

Bladder Cancer
Incidence, Mortality and Survival Rates in
the United Kingdom
August 2013

Prepared by: Public Health England Knowledge and Intelligence Team (South West).
For queries relating to this document, please contact: +44 (0) 11 7970 6474.
Published August 2013

The National Cancer Intelligence Network (NCIN) is a UK-wide partnership operated by Public Health England. The NCIN coordinates and develops analysis and intelligence to drive improvements in prevention, standards of cancer care and clinical outcomes for cancer patients.

This summary factsheet presents data for ICD-10 C67 “Malignant neoplasm of bladder”. The most recent incidence and mortality data have been used. Rates are standardised to the 1976 European Standard Population. Where appropriate, rates are per 100,000 sex-specific population.

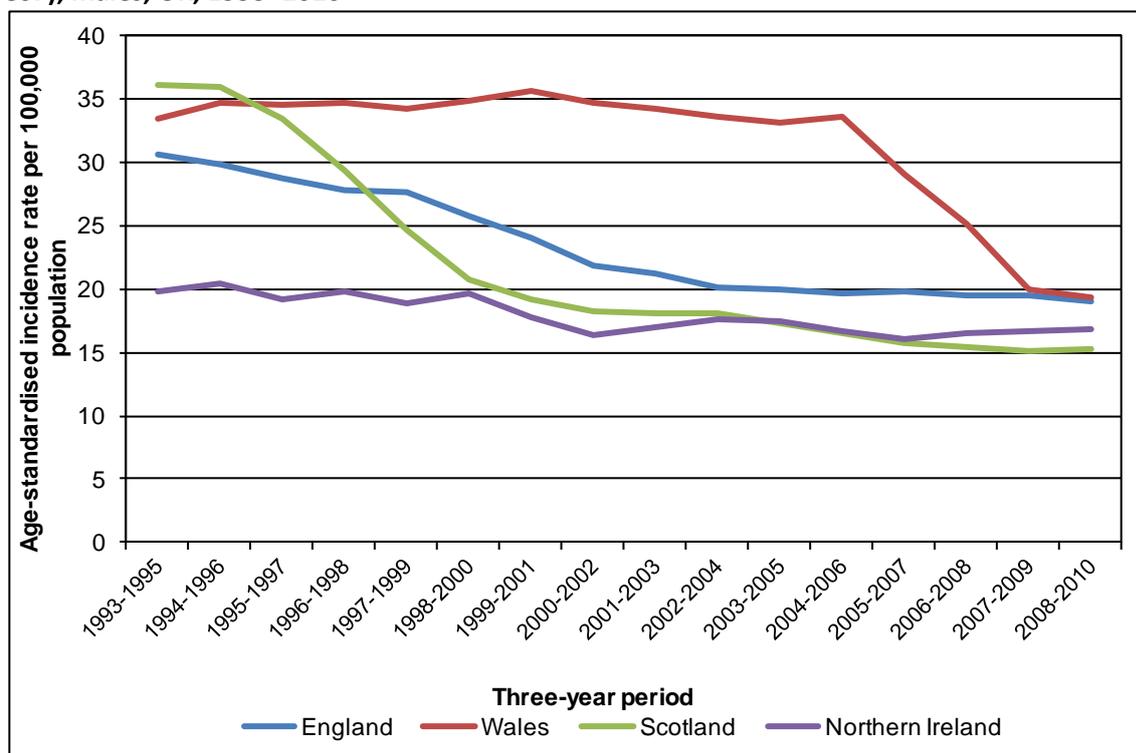
Incidence rates

The age-standardised incidence rate of bladder cancer is significantly higher in males than females for all four UK countries over all time periods ($p < 0.001$; see Fig. 1 and Fig. 2). In the most recent period (2008-10), the rate in males (15.2 to 19.4 per 100,000 in the different countries) was over three times higher than the rate in females (5.1 to 5.8 per 100,000).

