



## Kidney Cancer Statistics for the United Kingdom

The definition of kidney cancer includes cancers of the renal parenchyma (90%), the renal pelvis (5%) and the ureter (5%). Cancers of the renal parenchyma are also known as renal cell carcinomas (RCC). There are five subgroups of RCCs; conventional (clear cell, also called non-papillary, 75-80%); papillary (chromophilic, 10-15%), chromophobe, collecting duct carcinoma and unclassified renal cell carcinoma, the latter three of which together make up the remainder of RCC tumours<sup>1</sup>.

Kidney cancer accounts for 3% of all new cases of cancer diagnosed in men and just fewer than 2% of all cancers in women in the UK (excluding non-melanoma skin cancer)<sup>2-5</sup>.

Kidney cancer is therefore a relatively rare cancer; however some reports have indicated an increasing incidence globally, including the UK. This increase is due in part to the wider application of diagnostic imaging techniques leading to the incidental detection of asymptomatic kidney tumours.

## Incidence of Kidney Cancer by Age and Sex

Kidney cancer is the eleventh most common cancer in adults in the UK, with 7,380 new cases diagnosed in 2005. In UK men, it is the eighth most common cancer, with 4,622 new cases diagnosed in 2005, and in UK women it ranks fourteenth with 2,758 new cases diagnosed in 2005. This is a male to female ratio of 3:2 for incidence in the UK.

It has been estimated that the lifetime risk of developing kidney cancer is 1 in 89 for men and 1 in 162 for women<sup>6</sup>.

The number of new cases and rates for kidney cancer in the UK and its constituent countries in 2005 are shown in **Table 1**<sup>2-5</sup>.



**Table 1:** Number of New Cases and Rates of Kidney Cancer in the UK, 2005

Country	New Cases	Crude Rate	ESR <sup>1</sup>
<b>England</b>			
Men	3822	15.4	13.2
Women	2244	8.7	6.5
Total	6066	12.0	9.6
<b>Wales</b>			
Men	284	19.7	15.6
Women	160	10.6	7.3
Total	444	15.0	11.1
<b>Scotland</b>			
Men	413	16.8	14.2
Women	280	10.6	7.2
Total	693	13.6	10.4
<b>Northern Ireland</b>			
Men	103	12.2	11.8
Women	74	8.4	6.9
Total	177	10.3	9.0
<b>UK</b>			
Men	4622	15.7	13.4
Women	2758	9.0	6.6
Total	7380	12.3	9.7

<sup>1</sup> Directly age-standardised rate per 100,000 using European standard populations

Kidney cancer is rare in young adults and children, but rates begin to rise after the age of 40. Nearly 2 out of 3 people diagnosed with kidney cancer (62%) are over 65 years old and the highest rates are in the over 75s in both sexes.

Kidney cancer rarely afflicts children and about 90 paediatric cases are diagnosed in the UK each year. About 75% of childhood kidney cancer occurs in the under-fives. The most common paediatric kidney cancer is Wilm's tumour. Others include hereditary kidney cancer syndromes, such as von Hippel-Lindau disease.



Figure 1 shows the incidence kidney cancer by age-group<sup>2-5</sup>.

Figure 1: Numbers of New Cases of Kidney Cancer and Age Specific Incidence Rates by Sex, UK 2005

