

Uterine Cancer in the United Kingdom: overall trends and variation by age

KEY MESSAGE:

Uterine cancer incidence is increasing with the increasing prevalence of obesity being the main driver in this trend. Tackling obesity may help to reduce the burden of this disease. Survival has also increased markedly, particularly in older women.

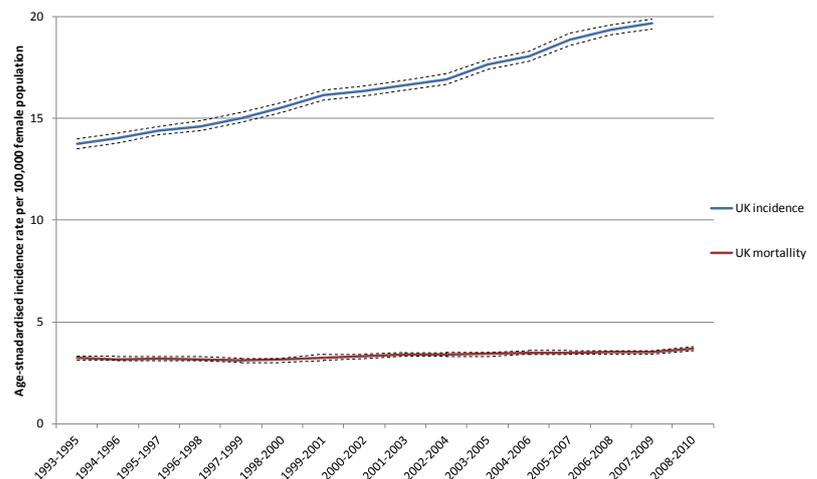
Introduction

Between 2007 and 2009 there were an average of 7,800 uterine cancer cases diagnosed annually in the UK, making this the fourth most common cancer in women and the most common gynaecological cancer. Between 2008 and 2010, there were an average of just over 1,800 deaths from uterine cancer. This makes uterine cancer the ninth most common cause of cancer death in women in the UK and the second most common gynaecological cancer death after ovarian cancer.

Overall Trends

The 43% rise in the incidence rate from 13.8 per 100,000 female population in 1993-1995 to 19.7 in 2007-2009 (figure 1) is considered to be mainly due to rising obesity rates.

Figure 1, trends in incidence and mortality rates, 1993-1995 to 2007-2009/2008-2010, UK



Survival from uterine cancer is generally good; both one- and five- year relative survival have improved by around 6 percentage points since 1993-1995, from 85.3% to 91.2% in 2007-2009 for one-year survival and from 72.9% to 78.5% in 2003-2005 for five-year survival (Figure 2). Symptoms such as post-menopausal bleeding often prompt women to visit their GP. Over two thirds of women

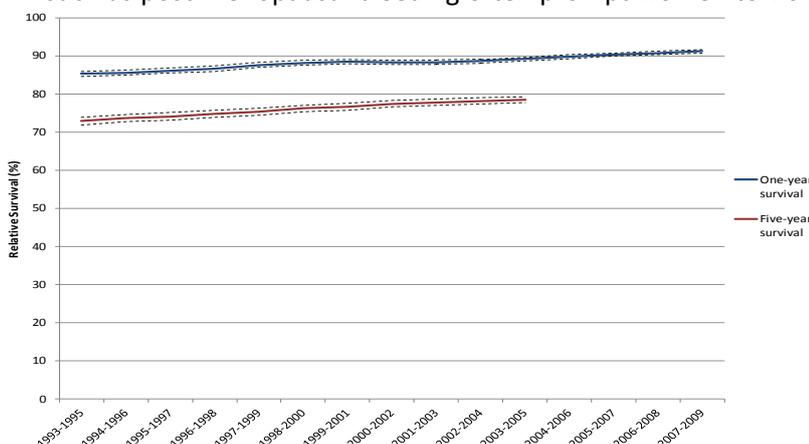


Figure 2, trends in one- and five-year survival rates, 1993-1995 to 2007-2009/2003-2005, UK

diagnosed with uterine cancer are diagnosed via an urgent referral as a “suspected cancer”^[1]. Around 75%^[2] of cases are diagnosed at stage I disease, facilitating successful treatment. Improvements in survival may be due to better symptom awareness and referral processes for symptomatic women, improved coordination of care and improved treatment.

Variation by age

The majority of cases of uterine cancer develop in post-menopausal women, with a steep increase in incidence from around the age of 50. Almost two thirds of cases are diagnosed in women aged 50-74. The majority of cases are endometrioid adenocarcinomas of the endometrium. The main risk factor for this disease is the effect of unopposed oestrogen on the uterus, without the inhibiting effects of progesterone. Unopposed estrogen occurs when women do not ovulate during the menstrual cycle, for example in a condition associated with obesity called polycystic ovary syndrome. A weak form of estrogen is produced in body fat, and following menopause, this can act upon the lining of the womb causing it to thicken (Endometrial hyperplasia; a pre-cancerous condition that can lead to endometrioid carcinomas). Obesity rates among women have also been rising with around a quarter of women classed as obese in 2011 compared to around 15% in the early 1990s (in England)^[3]. In addition to obesity, other risk factors for endometrial cancer have been more prevalent over recent decades, including diabetes, hypertension, and the use of Tamoxifen for the treatment of breast cancer. A reduction in the use of hysterectomy for women aged 40-50 years for the treatment of menstrual disorders over the past 25 years also likely contributes to the increasing incidence of uterine cancer.

