



Trends in five-year survival for teenagers and young adults with cancer in the UK

National Cancer Intelligence Network Data Briefing

Method

We obtained details from the National Cancer Data Repository on all patients diagnosed with cancer from 1992 to 2006 at ages 15-24 years in the UK. We calculated five-year relative survival for those diagnosed in 1992-96, 1997-2001 and 2002-06 for all cancers combined and for the eighteen most frequent types of cancer in teenagers and young adults (TYA), which represent 92% of all cancers in TYA.

Results

Five-year survival for all cancers combined increased significantly between 1992-96 and 2002-06 from 75.7% to 82.2% ($p < 0.001$). Improvement in survival was statistically significant for twelve of the eighteen cancer types analysed.

Differences in survival between 1992-96 to 2002-06 in descending order of absolute percentage increase are as follows: acute lymphoblastic leukaemia (ALL) (17.3%, p -value < 0.001), acute myeloid leukaemia (AML) (16.7%, p -value < 0.001), carcinoma of breast (14.6%, p -value = 0.022), Ewing sarcoma (12.8%, p -value = 0.005), non-Hodgkin lymphoma (12.1%, p -value < 0.001), colorectal carcinoma (10.3%, p -value = 0.033), non-rhabdomyosarcoma soft tissue sarcoma (NRSTS) (10.1%, p = 0.009), cervical carcinoma (8.3%, p = 0.022), melanoma (5.0%, $p < 0.001$), tumours of the brain and central nervous system (CNS) (3.9%, p = 0.013), Hodgkin lymphoma (3.8%, $p < 0.001$) and testicular germ cell tumours (GCT) (2.9%, p = 0.002).

Survival for rhabdomyosarcoma and osteosarcoma increased from 1992-96 to 2002-06 by 7.8% and 3.4% respectively, but did not reach statistical significance. For four types of cancer – non-gonadal GCT, thyroid carcinoma, ovarian GCT and ovarian carcinoma, there was little change in survival from 1992-96 to 2002-06.

Key messages

Five-year survival for teenagers and young adults with cancer in the UK has improved considerably and is now 82% for all cancers combined, though there are still groups of patients with relatively poor outcomes.

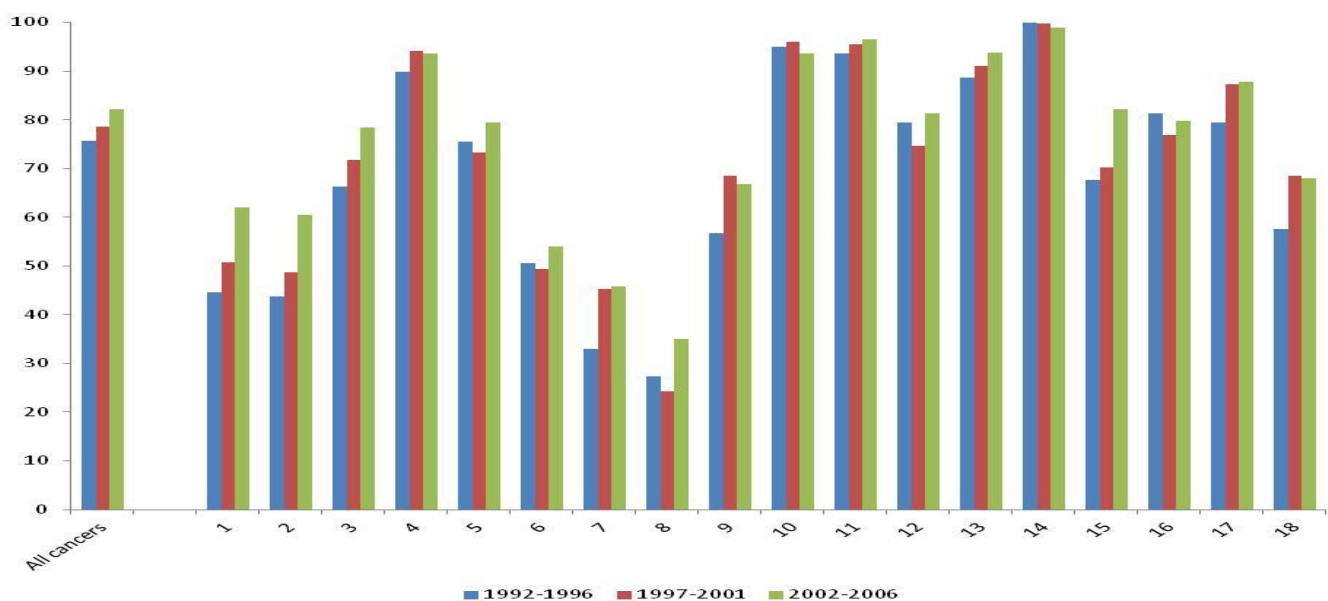


Figure 1: Five-year relative survival rates for all cancers and 18 cancer types among 15-24 year olds in UK for 1992-96 to 2002-06.

