

North West Regional Report



2024



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North West Cancer Research was founded more than eight decades ago. Its purpose is to independently fund research, strategies and community-level engagement to understand the causes of cancer and support those living with and beyond cancer in the North West of England and North Wales.

Over this time, we have built up a detailed picture of the prevailing cancer issues within our area. Having this level of awareness is critical, as cancer cannot be effectively tackled without a highly localised approach that recognises the multi-faceted, complicated and evolving nature of the challenges being faced.

As no two villages, towns, cities or even regions are exactly alike, we cannot take a one-size-fits-all approach to cancer around the country.

This is why we have invested over £50 million since 2000 in life-saving research projects, as well as preventative awareness campaigns that address cancer inequalities. All of this work is aimed at empowering local care systems with tailored measures that reflect the lived realities of their communities.



Multiple answers to a complex question

The challenges being faced by the population and healthcare infrastructure in the North West of England and North Wales remains stark.

For example, we know that residents in this region are 25% more likely to be diagnosed with cancer than in the rest of the UK*, and in the latest cancer mortality data, the figures in the North West are 8% above the national average.

When we look at the 18 different cancer groups for which mortality data is recorded by the NHS, the North West exhibits higher rates for a majority of them (13) compared to the English average.

As discussed in this report, the role that socio-economic factors play in the area's health

expectations is expressed in the statistics, with 'lifestyle related' cancers – bowel, lung, liver, kidney, stomach, and skin – showing the most alarming regional disparities.

Sadly, these rates have remained largely static over a number of years. This likely reflects the entrenched deprivation in our communities, as a clear correlation between poverty and increased cancer rates is evident in our research.

This is seen particularly in Liverpool, which experiences a 25.8% higher deprivation level than the rest of the country. In 2022, it also experienced 20% more cancer deaths than the English average.

These facts mean we must take a two-pronged approach to lower cancer incidence and mortality rates:

- 1. Educating people of all ages and backgrounds on key lifestyle factors to boost prevention by creating cross-society behavioural change.
- 2. Investing in research into early diagnosis and treatment to improve outcomes and support those living with cancer and their families.

Route one underscores the critical need for targeted education and outreach programmes that provide people young and old with the information they need to live healthy lives that minimise their risk of being diagnosed with cancer.

At North West Cancer Research, we frequently implement campaigns designed to spread vital information and raise awareness of the cancers most prevalent in our region. Encouraging early diagnosis and getting important messages on cancer prevention and education to all corners of

our communities has seen us undertake a wide range of activities, including school engagements to provide young people with healthy lifestyle skills and knowledge. We have also rolled out region-wide awareness campaigns to share vital information with the media alongside boots-on-the-ground work at key North West locations to disseminate information first-hand.

Recently this has involved creative messaging around bowel, skin, and head and neck cancers, which are all present at above average levels in the North West. Central to these campaigns has been taking the time to understand why people in our area are not taking measures that would help to prevent cancer or facilitate early diagnosis, such as wearing sunscreen or completing bowel cancer screening kits. These insights were then used to create engaging messages that spoke to these perceptions and current ways of thinking in order to encourage changes in behaviour and a wider understanding of the cancers that are impacting our communities.



“Stories really do matter as they are what touch people’s hearts and provoke action. The campaigns that feature these stories are important, as we are able to bring them to life and reach those who need to hear them.”

David Blacklock, Chief Executive of Healthwatch Cumbria, at North West Cancer Research’s 2024 roundtable on health inequalities in Lancashire and Cumbria

*National Institute of Health and Care Research North West Coast Clinical Research Network (2023)

Education and communication are important watchwords at all levels of society and talking to stakeholders in our communities such as politicians, health directors, NHS clinicians, mayors, councillors, academics, and more is essential to aligning our region's approach to tackling cancer and ensuring that the issues are understood and the priorities addressed.

As mentioned in a recent roundtable on tackling health inequalities in Lancashire and Cumbria, **"cancer is the point at which the pressures of**

society meet medicine". This is highlighted by the expansive network of local government, central government, the NHS, and third sector organisations that have a role to play in tackling the North West's high cancer rates. There are essentially three overlapping but distinct levels within society and the medical landscape which governs the North West's collective ability to prevent and treat cancer and through which we aim to engage. They are the political and medical system, and the research world.

"Engagement needs to be constant – we need to be consistently promoting the idea of prevention and making sure that the information doesn't stop."

Rahima Farah, Network Engagement Lead at the Central Liverpool Primary Care Network, at North West Cancer Research's 2022 roundtable on health inequalities in Merseyside

For **route two**, our research portfolio includes a mix of research types focused on common cancers, such as breast and prostate, along with studies on rare and childhood cancers and those that over-index in our region.

The largest weight of our funding however is concentrated on those cancers which have the greatest impact in our region. Such as head and neck cancers, cancers of the digestive system, the lungs and liver. Our funding is spent through academic and health institutions, but its aim and focus is to improve the health of the region.

North West Cancer Research maintains a research pipeline from the earliest discovery science and understanding of the genetic causes of cancer to studies which seek to improve patient care through our hospitals today. Added to this are studies which aim to improve available treatments using current techniques to those which focus entirely on the novel and groundbreaking – creating new ways to treat cancers.

This is reflected in the wide variety of research activities that are currently underway. Some examples of this work include a project with Blackpool Hospital on an early predictive detection method for lung cancer via vibrational spectroscopy of liquid biopsy and there is ongoing work in Manchester to decipher the evolution of small cell lung cancer. We are working with academics to identify the mechanisms within pancreatic tumours, as well as on personalised surveillance schedules for detecting liver cancers. While in Lancaster, we are supporting research into DNA repair following radio and chemotherapy treatment for bladder cancer. And all of this is just the tip of the iceberg, with dozens of other R&D programmes underway or already yielding revolutionary results.

Our focus is on the unique needs of our region and so an increasing amount of our research is on the inequalities which exist across the area. These may be connected to disparities in wealth or the many other diverse factors at play as we live and age, but they are what makes our region unique. We need to understand our inequalities if we are to address them, and this is what our research aims to do. Boiling the approaches down into two routes isn't to trivialise the complexity of the task at hand

but provides a useful prism through which to understand the steps we need to take. Indeed, in our recent roundtables held across the region, there is much discussion on local differences, political realities and research objectives which ultimately falls into one of these routes – although admittedly often in an overlapping manner.

In essence, the underlying thread that connects all this work is uncovering and addressing why cancer is a more common disease in the North West compared to the rest of the country.



● This report's purpose and approach

The disparity between the national and regional cancer rates has been a core driver of our work as well as our regional report.

Now in its fifth year, this document plays an important part in our engagement activities, as it maps out the cancer landscape across the North West. The data we analyse consistently highlights long-term trends that speak to both the scale of the challenge as well as the critical necessity of community-level interventions.

In preparing this, we assess the available data on cancer in the North West of England and explore it at a county level, covering Greater Manchester, Cheshire, Merseyside, Cumbria, and Lancashire.

This provides us with granular insights into how this disease affects our communities and which conditions are most affecting the people of the North West and its healthcare networks.

To build up this picture, our analysis overlays multiple data points, including socio-economic information with incidence (total and age standardised), prevalence and mortality rates.

Over the course of our regional reports, we have repeatedly seen more continuity than change, with the prevalence, incidence, and overall number of deaths from cancer remaining consistently above the national average.

● Empowering communities

From the evidence in this report, it is clear we are facing a long-term issue that is going to require significant investment to understand the problems – and the solutions - at a local level.

Education and awareness of preventative measures should be a priority, as increasing levels of understanding across populations will help the North West's cancer rate start to achieve parity with the national average.

This is why we are committed to implementing outreach projects at a grassroots level. Our presence in the region's communities and our research tells us that creating a cancer-free future is going to take innovation, investment, time and collaboration to address specific localised concerns and enable people across the North West to be empowered to take control of their own health.



● **Alastair Richards,**
North West Cancer Research CEO



NORTH WEST

Regional Overview

The North West experiences cancer at much higher rates than the rest of England, according to a number of key metrics.

Overall cancer incidence statistics in the region are significantly above the country’s benchmark and many areas are seeing mortality rates ranging from 8% up to 33% higher than the national average.

These increased rates mean people living in the North West’s counties and cities face a higher risk of being diagnosed with cancer each year as well as being more likely to die of cancer than if they lived elsewhere in the country.

The severity of the issue is underlined by the fact that the North West over-indexes for mortality on 13 of the 18 key cancers surveyed compared to the average in England. This issue is evident across the region but particularly stark in areas such as Cumbria and Liverpool, where the respective total death rates are 33% and 20% above the national norm.

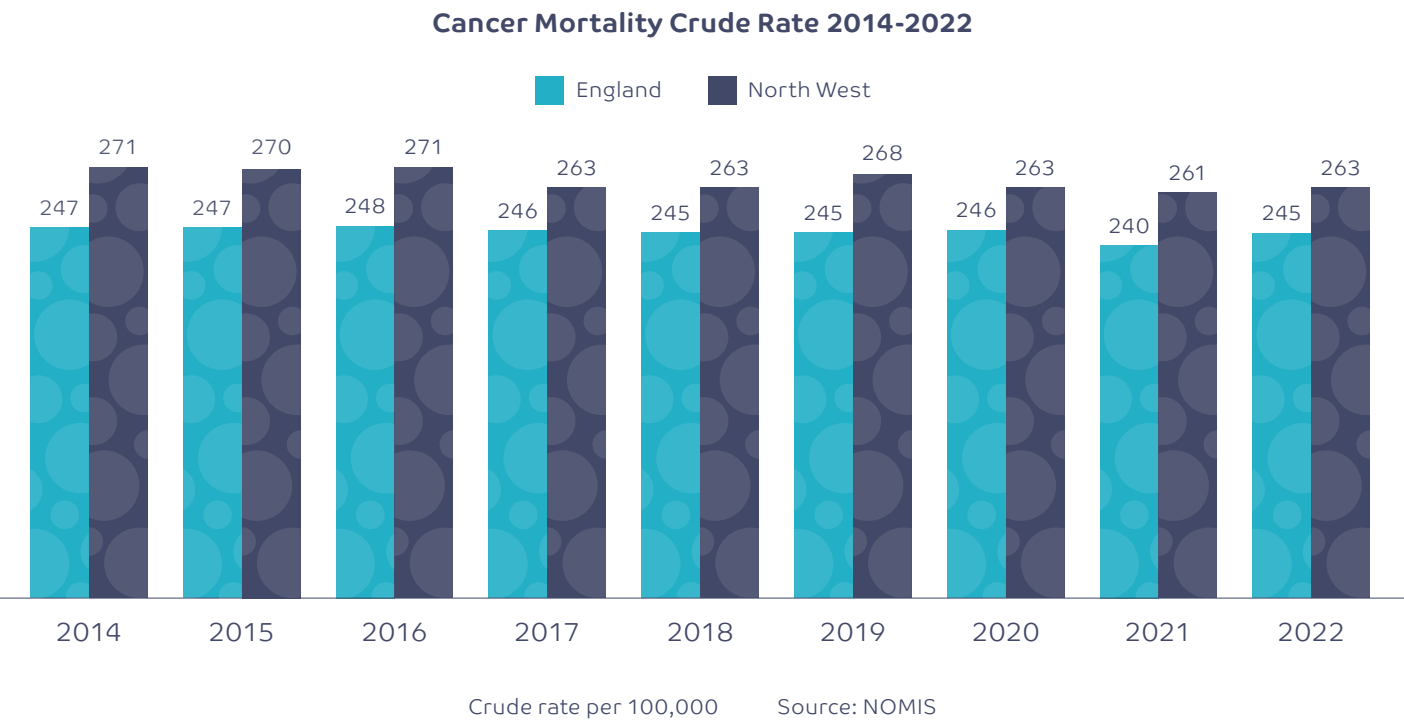
The total cancer death rates for some of the most prevalent and problematic regional diseases highlight key challenges for the North West’s health infrastructure. Compared to the national average, trachea, bronchus and lung cancer deaths were 28% higher (increasing from 25%

in our last report), while oesophageal and liver cancer deaths are 19% and 16% above average. Some communities are facing an especially acute challenge from this disease, with Liverpool recording a 56% higher than average mortality rate while Cumbria, Lancashire and Greater Manchester indexed at 39%, 27% and 21% above the norm.

