# Accelerating Progress:

## Research Strategy 2025-30

Because people with blood cancer can't wait

Blood cancer UK




# Contents

# From Alastair Boyle, Chair of the Research and Mission Committee

I was diagnosed with myelodysplastic syndrome in 2008. It took a long time to get my diagnosis, and along the way, I struggled to find clear, compassionate information. That experience reinforced for me how important it is that people affected by blood cancer have a direct say in everything relating to their care.

This is especially important when it comes to medical research. Scientists have brilliant knowledge of blood cancer. Healthcare professionals are experts in care and treatment. But no one understands blood cancer like the people living with it. Our experiences bring an essential perspective that must be heard – to make sure research focuses on what truly matters to us.

Since my diagnosis, I've worked with a range of health organisations and charities to help them put the voices of patients at the centre of their work.

And as a trustee of Blood Cancer UK, and the Chair of its Research and Mission Committee, it's a huge privilege to bring all my experiences to overseeing the charity's work – to make it matter for all people with blood cancer.

Blood Cancer UK plays a significant role in the blood cancer research landscape, and has the expertise to drive this strategy forward. And when it comes to involving people affected in developing this strategy, the charity hasn't just heard their voices, but listened.

This strategy sets out a plan for how their research will achieve the ultimate goal: to beat blood cancer for good. As both a trustee and someone with blood cancer, I'm confident Blood Cancer UK can deliver this.



# From Helen Rowntree, CEO

Every year, 15,000 people die from blood cancer in the UK. That's 15,000 too many.

When I became Chief Executive of Blood Cancer UK in 2023, the ink was barely dry on our organisational strategy. We developed that plan by listening to people affected by blood cancer, people like Ally. And we made a commitment: to bring forward the day when no one dies from blood cancer.

Research is the key to achieving this – and the core part of our charity's work.

Since then, we've already made huge progress, building on our long history of research discoveries. Thanks to our community of supporters, we've been able to invest significantly more in research – a step change that will have a huge impact for everyone affected by blood cancer.

But we must be honest about the challenges ahead. For some types of blood cancer, decades have passed with little improvement in survival. Treatment side-effects can severely affect people's lives, and can even be fatal. No one should die from blood cancer, but some people are dying because of who they are or where they live in the UK.

But we can change that. With this new Research Strategy, we set out our funding priorities for the next

five years, and how we will meet and overcome these challenges together.

Our approach is holistic. What research we will fund. How we will support research from bench to bedside, and the careers of scientists. How we listen to and involve people affected by blood cancer at every point. And how we collaborate with other organisations who share our goals. To improve the experiences of every adult and child with blood cancer, for all blood cancers.

Blood Cancer UK is the country's largest research funder solely dedicated to blood cancer. But my colleagues and I know we are only one part of something much bigger. Scientists, policymakers, supporters, and – crucially – every single person affected by blood cancer: we are the blood cancer community.

I'm excited to share with you this Research Strategy, and eager to get started on the work ahead. Because I know that together, we will beat blood cancer.

# The state of blood cancer in the UK

**5th** most commonly diagnosed cancer.

**40,000 people** in UK diagnosed per year.

There are three main types of blood cancer:
**Leukaemia**
**Lymphoma**
**Myeloma**

More than **100** diverse and complex individual diseases.

In the UK, 15,000 people die of blood cancer every year. Research has led to improvements in treatment for blood cancer, and saved many lives. But the diversity and complexity of blood cancer has meant that research investment has not yet improved survival for everyone. And for those who do survive, many current treatments have toxic side effects which have a long-term impact on quality of life.

The chances of surviving these diseases varies considerably. Among the types of blood cancer with the worst survival rates are acute myeloid leukaemia (particularly in older adults), non-Hodgkin lymphoma, and myeloma. Survival is not equal for all people, and can vary by age, ethnic background, sex, location in the UK, and socio-economic status.

The availability of effective treatments has a major influence on survival. Some types of blood cancer can be cured, while for other types, treatments can only delay progression. Some people die not from the cancer itself, but from the side-effects of their treatment.

Early diagnosis is also critical for survival, but the non-specific nature of many symptoms of blood cancer means that referral for cancer tests is often delayed. A third of people are diagnosed in an emergency setting, reducing treatment options that would have been available if they were diagnosed earlier.

We've also not fully explored the potential for blood cancer prevention – despite being a major focus for research in solid cancers. Though it's not possible to prevent many blood cancers by modifying lifestyle, there are opportunities to use targeted medicines to stop some people at high-risk from developing cancer at all.



