Breast Cancer
Suffolk
2023

Contents

Key points

1. Breast cancer incidence increases with age and is most common in the 80 and over age group. For SNEE ICB in 2020, almost 2 in 3 (64.0%) of breast cancer cases (514 cases), were in females aged 60 and over.

2. Breast cancer incidence statistically significantly decreased for England and for the Suffolk and North East Essex (SNEE) ICB, between 2019 and 2020. This is likely to be due to fewer presentations and urgent referrals during the pandemic. This could lead to an increase of breast cancers diagnosed in future years, particularly at later stages through routes such as emergency admissions.

3. Breast cancer screening coverage for Suffolk is above the England average. Almost 3 in 4 (74.4%) of all eligible Suffolk women are completing their breast screening when invited. Yet over 1 in 4 Suffolk women are not attending their screening invitation. This increases the likelihood of breast cancers diagnosed at later stages through other routes.

4. Breast cancer screening coverage for both Suffolk and England has decreased. Coverage in Suffolk has statistically significantly decreased from 81.7% in 2010, to 74.4% in 2022. Improving participation in screening could lead to more breast cancers diagnosed at earlier stages.

5. In England, more than 4 in 5 (83.9%) breast cancer cases were diagnosed through two-week wait referrals and breast screening in 2018. Over half (51.2%) of breast cancer diagnoses were through two-week wait referrals alone. For breast cancers diagnosed through screening, over 9 in 10 were diagnosed early at stages 1 or 2.

6. Breast cancer has better survival outcomes than other tumour types. Breast cancer outcomes have also improved over the last decade. Over 9 in 10 (92.0%) of women with breast cancer in SNEE ICB are surviving for at least 5 years after their diagnosis in 2016. This 5-year survival percentage has increased for SNEE from 83.2% in 2005.

An introduction to breast cancer

Breast cancer is the most common type of cancer in the UK, largely affecting women aged 50 and over. Almost 1 in 7 women will be diagnosed with breast cancer during their lifetime, however recovery outcomes are positive when the cancer is detected at an early stage[1].

Breast cancer has many symptoms – it is usually first noticeable with a lump or area of thickened breast tissue. Most lumps are not cancerous but should be checked by a doctor. Certain factors are known to increase the risk of breast cancer:

- Age (risk increases as you get older)
- A family history of breast cancer
- A previous diagnosis of breast cancer
- A previous benign (non-cancerous) breast lump
- Being tall, overweight, or obese
- Drinking alcohol[1,2]

For more information on the risks and causes of breast cancer, follow the link provided: Cancer Research UK risks and causes of breast cancer.

Breast cancers are diagnosed either through a breast screening (known as a mammography) or from a biopsy, where a small sample of breast tissue is examined under a microscope. Most breast cancers are divided into either:

- Non-invasive breast cancers, also known as carcinoma in situ. Found in the ducts of the breast and has not spread into the surrounding breast tissue.
- Invasive breast cancers, where cancer cells have spread into the surrounding breast tissue – the most common type of breast cancer.

This profile outlines the state of breast cancer in Suffolk covering:
- Breast cancer incidence
- Breast cancer survival
- Breast cancer mortality
- Routes to diagnosis
- Stage of diagnosis
- Breast cancer screening

Breast cancer incidence

Figure 1 shows the variation in breast cancer incidence using the standardised incidence ratio for data between 2015-19, at ward level in Suffolk. Almost all Suffolk wards share a statistically similar breast cancer incidence to the England average. Areas of the county where breast cancer incidence was statistically significantly above the England average include The Fornhams & Great Barton and Southgate (both West Suffolk), Stow Thorney (Mid Suffolk), Holywells (Ipswich) and Martlesham & Purdis Farm (East Suffolk).

Figure 1: Map of breast cancer incidence in Suffolk at ward level, using a standardised incidence ratio between 2015-19, compared to England for statistical significance.
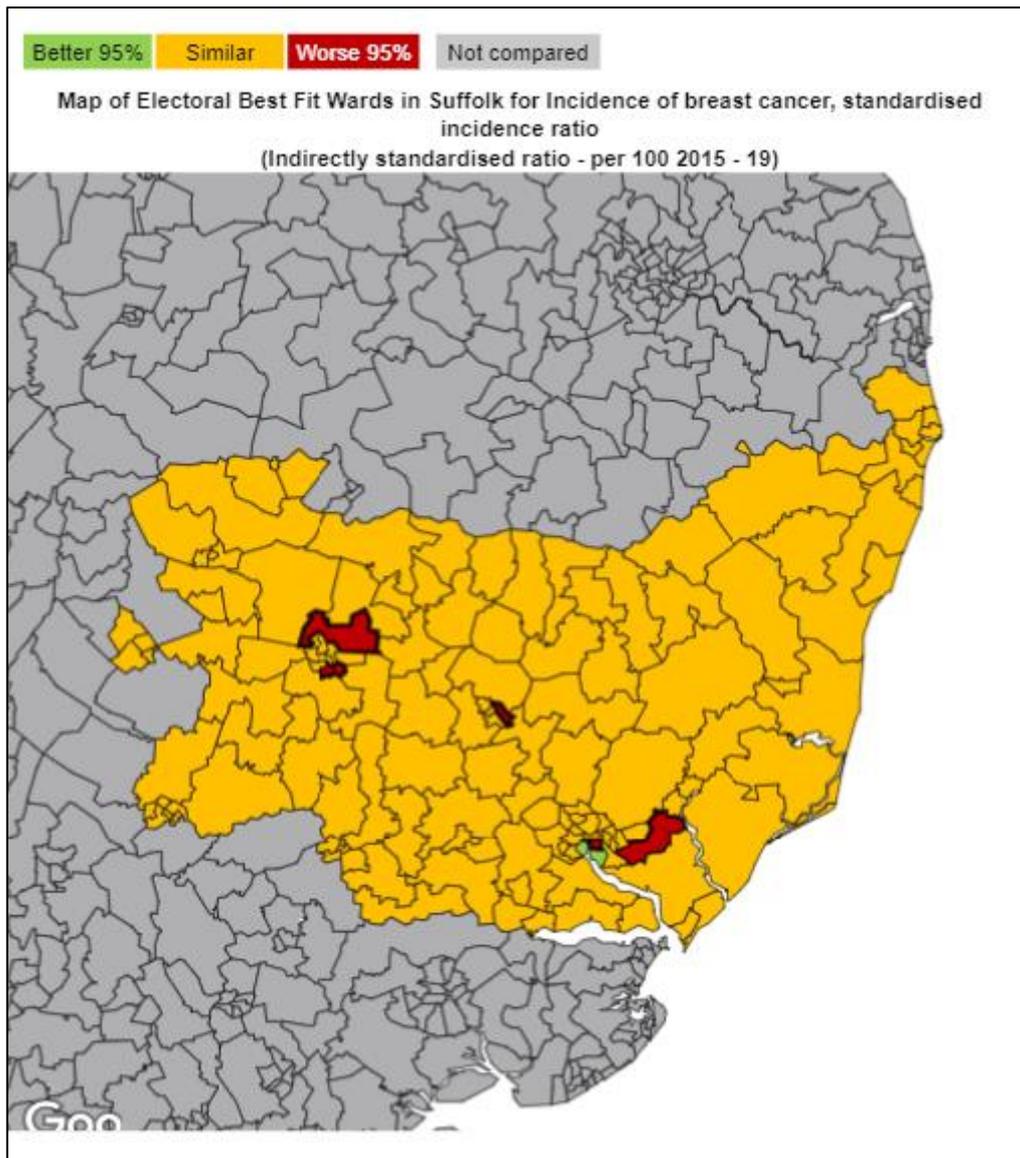

