

# Finding the Key to the Cures A plan to end bowel cancer by 2050



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#### **About Bowel Cancer UK**

We are the UK's leading bowel cancer research charity. We are determined to save lives and improve the quality of life for all those affected by bowel cancer.

- We support and enable research
- We educate patients, the public and professionals about bowel cancer by providing expert information and training
- We campaign for early diagnosis and access to best treatment and care across the UK

Find out more at bowelcanceruk.org.uk

"I wish Laura was here to write this herself but she can't be. She died from bowel cancer in 2013, aged 31. Nine months after her diagnosis and four weeks after her wedding to her childhood sweetheart of 18 years.

We are totally lost without our beautiful Laura. To never be able to hear my daughter's voice again; to never feel her touch on my arm; never hear her laughter or to share her sense of humour and fun. It is unacceptable that bowel cancer continues to have a devastating effect on so many families like mine. If we don't act now, thousands more people like Laura will die in the future.

But this can be changed through investing in research and asking the right questions. In this report you'll discover what's needed to make this happen. We couldn't save Laura but we can save lives like my daughters in the future."

Lesley, pictured with daughter Laura on her wedding day





**Foreword** Deborah Alsina MBE, Chief Executive

Great progress in improving the lives of people affected by bowel cancer has been made over recent years, but we still have a long way to go.

Each year in the UK over 41,200 people are diagnosed with bowel cancer and 16,000 lose their lives. Between now and 2035, it's estimated that a further 332,000 lives could be lost to the disease. With so many lives needlessly being cut short, we cannot be complacent. This is simply not good enough.

'Finding the Key to the Cures' will help us accelerate bowel cancer research, taking us one step closer to our long term goal, that by 2050 no one dies of

We are committed to supporting and funding research that will prevent bowel cancer, ensuring people are diagnosed earlier and improving treatment, care and quality of life for everyone affected by the disease.

We know we can't do this alone, we need to come together to deliver real change. No one individual or sector can put an end to people dying – but together we are determined to stop bowel cancer.

Through targeted investment in research today, we can save lives tomorrow. Research is the key to finding the cures to bowel cancer.

**Deborah Alsina MBE** Chief Executive, Bowel Cancer UK

"'Finding the Key to the Cures' highlights the crucial findings of our landmark Critical Research Gaps Initiative. Over the last two years, leading healthcare professionals, scientists and individuals affected by bowel cancer came together to identify the key research gaps, that if addressed, would significantly impact the lives of all those affected by this common disease. Our report not only highlights those gaps, but also presents



a series of key research recommendations to address them. We've produced a unique roadmap for future research activity to drive forward the step change that is needed to stop this deadly disease."

Professor Mark Lawler, Lead Author and Chair in Translational Cancer Genomics, Centre for Cancer Research and Cell Biology, Queen's University Belfast

## The need for speed

The clock is ticking. Every day thousands of people are told they have bowel cancer. Around the world, bowel cancer is the second most common cancer in women and the third most common in men. Each year, there are 1.4 million new cases and 694,000 deaths, and the numbers are rising. In the UK, bowel cancer is the fourth most common cancer and second biggest cancer killer.

However, it shouldn't be.

The disease is preventable, treatable and curable, and there have been major advances in treatments and bowel cancer screening programmes in recent years. Despite this progress, we know we can't be complacent. The harsh reality is that every year 16,000 people lose their lives to bowel cancer in the UK. The scale of the issue will only grow larger. It's estimated that between now and 2035, around 332,000 more lives could be lost to the disease. Early diagnosis is critical to changing this, but the real problem is that it can be difficult to detect early.

Lives could be saved if we could diagnose people earlier, develop new and more effective treatments, and ensure everyone has access to high quality care. But there are still many unknowns that we urgently need to address to save lives. Research is key to this. The need for speed prompted us to take action to identify a plan to accelerate bowel cancer research.

#### **Our ambition**

We want to transform bowel cancer survival rates. By 2028, we want to see the number of people surviving at least five years increase from 60% to 75%. In today's numbers, this means a possible 6,200 more people surviving bowel cancer each year in the UK. This will take us one step closer to achieving our long term goal that, by 2050, no one dies of bowel cancer.

The major advances in saving lives from bowel cancer in the past 20 years have all come through research. Research really is the key to finding the cures for bowel cancer. Through strategic investment in targeted research, we will deliver improvements in bowel cancer survival in our lifetime. But to do this we need to know where best to direct our efforts.

