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CANCER INCIDENCE AND SURVIVAL STATISTICS FOR NORTHERN IRELAND 1993-2021

The Queen's University Northern Ireland Cancer Registry (NICR) today (Tuesday 21st May 2024) released the official statistics on cancer diagnosed in Northern Ireland during 1993-2021.

This release provides details of the number of cancer cases diagnosed each year along with incidence rates over time and estimates of patient survival.

Key facts and figures are presented below.

Cancer incidence

- There were 10,061 (5,120 male, 4,941 female) patients diagnosed with cancer each year during 2017-2021.
- This excludes the frequently diagnosed but easily treated non-melanoma skin cancer (NMSC). There were on average 3,759 cases of NMSC diagnosed each year.
- The most common cancer types diagnosed during 2017-2021 were:
 - Among men: Prostate cancer (1,310 cases per year, 26% of all male cancers ex NMSC), lung cancer (705 cases per year, 14%) and bowel cancer (682 cases per year, 13%);
 - Among women: Breast cancer (1,490 cases per year, 30% of all female cancers ex NMSC), lung cancer (649 cases per year, 13%) and bowel cancer (534 cases per year, 11%).
- Cancer risk was strongly related to age with 34% of cases occurring among people aged 75 years and over. Incidence rates were greatest for those aged 85-89 years.
- Despite this younger people can still get cancer. On average 50 children (aged 0-14) were diagnosed with cancer each year.
- The odds of developing cancer by age 85 was 1 in 2.3 (2.1 for men, 2.5 for women).
- The average number of cancer cases (ex. NMSC) per year increased by 8% from 9,311 cases in 2012-2016 to 10,061 cases in 2017-2021. These increases are largely due to the ageing population. The percentage increase was greater for men (+10%) than women (+6%).

- Cancer types with increases greater than 20% in the average number of cases per year between 2012-2016 and 2017-2021 were:
 - For men: Thyroid cancer (84% increase), myeloma (32% increase) and liver cancer (22% increase);
 - For women: Thyroid cancer (77% increase), gallbladder and other biliary cancer (25% increase) and head and neck cancer (20% increase).
- Incidence rates (age-standardised) of cancer in 2017-2021 were 7% higher among people living within the Belfast Health and Social Care Trust area compared to the Northern Ireland average. Incidence rates were lower than average among people living in the South-Eastern and Northern Trust areas.
- Cancer incidence rates were 13% higher in the most deprived areas compared to the Northern Ireland average and were 5% lower than average in the least deprived areas.
- The relationship with deprivation varies by cancer type with incidence of lung, head & neck, oesophageal, stomach, liver, gallbladder (including other biliary) and cervical cancers higher than average in the most deprived areas. Incidence of melanoma and prostate cancer were higher than average in the least deprived areas.
- During 2017-2021 the proportion of patients diagnosed with late stage disease (stage IV) ranged from 3% for melanoma patients to 50% for pancreatic cancer patients.
- For the four most common cancer types the proportion of patients diagnosed at stage IV during 2017-2021 was 44% for lung cancer, 22% for bowel cancer, 18% for prostate cancer and 5% for female breast cancer.

Cancer survival

- Among patients diagnosed with cancer during 2012-2016, one-year net survival after diagnosis was 73%, while five-year net survival was 57%. However, one in five (19%) patients died within 6 months of diagnosis.
- Five-year net survival for patients diagnosed in 2012-2016 for the most common cancers was as follows:
 - Female breast cancer = 83%;
 - Male bowel cancer = 62%, Female bowel cancer = 60%;
 - Prostate cancer = 86%;
 - Male lung cancer = 13%, Female lung cancer = 17%.

- Five-year net survival was highest for testicular cancer (97%) and melanoma (92%), but remained poor for gallbladder cancer (16%), liver cancer (13%), unknown primary cancer (13%) and pancreatic cancer (8%).
- Cancer survival improved significantly between 2007-2011 and 2012-2016, with five-year survival increasing from 55% to 57%.
- There were significant improvements in five-year survival between 2007-2011 and 2012-2016 for kidney cancer (58% to 69%), lung cancer (11% to 15%), mesothelioma (2% to 8%) and male colorectal cancer (58% to 62%). No cancer type demonstrated significant reductions in cancer survival during his period.
- Cancer survival varies considerably depending upon age at diagnosis. Five-year survival for patients diagnosed in 2012-2016 was as follows:
 - Colorectal cancer: 67% for 15-54 year olds, and 48% for 75+ year olds,
 - Female breast cancer: 90% for 15-54 year olds, and 69% for 75+ year olds,
 - Lung cancer: 24% for 15-54 year olds, and 8% for 75+ year olds,
 - Prostate cancer: 94% for 15-54 year olds, and 71% for 75+ year olds.
- However, stage at diagnosis remains the biggest factor in cancer survival. The contrast in five-year survival between early and late stage disease for patients diagnosed in 2012-2016 was as follows:
 - 8% for late stage colorectal cancer, compared to 94% for early stage,
 - 20% for late stage breast cancer, compared to 97% for early stage,
 - 2% for late stage lung cancer, compared to 52% for early stage,
 - 46% for late stage prostate cancer, compared to 97% for early stage.
- At the end of 2021, there were 71,412 people (Males: 32,037; Females: 39,375) living with cancer who had been diagnosed with the disease during 1997-2021. Of these 11% had been diagnosed in the previous year and 68% in the previous ten years. 34% of cancer survivors were aged 75 and over at the end of 2021.
- The most prevalent types of cancer were prostate cancer with 12,056 men living with the disease, and breast cancer with 17,135 women living with the disease.

