

Renal Pelvis and Ureter Cancer Incidence, Mortality and Survival Rates in the United Kingdom

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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.

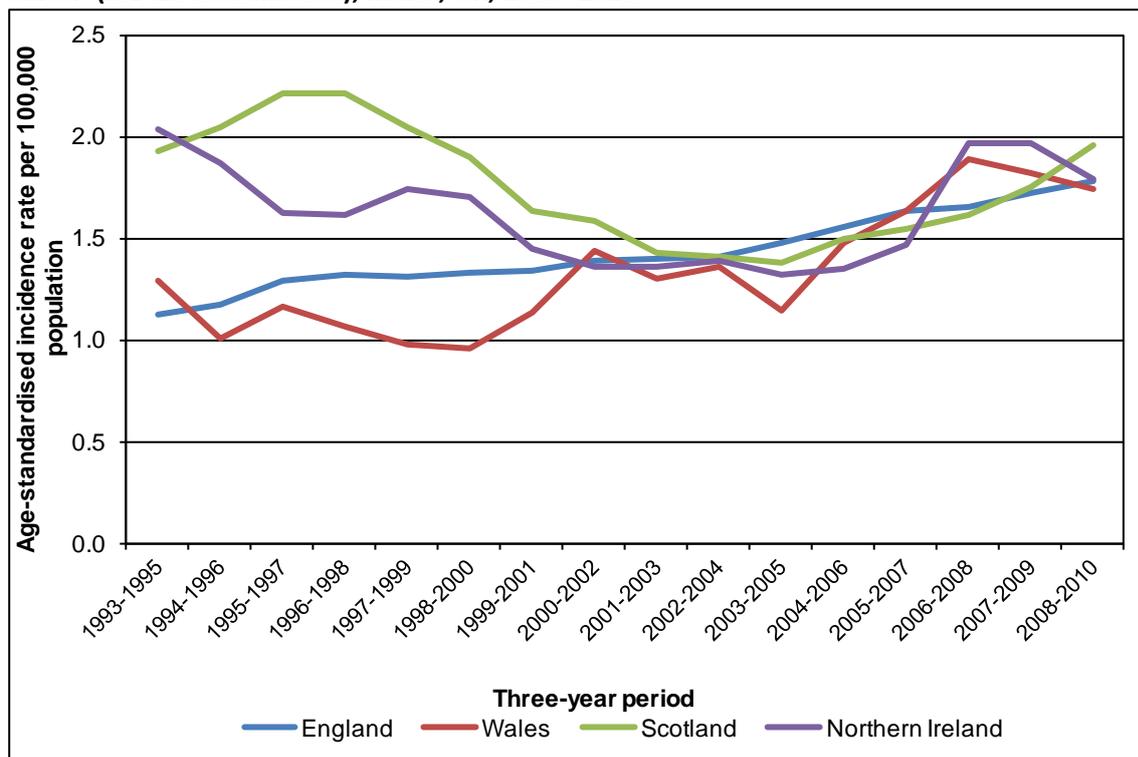
This summary factsheet presents data for ICD-10 C65 “Malignant neoplasm of renal pelvis” and ICD-10 C66 “Malignant neoplasm of ureter”. The most recent incidence and mortality data have been used. Rates are standardised to the 1976 European Standard Population. Where appropriate, rates are per 100,000 sex-specific population.

Incidence rates

The age-standardised incidence rate of renal pelvis and ureter cancer (Fig. 1 and Fig. 2) is significantly higher in males than females ($p < 0.05$ for all four countries in 2008-10). For 2008-10, the rate in males (1.7-2.0 per 100,000 across the four countries) was nearly twice the rate in females (0.8-1 per 100,000).