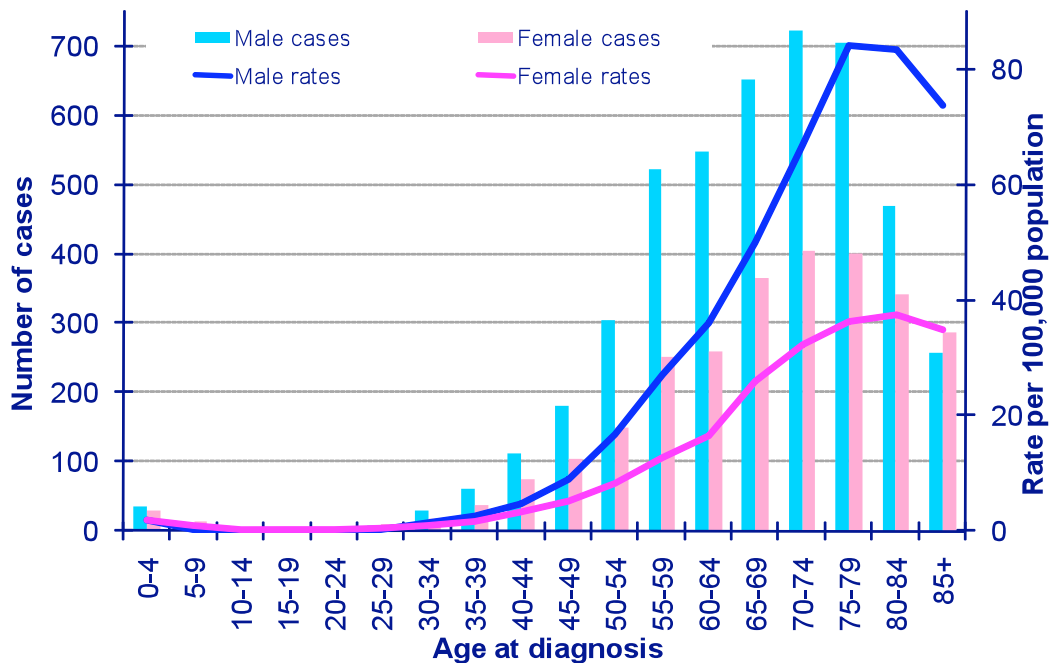


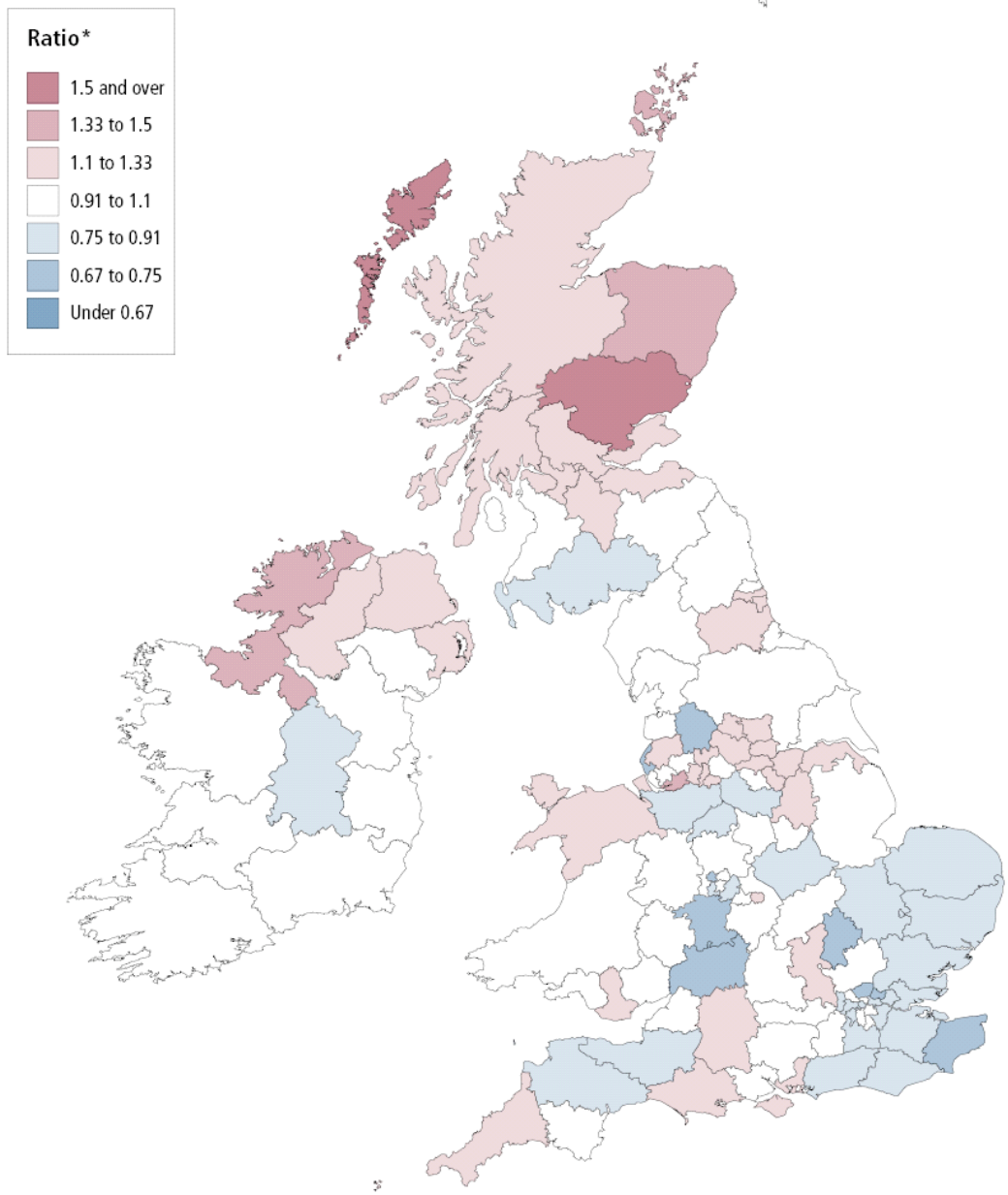
Figure courtesy of Cancer Research UK website

