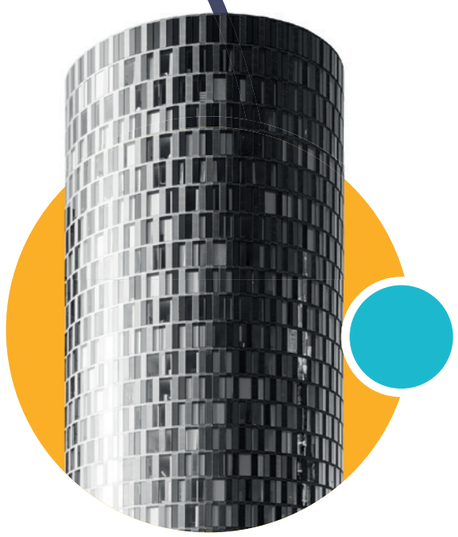
North West Regional Impact Report

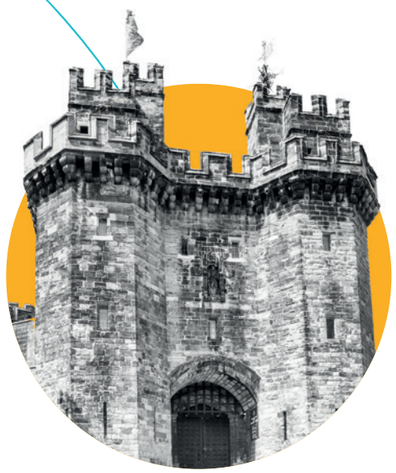
north west cancer research



2026







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EXECUTIVE SUMMARY

For more than seven decades, North West Cancer Research has been funding research, strategies, and community-level engagement designed to tackle the cause, improve the care, and, ultimately, find the cure for cancer.

This mission has been driven by the fact that cancer rates in the North West are significantly higher than the rest of the country. Not only are overall levels of the disease above average in our region, but certain diseases are being recorded at very stark levels. For example, the prevalence rate of both lung and oesophageal cancers is 19% higher in the North West compared to the rest of England.

We also know that no two villages, towns, cities, or even regions are exactly alike; therefore, we should not take a uniform approach to cancer around the country.

This is why we have invested almost £60 million since 2000 in regional initiatives to empower local care systems with tailored measures, materials, and treatments that reflect the lived realities of their communities.

To ensure we're focused on the research and outreach that deliver the greatest benefit for the North West, we regularly evaluate our projects while undertaking proprietary analysis of regional cancer rates. Together, this enables us to better understand the complexities of the cancer landscape, the impact of the work we fund, and the effect of our education and community programmes.

This document exemplifies these priorities, as for the first time we've combined our Impact Report and our Regional Report on the North West's cancer statistics – showing both the urgent need for intervention as well as the outcome of activity we have undertaken to date.

In this report, you will see that we have worked hard to build an informed and nuanced picture of the cancer issues within our area. This localised awareness is critical, as cancer cannot be effectively tackled without a highly targeted approach that accounts for the multi-faceted, complicated, and evolving nature of the challenge.

This is reflected in an increasing diversification of our portfolio to ensure that we fund work throughout the research spectrum for all those living with, and beyond, cancer which includes studies from the laboratory to the patient's bedside and further. We have also supported work which develops the research community and the next generation of scientists while funding research active clinicians and doctors based in our hospitals.

Almost four in ten cancers are linked to risk factors that people and communities can take steps to address, highlighting the potential to prevent many cases.

This is why, alongside the research, we are actively rolling out transformative local education initiatives while engaging with relevant healthcare, community, charity, and political leaders. By increasingly working in partnership with other stakeholders who share our passion for fighting cancer, we are finding many allies who are similarly invested in improving the health of our region.

This report brings all these strands up to date and showcases the thinking behind, as well as the impact of, our funding choices. Each of these choices opens up further routes for innovation and exploration, whether that is new treatments, expanding our reach into communities, or building on trusted relationships – all of which will further inform and empower the next decision and the one after that until we achieve our goal of a cancer-free future.



Alastair Richards

North West Cancer Research CEO

OUR IMPACT

In this report, we look at the impact of our work to understand what we have achieved, how we have moved forward cancer knowledge, and what our next steps need to be. Since 2023 we have achieved the following:



OUR RESEARCH

Putting our region's cancer needs first by funding world-class cancer research

We are proud to be members of the Association of Medical Research Charities (AMRC) and adhere to their processes and guidance to ensure our funding and the management of our research priorities are transparent and rigorous.

We work collaboratively with a team of scientists, researchers, clinicians and patients who form our Advisory Groups and help determine which projects are most relevant and impactful to our community.

We only fund the highest quality research that has the greatest impact on the lives of people in the region.

This funding can be broadly broken down into three categories, as we work to tackle the cause, improve the care, and find the cure for cancer.

Tackling the Cause

22% of projects funded

Tackling the cause by funding research that seeks to understand the biological mechanisms that cause cancer and the differences in our communities that lead to higher cancer levels.

Improving the Care

45% of projects funded

Improving the care by finding kinder treatments and better ways of communicating.

Finding the Cure

33% of projects funded

Finding the cure by funding world-class research to create new drugs and surgical techniques.

THE RESEARCH SPECTRUM

Our funding is invested through academic and health institutions. To date, we've built a research portfolio that 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, including lung, liver, and head & neck cancers.

The spectrum of our work means we maintain a research pipeline, from the earliest discovery science and understanding of the genetic causes of cancer, to studies which seek to improve patient care in hospitals. We also support studies to improve available treatments using current techniques and those which focus entirely on novel and groundbreaking methods.

As there are over 70 research programmes in progress, with many already yielding results, we've compiled highlights of our research in this report to exemplify our approach and to give a sense of the wide variety of activities we've been working on.

With the North West's unique needs and cancer landscape being a core focus, an increasing amount of our research is on the inequalities across the area. These may be connected to disparities in wealth or the many diverse socioeconomic factors that need to be accounted for, as it's important to understand our inequalities if we are to effectively address them through education and community-based activities.

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



RESEARCH PROJECTS BY CANCER TYPE

Our research projects are focused on multiple cancer types, ensuring we maximise the impact of our work across the North West's communities.

77 Active research projects

- 2 Childhood Cancers
- 1 Bladder
- 2 Melanoma
- 2 Oesophageal
- 4 Bowel
- 3 Blood Cancer
- 3 Ovarian
- 5 Pancreatic
- 1 Glioblastoma
- 6 Breast
- 3 Prostate
- 1 Stomach
- 7 Head and Neck
- 8 Gynaecological
- 2 Uveal melanoma
- 6 Lung
- 2 Liver
- 2 Brain

20 projects that will impact all types of cancer

Total cancer types = 80 due to overlap in research areas covered by 77 individual projects including studentships and research development grants.



OUTREACH AND EDUCATION

We know that education is central to improving the North West's cancer rates. Raising awareness and providing communities with information will empower individuals with the knowledge and skills that will help minimise their risk of being diagnosed with cancer while increasing their chance of an early diagnosis.

The importance of such initiatives in our region is underlined by the fact that lifestyle related cancers are much more prevalent here than elsewhere – as detailed in the Regional Report section of this document. If we can support the population to adjust particular behaviours, then it will help reduce risks and boost overall prevention and bring down the region's excessive rates.