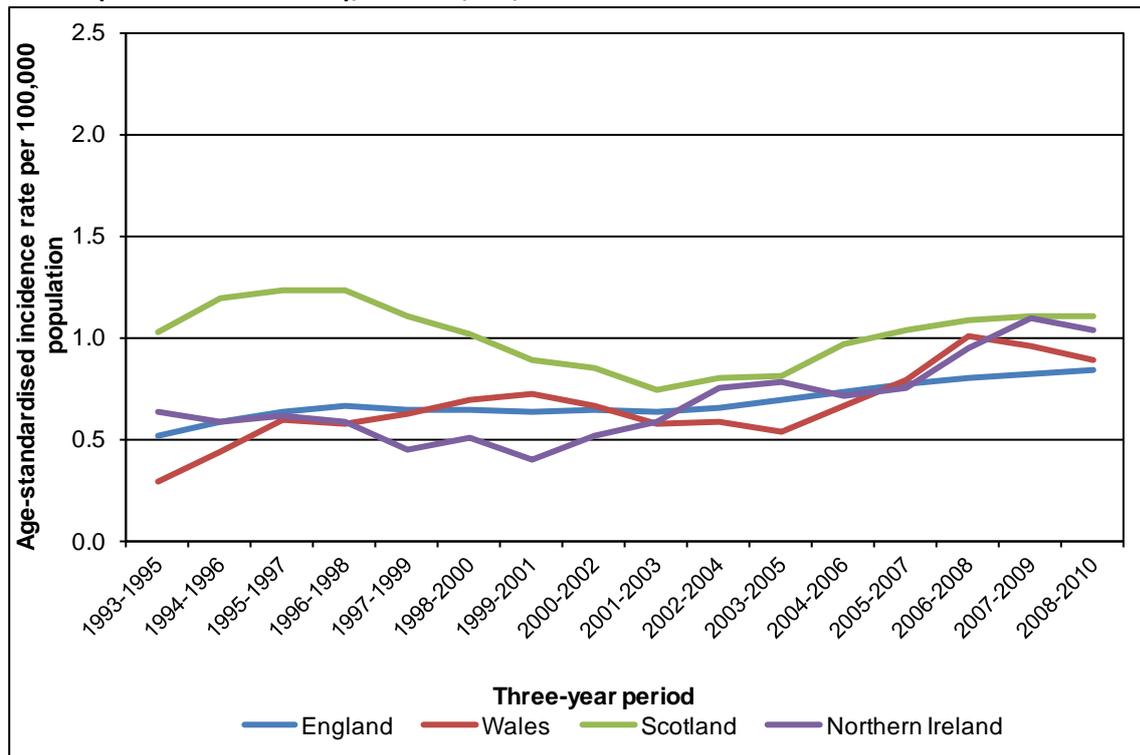
In 2008-10, the age-standardised incidence rate was significantly higher for both sexes in England, and for females in Wales ($p < 0.001$), compared to 1993-95. In Scotland and Northern Ireland no difference was found but this is difficult to determine as numbers of cases are small.

Figure 1: Age-standardised incidence rates (per 100,000 population) of renal pelvis and ureter cancer (ICD-10 C65 and C66), males, UK, 1993–2010



Source: Celtic National Cancer Data Repository

Figure 2: Age-standardised incidence rates (per 100,000 population) of renal pelvis and ureter cancer (ICD-10 C65 and C66), females, UK, 1993–2010