### Geographic Variations in the Incidence of Kidney Cancer

The incidence of kidney cancer varies between different regions of the UK and Ireland for both men and women. In Scotland, parts of Wales and Northern Ireland, the age-standardised rates for women are higher than the UK and Ireland average, while the incidence in Eastern and London regions are below average<sup>7</sup>. This distribution of kidney cancer follows the geographical pattern of two known risk factors for kidney cancer, namely smoking and obesity.

**Figure 2** shows the geographic spread of kidney cancer incidence for women from Health Authority data in the UK and Ireland, 1991-1999.

**Figure 2: Incidence of Kidney Cancer in Females by Health Authority, UK and Ireland 1991-1999**



*\*Ratio of directly age-standardised rate in health authority to UK and Ireland average*

Figure courtesy of Cancer Research UK website



**Tables 2 and 3** present the geographical spread of kidney cancer incidence and mortality for males and females in the UK. The data are presented by country of the UK and region of England for the period 1996-1999. Crude rates per 100,000 population and age-standardised rates per 100,000 using the European standard populations are presented<sup>8</sup>.

**Table 2:** Kidney Cancer Incidence and Mortality for Males by Country of the UK and Region of England, Latest Year Available

<b>Country/Region</b>	<b>Incidence</b>	<b>Crude Rate</b>	<b>ESR<sup>1</sup></b>	<b>Mortality</b>	<b>Crude Rate</b>	<b>ESR<sup>1</sup></b>
<b>United Kingdom<sup>2</sup></b>	3450	11.9	11.2	1880	6.5	5.9
<b>Great Britain<sup>2</sup></b>	3350	11.9	11.2	1840	6.5	5.9
<b>England &amp; Wales<sup>3</sup></b>	3040	11.8	11.0	1680	6.5	5.9
<b>England<sup>3</sup></b>	2830	11.7	10.9	1570	6.4	5.9
<b>Northern &amp; Yorkshire<sup>3</sup></b>	380	12.3	11.4	210	6.8	6.2
<b>Trent<sup>3</sup></b>	290	11.5	10.2	170	6.8	6.0
<b>Anglia &amp; Oxford<sup>3</sup></b>	290	10.7	10.3	170	6.4	6.0
<b>North Thames<sup>3</sup></b>	320	9.4	9.6	180	5.1	5.3
<b>South Thames<sup>3</sup></b>	400	11.8	11.0	210	6.3	5.7
<b>South &amp; West<sup>3</sup></b>	410	12.6	10.8	210	6.3	5.1
<b>West Midlands<sup>3</sup></b>	320	12.0	11.1	180	6.9	6.2
<b>North West<sup>3</sup></b>	420	13.0	12.5	230	7.1	6.5
<b>Wales<sup>3</sup></b>	210	14.8	12.7	120	8.1	6.9
<b>Scotland<sup>2</sup></b>	373	15.0	14.4	190	7.6	7.1
<b>Northern Ireland<sup>2</sup></b>	95	11.6	13.0	42	5.1	5.6