Getting these messages to all corners of our communities has seen us undertake a wide range of grassroots activities, including region-wide awareness campaigns to share vital information through media coverage as well as boots-on-the-ground work to circulate advice first-hand. We are also actively taking healthy lifestyle skills to the community hubs where it will have the most impact. This includes school engagements to provide young people with valuable knowledge that will benefit them throughout their lives, as it's important to provide people of all ages with the knowledge they need to live healthy lives.

Central to these campaigns has been taking the time to understand why people in our area are not taking measures that would help prevent cancer or facilitate early diagnosis, such as wearing sunscreen or completing bowel cancer screening kits. These insights have been used to create messages that speak to these perceptions and ways of thinking to encourage behaviour changes and a wider understanding of the cancers impacting our communities.

This approach relies on facilitating education, communication, and collaboration throughout all levels of society. Opening a dialogue between stakeholders in our communities such as politicians, health directors, NHS clinicians, mayors, councillors, academics, and more, is essential to aligning our region's cancer initiatives and ensuring that the issues are understood and prioritised.

The impact of societal factors such as deprivation, environment, and lifestyles emphasises how the weight of responsibility lies across civil society, from the expansive network of local government, central government, and the NHS to community bodies, private entities, and third sector organisations.



AN INTERCONNECTED APPROACH: BOWEL CANCER

Cancer cannot be beaten in the lab alone, and we know that it will take a multifaceted approach which encompasses education and community level interventions that raise awareness of critical issues such as identifying symptoms, lifestyle and behavioural factors, early diagnosis, and more. Layered into this, is an understanding of the socio-economic issues affecting an area as well as how to effectively communicate what can be complex or sensitive messages with communities.

Our recent bowel cancer programmes exemplify how we bring these multiple strands together. Bowel cancer is a high-priority challenge for the North West, as it is the second biggest cause of cancer deaths in the North West and is prevalent in the region at a higher rate than the national average. Cumbria and Cheshire are particularly affected, with prevalence rates respectively 33% and 15% above the rest of England.

In this section, we have detailed three carefully considered initiatives designed to deal with multiple stages of the disease, boost early diagnosis rates and support those in the region living with the disease and undergoing treatment.

1 IMPROVING BOWEL CANCER DIAGNOSIS

Patients referred through the Urgent Suspected Cancer pathway for possible bowel cancer typically undergo a colonoscopy, an invasive procedure that can be uncomfortable, time-consuming, costly and carries risks. CT colonography offers a less invasive, better-tolerated alternative, with comparable accuracy in detecting bowel cancer and polyps but it is currently underused.

Led by Dr Mariam Gaddah, a study is aiming to develop a scoring system to identify patients most likely to benefit from CT colonography alone, potentially avoiding the need for further invasive investigation. By analysing patient records from 2019–2023, the research will explore how patient-specific factors can help predict cancer risk and guide the most appropriate diagnostic approach.

The study has the potential to improve the bowel cancer diagnostic pathway by reducing unnecessary invasive procedures, improving patient experience and supporting more personalised care. Through investment in clinician-led research, we aim to drive better cancer outcomes across the North West and generate evidence that could inform practice nationally.



2 FINDING NEW SURGICAL SOLUTIONS

Keyhole surgery for right-colon cancer puts the patient in a head-down position, which is hard on people with heart or lung problems. Standard practice also means going through the peritoneum - the thin, balloon-like membrane that protects the organs inside. Going underneath it (an extraperitoneal approach) has advantages for patients, surgeons, and the anaesthetic team.

A study by consultant colorectal surgeon Tarek Hany at the Lancashire Teaching Hospitals NHS Foundation Trust has compared this approach with the standard technique in terms of safety and on how well it cleared tumour and lymph nodes. The technique was found to give excellent views of the anatomy, and the findings were published in Colorectal Disease, the official journal of the UK and European colorectal surgical societies. The technique is now in early assessment for use in patients.

3 ENCOURAGING SCREENING KIT RETURNS

One third of people across the region who are sent a bowel cancer screening kit never return it. Our “I’m Here Today” campaign was designed to address this by featuring the real stories of six people from across the North West whose cancers were caught early through screening.

The campaign highlighted the importance of returning screening kits and framed the test less as a clinical chore and, instead, as a way to protect the ordinary moments people may take for granted. Dale Vimalachandran, Reader in Colorectal Surgery, University of Liverpool and Honorary Consultant Colorectal Surgeon, Countess of Chester, joined our CEO Alastair Richards in urging those eligible to complete the screening kits.

The campaign’s call to action was simple and specific - people aged 50 to 74 who receive a home testing kit from the NHS every two years are encouraged to use and return it promptly. The campaign also flagged the key symptoms to watch for and that anyone experiencing them for three weeks or more should speak to their GP. For those aged 75 and over, or anyone who didn’t return a kit previously, the campaign directed them to a free NHS helpline, providing access to screening outside the standard invitation cycle. Post-campaign analysis found that the messaging had been effective in cutting through. Among those surveyed, approximately a quarter (23%) of the target audience had seen at least one element of the campaign and awareness of the screening programme as well as eligibility were both high at 92% and 78% respectively.



To encourage people to return bowel cancer screening kits, we ran a campaign featuring the stories of six people from the North West whose cancers were diagnosed thanks to screening



NORTH WEST REGIONAL REPORT

Over the past six years, we've analysed cancer rates in the North West and compared them to the average for England. This has repeatedly shown that our region lags behind the rest of the country and that a number of cancer types are present at markedly higher levels.

The disparity between the national and regional cancer landscape has enabled us to identify the conditions having the most significant impact on the North West's communities and healthcare systems, informing our research and education programmes. Defining this cancer map has allowed us to reveal entrenched issues that illustrate the scale of the challenge and the importance of significant long-term investment in localised interventions.

To generate this picture, we assess the available data on cancer in the North West and unpick it at a county level across Greater Manchester, Cheshire, Liverpool, Cumbria, and Lancashire. By aligning this information with socioeconomic data, we can see that factors such as demographics, environment, and deprivation have a clear impact on the region's health expectations, with counties exhibiting high levels of deprivation overlapping with areas managing some of the worst cancer rates.

This link is important, as communities in the North West face significantly higher rates of deprivation than the national average. Income data shows that Greater Manchester's population has the highest overall levels of deprivation in our region, with Liverpool a close second. In contrast, Cheshire is the most affluent county and the only one to register lower poverty levels than the English average.

Within each of the counties, the income and deprivation picture can be complex. For example, Cumbria experiences deprivation levels only slightly above the England average and is 14% less deprived than the rest of the North West. Yet Barrow and Copeland record higher levels of poverty compared to areas as such as Eden and South Lakeland, which are more affluent than the national average.

Access to healthcare is central to health outcomes and is inextricably linked to poverty levels. Being unable to afford travel costs or live in an area with access to healthcare facilities directly affects opportunities for early diagnosis and treatment.

The difference between each county's population demographics also highlights how an area's average age range affects cancer rates. In general, counties with older populations experience significantly higher prevalence rates for a wide range of cancers.

"It's vital that targeted research and community-level education initiatives are sufficiently resourced. Without investing in life-long learning and tailored technologies, approaches and therapies, we're not going to see the prevention and early diagnosis improvements necessary to resolve the region's entrenched cancer-related issues."