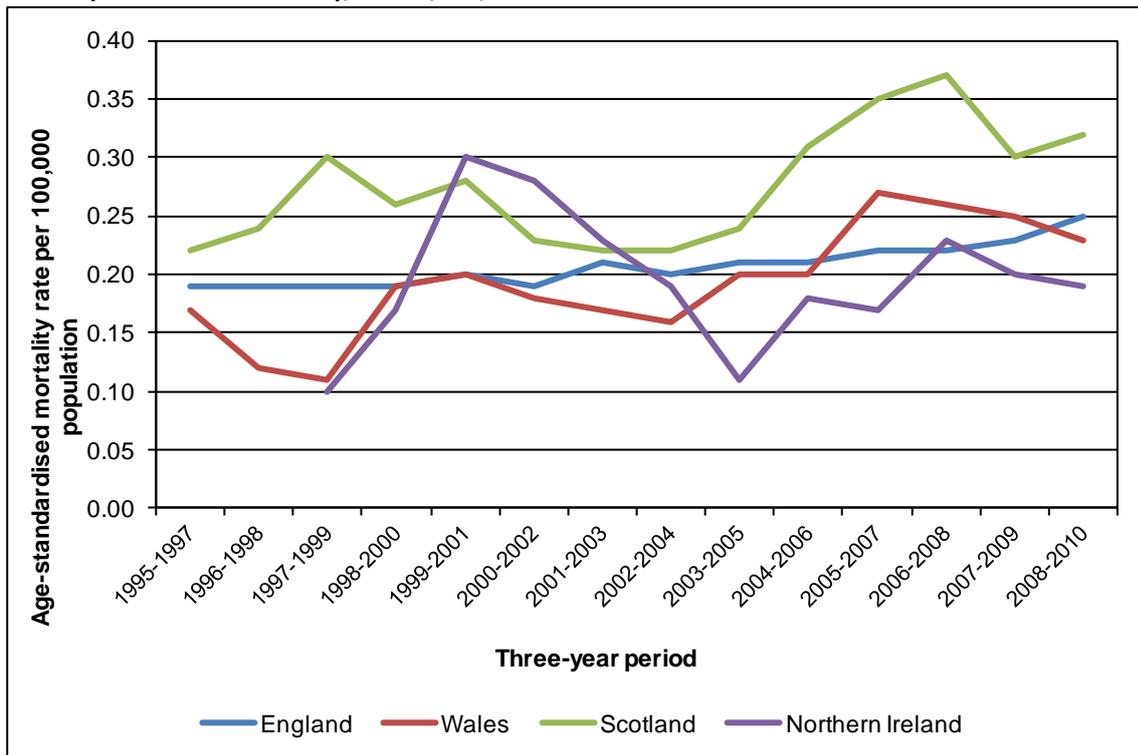
Source: Celtic National Cancer Data Repository

Mortality rates

Age-standardised mortality rates from renal pelvis and ureter cancer are significantly higher for males than females in England for the period 2008-10 ($p < 0.001$), but there was no effect of sex on mortality rates in the other countries (Fig. 3 and Fig. 4).

