

INTRODUCTION

Early deaths can be used as a proxy measure for patients presenting with late stage disease and deaths in the 30 days following an operation is used to measure the quality of surgery. We examined the pattern of deaths in the year following diagnosis in those aged 15-24 years.

METHODS

We included all patients diagnosed with cancer at ages 15-24 years in England during 2005-09. We calculated the percentage of patients who died 30 days, 90 days and one year after diagnosis for 16 types of cancer common in this age group, using the classification scheme by Birch *et al*⁽¹⁾. One-year relative survival was calculated within the STATA str programme using national life tables⁽²⁾.

RESULTS

- 581(6.9%) of TYA patients died within a year of diagnosis.
- Deaths at one year ranged from 23.0% for Acute Myeloid Leukaemia (AML) to 0.5% for Hodgkin Lymphoma.
- AML had the highest proportion of deaths in the first 30 and 90 days at 6.4% and 9.8% respectively.
- More than 10% of patients with acute lymphoblastic leukaemia (ALL), Non-Hodgkin lymphoma (NHL), colorectal carcinoma (CRC) and soft tissue sarcoma (STS) died in the first year.
- One-year relative survival dropped markedly with increasing age for ALL and moderately for AML.
- 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.
- One-year survival for female TYA patients with ALL was 10% lower than for males ($p = 0.013$). For melanomas, one year survival was higher for females compared to males ($p=0.02$).

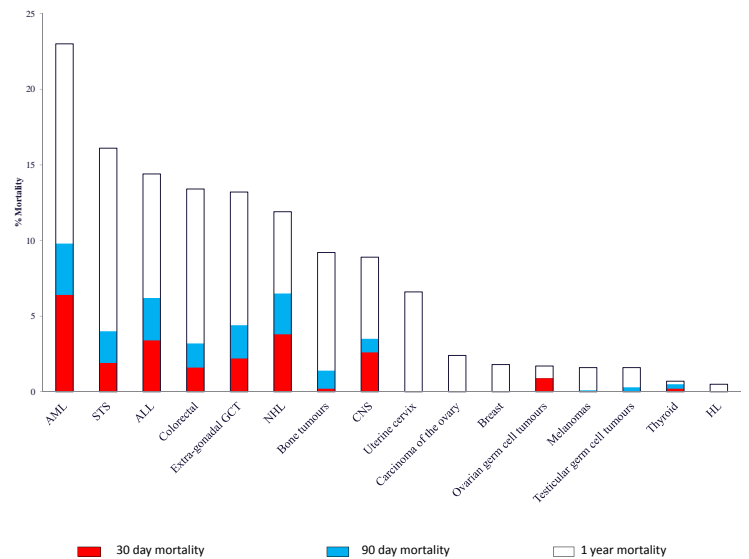
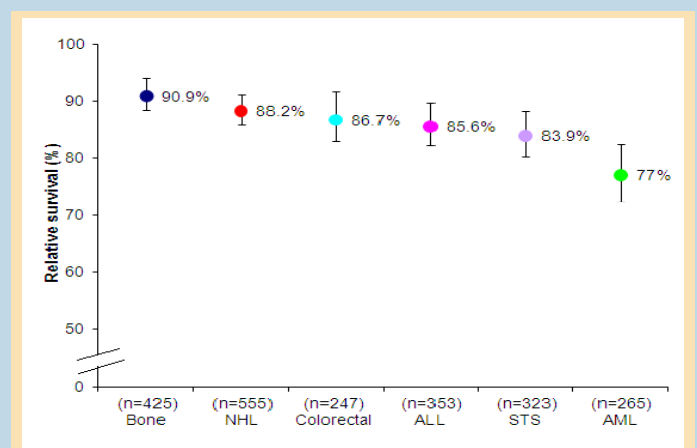
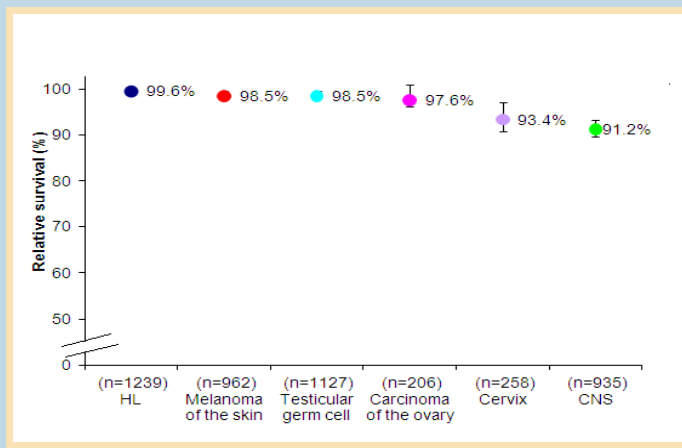


Figure 1: 30 day, 90 day and one year percentage mortality for individuals aged 15-24 diagnosed with cancer in England, 2005-2009, by diagnostic group.



Figures 2 and 3. 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.

DISCUSSION

The relatively high percentage of patients with AML, ALL and NHL who die in the first few months suggests high rates of complications of, and non-response to, treatment. We are exploring whether a proportion of such deaths in ALL and AML are avoidable. When available, we will compare by principal treatment centre the stage distribution for STS, CRC, bone tumours and cervical carcinoma.

REFERENCES

- (1) Birch JM, Alston RD, Kelsey AM, Quinn MJ, Babb P, McNally RJ. (2002). Classification and incidence of cancers in adolescents and young adults 1979-1997. *Br J Cancer*; 87:1267-74.
- (2) Dickman PW, Sloggett A, Hills M, Hakulinen T; Regression models for relative survival. *Statistics in Medicine* 2004; 23:51-64