

Short term survival for teenagers and young adults: 2005 to 2009

NCIN Data Briefing

Most recent 30-day mortality and one-year relative survival for teenagers and young adults with cancer

Methods

Data for patients in England diagnosed with cancer between 2005 and 2009, aged 15 to 24 years, were extracted from the National Cancer Data Repository. We calculated the percentage of patients who died within 30 days of the date of diagnosis and relative survival at one year. Results are presented for 12 diagnostic groups that have at least 50 new cases diagnosed per year and at least one death per year within the first year of diagnosis. These diagnostic groups account for approximately 80% of all cases and deaths within one year among TYA cancer patients.

Results

30 Day mortality

Thirty-day mortality was highest among acute myeloid leukaemia (AML) patients at 6.4% with an average of 3 deaths per year. Thirty-day mortality was lower for other diagnostic groups ranging from 3.8% for non-Hodgkin lymphoma (NHL) and 3.4% for acute lymphoblastic leukaemia (ALL) to just 0.2% for bone tumour patients with less than 1 death per year (Figure 1).

No deaths were observed within 30 days of diagnosis for those patients with Hodgkin lymphoma (HL), melanoma of the skin, testicular germ cell tumours (GCT), carcinoma of the cervix and carcinoma of the ovary. There was no significant difference in 30 day mortality by age group for any of the diagnostic groups examined. For AML, 15-24 year olds had higher 30-day mortality than 0-14 year olds (6.4% vs 4.7%: $p=0.391$) and lower than 25-49 year olds (6.4% vs 9.4%: $p=0.122$) but these differences were not statistically significant. Care should be taken in interpreting these values, as many are based on small number of deaths e.g. 4 for colorectal carcinomas.

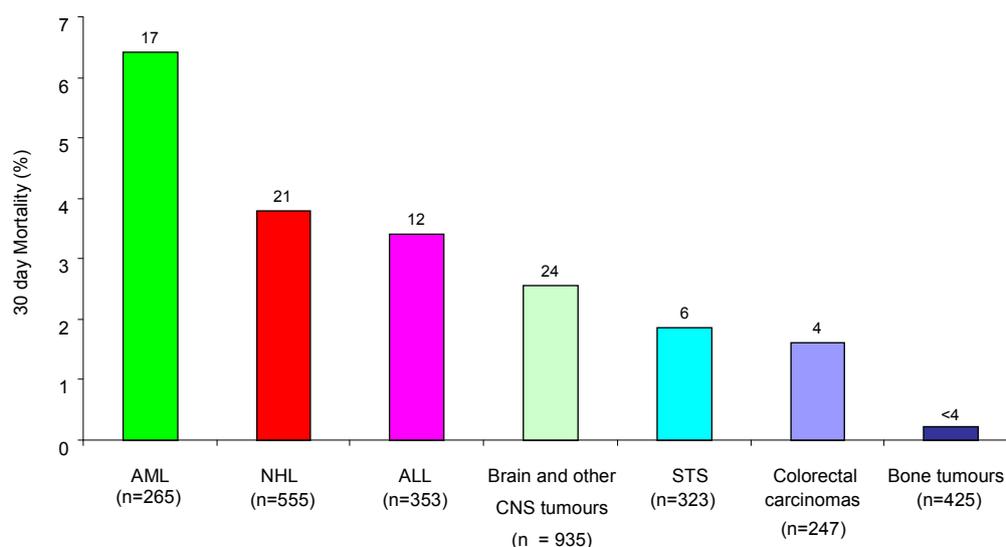


Figure 1. Percentage deaths within 30 days of diagnosis among 15 to 24 year olds with cancer in England, 2005 to 2009, by diagnosis. Numbers above the bars are the total number of deaths within 30 days. *Brain and other CNS tumours include borderline and benign neoplasms.

KEY MESSAGE:

30 day mortality and one year survival vary considerably by type of cancer in those aged 15-24 years. Patients with acute myeloid leukaemia have the highest proportion of early deaths, with 6.4% dying within 30 days of diagnosis and 77% surviving the first year.