#### In the UK:

## **Bowel cancer** is the second biggest cancer killer

16,000

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people lose their lives to bowel cancer

332,000

more lives could be lost to the disease between now and 2035

#### **About the Critical Research Gaps Initiative**

During 2015 – 2017 we brought together a diverse range of almost 100 leading clinicians, scientists, healthcare professionals and people affected by bowel cancer to identify critical gaps and priorities in bowel cancer research (The 'Critical Research Gaps in Colorectal Cancer Initiative'). We asked participants to consider four key questions:

- What are the key gaps in our knowledge and understanding of bowel cancer that have the most potential to improve patient outcomes?
- What research is needed to fill these gaps?
- What do you think would be the impact of filling them, especially for patients?
- What are the major challenges/barriers faced in filling these gaps?

By identifying these research gaps and determining the recommendations for next steps, the group were able to draw up a list of research priorities that have the greatest potential to benefit patients in the future.

'Finding the Key to the Cures' will inform and influence future research ideas, strategies and funding allocation. It will act as a catalyst for encouraging much needed collaboration. Ultimately, it will benefit many thousands of people in the future.

#### Finding the Key to the Cures

In December 2017, Gut (a leading international academic journal) published the outcomes of the Critical Research Gaps Initiative. The paper, 'Critical research gaps and recommendations to inform research prioritisation for more effective prevention and improved outcomes in colorectal cancer', sets out the future needs in bowel cancer research under nine key themes:

- **Discovery science**
- **Prevention**
- Early detection and screening
- Pathology: diagnosis prognosis prediction
- **Curative treatment**
- Stage 4 bowel cancer
- Living with and beyond bowel cancer
- Cross-cutting issues

In 'Finding the Key to the Cures' we set the current scene for each theme, outline the research gaps and provide recommendations for future research focus and direction.

There's a lot to do and we can't do it alone. We present here how we will be taking action to propel bowel cancer research forward and how you can help. No one individual or sector can stop people dying of bowel cancer, but together we can make a difference.



#### By studying the biology of bowel cancer, scientists have already:

- discovered important clues about what drives cancers to grow
- developed animal models that help us understand the different stages of human bowel cancer in greater detail
- recreated the 3D 'microenvironment' (the cells and tissue surrounding the tumour) of the bowel cancer tumour

#### What are the key research gaps?

#### What causes a healthy bowel to turn cancerous?

We lack ways to study in detail how the healthy bowel becomes cancerous and then progresses through the different stages of bowel cancer. Without this, future research into the development of new treatments to halt this process may be compromised.

#### The interaction between bowel cancer and its microenvironment

We need to better understand what role the tumour microenvironment plays in controlling and enabling bowel cancer cells. We know that in animal models, the microbes found in the gut seem to play a role in bowel cancer, but very little is known about how this affects bowel cancer in humans.

- We need to develop new laboratory models that mimic different stages of bowel cancer development and share them with the research community
- We need to better understand the relationship between the bowel cancer tumour and its microenvironment
- We need to discover the precise role the microbes in the gut (known as the microbiome) play in bowel cancer and how this can be exploited to improve outcomes

To spot cancers early, we need a better understanding of who may be at particular risk of developing the disease and to monitor them regularly and effectively. We need to understand all the individual components that work together to increase a person's risk of bowel cancer.

"My cancer spread because I wasn't tested for Lynch syndrome – a genetic condition that increases your risk of bowel cancer by up to 80% – until after my treatment started, which was always going to be ineffective for people with the condition. I should have been tested before my treatment was decided." Mo's whole family has been devastated

by bowel cancer because of Lynch syndrome



#### What do we already know?

#### Research has so far:

- identified several genes that are involved in bowel cancer risk and how patients will respond to treatment
- discovered links between lifestyle/environmental factors and bowel cancer risk
- revealed details about how genes and lifestyle/ environmental exposures work together to increase the risk of bowel cancer

#### What are the key research gaps?

#### What impact do our genes have on our bowel cancer risk?

Many genetic changes involved in bowel cancer risk remain unidentified. The interaction between the gut microbiome and our genes, and its impact on bowel cancer risk, is also very unclear. We need to better understand how genes affect a patient's chance of survival or their ability to respond to treatments.

#### How do our genes, lifestyles and the environment we live in interact with each other to affect our risk?

We don't know enough about the precise contributions of genetic, environmental and lifestyle factors to bowel cancer risk, and how they interact with each other to influence risk. If we could better pinpoint the influence of environmental exposures and lifestyle choices on bowel cancer risk, and the interplay between risk factors, we could develop better information for the public to help reduce their risk of developing bowel cancer.

