in order to benefit from their expertise and to share the costs of research work. By the close of the financial year we were jointly funding work with eight other charities as follows:

- **Tenovus Cancer Care** - Working with Tenovus, we have jointly funded a study examining how the remote consulting tools used by GPs during the pandemic and beyond help or possibly hinder patients who have cancer symptoms.
- **Kidney Research Northwest** - Kidney cancer is relatively rare but because of this it is hard to diagnose. With KRNW, we have jointly funded a pioneering study of Wilms' tumour, a type of childhood cancer, in order to improve the treatment of this.
- **The Bloom Appeal** - The Bloom Appeal focuses on blood cancers such as leukaemia which are common in our region and so we are delighted to have funded a study with them to advance our understanding of aggressive cases of lymphoma and chronic lymphocytic leukaemia.
- **Oracle Cancer Trust** – Oracle focus on head and neck cancers – which are significantly more common in our region than in more affluent parts of the UK. Together, we have jointly funded a project to understand what drives poor patient outcomes in our region.
- **Kidscan** – Kidscan funds research into childhood cancers – which can be rare but which are devastating in their effect. We have worked with them to fund research into medulloblastoma – a childhood brain cancer.
- **Cancer Research Wales** – We are excited to be partnering with Cancer Research Wales on the ThinkCancer project which seeks to improve the time taken for cancer patients to be referred to specialist services and to assist GPs and their teams in recognizing the warning signs of cancer.
- **Mesothelioma UK** – Mesothelioma is a regional problem, with hotspots of this cancer type in Merseyside and Cumbria. Our project seeks to develop a novel treatment approach for mesothelioma.
- **The Eve Appeal** – We are delighted to be jointly funding two fellowships with The Eve Appeal in the early detection of endometrial cancer at the University of Manchester and ovarian cancer at the University of Edinburgh..

Further partnerships will be funded in 2023/24.

Our approach of working in partnership also means that we have joined and benefitted from the expertise of two alliances. These are:

- **Cancer52** - This charity brings together organisations which focus on less common cancers but which count for a disproportionate number of cancer deaths.
- **NHS North West Coast Applied Research Collaboration** - This grouping brings together NHS Trusts and universities in our region to drive forward pioneering research and to ensure that our efforts are not in isolation but are coordinated with others.

North West Cancer Research is also a not-for-profit partner of the NHS Clinical Research Network.

Developing the cancer scientists of tomorrow

We continue to invest funds to help build and sustain research capacity in our region. This funding ensures the highest quality research occurs locally and develops the next generation of cancer researchers. Funding in this area is through a number of different streams including:

- Masters in Research 1-year qualifications
- PhD studentships
- Research Development Funding
- Funding for Lectureships, Fellowships and other posts

INFORMATION, OUTREACH AND EDUCATION

A key component of our activities is our information, outreach and education work.

We directly engage with communities across the region to devise outreach and education activities to improve understanding of the ways to prevent cancer, as well as highlighting the early warning signs.

This award-winning work emphasises key risks and gives people the practical skills and tools to become advocates for early diagnosis and healthy living in their communities.

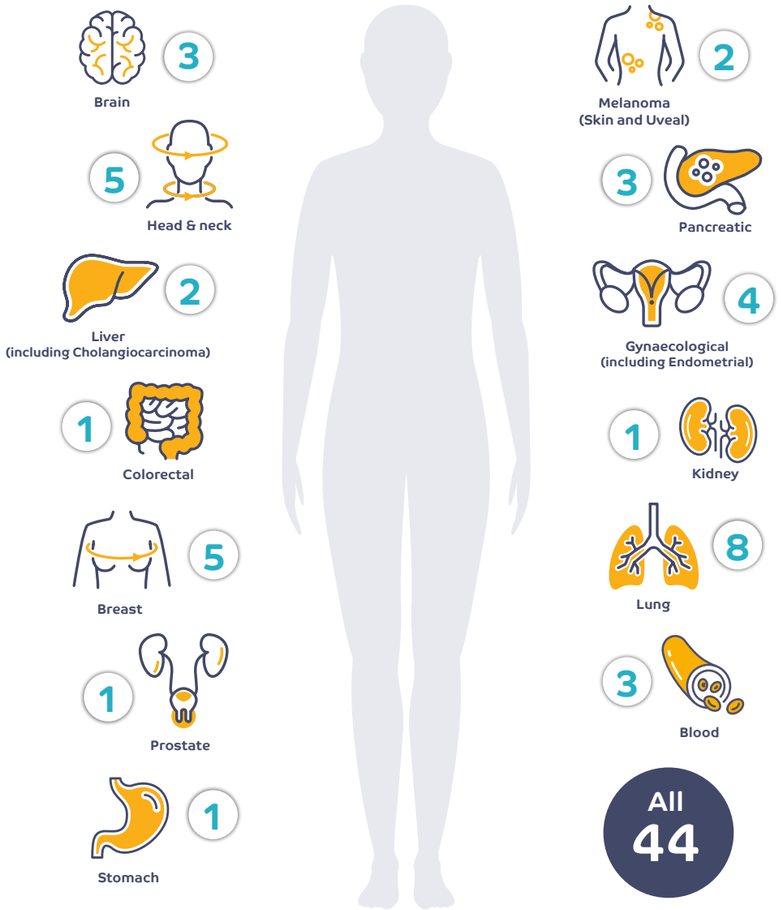
Recent engagement activity has included:

- A skin cancer campaign to educate and involve the public in activities that increase their understanding of how to keep safe in the sun and prevent skin cancer, as well as recognising the early warning signs
- A high-profile campaign to help people across the region recognise the symptoms of bowel cancer and encourage them to return screening kits
- A comprehensive school engagement program providing hands-on lessons that develop an understanding of the science behind the messages, whilst instilling healthy behaviours at an early age

RESEARCH PROJECTS BY CANCER TYPE

Our research projects are focused on multiple cancer types, ensuring we maximise the impact of our work across our community.

67 active research projects



Total cancer types = 67 due to overlap in research areas covered by 62 individual projects including studentships and research development grants.

CASE STUDY

Morecambe Bay Research Team Trial New Prostate Cancer Detection

A team of scientists, funded by North West Cancer Research at University Hospital of Morecambe Bay NHS Trust are trialling a new method of identifying markers for prostate cancer in order to improve the diagnosis process and patient experience.