Alastair Richards, CEO of North West Cancer Research, at a roundtable on cancer rates and inequality in Liverpool

NORTH WEST REGIONAL OVERVIEW

Residents in the North West are 25% more likely to be diagnosed with cancer than in the rest of the UK*, and the latest cancer prevalence data shows that the region still records a higher proportion of its population living with the disease than the rest of England.

The North West over-indexes for prevalence for 15 of the 20 key cancers we analysed and in total, 4,369 per 100,000 people in the region are living with cancer. This is inevitably placing a challenging burden on the North West's people and healthcare networks.

Across the region's five counties, some are facing total prevalence levels far higher than the national average, with Cumbria recording the most starkly above average rate of any county for the second report in a row.

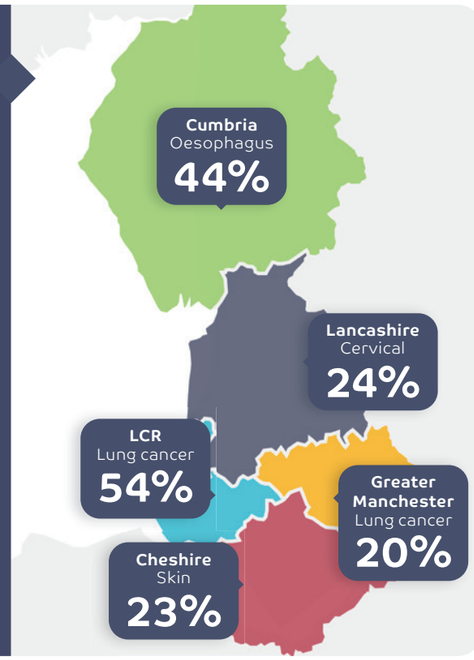
The prevalence rates for a number of specific diseases highlight key issues, with overall lung cancer rates being the most disparate at 25% above the national benchmark.

This is six percentage points higher than our previous Regional Report. Head & neck, cervical, and skin cancer are all more than 10% more common in the North West, exhibiting respective prevalence rates of 17%, 16% and 11% higher than average. The disparity for some cancers has increased compared to our last report, such as liver cancer which exhibits a four-percentage point higher prevalence rate than last year.

The fact that many of these cancers are lifestyle related reinforces the suggestion that behaviours and socioeconomic factors, such as smoking and poor diets, are a significant driver behind the statistics.

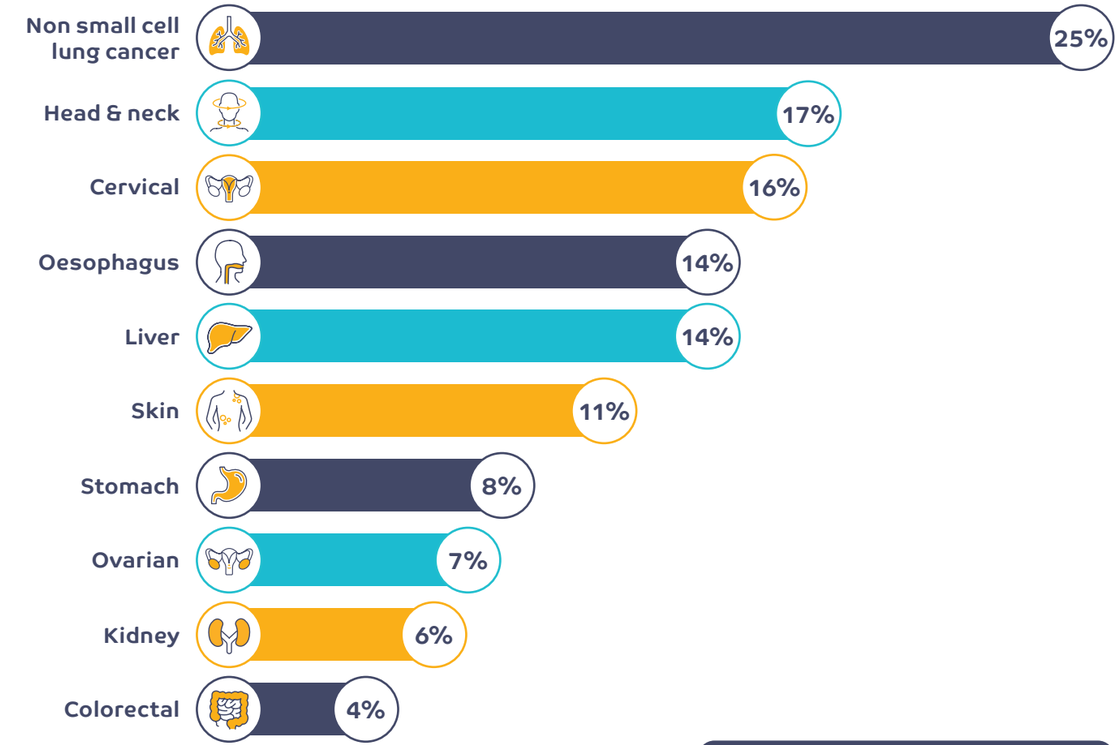
Mapping the most diagnosed cancers in each county

While each county in the North West is managing a disproportionate cancer burden, the specific challenges can vary across the region. This map shows the cancer type in each county that over indexes the most by prevalence.



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

North West top 10 over-indexed cancers by prevalence



% higher than the rest of England



LUNG CANCER RESEARCH CASE STUDY

FINDING NEW TARGETS FOR LUNG CANCER VACCINES

Lung cancer is one of the most common and deadly cancers in the North West and North Wales. Immunotherapy has transformed treatment for some people, but only between a fifth and two fifths of patients with non-small cell lung cancer – the most common form – benefit. One reason is that many patients don't have enough of the right immune cells, called T cells, ready to attack their cancer.

With funding from North West Cancer Research, Professor Christian Ottensmeier and his team at the University of Liverpool studied tumour and blood samples donated by 10 patients after surgery. In the lab, they exposed patients' T cells to man-made copies of cancer markers, with some shared across many tumours and others unique to each person's cancer. Several markers triggered strong immune responses, and unique markers worked just as well as shared ones. This suggests that both "off-the-shelf" and personalised vaccines could help boost the immune response in lung cancer.

The team are now checking whether these T cells are also present inside the tumours, which could show whether existing immunotherapy is enough or whether patients would also need a vaccine. In the longer term, this work could lead to new treatments that give more people with lung cancer the chance to benefit from immunotherapy.

The North West over-indexes for lung cancer prevalence by 25% compared to the England benchmark. Every North West county records starkly above average prevalence rates:

Liverpool City Region: 54%

Greater Manchester: 20%

Lancashire: 13%

Cheshire: 12%





LIVERPOOL CITY REGION OVERVIEW

A number of cancer types are present at starkly above average levels in the Liverpool City Region's (LCR) population compared to the country as a whole. Many lifestyle related cancers are recorded at rates substantially above the national average, including lung, head & neck, skin, and stomach cancers.

The LCR's lung cancer prevalence statistic is the highest in the North West and is 34% above the next most affected county, Greater Manchester. Head & neck cancer is similarly higher than elsewhere in the North West, with Cumbria ranking second at a rate 7% lower than LCR.