#### There's a lack of robust data

At the moment, we don't have enough data from patients to support research into bowel cancer risk factors. We also need more robust data to help better predict how likely bowel cancer is to return after treatment and predict treatment related side-effects.

- We need large-scale research projects to discover the genes that drive bowel cancer in a diverse cross-section of society
- We need to develop the tools to unpick the precise relationship between genetic, environmental and lifestyle factors linked with bowel cancer risk
- We need bigger, more high quality research studies to help us better understand bowel cancer risk factors across whole populations of people. Studies should include patient samples, information about treatment success and side-effects

## Prevention

Our aim is to stop bowel cancer developing in the first place. It is estimated that nearly half of all bowel cancers are due to lifestyle factors. Adopting a healthier lifestyle could help stack the odds against the disease.



#### What do we already know?

#### Research has shown that:

- a higher Body Mass Index (BMI), eating a lot of red meat and processed meat, drinking alcohol and a lack of physical activity are all linked with increased risk of bowel cancer
- diets high in fibre are found to reduce the risk of bowel cancer
- changing the gut microbiome may play a key role in bowel cancer prevention
- calorie / dietary restriction has been shown to prevent bowel cancer in animal studies
- certain drugs, such as aspirin, can be effective in preventing bowel cancer

#### What needs to be done?

- We need to encourage bowel cancer prevention researchers to work more collaboratively
- We need long-term research projects that identify specific details about how prevention activities should be rolled out, including information on how it works, when best to do it, for how long and who is most likely to benefit
- We need to find out what's stopping people taking part in prevention activities or adhering to advice to ensure more precise and effective prevention strategies are developed
- We need to use individual risk information to develop more precise personalised prevention information

#### What are the key research gaps?

#### **Current efforts to prevent bowel cancer** lack a joined up approach

Bowel cancer prevention research is limited by the lack of integration between different prevention strands (e.g. screening, lifestyle, chemoprevention). We need a coordinated approach, involving expertise from different disciplines, to deliver effective 'real-life' approaches.

#### There's a lack of reliable long-term studies

Despite the clear influence of lifestyle factors on bowel cancer risk, there is a lack of studies providing information over the long-term. Many prevention studies are not robust enough to tell us exactly how they either prevent or promote the development of cancer. We need to know about these potential mechanisms in order to identify the most effective interventions. We also need to understand what's stopping people taking part in prevention activities or adhering to preventative support and advice.



- While many countries, including Scotland, use the faecal immunochemical test (FIT) in their bowel cancer screening programmes, the other UK nation screening programmes currently use the faecal occult blood test (FOBT). England and Wales have both committed to introduce FIT in the future. Both tests look for hidden blood in poo
- FIT is more reliable than FOBT because a person's diet and medicine use are unlikely to affect the results
- FIT can be modified to change the level (or 'threshold') of blood in a poo sample that triggers the need for further investigation. However, adopting a lower threshold can sometimes lead to more false positives (a positive test result when the person does not have any polyps or signs of bowel cancer) and increased pressure on diagnostic services
- Another test used to look inside the bowel, flexible sigmoidoscopy, has been shown to reduce the number of people diagnosed with bowel cancer and the number of people who die. Flexible sigmoidoscopy involves using a thin, flexible tube with a camera on the end to look inside the lower part of the colon and rectum. However, when used as part of the national bowel scope screening programme, there have been a number of organisational and resourcing issues

#### What are the key research gaps?

#### Which tests work best for the bowel cancer screening programme?

While colonoscopy for general bowel cancer screening is currently being examined in a number of clinical trials worldwide, we won't have data on its impact on survival for 10-15 years. When FIT is used in screening, the level (or 'threshold') of blood in a poo sample that triggers the need for a colonoscopy can be adjusted to make the test more sensitive and appropriate for available colonoscopy resource. More research is needed to help us understand how the test should be modified to help achieve more accurate results across different groups such as men, women and people of different ages.

#### We need a better system to decide which patients need further tests

People being able to quickly recognise and report the signs and symptoms of bowel cancer to their GP has increased the numbers of people receiving further tests for bowel cancer, but not increased the numbers of cancers detected earlier. We need to ensure people with symptoms, who need to be seen most urgently, are prioritised. We also need to understand how other data can inform individual bowel cancer risk, (e.g. age, gender, BMI), alongside screening tools. This would improve the accuracy of screening programmes and the assessment of people with early symptoms.

