Because you’re amazing...
You’ve made our pioneering research possible...

In 2018/19

1,000,000+ people gave us a regular donation

40,000 volunteers donated millions of hours of time

£189m gifted by supporters leaving donations in their Wills

300 campaigners influenced their politicians to support better cancer policies

9,000 patients took part in our clinical trials

£25m total announced by the Stand Up To Cancer TV show

521,000 participants in our events and fundraising activities

£90m spent by people purchasing goods from our shops

Your generosity means that...
We’re helping more people survive cancer than ever before …

We’re preventing cancer
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We’re spotting cancer earlier
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We’re developing new treatments
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We’re improving existing treatments
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We’re revolutionising our understanding of cancer
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We’re funding research into almost every type of cancer
Page 12

Our vision
1 in 2 people will get cancer in their lifetime*. Our vision is to bring forward the day when all cancers are cured and, thanks to you, we’re accelerating progress towards our ambition of 3 in 4 people surviving cancer by 2034.

3 in 4
(*born after 1960)

Find out more at cruk.org
Thanks to you...

We’re preventing cancer

Around 4 in 10 cancer cases in the UK could be prevented. We’re working to help people reduce their cancer risk through cutting-edge research, world-class health information and by influencing government policy.

Evidence suggests that banning junk food adverts before 9pm should have a big impact on obesity

Restricting junk food advertising

Being overweight or obese is the biggest preventable cause of cancer in the UK after smoking. We’ve been raising awareness of the link between cancer and obesity, and campaigning for the UK Government to do more for a long time. Last year, a plan it laid out to halve childhood obesity by 2030 included our recommendation to ban junk food adverts before the 9pm watershed. Evidence suggests that this should have a big impact on obesity.

But it isn’t a done deal. The UK Government has gathered opinions on what the restrictions should look like and has promised to respond by the end of 2019.

“I was surprised to find out that obesity is such a big cause of cancer” says Holly Dowler, 29, whose family history of cancer has encouraged her to lose seven stone. “I thought, let’s not give cancer any more chances with me.”

Helping those with cancer that runs in the family

This year we’ve launched a new £4.2m project, led by Professor Clare Turnbull from the Institute of Cancer Research in London. The project hopes to improve our understanding of how inherited genetic changes increase the risk of cancer, and how to communicate what people’s test results mean.

She says: “We want to ensure people having genetic testing are given the most accurate information about their cancer risk and subsequent options.

“We’ll help them make the best choice for them about screening that can pick cancer up early, or drugs and surgery that could help prevent it.”
New breast cancer risk calculator

Breast cancer is the second most common cause of cancer deaths in UK women. But with nearly a quarter of cases thought to be preventable, there’s more we could be doing to stop the disease developing.

Our scientists have created the most comprehensive method yet that aims to predict a woman’s risk of breast cancer. They have combined information on family history and genetics, including more than 300 inherited genetic indicators, with other factors such as weight and alcohol consumption.

Now it’s been turned into an online calculator and is being tested by a group of GPs to see how it might work in their surgeries.

In the future, tools like this have the potential to encourage conversations about what people can do to reduce their risk of developing the disease. They could also guide decisions for those at high-risk about preventative treatments or even help tailor the breast cancer screening programme.

Preventing cancer in people with high-risk conditions

Barrett’s oesophagus is a rare condition where cells lining the oesophagus change because of acid reflux, increasing the risk of developing oesophageal cancer.

Liz Chipchase, 71, discovered she had Barrett’s oesophagus while taking part in our trial of the Cytosponge, a diagnostic test which uses a sponge attached to a string to collect cells from the lining of the oesophagus. She was subsequently found to have cancer, which was treated early. “Oesophageal cancer survival isn’t good, so the fact I am clear of cancer is fantastic,” she says.

Now our researchers are looking for more ways to prevent people with Barrett’s oesophagus from developing oesophageal cancer.

Professor Janusz Jankowski leads our AspECT trial, which this year found that taking anti-reflux medication, together with aspirin, could be a way to prevent the development of early preventable oesophageal cancer in people with Barrett’s oesophagus.

Professor Janusz Jankowski

£36m spent on ongoing research into the causes and prevention of cancer

Oesophageal cancer is hard to diagnose and hard to treat, so these results are very exciting.”

Professor Janusz Jankowski

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Professor Janusz Jankowski

Did you know?

Over the last 40 years, Cancer Research UK's work has helped double breast cancer survival.

Find out more at cruk.org/prevent

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Oesophageal cancer is hard to diagnose and hard to treat, so these results are very exciting.”

Professor Janusz Jankowski

Find out more at cruk.org/prevent
With your help...