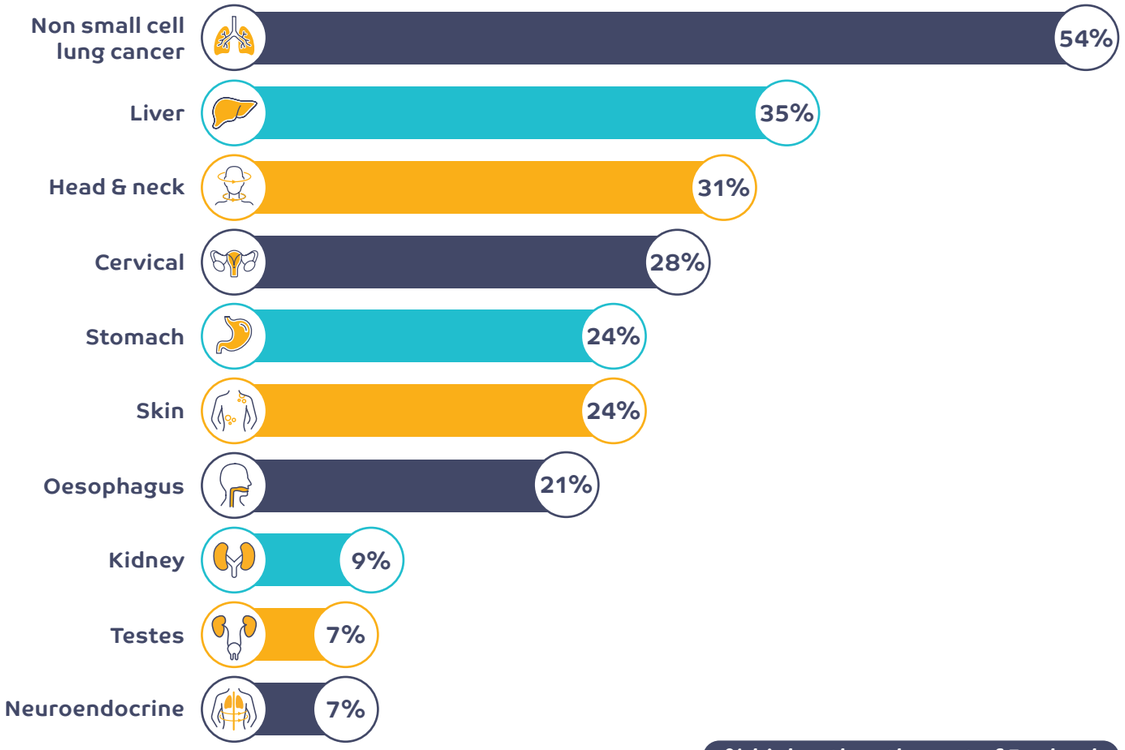
Out of 20 cancer types analysed, LCR had a higher-than-average prevalence rate for 16.

The disparity for several cancers has increased compared to our last report, this includes:

- **Non small cell lung cancer: +3% increase**
- **Liver cancer: +2% increase**
- **Oesophagus cancer: +1% increase**
- **Kidney cancer: +1% increase**

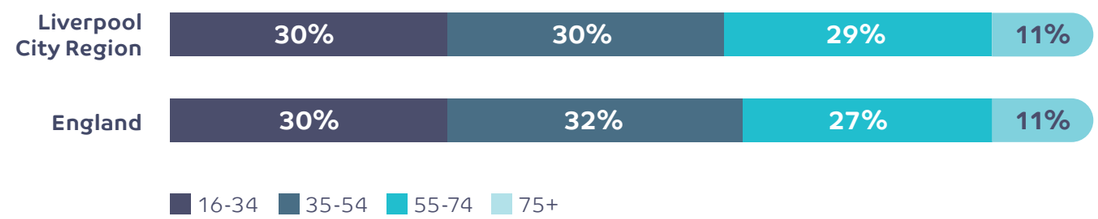


LCR top 10 over-indexed cancers by prevalence



LCR's population profile

Age profile



LYMPHOMA RESEARCH CASE STUDY

UNDERSTANDING WHY LYMPHOMA STOPS RESPONDING TO TREATMENT

Many people with lymphoma respond well to treatment at first, but a significant number relapse when their cancer stops responding to therapy. Some lymphoma cells can adapt to survive the drugs designed to destroy them. Changes to genes are known to play a part, but much less is understood about changes that affect how genes are switched on or off. This is especially relevant in the North West, which has higher rates of blood cancers.

Previous research found that when lymphoma cells become resistant to a cancer drug called romidepsin, a gene called SNHG32 becomes less active. Professor Slupsky and his team at the University of Liverpool switched the gene off in lymphoma cells in the lab. The cells then behaved in a similar way to resistant cells, suggesting that SNHG32 may play a role in how lymphoma stops responding to treatment.

Unlike most genes, which produce proteins, SNHG32 produces three small molecules that help to control how cells work. This project will look at what each molecule does and how they interact with other parts of the cell. The findings could point to new ways of making lymphoma treatments more effective and longer-lasting.



BLADDER CANCER AWARENESS

SPOTTED SOMETHING DIFFERENT?

Why bladder cancer?

Bladder cancer is the 11th most common cancer in the UK, and rates in the North West are higher than the English average, with Cumbria and Lancashire recording levels respectively 19% and 12% higher than the national benchmark. Blood in urine is the most common symptom , and, while it isn't always a sign of cancer, when bladder cancer is diagnosed early it is highly treatable.

Our campaign

To raise awareness of the symptoms, we launched the *'Spotted Something Different?'* campaign across North West England and North Wales, encouraging people to notice changes in their wee and see their GP. The approach focused on the symptom people recognise most easily – pink, red or brown urine – with an online hub covering the other signs and risk factors. The campaign was aimed mainly at people over 60, who are most at risk.

Consultant urological surgeon Vishwanath Hanchanale of the Royal Liverpool University Hospital explained that people often ignore blood in their urine when it comes and goes, and Liverpool grandfather Derek McStein shared his story. Derek was diagnosed in September 2025 after his wife encouraged him to see his GP.

The results

94% of people said the campaign was easy to understand

77% said it helped them understand the symptoms of bladder cancer

83% said they'd be more likely to see a doctor if they spot a symptom



CUMBRIA OVERVIEW

Cumbria continues to exhibit some of the region's most severe cancer challenges, with multiple cancer types recording higher prevalence rates than is found in any other county.

For the 20 cancers we analysed, Cumbria's prevalence rate over indexed for 17 when compared to the national benchmarks. For several cancer types, Cumbria records the highest prevalence rates in the North West, this includes skin, with levels 42% above the rest of the country and 31% higher than the regional average, as well as colorectal, uterus, bladder, and ovarian cancers. For breast cancer, Cumbria is equal highest with Cheshire at 16% above the rest of the country.

Cumbria's population demographics is likely a key factor in the county's cancer challenges. It has one of the oldest population profiles in the North West, with 34% of the county's adult population aged over 55 years old and 15% aged over 75. This compares to the national totals, which are 27% and 11% respectively. The county's deprivation rate is 20% lower than the North West average; however, it 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.

