

Cancer in the UK Overview 2024



About this report

Reference

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Comments, questions or feedback should be sent to stats.team@cancer.org.uk

About Cancer Research UK

We're the world's leading cancer charity, dedicated to saving and improving lives with our research, influence and information. We fund research into the prevention, detection and treatment of more than 200 types of cancer, through the work of over 4,000 scientists, doctors and nurses.

In the last 50 years, we've helped double cancer survival in the UK and our research has played a role in around half the world's essential cancer drugs. We want to bring about a world where everybody lives longer, better lives, free from the fear of cancer. And we're achieving this by funding the world's best scientists, carrying out cutting-edge research that saves and improves lives every day.

Our values

Our values help guide our behaviour and culture in an ever-changing world, building on the best of what we do today and what we aspire to be in the future. They unite and inspire us to achieve our ambitious plans and our mission of beating cancer, together.

Our values are:











Cancer Research UK is a registered charity England and Wales (1089464), Scotland (SC041666), the Isle of Man (1103) and Jersey (247).

Foreword



Michelle Mitchell OBE Chief Executive of Cancer Research UK

The UK has made huge progress in improving cancer survival over the last 50 years. But cancer remains the defining health issue of our time.

The challenge is only growing. Cancer incidence is rising. By 2040, the number of new cancer cases is projected to increase by around a fifth, meaning around half a million new cases diagnosed each year in the UK.

Right now, too many people are losing their lives to cancer. The disease remains the leading cause of death in the UK, causing 25% of all deaths, and cancer survival in the UK lags behind comparable countries. Despite the tireless efforts of the NHS, people living with cancer in the UK are also facing unacceptable waits to be diagnosed and treated. This cannot continue.

There are many opportunities to tackle these challenges and many reasons to be hopeful. We are in a golden age of cancer research. Decades of research by scientists and clinicians in the UK and around the world has led to many important discoveries and greatly increased our understanding of cancer. But we need to go further and faster on cancer to save more lives, more quickly.

The UK Government needs to back life-saving cancer research in the UK by delivering long-term, sustainable research funding. End cancers caused by smoking, the leading cause of cancer. Implement proven measures to increase earlier diagnosis of cancer. End the long waits for diagnosis and care currently facing cancer patients across UK.

To achieve this, we need strong political leadership. "Longer, better lives", our manifesto for cancer research and care, sets out the immediate and long-term measures the UK government can take to reduce cancer mortality rates by 15% by 2040 – preventing 20,000 cancer deaths every year. In England, the Prime Minister should publish a long-term cancer strategy, and establish a National Cancer Council to drive cross-government action on cancer. In Scotland, Wales and Northern Ireland we need to see funding to drive the implementation of cancer strategies and plans, and the rollout of proven interventions we know will make a real difference to the early diagnosis of cancer such as targeted lung cancer screening. We need vision and ambition right from the top of government to see the change people affected by cancer so desperately need.

The road ahead is not easy. However, if we seize the moment, we can bring about a future where everybody lives longer, better lives, free from the fear of cancer.

Michelle Arther

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Introduction

This annual report summarises key metrics and data across the cancer pathway, including prevention, earlier diagnosis and treatment. It looks at where progress is being made and what challenges remain in the UK.

Throughout this report, illustrative examples are given from the four nations of the UK, but similar patterns exist across all UK nations. Where possible, UK-wide data is presented, or data from each UK nation. However, not all UK nations report on all metrics included in this report, or in some instances different approaches mean data is not directly comparable.

The purpose of this report is to present an up-to-date overview of cancer in the UK. As such, this report is not assessing the impact of COVID-19 on metrics across the cancer pathway. Changes to collection of data during the pandemic, or temporary changes in access to health services or people's behaviour, mean the data is either not of the same quality for a short period of time or not appropriate for examining as part of longterm trends. Therefore, some recent data has not been presented in this report due to the impact of COVID-19. Decisions to include or exclude the most recent data have been taken for each section individually based on the specifics of the data. Broadly, we know that many aspects of cancer care were impacted by the pandemic, but it may be many years before the full implications and long-term impact become clear.

We know that there are health inequalities – unfair, avoidable and systemic differences in health between different groups – evident in cancer prevention, diagnosis and outcomes.

Inequalities are part of a complex web of wider determinants of health and this summary report would not be able to do justice to the health inequalities experienced by the public and people affected by cancer.

While exploring inequalities is not the focus of this report, beating cancer must mean beating it for everyone. Our Cancer in the UK series publishes separate reports to summarise the evidence on cancer inequalities, which has included reports on socio-economic deprivation and cancer inequalities in the UK and a separate report specifically looking at these inequalities in Scotland. Cancer Research UK also publishes articles on inequalities, including our Cancer News series.

In this report we show that improvements can be made right across the cancer pathway. From preventing cancers, diagnosing patients early and quickly, ensuring patients have access to the best treatment options and attaining outcomes that are among the best in the world. The report concludes by setting out the priority actions we believe are vital to addressing challenges faced by cancer services, and lays out how we can strengthen our ability through data-led insights to beat cancer. These data and calls to action also support those laid out in the recent Longer, <u>better lives: A manifesto for cancer research</u> and care, where we set out the measures and commitments the next UK Government can make to help prevent 20,000 cancer deaths every year by 2040.

The number of cancer cases will continue to grow

Nearly 1 in 2 people born in the UK will get cancer in their lifetime [1]. There are more than 1,000 new cases of cancer every day in the UK [2]. More than half (53%) of new cancer cases in the UK are breast, lung, prostate and bowel cancers.

The number of new cancer cases per year in the UK is projected to rise by a fifth (20%), from around 420,000 in 2023-2025 to around 506,000 by 2038–2040 [3]. This increase is mainly due to the growing and ageing population, though cancer incidence rates (which account for these population changes) are also projected to increase by around 2% by 2038-2040.

Overview of key cancer statistics

Cases

385,000

Deaths

167,000

Survival



New cases of cancer, 2017-2019, UK



Deaths from cancer, 2018-2019+2021, UK

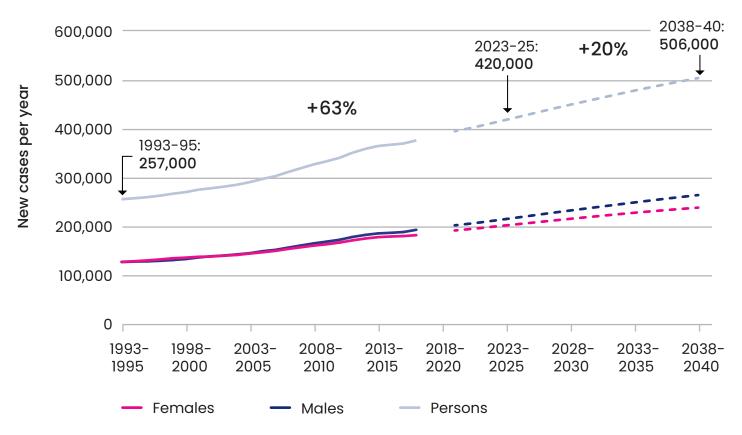


People with cancer surviving their disease for 10 years or more, 2018, UK

Since the early 1990s, cancer incidence rates in the UK have increased by 11% [3]. Rates in females have increased by 12%, while rates in males have increased by 5%. This sex difference is mainly driven by smoking-related cancer types, where incidence rates have been falling for some time in men but not yet in women, because smoking prevalence started falling earlier in men than women [4].

The cancer patient population is projected to become older. In the late 1970s, more than 4 in 10 (42%) of new cancer diagnoses were in people aged 70 or older – by 2040 this figure could be 6 in 10 (60%). Though incidence rates are currently rising fastest in younger people, population growth is concentrated in older age groups, so in terms of patient numbers the biggest increase will be in older people [5].

Cancer incidence in the UK projected to 2038–2040



Sources: Cancer Research UK, NHSE, PHW, ISD Scotland, NICR

Data saves lives

Cancer is the UK's biggest killer

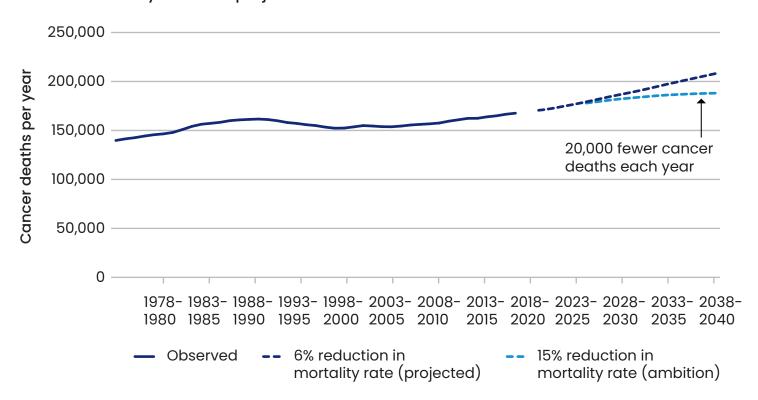
Cancer is the leading cause of death in the UK, causing 25% of all deaths – more than heart disease or dementia [6]. While mortality rates have fallen by 21% since the 1970s, still nearly 460 people die from cancer every day in the UK [7].

Cancer mortality rates in the UK are projected to fall by 6% between 2023–2025 and 2038–2040, but population growth and ageing means that the absolute numbers of deaths

could increase by almost a fifth, from 176,000 per year in 2023–2025 to around 208,000 by 2038–2040 [8]. Around three-quarters of deaths in 2038–2040 could be in the over-70s, compared with around half in the late 1970s.