We’re spotting cancer earlier

Diagnosing cancer at an earlier stage gives people the very best chance of survival. We’re working hard on all fronts to make early diagnosis and treatment a reality.

Helping GPs diagnose cancer sooner

GPs play a vital role in diagnosing cancers by recognising the signs and referring people for tests.

Laurel Johnson, 63, was diagnosed with oesophageal cancer after seeing her GP with worrying symptoms.

She says: “I went from having a sore throat and feeling unwell, with hot and cold spells, to being unable to even swallow my own saliva without gagging. I was losing weight fast and knew something was very wrong. I wouldn’t be here if it wasn’t for the medical care I received.”

We worked with over 2,000 GP practices last year to help them spot cancer earlier.

One of the ways we do this is by developing popular resources that summarise cancer referral guidelines and make them accessible in a range of formats.

Dr Ben Noble, a Cancer Research UK lead GP in Loughborough, has joined forces with his dad Patrick, a retired computer programmer, to help speed up cancer diagnosis. Together, they’ve created a mind-mapping tool to help GPs navigate cancer referral guidelines during consultations.

These interactive maps cover different organs of the body and guide GPs through recommended steps, such as when to send someone for a scan and when to make an urgent referral.

Dr Noble explained: “Cancer diagnosis and referral is complex and requires GPs to keep abreast of a great deal of information. I realised it lent itself perfectly to mind-mapping.”

9 out of 10 GPs who piloted the mind maps said they felt more confident about making cancer referrals and they’ll soon be rolled out to surgeries across England.

2,000

We worked with over 2,000 GP practices last year to help them spot cancer earlier
Detecting pancreatic cancer earlier

Research has shown that around half of people with pancreatic cancer also have new-onset diabetes, and that this diabetes precedes the pancreatic cancer diagnosis by about 12 months*.

Professor Eithne Costello and her Cancer Research UK-funded team want to see if it’s possible to detect pancreatic cancer at the same time as diabetes is diagnosed in this high-risk group.

They’ll soon start to recruit people with new-onset diabetes and will follow them to identify the early signs of pancreatic cancer.

The team hope to develop a reliable and cost-effective diagnostic test so that more cases can be diagnosed early.

*Even with an increased risk, the vast majority of people with diabetes won’t go on to develop pancreatic cancer.

The importance of early diagnosis

It’s now more than a decade since Joe Suckling, 61, was first diagnosed with lung cancer, a disease for which 10-year survival remains low at only 5%.

He says: “I had developed a cough that got worse and worse. It took a few visits to the GP before I was referred to see a consultant. Fortunately, I was able to get an appointment a week early and I think that may have saved my life.”

He adds: “In many cases, lung cancer is diagnosed when it’s too late. I was lucky because I was diagnosed when there was still time to do something about it.”

£61m spent on research into detecting, diagnosing and monitoring cancer

In the last 40 years lung cancer death rates in men have dropped by nearly 60%
We’re developing new treatments

We’re developing a new generation of more effective treatments and making sure they reach people who need them as quickly as possible.

Engineering viruses to target cancer

Dr Alan Parker and his Cancer Research UK-funded team at Cardiff University are modifying adenoviruses, normally responsible for coughs and colds, so that they target and kill cancer cells.

Dr Parker says: “In cancer treatment, up until now, reprogrammed viruses have not been able to target only the cancer cells and would also infect healthy cells, resulting in unwanted side effects.”

But the team has tested their modified virus in the lab on ovarian cancer cells that are resistant to traditional chemotherapy, and Dr Parker says: “We’ve shown that this engineered virus has the ability to destroy tumour cells, leaving healthy tissue unharmed.”

Next, the team hope to test the technique on other types of cancer they think it could also be effective against, such as pancreatic and aggressive breast cancer.

Revolutionising brain tumour treatment

Brain tumours are one of the hardest types of cancer to treat because not enough is known about what starts and drives the disease, and current treatments are not effective enough.

Last year we launched two Brain Tumour Centres of Excellence in the UK. These hubs of expertise are a collaboration between researchers at the University of Cambridge and the Institute of Cancer Research in London, and the University of Edinburgh and University College London.

In June 2019, in partnership with The Brain Tumour Charity, we awarded £18 million to three international, multidisciplinary teams to break new ground in the way we understand and treat brain tumours.

Teams will focus on the most aggressive kind of brain tumour, called glioblastoma, as well as children’s brain tumours.

Brain tumours are a priority for our research strategy, and as part of that commitment, we’re investing an extra £25 million into brain tumour research by 2022.

£85m spent on research into understanding cancer biology
Using new drugs to help more people

PARP inhibitors are a type of drug developed by our researchers to treat women with breast and ovarian cancer who also carry a high-risk BRCA gene.