Out of 20 cancer types analysed, Cumbria had a higher-than-average prevalence rate for 17. The disparity for several cancers has increased compared to our last report, this includes:

Breast: +16% increase

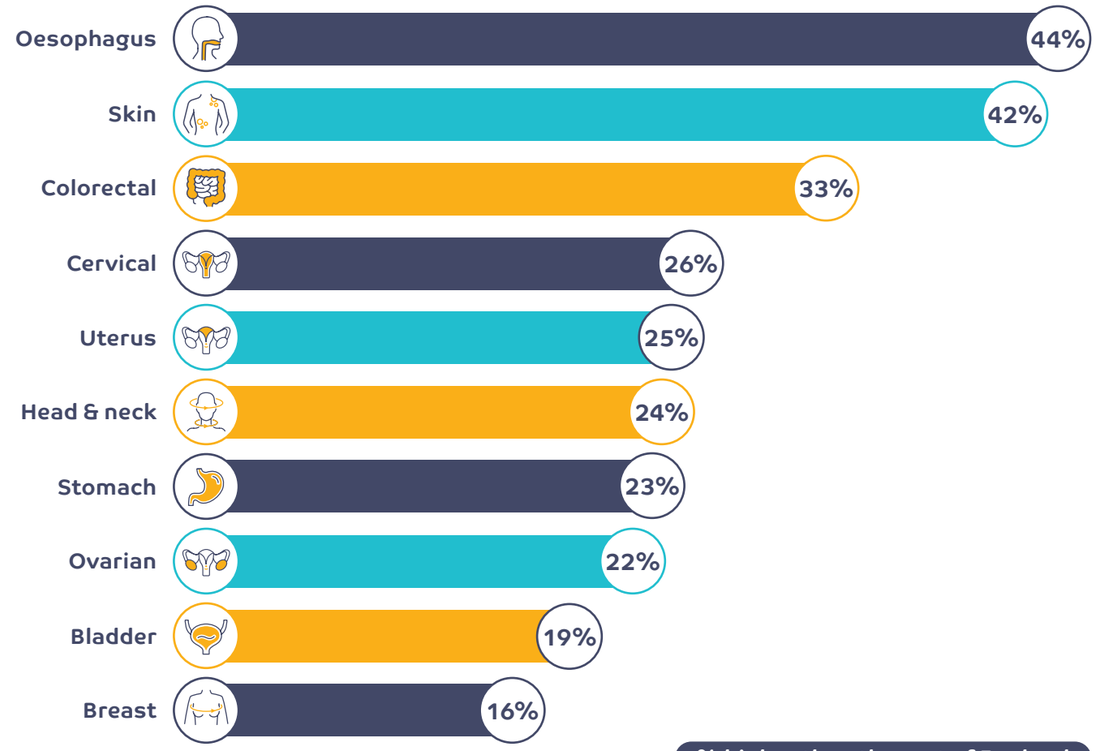
Skin: +10% increase

Oesophagus cancer: +8% increase

Ovarian: +6% increase

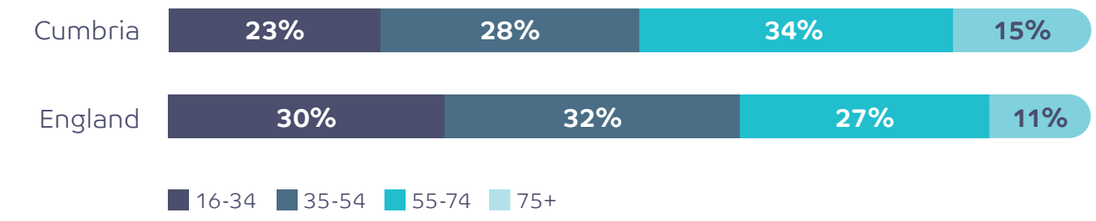


Cumbria top 10 over-indexed cancers by prevalence



Cumbria population profile

Age profile



OVARIAN CANCER AWARENESS
LISTEN TO YOUR BODY

Why ovarian cancer?

Our analysis shows the North West regularly over-indexes for ovarian cancer. The latest prevalence data puts it 7% higher in the region than in the rest of the country, and 22% above the national average in Cumbria.

Our campaign

We ran *'Listen To Your Body'* to raise awareness of ovarian cancer symptoms, which are often ignored or mistaken for less serious conditions, and to help people know when to speak to their GP. Case studies of women describing their diagnosis and treatment were central to the campaign. Ovarian cancer is more common in women over 50, so paid digital activity targeted that group. We tested the visuals, tone and messaging with women in the target audience before launch to make sure they would prompt the right action.

The results

Research after the campaign showed it improved knowledge of ovarian cancer.

People aware of the campaign are better at identifying ovarian cancer symptoms

75% of people saw the campaign as relevant

Almost two thirds (64%) said the campaign made them more likely to visit a doctor



OESOPHAGEAL CANCER AWARENESS
DON'T IGNORE THE SIGNS

Why oesophageal cancer?

Oesophageal cancer prevalence rates in the North West are 14% higher than the national average, and death rates from the disease are 19% higher. Symptoms such as heartburn, indigestion and difficulty swallowing are easy to dismiss, but spotting them early gives people the best chance of an early diagnosis.

Our campaign

To raise awareness of the symptoms, we launched *'Don't ignore the signs'* in January 2025. The campaign used road signs to show the symptoms, because road signs are familiar and hard to ignore. Each sign showed a symptom, including difficulty swallowing, heartburn, a persistent cough, a hoarse voice, and unexplained weight loss. The call to action sent people to a campaign page to find out more and speak to their doctor.

Alan Parkinson, 68, a grandfather of two from Liverpool, was diagnosed with oesophageal cancer in 2022 and shared his story to encourage others to act on symptoms. Jeremy Ward, consultant oesophageal surgeon at Lancashire Teaching Hospitals NHS Foundation Trust provided an expert view.

The results

94% said the campaign would make them more likely to visit a doctor

94% of people found the campaign easy to understand

96% said the campaign helped them understand the symptoms of oesophageal cancer



LANCASHIRE OVERVIEW

Lancashire's cancer prevalence rate is higher than the North West average and remains at the same level above the rest of the country as in our 2025 report.

For multiple cancers, Lancashire records inflated prevalence rates that are markedly higher than the English and North West averages. Lifestyle-related cancers continue to be recorded at significantly higher rates in Lancashire, including head & neck, oesophageal, and skin cancers, which are respectively present at rates 19%, 18%, and 14% above the norm.

Cancers which impact women are also found to be more prevalent in Lancashire's population. Cervical, ovarian, and uterine cancers are respectively recorded at 21%, 14%, and 9% higher than the average for England.