Currently, prostate cancer is diagnosed through a blood test that detects raised levels of Prostate Specific Antigen (PSA), however, PSA is not specific only to prostate cancer and therefore further tests may be needed such as MRIs or uncomfortable prostate biopsies that can cause severe infections and bleeding.

Mr Colin Cutting and Dr Brendan Tinwell are leading the project, which will see patients with suspected prostate cancer provide a blood, urine and semen sample to be tested by the team through Raman spectroscopy.

Raman spectroscopy is a light scattering chemical analysis technique that provides details about chemical structure and molecular interactions. The non-destructive technique will analyse the samples to provide information on the proteins, fats and carbohydrates, as well as DNA and RNA (a nucleic acis present in all living cells.)

Changes occur in the levels of these when prostate cancer is present and identifying the differences should make it possible to distinguish between cancerous and non-cancerous cells, ultimately making a diagnosis.

Patients involved in the trail will have their usual management with MRI, prostate biopsies, and a confirmation of diagnosis, or lack of, by a pathologist. Biopsy samples will be analysed through the Raman spectroscopy and all data compared between men with and without prostate cancer to evaluate the effectiveness of the trial.

Mr Cuttings said: “Prostate cancer is the most commonly diagnosed male cancer, with more than 52,000 new cases in the UK 2018/19. The rate of mortality to prostate cancer incidence in the North West/North Wales is the second highest in England/Wales at 27% compared with 20% in London.

“Patients are often diagnosed at a later stage and invasive procedures can be a deterrent. Exploring alternatives to biopsies, which could be potentially delivered clinically locally to home via bio fluid assessment (urine/blood/saliva) would make an immediate impact for our patients. Ultimately, we hope our research could lead to less invasive and more accurate diagnostic tests for prostate cancer.”

North West Cancer Research is the region’s leading cancer charity, funding life-saving research and education to tackle the cause, improve the care and find the cure for cancer.

The charity is dedicated to putting the region’s cancer needs first through focussing on the types of cancer that affect people living across North West England and North Wales the most.

CURRENT FUNDING

LANCASHIRE AND CUMBRIA

The role of NSMCE2-dependent SUMO modification in the replication stress response
Dr Elaine Taylor, Dr Mick Urbaniak
£199,908.00 /3 years

Small molecule induced degradation of centrosome clustering proteins: development of a novel, cancer-specific therapeutic approach
Dr Morgan Gadd, Dr Andrew Fielding
£232,696.52 /3 years

Analysis of an RNA export factor required for cell division and maintenance of genome stability
Dr Elaine Taylor, Dr Howard Lindsay
£231,271.00 /3 years

Analysis of the role of CIZ1 in maintenance of genome stability and recovery form DNA replication stress
Dr Nikki Copeland, Dr Chris Staples, Dr Jason Parsons
£257,081.00 /3 years

Early predictive detection method for lung cancer via vibrational spectroscopy of liquid biopsy
Dr Danielle Bury, Francis Martin, Tarek Saba, Thomas Bongers,
Camilo de Morais
£129,054.82 /3 years

PhD studentship: How is the immune system alerted to replication stress and DNA damage in keratinocytes during immunosurveillance against cutaneous squamous cell carcinoma?
Dr Leonie Unterholzner (Supervisor),
Otto Wheeler (Student)
£105,500.00 /3 years

Mapping geographically co-occurrent cancers in the Morecambe Bay area for designing targeted community-based interventions
Dr Luigi Sedda, Professor Alison Birtle,
Dr Andy Knox, Ms Lisa Jones,
Dr Hannah Timpson,
Professor Peter Atkinson
£170,543.30 /2 years

"Developing Raman spectroscopy as a diagnostic tool for prostate cancer – A potential non-invasive alternative to serum PSA (Prostate Specific Antigen) testing and prostate biopsies"
Professor Ihtesham ur Rehman,
Professor Alison Birtle,
Ms Sarah Hart, Mr Colin Cutting,
Dr Brendan Tinwell
£249,990.81 /3 years

Immunotherapy and Palliative Care Trajectories (IMPACT): a mixed-methods study mapping illness trajectories for people with advanced cancer receiving immunotherapy treatment to identify palliative care need
Dr Sarah Brearley, Dr Amy Gadoud,
Professor Catherine Walshe,
Dr Anastasia Ushakova,
Dr Manon Pillai, Dr Fiona Kiely
£239,536.83 /2 years

Finding My Way UK: Adaptation and replication testing of the benefits of online psychological support for cancer survivors
Professor Nicholas Hulbert-Williams,
Dr Lee Hulbert- Williams,
Dr Lisa Beatty, Professor Bogda Koczwara,
Dr Laura Ashley, Dr Peter Hall,
Professor Neil Coulson,
Professor Eila Watson,
Mrs Sue Millington, Mr Richard Jackson
£249,646.00 /3 years

PhD studentship: 'Caring, it's just what you do isn't it?': The psychosocial impact of a cancer diagnosis on informal caregivers
Dr Brooke Swash,
Professor Nicholas Hulbert-Williams,
Professor Valerie Morrison
£93,064.00 /3 years

A mixed method study to describe the factors associated with palliative care inequalities experienced by cancer patients in the North West, and the impact of these inequalities
Dr Amy Gadoud, Dr Sarah Brearley,
Dr Maddy French
£99,189.30 /3 years

Regulation of DNA repair and the innate immune response to radio- and chemotherapy by the DNA sensors cGAS and IFI16
Dr Leonie Unterholzner,
Dr Chris Staples
£268,333 – 3 years

Biospectrometry as a non-invasive diagnostic tool for suspected oesophageal cancer
Professor Ihtesham u Rehaman,
Dr Ravindra Date, Dr Mohammed Elniel
£49,893.70 /1 year

Optimising the community-based "Call for a Kit Clinic" health promotion programme to reduce inequalities in Bowel Cancer Screening uptake in Lancashire
Dr Yasemin Hirst,
Professor Christian von Wagner,
Dr Sandro Stoffel, Dr Robert Kerrison
and Dr Shahida Hanif
£96,515.30 /15 months