Renata Stec, 39, was diagnosed with ovarian cancer in 2016. Despite surgery and chemotherapy treatment, her cancer returned.

Renata was offered a second operation, but instead joined a clinical trial of a PARP inhibitor called olaparib combined with another drug, durvalumab.

She says: “I didn’t want surgery again because I don’t have family nearby to look after me. Olaparib is a tablet so I can take it at home.

“My tumours have shrunk to almost nothing, so I am very happy to be on this clinical trial.”

Many women like Renata are already benefitting from olaparib. This year, new research has shown that PARP inhibitor drugs could also be effective for treating prostate and pancreatic cancers, suggesting that many more people could benefit from these drugs in the coming years.

Improving treatment for leukaemia

Acute lymphoblastic leukaemia (ALL) is a type of blood cancer that affects both adults and children.

Many people with ALL are cured with chemotherapy. But as Dr Tobias Menne, from Newcastle upon Tyne Hospitals NHS Foundation Trust, says: “At the moment the treatment options are limited for people whose ALL has returned following standard therapies.”

Now, Dr Menne and his Cancer Research UK-funded colleagues are investigating whether a combination of two drugs – dexamethasone and selumetinib – could benefit children and adults with ALL that has returned after multiple treatments.

David Amaechi was treated for ALL when he was just three years old. Now aged 14, he’s been in remission since his treatment ended.

His mum Sandra says: “We are so thankful that there were treatments out there for David when he needed them.”

Did you know?

Cancer Research UK’s research has played a role in developing 8 of the world’s top 10 cancer drugs.

Find out more at cruk.org/our-research

Renata Stec

“My tumours have shrunk to almost nothing.”

Sandra Amaechi

“We are so thankful that there were treatments out there for David when he needed them.”

David Amaechi
It’s thanks to you...

We’re improving existing treatments

We need to get the most out of treatments we already have, making them kinder and better suited to the needs of individual patients.

We’re improving existing treatments

Improving children’s quality of life after cancer

Children and young people with cancer can often experience long-term side effects as a result of their treatment. For instance, the chemotherapy drug cisplatin has made a big impact on survival, but it can leave children with hearing loss.

This year, our SIOPEL-6 trial showed that a cheap, readily available drug called sodium thiosulphate can reduce the risk of hearing loss by up to 50% in children given cisplatin chemotherapy.

Luke Everett was part of the trial. He was diagnosed with hepatoblastoma – a rare type of liver cancer – when he was just six months old.

Luke was a baby when he was diagnosed and if he had suffered hearing loss at that age, it would have had a huge impact” says his mum, Claire.

“He is still having two-yearly checks for hepatoblastoma, but a recent hearing check confirmed he has normal hearing in both ears. Luke is 12 now and he loves gymnastics – he trains 24 hours a week and has become regional under-12 champion.”

Kevin Webber

Ground-breaking studies like STAMPEDE give people hope, and that’s priceless when you have advanced cancer.”

Kevin Webber

Boosting survival for men with prostate cancer

Prostate cancer is the second most common cause of cancer deaths in men in the UK.

This year, we’re celebrating another practice-changing finding from our ongoing STAMPEDE prostate cancer trial. Researchers have shown that adding radiotherapy to treatment for some men with advanced prostate cancer could improve survival by around 11%.

Kevin Webber, 54, participated in the trial. He said: “I discovered I had prostate cancer in November 2014 and was given a prognosis of as little as two years.

Kevin Webber

Luke was a baby when he was diagnosed and if he had suffered hearing loss at that age, it would have had a huge impact” says his mum, Claire.
Now, Dr Jean Abraham and the Cambridge team are running the Personalised Breast Cancer Programme to test whether this information can help match individual patients with treatment that may work best for them.

Catharine Scott, 51, was treated for breast cancer as part of the study. Her test results showed she was likely to benefit from a PARP inhibitor drug called olaparib.

The PARTNER trial is testing whether adding this drug to standard chemotherapy can help women with an aggressive form of breast cancer.

She says: “I had always thought breast cancer was breast cancer. I hadn’t realised there were different types and it was a relief to get the treatment that was right for me. I feel lucky that I’m still here, but I know that not everyone is as fortunate. That’s why we need to keep going with research.”

Tailoring treatment to different types of breast cancer

In 2012, our scientists, led by Professor Carlos Caldas, redefined breast cancer when they found that it was at least 11 different diseases. And this year, they took this work further. They showed how different DNA faults define how breast cancers behave, including how likely tumours are to respond to treatment or come back after surgery.