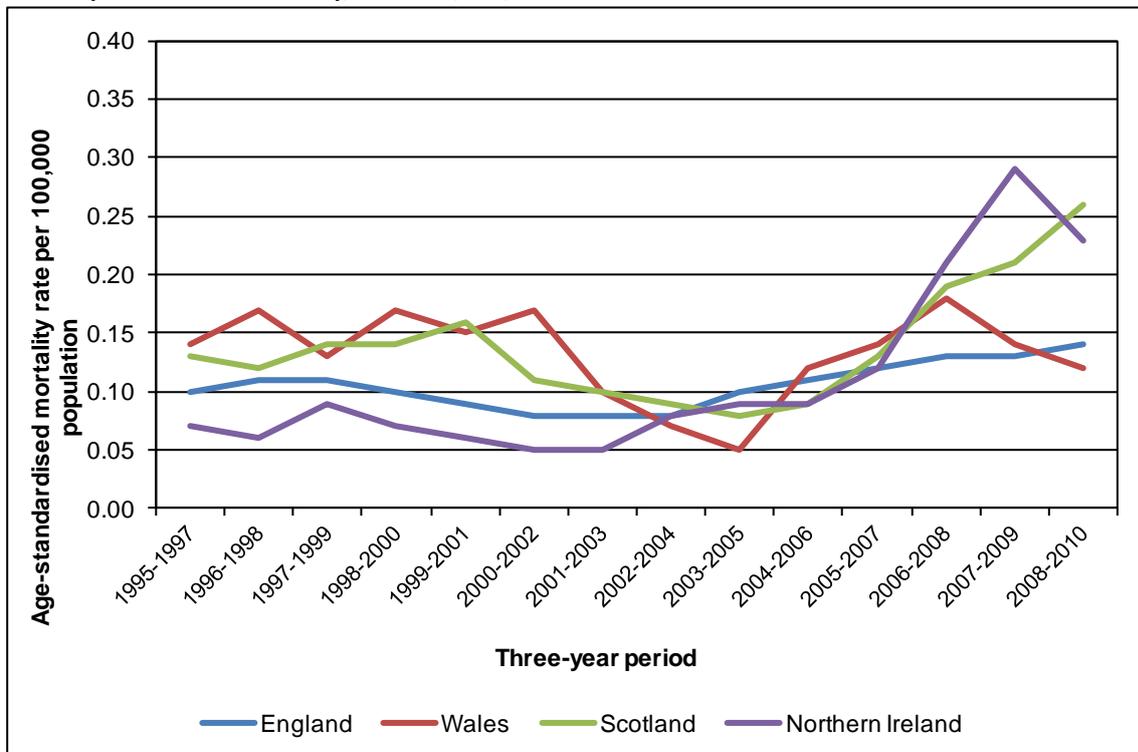
The age-standardised mortality rate was significantly higher in 2008-10 than 1995-97 for both sexes in England and for females in Scotland ($p < 0.05$), but otherwise no differences were discernible

Figure 3: Age-standardised mortality rates (per 100,000 population) for renal pelvis and ureter cancer (ICD-10 C65 and C66), 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 renal pelvis and ureter cancer (ICD-10 C65 and C66), females, UK, 1995–2010



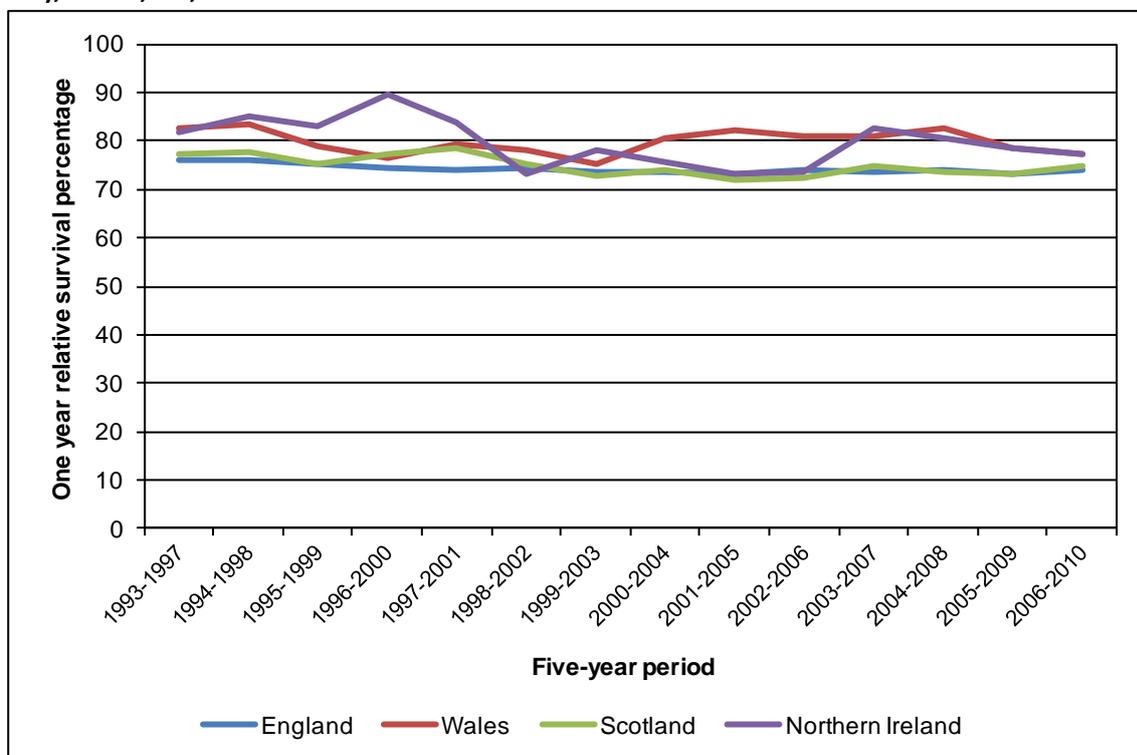
Source: Office for National Statistics, UK Cancer Information System (CIS)