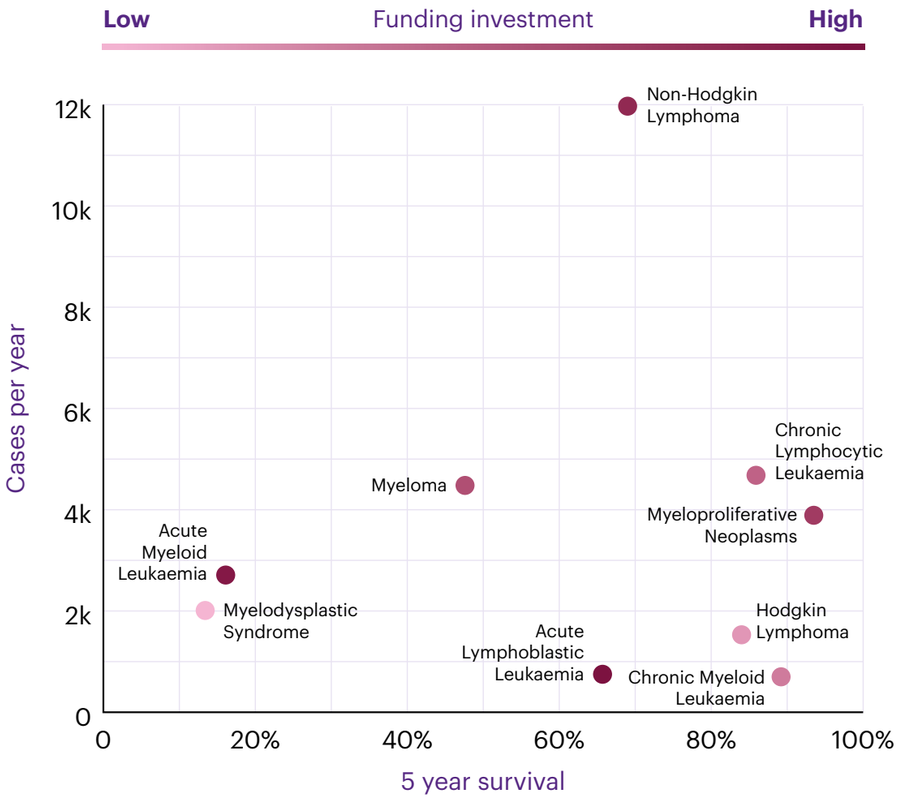
# Blood cancer research funding

Between 2002 and 2021, total spending on blood cancer research in the UK by 20 of the largest cancer charities was £756 million. Blood Cancer UK has played a significant role in this, funding around 40% of that overall blood cancer research during this period – making our charity the largest funder solely dedicated to blood cancer research in the UK.

What's more, blood cancer is a trailblazer for cancer research. The fundamental biology of cancer is often studied in blood cancer, partly because it is easier to access blood samples than a sample of a solid tumour. As a result, many of the paradigm shifts in cancer treatment – chemotherapy, targeted therapies, and CAR-T cell therapies – were first developed for blood cancer.

However, the funding dedicated to blood cancer – tackling the specific challenges people with blood cancer face – is less than it might first seem. Per person diagnosed, **we estimate the dedicated research spend for blood cancer in 2020/21 was about £180 for each person, significantly lower than the average for all cancers (£241 per person)*.**

* onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2011.03500.x




# Disparity between blood cancer subtypes

Leukaemia has traditionally received the most research funding overall in the UK, so there is a clear opportunity to increase funding directed towards lymphoma and myeloma. Blood Cancer UK's own research portfolio has become more balanced over the last five years.

Looking within these broad disease groups, there are also opportunities to direct funding towards types of blood cancer with the lowest survival rates – which haven't always received a proportionate level of funding in the past.

For example, acute lymphoblastic leukaemia (ALL) has received 25 times more funding per person affected than non-Hodgkin lymphoma (NHL), despite NHL having poorer survival rates. Myelodysplastic syndromes (MDS) have also received far less dedicated funding, despite having poor survival rates. Rare types of blood cancer have received even less targeted investment funding.

Graph data taken from analysis of the National Cancer Research Institute Cancer Research Database, which collected data from 20 cancer research charities on their annual research spend from 2002 to 2019.



# Optimising how research funding is spent

Data on the funding landscape and insight from blood cancer researchers across the UK has highlighted other areas of opportunity which could accelerate progress across all blood cancer:

**Increase funding for research on blood cancer prevention**, which has only received a tiny fraction (0.2%) of investment, despite the clear opportunities to stop some people from developing aggressive blood cancers at all.

**Better coordination of blood cancer research funding,** across larger 'pan-cancer' organisations and smaller disease-specific charities, to make best use of our collective resources and expertise.

**Close the gaps in critical points of career pathways for scientists**, to attract and retain the best scientific minds in blood cancer research.

**Reduce geographical disparity:** There are excellent research teams across the UK studying blood cancer, but more than half of blood cancer research funding goes to the 'Golden Triangle' of London, Cambridge, and Oxford.

"We've made huge advances in treatment for some blood cancers – but for other types, survival has remained stubbornly low. While increasing the amount of money we invest in research is crucial, it needs to be spent in the right way – targeted to solve the specific problems faced by patients with all the different forms of blood cancer."

**Professor Claire Harrison, Blood Cancer UK Trustee and Consultant at Guy's and St Thomas' NHS Foundation Trust**

# Progress since our last strategy in 2021

Increased research funding every year, doubling from...

**£5m** in 2021/22 → **£10m+** in 2024/25

**Increased size and diversity** of patient voice grant advisory network

**Further embedded patient involvement** across all our research funding activities

Funded **89** new grants with **a value of £26m+** in line with priorities

**Improving understanding of blood cancer**

**Improving treatment options for each individual**

**Improving the use of data**

Plan to **double our investment** in new research awards to **£70m** over the new strategy timeline

**Reintroduced funding for late stage translational and clinical research** with our largest investment in a single funding scheme for over a decade with the launch of our **Transformational Research Awards**

**£4.9m across 5 TRA awards**

## Increased our support for early career researchers

**£2.8m across 9 fellowships**

Launch of Early Career Advancement Fellowships scheme, supporting fellowships for two future leaders in myeloma as part of MWMMF, funding additional early career fellowships in partnership with other funders

**£500k across 17 pilot grants**

Launch our new Pilot Grant scheme

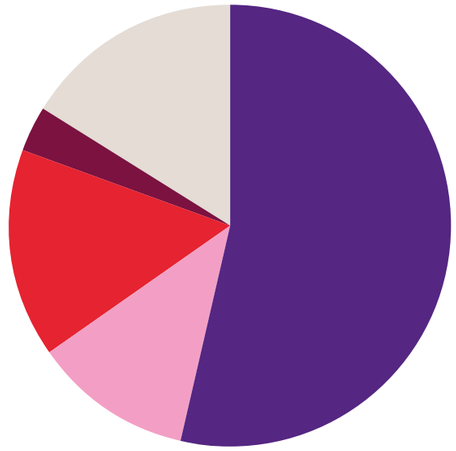


## Partnered with other funders to drive research forward in areas of shared strategic priority:

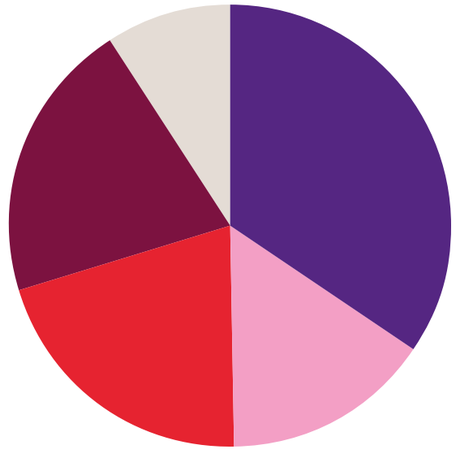
- Two **late phase clinical trials** with CANCER RESEARCH UK
- **£4m prevention focussed research** project with LEUKEMIA & LYMPHOMA SOCIETY
- Early career **fellowships** with UKRI Medical Research Council and Daphne Jackson TRUST
- A **clinical data focused project** aiming to improve disease management with Follicular Lymphoma Foundation