Optimisation and pre-clinical development of a KIFC1-PROTAC as a triple-negative breast cancer therapeutic
Dr Andrew Fielding,
Dr Sam Butterworth,
Professor Kaye Williams and
Dr Amanda Tomaz
£338,401 /2 years

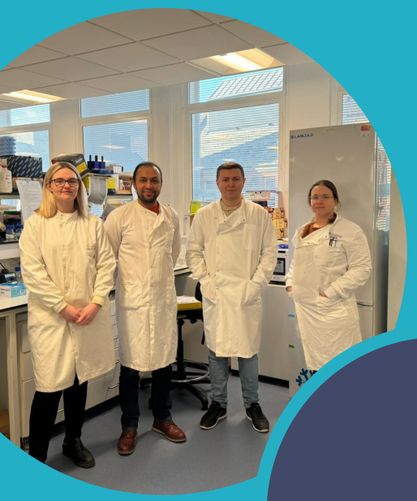
Improving brain health after chemotherapy through prehabilitation
Dr Christopher Gaffney,
Dr Helen Nuttall, Mr Daren Subar,
Dr Deborah Williamson, Dr Chan Ton
£237,181 /2.5 years

CURRENT FUNDING

NORTH WALES & CHESHIRE

Understanding barriers and enablers to use of primary care remote consulting for suspected cancer symptoms among vulnerable populations
Dr Julia Hiscock (Supervisor), Stefanie Diesbechl (Student) joint with Tenovus
£75,000 /3 years

Funding for Masters by Research for clinicians in North Wales
Professor Stephen Hughes
£141,335 /2 years



Think Cancer!: A pragmatic randomised controlled phase III trial of a novel behavioural intervention for primary care teams to promote earlier cancer diagnosis with embedded process and economic evaluation
Professor Clare Wilkinson, Professor Richard Neal, Professor Nefyn Williams, Dr Alun Surgey, Miss Stefanie Disbeschl, Dr Annie Hendry, Dr Julia Hiscock, Mrs Janice Rose, Miss Rachel Evans, Dr Nia Goulden, Dr Daniel Walker, Professor Rhiannon Tudor Edwards, Dr Victory Ezeofor, Miss Bethany Anthony, Professor Andrew Carson-Stevens, Professor Katherine Brain, Lowri Griffiths
£400,000 /2 years initially

Funding for Masters by Research for clinicians in North Wales
Prof Stephen Hughes
£141,335 /2 years

ITTACA (Immunotherapy TimeTeller for Advanced lung Cancer)
Dr Seline Ismail-Sutton, Dr Pasquale Innominato, Dr Nick Wreglesworth, Professor Robert Dallmann, Dr Catherine Bale
£99,000 /3 years

MERSEYSIDE

Function of stroma-derived gas6 in pancreatic cancer progression and metastasis
Professor Ainhoa Mielgo, Mr Robert Jones
£114,450 /3 years

Tribbles pseudokinases: Analysis of cancer-associated signalling mechanisms
Professor Patrick Eyers, Dr Dominic Byrne, Professor Claire Eyers
£221,262 /3 years

The role of the ERK5 signalling axis in BRAF inhibitor-resistant melanoma progression
Dr Mike Cross, Dr Rowan Pritchard-Jones, Dr Cathy Tournier, Dr Emanuele Giurisato, Professor Harish Poptani, Professor Clarie Eyers
£229,883 /3 years

DUB on the Tracks: USP31, a new regulator of microtubule dynamics in cancer cells
Professor Michael Clague, Professor Sylvia Urbe
£128,850 /3 years

Sensing tension: Bidirectional feedback mechanisms controlling breast cancer invasion
Dr Mark Morgan, Dr Tobias Zech, Dr Dean Hammond, Asst. Professor Pere Roca-Cusachs, Louise Jones, Professor John Marshall
£233,087 /3 years

A prospective study of genomic landscape of brain metastasis secondary to breast cancer utilising cell free DNA derived from cerebral spinal fluid Investigators
Professor Carlo Palmieri, Professor Janet Brown, Dr Vinton Wai Tung Cheng, Dr Ellen Copson, Dr Athina Giannoudis, Mr Michael Jenkinson, Mr Richard Jackson, Dr Iain MacPherson, Professor Jacqui Shaw, Mrs Lesley Stephen
£254,387 /3 years

"Imaging in the Window of Opportunity" Evaluating the role of advanced MRI techniques in detecting early response to immune checkpoint inhibition in a Head and Neck Cancer window of opportunity trial
Mr Andrew Schache, Professor Harish Poptani, Dr Joe Sacco, Dr Rahcel Brooker, Ms Eftychia-Eirini Psarelli, Dr Kumar Das, Dr Maneesh Bhojak, Dr Rebecca Hanlon, Dr Gaurav Sundar
£98,041 /18 months

DUB on the Tracks: USP31, a new regulator of microtubule dynamics in cancer cells
Professor Michael Clague, Professor Sylvia Urbe
£128,850.00 /3 years

Sensing tension: Bidirectional feedback mechanisms controlling breast cancer invasion
Dr Mark Morgan, Dr Tobias Zech, Dr Dean Hammond, Asst. Professor Pere Roca-Cusachs, Louise Jones, Professor John Marshall
£233,087.00 /3 years

PhD Studentship: Enhancing eye cancer diagnostics and early detection via the application of artificial intelligence to clinical images of primary and metastatic uveal melanoma
Professor Sarah Coupland (Supervisor) Professor Yalin Zheng, Professor Ke Chen, Dr Helen Kalirai, Max Jackson (Student)
£108,350 /3 years

A prospective study of genomic landscape of brain metastasis secondary to breast cancer utilising cell free DNA derived from cerebral spinal fluid Investigators
Professor Carlo Palmieri, Professor Janet Brown, Dr Vinton Wai Tung Cheng, Dr Ellen Copson, Dr Athina Giannoudis, Mr Michael Jenkinson, Mr Richard Jackson, Dr Iain MacPherson, Professor Jacqui Shaw, Mrs Lesley Stephen
£254,387.35 /3 years

"Imaging in the Window of Opportunity" Evaluating the role of advanced MRI techniques in detecting early response to immune checkpoint inhibition in a Head and Neck Cancer window of opportunity trial
Mr Andrew Schache, Professor Harish Poptani, Dr Joe Sacco, Dr Rahcel Brooker, Ms Eftychia-Eirini Psarelli, Dr Kumar Das, Dr Maneesh Bhojak, Dr Rebecca Hanlon, Dr Gaurav Sundar
£98,041.75 /18 months