If the UK cancer mortality rate fell by 15%, rather than 6% as projected, there could be around 20,000 fewer cancer deaths each year in the UK by 2040.

Cancer mortality in the UK projected to 2038-2040



Sources: Cancer Research UK, ONS, ISD Scotland, NICR

With the number of people affected by cancer set to increase, it is vital that each UK nation sets out a long-term plan to meet the growing cancer challenge. Plans centred around backing research, preventing more cancers and investment and reform in cancer services to diagnose cancers earlier and offer the best possible treatment to everyone.

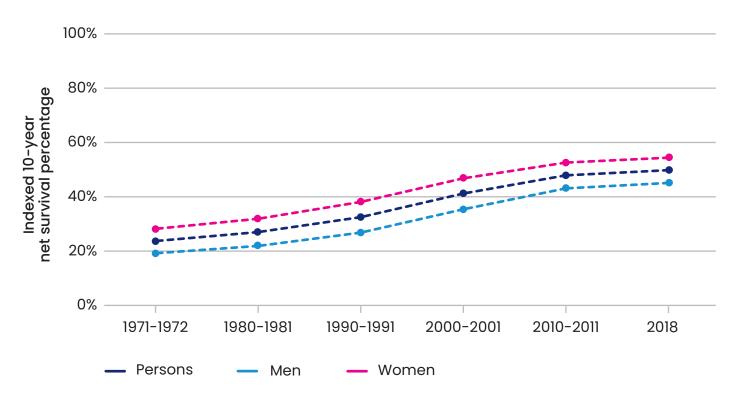
Within a year of the general election, the UK Government should publish a 10-year cancer strategy for England, underpinned by consecutive three-year action plans. Governments in Northern Ireland, Scotland and Wales should focus on fully funding and implementing their cancer plans, so they deliver full benefits

Survival is higher than ever before, but the rate of improvement has slowed

Ten-year survival for all cancers combined has doubled since the early 1970s, but progress has slowed over the last 10 years [9]. Survival increased three to five times faster in previous decades, compared with the improvement since 2010.

Still, half (50%) of people diagnosed with cancer in England and Wales in 2018 are expected to survive their disease for 10 years or more, compared to around a quarter (24%) in the early 1970s. Men have seen greater improvements in survival since the 1970s than women, but survival remains higher in women than men.

Trends in the index of 10-year survival for all cancers combined, adults, England and Wales, 1971-2018



Source: LSHTM cancer survival group

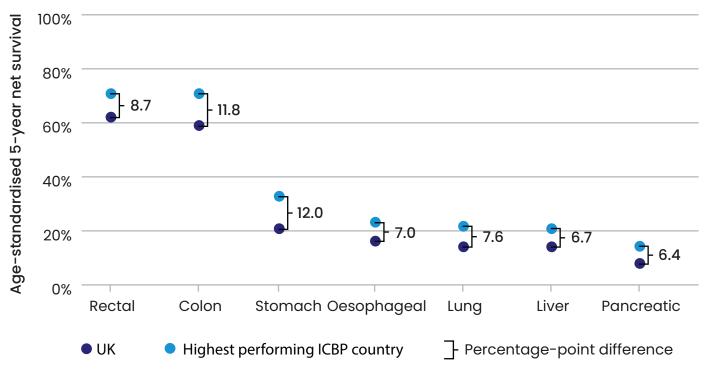
Survival in the UK is lagging behind comparable countries

Data from the International Cancer Benchmarking Partnership (ICBP) shows that survival for some common cancers in the UK consistently lags behind comparable countries [10].

While more research is needed to fully explain the factors driving the UK's worse outcomes, it's likely that differences in routes to and stage

at diagnosis, as well as access to optimal treatments, are the most important factors [11,12]. Research also suggests differences in policy between countries may also explain some of this international variation. Countries with consistent cancer policies have seen the greatest improvements in cancer survival between 1995 and 2014 [13].

Differences in 5-year net survival between the UK and the highest performing International Cancer Benchmarking Partnership countries, 2010–2014



Source: ICBP

Cancer Research UK's manifesto for cancer research and care sets an ambition for the UK to achieve amongst the best cancer survival in the world by 2035. This would require a substantial improvement in the rate of increase of cancer survival over the next decade. We must accelerate improvements in cancer care and make sure people affected by cancer in the UK receive the world-leading cancer outcomes they deserve.

Around 4 in 10 cancer cases in the UK can be prevented

That's more than 135,000 cases every year [14]. Key ways to reduce the risk of cancer include not smoking, keeping a healthy weight, enjoying the sun safely, cutting back on alcohol, eating less processed meat and being more physically active. Across the UK, lung, bowel, melanoma skin and breast cancers

account for almost two-thirds (63%) of all preventable cancer cases [14].

Governments have set targets against tobacco, overweight and obesity and alcohol. Cancer Research UK estimates that around 36,800 extra cancer cases could be prevented by 2040 across the UK if these targets are able to be met |15|.

Preventable cancer cases in the UK



Smoking is still the biggest cause of cancer

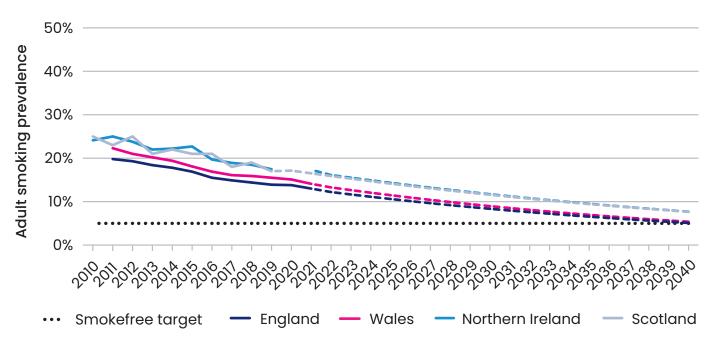
Smoking causes around 54,300 cases of cancer every year in the UK and is a risk factor for at least 15 types of cancer [14]. Around 54,600 cancer deaths are caused by smoking every year in the UK |16|.

Smoking levels are currently at their lowest recorded point – around 13% of the UK adult population smokes [17]. But UK nations aren't on track to reach their smokefree ambitions of 5% average adult smoking prevalence. Projections indicate that England will not reach 5% smoking prevalence until 2039 (ambition is 2030), Wales not until 2040 (ambition is 2030), and Scotland (ambition is 2034) and Northern Ireland (no ambition set) not until 2048 [18]. Smoking prevalence varies within the population, with a strong link between

cigarette smoking and socioeconomic group. There are nearly twice as many cancer cases in England caused by smoking in the poorest areas compared to the wealthiest [19].

Most people who smoke want to quit [20], but smoking is an addiction and they need support to do so. Funding cuts mean not everyone has access to local, free stop smoking services. In England, of people who smoke who set a quit date, 54% were successful in quitting through NHS Stop Smoking Services [21]. But there is variation in the proportion of successful quitters by region, age, ethnicity and socioeconomic group. Around 2 in 3 adult smokers in England say they took up smoking before they were 18 years old 22.

Smoking prevalence projections for adults (aged 16+) in the UK



Sources: Cancer Research UK, ONS, Scottish Govt, Dept of Health Northern Ireland

Governments across the UK must do more to help people reduce their risk of smokingrelated cancer by implementing an increase in the age of sale of tobacco products. We are pleased to see that the UK Government and devolved administrations plan to work together to try and ensure that this measure is adopted in a consistent way. We support this collaborative approach as it's essential that this important legislation is implemented across the UK.

The number of cancer cases attributable to overweight and obesity is rising

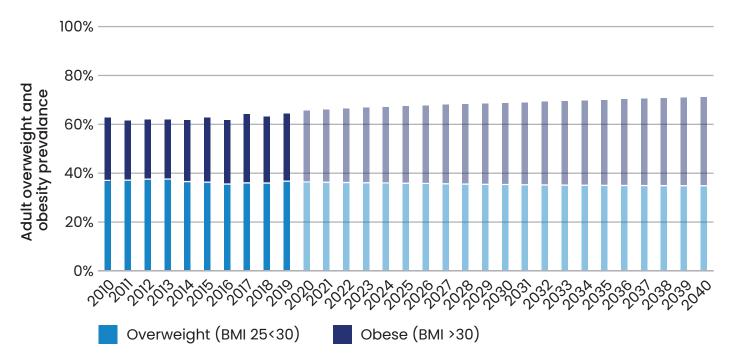
Overweight and obesity causes around 22,800 cases of cancer every year in the UK and is a risk factor for 13 different cancer types [14]. Around 9,200 cancer deaths are caused by overweight and obesity every year in the UK [16].

Overweight and obesity prevalence of adults in the UK is currently at its highest recorded level at 63% [23]. If current trends continue, projections suggest that more than a third (36%) of adults in the UK will be obese by 2040. That's almost 4 in 10 (38%) adults in England, and around a third of the adult population in Scotland, Wales and Northern Ireland (33%-

34%). And a rise in overweight and obesity is expected to lead to increases in cancer incidence.

There's substantial evidence that obesity starts early: children with obesity are much more likely to become obese as adults [24]. Today, almost 4 in 10 children in Year 6 (age 11) in England are overweight or obese, and this proportion has been rising steadily since the National Child Measurement Programme began in the early 2010s [25].

Overweight and obesity prevalence projections for adults (aged 16+) in the UK



Sources: Cancer Research UK, NHS Digital, Scottish Govt, Welsh Govt, Dept of Health NI

Governments across the UK must do more to reduce the incentives that push people towards unhealthy food and drink. Within a year of the general election, the UK Government should implement its own 2022 legislation on TV and online advertising restrictions on foods high in fat, salt and sugar (HFSS).