Moved away from our historical funding position of a high proportion being focused on leukaemia. Our funding portfolio is now more balanced across all blood cancer types

**2020/21**



**2024/25**



| | Leukaemia | Lymphoma | Multiple blood cancers | Myeloma | Other |
|---|---|---|---|---|---|
| 2020/21 | 53.80% | 11.62% | 15.25% | 3.23% | 16.09% |
| 2024/25 | 34.64% | 15.17% | 20.54% | 20.60% | 9.06% |

Thank you to all our supporters who have enabled this exciting progress to take place.

# Why do we need a new research strategy?

## Because with our best plan for the future, we will beat blood cancer.

More children and adults are surviving blood cancer today than ever before. But still 15,000 people in the UK are dying, every year – either from their blood cancer, or the effects of its treatment.

In 2023, we published our latest organisational strategy, with the ambitious goal of beating blood cancer within a generation. We are making good progress on delivering the strategy, including to triple our research funding. We now need a research strategy that outlines what we are looking to fund and our approach to investing in research, that keeps us on the right path towards ensuring no one dies from blood cancer.

As with everything we do as a charity, this Research Strategy was shaped by people affected by blood cancer, as well as blood cancer researchers. Their experiences have led to many of the commitments we make in this document.

We must fund research across all types of blood cancer, especially those that continue to have poor survival rates, or have been neglected in the past. We must address inequalities in blood cancer survival between different groups. And as the funding landscape changes, we must respond to the challenges scientists face today – and capitalise on the opportunities ahead.



## Our ambition

**Personalised medicine;**
People at high risk of developing blood cancer have tailored prevention, everyone gets an early diagnosis, and the right treatment tailored for them, to give them the best possible chances of living and living well.

## Research themes

### Prevention

- Identifying people at risk of developing blood cancer
- Targeting pre-malignant disease to prevent blood cancer
- Preventing transformation to more aggressive forms

### Early detection and predicting outcomes

- Ensuring early diagnosis*
- Predicting outcome and disease progression

### Treatment

- Decreasing the toxicity and side effects of treatments*
- Developing more effective treatments*
- Improving treatment combinations*
- Preventing relapse*

## Areas of investment

1. Discovery and translational research
2. Clinical research and experimental medicine
3. Strengthening the research community
4. Strategic partnerships

## Funding principles

1. Funding all blood cancers, highlighting the least survivable and neglected blood cancers
2. Involvement of people affected by blood cancer
3. Supporting innovation, technology and data science
4. Ensuring equality, diversity and inclusion in our research

* Priorities that align with the 2023 Children's Cancer PSP

# Our ambition for research

Blood Cancer UK funds a significant proportion of all publicly funded blood cancer research in the UK, covering all types of blood cancer - including childhood cancer.

Our organisational strategy for 2023-28 set out how we will beat blood cancer within a generation. With our Research Strategy for 2025-30, we will bring forward the day when no one dies of blood cancer or treatment side-effects.

**Here's how we'll do it:**

**Our ambition:**
**Personalised prevention, diagnosis and treatment:**
People at high risk of developing blood cancer have personalised prevention, and everyone with blood cancer gets an early diagnosis, and the right treatment tailored for them.

## Three areas we'll focus on:

1
**Prevention:**
To identify people at high risk of developing blood cancer, and find ways to prevent them having to go through blood cancer at all.

2
**Early detection and predicting outcomes:**
To help everyone to get an early diagnosis, and predict what the future might hold for them, so that they can start the right treatment sooner.

3
**Treatment:**
To develop new treatments and improve existing ones for all blood cancers, so that we can prevent relapse and progression, and give everyone the chance to survive and live well.




# Our ambitions for the next five years:

We will invest at least **£70 million into research** to develop tailored prevention, early detection and treatments, for all types of blood cancer.

We will **form strategic partnerships** with other funders, to bring more investment into key areas of need.

We will **fund across the research pipeline**, from discovery through to translational and clinical research.

We will ensure researchers appropriately address **equality, diversity, and inclusion** (EDI) in their research, and improve the diversity of our funded researchers and committee members.

We will invest **£24 million in the least survivable blood cancers** through complex innovative clinical trials.

We will continue to embed **meaningful involvement** of people affected by blood cancer across all of our activities.

We will continue to **support research into childhood cancers** aligned with the priorities identified in the 2023 James Lind Alliance Children's Cancer Priority Setting Partnership.

We will support the delivery of the **UK Blood Cancer Research Network** to ensure the **UK is a leader in blood cancer research**, through a collaborative and coordinated approach to developing clinical trials and large-scale research programmes.

UK Blood Cancer Research Network

We will **invest in the careers of researchers at critical points**, to ensure there is a pipeline of blood cancer researchers and strengthen the research community.

We will implement our **new Impact Framework** to capture and share even more impacts of our funding for people affected by blood cancer and the wider community.

Research theme

# Prevention

Because we can stop some people from getting blood cancer at all.

**Through research, we will find ways to:**

- Identify people at risk of developing blood cancer.
- Target pre-malignant disease to prevent blood cancer.
- Prevent transformation to more aggressive forms of blood cancer.