Survival rates

One-year survival rates for patients diagnosed with renal pelvis and ureter cancer in 2006-10 were significantly higher for males (74%) than females (68%) in England ($p < 0.001$), but there were no significant differences by sex in the other countries. There was no significant difference in one-year survival rates between 1993-97 and 2006-10 in any country.

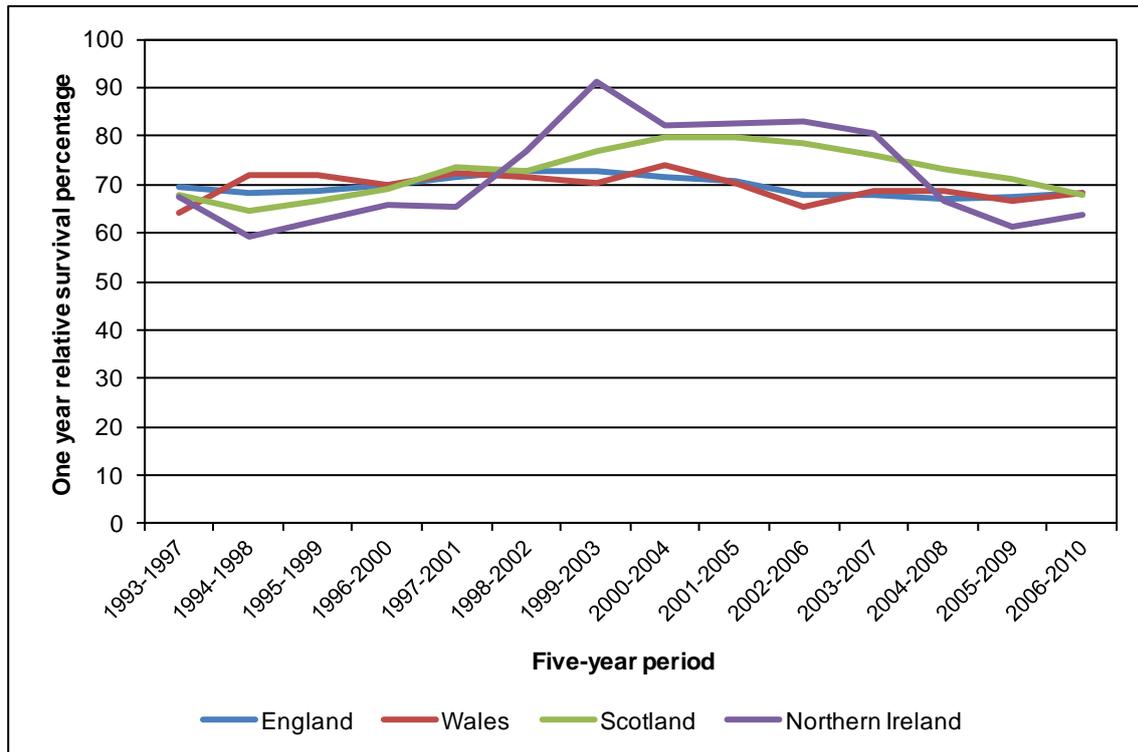
Five-year survival for patients diagnosed in 2002-06 was higher in males (51%) than females (43%) in England ($p < 0.001$), but higher for females (65%) than males (36%) in Northern Ireland ($p < 0.05$). There were no other significant differences by sex for 2002-06. Five-year survival was significantly lower in 2002-06, compared to 1993-97, for both sexes in England (57% to 51% in males and 53% to 43% in females); and for males in Scotland (63% to 47%; $p < 0.01$). However, in Northern Ireland the rates were significantly higher for females (30% to 65%; $p < 0.05$) and significantly lower for males (68% to 36%; $p < 0.01$).

