UROLOGY

Introduction

Urology encompasses diseases of kidneys, bladder and prostate to include incontinence, impotence, infertility, cancer and reconstruction of the genito-urinary tract. It encompasses patients of **both sexes** and **all ages**.

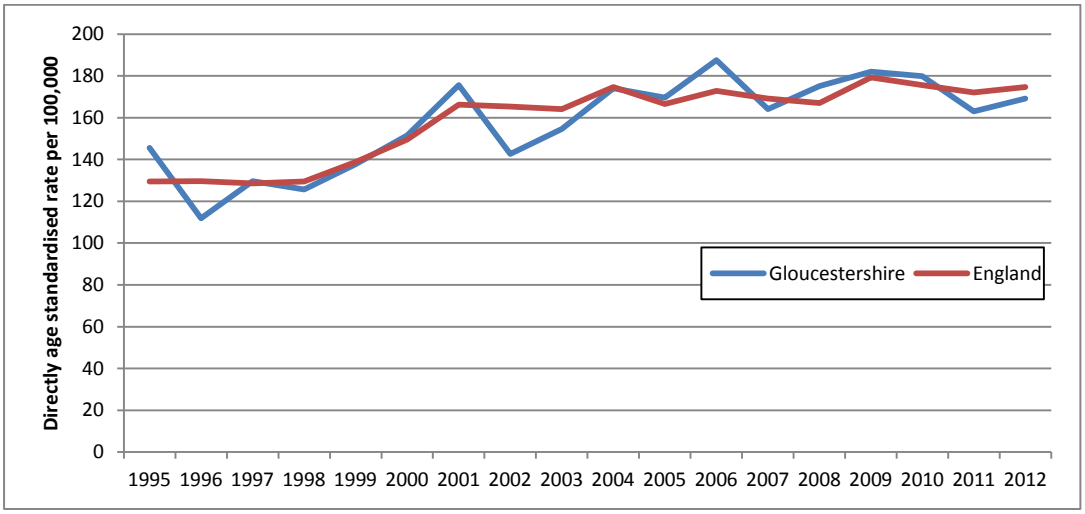
The British Association of Urological Surgeons assess that **GP referrals** for urological problems have increased by 20% over the last 20 years. However, the number of patients who need to undergo **urological surgery** for their condition has fallen to 10-12% (between 1 in 8 and 1 in 10)[1]

Urology Cancers

Prostate Cancer

This is the most common cancer in men accounting for 25% of all new cancers in UK males. It is strongly related to age with more than a third diagnosed in men over the age of 75 years. Between 2011 and 2013, the age standardised **incidence** rate in Gloucestershire was 158.2, which was significantly lower than the England rate (178.8)[2]. This translates to a total of 1274 new cases over the three year period. There has been an **increasing trend in incidence** at both county and national level (Figure 1).

Figure 1: Prostate Cancer Incidence, All ages, Annual Trend 1995 - 2012



Source: Health and Social Care Information Centre

Much of this increase has been attributed to incidental detection of prostate cancers following TURP[3] and **PSA[4] testing**. There is evidence of reduction in rates in older men

[1] British Association of Urological Surgeons. http://www.baus.org.uk/patients/urology-is
[2] South West Knowledge and Intelligence Team of Public Health England.
[3] Transurethral resection of the prostate
[4] Prostate Specific Antigen – a substance produced by prostate cells which can be measured by blood test as part of tests to diagnose prostate cancer or to see if treatment is working

(75+) more recently, probably due to diagnosis of early prostate cancer in young men through PSA testing.

As at 31st December 2013, the five year point **prevalence**[5] in Gloucestershire was 2171.

With and increasing older population (see below) and continuing PSA testing, the increasing trend is likely to be maintained.