Head and neck cancer/radiobiology/ DNA damage and repair
Dr Gabrielle Grundy and Dr Jason Parsons
£448,683.00 /5 years

A novel in vivo model for studying and targeting Ras-driven cancer
Professor Ian Prior, Dr Yasmina Sahraoui
£223,763.75 /3 years

Exploiting the soluble isoform of immune checkpoint receptor CTLA-4 to improve the treatment of cancer
Dr Lekh N Dahal, Professor Mark Cragg, Professor Joseph Slupsky, Professor Sir Munir Pirmohamed, Dr Frank Ward
£248,333.00 /3 years

Investigation of volatile organic compounds to diagnose and stratify men with prostate cancer
Professor Chris Probert, Professor Philip Cornford, Mr Henry Lazarowicz, Marta Garcia-Finana
£299,991.92 /3 years

PhD studentship: Defining and drugging the role of BAP1-mutation in the invasive behaviour of mesothelioma and uveal melanoma
Professor Judy Coulson (Supervisor), Martina Tripari (Student)
£105,500.00 /3 years

PhD studentship: Cancer Proteomics: Deciphering the cellular targets of clinical protein kinase inhibitors
Professor Patrick Eyers (Supervisor), Nefeli Boni-Kazantzidou (Student)
£138,089.00 – 4 years

PhD studentship: Augmenting the tumour cell immune response through destabilisation of PD-L1
Professor Mike Clague/ Professor Sylvie Urbe (Supervisor), Georgia Guillbert (Student)
£105,500 – 3 years

PhD studentship: Releasing the cell cycle arrest with PROTACs to enhance DNA-damaging therapies
Dr Morgan Gadd/Dr Sarah Allinson/ Dr Jason Parsons (Supervisor), Lauryn Buckley-Benbow (Student)
£105,500 /3 years

PhD studentship: Investigating the use of short activating RNAs (saRNAs) to upregulate tumour suppressor genes as a novel therapeutic approach in hepatocellular carcinoma (HCC)
Dr Ian Copple (Supervisor), Georgina Gregory (Student)
£105,500 /3 years

PhD studentship: Characterising the temporal host and tumour response to neoadjuvant therapy in metastatic rectal cancer
Professor Ainhoa Mielgo (Supervisor), Dr Jason Parsons, Mr Dale Vimalachandran, Mr Robert Jones, Professor Michael Schmid, Jayden Gittens (Student)
£104,961.00 /3 years

Investigating whether chemotherapy-induced senescence affects the behaviour of cancer stem cells in Wilms' tumour
Dr Bettina Wilm
Joint with Kidney Research North West
£149,954.87 /2 years

PhD studentship: Creation of cell lines modelling complex karyotype in B cell lymphomas using CRISPR/Cas9
Professor Joseph Slupsky (Supervisor), Abigail Clark (Student)
Joint with The Bloom Appeal
£105,000.00 /3 years

Investigating a stratified approach to mesothelioma treatments targeting metabolism using a novel chick embryo patient-derived xenograft model
Professor Judy Coulson, Dr Joe Sacco, Dr Anne Herrmann, Mr Michael Shackcloth, Professor Peter Szlosarek, Professor Harish Poptani, Mr Tony Murphy
£274,405.55 /3 years

Translational relevance of the Stimulator of Interferon Genes (STING) pathway and viral infection in follicular lymphoma
Dr Lekh Dahal, Dr Andrew Pettit, Dr Carrie Duckworth, Professor Dean J Naisbitt
£239,792.00 /3 years

PHD Studentship: Establishing the immune-profile of cholangiocarcinoma and the utility of human precision cut tumour slices (hPCTS) as a platform to assess immunotherapy response.
Dr Laura Randle (Supervisor), Professor Christopher Goldring, Mr Timothy Gilbert, Mr Hassan Malik, Professor Daniel Palmer, Owen McGreevy (Student)
£104,970 /3 years

From Clinic to Community: Contextualising Head and Neck Cancer Inequalities in Merseyside and Cheshire
Professor Ciara Kierans, Professor Terry Jones
£171,625.55 /2 years

PROTACing medulloblastoma: turning existing chemistry upside down to design a new therapeutic approach
Professor Michael Clague, Professor Sylvie Urbe, Professor Barry Pizer, Dr Igor Barsukov, Daisy Sawdon (Student)
Joint with Kidscan
£75,599 /3 years

Identifying the mechanisms underlying T-cell exhaustion in pancreatic tumours
Professor Ainhoa Mielgo, Professor Michael Schmid
£255,755 /3 years

Understanding the experiences of Black and Minority Ethnic (BAME) individuals with comorbid cancer and a long-term physical health condition impairing their cognition and/or communication
Dr Alam Elahi, Professor Nusrat Hussain, Dr Alys Wyn Griffiths and Dr Mary Gemma Cherry
£98,217.18 /20 months

PhD Studentship: Enhancing eye cancer diagnostics and early detection via the application of artificial intelligence to clinical images of primary and metastatic uveal melanoma
Professor Sarah Coupland (Supervisor) Professor Yalin Zheng, Professor Ke Chen, Dr Helen Kalirai, Max Jackson (Student)
£108,350 /3 years

Understanding how chemotherapy affects APC and T cell activation in pancreatic cancer liver metastasis
Professor Michael Schmid, Professor Ainhoa Mielgo, Professor Christian Ottensmeier, Professor Daniel Palmer & Dr Kim Clarke
£181,062 /3 years

LHNC Stage 2: consolidation for clinical impact (LHNC CCI)
Professor Keith Hunter, Professor Terry Jones, Professor Christian Ottensmeier, Professor Richard Shaw, Professor Andrew Schache, Mr Jason Fleming, Professor Joanne Patterson
£500,000 /4 years

PhD Studentship: Personalised surveillance schedules for detecting hepatocellular carcinoma
Dr David Hughes (Supervisor), Professor Philip Johnson, Professor Marta Garcia-Finana
£134,000 /3 years

Deubiquitinase Inhibitors as Novel Therapeutics for the Treatment of Hypoxic Malignant Pleural Mesothelioma
Dr Niall Kenneth & Dr Sarah Barnett
£29,190
Funded in partnership with Mesothelioma UK

