

**Because research will
beat blood cancer**



**Blood
cancer
UK**

“Research is at the heart of what we do as an organisation. Over the last 60 years, we have invested over £500 million in research and this has led to key research discoveries that have changed the lives of people affected by blood cancer. Thanks to this extraordinary progress, we believe it’s now possible to beat blood cancer in a generation. This research strategy will ensure our funds have the biggest impact possible for our community, and crucially that we reach the day when we beat it as soon as possible.”

Gemma Peters, CEO of Blood Cancer UK



Our research strategy in summary

The millions of pounds we invest in world class research each year, is all thanks to Blood Cancer UK's incredible community, many of whom are personally affected by blood cancer. Our shared goal is to beat blood cancer through research.

This research strategy sets out an overarching approach to our future research investment, and our short term priorities. These will always be guided by a focus on both impact, and what matters to people affected by blood cancer.

We will fund across a diverse portfolio, allowing us to take risks, respond to emergent opportunities and partner with others on common goals. This portfolio will include competitive project grant funding against a set of defined priorities.

We will also introduce a cross cutting scheme, that will allow us to support initiatives and research programmes across blood cancers.

Investing in partnership with other funders will facilitate greater impact from existing blood cancer research spend and bring new investment into blood cancer research.

Blood Cancer UK has had a strong track record in funding for early career researchers, and we will introduce a new fellowship scheme to support career development, to ensure the most talented researcher are supported to work in the blood cancer field.

“We need to give people good years on the clock, as opposed to just number of years”
Gordon Cook, Professor of Haematology & Myeloma Studies, University of Leeds



Our vision & mission

We're here to beat blood cancer, and research will get us there.

Over the last 60 years we have proved that blood cancer research saves lives, but now we need to finish the job. We need to discover more about how blood cancers evolve, develop, and are best treated. We need treatments with fewer side effects and better outcomes for people affected by blood cancer. We want a world where we can predict how a disease will progress, so that we can stop blood cancer in its tracks. Because the more we understand it, the more lives we can save.

Blood Cancer UK is the largest sole blood cancer research funder in the UK. Funding research which has an impact across all blood cancers is particularly important part of our strategy. Blood cancers are interconnected, as is the experience of people affected by blood cancer and the clinicians who treat them.

For example, chronic lymphocytic leukaemia (CLL) can transform to non-Hodgkin lymphoma and myelodysplastic syndromes (MDS) to acute myeloid leukaemia (AML). We know from previous discoveries that new treatments in one blood cancer go on to work in others, for example CAR-T.

“If cancer research were a comet, blood cancer research would be the brightest part at the leading edge. Many of the paradigm shifts in cancer research have come from research into blood cancer: chemotherapy, targeted therapies, monoclonal antibodies, CAR-T...etc”

Chris Bunce, Professor of Translational Cancer Biology, University of Birmingham

It is also true that developments in blood cancer have benefited other cancers and biomedical science. In blood cancer, we've identified the “cancer stem cell” responsible for generating a stream of cancer cells and causing drug resistance. Many cancer researchers across the globe are now trying to find treatments that target these cells.

As Blood Cancer UK we will always put what matters to people affected by blood cancer first. We are in a unique position to bring together our community including researchers and health care professionals to invest in the best quality science that will lead to the advances in treatment and outcomes. Because we're stronger together.



Why create a research strategy and why now?

We have a long history of investing in blood cancer research and a current grant portfolio worth around £40 million. This includes research projects, cell banks and clinical trials. This research has led to huge developments in our understanding of blood cancers, but we know that we need to do more if we're going to beat blood cancer within a generation.