The gravity of the challenge posed by trachea, bronchus and lung cancers is underlined by the fact that, for the last year data is available, it was diagnosed at a 27% higher rate in the North West. Making it the third highest cancer for overall incidence in the region and first for the most overall deaths.

In 2022, 59.88 people per 100,000 died of this disease, which is significantly more than every other type of cancer. In comparison, 26.62 deaths per 100,000 people were recorded for colon cancer while lymphoid, blood and related tissue cancers were recorded at at 19.05 deaths per 100,000 people.

The discrepancy between the North West and the rest of the nation when it comes to cancer mortality is starkly illustrated in the below graph, which shows that for nearly a decade this region has been a notable outlier.



Localised factors such as population demographics, the environment and deprivation levels have a notable impact on the pervasiveness, mortality levels and types of cancer that communities experience. This is important, as our research shows that communities in the North West exhibit significantly higher rates of deprivation than the national average.

The data on income levels indicates that people living in Greater Manchester experience the highest overall levels of deprivation in the North West, with Merseyside a close second. In contrast, Cheshire is the most affluent county in the region and the only one to register lower poverty levels than the English average.

Within individual counties, the picture can be very mixed. Cumbria experiences deprivation levels only slightly above the English average and is 14% less deprived than the rest of the North West. However, Barrow and Copeland record higher levels of poverty compared to areas of Cumbria such as Eden and South Lakeland, which are more affluent than the national average.

Lancashire represents the region’s most economically diverse county, with areas of substantial wealth as well as extreme poverty. Greater Manchester’s economic landscape also incorporates areas of significantly contrasting wealth levels. More prosperous postcodes such as Trafford and Tameside sit next to Manchester’s inner-city, one of the most deprived areas in England.

The difference between population demographics also shows how factors such as age play an important role in each county’s health outcomes.

In general, areas with older populations experience significantly higher incidence and mortality rates for a wide range of cancers.

Access to healthcare is a particularly important aspect when it comes to health outcomes and is an issue inextricably linked to poverty. Being unable to afford to travel or live in an area with easy access to the necessary healthcare facilities can directly affect opportunities for early diagnosis and treatment. This is especially evident in Cumbria, where in the south of the county 27% of people diagnosed with cancer must wait at least two months for treatment, while in North Cumbria

“We have to look at how we improve people’s lives and how we build a community that does that.”

Dan Carden, MP for Walton, at North West Cancer Research’s 2022 roundtable on health inequalities in Merseyside

“Some of the highest breast cancer screening rates in South Cumbria are in Kendal, and the lowest rates are in Barrow. There’s only around 25 miles between the two.”

Alastair Richards, North West Cancer Research’s CEO at a 2024 roundtable on Lancashire and Cumbria’s cancer challenges

this rises to 44% of people with a diagnosis. Greater Manchester has the youngest population in the North West, with 66% per cent of the adult population living in the area aged 54 or under, and it also has the lowest rates of cancer incidence and mortality in the region. The county records cancer mortality rates that are 4% below the national average and 12% below the North West average.

It is important to note that age is a key influence on the disease profile of Greater Manchester’s population. When looking at an age-standardised data sample, the region has a higher incidence rate than the national average – and in fact ranks second in the North West. This illustrates how deprivation can lead to worse outcomes for cancer patients, as when the young nature of the city’s residents is taken out of consideration, its total cancer death rate is still markedly above the English norm.

In contrast to Manchester, Cumbria has one of the oldest populations in the North West. 49% of Cumbria’s adult population is aged over 55 years old, which compares to the national average of 38%. This is reflected in excessively high rates of cancer, with mortality tracking at 33% higher than the national average and 25% higher than the region as a whole.

● Cancer impacting women

Certain cancers that impact women were found to be much more common in the North West's population compared to the rest of England.

The mortality statistics for ovarian cancer was found to be 5% above average across the region, with rates spiking in Cumbria, Lancashire and Liverpool which were respectively 29%, 23% and 19% higher than the English norm.

Incidence rates of ovarian cancer and cancer of the uterus are also above average across the North West, with ovarian cancer being 17% higher than the national average. Cumbria recorded the highest incidence rate of ovarian cancer, at 41% above the national benchmark. Merseyside is also tracking at 26% above average, with Cheshire ranked third with a 19% difference.

Cancer of the uterus indexes at a 6% higher incidence rate compared to the rest of the country, with Cumbria and Lancashire having the most acute challenges for uterine cancer, recording incidence rates 39% and 19% above average. This is mirrored in the mortality statistics, with Cumbria and Lancashire having 23% and 15% higher than average rates and only Cheshire was found to have significantly better than average mortality figures for this disease.

When looking at the last year for which incidence rates are available, cervical cancer is 19% more present across the region than the national average. Lancashire recorded the starkest incidence rates of cervical cancers, at 32% above the national average. Every other county aside from Cheshire also recorded a higher than average burden of this disease,



with cervical cancer incidence rates 17% higher than the national average in Cumbria and 16% higher in Merseyside.

Female breast cancer is the most diagnosed and prevalent cancer across the North West, with approximately 139 annual diagnoses per 100,000 people (according to incidence data) and a prevalence rate of more than 2,000 cases per 100,000 people. By mortality, breast cancer ranks fifth in the North West, with 14.9 fatalities per 100,000 people. Cheshire is particularly affected by this disease, with cases 24% higher than average and a mortality rate 4% above the norm. This is also a markedly higher difference to the national figure compared to other North West regions, with Liverpool having the second highest incidence rate at 8% above the average for England and no other region having a mortality rate worse than the national average.



● Cancer impacting men

Prostate cancer represents a key challenge for the North West, ranking fourth for mortality in 2022 and accounting for 18.40 deaths per 100,000 people in the region.

While the overall mortality rate is only slightly above the national average across the whole of the North West, regions such as Cumbria and Cheshire face acute challenges, with mortality rates 44% and 17% higher than the national benchmark for this disease.

After female breast cancer, prostate cancer is also the second most prevalent cancer in the region, with 1,524 cases per 100,000 people.



The North West's mortality rate for trachea, bronchus and lung cancers is 28% higher than the national average.

● Key challenges

Across the four years of data gathering that we’ve undertaken for these reports, almost all indices used to benchmark cancer incidence, prevalence and total deaths have remained largely static.

The cancer incidence rate for the North West has barely changed since our first report in 2021. The cancer mortality crude rate data illustrates the entrenched nature of the issue particularly well, showing that since 2014 the North West has remained on average 20.4 deaths per 100,000 above the rest of the country. This proves the entrenched nature of the problem and underlines the urgent need for immediate investment and evidence-led interventions in the North West’s communities.

Rates of trachea, bronchus and lung cancers remain very high in the North West, with a mortality rate 28% above the English average and an incidence rate 27% higher than the norm. Urban areas appear particularly affected, with Liverpool recording the highest mortality rate from this disease at 56% and Greater Manchester, despite its young population, indexing at 21% above average. This isn’t to downplay the challenge in more rural areas, with Cumbria and Lancashire having respective mortality figures 39% and 27% higher than the English average.

Mortality rates for some of the most challenging cancers appear to be increasing. Oesophageal cancer recorded an increase from a 16% higher than average mortality rate to 19% in the latest data. This disease presents an especially urgent challenge in several regions, with Lancashire, Cheshire and

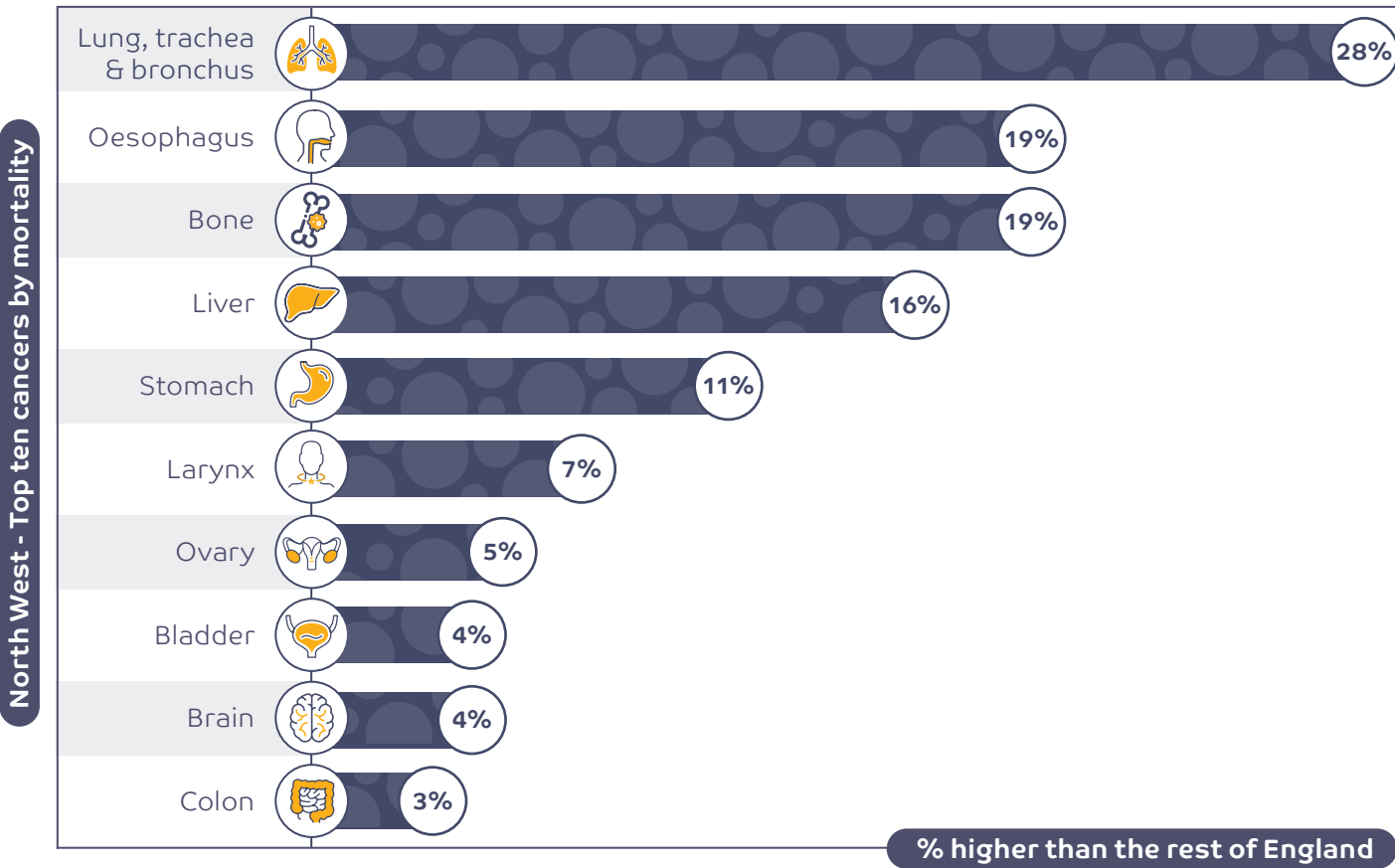
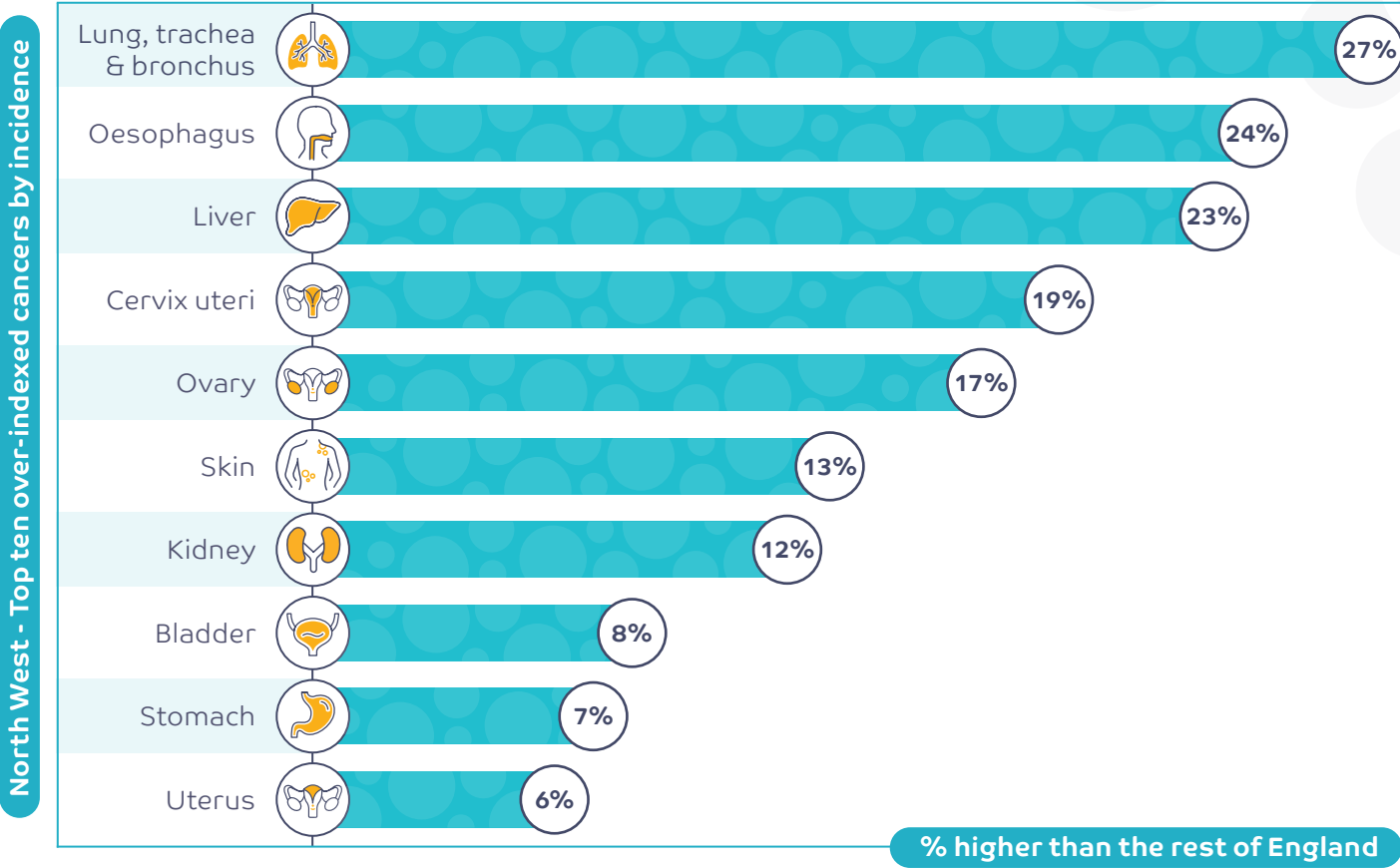
Liverpool indexing at 40%, 30% and 20% above average. While only Cumbria – which is otherwise well above average for 13 of the 15 cancers analysed – is the only region with lower rates than the rest of England. By incidence, this disease exhibits a 24% higher figure compared to the rest of England. Liverpool experiences the highest incidence rate at 34% above the national average, followed by Lancashire at 33%, Cumbria at 25%, Cheshire at 22% and Greater Manchester at 7%.