Development of a novel chick embryo model to discover and investigate therapeutics for uveal melanoma metastatic to the liver
Dr Joseph Sacco, Professor Judy Coulson, Professor Sarah Coupland, Professor Chris Goldring, Dr Sarah Barnett, Dr Rowena Sison-Young, Dr Laura Randle, Dr Helen Kalirai, Dr Karen Aughton, Mr Stephen Fenwick, Mr Robert Jones, Dr Anna Fowler, Dr Richard Jackson, Professor Joseph Slupsky, Dr Peter Kirk, Dr Andrew Fielding & Professor Takami Sato
£270,068 /3 years

Understanding recognition of tumour antigens by T-cells in Non-Small Cell Lung Cancer (NSCLC) for cancer vaccine development
Professor Christian Ottensmeier, Professor Natalia Savelyeva, Professor Pandurangan Vijayanand, Dr Serena Chee, Mr Michael Shackcloth & Mrs Lindsey Chudley
£253,316 /3 years

Development of a clinical bowel cancer research network
Mr Dale Vimalachandran
£100,000 /2 years

Understanding blood cancer inequalities using the UnCOVer dataset (UnCOVer Inequalities)
Dr Indrani Karpha
£92,771 /1.5 years

Understanding the Needs of Autistic Adults with Cancer during Cancer Treatment
Dr Mary Gemma Cherry
£96,466 /1.5 years

How is informal care to a person with cancer managed, when the person providing support has a pre-existing health condition/s?
Dr Lynda Appleton, Prof. Helen Poole, Sarah Watmough
£54,013 /2-years

MANCHESTER

“Deciphering evolution of Small Cell Lung Cancer from diagnosis to post chemotherapy disease progression: a search for new drug targets”
Professor Caroline Dive, Professor Fiona Blackhall, Dr Kristopher Frese, Dr Alastair Kerr
£105,000.00 /3 years

Promoting an anti-cancer tumour microenvironment in early breast cancer patients using the Factor X inhibitor Rivaroxaban
Professor Cliona Kirwan, Mr John Castle, Dr Urvashi Singh
£37,702 /1 year

The development of simple, non-invasive and cost-effective tests for the early of endometrial cancer
Dr Kelechi Njoku
Jointly funded with The Eve Appeal
£226,252 /3 years

The effectiveness of resistance exercise prehabilitation for preventing muscle wasting and improving patient outcomes during treatment for Oesophageal and Gastric cancers
£274,822 /3 years

Metabolites at the End of Life (METEL study)
Dr Seamus Coyle, Prof. Chris Probert
£231,500 /3 years

Determining the metabolomic fingerprint of premalignant lesions in endometrial cancer for early diagnosis and screening
Dr Andrew Davison, Professor Dharani Hapangama, and Dr Christopher Hill
£109,522 /3 years

Identification of regulators of cytotoxic T-cell infiltration and activity in ER+ breast cancer
Dr Frances Turrell, Dr Jamie Honeychurch, Professor Robert Clarke, Professor Cliona Kirwan
£110,000 /3 years

EXPLORING NOVEL PRECISION THERAPIES FOR HIGH GRADE SEROUS OVARIAN CANCER: Does acquired PARP inhibitor resistance confer sensitivity to PARG inhibitors? ACA (Immunotherapy TimeTeller for Advanced lung Cancer)
Professor Stephen Taylor, Dr Camilla Coulson-Gilmer, Dr Beth Barnes, Dr Anthony Tighe
£110,000 /3 years

Novel potent and selective inhibitors of PMCA4 as anti-metastatic drugs to treat pancreatic cancer.
Dr Jason Bruce, Dr Katherine Finegan, and Professor Claus Jorgensen
£109,998 /3 years