Screening programmes in the UK

Screening can help prevent cancers developing as well as detect cancers at an early stage when treatment is more likely to be successful.

There are established screening programmes for cervical, bowel and breast cancer in the UK. Around 5%-7% of all cancer cases are diagnosed through the breast, bowel and cervical screening programmes across the UK [26-29].

Cancer screening programmes save thousands of lives each year in the UK; it is estimated that over 5,000 lives are saved from the three cancer screening programmes each year [30-32].

In 2022, the UK National Screening Committee recommended a UK-wide targeted lung cancer screening programme for people with a history of smoking, as they are at an increased risk of lung cancer. Targeted Lung Health Check pilots have been running in parts of England since 2020, but there has been limited pilot activity of this approach in Scotland, Wales or Northern Ireland.

Governments and health systems must make efforts to ensure everyone eligible who wants to take up the offer of cancer screening can do so. Health systems in all four nations should support local systems to tackle barriers to participation and improve uptake and coverage of screening programmes, with a particular focus on tailored interventions to reduce inequalities, and appropriate national oversight to ensure progress.



Cervical screening coverage is declining

Cervical screening and the human papillomavirus (HPV) vaccination are both effective ways to prevent cervical cancer. Cancer Research UK recommends that everyone eligible takes up the offer of their HPV vaccine, but it doesn't protect against all types of HPV and some age groups aren't eligible for the vaccine, so cervical screening is still important.

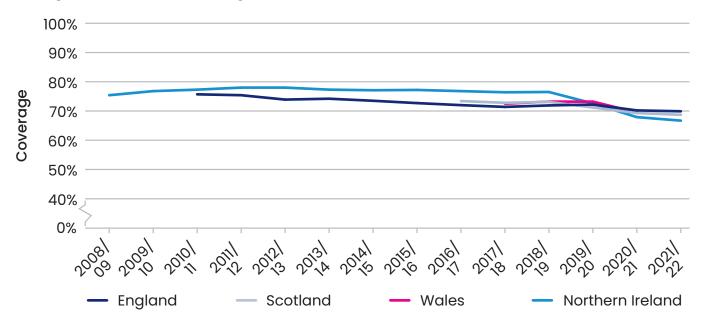
More than a third (36%) of cervical cancer cases in Wales [33], a third [33%] of cases in England [26] and around a quarter (26%) of cases in Northern Ireland [28] are diagnosed through screening.

Across the UK nations, coverage of cervical screening is around 67%-69%

[34–37]. Coverage across the UK has been declining. Over the last 10 years, coverage for 25–64-year-olds in England has fallen by around 6 percentage points and by 11 percentage points in Northern Ireland. In the last five years, coverage in Scotland and Wales has fallen by around 3-5 percentage points.

The most commonly reported barriers to cervical screening in those that didn't attend last time they were invited include embarrassment, previous experience of or worry about pain, previous bad experiences and not thinking they're at risk of cervical cancer [38]. In 2023, 84% of eligible people intended to go for cervical screening at their next invitation [38], which although promising, may not translate into attendance [39].

Coverage of cervical screening in the UK



Sources: NHS Digital, Public Health Scotland, Public Health Wales, HSC Public Health Agency

Health systems and governments should work to increase HPV vaccination coverage across the UK. Targeted action is needed in areas and amongst groups with lower uptake to reduce inequalities in coverage. Likewise, governments and health systems should make sure everyone invited can make an informed choice on whether to attend cervical screening, and do not face additional barriers to access if they choose to participate. This includes improving data collection and access to data to support service evaluation and quality improvement.

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Together we are beating cancer

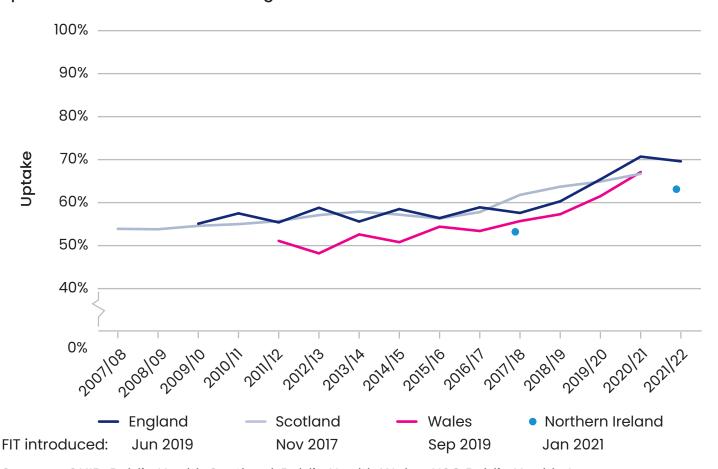
Data saves lives

Bowel cancer screening uptake has increased

Bowel cancer screening previously had the lowest uptake of the three screening programmes, with uptake rates of below 60% across the UK nations [40–43]. But over the last 10 years, bowel cancer screening uptake has increased. The move to a new bowel cancer screening test, faecal immunochemical testing (FIT), has helped with this increase (now between 62%-70% across the UK nations). But there are differences in how FIT is used in each UK nation [44].

Despite increases in uptake, there are still barriers to participation in bowel screening. The most commonly experienced barriers among those who didn't complete the kit last time they were sent one are finding the test too messy, not having any symptoms of bowel cancer (it is a misconception that screening is for people with symptoms) and being too embarrassed to complete the test [38]. In 2023, 90% of eligible people intended to complete their next bowel screening kit [38].

Uptake of bowel cancer screening in the UK



Sources: OHID, Public Health Scotland, Public Health Wales, HSC Public Health Agency

Each UK nation must set out a clear plan to further optimise bowel cancer screening, including the reduction of the FIT threshold, increasing workforce and diagnostic capacity to meet growing patient need and removing barriers to uptake.

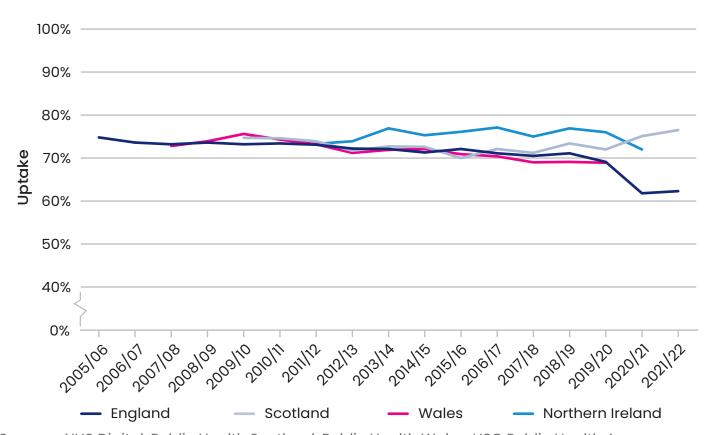
Breast cancer screening uptake has decreased in England and Wales

Over the last 10 years, breast cancer screening uptake has fallen by 11 percentage points in England [45] and 7 percentage points in Wales [46], but has remained relatively stable over time in Scotland [47] and Northern Ireland [48]. Breast cancer screening uptake currently ranges from around 62% in England to around 77% in Scotland.

The most commonly experienced barriers to attending breast cancer screening in those that didn't attend last time are the

appointment being too far from home, previous experience of pain and not having any breast cancer symptoms (it is a misconception that screening is for people with symptoms) [38]. Despite this, intention to take part at next invitation remains high at around 89%. But there is variation between nations, with 88% of those in Scotland intending to attend the next invitation compared to 79% of those in England.

Uptake of breast cancer screening in the UK



Sources: NHS Digital, Public Health Scotland, Public Health Wales, HSC Public Health Agency

Governments and health systems must make efforts to ensure everyone eligible who wants to take up the offer of breast cancer screening can do so. This should include measures to address the barriers to breast screening uptake and making sure the service model doesn't create barriers to participation.

Data saves live

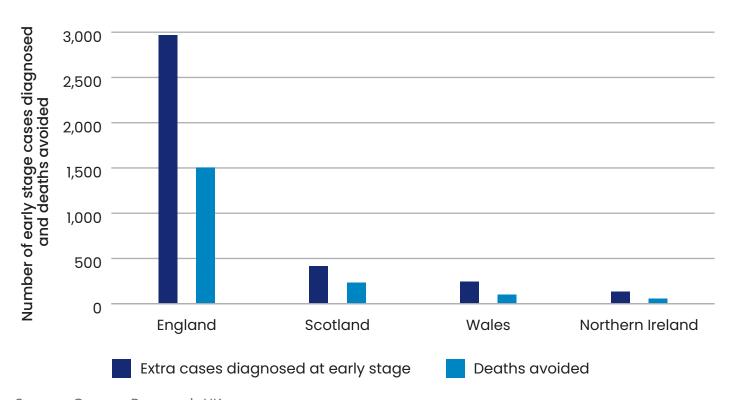
Cancer services

A targeted lung cancer screening programme could detect thousands of early-stage lung cancer cases

Cancer Research UK estimates that around 3,800 extra patients each year across the UK could be diagnosed at an early stage rather than a late stage when the programme is fully

rolled out, even if uptake is only around 50% [49]. This creates the potential for around 1,900 deaths from lung cancer to be avoided each year [50].