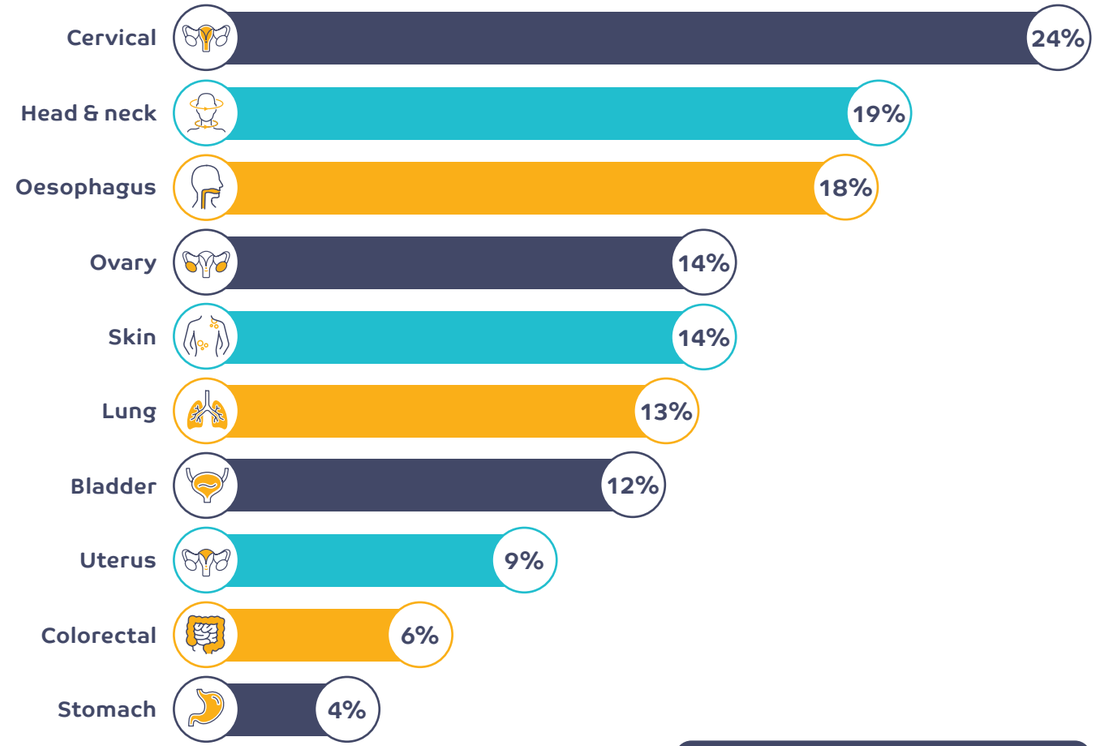
Lancashire represents the most economically diverse county in the North West, encompassing both Blackpool, which has some of the most deprived communities in England, and the Ribble Valley, one of the nation's wealthiest areas.

Out of 20 cancer types analysed, Lancashire had a higher-than-average prevalence rate for 15. The disparity for several cancers has increased compared to our last report, this includes:

- **Head & neck: +2% increase**
- **Skin: +2% increase**
- **Cervical: +1% increase**
- **Colorectal: +1% increase**
- **Stomach: +1% increase**

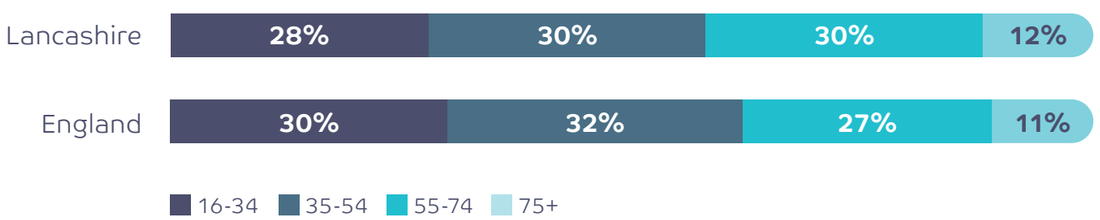


Lancashire top 10 over-indexed cancers by prevalence



Lancashire population profile

Age profile



PROSTATE CANCER RESEARCH CASE STUDY

TRIALLING A LESS INVASIVE WAY TO DETECT PROSTATE CANCER

Prostate cancer is the most commonly diagnosed cancer in men, and the North West and North Wales have the second highest mortality-to-incidence rate in England and Wales. Diagnosis currently relies on the PSA blood test, but PSA levels are not specific to prostate cancer, so many men go on to need MRI scans or prostate biopsies, which can cause severe infections and bleeding. Patients are often diagnosed late, and invasive procedures can put them off coming forward.

With funding from North West Cancer Research, Mr Colin Cutting and Dr Brendan Tinwell are leading a team at University Hospitals of Morecambe Bay NHS Foundation Trust to test a new way of finding markers of the disease.

Men with suspected prostate cancer provide blood, urine and semen samples, which the team analyse using Raman spectroscopy, a light-based technique that detects changes in molecules such as proteins, fats and DNA. The results will be compared with those from their usual care, including MRI and biopsy, to see how well the new approach can tell cancer from non-cancer.

The team hope their research will lead to less invasive, more accurate tests that could one day be carried out locally, or even at home.





PREHABILITATION RESEARCH CASE STUDY

THE EFFECTS OF PREHABILITATION ON ‘CHEMO BRAIN’ IN COLORECTAL CANCER PATIENTS

Earlier diagnosis and better treatments mean more people are surviving cancer, but much less is known about their quality of life after treatment. Chemotherapy-related cognitive impairment, often called ‘chemo-brain’, is still poorly understood. It is particularly common in colorectal cancer, where patients often need intensive chemotherapy.

Dr Christopher Gaffney and his team at Lancaster University are working with East Lancashire Hospitals, Lancashire Teaching Hospitals and Blackpool Teaching Hospitals to find out whether prehabilitation can help. Patients aged 60 and over will start a personalised exercise programme three weeks before chemotherapy and continue it throughout their treatment. Cognitive and sensory tests will track changes in brain function before, during and after chemotherapy.

The project aims to show whether prehabilitation can protect brain health and reduce the severity of chemo-brain. If it does, chemotherapy could become more manageable, and outcomes could improve for people living with colorectal cancer in the North West.



GREATER MANCHESTER OVERVIEW

While Greater Manchester has the lowest overall cancer prevalance rate in the North West, many cancer types are still present at levels significantly higher than the national average.

While this may seem to indicate that the county has a reduced cancer challenge, this perspective must be balanced by the fact that Greater Manchester has a significantly younger-than-average population. In Greater Manchester, 66% of adult residents are aged between 16 – 54, with the national average being 62%. This complexity risks obscuring the true scale of the cancer burden.

Greater Manchester has very high overall inequality levels, being 38% more deprived than the national average and the city centre is one of the country's poorest areas, with deprivation levels 54% higher than the England average. However, within the county there are many contrasting pockets of comparative wealth, with affluent areas such as Trafford and Tameside situated very close to inner-city communities that experience significant deprivation.