Melanoma has an outsized impact in the North West, possibly due to lifestyles or outdoor occupations which put populations at an increased risk. While across the region the mortality rate is slightly below the national benchmark, this is only due to the younger than average Manchester population skewing down the overall figure. In Cheshire, the prevalence rate is 29% higher than the national average and the mortality rate is 21%, which is the most above average mortality figure in the North West for this disease. The regional prevalence of melanoma is 13% higher than the national average, with Cumbria recording a prevalence rate 32% above average and a mortality rate 18% higher.

Head and neck cancers are problematic across the North West. Merseyside has the highest prevalence rate of this cancer out of the five counties and is 32% above the national average. Cumbria, Lancashire, and Greater Manchester are all also managing a significantly higher prevalence than should be expected at 29%, 18% and 13% above the national average.

“We must have a deep understanding of our communities, what motivates them and drives behaviour, to help them make what are sometimes quite challenging decisions.”

Matt Ashton, Director of Public Health at Liverpool City Council, at North West Cancer Research’s 2023 roundtable on health inequalities in Merseyside



MERSEYSIDE

County Overview



MERSEYSIDE

County Overview

The cancer mortality rate for Liverpool is 12% above the regional average and 20% higher than the rest of the country. This is the second highest cancer mortality rate in the North West after Cumbria. The latest available data shows a similar trend for the city's cancer incidence rate, which is higher than the North West average by 8%, and 15% above the national average.

The high levels of deprivation may account for the notable disparity in incidence and mortality rates. As Merseyside is one of the most deprived counties in the North West, with significantly high levels of poverty compared to both the regional and national picture.

9% of the population in the Liverpool City Region are categorised as either having never worked or are long-term unemployed, which has increased from 8% in our previous report and compares to a national average of 7%. More than a quarter (26%) are employed in routine, semi-routine or manual roles, while slightly less (23%) have managerial, administrative, or professional occupations. Full-time students make up 7% of the city's population, which is higher than the national average of 6% but lower than the previously recorded 10%.

A range of cancer types are present at a disproportionate rate in the Liverpool area and the population exhibits a significantly above average mortality rate for many of these. Lung, trachea and

bronchus cancers continue to present a challenge, with Liverpool exhibiting the region's highest above average mortality rate at 56% higher than the rest of the country. In the most recent data, this disease was also the most overly diagnosed type of cancer in Merseyside, with an incidence rate 44% higher than the national average.

Stomach, liver, oesophageal, and skin cancers all remain markedly problematic for the region's healthcare system, with respective mortality rates 32%, 21%, 20% and 20% higher in Liverpool than across the rest of the country. In the most recent prevalence data, Liverpool records the highest level of head and neck cancer in the region, with rates 12% above the regional average and 32% above the national average.

"If you think about the main impacts on poor health, especially with cancer, you're thinking about alcohol, smoking, and obesity, all of which we have bigger challenges around."

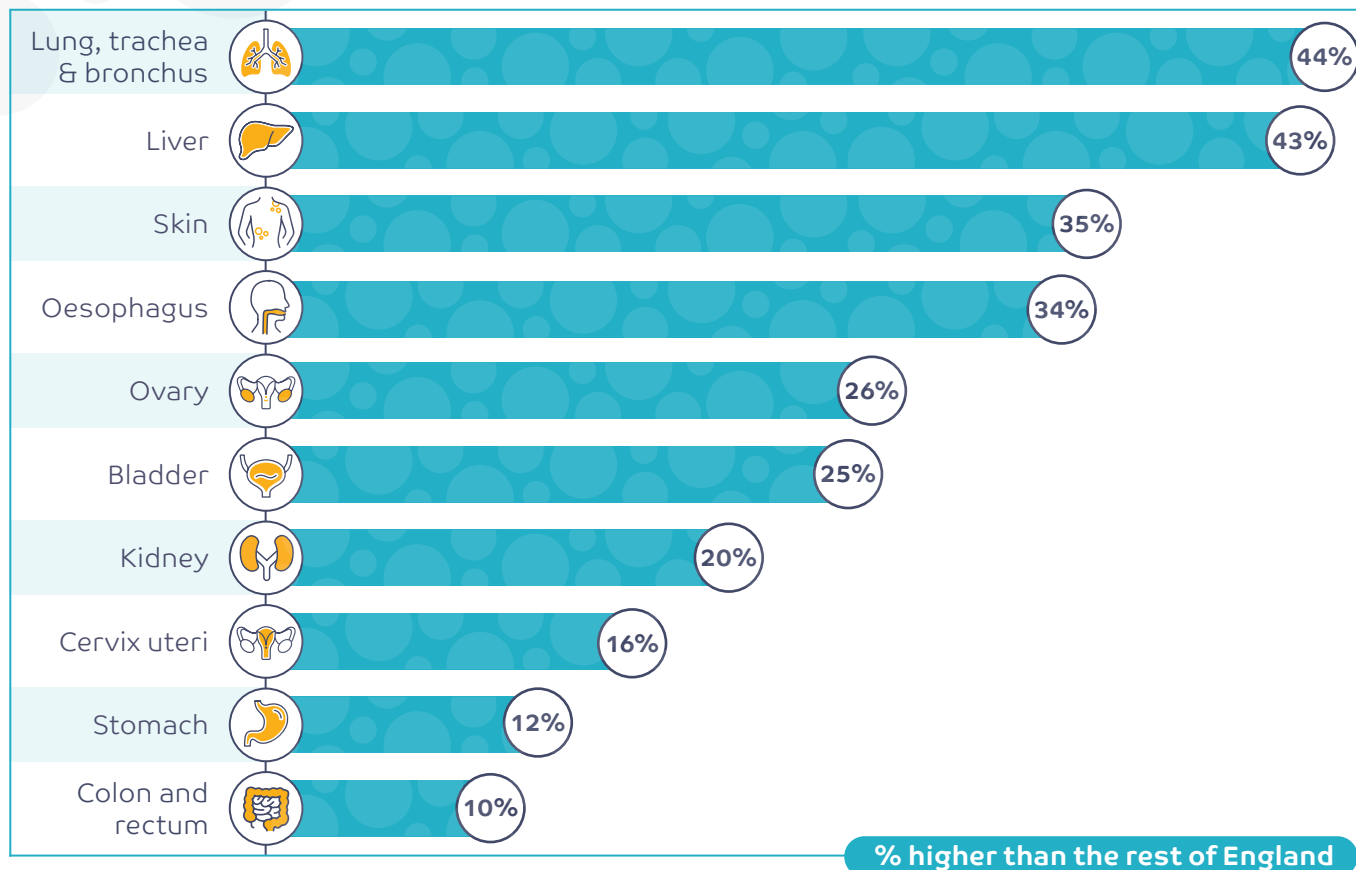
Matt Ashton, Director of Public Health at Liverpool City Council, at North West Cancer Research's 2023 roundtable on health inequalities in Merseyside

COUNTY-SPECIFIC BREAKDOWN: Merseyside

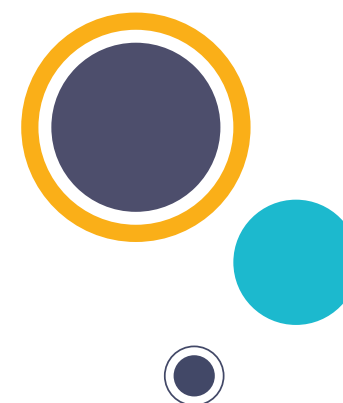
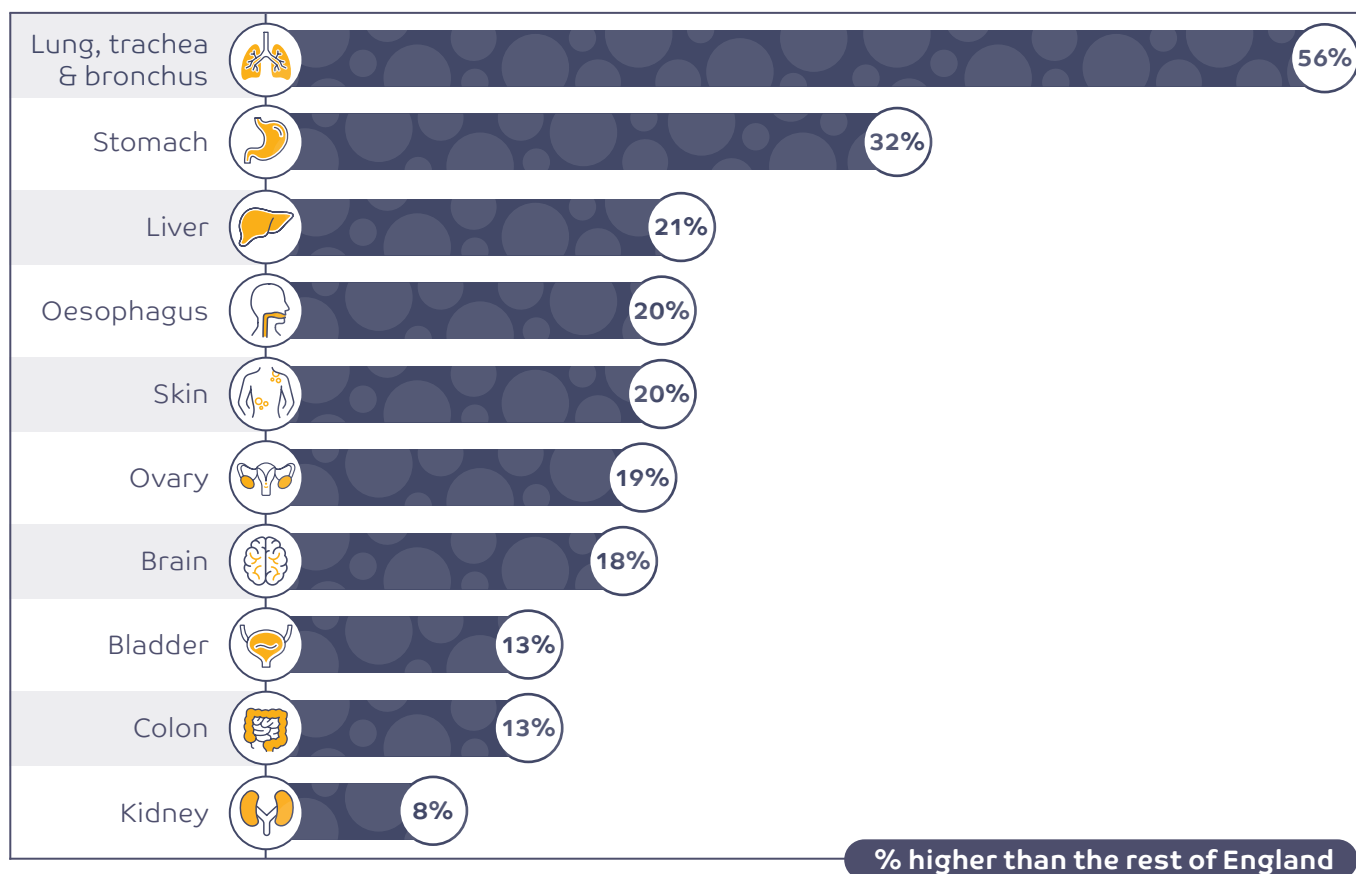
Top five areas of need