Potential impact each year of the implementation of lung screening programmes across the UK



Source: Cancer Research UK

Governments and administrations in Scotland, Wales and Northern Ireland must make a ministerial commitment to implementing targeted lung cancer screening. This should include a roadmap for rollout considering the capacity, resources and infrastructure needed to support a successful screening programme. Comprehensive smoking cessation interventions should be embedded into the programme, with ongoing support available.

In England, the UK Government should accelerate current plans for the implementation of lung cancer screening, aiming to deliver full coverage across the country by 2028.

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Finding and treating cancer earlier increases survival

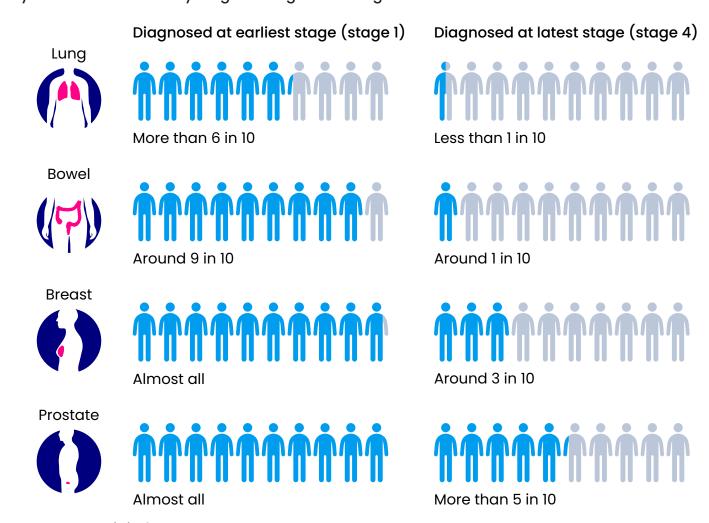
Patients diagnosed at an early stage are more likely to survive their cancer as they have more treatment options, often curative, than those diagnosed later.

For example, in England, more than 6 in 10 (63%) stage 1 lung cancer patients survive their disease for five years or more, compared to less than 1 in 10 (4%) at stage 4 [51]. Similar

differences are seen in Wales [52] and Northern Ireland [53].

Longer term survival differences by stage are also seen, with around 3 in 10 (29%) people surviving their stage 1 lung cancer for 10 years or more compared to less than 1 in 10 (4%) for those diagnosed at stage 3 [54].

5-year cancer survival by stage at diagnosis in England



Sources: NHS Digital, ONS

To give cancer patients the best chance of surviving their disease, governments and health systems across the UK must radically accelerate efforts to diagnose more cancers at an early stage.

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Data saves lives

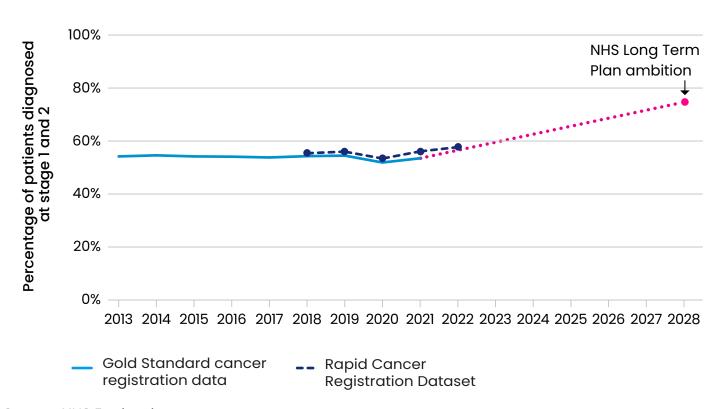
We need to diagnose more cancers earlier

Around 54% of cancers in England and in Northern Ireland are diagnosed early (stages 1 and 2) [53,55].

In England, the NHS has set an ambition for 75% of cancers to be diagnosed early by 2028 [56]. To reach this ambition, from 2028 around 100,000 additional cancer cases will need to be diagnosed at stage 1 or 2 per year [57]. But since 2013, Gold standard cancer registration data shows the proportion of all cancer cases diagnosed at an early stage has remained stable in England, with a small dip in 2020 [55].

The Rapid Cancer Registration Dataset (RCRD) is available for assessing more recent stage data [58], but it's less complete and reliable. Given the impact of COVID-19 on patients and health systems, including the pausing of screening programmes in 2020, trends in cancer cases over the last few years are complex. We don't yet have the evidence to say whether the small increase in the proportion diagnosed early observed for 2022 is a genuine improvement that will be sustained, or partly related to the recovery of patient behaviour and services from the impact of COVID-19.

Percentage of patients diagnosed at stages 1 and 2 in England



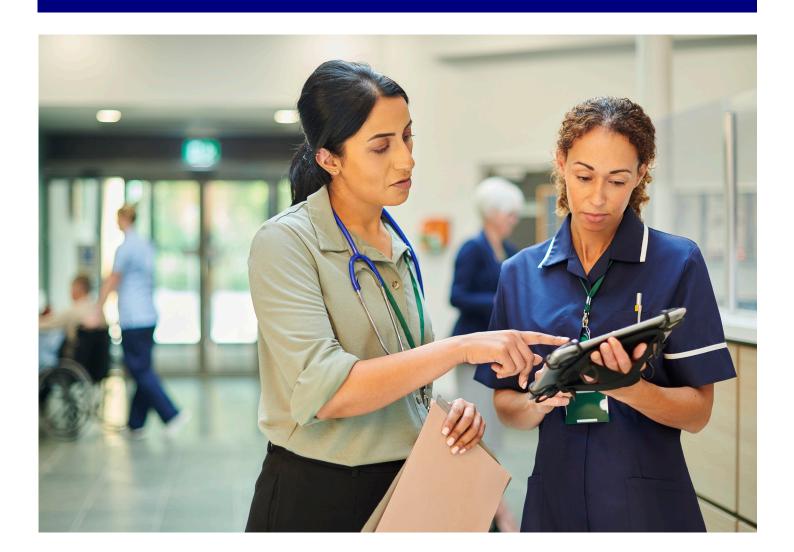
Source: NHS England

21

Governments must make concerted efforts to make sure more people are diagnosed with cancer at earlier stages. This includes achieving ambitions on increasing the number of cancers diagnosed at stage 1 and 2, alongside a reduction in the number of cancers diagnosed at stage 3 and 4, with a focus on cancers that would lead to the greatest benefit in survival such as lung, bowel and prostate.

- In England, the UK Government and NHS England should diagnose 75% of cancers at stages 1 and 2 by 2028, as per the ambition set out in the NHS Long Term Plan in 2019.
- In Scotland, the Scottish Government should reduce later stage disease (stages 3 and 4) by 18% as per the ambition in the Cancer Strategy for Scotland.
- In Wales, the Welsh Government should deliver on their commitment to earlier and faster diagnosis made in the Cancer Improvement Plan, and set a specific target to reduce late-stage diagnosis of cancer.
- In Northern Ireland, the Executive must drive forward aims on the reduction of latestage disease as outlined in A Cancer Strategy for Northern Ireland 2022–2032, and set a specific target for the reduction of late-stage diagnosis of cancer.

Across the UK, governments and administrations should implement measures that reduce later stage diagnosis of cancer, and support local and regional health systems to develop and adopt tailored approaches to reducing inequalities in earlier diagnosis.



People recognise common cancer symptoms

Timely help-seeking can increase the chance of an earlier diagnosis [59]. And awareness of possible cancer symptoms is an important factor in deciding whether to seek help. In the UK, people on average recognise 12 out of 15 common cancer symptoms [38]. The most commonly recognised symptoms are lump/swelling, change in the appearance of a mole, coughing up blood and unexplained weight loss.

It's concerning that many people are experiencing possible cancer symptoms but

aren't talking to their doctor about them. In the UK, around 55% of people had experienced a potential symptom of cancer in the last six months [38]. But under half (49%) of those people contacted their GP within six months.

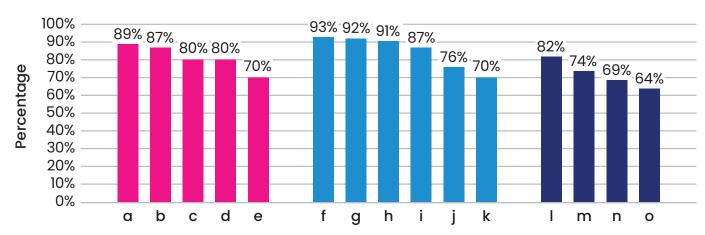
The most commonly experienced barriers to seeing a health professional in the UK include finding it difficult to get an appointment or to get an appointment at a convenient time, worry about wasting the healthcare professional's time and not wanting to be seen as someone who makes a fuss [38].