Did you know?
Cancer Research UK was a key player in the development of radiotherapy, which now benefits more than 130,000 patients every year in the UK.

Find out more at cruk.org/optimise-treatments
Because of you...

We’re revolutionising our understanding of cancer

In January 2019, we announced funding through our Grand Challenge awards for three new international teams who are tackling some of the biggest questions in cancer research. Our most ambitious research award to date, Grand Challenge was set up to revolutionise our understanding of cancer.

Could gut bacteria help treat bowel cancer?

Our body is home to trillions of bacteria that together are known as the microbiome, with the majority living in the gut. Research suggests that these communities play a role in how some cancers develop or respond to treatments.

Headed up by Professors Matthew Meyerson and Wendy Garrett, a team of international experts has joined together to find out more, starting by investigating the link between gut bacteria and bowel cancer risk.

The team will analyse samples from more than 17,500 people with cancer, studying how particular species of bacteria might affect tumour development and growth. They also hope to unpick how the gut microbiome might change the way cancers respond to treatments like immunotherapy and chemotherapy.

How does inflammation cause cancer?

Inflammation is one of the body’s most powerful weapons in preventing infections and repairing injuries, but it can also cause collateral damage. For people with long-term inflammatory conditions, this damage can be irreparable and sometimes leads to cancer.

Now a team of researchers, led by Professor Thea Tlsty, have won Grand Challenge funding to understand precisely how these tumours develop.

They’ll use sophisticated imaging techniques to see how particular cells change in the oesophagus, colon and stomach, and by understanding the link between inflammation and cancer, they hope to find ways to block or reverse the process.

17,500 patient’s samples will be analysed to study how particular species of bacteria might affect tumour growth
Why do certain faulty genes only cause cancer in some parts of the body?

Although faulty genes are a common thread across cancers, some faults only cause cancer in certain parts of the body. Faults in a gene called APC can cause bowel cancer, for example, and another gene called BRAF goes wrong in around half of melanomas.

To find out why, Professor Stephen Elledge, from the Brigham and Women’s Hospital, Harvard Medical School, has teamed up with other researchers in the US, UK and Netherlands. With a Grand Challenge award, the researchers will map out where in the body certain faults help cancers grow.

Professor Owen Sansom, part of the team and Director of the Cancer Research UK Beatson Institute in Glasgow, says: “We hope to uncover the reason why we see a particular gene mutation in bowel cancer but not in skin cancer. Finding the answer might help us protect people from developing bowel cancer.”

Find out more at cru.org/grand-challenge

£60m

funding committed to three new Grand Challenge teams over the next five years

“What’s special about Grand Challenge is not just the amount of money, but the type of research that’s being funded. It supports areas of research that ask the big questions about cancer.”

Margaret Grayson
In 2018/19, we spent £442m on new and ongoing research projects.

- **Research administration and support costs:** £40m
  - Including costs incurred to support our research activity, such as peer review, grant management, IT and other support costs.

- **Specific cancer types:** £188m
  - Research projects focused on specific types of cancer.

- **Revenue shares:** £50m
  - A share of royalties from sales of innovations developed from our research, which we pass on to others involved in that research.

- **Basic research:** £85m
  - Research into understanding the fundamental biology of cancer.

- **Research relevant to all types of cancer:** £79m
  - Including infrastructure like our research Centres and investments that help to support research programmes, projects and clinical trials.

- **Specific cancer types:** £188m
  - Research projects focused on specific types of cancer.

This year we spent £442 million on research activity, including £188 million on specific cancer types.

Our vision is to bring forward the day when all cancers are cured, from the most common types to those that affect just a few people. We receive no government funding for our life-saving research.

Did you know?
For every £1 we receive from donations, investments, and royalties and grants, 82p is available to beat cancer.*

* We don’t count our shops in this calculation. For more information, see our 2018/19 Annual Report & Accounts at cruk.org/our-accounts.
Since 2017/18 we’ve changed the way we report on our expenditure. Find out more in our 2018/19 Annual Report & Accounts at cruk.org/our-accounts.

Questions about cancer? We’re here to help

About cancer
For world-class information on over 200 different cancer types, from symptoms to coping with treatment, visit cruk.org/about-cancer.

Cancer Chat
Join our fully moderated online community to share experiences and seek support from others at cruk.org/cancer-chat.

Nurse helpline
Speak to one of our friendly cancer nurses in confidence by calling freephone 0808 800 4040.

Share your thoughts
We want to keep improving the way we communicate with supporters. To tell us what you thought of this update please visit cruk.org/our-year-survey.
Thanks to you

Our life-saving research continues…

Discover more at www.cruk.org

Together we will beat cancer