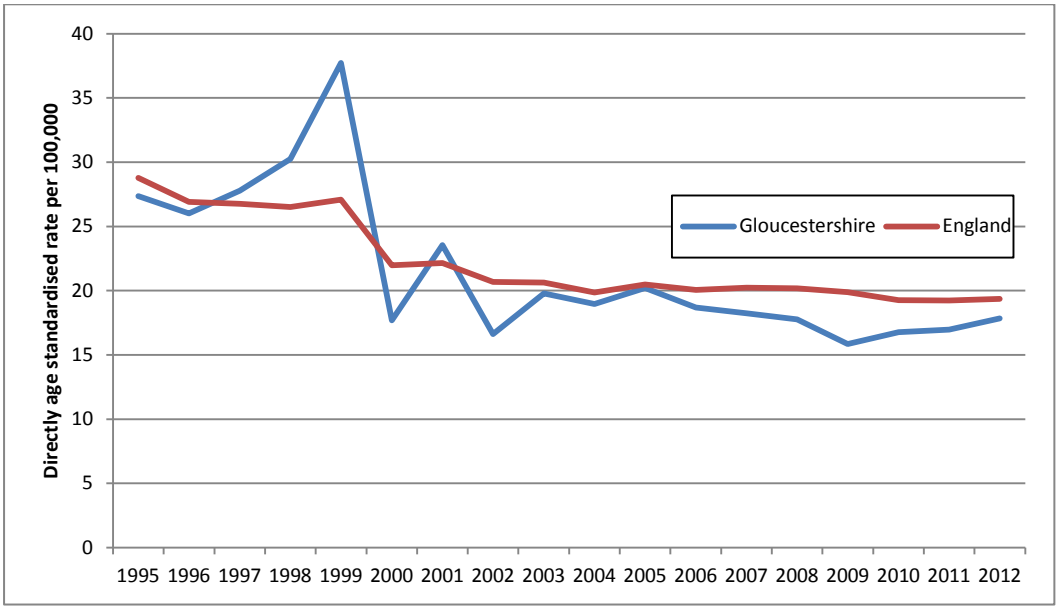
Mortality is also strongly related to age with highest rates in older men, and there is no evidence of an association with deprivation.

Bladder Cancer

Bladder cancer is the 7th most common cancer overall (4th most common in men and 13th most common in women).

The latest published **incidence** rates[6] for males (28.51) and females (8.56) in Gloucestershire though lower, are not statistically significantly different from England rates. Figure 2 shows a general **decreasing trend in incidence** which seems to be stabilising more recently at the national level, with this slightly on the increasing trend in Gloucestershire.

Figure 2: Incidence of Bladder Cancer, All Ages, Persons, Annual Trends, 1995 -2012



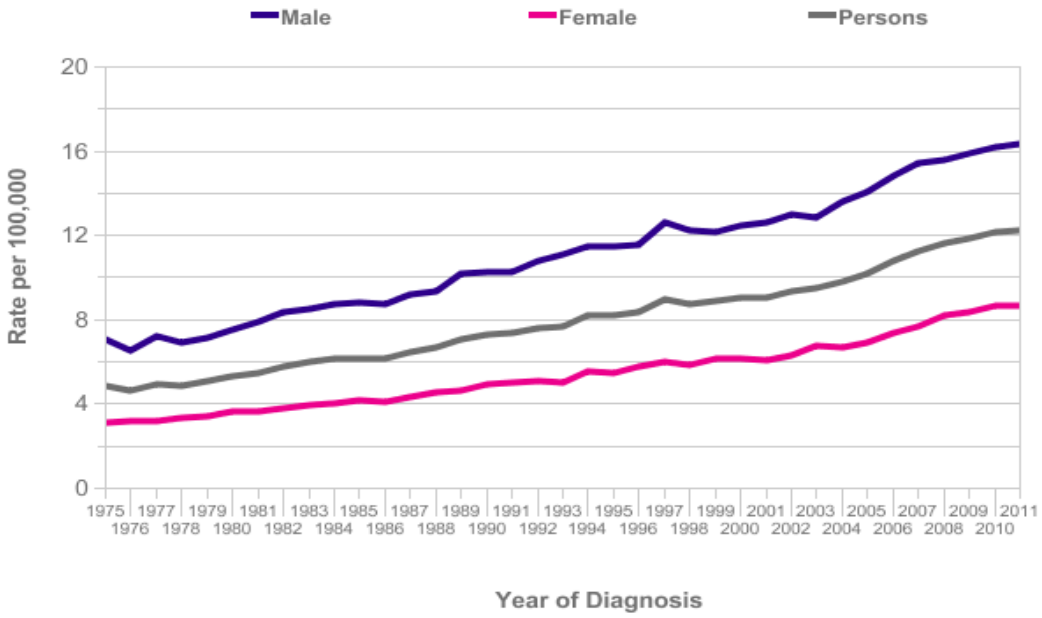
Around half of all new cases occur in people aged 75 years and over. **Mortality** has been decreasing nationally with more than two-thirds of deaths in people aged 75 years and over. Survival shows an improving trend with this being higher for those diagnosed at a younger age.