## The challenge

Prevention has been a major focus of research in solid tumours, but not to the same extent for blood cancer. It is thought that over 90% of blood cancer is not preventable, because the development of blood cancer is not affected in the same way as solid cancers by modifiable risk factors such as diet, exercise, and smoking.

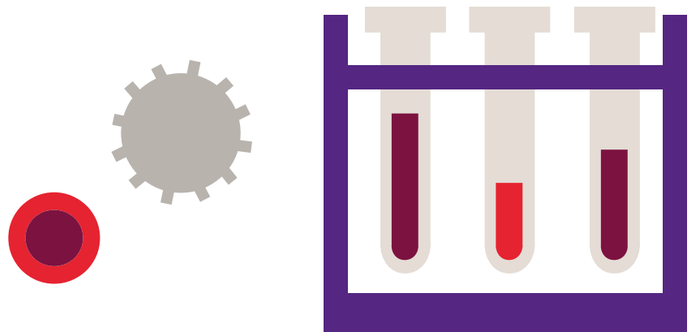
We do know there are some 'pre-malignant' blood conditions which can develop into more aggressive cancers. For example, monoclonal gammopathy of undetermined significance (MGUS) is a precursor condition for multiple myeloma, and clonal haematopoiesis of indeterminate potential (CHIP) can sometimes develop into acute myeloid leukaemia (AML).

A similar situation exists for myelodysplastic syndromes (MDS). These are types of blood cancer in their own right, but can sometimes transform into aggressive AML.

Only a small proportion of people with these conditions will go on to develop an aggressive malignant cancer, but we have no way of knowing who those people will be. And so, for any individual person, we cannot say what the future holds for them.

"Prevention of solid cancers that form tumours is an advanced area of research and clinical practice – but we're simply not at that stage with blood cancer yet."

**Dr Rubina Ahmed, Director of Research, Policy and Services at Blood Cancer UK**



# The opportunity ahead

Though we know that many blood cancers are not preventable, knowledge and technology are advancing all the time – bringing us closer to the day where we could prevent some types of blood cancer.

Through research, we're learning more about pre-malignant conditions like MGUS and CHIP, and how MDS transforms into AML. In the future, we'll be able to identify whether a person with one of these conditions has a high risk of progression. And through research, we'll identify treatments which could prevent this from happening.

There is a lot of excitement among scientists about the potential for prevention, and a small but dedicated research community focussed on it. With our Research Strategy, we will build on this momentum, grow this research community, and prevent as many people as possible from getting blood cancer in the first place.




Project spotlight

## Dr Aidan Haslam and Professor Chris Bunce

(University of Birmingham)

Dr Aidan Haslam is working with Professor Chris Bunce, studying the origins of MGUS to understand how it starts, and why it sometimes develops into myeloma. Blood Cancer UK is funding Aidan to further investigate factors which they believe may increase the chances of MGUS progressing.

They hope their studies could eventually lead to screening for people with MGUS, to assess and monitor their risk. If it looks like they will develop myeloma, these people could start treatment earlier to improve their chance of survival. The team's research could even lead to new treatments to prevent the progression of MGUS into myeloma entirely.

"Meeting patients with blood cancer and their families is what inspires me as a doctor. It's been a privilege to support them through their treatments and I feel very lucky that I get to continue supporting patients with blood cancer, through research. By understanding more about the biology of the precursor of myeloma, we hope to identify which patients will go onto develop myeloma and how we might intervene. Ultimately, I hope we can diagnose patients with myeloma earlier and maybe even prevent it from developing in the first place."

**Dr Aidan Haslam**

This project was funded by the Matthew Wilson Multiple Myeloma Fund which has funded £3M of research to date to improve diagnosis and treatment of myeloma

Research theme

# Early detection and predicting outcomes

Because, with the right treatment as early as possible, we can give everyone the best chance of survival.

**Through research, we will find ways to:**

- Ensure an early diagnosis for every person with blood cancer.
- Give people an accurate picture of what the future holds for them.



# The challenge

Many people with blood cancer have told us they had a bad experience getting diagnosed. Blood cancer symptoms are sometimes vague or non-specific, and so are often missed or overlooked. Our own research shows nearly a third of people with blood cancer had to visit their GP three or more times before getting referred for cancer tests.

Diagnosis and monitoring of blood cancer often depends on taking bone marrow samples, a painful and inconvenient procedure for people – especially if they have to be repeated to see how the cancer has responded to treatments.

Every person's disease is different, and responds to treatments in different ways. At the moment it can be challenging to predict how a person's cancer might progress, and so what would be the most appropriate treatments and dose for them. As a result, they might end up receiving a 'default' treatment which doesn't benefit them, but from which they still experience the side-effects.

Together, delays in diagnosis and the uncertainty around the best course of treatment can hamper a person's chances of survival.

"Blood cancer is a disease with a myriad of symptoms – some evident, some more difficult to recognise both for individuals themselves and GPs. […] As a result, too many blood cancer diagnoses are subject to lengthy delays that limit treatment options and results in people dying sooner than they would have if diagnosed earlier."

**From UK Blood Cancer Action Plan, 2024**

# The opportunity ahead

Early diagnosis was a major theme of our UK Blood Cancer Action Plan, published in 2024. There is much that the Government and the NHS can do to improve referral and diagnosis of suspected blood cancer with existing resources and knowledge.

But through research, we can also find new ways to ensure everyone gets an early diagnosis that could save their life.

Multi-cancer early detection tests such as GRAIL are being trialled in the NHS to spot signs of blood cancer sooner. There is also the potential to use AI tools to assess non-specific symptoms, or analyse patient samples such as images of bone marrow, to speed up referral and diagnosis.

Once a person is diagnosed, research can help develop more accurate ways to decide on the best treatment for them. Less invasive methods to monitor a disease could also help keep a closer eye on whether treatments are working, and switch to alternatives sooner, if needed.

This will mean everyone with blood cancer gets an early diagnosis and a treatment plan tailored for them, giving them the best chance of survival and quality of life.