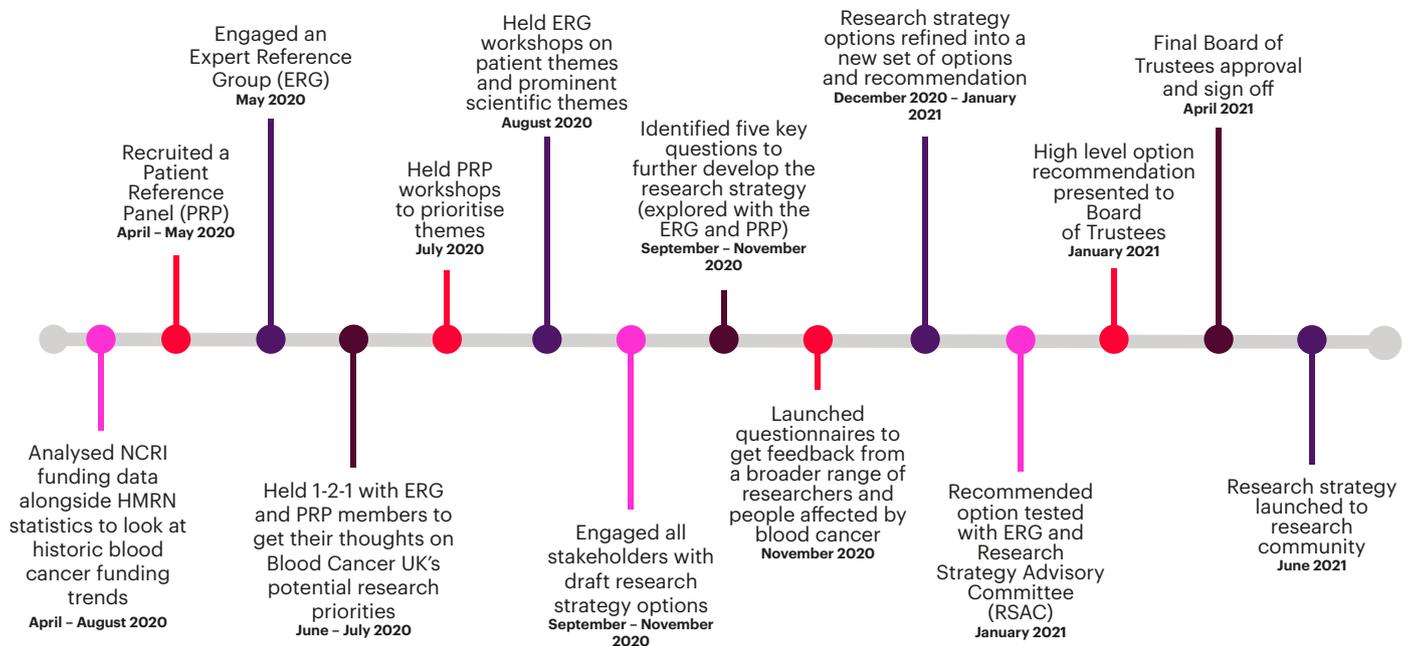
In recent years we've seen step changes in the way blood cancers are diagnosed and treated. For example, identifying key genetic switches has had a real impact on outcomes for people affected by blood cancer. Recent advances in technology mean we can now better analyse, understand and build on previous scientific discoveries, providing a platform for the acceleration of new treatments.

Through the development of the research strategy, we have identified areas of scientific opportunity where our focused investment will further accelerate research progress. This will also enable us to develop partnerships, so that we can ensure the best possible outcomes for people with blood cancer.

This work began before the current Covid-19 pandemic. But the pandemic is likely to have a long-term impact on research. In the short term, all funding organisations will have less to invest and sadly, some researchers are exiting the field as a result. Blood Cancer UK needs to protect and support our research community. But there are likely to be longer term changes to research in the UK after the pandemic, so we need an approach to funding research which is agile and flexible.