[5] Prevalence refers to the number of people who have previously received a diagnosis of cancer and who are still alive at a given time point.
[6] 2010-12 pooled rates

Kidney Cancer

Incidence rates have more than **doubled** national since the mid-1970 (Figure 3), with this increasing by almost a third in the last ten years. Three quarters are diagnosed in people aged 60 and over. There are no local published figures on this, but local trend is likely to be similar.

Figure 3: UK Incidence of Kidney Cancer by Gender, 1975-2011

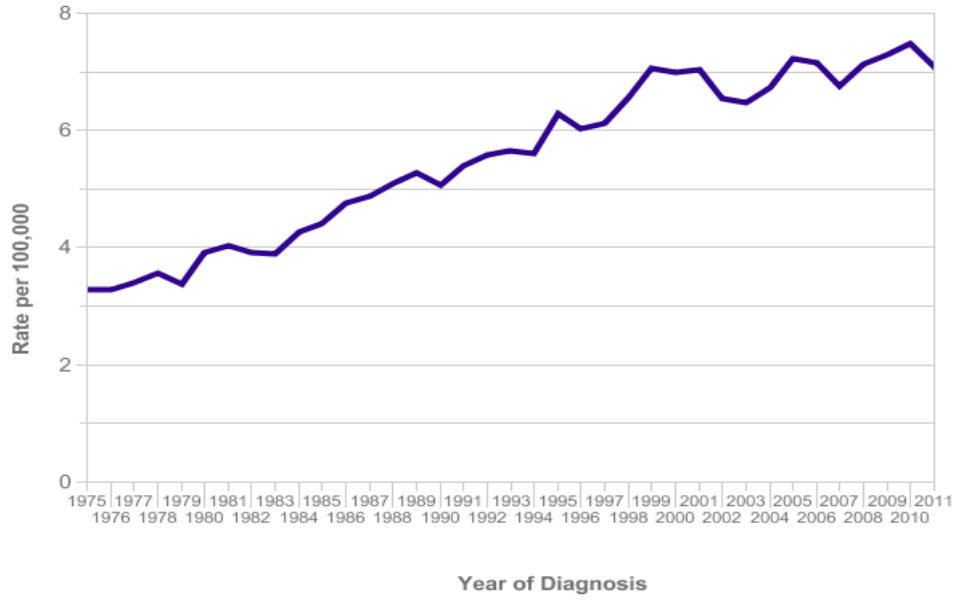


Source: Cancer Research UK

Testicular Cancer

More common in younger than older men, rare before puberty and is the most common cancer in men aged 25-49. Only four in 100 testicular lumps turn out to be cancerous. **Incidence in Britain** has **more than doubled** since the mid-1970s, though rates have stabilised in recent years. There are no local published figures on this, but local trend is likely to be similar. Testicular cancer risk is around 3-4 times higher in males with **undescended testes** and12-18 times higher in men with **previous testicular cancer**, compared with the general population, with 2-4% of men with previous testicular cancer developing cancer in their remaining testicle within 20 years.