Source: Fingertips Public Health Data

Breast cancer incidence, all persons

In England, 2020, the age-standardised incidence rate of female breast cancer was 140.8 cases per 100,000, accounting for 39,871 tumours. SNEE ICB had a statistically similar breast cancer incidence rate, at 144.2 per 100,000 – accounting for 803 tumours in 2020. Norfolk and Waveney ICB had a statistically similar breast cancer incidence rate to SNEE ICB. The Norfolk and Waveney rate of 157.6 per 100,000 was statistically significantly higher than the England rate in 2020.

Figure 2 summarises breast cancer incidence rates across Suffolk's sub-ICB areas per 100,000 in 2020. North East Essex, Ipswich and East Suffolk and West Suffolk sub-ICBs all had statistically similar breast cancer incidence rates to England. Norfolk and Waveney sub-ICB had a statistically significantly higher breast cancer incidence rate in 2020.

Figure 2. Age-standardised breast cancer incidence rates per 100,000 for all ages for Suffolk sub-ICB locations, 2020.
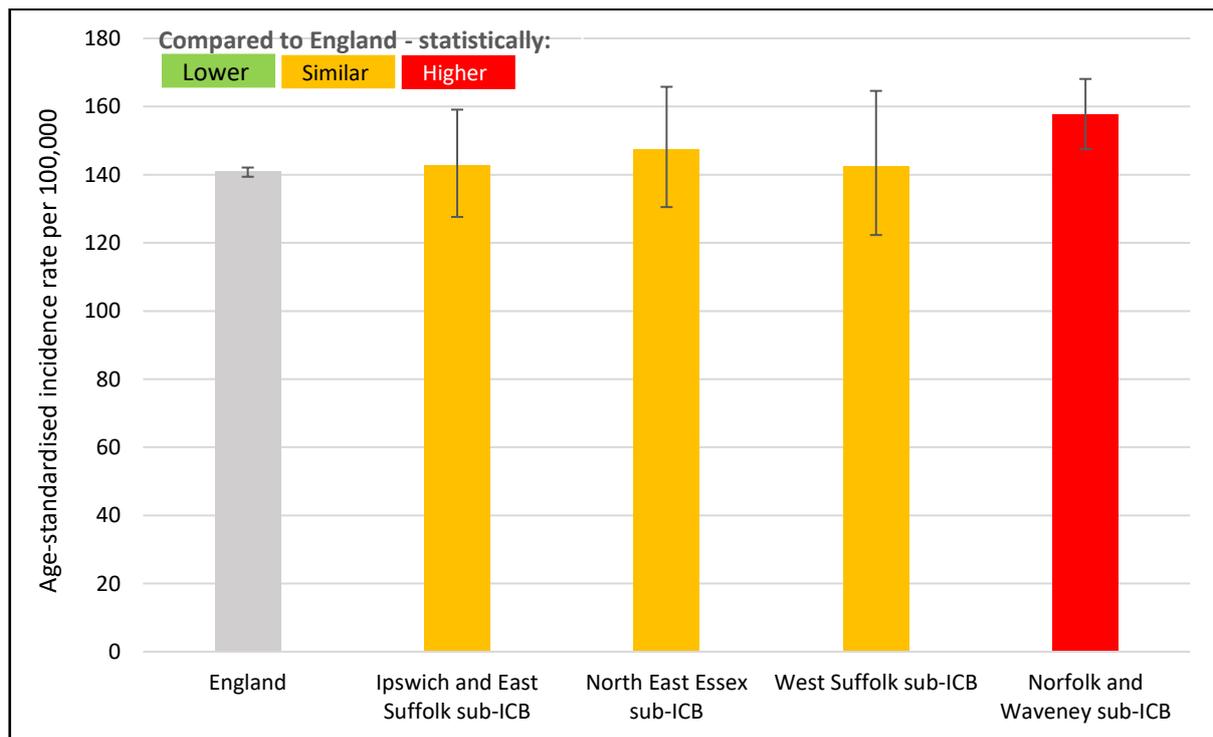
Source: CancerData

Breast cancer incidence variation by age

Rates of breast cancer incidence increase with age in England and across Suffolk's sub-ICB locations. Figure 3 shows the breast cancer incidence rates for SNEE and Norfolk and Waveney ICB, and England, for all ages and selected age groupings in 2020. For England in 2020, breast cancer incidence was highest in the 80 and over age group, at 393.7 cases per 100,000. For SNEE ICB, the 80 and over age group had a breast cancer incidence rate of 424.4 - statistically similar to the England average – but also the highest out of all the other age groupings.

Breast cancer is more evenly distributed across age groups. In SNEE ICB, 2020 those aged:
- 25 to 49 accounted for 126 breast cancer cases – 15.7% within SNEE ICB (there were 0 cases for the under 25 age group).
- 50 to 59 accounted for 163 breast cancer cases – 20.3% within SNEE ICB.
- 60 to 69 accounted for 174 breast cancer cases – 21.9% within SNEE ICB.
- 70 to 79 accounted for 187 breast cancer cases – 23.3% within SNEE ICB.
- 80 and over accounted for 153 breast cancer cases – 19.1% within SNEE ICB.

*percentages will not add up to 100% due to rounding.