Project spotlight

## Professor Daniel Royston and Professor Jens Rittscher

(University of Oxford)

5,000 people in the UK are diagnosed with myeloproliferative neoplasms (MPNs) every year. People are usually diagnosed after a bone marrow biopsy is reviewed by a specialist using a microscope. But relying upon the human eye can be prone to error, and sometimes it is possible to miss the earliest changes that indicate blood cancer.

Artificial intelligence (AI) tools have huge potential to reliably spot abnormalities in bone marrow biopsies – diagnosing cancers like MPNs quicker and more accurately. Professor Daniel Royston and Professor Jens Rittscher are developing AI tools to do just this, and Blood Cancer UK is funding them to test it on a large collection of bone marrow biopsies. If successful, their AI tools could eventually be used to help diagnose MPN and decide which treatments are best. It could also help doctors monitor whether a treatment is working, so that the person can be switched to an alternative if not. Tools like this could help with quicker diagnosis and start the correct treatment sooner – to give them the best possible chance of surviving.

"The range of opportunities for using AI in pathology is remarkable. Moving away from relying on the subjectivity of the human eye down a microscope, towards systematic and objective analysis of bone marrow biopsies, can only benefit people affected by blood cancer."

**Professor Daniel Royston**

Research theme

# Treatment

Because we can develop new treatments that cure blood cancer for good.


**Through research, we will find ways to:**

- Reduce side-effects and make treatments kinder
- Develop more effective new treatments
- Identify the right treatment combination for each individual
- Prevent blood cancer from coming back or progressing



# The challenge

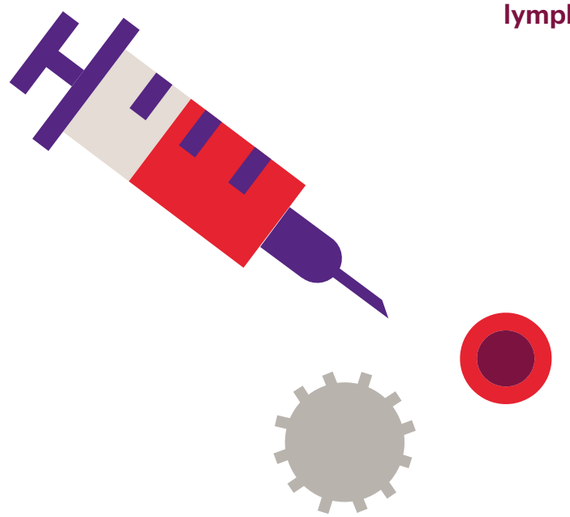
In the UK, 15,000 people every year die from blood cancer or its treatments. To bring forward the day when no one dies, delivering improved treatments for people must be a priority.

For some people with blood cancer, there is a real lack of effective treatments, and so new drugs must be developed with urgency. Even where good treatments are available, cancer can develop resistance, return years later, or transform into more aggressive types. We must find ways to stop this from happening.

Meanwhile, treatment side-effects can have a significant impact on the lives of adults and children with cancer. The risks of some treatments may prevent older people from receiving them, and some of these side-effects can be fatal.

"I've had lots of treatment over the years, including chemotherapy, radiotherapy, a stem cell transplant and targeted therapy. Two times I got into remission, but each time, after around two years of living my life without blood cancer, I got the news it had come back."

**Grant, living with acute lymphoblastic leukaemia.**



# The opportunity ahead

There have been many advances in treatment of blood cancer in recent years – giving people more time with their loved ones, and improving their quality of life compared to old treatments.

Blood Cancer UK funding has supported many advances in therapies for blood cancer, including the development of new drugs for CML and ALL, antibody treatments for lymphoma, and developing new universal CAR-T therapies for T-cell ALL.

New classes of therapies are being developed all the time, including epigenetic-targeting drugs such as menin inhibitors for AML, and next-generation cellular therapies. Combining these with existing treatments will help to give people more options, and prevent relapse and progression in the future.

As our understanding of blood cancer grows day by day, investing in translational research will turn lab discoveries into new therapies that can be tested in people. Innovative clinical trial formats can also help more people access experimental treatments, and give scientists the answers they need sooner.

In short, there are huge opportunities to develop new therapies that improve and save the lives of everyone with blood cancer.




Project spotlight

## Professor Michelle West

(University of Sussex)

Epstein-Barr virus (EBV) infects white blood cells called B-cells, and can cause types of lymphoma, such as Burkitt lymphoma, diffuse large B-cell lymphoma (DLBCL) and Hodgkin lymphoma. EBV is also the main cause of lymphomas in patients after a transplant. EBV lymphomas are treated with the same harsh treatments as other lymphomas- we are missing an opportunity to target the virus directly with new drugs.

Professor Michelle West believes a molecule called EBNA1 may hold the key to developing better treatments for EBV lymphomas with fewer side-effects. So Blood Cancer UK is funding Professor West and her team to find ways to block EBNA1 and kill EBV lymphoma cells.

If successful, Professor West's project could generate prototype drugs which, after further development, could be tested in people. Her aim is to create better, less toxic treatments for people with EBV lymphomas – and give them the best possible chance of surviving.