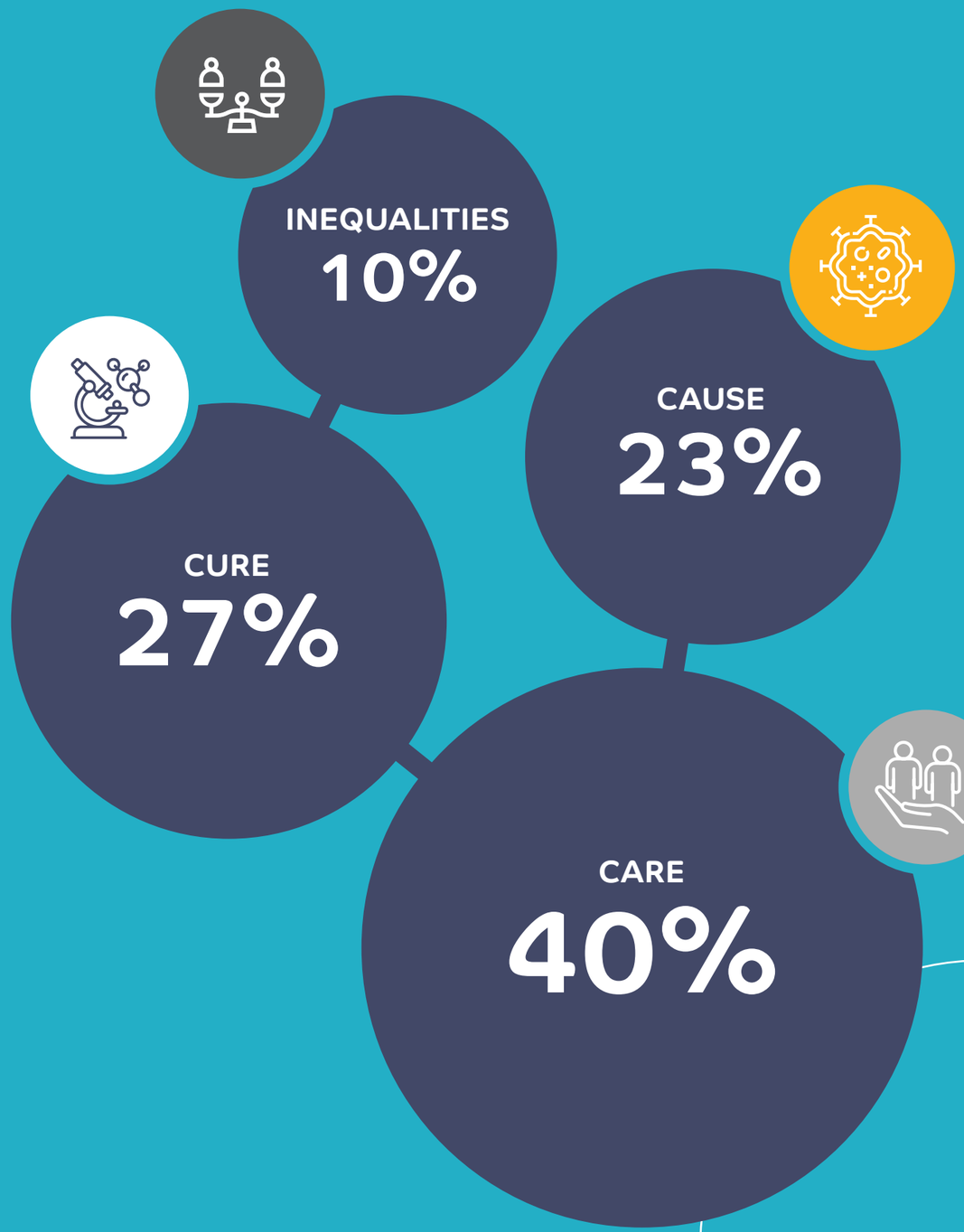
OTHER PROJECTS AND FUNDING

Investigating and explaining contemporary patterns and trends in inequalities across the head and neck cancer pathway: understanding the roles of deprivation and region
Professor Linda Sharp,
Mr James O'Hara, Dr Laura Woods,
Professor Clare Bambra,
Mrs Val Bryant, Dr Jonathan Pratschke
and Dr Manuela Quaresma
In Partnership with Oracle Head and
Neck Cancer Trust
£124,152 /2 years

Contribution to the National Head and Neck Cancer Audit Feasibility Study
In coalition with other charities
including Oracle Head and Neck
Cancer Trust, The British Association
of Head and Neck Cancer Oncologists,
GetaHead, Young Tongues, The British
Association of Head and Neck Cancer
Oncology Nurses
£40,000 /2 years

Next Generation Plasma Proteomics for Biomarker Discovery in Early Ovarian Cancer: The LOCATE (bLood Ovarian CAncer TEst) study
Dr Neil Ryan
In Partnership with The Eve Appeal
£336,303 /3 years

RESEARCH FOCUS



CASE STUDY

Researchers at The University of Manchester Search for New Drug Targets for Small Cell Lung Cancer

A North West Cancer Research funded team at The University of Manchester, headed by Professor Caroline Dive, are investigating the disease progression of small cell lung cancer (SCLC) from diagnosis to post-chemotherapy in order to identify new treatment options.

Small cell lung cancer is a particularly aggressive form of lung cancer. SCLC tumours grow and divide quickly, leading to fast disease progression, which makes it harder to control. It also produces circulating tumour cells, which break away from the primary tumour and enter the bloodstream, increasing the risk of cancer spreading to other parts of the body.

At the start of treatment, the cancer cells respond well to chemotherapy and are vulnerable to the drugs used, with tumours reducing in size. However, the cancer almost always returns and the cells no longer respond to the same chemotherapy drugs. It is not currently understood why the cancer cells develop this resistance and is a major challenge in cancer treatment.

Professor Dive's project seeks to uncover the ways SCLC becomes resistant to chemotherapy, as well as provide insight into determining which new treatments may work. The team has developed a unique panel of laboratory models derived from six patient tumour cells taken both before they received treatment, when their tumour responded to chemotherapy, and again after the tumour became drug-resistant. Using a variety of tumour profiling techniques, the researchers are investigating the molecular differences between the two models in order to discover how SCLC evolves. The findings will be used to develop treatments that will either improve responses to initial chemotherapy, or that can be used after chemotherapy fails.

Professor Caroline Dive, said: "Overall cancer incidence in the North West exceeds the national average, and cancers of the lung, trachea and bronchus are 27% higher in the region than the rest of England. SCLC is associated with heavy smoking and links to high smoking rates in the region.

"The ultimate goal of this proposal is to identify how patients with SCLC develop resistance to standard chemotherapy. We seek to identify druggable targets against which agents can be either incorporated into first-line chemotherapy treatment or as second line treatment. For any targets for which therapeutics are currently available, we will seek to engage relevant pharma partners in collaboration toward bringing their assets to the clinical environment, with a particular interest in initiating early phase trials in ECMC North NHS Trusts.

"As part of the Lung Cancer Centre of Excellence, our lab is uniquely placed to tackle the challenge of improving early detection, diagnosis and treatment of lung cancer, and our team collaborates with lung cancer clinicians across the North West to improve access to new drugs and find better ways to extend and optimise the quality of life in this patient population."

CASE STUDY

A New Way to Improve End-of-Life Care for Cancer Patients

Recognizing when someone is nearing the end of life is crucial for providing compassionate and well-planned care. It allows doctors, families, and healthcare teams to make important decisions, offer better pain management, and ensure patients spend their final days with dignity. However, predicting when death is approaching is notoriously difficult, and often inaccurate.

In the North West, where lung cancer rates are significantly higher than the national average, improving end-of-life care is especially important. Lung, trachea, and bronchus cancer rates in the region are 20% higher than the rest of England. In North Wales, lung cancer is the third most common cancer, but it is responsible for the most cancer-related deaths in the region.
To help address this challenge, Dr. Séamus Coyle, funded by North West Cancer Research, is leading a groundbreaking study that could transform end-of-life care. His research focuses on lung cancer patients, analysing their urine samples to detect chemical changes that occur in the final month of life.

The study identified seven key chemicals that can predict, with high accuracy, when a patient is in their last 30 days. This method outperformed current prediction tools and provided reliable forecasts at multiple time points throughout the month.