Figure 3. Breast cancer incidence rates per 100,000 for Suffolk and North East Essex ICB, Norfolk and Waveney ICB, and England, for all ages and selected age groupings, all persons, 2020.
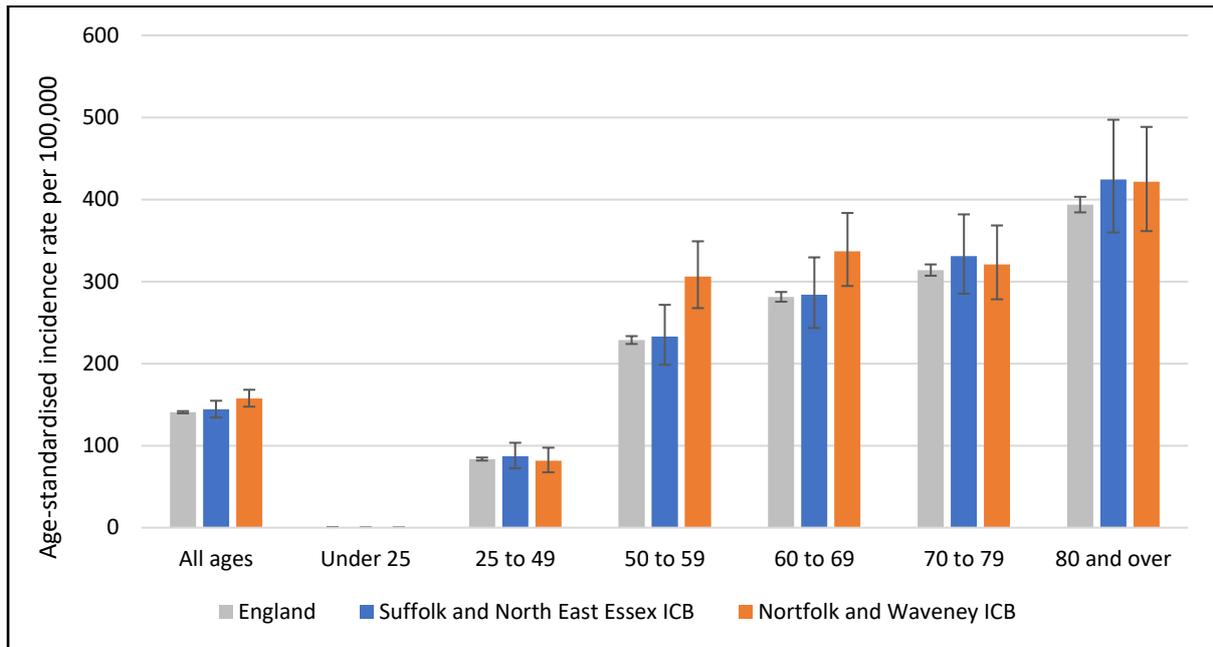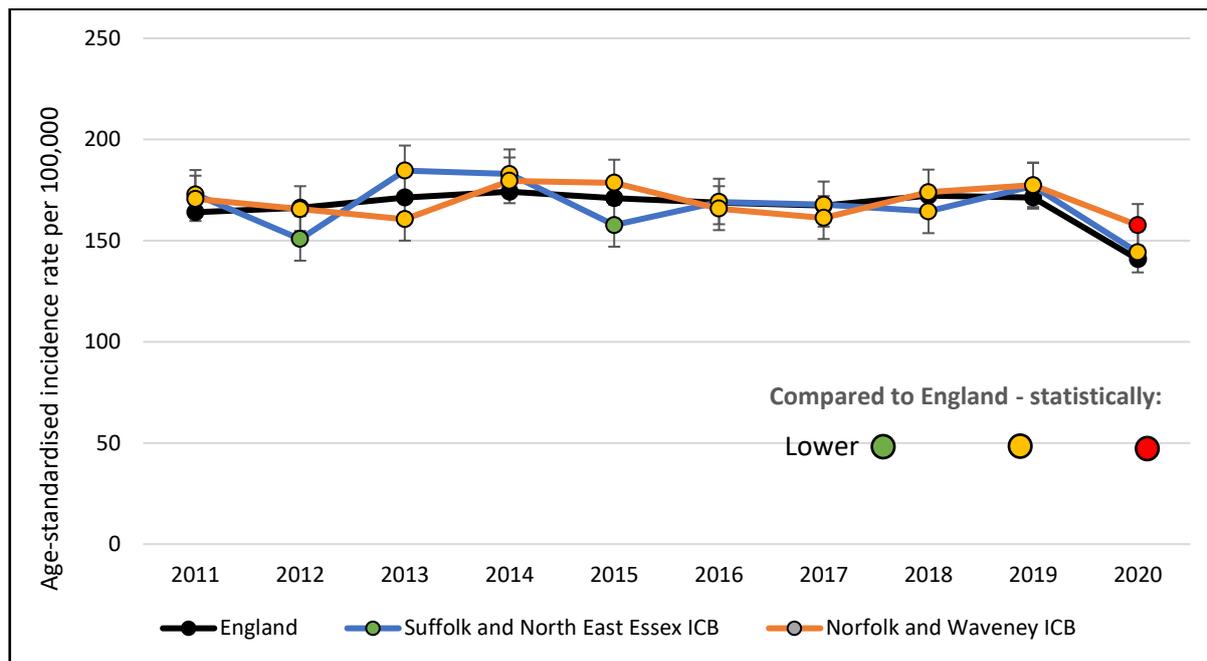

Source: CancerData

Breast cancer incidence trend

Figure 4 shows the breast cancer age-standardised incidence rates per 100,000 trend between 2011 and 2020 for SNEE and Norfolk and Waveney ICB, compared to England. In England, breast cancer incidence rates have statistically significantly increased from 164.1 per 100,000 in 2011, to 171.3 per 100,000 in 2019, before statistically significantly falling in 2020 to 140.8. This decrease in 2020 coincides with the national decrease in breast cancer screening coverage during the pandemic. This could mean there are a large proportion of undiagnosed breast cancers, which could present at later stages. As three years have now passed, many of these cases should now be diagnosed, but may appear as later diagnoses in the data. SNEE ICB's breast cancer incidence trend has remained statistically similar from 2011 (172.8 per 100,000) to 2019 (176.9 per 100,000). This rate also statistically significantly decreased in 2020 to 144.2 per 100,000.

Figure 4. Breast cancer age-standardised incidence rates per 100,000 for Suffolk and North East Essex ICB, Norfolk and Waveney ICB, all persons, all ages between 2011-2020 compared to England.

Source: CancerData

Breast cancer survival

NHS digital publishes cancer survival for all cancers, colorectal, lung, and female breast cancers at a national and ICB level between 2005-2020. Figure 5 provides information on the percentage of women who had a breast cancer diagnosis who were still alive 1 year, or 5 years after their initial diagnosis for SNEE ICB and England. Confidence intervals are not reported with this dataset. However, the data does allow us to observe survival trends for tumour types since 2005.

