



Clinical trial participation and outcomes in teenagers and young adults in England with acute lymphoblastic leukaemia

National Cancer Intelligence Network Data Briefing

Background

For the period 2004–2010 the first line trial for young patients with acute lymphoblastic leukaemia (ALL) in the UK was UKALL2003. The upper age limit for the trial was the 18th birthday from 2004 to 2007, the 20th from 2007 to 2008 and 25th from 2008 onwards. There were no disease-specific factors that would make patients ineligible for the trial.

Methods

Details of patients recruited into the UKALL2003 clinical trial were matched against the National Cancer Data Repository (NCDR) for patients diagnosed with ALL at age 15–24 years in 2004–10 in England. The English National Cancer Online Registration Environment (EnCORE) was interrogated for details of patients on the trial database not matched on the NCDR.

The study population was the 511 patients diagnosed with ALL aged 15–24 years in England in 2004–10 on NCDR or EnCORE. We calculated the percentage of the study population that were recruited onto UKALL2003, one and two-year relative survival, and the number and percentage of deaths by whether in the trial for each quarter over the two years following diagnosis.

Results

Table 1: Number and percentage of study population recruited onto UKALL2003 by year of diagnosis and age group

Year of diagnoses	15–17 years		18–19 years		20–24 years	
	Proportion	percentage in trial	Proportion	percentage in trial	Proportion	percentage in trial
2004	19/34	55.9%	0/6	0.0%	0/25	0.0%
2005	26/45	57.8%	0/20	0.0%	0/23	0.0%
2006	18/29	62.1%	9/26	34.6%	0/19	0.0%
2007	20/32	62.5%	8/14	57.1%	4/32	12.5%
2008	23/30	76.7%	16/18	88.9%	8/23	34.8%
2009	24/31	77.4%	13/20	65.0%	10/26	38.5%
2010	19/25	76.0%	8/11	72.7%	14/22	63.6%
2004–10	149/226	65.9%	54/115	47.0%	36/170	21.2%
2008–10	66/86	76.7%	37/49	75.5%	32/71	45.1%

Key messages

- Many patients were not recruited onto UKALL2003, especially those aged 20 to 24.
- One-year and two-year survival were significantly better for those in the trial.
- 8.0% of those not in trial died within three months of diagnosis

The proportion of patients aged 15–17 in the trial increased from 59% in 2004–07 to 77% in 2008–10 (Table1). In the latter period, the proportion of patients aged 18–19 in the trial was similar at 76%, but considerably lower at 45% for 20–24 year olds.

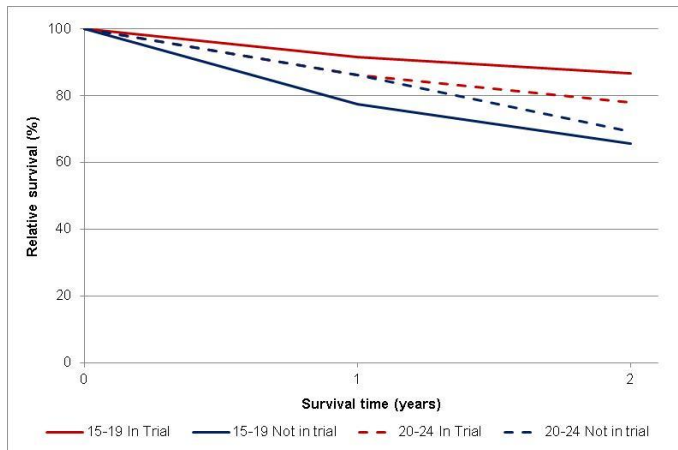


Figure 1: One and two-year survival for 15–19 and 20–24 year olds with ALL diagnosed in 2004–10 by trial status

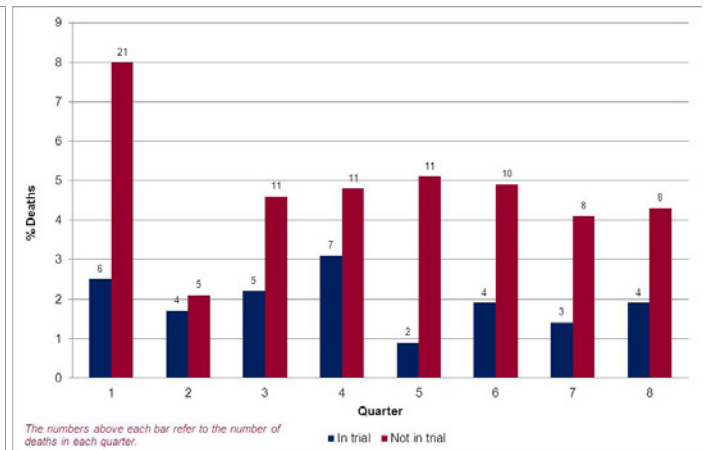


Figure 2: Number and % of deaths in 15–24 year olds with ALL by trial status for each quarter in the two years following

One-year survival for 15–24 year olds was 90.8% (95% CI: 86.4-93.9) for those in the trial compared with 81.9% (95% CI: 76.6-86.0) for those not in the trial. Two-year survival was 85.4% (95% CI: 80.3-89.3) in trial and 67.5% (95% CI: 61.5-72.8) not in trial. For patients aged 15–19 those in the trial had 14.1% better one-year survival in absolute terms; in contrast to identical rates in those aged 20–24 (Figure 1). At two years, the difference in survival was 21.1% for 15–19 year olds and 8.6% for 20–24 year olds, though the latter was not statistically significant.

32.2% of patients not in the trial died within two years of diagnosis compared with 14.6% of those in the trial. The biggest difference was in the three months following diagnosis during which 21 (8.0%) patients not in the trial died compared with 6 (2.5%) in the trial (Figure 2).

Summary

- two-thirds of patients aged 15–24 diagnosed with ALL in 2008-10 were recruited onto UKALL2003; three-quarters of 15–19 year olds but less than half of those aged 20–24
- one-year survival for 15–24 year olds was 90.8% for those recruited to the trial compared with 81.5% for those not recruited. Two-year survival was 85.4% for those recruited and 66.9% for those not recruited. These differences were statistically significant.
- 21 (8.0%) patients not in the trial died in the three months after diagnosis compared with 6 (2.5%) patients in the trial.

FIND OUT MORE:

The PHE Knowledge and Intelligence Team North West is the lead KIT for cancer in teenagers and young adults (TYA).

Other useful resources within the NCIN partnership:

What cancer statistics are available and where can I find them?

<http://www.ncin.org.uk/publications/reports/>

Public Health England’s National Cancer Intelligence Network (NCIN) is a UK-wide initiative, working to drive improvements in cancer awareness, prevention, diagnosis and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research.