LETTER TO THE EDITOR

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Comment on 'cancer incidence in the United Kingdom: projections to the year 2030'

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We agree with Mistry *et al.* (2011) that quantification of the future burden of cancer incidence is vital in health-care planning and that where risk factors are not well understood (as is the case for the majority of haematological cancers) projections from observed trends provide the best available evidence to achieve this. However, we are concerned that the projections they have recently published for haematological cancers, and which are widely disseminated via the Cancer Research UK CancerStats website (Cancer Research UK, 2012), are not credible and are likely to be based on incomplete data.

In their paper, based on cancer registration data for the UK between 1975–2007, the authors project a small increase in the age-standardised incidence of non-Hodgkin lymphoma (NHL) between 2007 and 2030 in males and a decline in females (+2% and −15%, respectively) and reductions in incidence for both myeloma (males −14%, females −15%) and leukaemia (males −22%, females −23%). They also present observed age-specific incidence rates for myeloma and leukaemia that appear to be in sharp decline in the last few years of their data series.

In the absence of any trends in risk factors that could lead to such declines and aware that diagnostic and clinical practice is if anything leading to increased identification of leukaemia and myeloma, we found these projections surprising and sought to replicate them.

We accessed publically available data on cancer registrations in England using the Cancer Information Service (CIS) for the time period 1984–2009 (National Cancer Intelligence Network, 2012), and ONS population projections for England to 2035 (Office for National Statistics, 2011). We then applied the age-period-cohort model used by Mistry *et al.* (2011) using the *apcspline* command in Stata v.11 to project age-standardised incidence rates to 2030 for NHL (ICD10 C82–85), myeloma (ICD10 C90) and leukaemia (ICD10 C91–95). To enable comparison with the published projections we used the power-5 link function (Møller *et al.*, 2002). Incidence rates were age-standardised using the European standard population and the percentage change between the observed rates in 2007 and projected rates for 2030 was calculated.

Table 1. Age-standardised incidence for haematological cancers in 2007 and projected to 2030

	Age-standardised rate (per 100 000)		
Type	**2007**	**2030**	**Change 2007–2030**
Non-Hodgkin lymphoma			
Male	17.3	19.7	+14%
Female	12.4	14.5	+17%
Myeloma			
Male	6.4	9.7	+50%
Female	4.2	5.7	+37%
Leukaemia			
Male	12.5	14.9	+20%
Female	7.5	8.9	+19%

Projections based on the CIS data set showed very different results from those published, with increasing age-standardised rates for all three forms of haematological cancers in both sexes (see Table 1). We did not observe any downward trends in age-specific incidence rates for myeloma or leukaemia in the English CIS data and we believe that the published projections may have been based on incomplete registration data for the latter period of their time series. Although we were not fully replicating their analyses and used a shorter time series and a sub-population of the UK, we do not believe this could explain the differences observed.

Haematological cancers present particular problems for the accurate estimation of incidence through routine cancer registration systems. A variety of factors may make past trends a relatively poor predictor of future incidence, so our projections should be viewed

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with caution. However, we believe they represent a more realistic estimate of the likely trends in incidence over the next two decades.

It will be important to resolve the reasons for differences between routine cancer registration data sets under-pinning these projections for haematological cancers and also to establish if there is any impact on other disease-specific projections.

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