- Lung, trachea, and bronchus cancer rates are very high, with a 56% above average mortality rate and 44% more cases by incidence than the national average.
- As with many lifestyle related cancers, stomach cancer is posing a significant challenge, with the total from this disease 32% above the English average and an annual diagnosis rate 25% higher.
- Liver cancer prevalence and total deaths in Merseyside remain high, with a 43% higher incidence rate and a 21% higher mortality rate compared to the rest of England.
- Merseyside's communities struggle with oesophageal cancer. Incidence rates are 34% higher than the rest of the country and total deaths are 20% above the country's benchmark.
- Liverpool recorded a skin cancer mortality rate 26% above the regional average and an incidence rate for this disease 35% higher than the national picture.

Liverpool - Top ten over-indexed cancers by incidence



Liverpool - Top ten cancers by mortality



● SYSTEM ENGAGEMENT: Our work

Since 2022, we've hosted a number of roundtables across the North West to bring together community leaders, clinicians, academics, and charities to discuss in depth how to address health inequalities in specific areas across the North West.

A recent roundtable event at Lancaster University provided local politicians, researchers based at the university, healthcare professionals and other stakeholders in Lancashire and Cumbria's health landscape the chance to discuss issues face-to-face – with an opportunity to share their experiences and reflect on how to resolve the disparity between the national and regional cancer statistics.

This led to a number of impactful insights, ranging from access to treatment issues stemming from the

area's geography to the urgent need for a regional and national cancer plan and how to empower patients during their treatment pathway.

Being 'in the room' with community leaders and regional decision makers means we can provide valuable insights where needed and enables us to connect the dots between different entities, ensuring that all those engaged in tackling cancer in our region are aligned, informed, and moving forward together.

To spread the lessons from this discussion and advance the conversation on health inequalities, we created white papers based on the roundtables, which are available on the North West Cancer Research website.

CUMBRIA

County Overview



CUMBRIA County Overview

Our analysis shows that Cumbria faces some of the starkest cancer challenges of any area in the North West.

The county's cancer mortality rate is 33% above the national average and indexes at 25% above the North West's baseline. The most recent cancer incidence statistics show that cases of cancer are being diagnosed at a 23% above average rate compared to the rest of England.

In addition to recording the highest overall mortality and incidence rates in the North West, Cumbria's communities are facing significant challenges from several specific cancer types. This includes a stomach cancer mortality rate 61% above the rest of the country and a colon cancer mortality statistic that is 57% above the national benchmark and 44% above the next North West region, which is Liverpool at a 13% higher than average rate.

Cancers of the lymphatic system, blood and related tissue; kidney; prostate; brain and trachea, bronchus and lung all recorded mortality rates between 39% - 54% higher than the national average. Of the 15 cancer types for which mortality data is available, Cumbria's rates only aligned with the national baseline for one, breast cancer. The region was also only below the national mortality rate for one, oesophageal cancer, bucking the regional trend for this disease. However the latest incidence data indexes oesophageal cancer at 25% above average in Cumbria.

When looking at the most recent incidence data, kidney cancer is recorded at a rate 42% higher than the English average and 15% above the next highest

county, Cheshire. Cumbria also scores highest for ovary (41%), colon and rectum (39%), stomach (23%), and non-Hodgkin lymphoma (21%), among others.

The county is also managing a number of other cancer disease types at very high rates. The prevalence rate of head and neck cancers is recorded as 39% above average, which is the second highest rate in the North West. While incidence for liver and skin cancers index respectively at 34% and 33% higher than the rest of the country.

The area's demographic backdrop may explain these results, as Cumbria has one of the oldest population profiles in the North West. 49% of the county's adult population are over 55 years old and 15% are aged over 75. This compares to the national totals, which are 39% and 11% respectively.

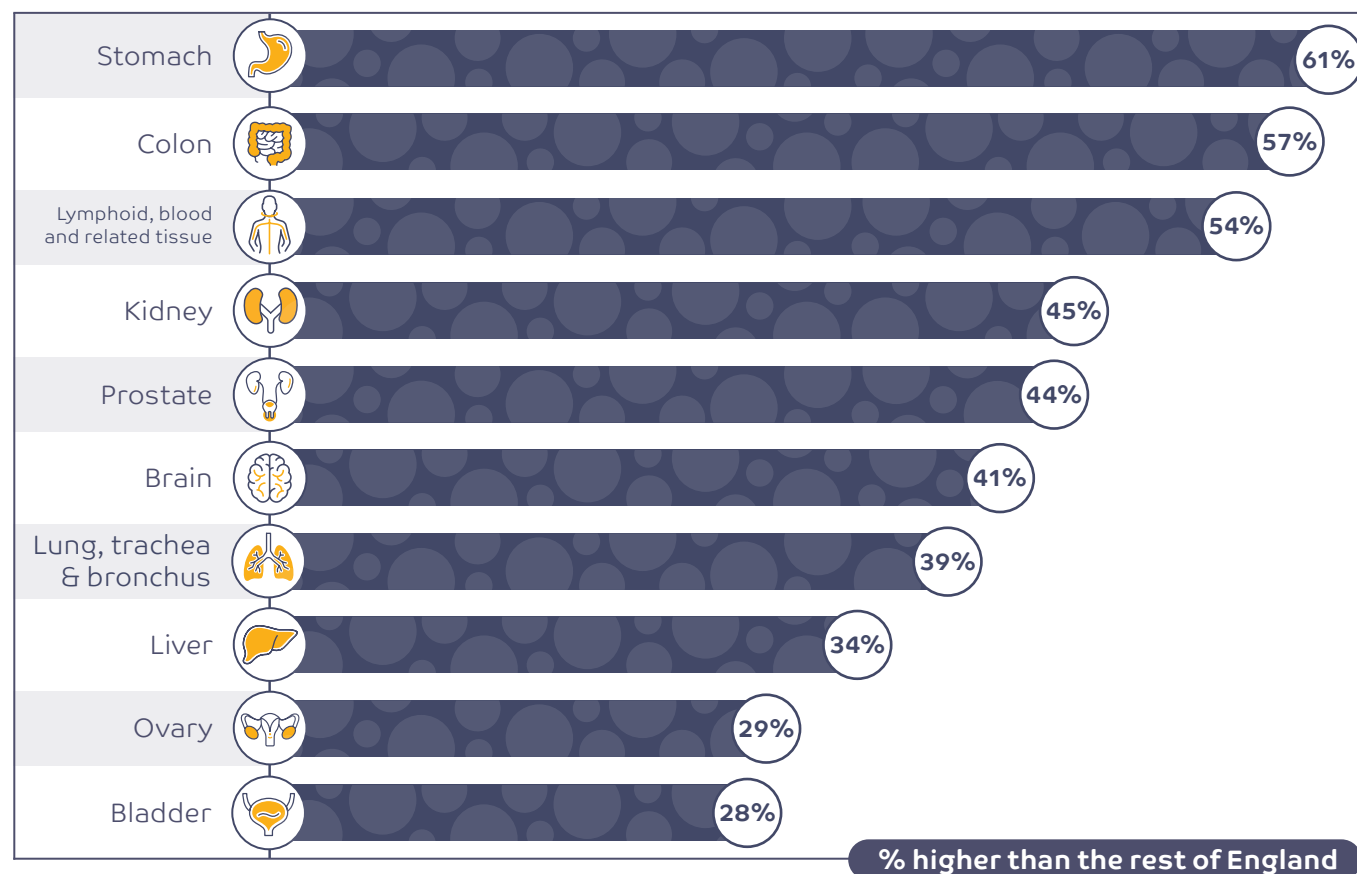
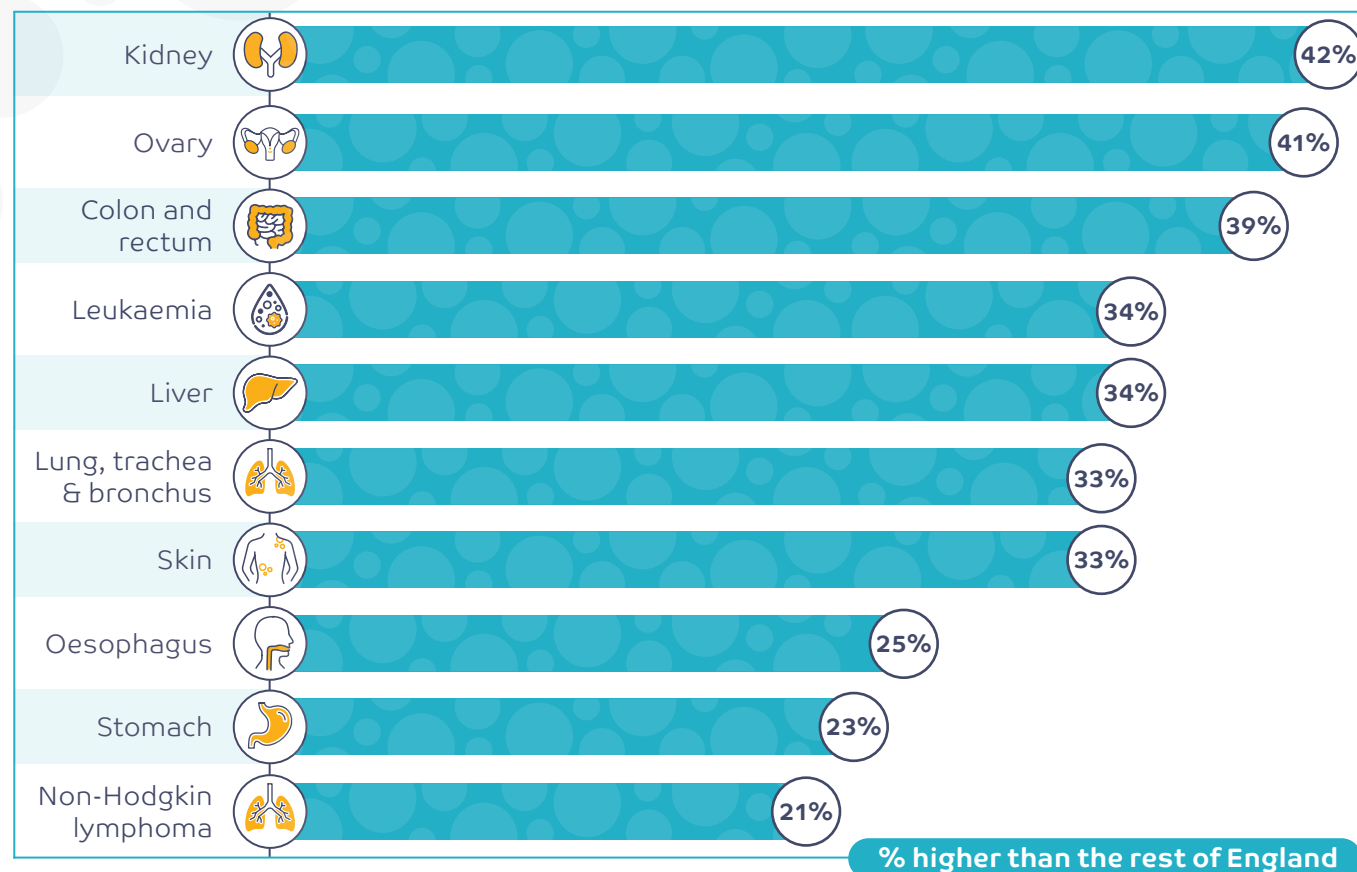
As a whole, Cumbria is less affected by deprivation than the North West average. However, while it is 20% less deprived than the region, the area does host several pockets of entrenched deprivation. Barrow for example is 26% more deprived than the English average and Copeland records 19% higher deprivation levels, which compares with locations such as Eden and South Lakeland which are much less deprived than the national average.