Survival outcomes for breast cancer are generally better than other tumour types. In 2020:

- In England, 97.3% of women survived for at least 1 year after their breast cancer diagnosis (an increase from 94.7% in 2005).
- For SNEE ICB, 98.1% of women survived for at least 1 year after their breast cancer diagnosis (an increase from 94.7% in 2005).

For 5-year survival (latest data is for diagnoses in 2016):

- In England, 9 in 10 (90.0%) women survived for at least 5 years after their breast cancer diagnosis (an increase from 84.2% in 2005).
- For SNEE ICB, over 9 in 10 (92.0%) of women survived for at least 5 years after their breast cancer diagnosis (an increase from 83.2% in 2005).

Figure 5. Breast cancer 1-year and 5-year survival net survival percentages by calendar year of diagnosis, for all adults (aged 15 to 99) for Suffolk and North East Essex ICB and England.
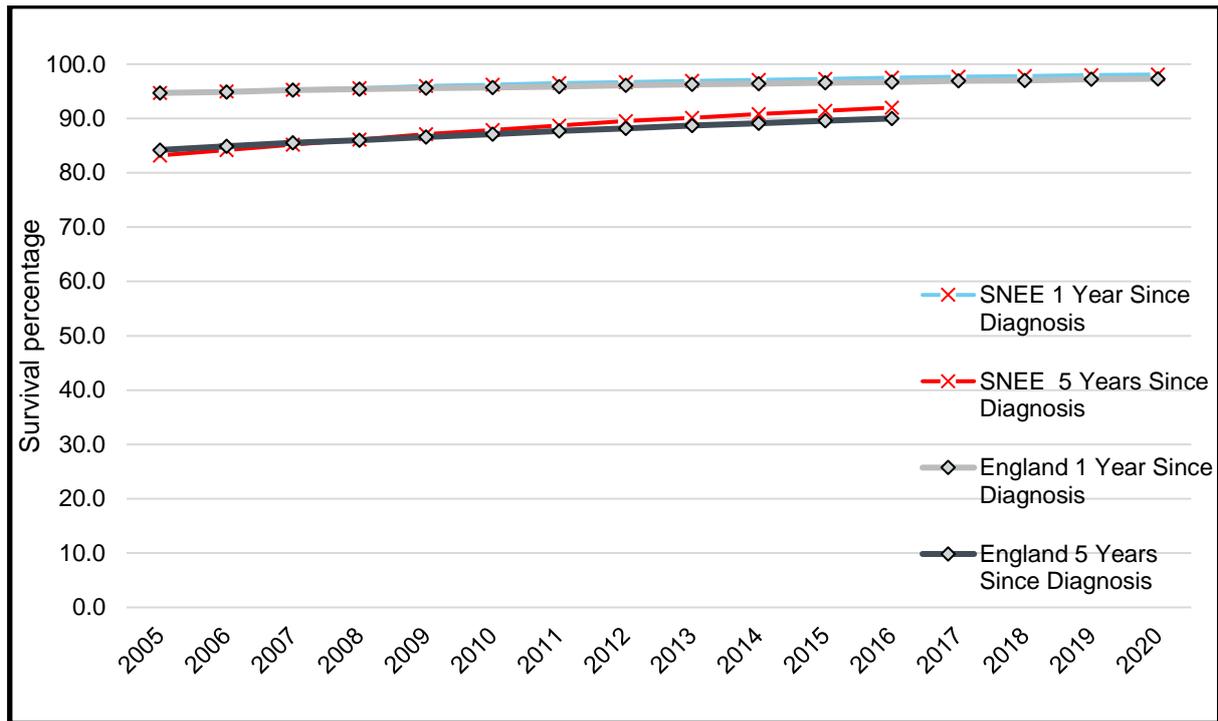
Source: Cancer survival: Index for sub-Integrated Care Boards, 2005 to 2020

Breast cancer mortality
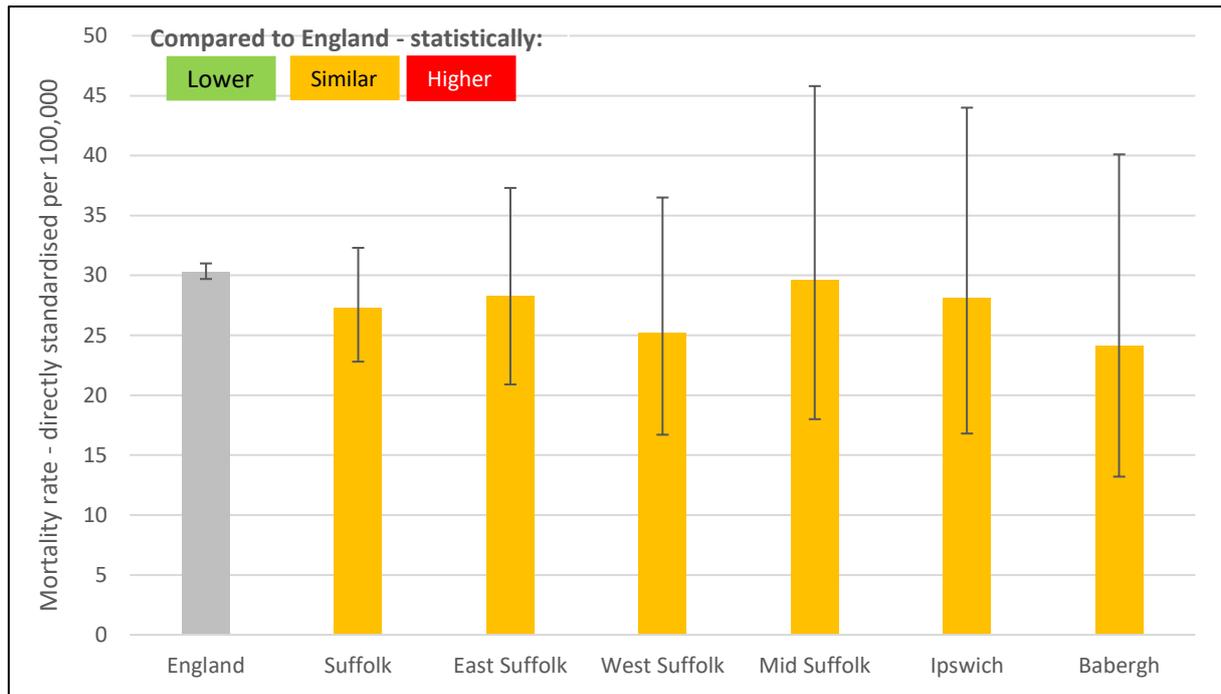
Breast cancer mortality, all persons

Fingertips data for lung cancer mortality covers 2021 and provides a breakdown by Suffolk districts. CancerData provides lung cancer mortality data for 2020 at sub-ICB level. Both are presented below.