- We need to determine the optimal cut-off level of blood in poo (or threshold) for FIT
- We need to determine the role of other bowel cancer screening tests
- We need to explore how we can incorporate an individual's risk of developing bowel cancer to provide a more accurate screening result
- We need to use FIT and other tools to develop more accurate ways of assessing risk in patients who may have bowel cancer symptoms
- We need to develop new tests that could be used to diagnose bowel cancer for both the screening programme and in patients with symptoms



- Current research is exploring how biomarkers (any of the body's molecules that may be measured to assess a person's health) could help improve the accuracy of pathology reporting to help improve treatment choices
- While some biomarkers are becoming well established, others are just emerging and there are likely to be additional biomarkers that are yet to be discovered

#### What are the key research gaps?

#### What's the best way to group patients to help predict outcomes?

Currently, bowel cancer patients are grouped based on their likely prognosis, but this approach can be unreliable and only allows a rough estimate of survival. It is a major challenge for pathologists to increase the accuracy of how patients are categorised.

We need to better understand and predict which pre-cancerous polyps will go on to develop bowel cancer, which patients will see their bowel cancer return, how someone will respond to treatment and the likelihood of potential toxic side effects of treatment.

#### We lack qualified staff, consistency and training in biomarker research

Biomarker research in bowel cancer has so far lacked consistent and reliable results. Lack of technical training and qualified staff to test biomarkers and develop next-generation diagnostic tools has slowed progress.

- We need to understand more about the characteristics of pre-cancerous polyps and early stage bowel cancer tumours to help predict risk
- We need to develop new tools to help us predict which patients will see their cancer return and which will react poorly to certain treatments
- We need to use our evolving understanding of the bowel tumour and its microenvironment to improve analysis of patient samples and make sure methods are consistent across different **laboratories**
- We need to encourage collaboration and shared learning by bringing medical experts and healthcare professionals from various medical disciplines together to improve professional training and ensure a successful and sustainable pathology service for the future



#### To date, research has:

- · delivered advances in all areas of bowel cancer treatment, improving the quality of treatments that may cure the disease
- developed techniques, such as keyhole colorectal surgery, that have improved short term recovery at no expense to survival
- made great advances in understanding, implementing and optimising patient-centred cancer care
- investigated treatments that minimise side effects or enhance survival

#### What are the key research gaps?

#### We need to better understand risks and benefits of different treatment options

As more potentially curative treatments become available, we need to understand more about the long and short term effects of those treatments. While some patients with advanced disease may wish to try new treatments with major side effects, patients with very treatable disease may want options with a minimal impact on their quality of life, even though those treatments may be less effective. We need to work with patients to agree a balance between patient experience and survival.

#### We need more treatments with the potential to cure people

Treatments still need to be refined so that patients with currently incurable bowel cancer may, in future, be cured. All new surgical and radiotherapy treatments need robust evaluation to ensure that the most effective treatments are widely available to all.

- We need more research to help improve shared decision-making between patients and healthcare professionals about treatments that could potentially cure people of bowel cancer
- We need to establish the best interventions that are performed around, or at the same time as, surgery or other treatments, to achieve the best outcomes for patients
- We need to improve curative treatment options for patients with advanced bowel cancer, ensuring a balance between hope and chance of success
- We need to discover biomarkers that inform the most effective treatment strategy for every patient
- We need to develop methods to improve the evaluation of new curative treatment options



- Many more treatment options are available for stage 4 bowel cancer patients today, compared to 20 years ago and innovative techniques are increasing the chance of cure for many more patients who once may have been classed as incurable
- There have been major developments in bowel cancer surgery for those with advanced disease
- Our understanding of the role of bacteria and inflammation in the development of bowel cancer has progressed, but we need to understand more about how we can use the immune system to attack and treat bowel cancer more successfully

#### What needs to be done?

- We need to develop ways to identify which patients with stage 4 bowel cancer will most benefit from cutting-edge technologies
- We need to develop accurate biomarkers to help ensure that every patient gets the right treatment at the right time
- We need to develop innovative new treatments that target the tumour microenvironment

### What are the key research gaps?

#### The impact of surgery when bowel cancer has spread

We still don't know whether having surgery to remove the original tumour may in some way affect the behaviour of bowel cancer in those with metastatic disease. There is much variation in this type of surgery across the UK, and it is still unclear how best to select patients for these procedures.