29% of Cumbria's population are employed in routine, semi-routine or manual roles, while a quarter (25%) have managerial, administrative, or professional occupations. Students make up 4% of the population, while 7% of people living in the area are long term unemployed or have never worked.

● COUNTY-SPECIFIC BREAKDOWN: Cumbria

Top five areas of need

- The county as a whole is the furthest region in the North West away from aligning with the national average cancer rates for mortality and incidence.
- Cumbria's healthcare infrastructure is facing mortality rates for certain cancers well above the rest of the country and region, such as stomach cancer and colon cancer, which index at 61% and 57% above the national average.
- Rates of ovarian cancer in Cumbria have been recorded at 41% higher than the national average for incidence and 29% above average for mortality.
- For the 15 cancer types of which mortality data is available, Cumbria's rates are more than 15% above average for 13.
- The mortality rate for uterine cancer in Cumbria is 23% above the national average, which is 46% adrift from rates in Cheshire.



● INNOVATIVE TREATMENT: Our work

The North West has the highest regional incidence and mortality rate of pleural mesothelioma, a cancer that affects the lining of the lung. The reason for this stems from the fact that mesothelioma is directly linked to asbestos exposure - a material that was widely used as part of the North West's historic shipbuilding industry.

Chemotherapy drugs and drugs that target the immune system can help some patients with this disease, but it has been found that others do not respond at all and in most cases the cancer eventually becomes resistant to treatment.

A new study will use a targeted drug combination to understand why some patients might benefit from treatment more than others.

An innovative process has been devised for the project, in which a tiny mesothelioma sample from a diagnostic biopsy is placed into a hen's egg. Cancerous cells will then form a tumour nodule in the egg and grow, allowing for new and existing drugs to be tested against the mesothelioma cells.

This study identified that a biomarker gene called BAP1 influences how patients respond to two existing drugs used to treat mesothelioma. Thanks to this insight, the hen's egg model can be used to understand the likely response of mesothelioma in individual patients to design better clinical trials.

LANCASHIRE

County Overview



LANCASHIRE County Overview

The cancer mortality rate in Lancashire aligns with the overall North West average at 8% above the rest of the country. Likewise, the most recent incidence data shows that the county's rate of new cases each year is above the national norm but in line with the wider region.

The county is the most economically diverse in the North West. This is illustrated by the fact that it encompasses Blackpool, which has some of the most deprived communities in England, and the Ribble Valley, one of the nation's wealthiest areas. The county's under-55s make up 58% of the adult population, with those aged 75 or over constituting 12%.

Just over a quarter (26%) of Lancashire's population is employed in routine, semi-routine or manual roles and a similar proportion (24%) have managerial, administrative, or professional occupations. Students make up 6% of the county's residents, while 8% are long term unemployed or have never worked.

Lancashire has the North West's most above average mortality rate for oesophageal cancer, at 40% higher than the national benchmark. This is even 21% above the North West average and 45% higher than nearby Cumbria. When looking at incidence, Lancashire is 33% above the national average for this disease, which is only lower than Liverpool at 34%.

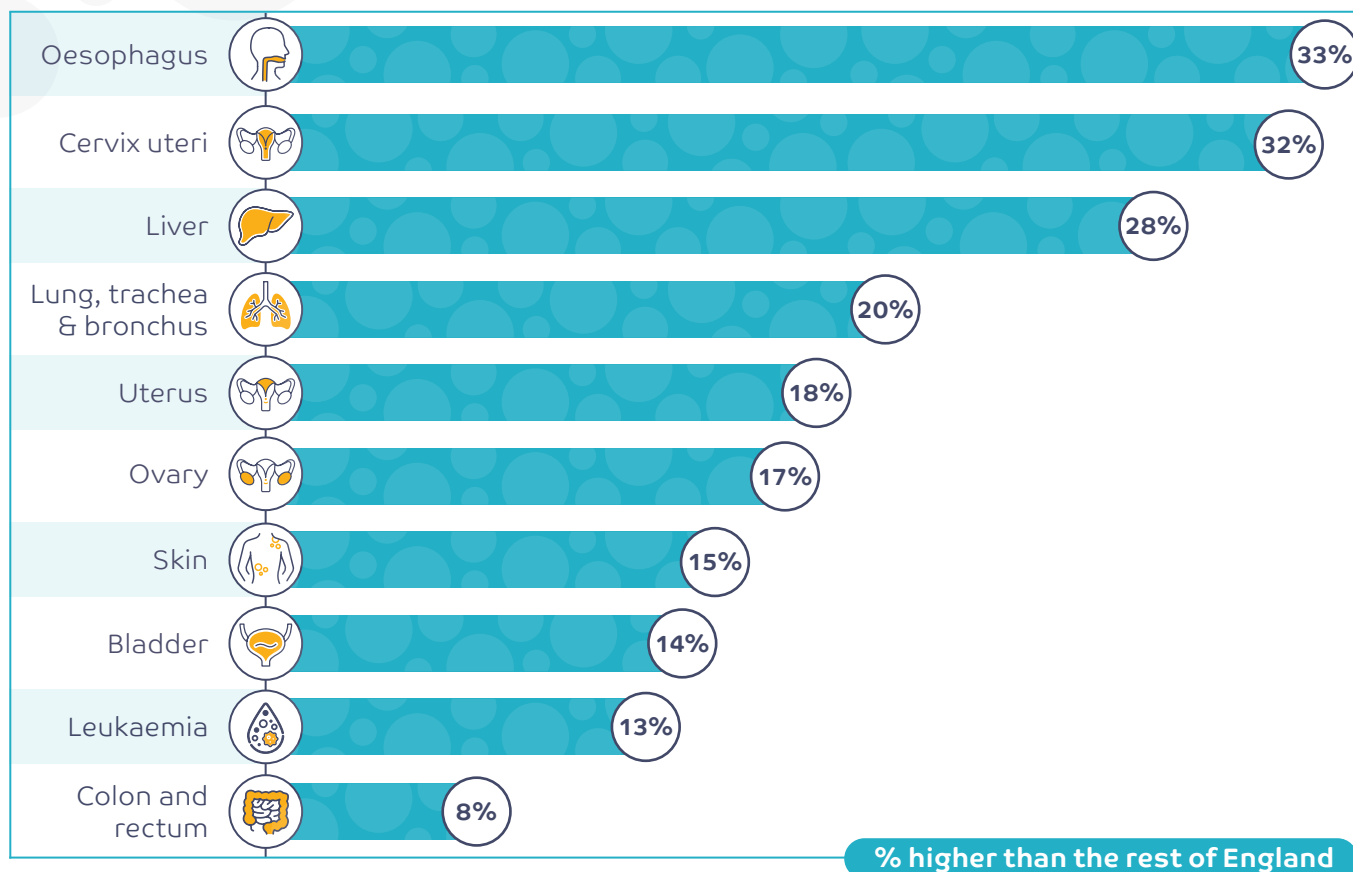
The data shows that trachea, bronchus and lung cancer is a challenge in Lancashire, with incidence rates 20% above average and a mortality rate 27% higher than the rest of England. Liver cancer is likewise present at an outsized rate, indexing an incidence rate 28% above the norm and a mortality rate 15% above average.

Cancers that impact women are also highly ranked in the county, with mortality rates for ovarian and uterine cancers being respectively 23% and 15% above the national average. Lancashire has the second highest rates for both diseases after Cumbria and cervical cancer is being diagnosed at a particularly high rate, with incidence data tracking 32% higher than the rest of the country.

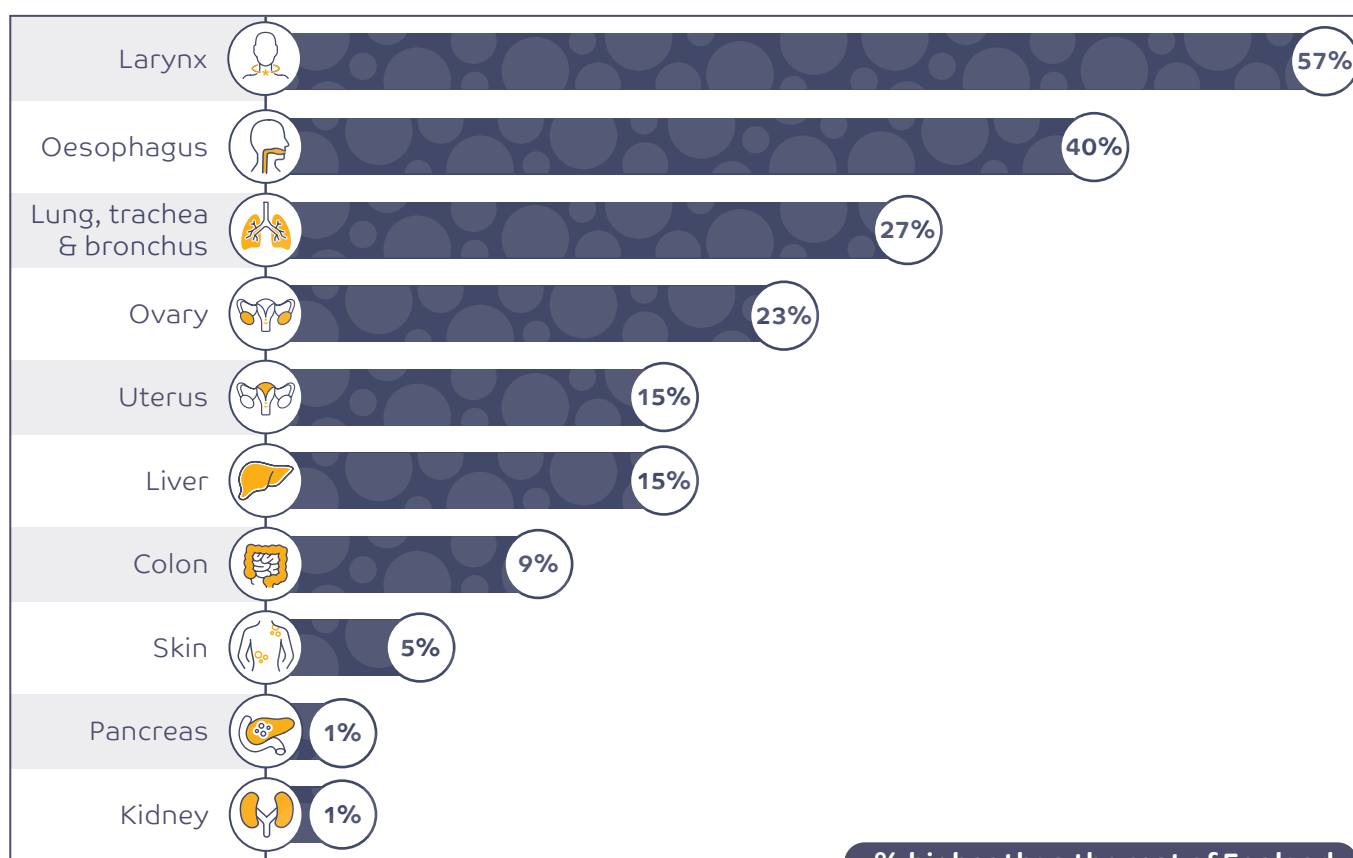
● COUNTY-SPECIFIC BREAKDOWN: Lancashire

Top five areas of need

- Lancashire's mortality rate for oesophageal cancer is the highest in the North West at 40% above the English average.
- The mortality and incidence rates for cancers that impact women is notably higher in Lancashire than the rest of the country and most of the North West.
- Trachea, bronchus and lung cancer is present in Lancashire at a 20% higher rate than the rest of the country, resulting in a mortality rate 27% above the national average.
- Total deaths from liver cancer are 15% higher in Lancashire than across England as a whole.
- The prevalence rate for head and neck cancers is 18% higher in Lancashire's communities than in the rest of the nation.