In Suffolk in 2021, 135 women died from breast cancer. Those 135 deaths were distributed around the county accordingly:

- East Suffolk: 53 deaths.
- West Suffolk: 28 deaths.
- Mid Suffolk: 20 deaths.
- Ipswich: 19 deaths.
- Babergh: 15 deaths.

Figure 6 shows the directly standardised mortality rate from lung cancer (all ages, all persons) per 100,000 in 2021 for Suffolk and districts, compared to the England average. Suffolk has a statistically similar breast cancer mortality rate to the England average at 27.3 per 100,000. All Suffolk districts also have statistically similar breast cancer mortality rates to the England average (30.3 per 100,000).

Figure 6. Breast cancer mortality rate (directly standardised) per 100,000 for Suffolk and districts, compared to England in 2021.


Source: Fingertips Public Health Data

The England age-standardised mortality rate for breast cancers was 32.4 per 100,000, accounting for 9,638 deaths. Breast cancer mortality for SNEE ICB in 2020 was statistically similar to the England average. The breast cancer mortality rate for SNEE ICB in 2020 was 29.5 per 100,000, with 178 total deaths. Norfolk and Waveney ICB in 2020 also had a statistically similar breast cancer mortality rate to the England average, at 31.6 per 100,000.

Figure 7 shows the breast cancer age-standardised mortality rates for all persons, all ages for all sub-ICBs across Suffolk's geographical footprint in 2020, compared to England estimates. For the 178 breast cancer deaths for SNEE ICB in 2020, they were distributed across sub-ICB locations accordingly:

- Ipswich and East Suffolk sub-ICB – 55 deaths, rate of 21.5 per 100,000. Statistically significantly lower than England.
- North East Essex sub-ICB – 78 deaths, rate of 37.2 per 100,000. Statistically similar to England.
- West Suffolk sub-ICB – 45 deaths, rate of 32.3 per 100,000. Statistically similar to England.

Figure 7. Breast cancer age-standardised mortality rates per 100,000 for all persons, all ages, for Suffolk sub-ICB locations, 2020.
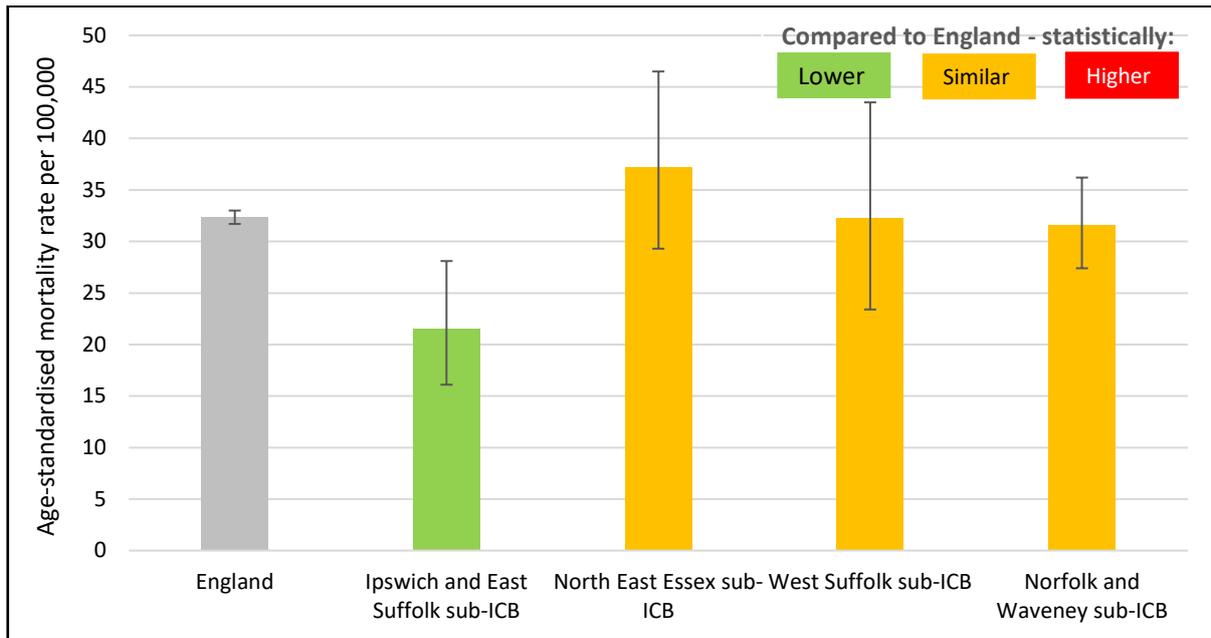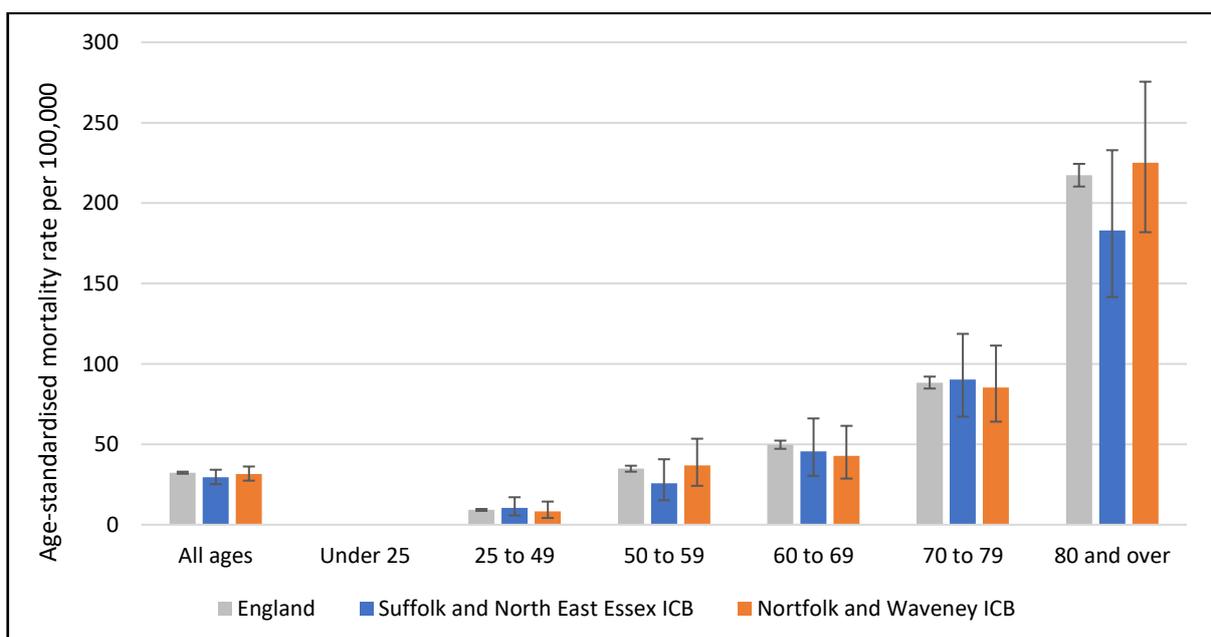