How we developed our research strategy

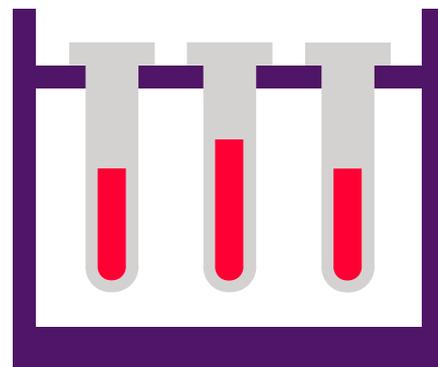


Over the last year, we've spoken to researchers and people affected by blood cancer to understand the top priorities and upcoming advances in research. Working collaboratively, we have developed a new strategy for our investment in research, one that we believe will accelerate the rate of progress so people with blood cancer can benefit sooner.

We brought together a group of people affected by blood cancer and a group of blood cancer researchers and clinicians for in depth discussions on potential priority areas for blood cancer research. We also ran online workshops to engage wider groups and ensure we received a diverse range of thoughts and opinions. We consulted broadly with the research community and people affected by blood cancer to ensure our decision making was grounded in the expertise of our communities.

"Nothing about us without us, to quote the well-known phrase. Being involved in this process has helped me understand just how important the patient voice is to Blood Cancer UK. We have been listened to at every step and it has been an intensely rewarding process to be part of."

Ally Boyle, diagnosed with myelodysplastic syndrome (MDS) in 2008



Our core strategic principles

Across our portfolio, Blood Cancer UK is committed to funding excellent quality scientific research that will improve our understanding of blood cancers, lead to the development of new treatments with fewer side effects and will ensure that more people survive. As a result of the research strategy development process, Blood Cancer UK will focus on doing five things:

1. Working in partnership

We will actively seek to work with other charities, industry and partners who share common goals, in the UK and internationally.

“Working in partnerships is so important to make the most of the funding available and achieve more for patients”

Irene Roberts, Professor of Paediatric Haematology, Oxford University

2. Driving innovation

Our researcher and patient community will continue to shape our priorities. Our funding approach will be agile to enable us to respond to emerging opportunities.

“No one can predict the course of research, and as a result researchers need an avenue for funding that allows them to present innovative ideas, which might in turn uncover something ground-breaking”

Tim Somerville, Professor of Haematological Oncology, Cancer Research UK Manchester Institute

3. Facilitating collaboration/ multi-disciplinary research

There are many complex challenges in blood cancer research that will require ideas and expertise from multiple disciplines. We know a collaborative approach will be important in making a step change for people affected by blood cancer.

“I’m currently in remission from Hodgkin lymphoma, and don’t know when to be worried. I live with the fear and worry of relapse.”

Ruchi Shrivastava, diagnosed with Hodgkin lymphoma in 2015

4. Putting people affected by blood cancer at the heart of research

People affected by blood cancer have guided the development of this research strategy and we will continue to ensure their voice is central to our research.

“Everyone’s blood cancer is their own, everyone’s experience is different.”

Katharine Harries, mother to Max, diagnosed with acute myeloid leukaemia (AML) at 3 months

5. Working collaboratively with researchers

We will continue to work with researchers to make sure our priorities are in line with new discoveries and will have the biggest impact on people affected by blood cancer. It is critical the very best people work on blood cancer research and so we will invest in careers.



Overview of our research portfolio

This diagram is a visual representation of our research portfolio. The relative sizes of each box represents the likely proportion of funding that will be allocated to this area. Further information on the timeline for implementation of each of these elements can be found on **page 11**.

Prioritised Grant Funding Scheme

Description: Applications will be considered by our funding committee of blood cancer research experts, leaders in their fields across a range of disciplines. Our decision making processes will also include people affected by blood cancer. Grants will be approved for funding where they demonstrate alignment with our priorities (page 9) and are of high scientific quality.

Rationale: Enables us to continue to fund high quality projects, whilst allowing for scientific innovation, but prioritising identified areas.

Early Careers

Description: Joint funding scheme with partner funder to support early career researchers.

Rationale: Support the future of blood cancer researchers, such as emerging group leaders.