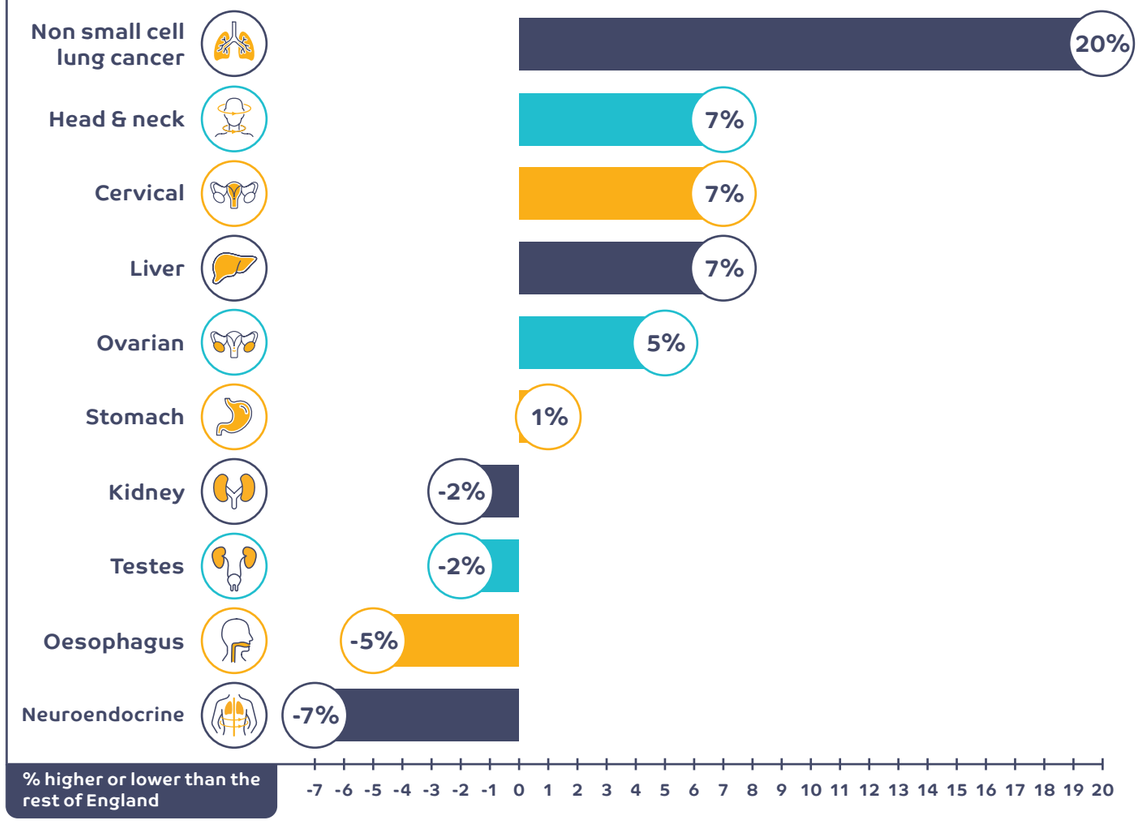
Even with a youthful age profile, Greater Manchester exhibits a higher-than-average prevalence rate for six of the 20 cancer types analysed. For lung cancer, the region has the second highest prevalence rate after LCR, indexing at 20% above the rest of the country.

Other lifestyle related cancers are also recorded at a disproportionate level in Greater Manchester, including head & neck and liver cancers, which are both present at a 7% higher than average rate, and stomach cancer, which is 1% more prevalent.

Cancers affecting women are also present at notably higher rates, with cervical cancer's prevalence indexing at 7% above the rest of England and ovarian cancer recording a 5% difference for the second report running.

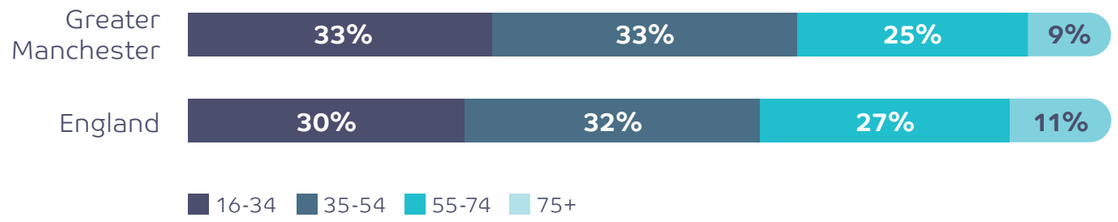


Greater Manchester top 10 over-indexed cancers by prevalence



Greater Manchester population profile

Age profile



BREAST CANCER RESEARCH CASE STUDY

TESTING WHETHER A COMMON BLOOD THINNER CAN BOOST IMMUNITY AGAINST BREAST CANCER

Breast cancer patients whose tumours contain many large immune cells called macrophages tend to have worse outcomes. These cells may produce a clotting protein (Factor X) which could stop the body's immune system from attacking the cancer. Rivaroxaban, an anti-clotting tablet commonly prescribed by GPs to prevent stroke and thrombosis, blocks Factor X, and early evidence in skin cancer patients suggests it can help immune cells kill cancer cells.

With funding from North West Cancer Research, Professor Cliona Kirwan and Dr John Castle are leading a team at The Christie in Manchester to find out whether Rivaroxaban could do the same in breast cancer. The team have recently completed a "window of opportunity" trial with patients across the North West, giving the drug between diagnosis and standard treatment such as chemotherapy or surgery, and monitoring whether it stopped cancer cells from dividing. Using the PhenoCycler System, they can test the same tissue samples repeatedly, making the most of every sample donated.

If Rivaroxaban is found to aid the body's immunity against cancer, it could become a new, affordable treatment for people with breast cancer in the region.





WOMB CANCER RESEARCH CASE STUDY

DEVELOPING A SIMPLER, LESS INVASIVE TEST FOR WOMB CANCER

Womb cancer is the most common gynaecological cancer and the fourth most common cancer in women, and cases are rising. Abnormal bleeding is the key warning sign, but the tests currently used to diagnose it, including ultrasound, hysteroscopy and biopsy, can be uncomfortable and invasive.

Dr Kelechi Njoku at the University of Manchester has been awarded a three-year Fellowship, jointly funded by North West Cancer Research and The Eve Appeal, of up to £120,000 a year. His research uses proteins found in vaginal fluid, collected with a small device, to detect womb cancer.

Early studies picked up 95% of cancers, particularly in postmenopausal women. The Fellowship will now test the approach in 500 women who either have womb cancer or are at high risk of developing it, looking at how accurate the test is, how acceptable women find it, and whether it would be cost-effective for the NHS.

The project aims to give women a faster, more accurate and less invasive way to be diagnosed, helping to improve outcomes for those affected by womb cancer.

Uterus cancer is 2% more prevalent in the North West than the rest of England. Cumbria and Lancashire's communities are particularly affected by this disease, with prevalence rates respectively 25% and 9% higher than the national average.



CHESHIRE OVERVIEW

Out of the 20 types of cancer that we analyse, Cheshire records more diseases at an above average rate than any other county in the North West.

While it is only the most over-indexed for one cancer type (kidney at 16% above the national average, which is two percentage points above Cumbria, the next highest county), there are many for which it exhibits starkly above average prevalence rates.

Cheshire has a higher-than-average prevalence rate for 18 out of 20 cancer types analysed. This includes skin cancer, which is 23% higher than the rest of the country and 12% above the North West average, as well as breast cancer which at 16% above the norm is the joint highest in the North West.

In line with the region, lifestyle cancers are disproportionately present in Cheshire's population. For example, oesophageal, kidney, colorectal, lung, and head & neck cancers respectively record 22%, 16%, 15%, 12%, and 8% higher than average prevalence rates.

In the most recent data, Cheshire records markedly higher or increasing rates for several cancer types affecting women. Along with the high breast cancer rates, ovarian and uterine levels are respectively 10% and 5% above the national average. While cervical cancer rates are 5% better than the rest of the country, they were 10% better in our 2025 analysis.