Figure 4: Incidence of Testicular Cancer in Britain, 1975-2011



Source: Cancer Research UK

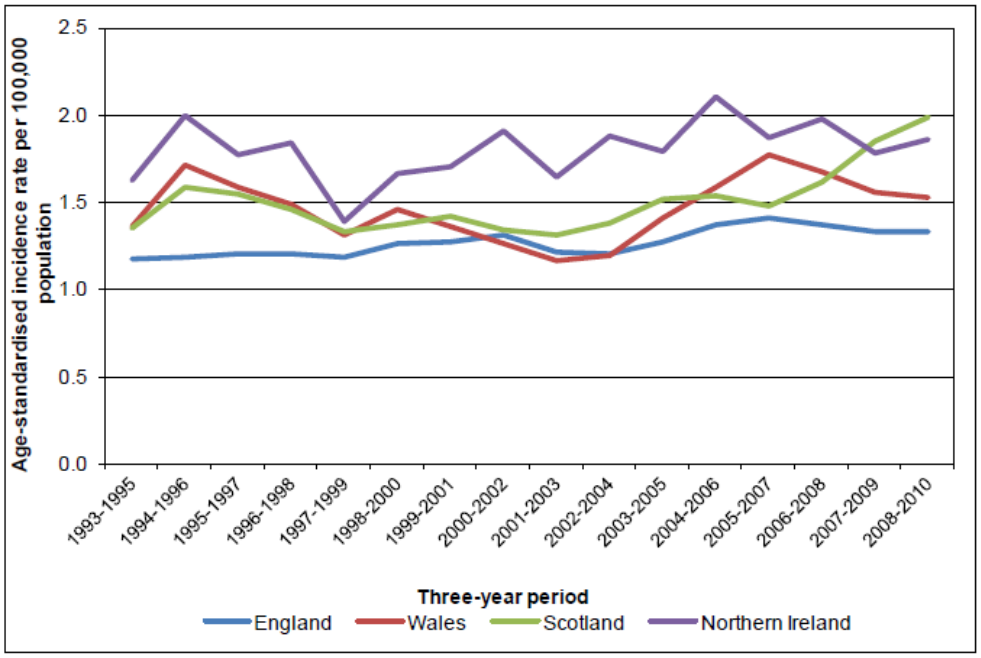
Penile Cancer

This is a **rare cancer** with most cases occurring in men aged over 60 years old. It rarely affects men under 40. The National Cancer Intelligence Network (NCIN) estimates that around 400 cases were diagnosed each year in England between 2008 and 2010[7].There are no readily available published national or local data on this, but the NCIN published a report[8] on the **incidence**, mortality and survival for penile cancers in 2013. Figure 5 below shows a **somewhat increasing trend** for England between 1993 and 2010. **Mortality** however remained largely the same over this period. There are no local published figures on this.

[7] http://www.ncin.org.uk/publications/data_briefings/penile_cancer_incidence_by_age

[8] National Cancer Intelligence Network. Penile Cancer Incidence, Mortality and Survival Rates in the United Kingdom. August 2013

Figure 5: Age-standardised Incidence Rate of Penile Cancers, Males UK, 1993 - 2010



Source: National Cancer Intelligence Network

Men with **human papilloma virus** have an increased risk of developing penile cancer.

Other Urological Conditions

We do not have local prevalence figures for these. Table 1 shows potential numbers in Gloucestershire applying national prevalence rates.

Table 1: Prevalence of Non-cancer Urological Conditions

Condition	National rate	Gloucestershire estimated number (low)	Gloucestershire estimated number (high)	Gloucestershire estimated number (mid)
Benign prostatic hyperplasia	40% of 40+ males			**6306**
Prostatitis	2 - 10% of adult men	4687	23434	**14061**
Urinary incontinence	5 - 10% of all people	30283	60565	**45424**
Interstitial cystitis	0.7% of all people			**4240**
Urinary tract Infections	10% females, 2.5% males			**37853**
Kidney stones	10-20% males, 3-5% females	39368	75707	**57537**
Chronic kidney disease	20% 65+ males, 25% 65+ females			**27387**
Infertility	16% of couples trying to conceive			**?**
Erectile dysfunction	10% males 18+			**23434**

Urological Conditions and Demographic Changes in Gloucestershire

Gloucestershire has a **relatively older population** than the national average, with the growth in the 65+ age group being the greatest (higher than national growth rate), and this pattern of growth set to continue to 2037. Gloucester will see the greatest growth from 2012 – 2037 (82.6%), followed by Stroud (74.6%) and Forest of Dean (72.6%). The growth in this age band is important as **more than three out of five new cancers are diagnosed in people aged 65 or over**, and over a third are diagnosed in those aged 75 or over. Increasing age can also contribute to increasing numbers of **urinary incontinence** and **chronic kidney diseases.**

Gloucestershire has a **relatively small BME population** at 4.6% compared with a national figure of 14.6%. This diversity is most pronounced in the 0-19 age band with 7.6% being from a BME group. However, between 2001 to 2010, the census figures show that the county became a **more ethnically diverse** county with the BME population increasing by 70%, and people classed as 'White Other' increasing by 105% over the same period[9]. Within the BME group, the greatest increase was within the Asian/Asian British group (81.2%) followed by 'Mixed' (79.1%) and Black/African/Caribbean/Black British (55.8%). It is likely that this increase in diversity will continue into the future.