Figure 5: One-year relative survival rates (%) for renal pelvis and ureter cancer (ICD-10 C65 and C66), males, UK, 1993-2010



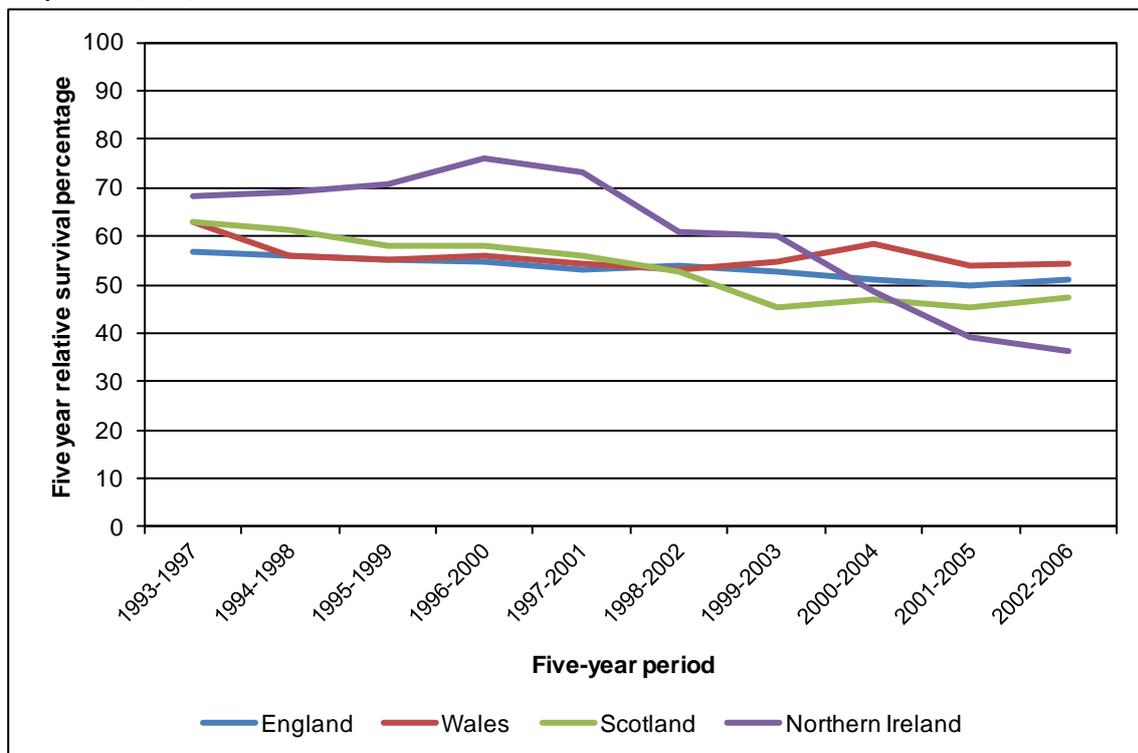
Source: Celtic National Cancer Data Repository

Figure 6: One-year relative survival rates (%) for renal pelvis and ureter cancer (ICD-10 C65 and C66), females, UK, 1993-2010