<sup>1</sup> Directly age-standardised rate per 100,000 using European standard populations

<sup>2</sup> Data from 1996 for incidence and 1998 for mortality

<sup>3</sup> Data from 1997 for incidence and 1999 for mortality



**Table 3:** Kidney Cancer Incidence and Mortality for Females by Country of the UK and Region of England, Latest Year Available

Country/Region	Incidence	Crude Rate	ESR <sup>1</sup>	Mortality	Crude Rate	ESR <sup>1</sup>
United Kingdom <sup>2</sup>	2160	7.2	5.5	1230	4.1	2.8
Great Britain <sup>2</sup>	2100	7.2	5.5	1190	4.1	2.8
England & Wales <sup>3</sup>	1800	6.8	5.2	1030	3.9	2.6
England <sup>3</sup>	1670	6.7	5.2	960	3.8	2.6
Northern & Yorkshire <sup>3</sup>	250	7.8	5.8	130	4.1	2.6
Trent <sup>3</sup>	170	6.6	5.1	110	4.4	2.9
Anglia & Oxford <sup>3</sup>	170	6.3	5.3	90	3.4	2.4
North Thames <sup>3</sup>	180	5.0	4.3	120	3.5	2.6
South Thames <sup>3</sup>	200	5.7	4.4	120	3.5	2.3
South & West <sup>3</sup>	270	7.9	5.9	130	3.9	2.5
West Midlands <sup>3</sup>	170	6.3	4.8	100	3.8	2.6
North West <sup>3</sup>	270	7.9	6.1	140	4.2	2.9
Wales <sup>3</sup>	130	8.4	5.7	70	4.5	2.7
Scotland <sup>2</sup>	261	9.9	7.7	119	4.5	3.0
Northern Ireland <sup>2</sup>	60	7.0	6.2	37	4.3	3.3

<sup>1</sup> Directly age-standardised rate per 100,000 using European standard populations

<sup>2</sup> Data from 1996 for incidence and 1998 for mortality

<sup>3</sup> Data from 1997 for incidence and 1999 for mortality

**Trends in the Incidence of Kidney Cancer**

The global incidence of kidney cancer has been increasing since the 1970s. In Great Britain, the incidence of kidney cancer in men increased by more than 85% from 7.1 per 100,000 in 1975 to 13.4 per 100,000 in 2005. In women, the incidence has more than doubled over the same period from 3.2 to 6.6 per 100,000 (**Figure 3**). Most of this increase has occurred in people over the age of 65, with rates more than doubling between 1975 and 2005 for men in their 70s and early 80s and women aged 65 and over<sup>2-5</sup>.

This increase in incidence is due, in part, to the introduction of new imaging techniques, such as ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI), resulting in the incidental detection of asymptomatic disease<sup>9-11</sup>. However, studies in the USA and UK have shown that some of this increase in incidence is in fact real and not solely attributed to incidentally-detected tumours<sup>12,13</sup>.