The age-standardised incidence rate of bladder cancer was lower in 2008-10 than in 1993-95 in all cases except for females in Northern Ireland, who always had the lowest rate (see Fig.1 and Fig. 2). Reasons for this change include changes in the way bladder tumours are classified (with in situ tumours or those of uncertain behaviour being reclassified with ‘D’ codes), and also a decrease in smoking and exposure to environmental carcinogens, such as those involved in the chemical, rubber, transport, and dye industries (Cancer Research UK).

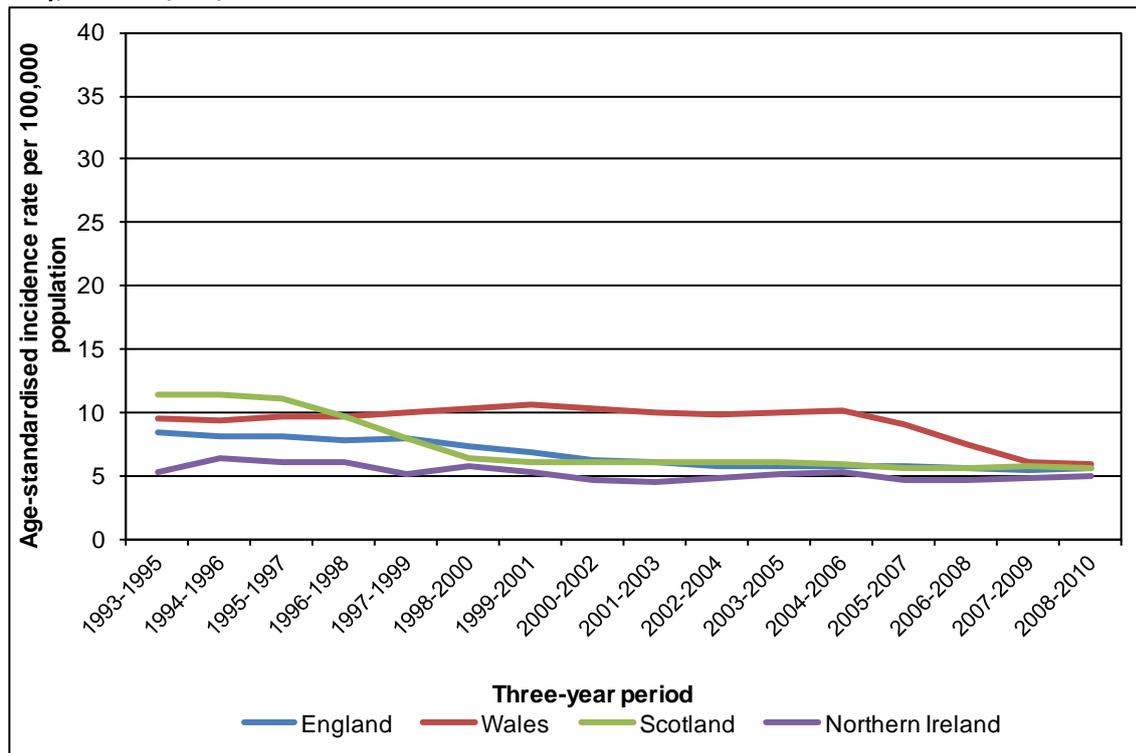
It is important to note that in Northern Ireland tumours of uncertain behaviour have never been counted in the bladder cancer total and hence the large decrease in rates is not observed.

Figure 1: Age-standardised incidence rates (per 100,000 population) of bladder cancer (ICD-10 C67), males, UK, 1993–2010



Source: Celtic National Cancer Data Repository

Figure 2: Age-standardised incidence rates (per 100,000 population) of bladder cancer (ICD-10 C67), females, UK, 1993–2010