Percentage of people that recognise common signs and symptoms of cancer

95% recognised at least one non-specific symptom

94% recognised at least one red-flag symptom

94% recognised at least one lung-specific symptom



- a Unexplained weight loss*
- b Persistent change in bowel habits
- c Persistent unexplained pain*
- d Persistent change in bladder habits
- e Tired all the time

- f Unexplained lump or swelling
- g Change in the appearance of a mole
- h Coughing up blood**
- i Unexplained bleeding
- j Persistent difficulty swallowing
- k A sore that does not heal
- I Persistent cough
- m A change to an existing cough
- n Persistent hoarseness
- o Shortness of breath

Source: Cancer Research UK

* Also a red-flag symptom

** Also a lung-specific symptom

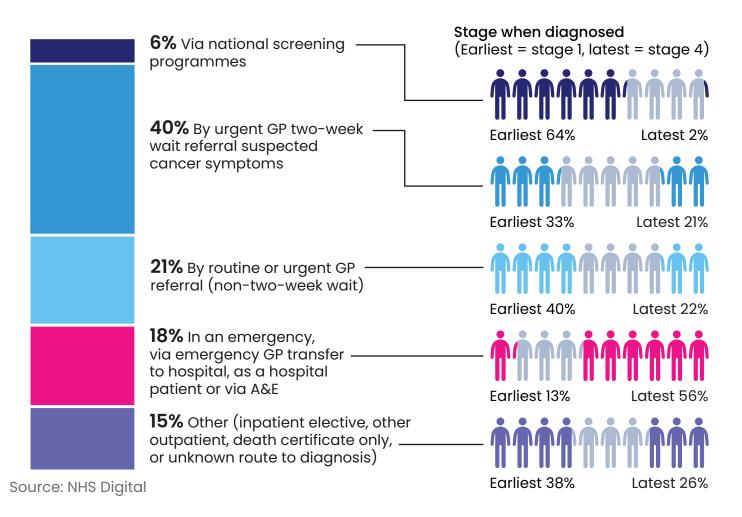
Governments across the UK should make a commitment to sustained, multi-year funding for public awareness campaigns. They should also support health systems in all four nations to develop more accessible routes into healthcare, assessing how services could support help-seeking behaviours.

Too many patients are diagnosed through an emergency presentation

Around 1 in 5 of all cancers in Scotland [27], Northern Ireland [28] and England [26] are diagnosed via an emergency route. This has reduced from around 1 in 4 (25%) in England over the last decade. Patients diagnosed

via this route are more likely to have latestage disease, which impacts their treatment options, and also report a worse experience of cancer care [60].

Percentage of patients diagnosed via different routes in England, 2018



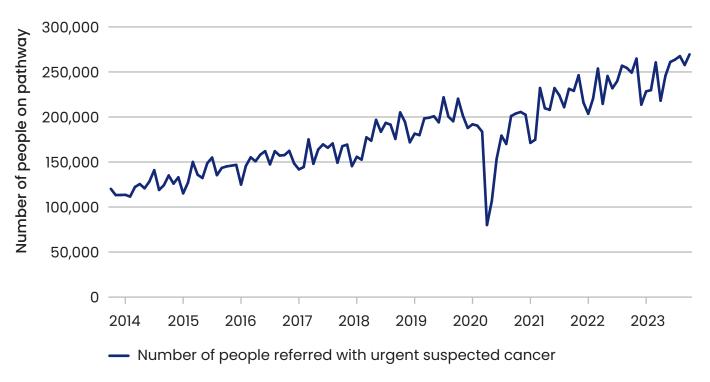
Governments and administrations across the UK should do more to reduce the number of cancers diagnosed in emergency settings. To make sure people with suspected cancer can access healthcare promptly, governments and administrations across the four nations must increase primary care capacity, as well as coordinating the design, delivery and implementation of different routes into healthcare that are accessible to everyone. This means people should be able to access the routes, health professionals and appointment modes that are right for their health needs.

More people are being referred with suspected cancer than ever before

The number of people urgently referred with suspected cancer in England has increased steadily for over a decade. In October 2023, more than 269,000 people were urgently referred with suspected cancer [61].

In England, all patients referred urgently with suspected cancer symptoms are included in the Faster Diagnosis Standard (FDS) pathway. This pathway also includes people referred through the national cancer screening programmes and with breast symptoms where cancer is not initially suspected. The FDS was introduced in 2021 and replaced the Two Week Wait target in October 2023. The target aims to diagnose or rule out cancer for 75% of patients within four weeks - but this has yet to be met.

Number of people referred with urgent suspected cancer in England



Source: NHS England

Rapid diagnosis and treatment of cancer is vital for improving cancer outcomes and reducing anxious waits for patients. This is why committing to and delivering ambitious targets on the time it takes for cancer to be diagnosed is so important. But the FDS target of 75% is set well below the originally recommended target of 95%, as per the 2015 Cancer Strategy for England. NHS England has committed to raising the target to 80% in 2025/26. The UK Government should continue to work towards implementing the originally proposed 95% target in the longer term, with a commitment to raising it to 85% over the course of the next parliament.

Diagnostic services are struggling to keep up with demand

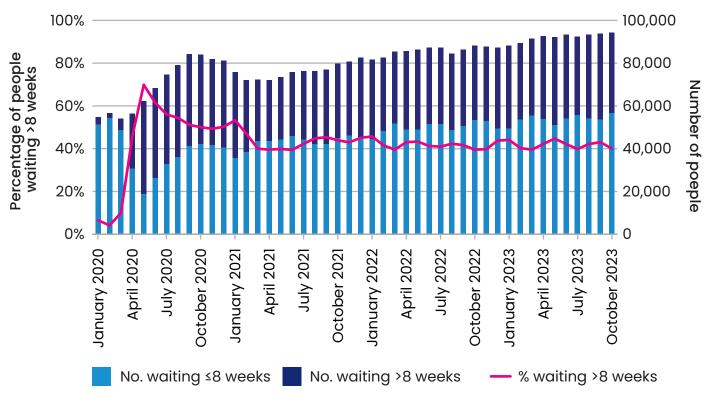
Endoscopy and radiology are two key types of diagnostic tests for cancer. In October 2023, there were more than 1.6 million people waiting for these key diagnostic tests in the UK [62].

Many people also face long waits for these tests. For example, Wales states that no patient should wait longer than eight weeks for a key diagnostic test. At the end of October 2023, there were around 37,600 people waiting

more than eight weeks for a test, with this number growing over time [63].

It's important patients who go on to be diagnosed with cancer have timely access to tests, so they can begin their treatment journey as soon as necessary. But constraints in diagnostic capacity are holding services back. This is mainly due to shortages of key equipment and staff vital to diagnosing cancer.

Diagnostic tests waiting list, Wales



Source: Welsh Govt

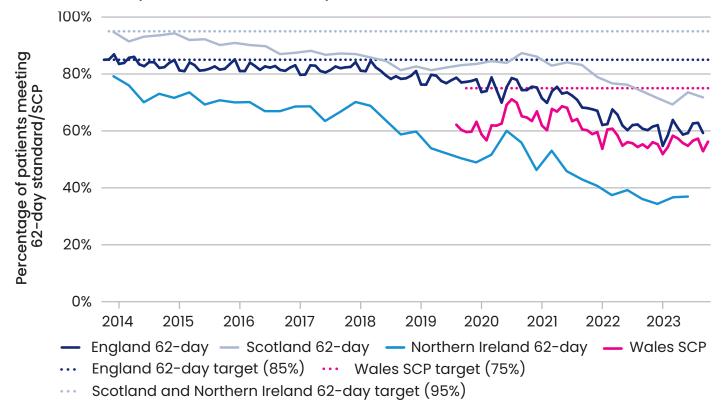
With the demand for cancer diagnostic services increasing, it is more important than ever that services are properly equipped. We need to see commitments across the UK to optimise care pathways and greater investment in diagnostic capacity to meet growing demand. New innovations to support the detection and diagnosis of cancer also offer real opportunities to improve services if effectively implemented across health systems.

Cancer waiting times are amongst the worst on record

Across the UK, it's concerning that cancer waiting times targets have been consistently missed for years. One key target, the 62-day standard, hasn't been met in England since 2015 [61], Scotland since 2012 [64], and has never been met in Northern Ireland since being introduced in 2008 [65].

Wales is also yet to meet its target for the Suspected Cancer Pathway, which was implemented in June 2019. In October 2023, only 56.2% of patients started treatment within 62 days from point of suspicion of cancer [66]. Long waiting times are a worry for the public, with polling showing that 95% of people are concerned about the time it takes for patients to be diagnosed and start their cancer treatment [67]. Making sure people are tested and, if needed, treated as soon as necessary can help alleviate some of the anxiety which accompanies a referral for suspected cancer. And for some patients with fast growing cancers, access to timely diagnosis and treatment could have impacts on outcomes.

Performance against the 62-day standards in England, Scotland and Northern Ireland and Suspected Cancer Pathway in Wales



Sources: NHS England, Public Health Scotland, Welsh Govt, Dept of Health NI

Every nation in the UK must set out plans to address ongoing poor performance. In England, as a minimum offer to people with cancer, Cancer Research UK would like to see the next UK Government commit to consistently meeting cancer waiting times targets, including a raised FDS target of 85% by the end of the next parliament.

Patients feel positive about the care they receive, but people are concerned about **NHS** resources

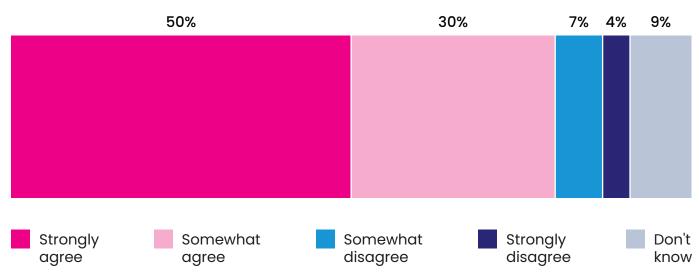
Despite the pressure on the NHS in recent years, patients score their overall care positively. In the 2022 Cancer Patient Experience Survey in England [68], the average score of a patient's overall experience on a scale of 0 (very poor) to 10 (very good) was 8.9 [68]. The latest Cancer Patient Experience Survey from Scotland in 2018 [69] and Wales in 2021 [70] also showed a similar pattern.

Survey results highlight that patients are satisfied with the administration of their care.

But communication and aftercare support from GPs and community services are common areas for improvement.