#### We need biomarkers to help improve patient outcomes

There is currently a lack of biomarkers to help determine the best care options for stage 4 bowel cancer patients. To date, research into using the immune system to target bowel cancer has had limited success. The relationship between the gut microbiome, gut inflammation and cancer is complex, but key to understand if we are to improve the treatment of bowel cancer.

## Living with and beyond bowel cancer

More people than ever before are surviving bowel cancer, or living with it for many years. With many having complex ongoing needs, research is key to ensuring they receive the care they need, at the right time and in a way that's most appropriate for them.

"Although I've recovered from bowel cancer, the peripheral neuropathy in my feet from chemotherapy is life changing. I used to go walking in the Welsh hills every weekend but now the pain stops me from walking more than 150 metres at a time"

Julie was diagnosed with stage three bowel cancer a few weeks before her 60th birthday



#### Research has found that:

- there are a number of tools that assess quality of life in people living with and beyond bowel cancer. but very few healthcare professionals discuss survivorship issues regularly with patients and their families
- a high proportion of patients have troublesome and potentially disabling symptoms after surgery or radiotherapy for bowel cancer, which may have an impact on daily living
- doing more physical activity and eating healithy can have significant benefits for bowel cancer patients, but research on their impact following treatment or after bowel cancer comes back is limited

#### What are the key research gaps?

#### We need to better understand quality of life issues in people living with and beyond bowel cancer

There are still major gaps in our knowledge about how to improve quality of life for bowel cancer survivors. Relatively little is known about which aspects of treatment cause symptoms and how we can prevent, reduce or treat symptoms following bowel cancer treatment.

We need to improve our knowledge of the psychological consequences and social challenges for those living with and beyond bowel cancer. We also need research to inform survivorship care guidelines and tools to aid discussions between healthcare professionals and bowel cancer survivors.

- We need to better understand quality of life issues in bowel cancer; what causes them, how people are affected, how to manage the issues and how to support individuals
- We need to identify what causes symptoms following bowel cancer treatment and develop options to manage them effectively
- We need to further explore the benefits of physical activity, healthy eating and other lifestyle changes for people living with and beyond bowel cancer
- We need to conduct research to help with appropriate care planning and promote shared decision-making for people living with and beyond bowel cancer

## Cross-cutting issues

Common across all areas of bowel cancer research is the need for experts to collaborate more widely, and find ways to improve communication between professionals, patients and the public.

"Like many other people desperately trying to gain some control over their situations, I turned to Google and support forums for answers but it shouldn't have to be this way. Our health service should give us reliable and accurate information "

Stacey, a mother of two and carer for her partner Greg, who has advanced bowel cancer



#### What do we already know?

- Bowel cancer research is moving at a tremendous pace, delivering more advanced and complex interventions involving a variety of approaches and requiring wide-ranging expertise
- While a multidisciplinary team approach delivers optimal care to bowel cancer patients, we don't always achieve this in research
- Addressing communication issues is essential for making sure that the public, bowel cancer patients and survivors receive high quality, appropriate information. It will also encourage shared decision making about care

#### What are the key research gaps?

#### Bowel cancer research and the way it's funded lacks coordination

We need to bring together the diverse expertise that is increasingly required to answer some of the complex research challenges in bowel cancer. Linking experts from across disciplines, such as biologists, statisticians, pathologists, and clinical experts, would help to address the critical questions. Funding bodies must also find ways to collaborate in targeting their limited funds towards areas of specific research needed in bowel cancer.

#### We lack effective communication strategies between healthcare professionals and people affected by bowel cancer

We still need research to address distinct challenges around bowel cancer communications and awareness of bowel cancer risk factors, potential prevention options, and the benefits and risks associated with treatments. Patient Reported Outcome Measures (PROMs) refer to questionnaires that capture a patient's health status or health-related quality of life at a single point in time. They play a key role in identifying specific communication needs, but there are significant variations in how they are measured and used, limiting their usefulness. We also need a better understanding of why bowel cancer patients do or don't participate in research trials, to help improve recruitment and design trials more acceptable to patients.

- We need to establish a national, multi-disciplinary bowel cancer research conference, that draws together representatives from the bowel cancer community
- We need to fund research that addresses research gaps and encourage collaboration between complementary funding organisations
- We need to develop tailored information materials and shared decision-making tools, to support individual choice
- We need to establish the most appropriate communication strategies for explaining risk and benefit and identify approaches to best measure quality of life
- We need to create tools to enable data sharing and maximise benefits for bowel cancer researchers, patients and society

It's time for action. The Critical Gaps Research Initiative is a roadmap to improve the prevention, diagnosis and treatment of bowel cancer.