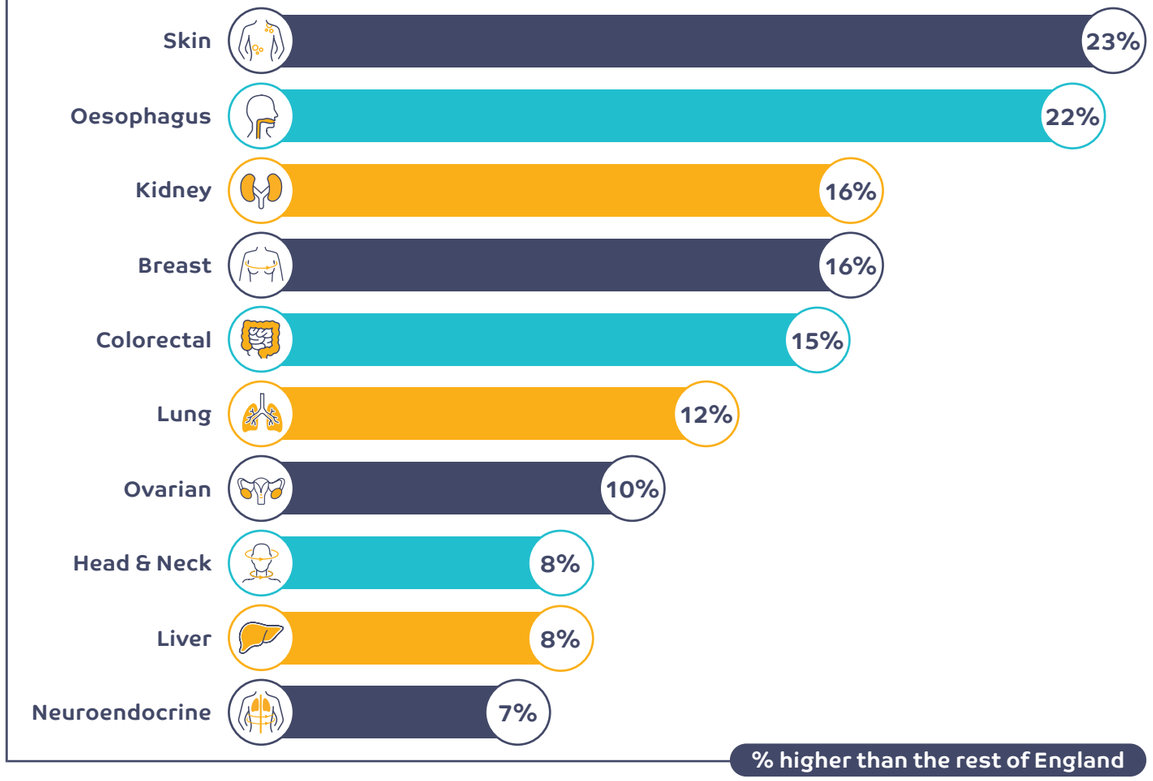
Cheshire is the most affluent North West county by some margin, indexing at 18% less deprived than the national average. However, areas of the county record significant poverty levels such as Crewe and 16% of Chester's neighbourhoods are in the lowest income deciles.

The disparity for several cancers has increased compared to our last report, this includes:

- **Kidney: +4%**
- **Oesophagus: +2%**
- **Breast: +2%**
- **Colorectal: +2%**
- **Lung: +2%**
- **Prostate: +2%**
- **Bladder: +2%**

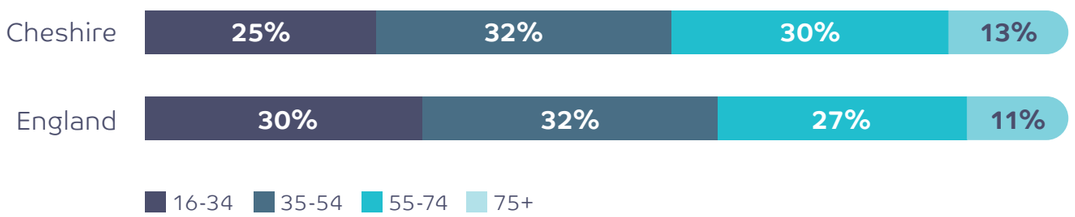


Cheshire top 10 over-indexed cancers by prevalence



Cheshire population profile

Age profile



SKIN CANCER AWARENESS

PROTECT WITH SPF

Why skin cancer?

The prevalence of skin cancer in the North West is 11% above the national average, with some counties experiencing much higher rates: Cumbria, Liverpool, and Cheshire respectively recorded skin cancer prevalence rates 42%, 24%, and 23% higher than the rest of England. Many skin cancer cases can be prevented with simple sun protection, but the region's cloudy reputation means many adults don't think they need it.

Our campaign

In June 2025 we launched *Protect With SPF* across the North West and North Wales. Its message was "SPF, even in the North West!" The campaign asked adults to protect themselves as carefully as they protect their children, with local children delivering the sun safety messages to the grown-ups around them. The advice was to wear at least SPF 30, sunny or cloudy, reapply it regularly and stay out of the sun between 10am and 3pm.

Support came from Professor Rowan Pritchard-Jones, Medical Director at NHS Cheshire and Merseyside and a consultant plastic surgeon at Whiston Hospital. Daniel Lloyd, 36, from Bolton, was diagnosed with melanoma and shared his story to encourage anyone worried about a mole to see their doctor.

The results

96% said the campaign was relevant, with 65% saying it was 'very relevant'

66% strongly agreed the campaign made them more likely to apply sunscreen to their children and themselves

95% said the campaign was easy to understand



IMPROVING CARE FOR AUTISTIC PEOPLE CASE STUDY

UNDERSTANDING THE NEEDS OF AUTISTIC ADULTS WITH CANCER DURING ACTIVE CANCER TREATMENT

Autistic people get cancer at similar rates to non-autistic people, but they are around twice as likely to die from it. They are less likely to seek help from healthcare services, and their appointments are less likely to go well. Common reasons include miscommunication, sensory differences, showing pain in different ways and finding uncertainty hard to cope with. Despite this, very little research has looked at how cancer care could better meet their needs.

Dr Gemma Cherry and Dr Jennifer Kirton at the University of Liverpool are co-leading a study on active treatment, a period of regular appointments and physically and emotionally demanding treatment. They are working in partnership with Dr Lynda Appleton at Clatterbridge Cancer Centre NHS Foundation Trust, with funding from North West Cancer Research. The team are interviewing autistic people who have recently had cancer treatment, along with their relatives and healthcare professionals working in cancer care across the region, to find out what works well and what could be improved. A group of autistic patients has helped shape the project throughout.

Workshops will then bring together patients, relatives, clinicians, managers and researchers. Together they will develop recommendations for services, along with information for clinicians and the public, to support better care for autistic people at every stage of cancer.



Autistic people get cancer at similar rates to non-autistic people, but they are around twice as likely to die from it.

DATA OVERVIEW

The main metric used for this report was to compare the crude rate of cancer prevalence in the North West and its five individual counties to the average for England. We analysed both the total prevalence for all cancers as well as the prevalence rates for 20 specific cancer types for which NHS data is available.

Cancer prevalence is defined as the total number of people in the population who have had a diagnosis of cancer. The most recent prevalence data covers the year 2022 and was sourced from NHS England, local authorities, Integrated Care Boards (ICBs), the 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.

Cancer incidence data was also analysed for the report. Incidence is defined as the total number of annual diagnoses and the latest data, sourced from NHS England, covers 2022. Incidence was not used as the lead metric in this report as the data is only available by the three ICBs that cover the North West (NHS Cheshire and Merseyside Integrated Care Board, NHS Greater Manchester Integrated Care Board, and NHS Lancashire and South Cumbria Integrated Care Board) and so cannot be viewed at a county level. Additionally North Cumbria now falls into the North East and North Cumbria Integrated Care Board, and so data from this region could not be accounted for.











north west cancer research

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