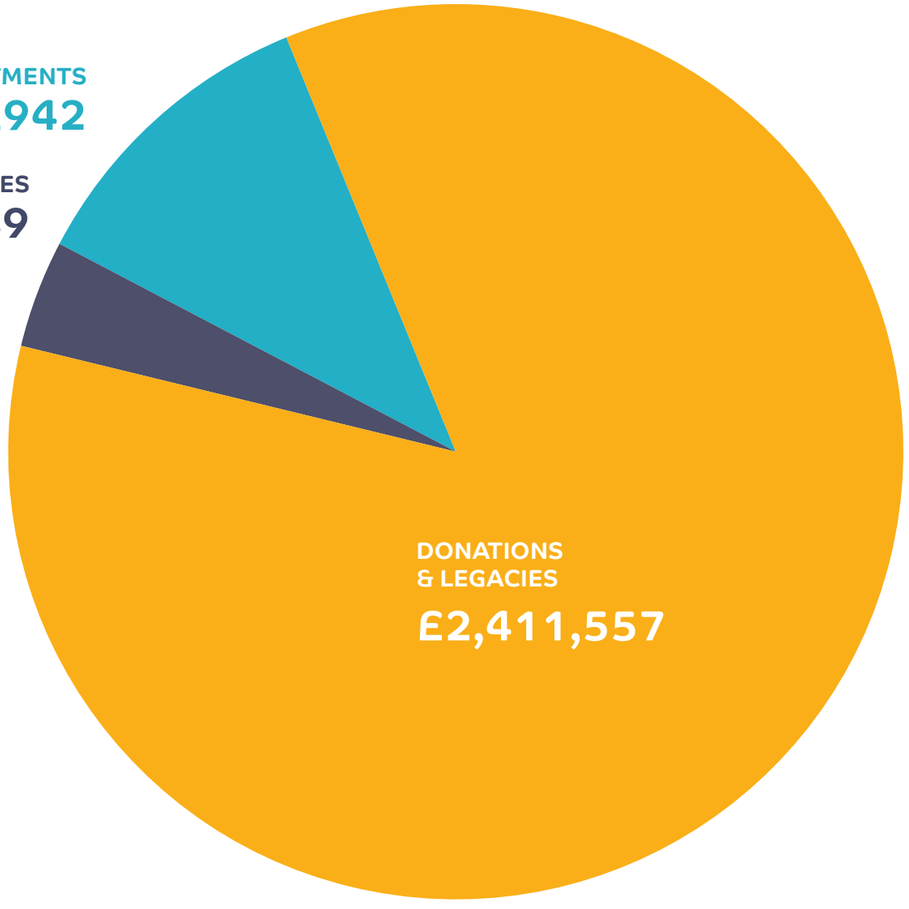
Interestingly, the study also revealed that cancer patients typically do not die from sudden organ failure or infections, as is common in acute illness. Instead, their bodies undergo a gradual metabolic decline, with measurable changes in 125 different chemicals in the final weeks. These findings suggest there may be a distinct dying process linked to cancer.

Dr. Coyle's research could lead to the development of a simple urine test, helping doctors identify when a patient is nearing the end of life earlier and more accurately. This would give families and healthcare teams more time to provide meaningful, compassionate care and reduce unnecessary or burdensome interventions.

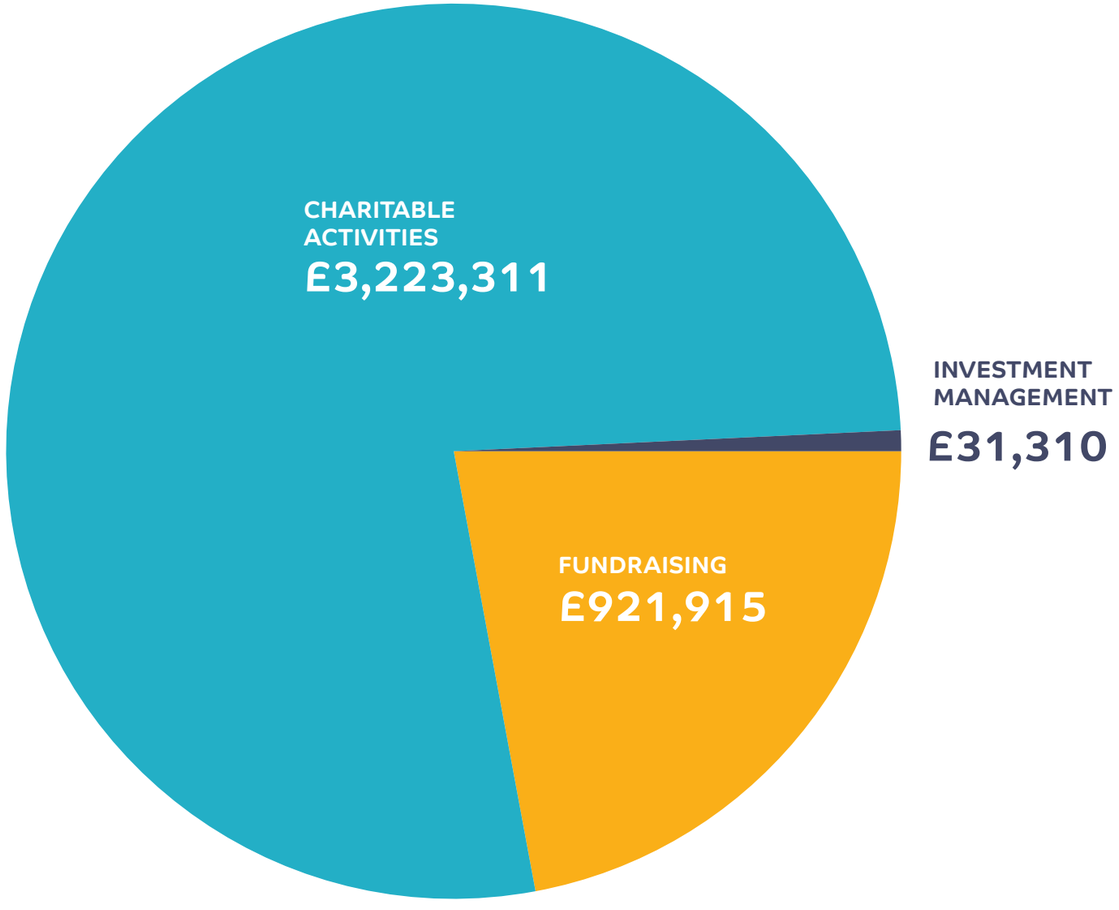
FINANCIAL SUMMARY 2023-2024

This summary on pages 26-29 gives an overview of how we have performed during the financial year ending 30 September 2024. The full Annual Report and Financial Statements are available from the North West Cancer Research office or the Charity Commission website.

