

Announcement of methodological changes to Cancer survival in England publication

Introduction

This document provides updates to the methodology for the cancer survival publications produced by the National Disease Registration Service (NDRS) within NHS England (NHSE). The publications and statistics included are:

- Cancer survival in England

Each section will relate to a change in methodology and include the following sections:

- Background
- Methodological changes
- Timing
- Impact

Adult cancer groups

Background

This publication used to present cancer groups based solely on the International Classification of Diseases version 10.5 for all adult cancers (diagnosed aged 15 to 99 years).

Methodological changes

National Disease Registration Service (NDRS) cancer groups are now used to present survival estimates. The NDRS cancer groups cover a wide range of subtypes, which can require different treatments and have different outcomes. They were developed with input from patients, cancer charities, and clinicians, and will continue to evolve as medical knowledge and practice change. Two levels of grouping are used — “main” and “detailed”—explained further on our [Standard cancer group](#) definitions webpage.

Skin cancer estimates for basal cell carcinoma (BCC), cutaneous squamous cell carcinoma (cSCC) and rare skin cancers are included for the first time. For each of these skin cancers, estimates are based on counts of the first diagnosis per patient (following usual cancer survival methodology).

Timing

The first publication to be affected by this change will be the April 2026 release, which will cover cancers diagnosed between 2018 and 2022.

Impact

The impact of the above changes on the Cancer survival in England publication is expected to be minimal for cancer groups with similar definitions. The NDRS cancer groups allow us to present a wider range of estimates in a greater number of clinically meaningful cancer groups than previously published.

Cohort inclusion criteria

Background

The data used in all these publications come from the National Cancer Registration Dataset. All data undergo quality assurance and control as described in the [Data Collection and Quality Assurance of Administrative Data](#) for Cancer Registrations methodology.

Methodological changes

For previous releases, additional consistency checks were applied to ensure agreement between tumour topography and morphology, following the European Network for Cancer Registries (ENCR) rules. Improvements to the cancer registration process and the implementation of detailed rules for recording diagnoses mean that these checks are no longer applicable for more recently diagnosed tumours. We therefore no longer apply the ENCR topography/morphology checks to our cohorts.

Timing

The first publication to be affected by this change will be the April 2026 release, which will cover cancers diagnosed between 2018 and 2022.

Impact

The impact of the above changes on the Cancer survival in England publication was minimal. ENCR checks are no longer applied as the improvements to the cancer registration process allows more specific topographical codes to be assigned to tumours. For most NDRS main cancer groups, the proportion of cases that would have been excluded by ENCR checks is below 2%. The exceptions are Heart, mediastinum, pleura, other and ill-defined (11.1%), Cancer of unknown primary (9.3%), Kaposi sarcomas (5.1%), and Blood cancers (3.6%). Only a few of the NDRS detailed cancer groups were affected. These were Chordomas (8.7%) and Gastrointestinal stromal sarcomas (GISTs) (2.2%) with all others below 2%. Therefore, our cohort groups are slightly larger.

Updated lifetables for net survival

Background

Lifetables were previously created based on populations and deaths using the Lower layer super output areas (LSOA) from the 2011 census to match to the version of the Index of Multiple Deprivation which most closely aligned with the period of the data.

Methodological changes

Lifetables are now created based on populations and deaths using the LSOAs from the 2021 census. For more information on these updates please see the 'Methodological change notice -Lifetables'.

Timing

The first publication to be affected by this change will be the April 2026 release, which will cover cancers diagnosed between 2018 and 2022.

Impact

The impact of the above changes on the Cancer survival in England publication is that the cancer survival in England publication is now more appropriately based on the most recent whole population data, more accurately reflecting the composition of the country.

Using R statistical software

Background

Previously all analysis was conducted in Stata statistical software.

Methodological changes

We now analyse all data using R statistical software. Net survival is calculated using *rs.surv* from the *relsurv* R package. Overall survival is calculated using *survfit* from the survival R package.

Timing

The first publication to be affected by this change will be the April 2026 release, which will cover cancers diagnosed between 2018 and 2022.

Impact

The impact of the above changes on the Cancer survival in England publication is expected to be minimal. Analysis was simultaneously run in Stata, estimates were very similar. Differences were largely due to rounding differences between Stata and R.

Net survival validation rules

Background

Age-standardisation allows for fair comparisons to be made between populations and over time. The estimates are standardised using the International Cancer Survival Standard (ICSS) weightings with 5 age-groups.

We previously applied validation criteria to our age-standardised net survival estimates. These have been updated to remove one rule and are now also applied to non-standardised net survival estimates. These are:

- a minimum of 10 patients should be alive at the beginning of the survival period being estimated (for example, first year of follow-up for a 1-year estimate, fifth year of follow-up for a 5-year estimate and tenth year of follow up for a 10-year estimate)
- at least two deaths should be registered in the years before or after the duration(s) being estimated
- the standard error of the survival estimates should be lower than 20%

If any of these rules are not met, the 5 age-groupings are reduced to 4, with a single pair of adjacent age-groups being combined, and the same criteria are then performed. If for the combined groups the criteria are still not met, then the estimate is suppressed and displayed as missing in the data tables.

Methodological changes

We have removed the following rule from the validation criteria

- the level of the survival estimates should not increase with duration (for example, the survival estimated at five years following diagnosis should be lower than the survival estimated at one year following diagnosis)

This rule is being removed to display more accurate and usable estimates of survival for a greater number of cancer groups and survival durations. This is only relevant for net survival, as net survival can increase with duration from diagnosis as it is a measure that compares the mortality experience to the general population. Therefore, in some limited circumstances, competing risks will be experienced more in the general population compared to the specific cancer population for which survival is being estimated.

Timing

The first publication to be affected by this change will be the April 2026 release, which will cover cancers diagnosed between 2018 and 2022.

Impact

The impact of the above changes on the Cancer survival in England publication is that a greater number of estimates are now available.

Overall impact of all changes

The results reported for publications published from April 2026 are not directly comparable with previous iterations of this publication. Cancer survival estimates will be recalculated using the updated methods for cancers diagnosed from 2013 onwards; the intended publication date will be in 2026. This will allow trends to be reported.

Future plans

The lifetables will be updated in 2026 to use the newly published Index of Multiple Deprivation 2025.

Further information

Questions and feedback on the publication are welcomed and should be sent to NDRSenquires@nhs.net or alternatively call 0300 303 5678.