% higher than the rest of England



% higher than the rest of England



Lancashire's mortality rate for oesophageal cancer is the highest in the North West.

GREATER MANCHESTER

County Overview



GREATER MANCHESTER County Overview

Greater Manchester represents a complex cancer landscape in a way that most other North West regions do not. While many cancer types are present at strikingly high rates, it has the lowest overall cancer incidence statistics in the North West, being 4% below the national average according to the latest data. The youthful make-up of the region, with 66% of Greater Manchester’s adult residents being aged under 54 compared to the national average of 62%, arguably influences the low rates. For this reason, this section includes both crude rate (e.g., incidence or prevalence per 100,000 people compared to the national average) and age standardised data (which takes into consideration both population size and age-structure) to provide a rounded picture of Greater Manchester’s cancer landscape. The data set in question is identified for each statistic for clarity.

When analysing age standardised data, Greater Manchester aligns much more to the wider North West picture. The age standardised data set shows that Greater Manchester has a higher incidence rate than the national average and when compared to other North West regions is only behind Liverpool. Statistics on age standardised total cancer deaths also show that Greater Manchester has a 10% higher rate than the national average.

As mentioned, Greater Manchester has the lowest overall incidence rate (when analysing crude rate data) for cancer and forms of the disease are diagnosed at markedly low levels, such as prostate, pancreas, and non-Hodgkin lymphoma. It is also the only region to under-index on incidences of skin, ovarian and oesophageal cancer - asides from when the data is age standardised, when ovarian and oesophageal cancer records a higher than average incidence rate.

Even when not age standardised, the city records a number of acutely above average mortality and incidence rates. This includes lung, trachea and bronchus cancer, which has a total death rate 21% above the national average and an incidence rate 17% higher than the norm. For age standardised data, Greater Manchester has the highest incidence rate for this disease in the North West, with 94.3 out of 100,000 people being diagnosed, which compares to the national rate of 68.7.

Liver cancer also remains a concern for Greater Manchester communities, with a non- age standardised mortality rate that is 13% above average. The crude prevalence rates of head and neck as well as ovarian cancer index at 13% and 10% higher than the national average respectively. In addition, the crude incidence rate of cervical cancer shows an 11% disparity and oesophageal cancer indexes at a 7% above the average rate.

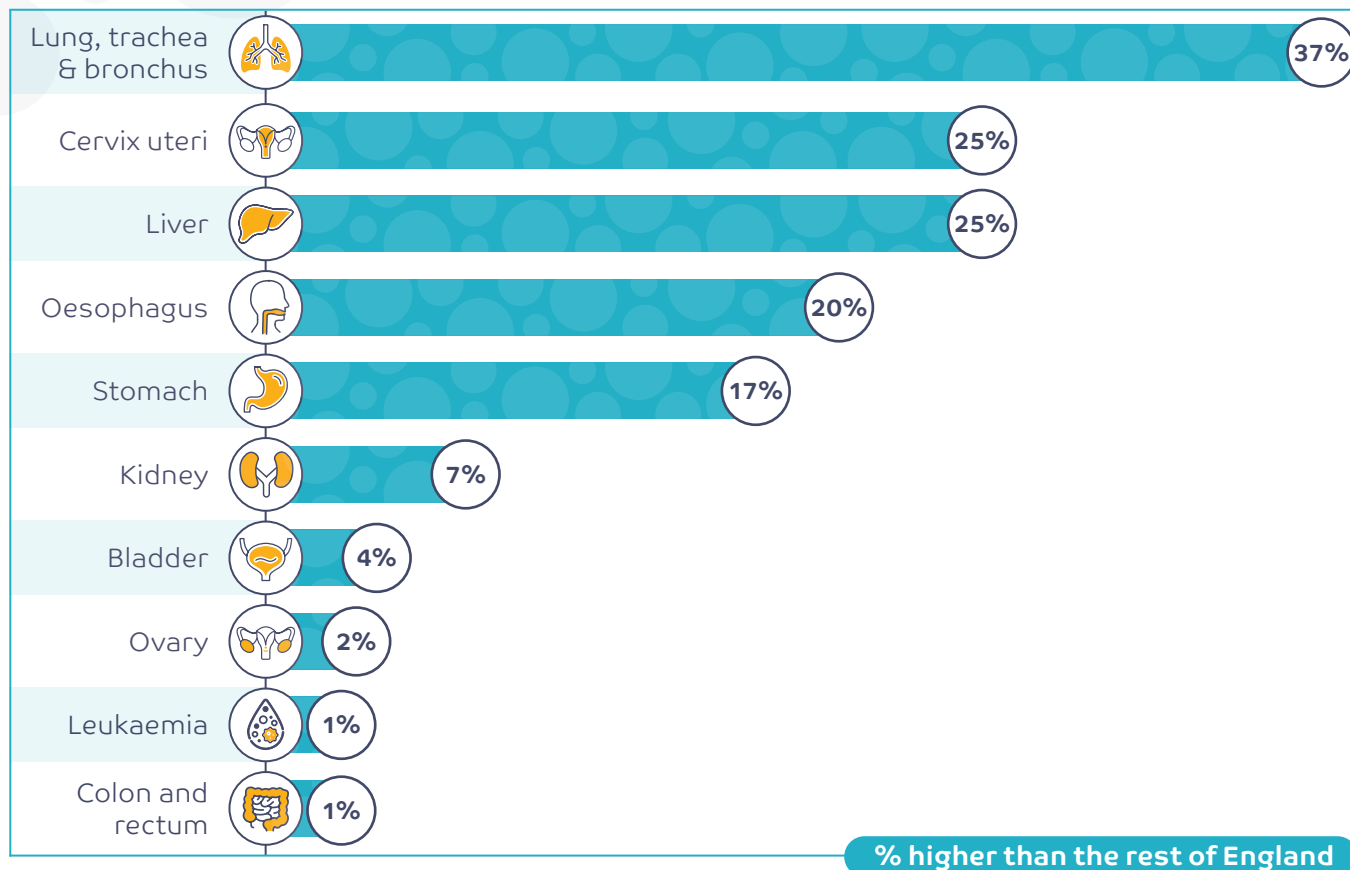
The area’s deprivation levels also illustrate the complexities of the region’s demographics. While overall Greater Manchester has very high inequality levels, being 38% more deprived than the national average, it also has many pockets of wealth. Affluent areas such as Trafford and Tameside are situated close to inner-city communities that experience significant deprivation. The city centre of Manchester itself is one of the country’s poorest areas, with deprivation levels 54% higher than the English norm.

Approximately a quarter (23%) of Greater Manchester’s population are employed in routine, semi-routine or manual roles, while 24% have managerial, administrative, or professional occupations. Students make up 7% of the population, while 9% of people living in the area are long term unemployed or have never worked, higher than the national average of 7%.

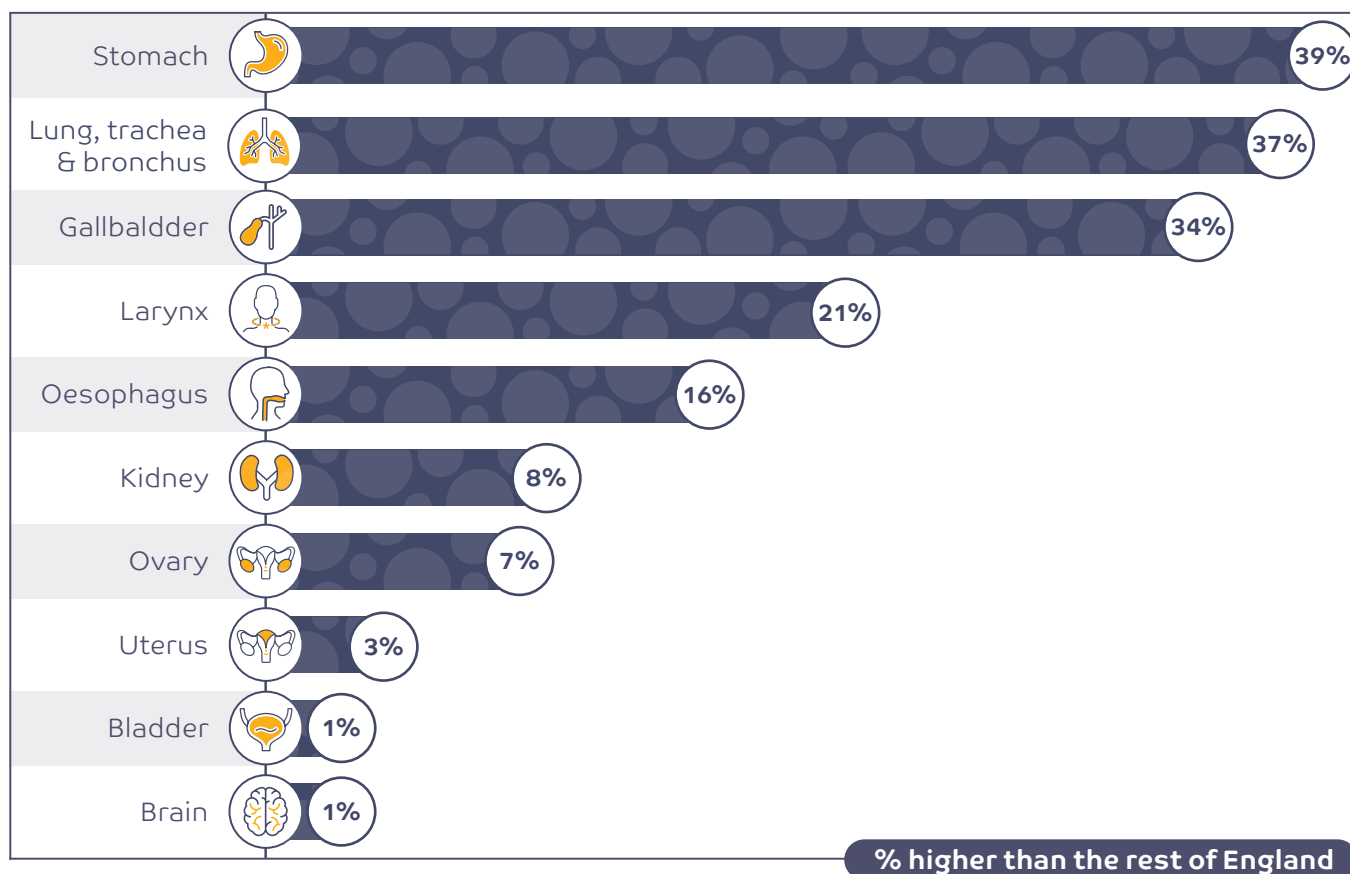
● COUNTY-SPECIFIC BREAKDOWN: Greater Manchester

Top five areas of need

- Diagnosed cases and deaths of lifestyle related cancers are high in Greater Manchester. This includes lung, trachea and bronchus cancers, for which the age standardised incidence rate and total death rate are 37% and 21% higher respectively than the national average
- Cancers impacting women are present at above average rates, with the age standardised incidence rate of cervical cancer being 25% higher than the national benchmark.
- Greater Manchester’s communities are impacted by a 25% above average age standardised incidence rate for liver cancer.
- Head and neck cancer rates in Greater Manchester remain high, with a crude rate of prevalence 13% higher than the rest of England.
- Oesophageal cancer presents a significant challenge to Greater Manchester’s communities and health network, with an age standardised incidence rate 20% above the national average and an age standardised mortality rate 6% higher than the rest of the country.