Source: CancerData

Breast cancer mortality variation by age

Figure 8 shows the breast cancer mortality rates for SNEE and Norfolk and Waveney ICB, and England, for all ages and selected age groupings, in 2020. Akin to other cancer types, breast cancer mortality rates increase with age. Over 3 in 4 (77.2%) of breast cancer deaths in England, 2020, occurred in females over the age of 60 (7,444 deaths). For SNEE ICB in 2020, over 4 in 5 (81.5%) of breast cancer deaths occurred in females over the age of 60 (145 deaths). Breast cancer mortality rates were statistically significantly highest in the 80 and over age group, at 217.3 per 100,000 for England, and 183.1 per 100,000 for SNEE ICB. Breast cancer mortality rates for each of the below age groups are statistically similar across ICB areas and England.

Figure 8. Breast cancer mortality rates per 100,000 for Suffolk and North East Essex ICB, Norfolk and Waveney ICB, and England, for all ages and selected age groupings, all persons, 2020.
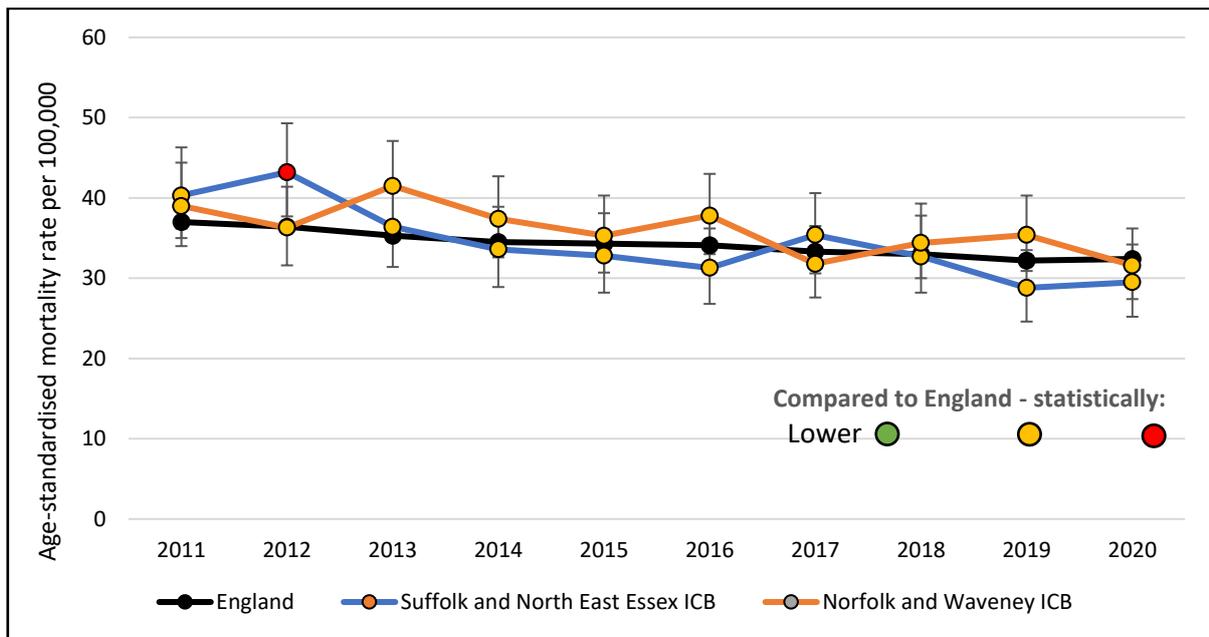

Source: CancerData

Breast cancer mortality trend

Figure 9 shows the age-standardised breast cancer mortality rates per 100,000 trend for SNEE and Norfolk and Waveney ICB between 2011-2020 compared to England. Breast cancer mortality rates in England have statistically significantly decreased from 37.0 per 100,000 in 2011, to 32.4 per 100,000 in 2020. Breast cancer mortality rates for SNEE ICB have also statistically significantly decreased from 40.3 per 100,000 in 2011, to 29.5 per 100,000 in 2020. The breast cancer mortality rate for SNEE ICB has been statistically similar to the England rate each year between 2013-2020.

Figure 9. Age-standardised breast cancer mortality rates per 100,000 for Suffolk and North East Essex ICB, Norfolk and Waveney ICB, all persons, all ages between 2011-2020 compared to England.

Source: CancerData

Routes to diagnosis

Nationally, cancer survival in England is low compared to the European average. Evidence suggests this could be due to later diagnosis when cancers are at more advanced stages and harder to treat[3–5]. The Routes to Diagnosis study found large differences in how patients were diagnosed and large variation in survival between these groups. Those diagnosed via emergency presentations were associated with low survival[6].

Figure 10 shows the breast cancer routes to diagnosis in England between 2011 and 2018. Two-week wait referrals and breast screening diagnosed 83.9% of all breast cancers in England in 2018. Over half (51.2%) of breast cancers were diagnosed through two-week wait referrals. The rate of breast cancers being diagnosed from two-week wait referrals is statistically similar to the rate in 2011 (51.1%).

There has been a statistically significant increase in the percentage of breast cancers diagnosed in England through the breast cancer screening programme. In 2011, 29.4% of breast cancers were diagnosed from breast screening – this percentage has statistically significantly increased to 32.7% in 2018.