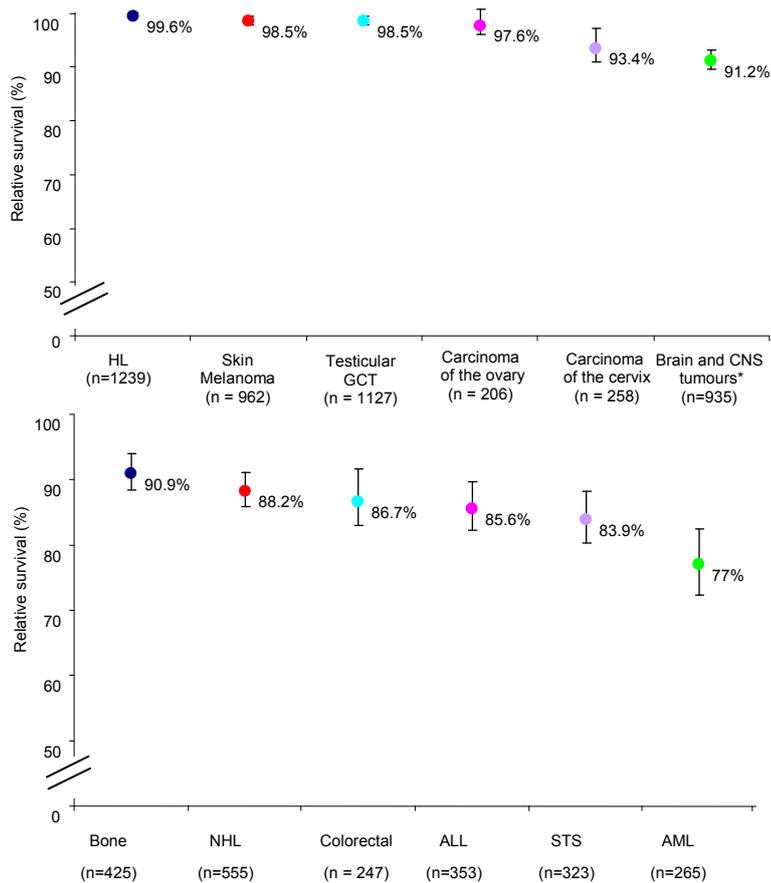


Figure 2. One-year relative survival among 15 to 24 year olds with cancer in England by diagnostic group. Numbers in parentheses along the x-axis are the number of cases in each diagnostic group. Error bars represent the 95% confidence limits. *Brain and CNS tumours include borderline and benign neoplasms.

Summary

Thirty-day mortality was 0% and one-year survival was above 97% for TYA patients with Hodgkin lymphoma, melanoma of skin, testicular germ cell tumours and carcinoma of the ovary. The haematological cancers AML, NHL and ALL had the highest 30-day mortality and among the lowest one-year survival. Patients with soft tissue sarcomas had among the lowest one-year survival but relatively low 30-day mortality. Among the carcinoma diagnoses analysed 30-day mortality was higher and one year survival was lower for colorectal carcinomas than for ovarian or cervical carcinomas. Further work is currently being done to understand the reasons for deaths shortly after diagnosis focusing initially on AML and ALL.

FIND OUT MORE:

North West Cancer Intelligence Service (NWCIS) is the lead Cancer Registry for cancer in teenagers and young adults. Other information about TYA cancer and this data briefing can be found at <http://www.nwcis.nhs.uk>.

Other useful resources within the NCIN partnership:

Cancer Research UK CancerStats – Key facts and detailed statistics for health professionals

<http://info.cancerresearchuk.org/cancerstats/>

The National Cancer Intelligence Network is a UK-wide initiative, working to drive improvements in standards of cancer care and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research. Sitting within the National Cancer Research Institute (NCRI), the NCIN works closely with cancer services in England, Scotland, Wales and Northern Ireland. In England, the NCIN is part of the National Cancer Programme.

One-year survival

In a similar pattern to 30-day mortality, survival at one year was highest among TYA patients with Hodgkin lymphoma (HL), melanoma of the skin, testicular germ cell tumours (GCT) and carcinoma of the ovary (Figure 2). One year survival was slightly lower (90%-95%) for TYA patients with carcinomas of the cervix, brain and other CNS tumours, and bone tumours as well as for patients with non-Hodgkin lymphoma (NHL), colorectal carcinomas, acute lymphoblastic leukaemia (ALL) and soft tissue sarcomas (STS) (80% - 90%). The lowest one year survival was observed among acute myeloid leukaemia (AML) patients (<80%), similar to the results for 30-day mortality.