* Graph is based on age standardised total cancer deaths for which data was available.



* Graph is based on age standardised total cancer deaths for which data was available.



● HAPPY HEALTHY ACTIVE: Our work

North West Cancer Research and Liverpool School Sports Partnership worked together to deliver their Happy Healthy Active project to over 16,000 primary school children in Liverpool over the last year.

Funded by Public Health Liverpool and Alder Hey Children's Hospital, this innovative programme comprises of 10 creative and engaging sessions that give children the knowledge and insight needed to make healthy life choices and the confidence to adopt healthy behaviours and thrive throughout their lives.

North West Cancer Research believe that the earlier we educate children about healthy choices, the more embedded it will become in their natural behaviours, acting as the perfect foundation for them to thrive and better their long-term health.

Over the last year, the project has made a small difference to the children that will impact them for life. However, we are also aware that more still

needs to be done to continue to reinforce this messaging across the region in children and adults. Initiatives like this will also help produce communities who know when and how to access services, allowing them to be diagnosed at an earlier stage and have better health outcomes.

In addition to the positive feedback from teachers, parents and children, the project was also commended by Ofsted who were carrying out a 'deep dive' inspection at a school that the sessions were being held. The report concluded it was one of the most positive sessions they had witnessed and they were impressed with the knowledge and enthusiasm of the children.

The Happy Healthy Active project also received national recognition when it won the Engaging Schools Award at the School Games Impact Awards.

CHESHIRE

County Overview



CHESHIRE

County Overview

Cheshire is the most affluent region in the North West by some margin, indexing at 18% less deprived than the national average.

Almost one third (31%) of the population in Cheshire are employed in managerial, administrative, or professional roles, while under a quarter (24%) have routine or manual occupations. Students make up 5% of the population, while 6% of people living in the area are long term unemployed or have never worked. The county has a relatively high percentage of older residents with approximately 43% of the adult population aged over 55, and 13% of the county are over 75 years old.

Overall, Cheshire has a cancer mortality rate 8% above the English average and an incidence rate 15% higher than the rest of the country. For many recorded cancers, the region is in line with the North West as having higher than average incidence and mortality rates, with a few exceptions such as stomach and uterine cancers having lower than average mortality rates.

Cheshire is rarely the furthest region from the national norm – with the notable exception being skin cancer, for which the county has the highest mortality rate at 21% above the average and an incidence rate 32% higher than the national norm.

Similar to other areas in the North West, Cheshire has very high rates of oesophageal cancer. This disease is present in the county at a 22% higher than average incidence rate and has a 30% higher than average mortality rate, which is second in the region after Lancashire at 40%.

A number of other cancer types are found to be having a significant burden on the county's population and healthcare network, including kidney, lymphoid, blood and related tissue, prostate, bladder, and brain, which all recorded mortality rates between 14% - 20% above the national average.

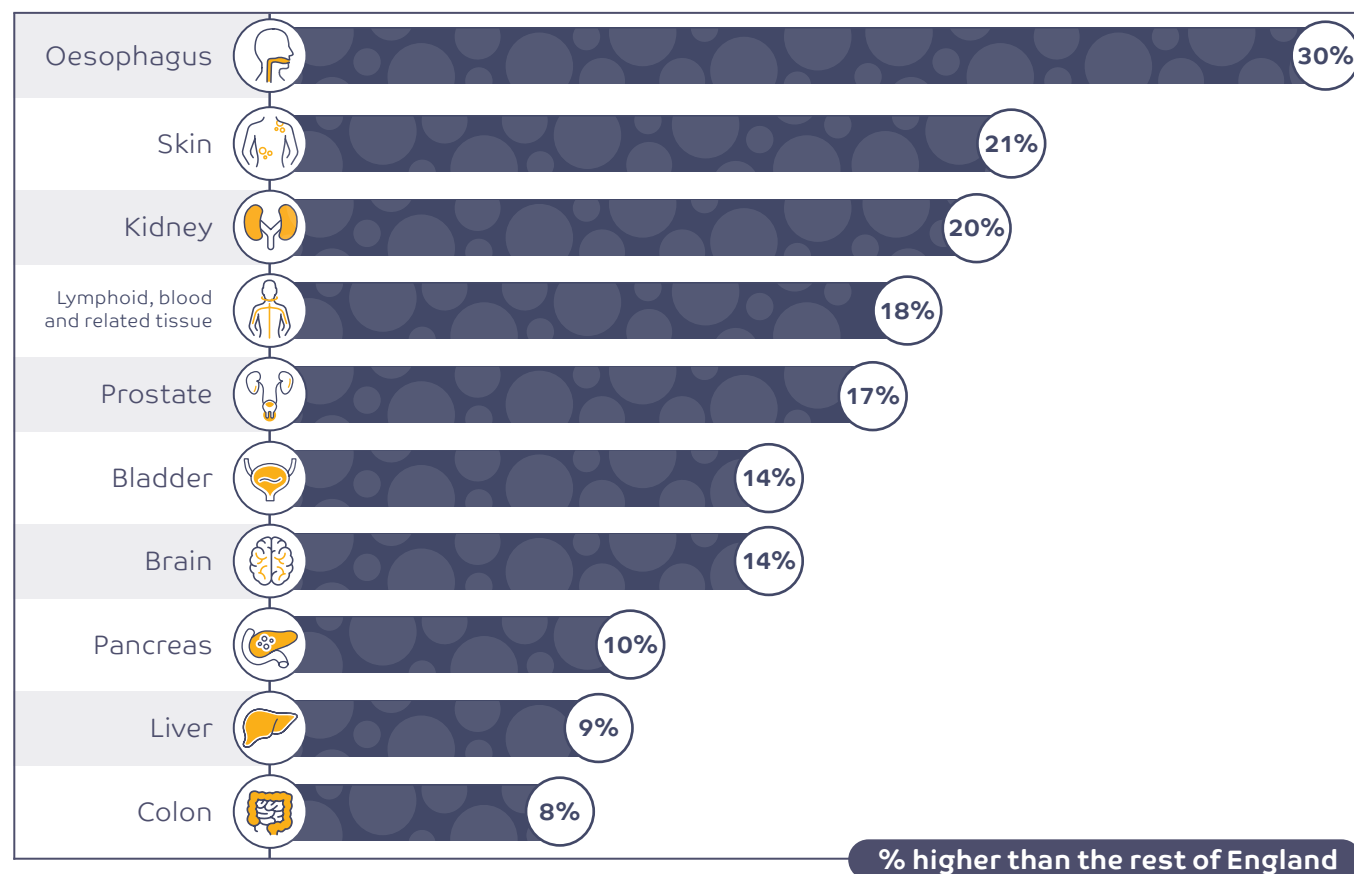
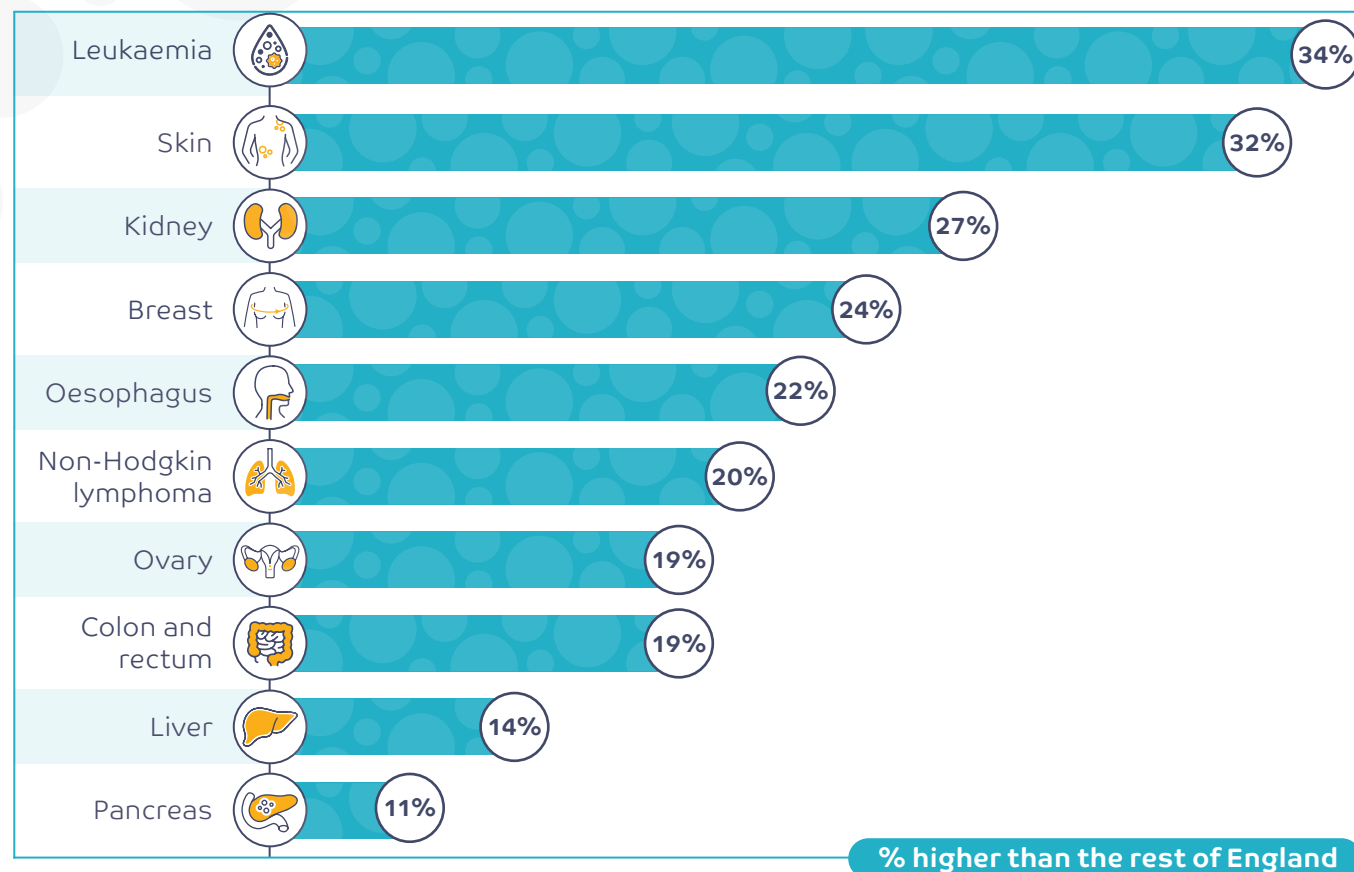
In the latest incidence data, Cheshire recorded a 34% higher incidence rate of leukaemia than the rest of the country. The incidence rate for breast cancer is also notably higher than other North West regions at 24% above the national norm, which corresponds to a mortality rate 4% above the national benchmark.

Cheshire's healthcare infrastructure is having to manage the North West's highest mortality rate for skin cancer.

COUNTY-SPECIFIC BREAKDOWN: Cheshire

Top five areas of need

- Cheshire records the North West's highest mortality rate for skin cancer at 21% above the national norm and 27% higher than the regional average.
- The incidence of breast cancer is 24% higher in Cheshire's population than the national average.
- The county records the North West's second most above average mortality rate (30%) for oesophageal cancer.
- Kidney cancer indexes are at a 20% higher mortality rate and a 27% higher incidence rate than the national benchmark.
- Cheshire's communities face a 34% higher incidence rate of leukaemia than the rest of the country.



● DIAGNOSIS AND TREATMENT AMONG PEOPLE FROM MINORITY ETHNIC BACKGROUNDS: Our work

It is vitally important to catch cancer at the earliest possible stage. As the sooner the diagnosis, treatment and care can occur then the better the patient's outcomes typically are. People from ethnic minority backgrounds can face specific barriers in cancer care, such as unmet cultural needs and language barriers. This can lead to them presenting to healthcare services after their cancer has progressed to a later stage, which can have an impact on the outcome and treatment options available.

Despite knowing that overarching diagnosis rates are often poor among people from ethnic minority backgrounds, no research has focused on how we can better support those who have cancer as well as long-term health conditions that affect how they communicate or think.