Cancer Research UK survey data shows confidence in the health system's ability to tackle cancer is also low among the public. Across the UK, around 80% of people don't think the health service has enough staff or equipment to see, test and treat all people with cancer [38].

Percentage of people that agree with the statement: "I don't think the health service has enough staff or equipment to see, test and treat all the people with cancer that need to be seen, tested and treated"



Source: Cancer Research UK

In every part of the UK, the public are deeply concerned by the significant challenges facing cancer services today. Governments must be bold in their ambitions to address these challenges and put in place significant investment to make sure cancer services have the staff and equipment they need to support all those affected by cancer.

Researc

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Treatment regimens vary by cancer type

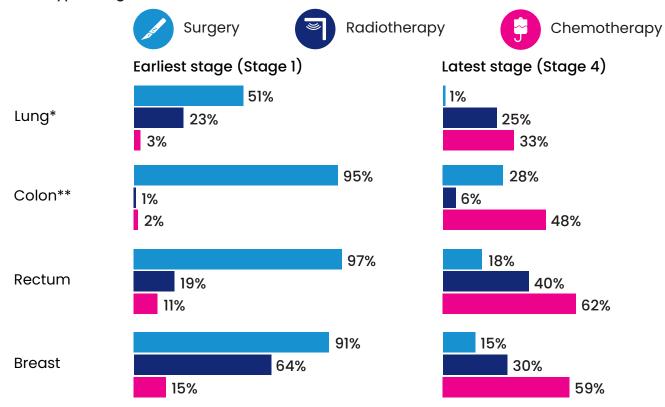
Alongside earlier diagnosis, ensuring access to optimal treatment is essential for improving cancer outcomes. Surgery, radiotherapy and chemotherapy are the main ways of treating cancer and may be used alone or in combination.

In England, almost half (47%) of all cancer patients in 2019 received surgery to remove their tumour as part of their first treatment, making it the most commonly used first treatment, while 28% had radiotherapy and 26%

chemotherapy [71]. But treatment varies widely between cancer sites and stage at diagnosis.

Tackling regional variation in survival by stage, primarily through reducing variation in access to treatment, could result in improved survival for many patients. Cancer Research UK estimates that each year, if survival by stage across England matched that of the best performing areas, around 1,400 more patients diagnosed with lung cancer and 840 more patients diagnosed with bowel cancer could survive their disease for two years or more [72].

Proportion of patients receiving surgery, radiotherapy and chemotherapy for common cancer types, England 2019



*Non-small cell lung cancer only **Includes rectosigmoid junction Source: NHS Digital, Cancer Research UK

There is a clear need for action so that all cancer patients have access to timely, quality and effective treatment. The Department of Health and Social Care and NHS England should make sure a new 10-year cancer strategy for England sets out a strategic approach to addressing unwarranted variation in access to treatment. This should be developed in conjunction with tumour-specific clinical leads to provide oversight and advice for content on cancer treatment.

Research

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Data saves lives

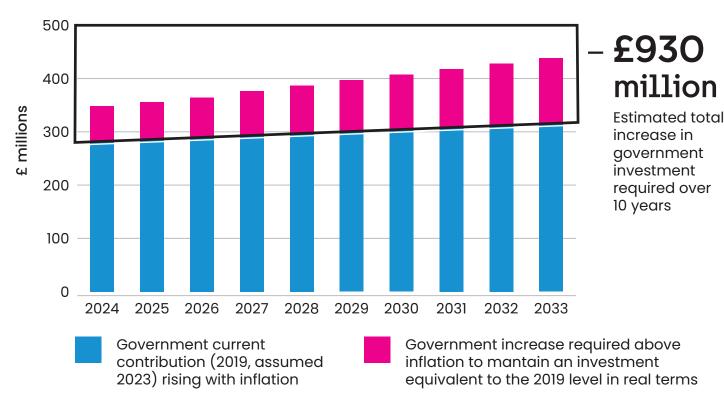
Funding cancer research sustainably

Excluding research funded by industry, charities fund 62% of cancer research, compared to government's 38% [73]. This is the lowest proportion of any major health condition. Cancer Research UK estimates that to maintain an equivalent investment to the 2019 level in real terms, government investment in cancer research would need to increase to around £121m above inflation per year by 2033, to a total of £930m over the next 10 years [74].

This figure doesn't take into account the increasing number of cancer cases in the UK. To maintain the same amount of research funding per case, Cancer Research UK estimates there is around a £2bn funding gap which needs to be filled over the next decade for the UK to remain globally competitive.

There was £1.8bn of investment in UK cancer research in 2020/21, which generated more than £5bn of economic impact. This means that for every £1 invested in cancer research, £2.80 of economic benefits are generated [73].

Increased UK Government investment in cancer research to maintain spend per case to the 2019 level in real terms



Source: Cancer Research UK

The Department for Science, Innovation and Technology and the Treasury should work with charities, industry and public funding agencies to establish a Commission on Sustainable Biomedical Research. This should be tasked with developing a new long-term investment solution for late-stage basic and early-stage translational life sciences research within one year of being established. It should also include setting out a plan for closing the more than £1bn funding gap for cancer research over the next decade.

Research Together we are beating cancer Data saves lives

Making time for research in the health service

In 2022 in England, only 43% of cancer patients had research opportunities discussed as part of their care [68]. A Cancer Research UK survey found that 8 in 10 (80%) clinical cancer research staff in the UK said it has become harder to deliver research in a timely manner in 2022 and 2023. More than 7 in 10 (72%) said it's also been more difficult to meet trial recruitment targets [75].

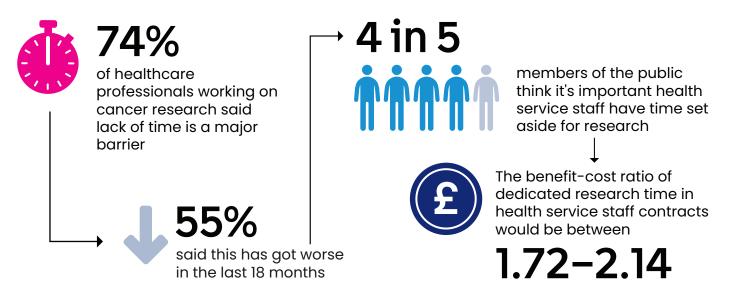
Tackling wider health service pressures and lack of research time are among the top priorities. Around 8 in 10 (79%) of all surveyed clinical cancer research staff said wider pressures are a substantial or extreme barrier to research. One consequence is that clinicians rarely have the time to support

research delivery. Concerningly, almost 6 in 10 (55%) of surveyed healthcare professionals specialising in cancer had even less time to support research in 2022 and 2023.

Meanwhile, there is support for clinicians to have more time for research delivery. Around 80% of the public believe it's important that health service staff have protected time for research, even when the health service is under pressure [67,75].

There are also economic benefits. For example, allowing 20% of consultants and Advanced Clinical Practitioners in the UK to spend 20% of their time dedicated to research is estimated to produce around 1.72-2.14x more benefits than costs [76].

The case for protecting cancer research time in the NHS



Source: Cancer Research UK

NHS England and devolved health systems must take concerted action to make the health service a flourishing environment for clinical research. This should include increasing the monitoring and reporting of research activity at trust, regional and national levels and working with trusts and health boards to protect and increase the supply of dedicated research time in health service staff job plans.

Together we are beating cancer

Together we are beating cancer

Thanks to research, more people are surviving their cancer than ever before. But as this report highlights, we're also seeing a concerning slowing in improvements in cancer survival. Cancer services are facing huge challenges, and with the number of new cases projected to increase in the future, there will be even greater demands on services. But the opportunities to prevent more cancer cases and transform cancer outcomes in the UK are also growing - and we know the solutions and innovations that hold the key to realise them.

Cancer Research UK wants the UK to be one of the top countries in the world for cancer survival. Achieving this will require political momentum across cancer research, prevention and care. That's why Cancer Research UK published Longer, better lives: A manifesto for cancer research and care, which sets out the actions the UK Government should take to elevate cancer survival and help everyone live longer, better lives, free from the fear of cancer.

Improvements in cancer outcomes will also require a greater shift from treating ill health to preventing more cases in the first place. Preventing cancer will save lives. But it will also have a positive impact on productivity and reduce pressure on health services.

Therefore, action must be taken across the UK to address the two largest causes of cancer – smoking and overweight and obesity. Within a year of the general election, the UK Government should implement the 2022 legislation on TV and online advertising restrictions on foods high in fat, salt and sugar (HFSS). And the landmark plans to raise the age of sale of tobacco, alongside providing a funded programme of measures to help people who are already smoking to quit in England, is welcome. With tobacco being the biggest cause of cancer and death in the UK, it is vital that this legislation is fully implemented across the UK.

We also need to see improvements across health services so that patient experience and outcomes can be improved across the cancer pathway. This includes ensuring that more cancers are diagnosed earlier, by implementing proven measures such as targeted lung cancer screening. This should sit alongside efforts to make primary care more accessible to everyone and targeted public awareness campaigns that support positive health behaviours.

Moreover, governments must commit to end the long waits for cancer diagnosis and treatment. This will need a substantial investment in diagnosis and treatment capacity, through developing and delivering a 10-year cancer-specific workforce plan, eliminating the wider NHS maintenance backlog by 2030 and committing to rolling ringfenced capital investment for cancer.