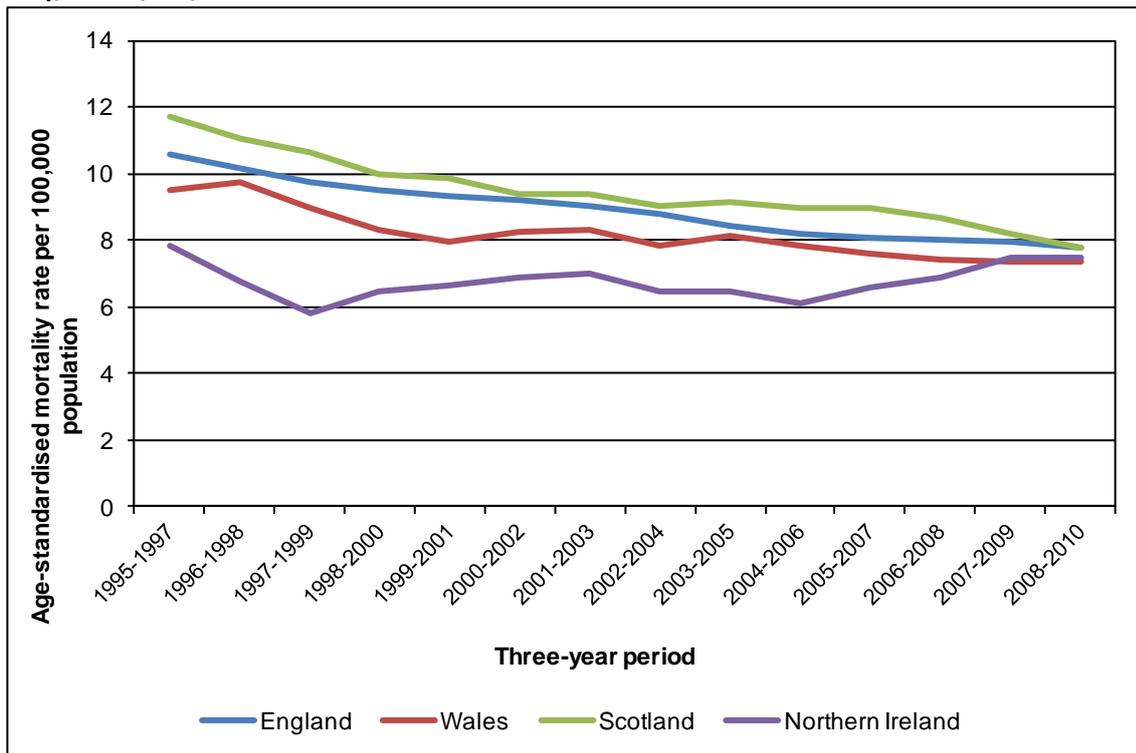
Source: Celtic National Cancer Data Repository

Mortality rates

Age-standardised mortality rates from bladder cancer are significantly higher in males than females ($p < 0.001$; Fig. 3 and Fig. 4). In 2008-10, the mortality rate was nearly three times higher in males (7.4 to 7.8 per 100,000 in the different countries) than in females (2.2 to 3.4 per 100,000).