Recent Trends in cancer incidence and survival

- Due to the COVID-19 pandemic, which began in 2020, further reports have been compiled detailing how incidence and survival from cancer has changed between April-December 2018-2019, 2020 and 2021 thereby providing an overview of the impact of the pandemic on cancer patients and cancer services in general.
- Overall compared to April-December 2018-2019, in 2021 the number of cases of cancer (ex NMSC) diagnosed increased by 4% from 7,748 cases per year to 8,055. There was:
 - a 27% increase in bone cancer cases,
 - a 20% increase in bladder cancer cases,
 - a 17% increase in both colorectal and oesophageal cancer cases,
 - a 13% increase in stomach cancer cases and
 - a 9% increase in female breast cancer cases.
- However some sites did not see an increase in 2021 cases compared to April-December 2018-2019. There was:
 - an 18% decrease in testicular cancer cases,
 - a 14% decrease in leukaemia cases,
 - a 13% decrease in head and neck cancer cases,
 - an 12% decrease in kidney cancer cases and
 - an 11% decrease in cervical cancer cases.
- Despite differences in recovery between cancer sites, overall there was considerable recovery in the number of cases detected in 2021 (8,055 cases) compared to the situation in 2020 (6,949 cases) for the April- December period.
- There was a reduction in the use of surgery to treat head and neck cancer in an inpatient setting, which decreased between 2018-2019 and 2020 from 47% to 40%, and remaining below 2018-2019 levels at 39% in 2021.
- There was a decrease in the proportion of Non-Hodgkin's lymphoma cases receiving systemic therapy from 65% in 2018-2019 to 58% in 2021.
- There was a reduction in the proportion of oral cancer cases receiving surgery from 49% in 2018-2019 to 41% 2020 and 37% in 2021.
- In addition there was reduction in the use of radiotherapy to treat bladder cancer, which decreased from 24% in 2018-2019 to 22% in 2020 and 14% in 2021.

- There was an increase in the proportion of prostate cancer cases who did not receive any treatment (including surgery, radiotherapy, systemic therapy or hormone therapy), from 26% in 2018-2019 to 30% in 2020 and 33% in 2021.
- For lung cancer the increase in later stage diagnosis identified in 2020 remained in 2021, with 48% of cases diagnosed at stage IV in 2021 compared to 47% in 2020 and 42% in 2018-2019. This is likely the cause of a reduced proportion of lung cancer patients receiving surgery (13% in 2018-19, 8% in 2020, 10% in 2021) and a reduction in one-year survival (41% in 2018-19, 35% in 2020, 37% in 2021).
- There were reductions in the use of surgery to treat melanoma within a hospital inpatient setting, which decreased from 77% in 2018-2019 to 57% in 2020 and 60% in 2021.
- No other cancer type demonstrated increases in late-stage diagnosis or reductions in patient survival between 2018-19 and 2021.

NOTES TO EDITORS:

1. All the statistics in this release are available at <http://www.qub.ac.uk/research-centres/nicr/CancerInformation/official-statistics/>
2. Legislation designating the Northern Ireland Cancer Registry (NICR) as an official producer of statistics came into place on 1st April 2012. Today's release of data adheres to the code of practice referenced in this legislation.
3. About the data:
 - a. New cases of cancer are registered from pathology reports, hospital administration records, and death certificates. GP or hospital charts may also be accessed if the above sources do not yield a reliable registration.
 - b. Registrations are validated and quality-checked according to internationally recognised standards.
 - c. Released statistics are not patient identifiable.
4. Incidence refers to the number of new cases of cancer diagnosed in a particular period of time and population. Prevalence is the number of people diagnosed with cancer in the past twenty-five years who were still alive at the end of 2021.
5. Incidence rates are defined as the number of cases divided by the population that the cases came from. It is usually expressed as cases per 100,000 people. Age-standardised rates, using the 2013 European Standard Population, are used to detect trends over time, or differences between regions, that are not related to differences in the size or age of the population.
6. Five-year survival refers to the proportion of people diagnosed with a cancer who are still alive five years later. Age-standardised net survival used here is a survival statistic that has been adjusted for background mortality and age profile between periods. Net survival is the theoretical survival of patients if they could die only from the cancer in question.
7. The data in this release was produced by:
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