Much of the progress we've seen in cancer survival over the past 50 years can be attributed to advances in life-saving research. Therefore we must solidify the UK's position as a global leader in cancer research. The whole life sciences sector, including medical research charities, must be brought together with health services to make sure

Research

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ata saves lives

the life science ecosystem is flourishing and sustainable in the long term. To support this, the UK Government should also set out funding for cancer research over the next decade, including a plan to close the more than £1bn funding gap. Meanwhile, we must also get better at translating research into real-world applications and rolling these applications out for widespread use, so the benefits of research reach patients more quickly.

Measures implemented to improve cancer survival must also recognise and address the stark inequalities in cancer incidence and outcomes. We need specific interventions that tackle cancer inequalities, including broadening clinical trial access and improving screening participation. But ultimately, if we want to accelerate progress in reducing health inequalities, governments need to address their underlying determinants – including poverty and structural inequalities based on a person's background or identity.

The lack of a strategic, long-term approach to cancer prevention, care and research is

holding back improvements in cancer survival. Commitment, leadership and investment in cancer from the UK Government is needed. This requires a long-term cancer strategy for England and a new National Cancer Council, accountable to the prime minister, to drive cross-government action on cancer. Cancer plans and strategies in Scotland, Wales and Northern Ireland must also be fully funded and implemented if they are to deliver full benefits for patients.

There are considerable and urgent challenges facing cancer research and care. But they are fixable. We are in a golden age of cancer research, which puts us on the brink of transforming our understanding of cancer and our ability to tackle it. We also know that proven interventions in prevention, diagnosis and treatment could have significant positive impacts if fully implemented. By seizing these opportunities, together we can drive progress further and faster to improve the lives of all those affected by cancer.

Together we are beating cance

Data saves lives

Data saves lives

This work uses data provided by members of the public and cancer patients and collected by the health services and cancer registries in each UK nation as part of their care and support. This report uses data that was available up to 31 December 2023.

By analysing and interpreting data across the cancer pathway, we can identify where improvements need to be made for people affected by cancer. To do this we need access to complete, up-to-date information, including patient data.

Access to and the availability of data for analysis and research has become much more challenging over the last decade. The data collected across the UK for cancer patients is world-leading, but the process for accessing the data differs between all four nations, in many cases lacks transparency and the process can take years from application to receiving data. The ability to conduct data-driven research is therefore compromised.

Furthermore, not all UK nations collect and report on key metrics such as stage at diagnosis, and where they do, some aren't comparable. There are gaps in this overview report where data isn't available in every UK nation. Cancer Research UK will continue to work closely with other organisations to try and improve the process for safe and secure access to cancer data and advocate for the collection and release of more granular data for service improvement and research.

Effective safeguards are essential to maintain the confidentiality and anonymity of patient data, as is a process that allows those safeguards to exist and for analysis and research to be undertaken in a timely and transparent process.

Accessing data across the whole of the UK is vital to further our understanding of improvements for patients. A UK-wide approach would help speed up access to data for the research and healthcare community without compromising data security, improving the consistency and completeness of key cancer datasets and rationalising cancer data flows and data linkage. Working across the four UK nations brings valuable insights, which is why Cancer Research UK continues to work with other charities and organisations, as well as the data custodians in each country, to collaborate in making improvements in access to data.

The routine collection of data on demographics, diagnosis, treatment and outcomes for every patient is invaluable in improving cancer outcomes for everyone. While variation isn't the focus of this report, relevant breakdowns in data across the cancer pathway are critical for identifying where disparities exist. Patient confidentiality is critical, but aggregated data removing identifiable information needs be regularly reported so inequalities can be understood and addressed. Beating cancer must mean beating cancer for everyone.

Other Cancer in the UK publications

Cancer in the UK 2024: Devolved nations summaries

- Cancer in the UK: Scotland overview 2024
- Cancer in the UK: Wales overview 2024
- Cancer in the UK: Northern Ireland overview 2024

Our previous reports

- · Cancer in the UK: Overview 2023
- Cancer in the UK: Deprivation and cancer inequalities in Scotland, 2022
- Cancer in the UK: Socioeconomic deprivation, 2020
- Cancer in the UK: 2019
- Cancer in the UK: 2018

References

- 1 Cancer Research UK. Cancer Research UK. Cancer risk statistics.
- 2 Cancer Research UK. Cancer incidence statistics.
- Calculated by the Cancer Intelligence 3 Team at Cancer Research UK. All cancers combined excluding non-melanoma skin cancer (ICD-10 C00-C97 excl C44), projected age-standardised incidence rates and annual average number of cases for 2023-2025 and 2038-2040.
- Cancer Research UK. Cancer Research UK. 4 Cancer incidence for common cancers.
- 5 Cancer Research UK. Cancer incidence by age.
- 6 Cancer Research UK. Cancer Research UK. 2023 [cited 2023 Oct 27]. Cancer mortality for all cancers combined.
- 7 2018-2019+2021, ICD-10 C00-C97. Cancer mortality for all cancer combined. England and Wales data were accessed from: Nomis mortality statistics by underlying cause, sex and age. Scotland data were provided by ISD Scotland on request, or sourced from NRS. Similar data can be found at National Records of Scotland. Northern Ireland data were provided by the Northern Ireland Cancer Registry on request, or sourced from NISRA. Similar data can be found from the Northern Ireland Cancer Registry or from NISRA. Population data were published by the Office for National statistics. Similar data can be found in their Analysis of population estimates tool.
- Calculated by the Cancer Intelligence Team at Cancer Research UK. All cancers combined (ICD-10 C00-C97), projected age-standardised mortality rates and annual average number of deaths for 2023-2025 and 2038-2040.
- Cancer Research UK-commissioned analysis from London School of Hygiene and Tropical Medicine, 2023. Survival trends in England and Wales 1971-2018.

- International Agency for Research on Cancer, World Health Organization. ICBP SURVMARK-2.
- Weller D, Menon U, Falborg AZ, Jensen H, 11 Barisic A, Knudsen AK, et al. Diagnostic routes and time intervals for patients with colorectal cancer in 10 international jurisdictions; findings from a crosssectional study from the International Cancer Benchmarking Partnership (ICBP). BMJ Open. 2018;8(11):e023870.
- Norell CH, Butler J, Farrell R, Altman A, Bentley J, Cabasag CJ, et al. Exploring international differences in ovarian cancer treatment: a comparison of clinical practice guidelines and patterns of care. International Journal of Gynecologic Cancer. 2020;30(11).
- Nolte E, Morris M, Landon S, McKee M, Seguin M, Butler J, et al. Exploring the link between cancer policies and cancer survival: a comparison of International Cancer Benchmarking Partnership countries. The Lancet Oncology. 2022;23(11):e502-14.
- Brown KF, Rumgay H, Dunlop C, Ryan M, Quartly F, Cox A, et al. The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015. Br J Cancer. 2018;118(8):1130-41.
- Calculated by the Cancer Intelligence Team at Cancer Research UK (2023). Reduction in number of cancer cases if risk factor prevalence is reduced to specific levels, compared with number of cancer cases projected assuming recent cancer incidence and risk factor prevalence trends continue. Smokefree achieved: smoking rates reduced to 5% average amongst adult population; 10% of those who are overweight and obese shift down one BMI category by 2030; 10% of those drinking alcohol above recommended levels shift down one intake category by 2030.
- 16 The Institute for Health Metrics and Evaluation. Global Burden of Disease. 2023.
- Office for National Statistics. <u>Adult smoking</u> habits in the UK. 2023.

- Calculated by the Cancer Intelligence Team at Cancer Research UK (2023). England and Wales data (2011-2021) accessed here. Scotland data (2008-2019) accessed here. Northern Ireland data (2010/2011-2021/2022) accessed <u>here</u>. Due to data limitations during the pandemic, the value for 2020 was removed for Northern Ireland projections.
- 19 Payne NWS, Brown KF, Delon C, Kotrotsios Y, Soerjomataram I, Shelton J. Socioeconomic deprivation and cancer incidence in England: Quantifying the role of smoking. PLOS ONE. 2022;17(9):e0272202.
- 20 Sharma A, Szatkowski L. Characteristics of smokers who have never tried to quit: evidence from the British Opinions and Lifestyle Survey. BMC Public Health. 2014 Apr 11;14(1):346.
- NHS Digital. Statistics on NHS Stop Smoking <u>Services in England - April 2023 to June</u> 2023 (Q1). 2023 Oct.
- 22 NHS Digital. <u>Health Survey for England 2019.</u> 2020 Dec.
- 23 Calculated by the Cancer Intelligence Team at Cancer Research UK (2023), based on overweight and obesity prevalence in England: NHS Digital, <u>Health Survey for</u> England, 1993-2019. In Scotland: Scottish Government. The Scottish Health Survey, 2003-2019. In Wales: Welsh Government. Welsh Health Survey, 2003-2015. In Northern Ireland: Northern Ireland Department of Health, <u>Health Survey Northern Ireland</u>, 2010/11-2019/20. And population projections in the UK for 2040: Office for National Statistics. Zipped population projections data files, 2020-based edition of the dataset, England, Wales, Scotland, Northern Ireland.
- 24 Simmonds M, Llewellyn A, Owen CG, Woolacott N. Predicting adult obesity from childhood obesity: a systematic review and meta-analysis. Obes Rev. 2016;17(2):95–107.
- 25 NHS Digital. National Child Measurement Programme, England, 2022/23 School Year. 2023.
- 26 NHS Digital. Routes to Diagnosis, 2018. 2022.
- Public Health Scotland, National Cancer Diagnosis Audit: <u>Summary information</u> from an audit of patients diagnosed