Strategic Investment

Description: Investment in specific and strategic research opportunities that have the potential to transform the lives of people with blood cancer

Rationale: Blood Cancer UK is strategically positioned to connect donors and researchers.

Multidisciplinary Scheme

Description: One funding call per year for multi-collaborative applications.

Rationale: Encourages research across multiple blood cancers and supports collaboration and the formation of broader blood cancer research teams.

Funding Partnerships

Description: Blood Cancer UK will join with other funders to strategically combine funding in areas of specific need. Most recently, we have done this to support vaccine effectiveness research.

Rationale: Enables a specific scheme for partnership with other charities and funders, to encourage less duplication and target areas of need.

Our priorities for this year (FY 2021/22)

This year, we will focus on three areas of research investment, within our prioritised grant funding scheme.

1. Improving understanding of fundamental disease processes

including underlying areas such as disease origin, transformation, and relapse, so that we can better predict, and in the future prevent, blood cancer.

To continue making progress, we need to gain a deeper understanding of how and why blood cancer develops, evolves, becomes resistant to treatment, and returns in some patients. We need to understand more about the drivers of blood cancer such as blood cancer stem cells, the genetic basis of the disease and the mechanisms behind cancer progression. This research is a vital step in enabling us to develop new and more personalised treatment for people with blood cancer.

“I want to make a plea for basic biology, as there is still so much knowledge that is missing, knowledge which will in turn create improvements in diagnosis and treatment.”

Kate Robinson, follicular lymphoma patient

“As someone living with and being treated for CLL, there will always be a constant worry in my mind about my blood cancer transforming into Richter’s syndrome, a much more aggressive form of blood cancer, with few treatment options.”

Kieron Mayes, diagnosed with chronic lymphocytic leukaemia (CLL) in 2009

2. Improving treatment options for the individual

including personalised approaches and immunotherapies, resulting in improved survival with fewer side effects (due to less toxic treatments).

While many blood cancer treatments are successful in treating or controlling disease, many are toxic and can severely affect someone’s quality of life and leave them with long-term side effects. We need to change this. We also need to better predict who will respond and why to treatments.

We want to use the knowledge we develop of the basic biology (priority 1) to help develop more personalised treatments. This is important to ensure everyone is on the most appropriate treatment for them as soon as possible and allow for a more stratified approach, which will result in better outcomes, with as few side effects as possible.

“Living with cancer or post treatment means frequently being left with long term side effects. There are some life-threatening late effects such as secondary cancers, heart disease ...etc. But there are other life-affecting consequences like infertility, fatigue, joint pains, neuropathy, sexual dysfunction, the psychological impact, changes to appearance and self-confidence... many of which we often just have to live with and aren’t given the deserved attention”

Gillian Murphy, diagnosed with acute lymphoblastic leukaemia (ALL) in 2013

3. Developing novel approaches to the use of data

advancing our understanding through analysing large and rich data sets to facilitate benefits across blood cancers.

Data is vital to improving disease outcomes and connecting the dots across blood cancers. As data ever increases in complexity, so does its analysis. But through better analysis and linkage we can learn about similarities and differences between disease types. With this information we will be able to stratify treatment approaches or re-purpose drugs more efficiently.

We will encourage applications that consider the use of large and richly layered data samples and/ or those which will help inform other studies approach to data. This may involve applicants linking with existing data sources such as National Cancer Registration and Analysis Service (NCRAS), Haematological Malignancy Research Network (HMRN), or hubs like Health Data Research UK, making use of data already out there.

“I believe that data is and will be key to understand complicated issues when it comes to blood cancer. I would have no problems sharing my data if it could in turn help someone else in the future. I can only see benefits.”

Kieron Mayes, diagnosed with chronic lymphocytic leukaemia (CLL)

Inevitably, this also means that we will deprioritise some areas for funding.

Specifically, these are:

- Applications that do not demonstrate alignment to the themes outlined above.
- Applications that are not committed to consider involving or engaging people affected by blood cancer.
- Clinical trials, unless in partnership with other funders, or where there are limited other funding opportunities from for example industry.
- Further early careers support, such as PhD studentships.