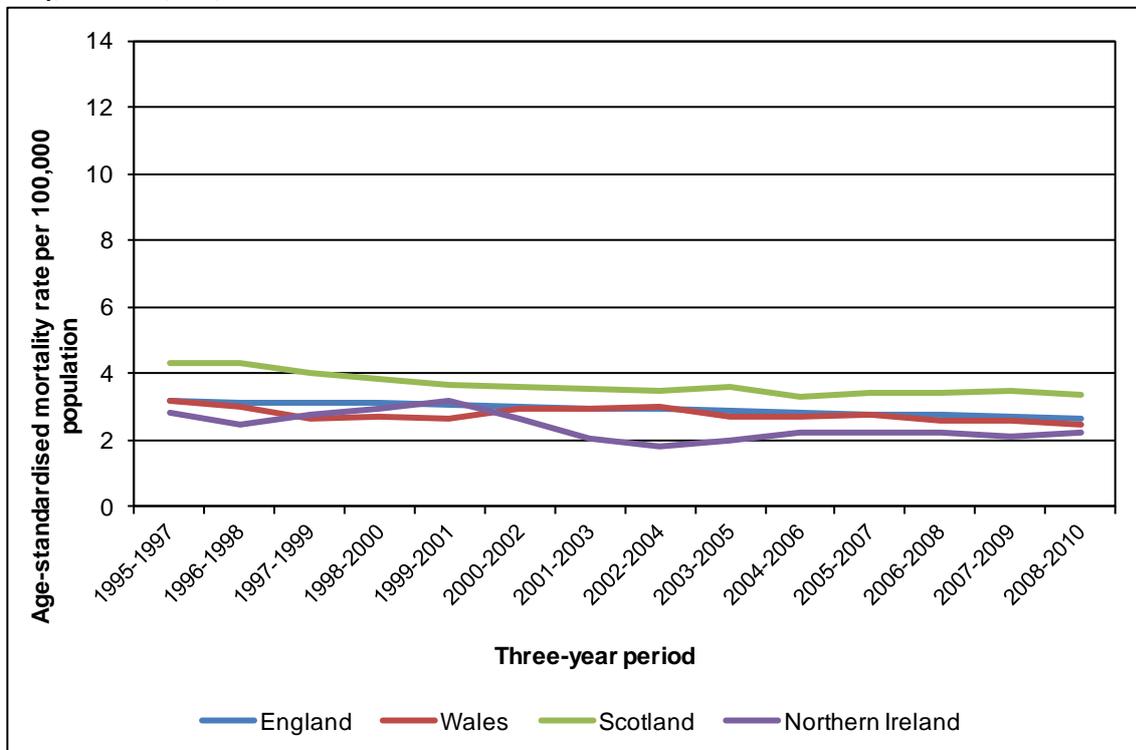
The age-standardised mortality rate was lower in 2008-10 than in 1995-97 for males and females in England, Wales, and Scotland; but there was no difference for either sex in Northern Ireland. Statistical significance for Northern Ireland data is harder to determine because of the smaller number of deaths. On average, the mortality rate was 21% lower for females and 22% lower for males in 2008-10 compared to 1995-97.

Figure 3: Age-standardised mortality rates (per 100,000 population) for bladder cancer (ICD-10 C67), males, UK, 1995–2010



Source: Office for National Statistics, UK Cancer Information System (CIS)

Figure 4: Age-standardised mortality rates (per 100,000 population) for bladder cancer (ICD-10 C67), females, UK, 1995–2010



Source: Office for National Statistics, UK Cancer Information System (CIS)

Survival rates

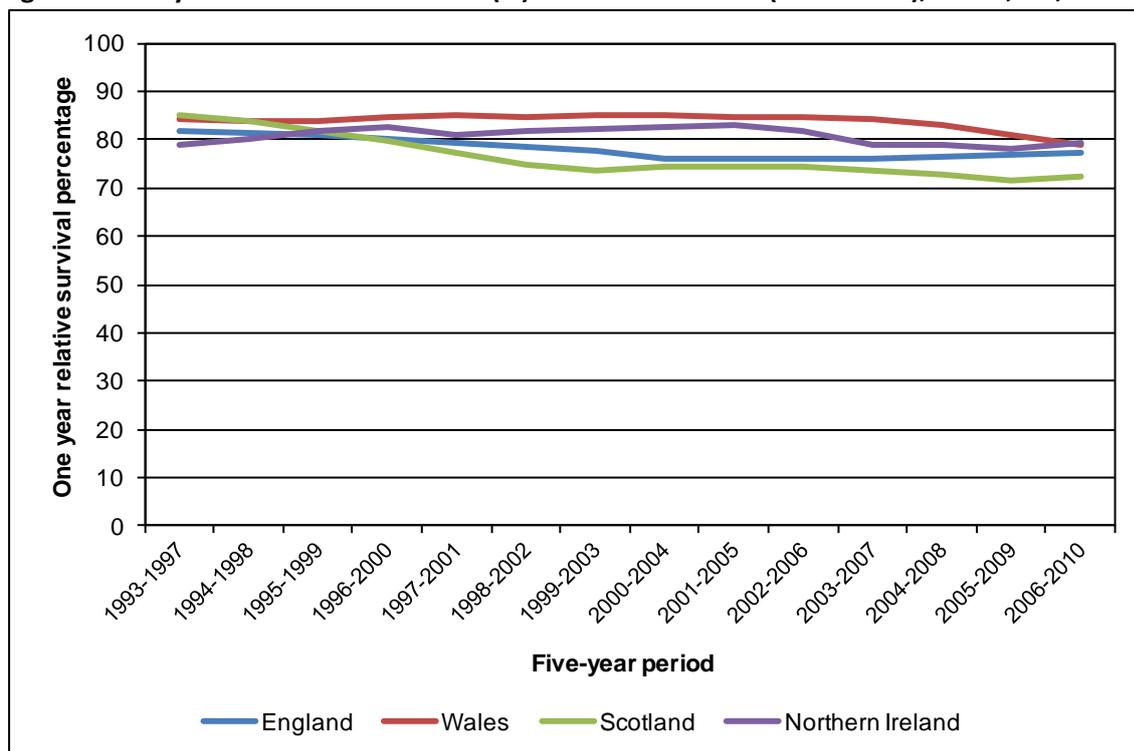
One-year and five-year relative survival rates from bladder cancer are significantly higher in males than in females ($p < 0.001$) in all four countries for the most recent period (2006-10 for one-year survival and 2002-06 for five-year survival).