A project taking place in Liverpool aims to address this gap and optimise the care provided for people from ethnic minority backgrounds, to help local services better understand and meet their needs. By carrying out interviews with patients from ethnic minority backgrounds who have cancer and another long-term condition, as well as their relatives and staff members who have cared for them during or after their cancer diagnosis, we aim to understand patient experience and the key factors that make accessing healthcare easy or difficult, and how local cancer services can better support them.

Communicating with Communities

Education is a central aspect of our activity.

It is one of the most powerful tools available to help individuals minimise their risk of being diagnosed with cancer and increase their chance of an early diagnosis should they contract the disease.

The importance of this approach is underlined by the fact that lifestyle related cancer types are much more prevalent in the North West than elsewhere. Therefore, if we can support our communities to adjust key behaviours then it will help to significantly address the disparities in cancer incidence, prevalence and mortality between this region and the rest of the country.



● HEAD & NECK CANCER AWARENESS - 'Don't Be Silent. Speak Out.'

From our analysis of head and neck cancer rates in the North West, we found a 20% higher prevalence rate in the region than across England as a whole; with over twice as many men living with the disease than women. Affecting more than 30 different parts of the head and neck, including the throat, tongue and mouth, the condition is more common in men, especially those aged 50 and above.

To raise awareness of this disease and encourage men to get checked as soon as symptoms appear, we initiated the 'Don't Be Silent. Speak Out.' campaign.

This series of media and digital activities put key information regarding head and neck cancer prevention into the eyelines of those most at risk.

The campaign was centred around the facts about the regional disparity in head and neck cancer rates and the personal stories of five men from across the region, who are currently or have recently lived

with this disease. In a series of videos, they spoke about the symptoms they noticed.

Eye-catching and informative creative was used to spread this message to the target demographic across online channels including Facebook, Instagram and YouTube, and directed people to a dedicated 'Speak Out' landing page.

The campaign also included media outreach, in which BBC Radio Presenter Mark Radcliffe shared his own head and neck cancer diagnosis and treatment story.

Mark's powerful story and passion for encouraging men to recognise symptoms and seek medical advice, combined with stark regional statistics, garnered significant attention from numerous media outlets. Including several ITV and BBC shows as well as regional online titles across the North West.



● BOWEL CANCER AWARENESS - 'Remember when...'

Bowel cancer has a significant burden on the North West's healthcare infrastructure, being the second biggest cause of cancer deaths in the region.

A recent change in the prevention and treatment picture for this disease is that the age of receiving screening kits has changed in the North West, lowering it to those aged 54-74. However, there is a notable correlation between the uptake of bowel screening and deprivation, which is a critical factor in the North West given its many low income areas. These facts led us to implement a campaign focused on the importance of returning bowel cancer testing kits.

To inform this campaign, we conducted research to discover why people avoid returning their kits. Fear, disgust and denial were identified as the primary reasons behind this behaviour. Our messaging was therefore designed to act as a positive reminder to return these kits and make people feel good about the process.

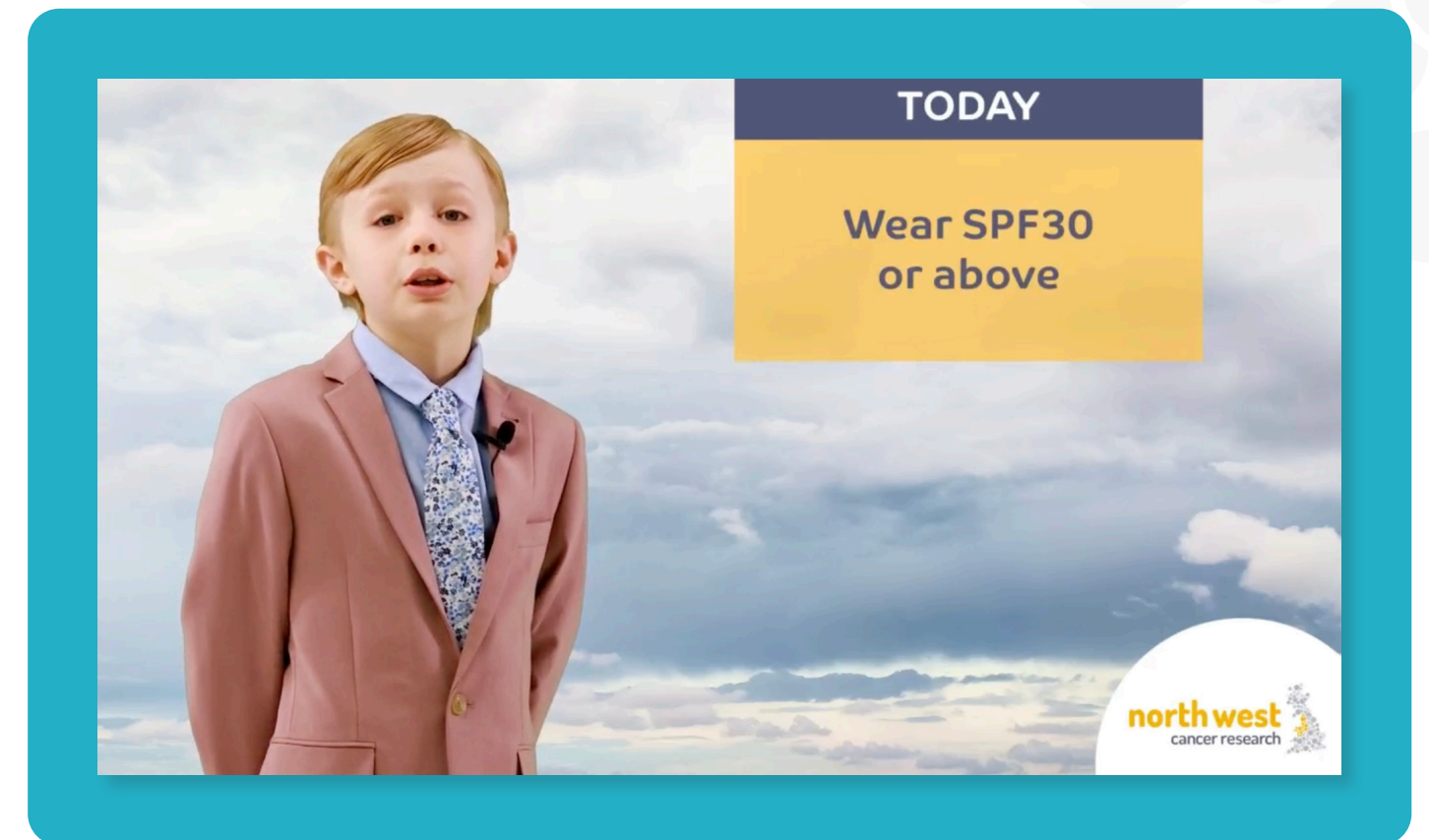
The campaign used nostalgia to connect with the audience, suggesting that if they remember a particular item or moment in an advert, such as a chopper bicycle, Walkmans, or the opening of Eric's music venue in Liverpool, then it was

time to return their bowel screening kit. To further resonate with our audiences, much of the messaging was regionalised and case studies with people who had been diagnosed and treated for bowel cancer were utilised.

As the research showed men were particularly reluctant to return screening kits, elements of the campaign were specifically tailored to this demographic.

This included working with football clubs across Cheshire and Merseyside to develop adverts in match day programmes featuring key moments from the club's history. In addition, Ex-Everton and Republic of Ireland footballer Kevin Sheedy was a prominent case study during the campaign, which shared his story of being diagnosed with bowel cancer at 52 and highlighted the importance of early diagnosis.

The media outreach resulted in an interview on ITV Granada Reports with Kevin Sheedy alongside coverage in multiple online and broadcast outlets across the North West as well as significant engagement with social media activity and campaign videos.



● SKIN CANCER AWARENESS - 'Block the Sun, Not the Fun'

With the North West's skin cancer incidence rate being 13% higher than the rest of England, and some areas facing mortality rates from this disease 20% or more above the national average, it is vital to raise awareness of sun safety measures across the region.

In 2024, we carried out research which showed that parents can often spend so much time reapplying sunscreen to their children that they forget about themselves. We therefore designed a campaign to act as gentle reminder to make sure parents across the North West remember to wear sun protection themselves.

This messaging needed to educate people that the sun's UV rays can still increase their chance of getting skin cancer even in the North West and when it's cloudy.

To reinforce this point, the campaign included a news team consisting of a roving reporter, weatherman and news anchor reminding

adults of the importance of sunscreen. To underline the message, roles were reversed and the news team was made up entirely of children acting as the experts and encouraging adults to "block the sun, not the fun".

This strategy incorporated engaging video content published across Meta and YouTube with multiple case studies from people who had been diagnosed and treated for skin cancer shared across the region's broadcast, print and online media.

The outreach included BBC Radio Manchester attending the campaign's launch at Acacias Primary School and interviewing schoolchildren after sun safety sessions were delivered by North West Cancer Research. A roadshow with a pop-up ice cream stand handing out free sunscreen samples at GreenWood Family Park, Tatton Park, Cheshire Ice Cream Farm and Hoghton Tower was also a great way to spread important information among communities first-hand.

DATA

The statistics behind the report



We assessed the 18 key cancers across the North West for which NHS data are available. The data used in this report was sourced for Wales and England from official sources, principally National Cancer Registration and Analysis Service (NCRAS) Cancer Data for England (www.cancerdata.nhs.uk) the Office for National Statistics (<https://www.nomisweb.co.uk/>), and Public Health Wales (<https://phw.nhs.wales>) for Wales. Population, employment, household religion and ethnicity data was obtained from the UK Office for National Statistics via Nomis (www.nomisweb.co.uk) and from 2021 Census data.

The latest mortality data is from 2022 (Office for National Statistics) and the latest cancer incidence, prevalence, and age-standardised mortality data sets are from 2020. Data on age standardised total cancer deaths came from the Office of National Statistics Leading Causes of Mortality 2020 report.

Where data has not been directly reported for Local authority areas, tables of data were aggregated according to their type (counts versus rates), allowing for other features such as cancer type, gender and age.

With the implementation of Integrated Care Boards (ICBs) and sub-ICBs, cancer incidence data for England has seen a change in reporting by geographic area. Mapping of new sub-ICBs to Local Authorities was carried out in 2023 to identify and correctly process data during aggregation up to Local Authorities and regions. Accounting for these changes was an absolute requirement as rate measures are affected by population.

The two areas where allowances were made were the former Tameside & Glossop and Morecambe Bay CCGs. The former is now part of a larger ICB that is mostly outside of the boundary of Greater Manchester. NHS Tameside & Glossop CCG is now split across the sub-ICBs of Manchester ICB - 01Y and Derby and Derbyshire ICB - 15M. For Morecambe Bay CCG, and due to local authority boundary changes, data for NHS Lancashire and South Cumbria ICB - 01K appears under both Cumbria and Lancashire areas, but is not duplicated in the aggregate roll-up to the North West.

Overall, the re-organisation of CCG areas, together with Local authority boundary changes, have been allowed for in this report. This has provided an accurate reflection of the data for an area and taking the rate values as indicators it provides the best possible comparison with prior years.

It is important to note that due to these changes, the data comparisons between reports from 2023 and previous years are not completely one-for-one. We recognise that it is vital to understand whether the North West as a region is getting better, worse or not changing at all when compared to the national picture. Therefore we have undertaken this in-depth, proprietary research to create the best benchmarking model possible. The boundary changes and lack of comparative data in general is an example of the issues obscuring the regional cancer landscape and is further motivation for us to clarify the realities of the situation.

The latest full set of incidence and prevalence data used in this report covers the 2020 calendar year, the first year of the COVID-19 pandemic. There is significant research to suggest that the pandemic affected cancer diagnoses and treatment rates. For example, The Lancet article 'COVID-19 and cancer: 1 year on' published in April 2021 cited a study which estimated that **"45% of those with potential cancer symptoms did not contact their doctor during the UK's first wave of the pandemic (March–August, 2020)"**. This is worth highlighting as it means that the true state of cancer diagnosis and prevalence in the North West may be higher than that factored into this report.

However, as the main metric used is the difference between the national and regional diagnosis, prevalence and mortality, rather than overall totals, this is still the best indication for the disparity between the likelihood of contracting, living with and dying from cancer in the North West compared to elsewhere.

north west
cancer research



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