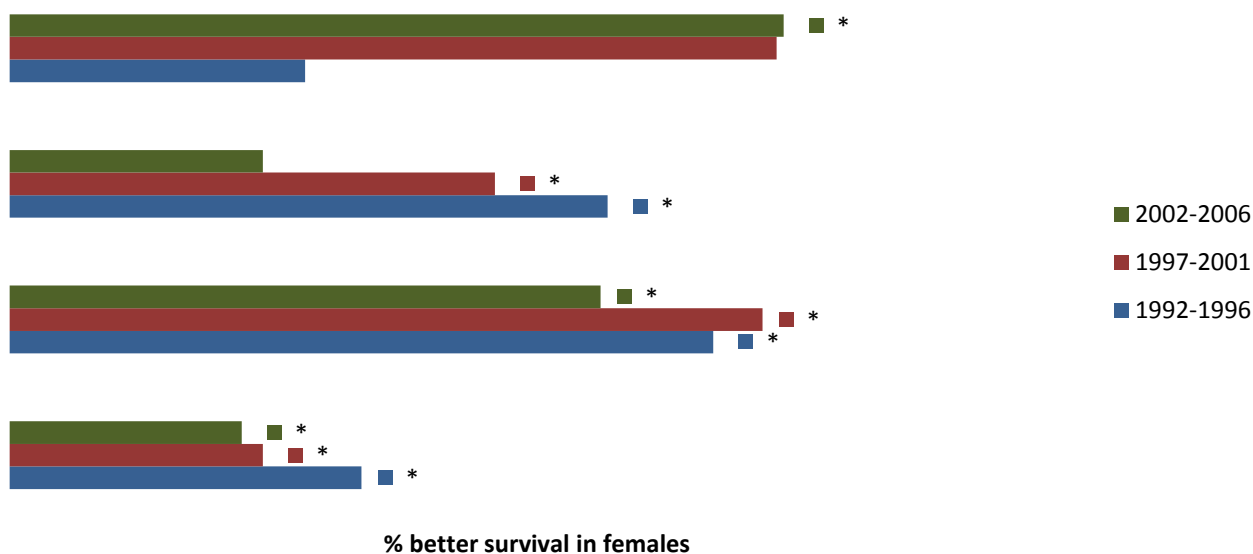


Figure 2: Differences in five-year relative survival rates between females and males for cancers with statistically significant gender differences. An * represents a statistically significant difference.

Females had better survival than males for all cancers combined, though this decreased from 4.7% in 1992-96 to 3.3% in 2002-06. Females with melanoma had better survival throughout the study period. The gender gap for patients with CNS tumours decreased considerably over time and was not significant in 2002-2006. For NRSTS, the gap increased from 4.2% in 1992-96 to 11% in 2002-06 and became statistically significant.

Summary

- five-year survival for almost all types of cancer in TYA has improved considerably from 1992-96 to 2002-06 and is now 82% for all cancers combined
- survival rates for certain types of cancer improved little if at all over the study period, though in some instances such as thyroid carcinoma there was little or no room for improvement
- survival is still low for certain types of cancer such as rhabdomyosarcoma, Ewing sarcoma and osteosarcoma
- males with some types of cancer such as melanoma and NRSTS have lower survival than females
- previous work published by NCIN¹ shows that TYA patients with soft tissue sarcomas and bone tumours have lower survival than those aged 0-14 years and 25-49 years

Further work is indicated to understand the remaining gender differences and to quantify the roles of the level of specialist care, routes to diagnosis, treatments given and participation in clinical trials in improving survival.

Reference

1. Survival in teenagers and young adults in the UK. C O'Hara, A Moran (NWCIS) and the TYA advisory group, available at <http://www.ncin.org.uk/publications/>