One-year relative survival rates for people diagnosed with bladder cancer in 2006-10 were 58-66% for females in the four countries, and 72-79% for males (Fig. 5 and Fig. 6). In 2006-10 compared to 1993-97, one-year relative survival rates were lower ($p < 0.05$) for both females and males in all countries, except Northern Ireland where there was no difference.

For people diagnosed with bladder cancer in 2002-06, five-year relative survival rates (Fig. 7 and Fig. 8) were 53-72% for males and 39-63% for females. In 2002-06 compared to 1993-97, five-year relative survival rates were lower ($p < 0.001$) in England and Scotland for both sexes, while for males in Wales and both sexes in Northern Ireland there was no difference, and the rate was higher for females in Wales ($p < 0.05$).

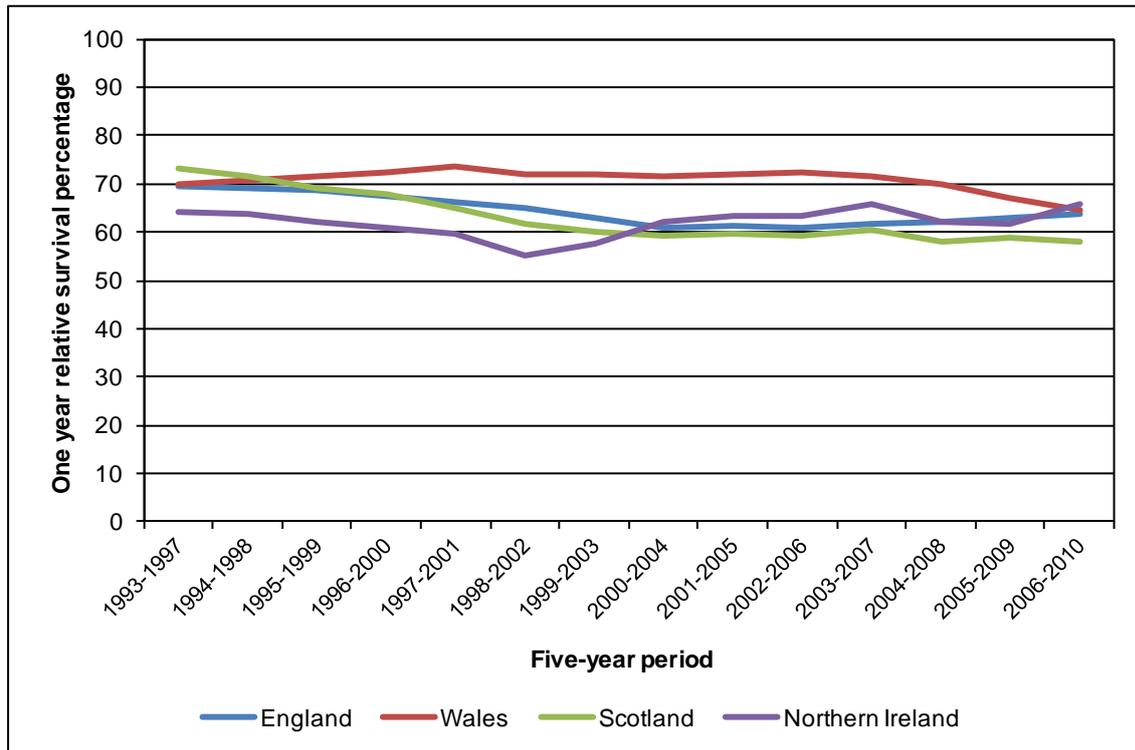
The general decrease in one-year and five-year survival is related to the recoding mentioned above, which meant many non-invasive cancers were no longer classified as bladder cancers. The number of deaths arising from these non-invasive cancers is minimal, so there was an overall reduction in incidence but not mortality and hence survival decreased.