In 2018, female breast cancers in England were diagnosed through these routes:

- Two-week waits (urgent GP referrals with a suspicion of cancer): 51.2%
- Screening (detected through the breast screening programme): 32.7%
- GP referral (routine and urgent referrals with a suspicion of cancer, where the patient was not referred under the TWW referral route): 7.2%

- Emergency presentation (an emergency route via A&E, emergency GP referral or emergency admission): 3.6%
- Unknown: 2.8%
- Other outpatient (elective route with an outpatient appointment): 2.2%
- Inpatient elective (no earlier information found prior to admission from a waiting list, booked or planned): 0.2%
- DCO (diagnosis by death certificate only): 0.1%

Figure 10. Breast cancer routes to diagnosis between 2011 to 2018 for England.
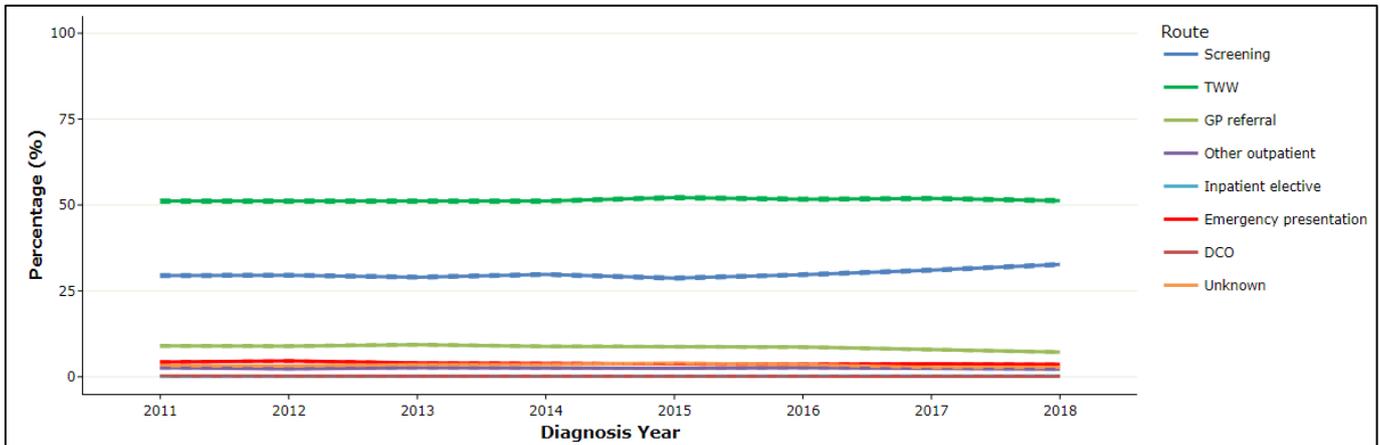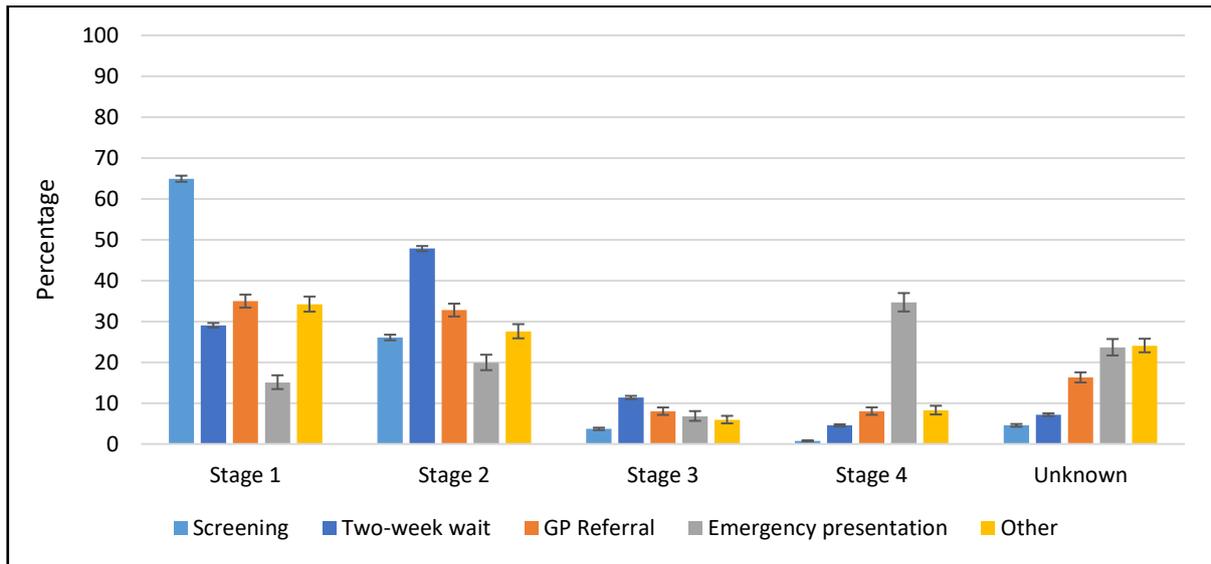

Source: CancerData

Stage of diagnosis

Figure 11 shows the England percentage of breast cancers diagnosed in 2018, by stage, split into each of the major breast cancer routes to diagnosis. Results show that the breast cancer screening programme is successful at diagnosing breast cancers earlier. Screening diagnoses 64.9% of breast cancers at stage 1, and 26.1% at stage 2 – meaning over 9 in 10 (91.0%) of all breast cancers diagnosed from the screening programme were diagnosed early.

Similarly, two-week wait referrals also lead to the majority of breast cancers being diagnosed at earlier stages. 29.1% of breast cancers diagnosed through two-week wait referrals were at stage 1, and 47.8% at stage 2. This means two-week wait referrals led to over 3 in 4 (76.9%) of breast cancers diagnosed through this method being diagnosed early in 2018. This was also similar for the GP referral pathway – with over 2 in 3 (67.8%) of GP referral breast cancer diagnoses at either stage 1 or 2.

Breast cancers diagnosed through emergency admissions in England were more likely to be at later stages, where outcomes tend to be worse for patients. Over 1 in 3 (34.7%) breast cancers diagnosed through emergency admissions were at stage 4, with almost 1 in 4 (23.6%) of breast cancers diagnosed through emergency admissions at an unknown stage. Just over 1 in 3 (35.0%) breast cancers diagnosed through emergency admissions were diagnosed early/at stage 1 or 2.

**Figure 11. Stage of diagnosis for the routes to diagnosis, for female breast cancers in England, 2018.**

Source: CancerData

Breast cancer screening

Data on the coverage of the Suffolk breast cancer screening programme is sourced by Fingertips. Breast screening coverage refers to the proportion of women eligible for screening (age 53-70) who have had a test with a recorded result at least once in the previous 36 months.

Figure 12 shows the 2022 Suffolk and Districts and boroughs in Suffolk breast cancer screening coverage for people aged 53 to 70 years compared to the England average. Results show that breast cancer screening coverage, in Suffolk 2022, was statistically significantly higher than England, with a coverage of 74.4%- almost 3 in 4 eligible women completed their breast screening. Across the Suffolk districts, breast cancer screening percentages vary between the lowest 68.2% in Ipswich, to 77.9% in Mid Suffolk. Although there is variation, all Suffolk districts have a statistically significantly higher breast screening coverage percentage than the England average of 65.2%.