In order to respond to an ever-changing scientific environment, we will review these priorities every 1 – 2 years. We will do this collaboratively with people affected by blood cancer and scientific experts.

“Big data is the future and could be key in pushing cancer research forward”
Iain Matthews, diagnosed with follicular lymphoma in 2016



Implementing our research strategy

This financial year

- One grant funding round, aligned to the priority areas set out above.
- Joint fellowship scheme with partner funder.
- Patient/ carer advisory panel set up, with members involved in reviewing grant applications (lay review) and Research Funding Committee processes.
- Deliver our current partnerships and nurture opportunities for new ones both nationally and internationally.

Next financial year

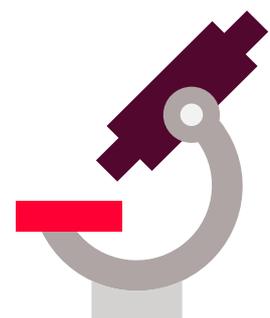
- Multi-disciplinary grant scheme set up and launched. Funding a small number of larger projects bringing together experts in multiple areas to drive innovation (e.g. in immunology, bioinformatics, data, epidemiology, clinicians, basic scientists... etc).
- Embed the voice of people affected by blood cancer in all our research processes and decision making.
- Put processes in place to facilitate collaboration between us and our researchers to ensure the priority areas remain relevant to the ever-changing research landscape.

From now onwards

- Work in partnership with other organisations, both in the UK and internationally, to remove duplication, share knowledge and focus on shared goals and ambition.
- Identify and address the inequalities that sit in and across research sector and within the research we may fund.
- Encourage and help our researchers to consider how they will involve and engage people affected by blood cancer in their work (through additions to all or applications forms).

“We are at risk of losing a generation of blood cancer specific researchers, who have ever diminishing avenues to turn to for funding, with those who cannot get funding turning to other research areas or leaving research altogether”