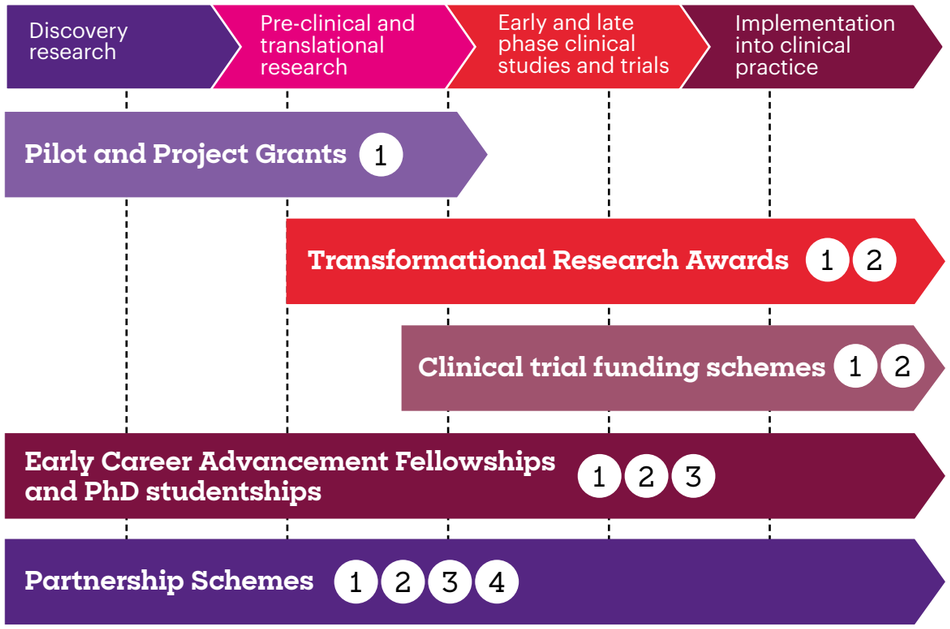
"Our basic research into the molecular changes and key players involved in EBV-driven blood cancer has developed into exciting work where we are now trying to create more effective treatments that target EBV blood cancer cells and leave healthy cells unscathed."

**Professor Michelle West**

# Areas of investment

Because by investing in the right places, we will stop people dying from blood cancer. We will direct our funding towards four key areas.

## Overview of funding schemes in relation to areas of investment




**Areas of investment:**

1. Discovery and translational research
2. Clinical research and experimental medicine
3. Strengthening the research community
4. Strategic partnerships



## 1 Discovery and translational research

The cornerstone of Blood Cancer UK's research portfolio has been fundamental 'discovery' research conducted in laboratories, which has led to many breakthroughs in our history. Through translational research, we turn these lab discoveries into experimental treatments ready to test with people with blood cancer.

**We will:**

- Increase our funding for discovery research across the UK, through Project and Pilot grants and Fellowships, to create the breakthroughs of the future for all blood cancer types.
- Continue to fund Transformational Research Awards to support advanced pre-clinical translational research, and turn discoveries into therapies ready for testing in people.
- Work with partners with expertise in research translation and commercialisation, to bring treatments to people with blood cancer quicker.

"Taking lab discoveries and translating them into treatments that will improve outcomes for patients is absolutely vital, or else all that basic research will be in vain."

**Dr Richard Francis, Deputy Director of Research, Blood Cancer UK**

# 2 Clinical research and experimental medicine

With our ambitious strategy and increase in fundraising support, now is the time for us to significantly grow our clinical research portfolio. While we will support the development and evaluation of treatments for all forms of blood cancer, we are particularly focussed on improving therapies for hard-to-treat diseases – like T-cell lymphoma, mantle cell lymphoma (MCL), myeloma, chronic myelomonocytic leukaemia (CMML) and AML – which account for 58% of all deaths from blood cancer.

**We will:**

- Invest £24 million to support large-scale innovative clinical trials to develop new treatment options for the least survivable types of blood cancer.
- Continue to fund Transformational Research Awards to support clinical research to advance treatments for all forms of blood cancer.
- Encourage the collection and investigation of samples during clinical trials, to make the most of the opportunity to learn about how treatments work, and who will benefit most from them.
- Understand and reduce the barriers to setting up and delivery of clinical studies, so that we can accelerate UK clinical research into blood cancer.
- Develop strategies to increase participation in clinical trials, particularly among under-represented groups, by addressing the various barriers that prevent involvement.

"Complex innovative clinical trials, such as multi-arm, multi-stage trials, that are being developed by Blood Cancer UK, have potential to accelerate the evidence for new treatments that can save lives for people with the hardest to treat blood cancers."

**Professor Mhairi Copland, University of Glasgow**




Project spotlight

## Dr Charlotte Graham

(King's College London)

CAR-T cell therapy is a treatment that harnesses the power of our immune system to destroy cancer cells. It offers an exciting new approach to treating many forms of blood cancer, but current forms of CAR-T cell therapy aren't always effective for people with myeloma.

Blood Cancer UK is funding Dr Graham and her team at King's College London to run a clinical trial to test a new type of CAR-T cell therapy, called TriPRIL CAR-T in 20 patients with myeloma. The team have already shown this is likely to be more effective against myeloma than standard forms of CAR-T. They are also testing a new way to produce the CAR-T treatment more rapidly on site at the same hospital as the patient.

If this new CAR-T cell therapy is successful, it could revolutionise treatment for many people with myeloma, providing a potentially life-saving treatment. Ultimately, this research also has the potential to transform how CAR-T cells are made for not just myeloma but also other types of cancer, enabling faster, more cost-effective and widely accessible treatments.

"My motivation to find cures for blood cancer stems from my brother's treatment for lymphoma more than 20 years ago, which led me on a career path as a haematologist and cancer researcher. CAR-T cell therapy has been transformative for patients with blood cancers, and I hope we can expand the patient population that benefits."

**Dr Charlotte Graham**

# We are currently supporting...

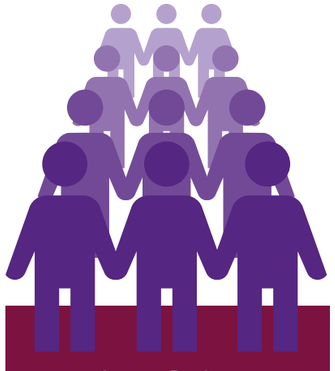
**100**
**research grants worth over £31.7m...**

**...located across**
**10 of the 12**
**UK regions**
**including all 3 devolved nations**

**...based at**
**26**
**different host organisations**

**...including growing numbers of early career researchers across all grants**
with dedicated support from our increasing investment in fellowships and pilot grants

**...led by**
**87**
**different blood cancer researchers**



**...involving**
**over 350**
**researchers in total**



## 3 Strengthening the research community

We have a proud history of supporting research careers. Many of the UK's leading blood cancer researchers credit support from Blood Cancer UK as an instrumental factor in their career success - and the subsequent positive impact their research has had for people with blood cancer.