Figure 12. Suffolk and district breast cancer screening coverage (53-70yrs), compared to England average, 2022.
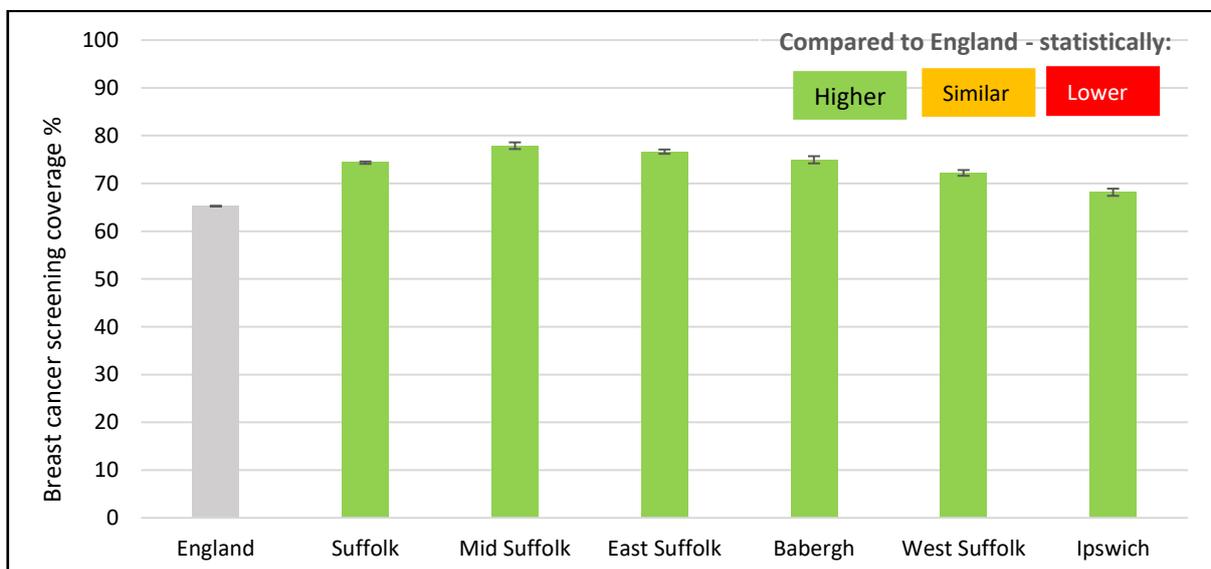
Source: Fingertips Public Health Data

Figure 13 shows the Suffolk and England breast cancer screening coverage trend between 2010 and 2022. Breast cancer screening coverage in Suffolk has been statistically significantly higher than the England average between 2010 to 2022. The fall in breast cancer screening coverage between 2021 and 2022 shows the impact of the Covid-19 pandemic. When comparing pre-pandemic data, Suffolk's breast cancer screening coverage has statistically significantly decreased between 2010 (81.7%) to 2020 (79.7%).

Figure 23. Suffolk and England breast cancer screening coverage between 2010-2022.
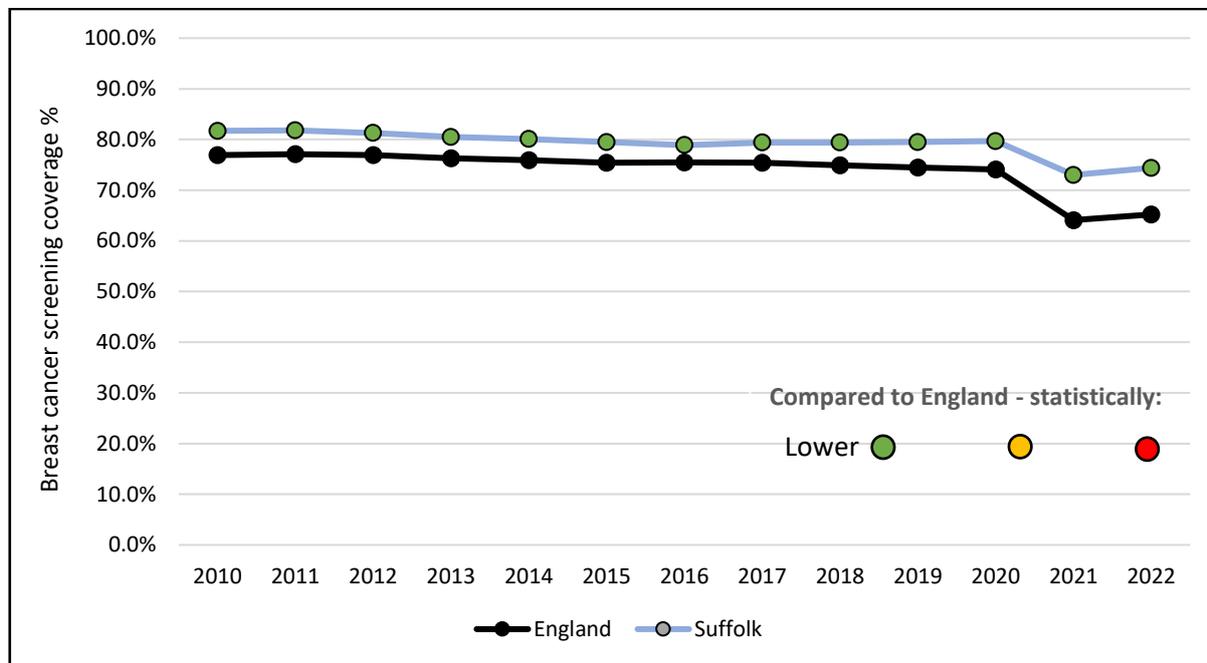
Source: Fingertips Public Health Data

References

1. Breast cancer in women - NHS. Accessed June 22, 2023. https://www.nhs.uk/conditions/breast-cancer/

2. Risk factors for breast cancer | Breast Cancer | Cancer Research UK. Accessed June 22, 2023. https://www.cancerresearchuk.org/about-cancer/breast-cancer/risks-causes/risk-factors

3. Elliss-Brookes L, McPhail S, Ives A, et al. Routes to diagnosis for cancer – determining the patient journey using multiple routine data sets. *British Journal of Cancer 2012 107:8*. 2012;107(8):1220-1226. doi:10.1038/bjc.2012.408

4. Abdel-Rahman M, Stockton D, Rachet B, Hakulinen T, Coleman MP. What if cancer survival in Britain were the same as in Europe: how many deaths are avoidable? *Br J Cancer*. 2009;101(Suppl 2):S115-S124. doi:10.1038/sj.bjc.6605401

5. Thomson CS, Forman D. Cancer survival in England and the influence of early diagnosis: what can we learn from recent EUROCARE results? *British Journal of Cancer 2009 101:2*. 2009;101(2):S102-S109. doi:10.1038/sj.bjc.6605399

6. Prevention and Early Diagnosis. Published online 2016. doi:10.3/JQUERY-UI.MIN.JS