Figure 5: One-year relative survival rate (%) for bladder cancer (ICD-10 C67), males, UK, 1993–2010



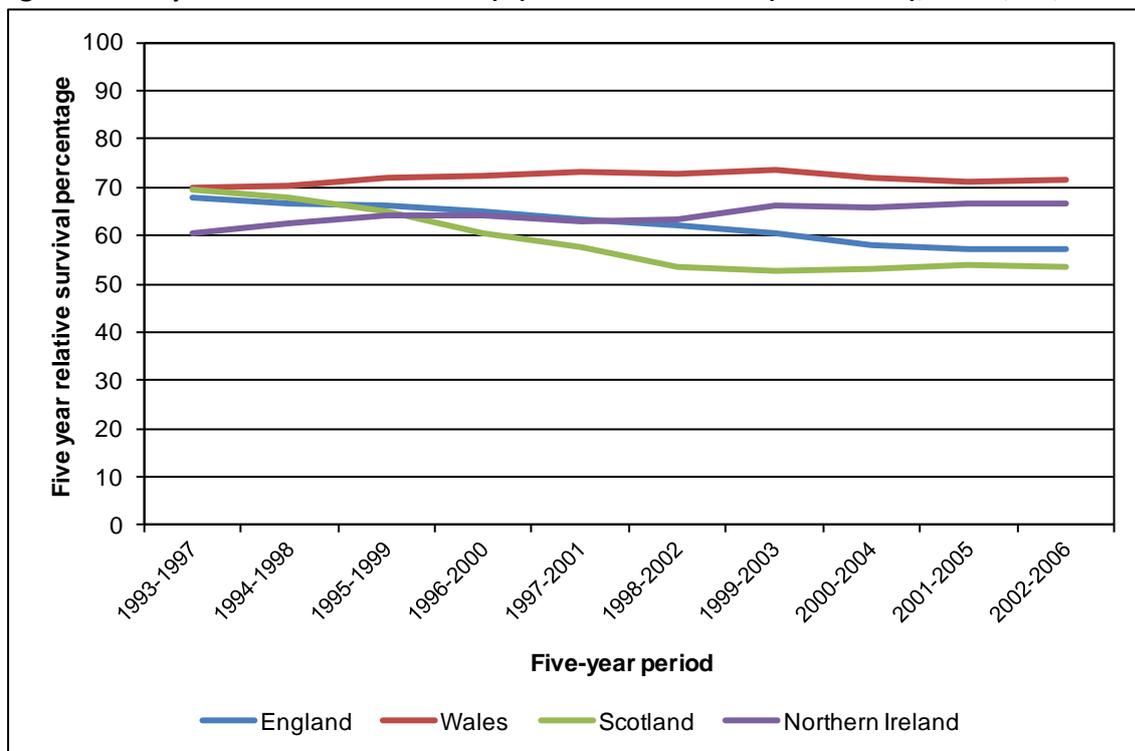
Source: Celtic National Cancer Data Repository

Figure 6: One-year relative survival rate (%) for bladder cancer (ICD-10 C67), females, UK, 1993–2010