**Figure 3: Age-standardised (European) Incidence Rates of Kidney Cancer by Sex, Great Britain, 1975-2005**

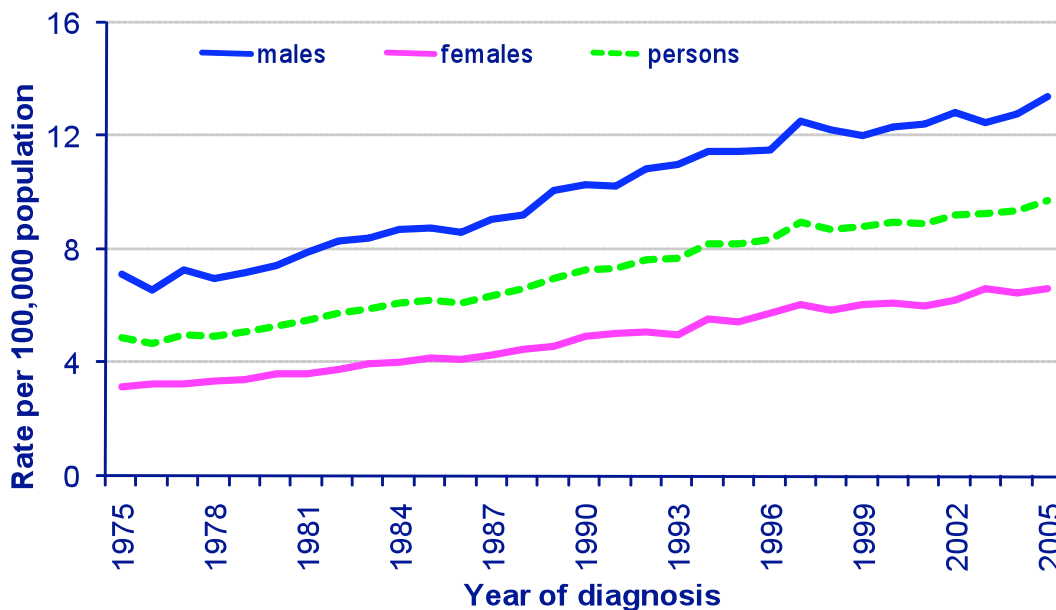


Figure courtesy of Cancer Research UK website



The increasing incidence of kidney cancer for both men and women in the UK between 1993 and 2005 can be seen in **Figure 4**.

**Figure 4: Age-standardised (European) Incidence Rates of Kidney Cancer by Sex, UK, 1993-2005**

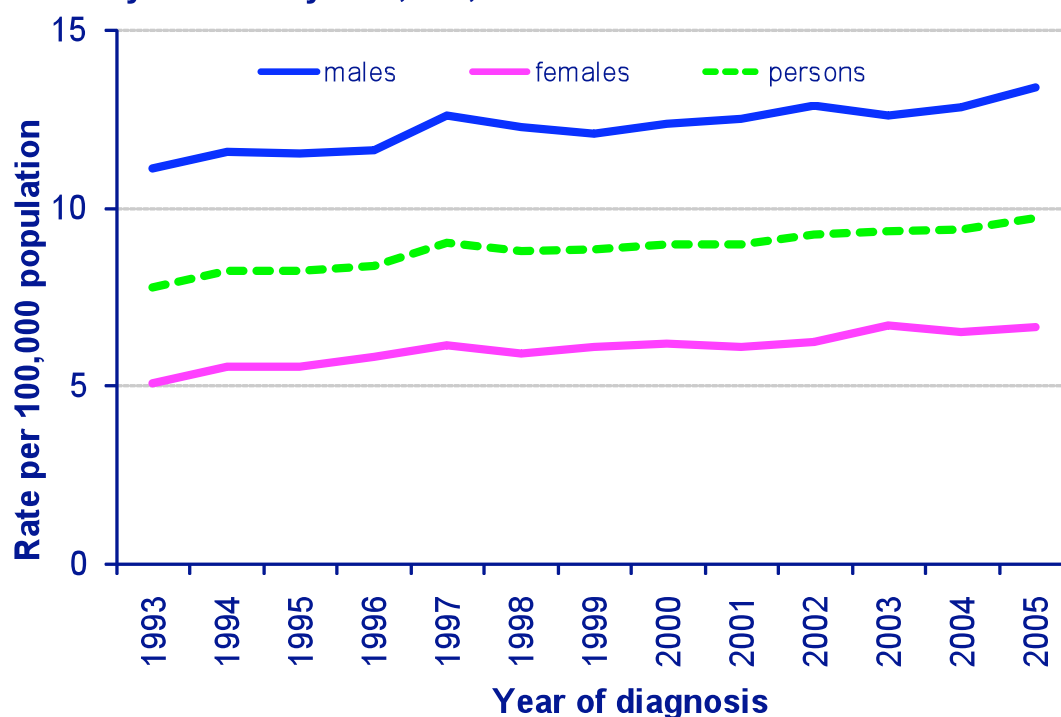


Figure courtesy of Cancer Research UK website

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