Adam Mead, Professor of Haematology, University of Oxford



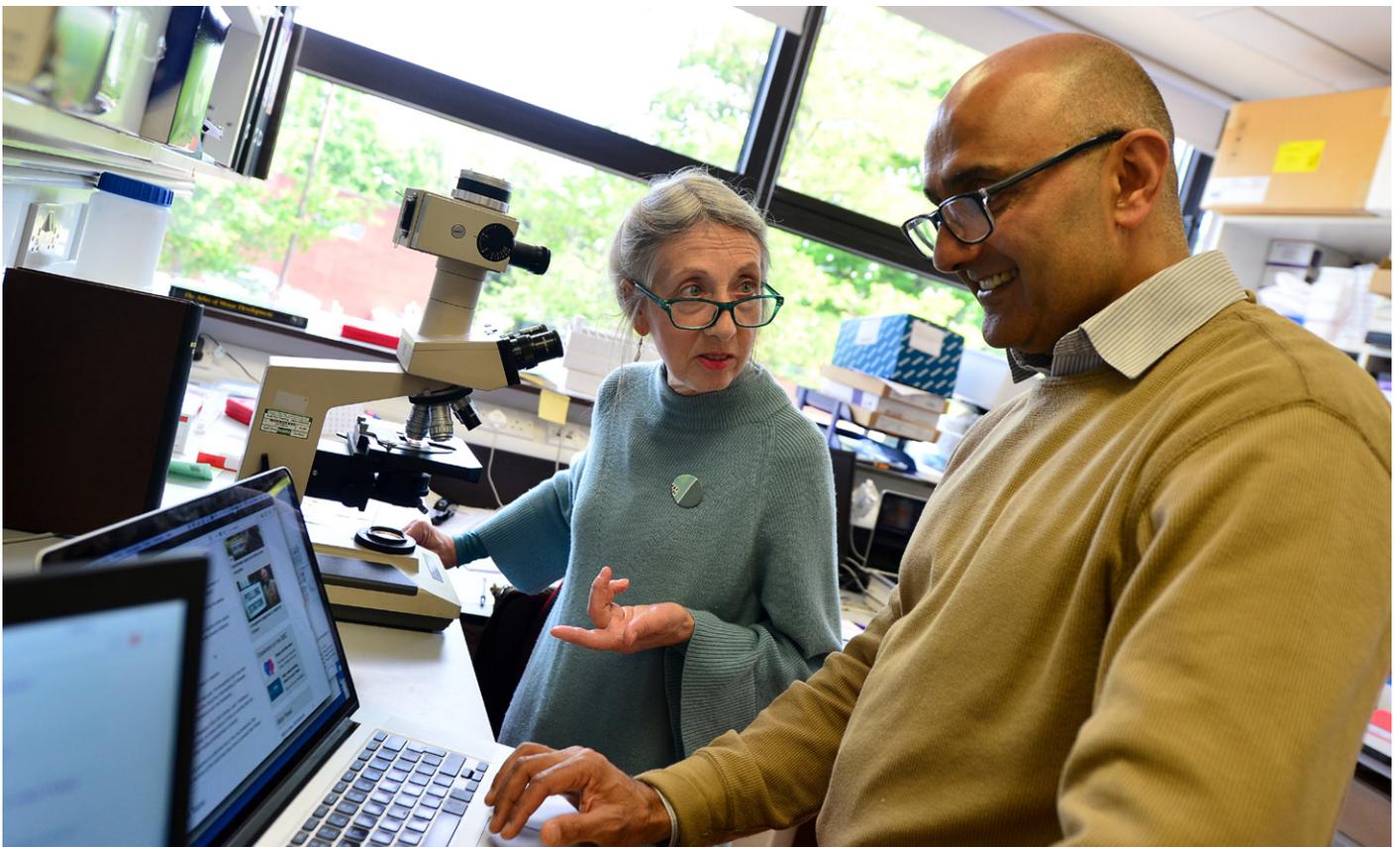
How will we know if we've been successful?

The Covid-19 pandemic has had a big impact on medical research charities, including Blood Cancer UK. Despite the financial impact of Covid-19, our vision of beating blood cancer within a generation is undimmed.

We expect to fund a minimum of £25 million in research over the next five years. Any further growth in our fundraising, will increase this total.

We will monitor and measure our impact and expect to see things such as:

- Discoveries leading to changes in survival rates of people diagnosed with blood cancer.
- Discoveries leading to new treatments being introduced.
- Discoveries enabling us to better predict/ understand relapse and transformation.
- Discoveries leading to changes in treatments that mean fewer side effects (both short and long term).
- Greater and better use of data.
- Patient & public involvement integrated across blood cancer research.
- New investment into blood cancer research.



How you can help?

If you are interested in funding research please contact the Partnership & Philanthropy Team by emailing philanthropy@bloodcancer.org.uk, or our Supporter Relations Team via phone on **0808 169 5155**, and a member of the team would be more than happy to assist you.

If you have any questions about the research strategy itself or are interested in applying for funding from Blood Cancer UK, please take a look at our website here or contact our research team by emailing research@bloodcancer.org.uk.

Thank you

We would like to express our gratitude and thanks to our Research Strategy Patient Panel Members: Ally Boyle, Tom de Young, Camilla Ferguson, Yvonne Gabriel, Katharine Harries, Sandra Hinds, Iain Matthews, Kieron Mayes, Annetta Mcintosh, Gillian Murphy, Kate Robinson, Ruchi Shrivastava, Tracy Stephenson and Gemma Whiting.

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And share thanks with our Research Strategy Advisory Committee (RSAC) members; Dr Jane Stevens (Committee Chair and Trustee), Professor Frances Balkwill (Trustee), Dr Doug Brown and Dr Andrew Hall, who have served as our independent advisors.



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