But as the wider research ecosystem face challenges, the blood cancer research community is at risk of shrinking. A lack of focused funding for career development may lead to scientists not starting their careers in blood cancer research, or existing blood cancer scientists leaving the field entirely. At the same time, we hear from our wider healthcare professional community about the lack of time they have to get involved in research or funding schemes that meet their needs. We must reverse this trend and build a strong research community, ready to take on the challenges set by blood cancer, and create the breakthroughs that will stop people dying.

**We will:**

- Address the critical gaps in research capacity, by funding PhD studentships and early-career fellowships for both clinical and non-clinical scientists.
- Assist early-career scientists in their wider career development, through encouraging their involvement in applications to our other funding schemes, targeting our pilot grant scheme primarily to lead applicants who are early career researchers, supporting activities such as networking and enabling conference attendance.
- Provide a targeted funding opportunity for healthcare professionals to allow them to lead research in the patient communities they serve.
- Reduce the geographical disparity of funding, and support excellent research across the UK.

"Blood cancer researchers have fewer avenues for funding, and we're at risk of losing a generation of blood cancer specific researchers. Supporting researchers through funding is vital to maintaining them within the field."

**Professor Katrin Ottersbach, University of Edinburgh, Chair of the Fellowship Panel**

# 4 Strategic partnerships

We will not beat blood cancer alone – we owe it to everyone affected to work with other organisations who share our goals. We already work with a range of other funders to jointly support research and share expertise.

**We will continue to proactively start partnerships with other organisations, so that we can:**

- Address gaps in our funding programme, and make the most of the funds we have.
- Use their expertise and share our own, so we can achieve our common goals faster.
- Encourage scientists from other fields to work on blood cancer, bringing new ideas to solve long-standing problems.

We're particularly keen to develop partnerships focussed on paediatric blood cancer, rare conditions, and translation and commercialisation of research.





Partnership highlight

## The Leukemia and Lymphoma Society

In 2024, Blood Cancer UK announced a partnership with US non-profit The Leukemia & Lymphoma Society. Together, we're funding a five-year, £4 million research project led by Professor George Vassiliou in Cambridge. His aim is to develop screening tests to identify people at high risk of myeloid blood cancers like AML, and find ways to prevent these cancers from developing.

"Many patients with myeloid blood cancers are still in dire need of more effective and safer therapies. Identifying those at high risk of developing aggressive disease is at the forefront of today's research. International collaboration is essential to drive such innovative research and achieve tangible progress for patients worldwide. The Leukemia & Lymphoma Society is proud to be joining forces with Blood Cancer UK to move forward the important work of Professor Vassiliou and his colleagues."

**Lore Gruenbaum, PhD**
**Senior VP & Chief Scientific Officer at Leukemia & Lymphoma Society**

Project spotlight

# Professor Chris Fox

## (University of Nottingham)

Primary central nervous system lymphoma (PCNSL) is a rare and aggressive blood cancer that primarily affects the brain. This leads to serious issues like difficulty walking, seeing, remembering, speaking, and even seizures. PCNSL is usually treated with chemotherapy, although this often doesn't work or the cancer comes back (relapses). If the disease returns, treatment options are limited and have severe side effects.

Professor Chris Fox and his team are building on the early success of an early-stage clinical trial called PRiZM+, where a drug called zanubrutinib showed promising results in people with PCNSL. This new study trials a combination of zanubrutinib with two other drugs that should target the PCNSL cells.

This research could lead to better treatments and improved survival for people with relapsed PCNSL, who currently have few or no options.

If this drug combination proves effective, researchers will build on this foundation to conduct larger clinical trials. It is only though trials like this that we can improve outcomes for patients suffering from relapsed PCNSL by finding better, more tolerable treatments and extending survival.

"Although treatments for many forms of blood cancer have improved over the last ten years its absolutely vital that people living with rarer forms of blood cancer aren't left behind. Research funding for studies like the PRiZM+ trial is essential to allow us to better understand and treat these challenging conditions to improve the lives of these often overlooked patient groups."

**Professor Chris Fox**



# Our funding principles

## Because we must fund the best research that benefits every person with blood cancer.

Underlying this strategy, and all our decisions about what projects to fund, are four core principles that we commit to.

### 1. We will fund research across all blood cancers – including rare diseases, less survivable cancers, and childhood cancers.

There are more than 100 types of blood cancer, and we are the only organisation dedicated to supporting research into every single one – and curing blood cancer for good.

Rare forms of blood cancer have been neglected by research in the past, and deserve special focus. We will collaborate with other organisations, nationally and internationally, to fund new research for these unique conditions.

We will focus on the least survivable blood cancers by investing £24 million into innovative clinical trials to develop new treatments, which could save thousands of lives.

Childhood blood cancer has historically been a strength of our research portfolio, making up 25-30% of our funding. Our research goals align with many of the priorities from the 2023 James Lind Alliance Children's Cancer Priority Setting Partnership, and we will highlight these common areas within our funding schemes. We will work with other funders that specialise in children's cancers to support research, helping every child live a long healthy life.

### 2. We will meaningfully address the principles of equality, diversity and inclusion; both by funding research that benefits all people affected by blood cancer, and by supporting researchers from diverse backgrounds

We want to bring forward the day when no one dies because of blood cancer – and that means stopping everyone from dying, no matter where they live in the UK, or their ethnic background, sex, age, or socio-economic status.

But in the past, research hasn't always involved the diverse groups of people who ultimately should benefit. Because of this, we don't have a complete picture of how treatments may benefit different people, and what we need to do to prevent every blood cancer death.

Researchers applying for funding will need to consider the different groups of people their research will benefit, and how they are addressing equality, diversity, and inclusion in the design and delivery of their work. This will be important for clinical studies, but will also be considered in non-clinical research, such as the appropriateness of pre-clinical models.