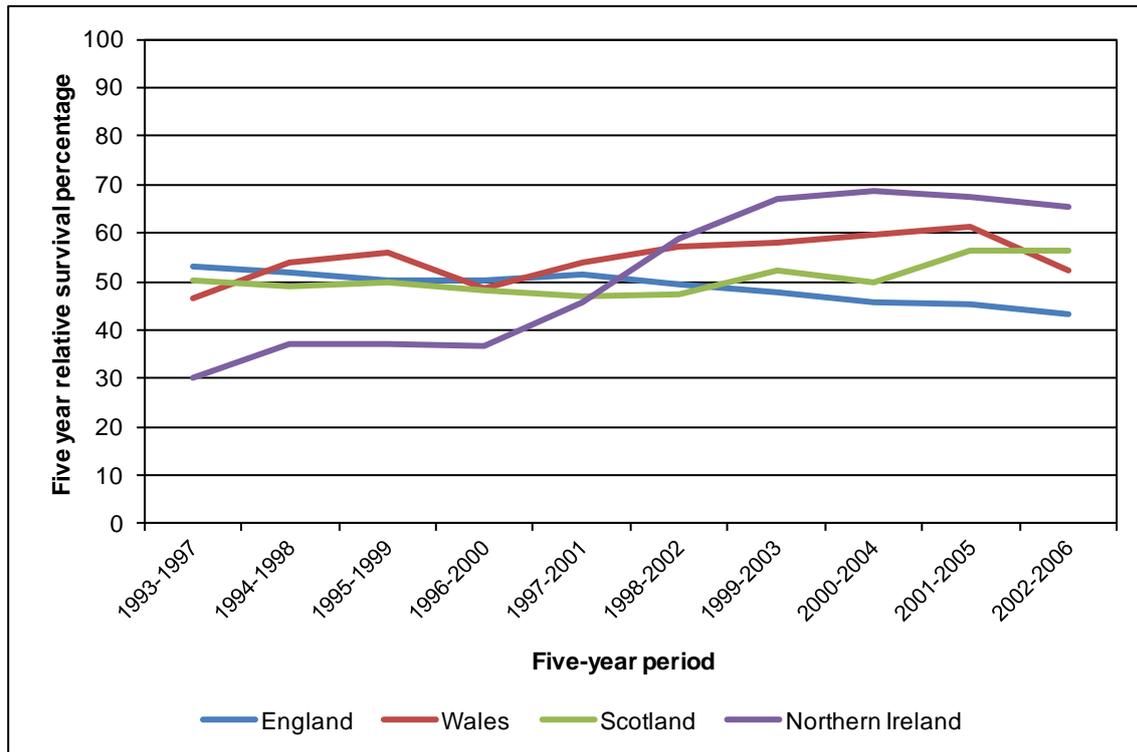
Source: Celtic National Cancer Data Repository

Figure 7: Five-year relative survival rate (%) for renal pelvis and ureter cancer (ICD-10 C65 and C66), males, UK, 1993-2006



Source: Celtic National Cancer Data Repository

Figure 8: Five-year relative survival rate (%) for renal pelvis and ureter cancer (ICD-10 C65 and C66), females, UK, 1993–2006



Source: Celtic National Cancer Data Repository

Key questions and next steps

- Why is the incidence rate of renal pelvis and ureter cancer much higher in males than females?
- What is the role of imaging in any recorded increase in incidence?
- What is causing a fall in five-year survival? Is imaging detecting advanced or metastatic tumours which would have been previously unknown or unclassified?
- Why is one-year and five-year survival higher in males than females?
- Are there concurrent bladder or ureteral tumours?
- Explore age-specific incidence and mortality rates.
- Explore the influence of socioeconomic factors on incidence and mortality rates.
- Explore stage at presentation and the influence of sex, age, socioeconomic status and time-period on this.
- Explore synchronous/metachronous tumours.
- Explore causes of death for those diagnosed with cancers of the renal pelvis. These people are often heavy smokers which increases the risk of death from other causes, which makes relative survival based on age a less reliable comparison.