Some cancers are more common in certain **ethnic groups**. Black males of all age groups are significantly more likely than white males to get **prostate cancer**. Asians and Chinese are significantly less likely, while mixed groups have lower rates which were not statistically significant. Blacks and Asians are significantly less likely to get **bladder and kidney cancers** compared to whites[10]. White men have a higher risk of **testicular cancer** than men from other ethnicities. **Chronic kidney disease** is more common in people of south Asian origin (those from India, Bangladesh, Sri Lanka and Pakistan) and black people than the general population, generally as a result of diabetes in South Asians and hypertension in blacks.

Gloucestershire is a relatively affluent area with some areas of **deprivation**. There were small changes to the distribution of deprivation between 2007 and 2010, with 2010 IMD figures showing 8 neighbourhoods in the 10% most deprived nationally, compared with 7 in the 2007 IMD figures. It is unlikely that the distribution of socio-economic deprivation in Gloucestershire would change hugely in the near future.

Kidney and bladder cancers show a statistically significant association with socio-economic deprivation, while **prostate and testicular cancers** show an inverse relationship[11.]

There is a clear social gradient in **cancer mortality** in general, with more deprived areas experiencing higher mortality rates than less deprived areas. Nationally in 2012, the most deprived 10% of the population had an under 75 mortality rate from cancer nearly double that of the least deprived 10% of the population. Mortality from **prostate cancer** however does not show an association with deprivation.

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[9] http://www.maiden.gov.uk/InstantAtlas/Equalities/summary.pdf

[10] National Cancer Intelligence Network. Cancer Incidence and Survival by Major Ethnic Group, England, 2002-2006. http://publications.cancerresearchuk.org/downloads/Product/CS_REPORT_INCSURV_ETHNIC.pdf

[11] National Cancer Intelligence Network. Cancer Incidence by Deprivation, 1995 – 2004.

Urological Conditions and Lifestyle Factors

Up to **half of all cancers** could be prevented by changes in lifestyle behaviours such as smoking, poor diet, obesity, alcohol misuse and lack of exercise. 42% of **bladder cancer** cases are linked to lifestyle and other risk factors with **smoking** linked to about 37% of cases nationally. Overall, smoking prevalence in Gloucestershire is significantly lower than national rates and it has seen a falling trend over the years. The rate is however higher than national average in 'mixed' and 'white' groups, as well as 'routine and manual' and those who have never worked or are long term unemployed.

42% of **kidney cancer** cases each year are linked to major lifestyle and other risk factors – **smoking** 24% and **overweight and obesity** 24%. Increasing local levels of obesity would impact on the incidence level of kidney cancer. Gloucestershire's level of excess weight[12] in adults is currently not significantly different from national average, though our rate of excess weight in 4 – 5 year olds is significantly higher than national averages.

Spend and Outcome Tool (SPOT)

The SPOT is a tool developed by the Yorkshire and Humber Public Health Observatory (now part of Public Health England)[13] which gives an overview of spend and outcomes across all programmes of care (based on the 23 Programme Budget categories). Data available over a **three year period (2009/10 -2011/12)** gives us an overview of trend around two programme areas which are likely to cover urological conditions, namely:

- Cancers and tumours
- Problems of the Genitourinary system

Note that the cancers and tumours programme area covers **all cancers** in this tool and not just urological cancers.

Cancers and tumours - Initially in 2009/10, Gloucestershire had a higher spend better outcome compared with its ONS partners. By 2011/12, the higher spend remained with outcomes slightly improved. It would be beneficial to maintain improved outcome at lower spend. (Spend/head initially similar to cluster average, becoming higher in 2011/12).

Genitourinary problems - Initially lower spend better outcome. With the same spend in 2011/12 after apparent dip in outcome, it would be beneficial to improve outcome at current spend (spend/head has remained lower than cluster average).

Programme Budget

The 2013/14 Programme Budgeting Benchmarking Tools gives some information on comparative spend for urological cancers and genito-urinary problems.

Urological Cancers

Gloucestershire spent a total of £4,123,257 on urological cancers, £459,168 **more** than our cluster average.

[12] Percentage of adults classified as overweight or obese

[13] http://www.yhpho.org.uk/resource/view.aspx?RID=49488

In terms of care settings, our spend was much higher for unscheduled care. It was also higher for day case and elective as well as for critical care (see Appendix 1).

Problems of Genito-urinary System

A total of £33,186,960 was spent on problems of genito-urinary systems (out of which £960,324 was spent on sexually transmitted diseases). This total spend was £898,702 **lower** than our cluster average. Our spend was however much higher for unscheduled care, primary prescribing and community and integrated care (see Appendix 2).