We can't do this alone.

We need your help.

We need strategic investment in high quality research, shared learning and expertise and greater collaborative efforts.
We are determined to deliver improvements in bowel cancer survival in our lifetime.

## Changing the future of bowel cancer

#### What are we going to do to address the research gaps?

We are committed to ensuring we support, enable and fund the highest quality research, with the greatest potential to benefit all those affected by bowel cancer. We know we need to lead by example. We're determined to establish a strong research agenda, enable patients to influence and shape the future of bowel cancer research, build future research capacity and facilitate collaboration across the bowel cancer research community.

#### We will champion research

Following extensive consultation with leading research experts, those affected by bowel cancer and informed by the Critical Gaps Research Initiative, we've chosen four key priority areas of focus for the next five years.

- **T** To improve the prevention, early detection and treatment of bowel cancer, with particular
- i. identifying ways of preventing bowel cancer
- ii. improving bowel cancer screening iii. understanding and identifying people at high
- risk of bowel cancer
- iv. understanding bowel cancer in the under 50s
- v. ensuring best treatment and care for all bowel cancer patients
- To enable patients to influence and shape **L** the future of bowel cancer research
- To assist and facilitate high quality bowel **cancer research**; building the UK bowel cancer research capacity and helping to identify future research leaders
- To facilitate collaboration and cooperation across the bowel cancer research community

We will be allocating grants to both small pilot projects that explore new, innovative research ideas and to larger projects that explore more developed ideas. Through strategic investment in targeted research, we will deliver improvements in bowel cancer survival in our lifetime. To find out more about our research strategy visit our website: bowelcanceruk.org.uk

#### We will stimulate collaboration

The bowel cancer research community needs to work more closely together to maximise progress. Greater cross-disciplinary working is needed to drive high quality research and promote the sharing of expertise. To support this, we will establish and deliver a multi-disciplinary bowel cancer research conference that draws together representatives from across the bowel cancer community. Our conference will showcase a wealth of research from across the bowel cancer continuum and bring together clinicians, scientists and healthcare professionals to debate and discuss the challenges and opportunities for bowel cancer research.

Collaboration between funding bodies is also required if innovative bowel cancer research studies are to be supported appropriately and in a timely fashion. We are committed to exploring opportunities to develop collaborative research grants with complementary funding organisations.

#### We will increase capacity

We are determined to provide funding opportunities that help retain and develop talented academics in bowel cancer research. This is particularly important for surgical research. Surgery is the most common treatment for bowel cancer and central to curing the disease, yet investment in surgical research is woefully inadequate, with very few clinical trials in the UK focused on surgery.

We will continue to cultivate our ongoing partnership with the Royal College of Surgeons of England, which will see a continued investment in surgical research.

We will seek out other opportunities to facilitate capacity building in bowel cancer research and, over time, we will look to develop additional funding schemes that are aimed at supporting clinical and scientific researchers at all stages of their bowel cancer research career.

#### We will develop a patient advocacy network

We will develop a patient advocacy network to enable people closely affected by the disease to engage in and influence research carried out around the UK to ensure it is focused on improving outcomes for patients.

By drawing on existing resources and good practice in patient and public involvement (PPI), we will create a PPI strategy and training programme to develop a strong network of patient advocates for research.

We will also work with the bowel cancer research community to ensure patients are consulted in the design and implementation of research projects.

In our own research programme, we will ensure that patients are involved in grant funding processes by implementing a Lay Review Panel who have representation on our Scientific Advisory Board.

## What you can do to help

We also need you to be a catalyst for change and help us to impact thousands of lives in the future.



Take part in research



**Share your story** to help raise awareness



**Fundraise for us** so that by 2050 no-one dies of bowel cancer



Take action on our campaigns to help improve early diagnosis and access to best treatment and care



**Join our Patient Advocacy Network** 



**Donate and support** the future of bowel cancer research

### Visit bowelcanceruk.org.uk to find out more

### Acknowledgements

We wish to thank all the people affected by bowel cancer, healthcare professionals and experts who kindly gave their time to provide insight into bowel cancer research priorities.

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Bowel Cancer UK is the UK's leading bowel cancer research charity. We are determined to save lives and improve the quality of life for all those affected by bowel cancer.

We support and enable research, educate patients, public and professionals about bowel cancer and campaign for early diagnosis and best treatment and care for all those affected.

Find out more at bowelcanceruk.org.uk