Researchers themselves can face many inequalities and barriers as they try to develop their careers, and we know there is more we can do to support researchers from under-represented backgrounds. We will look at how we can encourage more researchers to engage with us and provide them the opportunities and support they require.



### 3. We will meaningfully involve people affected by blood cancer in all stages of the research process.

People affected by blood cancer are at the heart of everything we do, including research. Involving people with lived experiences to shape our work ensures it makes a real difference to people in the future.

We already involve people affected by blood cancer in deciding what research we fund, but we know there are more areas where they can make a valuable contribution. We will support researchers to meaningfully involve people affected by blood cancer as early as possible in their work, for example helping to set the research questions and design their studies.

We will also expand the number and diversity of people we involve in research, including people from groups who have been under-represented in the past, such as ethnic minorities.

### 4. We will encourage and support innovation in blood cancer research.

People affected by blood cancer deserve nothing less than ground-breaking research that makes a real difference to their lives. To achieve this, we will support scientists to use innovative approaches and technology in their work, to truly accelerate research.

Today in 2025, that includes gene editing, next-generation cell therapies, AI, and data science. In the future, when other innovations emerge, we will help scientists make the most of them for blood cancer research.

On data science specifically, there is already a wealth of information in routinely-collected health data, clinical trials, and biobanks. We will encourage the use and linkage of existing data, to maximise the potential benefit for people with blood cancer.

# Monitoring the progress and impact of our research

All the research we fund has the potential to contribute to our mission of bringing forward the day when no one dies of blood cancer or its treatments. Monitoring the impacts of our research funding is vital to show how we are making a difference for our blood cancer community.

Impact can take many different forms, which is why we will be implementing our new Research Impact Framework to capture this diverse information during and after the lifespan of projects.

Research can take a long time to make a tangible difference in the care of people with blood cancer, which means we need to follow projects outputs for a long time, sometimes up to five to 10 years after they have finished.

We're planning on sharing more information about the exciting outcomes and impact of our research with our diverse audiences, bringing hope to the communities we support and showing the value of funding blood cancer research.

## Metrics we will be capturing in our Research Impact Framework

| Generating new knowledge | Translation to new diagnostics, treatments and preventative strategies | Engaging and influencing diverse audiences | Stimulating new research | Strengthening the research community |
|---|---|---|---|---|
| Scientific publications | Preventative interventions, diagnostic tools, new treatments and other clinical products | Changes to policy and guidelines | Further funding | Awards and recognition |
| Research methods, products, and tools | IP and commercialisation | Public engagement and involvement activities | Research collaborations and partnerships | Career progression |



# How we decide what research to fund

## Because we must fund the best research to make a real difference for everyone affected by blood cancer.

We decide what research to fund through a rigorous and inclusive peer review process, and make sure the results of this research are released freely to everyone.

As a member of the Association of Medical Research Charities (AMRC), we review applications for all our research funding streams based upon the AMRC's six principles of expert review: proportionality, independence, diversity, rotation, impartiality and transparency.

Applications for research funding are reviewed by medical and scientific experts from across the world, people affected by blood cancer, and our research funding committees. Final approval of each funding committee's recommendations is provided by Blood Cancer UK's Board of Trustees.

"As someone directly affected by blood cancer, having the opportunity to be involved with Blood Cancer UK and the wider research community really helps make it relevant and useful for patients like me and our loved ones. Hopefully by developing more meaningful [patient and public involvement], this will result in leading to better services, treatment, and care."

**Sunny Kharbanda,**
**Patient Voice Grant Advisory Member**


# Open access publication policy

We want people with blood cancer to gain the maximum benefit from the findings of the research we support. We believe that free access to and unrestricted re-use of published research is one of the ways we can achieve this.

So, for Blood Cancer UK-funded researchers, we provide a contribution towards the article processing costs for Open Access publishing – making the research findings immediately available upon online publication.



## The time to support research is now.

# Because people with blood cancer can't wait any longer.

People with blood cancer have been waiting too long for a cure. 15,000 people every year die from blood cancer in the UK. If we want to bring forward the day when no one dies, we must act now.

In this report, we outline how Blood Cancer UK's research over the next five years will help us achieve this goal. We have the expertise, the plan, and the determination to set this strategy in motion. But we cannot achieve our goals on our own.

If you share our vision of a world where no one dies because of blood cancer, please consider supporting Blood Cancer UK with a philanthropic gift, by contacting **philanthropy@bloodcancer.org.uk**.

**Because together, we are the generation to beat blood cancer.**

After losing her husband to blood cancer, Samantha and her family wanted to make a difference. Their generous donation is now funding vital research with Dr Goedele Maertens, bringing hope to others for the future.

"It's important for me and our family to carry on trying to find a way to ensure other families don't go through what we went through. If you have the ability to sponsor a project, now is important because research is needed now. You're intimately involved…you can see what your money is actually doing. Ultimately what we're investing here is hope for the future."

# Thank you

**The blood cancer community – including those affected, and blood cancer researchers – had a significant input in shaping this Research Strategy. Thank you to everyone who has shared their experiences and expertise and to our researchers for all their hard work and dedication in helping us to beat blood cancer.**




We're a community dedicated to beating blood cancer. We do this by funding research and supporting those affected. Since 1960, we've invested over £500 million in blood cancer research, transforming treatments and saving lives.

Right now, our community is supporting over 350 researchers across the UK who are searching for the next breakthrough. The day we will beat blood cancer is now in sight and our researchers are determined to finish the job.

As well as looking for a cure in the future, we're here for people when they need someone to talk to. Whether on the phone or online, we offer health information people can trust, in a language they can understand.

We also campaign for change, helping to make sure that people get the healthcare they deserve and that new treatments that come from research breakthroughs are available on the NHS.

**bloodcancer.org.uk/research-strategy-2025**

To find out more, get in touch at **research@bloodcancer.org.uk**

Blood cancer UK

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