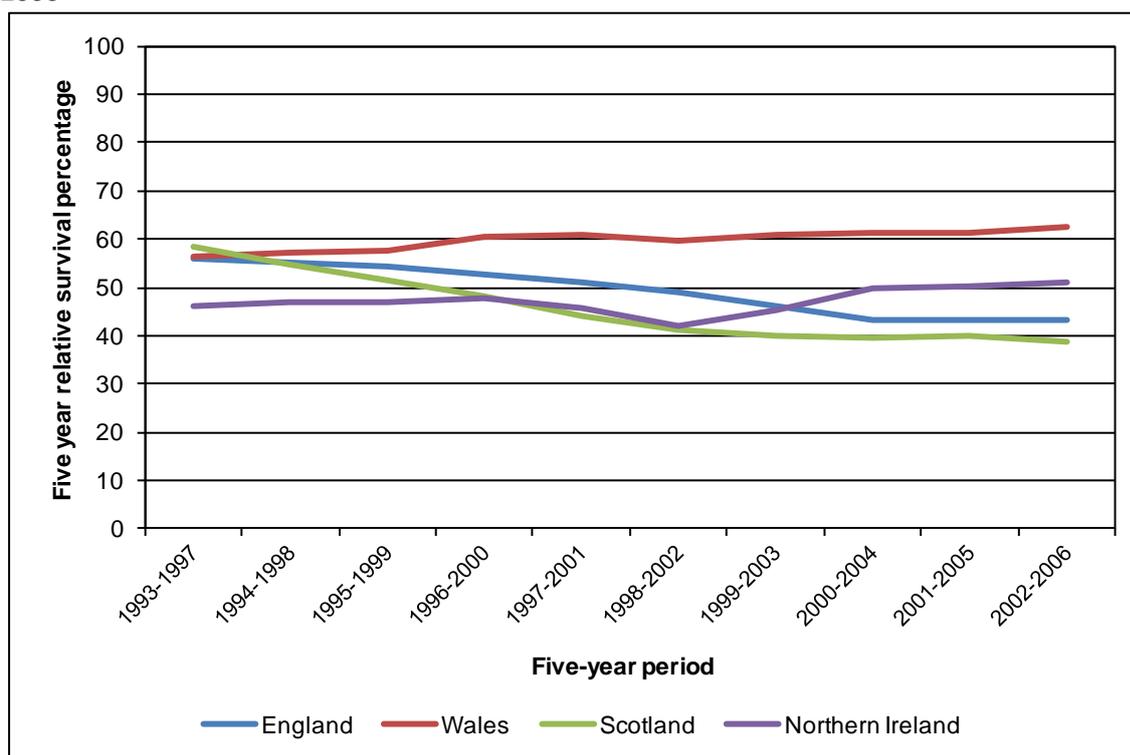
Source: Celtic National Cancer Data Repository

Figure 7: Five-year relative survival rate (%) for bladder cancer (ICD-10 C67), males, UK, 1993–2006



Source: Celtic National Cancer Data Repository

Figure 8: Five-year relative survival rate (%) for bladder cancer (ICD-10 C67), females, UK, 1993–2006



Source: Celtic National Cancer Data Repository

Key questions and next steps

- How much of the reduction in age-standardised incidence of bladder cancer is due to change in coding and how much is due to reduction to exposure to aetiological risk factors?
- Why have survival rates fallen? Is this all due to the change in coding, or is there a change in the diagnosis pattern for more aggressive cancers which have a worse prognosis?
- Are falling mortality rates linked to better treatment?
- Explore age-specific incidence and mortality rates.
- Explore the influence of socio-economic factors on incidence and mortality rates.
- Explore stage at presentation and the influence of sex, age, socioeconomic status and time-period on this.
- Expand on exploration of reasons for reduction in survival.

References

Cancer Research UK. Bladder cancer – UK incidence statistics. Retrieved December 08, 2009, from Cancer Research UK:
<http://info.cancerresearchuk.org/cancerstats/types/bladder/incidence/index.htm#timetrends>