- <u>between 1 October 2018 and 30 September</u> 2019. 2021.
- 28 Public Health Northern Ireland, Queen's University Belfast. Pathway to a cancer diagnosis, 2012-2016.
- 29 Calculated by the Cancer Intelligence Team at Cancer Research UK (2023). Proportion diagnosed through cervical, bowel and breast screening programmes in 2018-2019. Based on <u>Cancer incidence</u> in Wales, 2002-2019, Cervical Screening Programme Reports, Bowel Screening Programme Reports, Breast Screening Programme Reports.
- 30 Independent UK Panel on Breast Cancer Screening. The benefits and harms of breast cancer screening: an independent review. The Lancet. 2012;380(9855):1778-86.
- Parkin DM, Tappenden P, Olsen AH, Patnick J, Sasieni P. Predicting the impact of the screening programme for colorectal cancer in the UK. J Med Screen. 2008;15(4):163-74.
- 32 Calculated by the Cancer Intelligence Team at Cancer Research UK (2023). Based on cervical cancer rates from: Landy, R., Pesola, F., Castañón, A. et al. Impact of cervical screening on cervical cancer mortality: estimation using stagespecific results from a nested case-control study. Br J Cancer 115, 1140–1146 (2016). , and mortality rates from: England and Wales use data from Nomis mortality statistics; Scotland data were provided by ISD Scotland on request, November 2021. Northern Ireland data were provided by the Northern Ireland Cancer Registry on request (February 2022).
- 33 Calculated by the Cancer Intelligence Team at Cancer Research UK (2023). Proportion diagnosed through cervical screening programme in 2018. Based on Cancer incidence in Wales, 2002-2019, <u>Cervical Screening Programme Reports.</u>
- 34 NHS Digital. <u>Cervical Screening Programme</u>. 2022.
- 35 HSC Public Health Agency. Northern Ireland Cervical Screening.
- 36 Public Health Scotland. Scottish cervical screening programme statistics. 2023.
- 37 Public Health Wales. <u>Cervical Screening</u> Programme Reports. 2022.

- 38 Cancer Research UK. Cancer Awareness Measure. Unpublished findings. Data collected via YouGov's online panel that surveyed 4,053 UK representative adults. 2023 Sep Graphic shows response to question "Which of the following, if any, do you think could be warning signs of symptoms of cancer?"
- 39 Ryan M, Waller J, Marlow LA. Could changing invitation and booking processes help women translate their cervical screening intentions into action? A population-based survey of women's preferences in Great Britain. BMJ Open. 2019;9(7):e028134.
- 40 Public Health Wales. <u>Bowel Screening</u> Programme Reports. 2021.
- Public Health Scotland. Scottish bowel screening programme statistics. 2023.
- 42 HSC Public Health Agency. Northern Ireland <u>Bowel Cancer Screening Programme</u>. 2023.
- 43 Office for Health Improvement and Disparities. Fingertips Public Health Data: Cancer Services.
- 44 Cancer Research UK. <u>Bowel cancer</u> screening. 2022.
- 45 NHS Digital. NHS Breast Screening Programme, England 2021-22. 2023.
- 46 Public Health Wales. <u>Breast Screening</u> Programme Reports. 2022.
- 47 Public Health Scotland. <u>Scottish breast</u> screening programme statistics. 2023.
- 48 HSC Public Health Agency. Northern Ireland Breast Screening Programme.
- 49 Calculated by the Cancer Intelligence Team at Cancer Research UK (2023) when applying the evidence from the initial phase of the targeted lung screening programme in England for 55-74 year olds to the numbers in that population in Scotland and accounting for differences in smoking prevalence. "Early stage" refers to cancers diagnosed at stage 1 or 2, and a "late stage" refers to cancers diagnosed at stage 3 or 4. Many assumptions have been made to get these estimates, but they are a best guess using the currently available evidence.
- 50 Calculated by the Cancer Intelligence Team at Cancer Research UK. Assuming 1)

- 50% of lung cancer deaths in 55–74-yearolds are in people who would have been eligible for targeted lung health checks (based on Gracie et al. 2019, Eur Respir J), and using incidence as proxy for mortality); 50% of those eligible will take part in a targeted lung health check (based on currently reported uptake and expert opinion of feasible maximum uptake); 3) targeted lung health checks will reduce lung cancer deaths by 24% in males and 33% in females (based on de Koning et al. 2020, N Engl J Med).
- NHS Digital. Cancer Survival in England, 51 <u>cancers diagnosed 2016-2020, followed up</u> to 2021. 2023. Data for lung cancer, bowel cancer, breast cancer and late stage prostate cancer is age-standardised net survival for adults (aged 15 to 99 years) in England. Data for early stage prostate cancer is age-standardised net survival for adults (aged 15 to 99 years) in England, for those diagnosed in 2013-2017 followed up to 2018. Source: ONS, One-year and five-year net survival for adults (15-99) in England diagnosed with one of 29 common cancers, by age and sex.
- 52 Public Health Wales. Cancer Survival in Wales, 2002-2020. 2023.
- 53 Northern Ireland Cancer Registry, Queen's University Belfast. Cancer incidence, survival, mortality and prevalence data. 2023.
- 54 Public Health England, Cancer Research UK. <u>10-year cancer survival by stage for</u> patients diagnosed in the East of England, 2007 to 2017. 2021.
- 55 NHS Digital. <u>Case-mix adjusted percentage</u> of cancers diagnosed at stages 1 and 2 by sub-ICB in England, 2021. 2023 Dec.
- 56 NHS England. NHS Long Term Plan.
- 57 Calculated by the Cancer Intelligence Team at Cancer Research UK (2022). Number of additional cases needing to be diagnosed to meet the 75% NHS ambition.
- 58 National Disease Registration Service. Rapid Cancer Registrations Dataset.

- 59 Whitaker KL, Macleod U, Winstanley K, Scott SE, Wardle J. Help seeking for cancer 'alarm' symptoms: a qualitative interview study of primary care patients in the UK. Br J Gen Pract. 2015;65(631):e96-105.
- 60 Pham TM, Gomez-Cano M, Salika T, Jardel D, Abel GA, Lyratzopoulos G. Diagnostic route is associated with care satisfaction independently of tumour stage: Evidence from linked English Cancer Patient Experience Survey and cancer registration data. Cancer Epidemiology. 2019;61:70-8.
- NHS England. Cancer Waiting Times. The 62-day standard states that patients should begin treatment within 62 days (two months) of an urgent referral. From October 2023, England also includes people referred from a screening programme, a breast symptomatic referral or through consultant upgrade in this standard.
- 62 Calculated by the Cancer Intelligence Team at Cancer Research UK, based on waiting list data. Data sources: NHS England, Monthly Diagnostic Waiting times and Activity. Public Health Scotland. NHS waiting times - diagnostics. Public Health Wales. NHS Hospital waiting times; diagnostic and therapy services Department of Health. Northern Ireland waiting time statistics: diagnostic waiting times September 2022.
- 63 Welsh Government. NHS diagnostic and therapy service waiting times. 2023.
- 64 Public Health Scotland. Cancer waiting The 62-day standard states that patients

should begin treatment within 62 days (two months) of an urgent suspected cancer referral.

- 65 Department of Health NI Government. Cancer waiting times. The 62-day standard states that patients should begin treatment within 62 days (two months) of an urgent suspected cancer referral.
- 66 Welsh Government. NHS cancer waiting The SCP target aims to begin treatment within 62 days of the point of suspicion of cancer for 75% of both urgent and nonurgent cancer referrals.
- 67 Cancer Research UK. Public Opinion Polling Survey: Key Findings from June 2023.

- 68 NHS England. National Cancer Patient Experience Survey 2022: National level results. 2022.
- 69 Scottish Government. <u>Scottish Cancer</u> Patient Experience Survey. 2019.
- 70 <u>Wales Cancer Patient Experience Survey</u>. 2021.
- National Disease Registration Service. <u>CancerData: Chemotherapy, Radiotherapy</u> and Surgical Tumour Resections in England.
- 72 Analysis by Cancer Research UK-NDRS partnership using cancer registration data from the NDRS to calculate net twoyear cancer survival by stage and Cancer Alliance for lung and colorectal cancer patients diagnosed between 2014 and 2018. The 'best' survival was calculated as the average survival for each age group for the three alliances with the highest age-standardised net survival for each stage. These 'best' survival estimates were applied to the age distribution of cancer diagnoses for England to calculate the increased number of patients who would survive their cancer for two years or more, compared to the current survival in England. Patients with missing stage at diagnosis are excluded from this analysis.
- 73 PA Consulting, Cancer Research UK. <u>Understanding the economic value of</u> cancer research. 2022 Jun.
- 74 Cancer Research UK. Longer, better lives: A manifesto for cancer research and care. Cancer Research UK conducted the funding gap analysis to provide an approximate estimate of government spending needed over the next decade to maintain total public (government and not-for-profits) spending on cancer research and development at the 2019 level. This analysis has not been published and reflects our best estimates of the funding gap, based on our current knowledge of government and not-forprofit spend data. It does not include private sector spend. 2023 Nov.
- 75 Cancer Research UK. Unpublished Cancer Research UK data. Survey of the UK clinical research workfoce. August 2023.

76 Economic modelling undertaken by Economics By Design Ltd. for Cancer Research UK, to provide an update of previous estimates undertaken using the methodology adopted in "Estimate of the economic costs and literature review of the benefits of dedicated research time for Hospital Consultants in the NHS: Final Report for the Academy of Medical Sciences, YHEC" (October 2019). The modelling also included Advance Practitioners as having a research role. 2023.