INCOME



EXPENDITURE



CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES

FOR THE YEAR ENDED 30 SEPTEMBER 2024

	Unrestricted funds 2024	Restricted funds 2024	Total funds 2024	Total funds 2023
INCOME FROM:				
Donations and legacies	1,957,373	454,184	2,411,557	2,618,720
Other trading activities	110,189	-	110,189	-
Investment income	315,942	-	315,942	280,125
TOTAL INCOME	**2,383,504**	**454,184**	**2,837,688**	**2,898,845**
EXPENDITURE ON:				
Raising funds:				
Fundraising and legacy generation costs	921,915	-	921,915	771,211
Investment management	31,310	-	31,310	29,638
Charitable activities	2,744,420	478,891	3,223,311	2,539,317
TOTAL EXPENDITURE	**3,697,645**	**478,891**	**3,299,614**	**3,025,582**
NET INCOME/(EXPENDITURE) BEFORE INVESTMENT GAINS	(1,314,141)	(24,707)	(1,338,848)	(441,321)
Gains/(losses) on investments	1,104,660	-	1,104,660	231,351
NET INCOME/(EXPENDITURE) BEFORE TRANSFERS	(209,481)	(24,707)	(234,188)	(209,970)
Transfers between funds	-	-	-	-
NET MOVEMENT IN FUNDS	(209,481)	(24,707)	(234,188)	(209,970)
RECONCILIATION OF FUNDS: Total funds brought forward	5,176,760	24,707	5,201,467	5,411,437
TOTAL FUNDS CARRIED FORWARD	**4,967,279**	**-**	**4,967,279**	**5,201,467**

CONSOLIDATED BALANCE SHEET

FOR THE YEAR ENDED 30 SEPTEMBER 2024

	Total funds 2024	Total funds 2023
FIXED ASSETS		
Tangible assets	151,895	963
Investments	9,263,371	8,232,986
	9,415,266	**8,233,949**
CURRENT ASSETS		
Stocks	20,691	21,096
Debtors	554,205	453,950
Debtors: amounts falling due after more than one year	5140,327	59,000
Investments – short term	1,416,027	2,027,452
Cash at bank and in hand	538,445	640,662
	2,669,695	**3,161,608**
CREDITORS: amounts falling due in less than one year	**(4,497,157)**	**(3,946,017)**
NET CURRENT ASSETS (LIABILITIES)	**(1,827,462)**	**(784,409)**
TOTAL ASSETS LESS CURRENT LIABILITIES	7,587,804	7,449,540
CREDITORS: amounts falling due after more than one year	**(2,620,525)**	**(2,248,073)**
NET ASSETS	**4,967,279**	**5,201,467**
CHARITY FUNDS		
Restricted funds	-	24,707
Unrestricted funds	**4,967,279**	**5,176,760**
TOTAL FUNDS	**4,967,279**	**5,201,467**

TRUSTEES, ADVISORS AND PATRONS

Trustees and Officers of the Board

Miss C M Jones BA, ACG
Chair and Chair of the Nominations & Remuneration Committee
Mr S Anantharaman
Mrs H Atherton
Dr M Carter CPsychol AFBPsS
Vice Chair
Mrs J Clague BA FCA
Honorary Treasurer
Mr M Haig
Resigned 20 May 2024
Ms F Hewison
Dr S Kothari
Mr P Moonan
Chair of the Marketing and Fundraising Committee
Mr M Ore
Resigned 31 December 2024
Dr P Robertshaw PhD, Dip DM
Mr A Stalker
Mr J Willis
Chair of the Investment Committee
Mrs Keri Barton
Mrs Susan Giles
Mrs Julie Edler
Mrs Jenny Bowers

Patrons

The Most Reverend Malcolm McMahon
The Archbishop of Liverpool
The Right Reverend Mark Tanner
The Lord Bishop of Chester
The Right Reverend John Perumbalath
The Bishop of Liverpool
The Right Reverend Gregory Cameron
The Bishop of St Asaph
The Right Reverend Peter Eagles
The Bishop of Sodor and Man
The Right Reverend Beverley Mason
The Bishop of Warrington
Mark Blundell
Lord Lieutenant of Merseyside
Prof Tim Jones
The Vice Chancellor, The University of Liverpool
Prof Mark Power
The Vice Chancellor, Liverpool John Moores University
Prof Calum Semple
The President of the Liverpool Medical Institution
The Most Honourable David Cholmondeley
The Marquess of Cholmondeley
Lord Mostyn
Dame Lorna Muirhead
Henry Bowring

Registered office

North West Cancer Research
Room G5, Liverpool Science Park
131 Mount Pleasant
Liverpool L3 5TG

Bankers

NatWest
247 High Street, Bangor,
Gwynedd LL57 1RW

Solicitors

Brabners LLP
Horton House, Exchange Flags,
Liverpool L3 9QJ

Investment Managers

Rathbones (Incorporating Investec Wealth and Investment Ltd.)
Port of Liverpool Building
Mann Island, Liverpool L3 1NW

Independent Auditors

Crowe U.K. LLP
3rd Floor, St George's House
56 Peter Street, Manchester M2 3NQ

With Thanks

Albert Gubay Charitable Foundation
Alder Hey Children's NHS Trust
Chapman Charitable Trust
Charles Brotherton Trust
Elda Latin Charitable Trust
John E Behrend
Liverpool Charity and Voluntary Services
Sir Donald and Lady Edna Wilson Charitable Trust
The Hospital Saturday Fund
The L A Jones Charitable Trust
The Pennycress Trust
The Red Rose Charitable Trust

We are grateful for the vital contribution that legacies make to the work of North West Cancer Research. Our heartfelt thanks go to the estates of:

Lorraine Baker
James Ernest Campbell
Brian Chappell
Elizabeth Davies
Gwyneth Griffith
Betty Hedgecock
Sheila Holgate
Eleanor Irving
Delysia Edith Jones
Iris May Markham
Iris Evelyn Masters
Ann McGough
Gordon George Morris
Doreen Newton
Sheila Mary Price
Allan Peter Harry Richardson
William Norman Taylor
Joseph Tomlinson
Hilda Margaret Wood