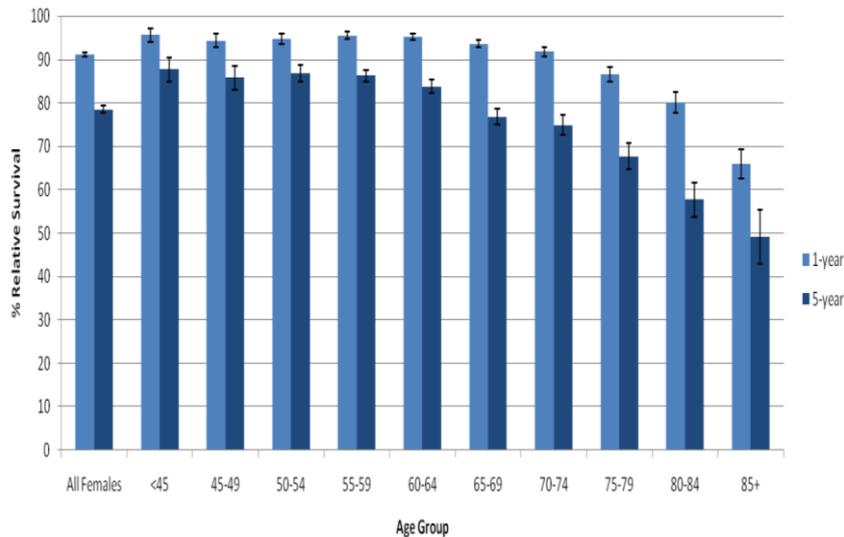


Figure 3, One- and five-year survival rates by age group, 2007-2009/2003-2005, UK

Almost two thirds of deaths occur in women aged 70 and over with the number (1,008) and the rate (36.1 per 100,000 female population) highest in women aged 85+. Survival is therefore much poorer in older women than younger; one-year survival is 96% in women under 45 compared to 66% in women age 85+ and five year survival is 88% compared to 49%, respectively (Figure 3). As with many cancers, later stage disease at presentation is more common with increasing age and is associated with poorer survival.

Indeed, women over the age of 70 are more likely to be diagnosed through an emergency route than younger women (5% of cases in women aged 50-69 increasing to 27% in women aged 85+ in 2006-2008)^[1]. The worse outcomes for older women may also be related to advanced disease stage and poorer general health with co-morbidities in older patients, which may prohibit the use of effective uterine cancer treatments. 89% of women in their 50s and 60s received surgery for endometrial cancer, compared to 65% in women aged 80+^[4].

Age Group	One-year Relative Survival				Five-year Relative Survival		
	1993-1995	2000-2002	2007-2009	Change	1993-1995	2003-2005	Change
All Females	85.3	88.3	91.2	5.9 *	72.9	78.5	5.6 *
<45	92.1	94.9	95.7	3.5	81.3	87.8	6.5
45-49	93.8	95.3	94.4	0.6	85.3	85.8	0.5
50-54	94.2	94.7	94.7	0.5	84.5	86.8	2.3
55-59	93.0	94.7	95.6	2.6 *	83.0	86.2	3.2
60-64	92.0	93.3	95.3	3.4 *	79.1	83.8	4.7 *
65-69	87.7	91.4	93.7	5.9 *	72.6	76.8	4.3 *
70-74	82.3	88.4	91.8	9.5 *	64.5	74.9	10.3 *
75-79	80.2	83.2	86.5	6.3 *	62.9	67.7	4.8
80-84	68.8	72.5	80.1	11.3 *	48.4	57.8	9.4 *
85 +	54.9	61.6	66.0	11.0 *	34.6	49.3	14.7 *

Although survival is lower in older women, there is evidence that it is improving. For example, between 1993-1995 and 2007-2009 one-year relative survival has improved by 11% for women aged 80+, while between 1993-1995 and 2003-2005, five-year survival has increased by 15% for women aged 85+ (Tables 1 and 2, the asterisk indicates a statistically significant increase in the survival rates when comparing 1993-1995 and the most recent year).

Table 1, Trends in one- and five-year relative survival by age, 1993-1995 to 2007-2009, UK

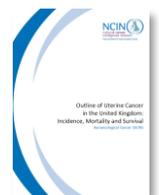
Recommendations

Uterine cancer is now the most common gynaecological cancer, with rising obesity rates likely the main driver behind the increasing incidence trends. Tackling obesity rates will not only have an impact on rising rates of diabetes, cardiovascular disease and other health problems in women, but may also help to slow the increasing burden of uterine cancer.

Uterine cancer is generally diagnosed early; around 75% of cases are diagnosed at stage I and the majority are treated successfully with surgery. This results in good long term survival. However, differences in survival by age suggest that earlier diagnosis may be key to increasing survival rates in older women who are more likely to be diagnosed through emergency routes and less likely to receive surgery.

Further Information

This analysis was taken from our published report, 'Outline of Uterine Cancer in the UK: Incidence, Mortality and Survival' published on the NCIN website in October. A more comprehensive reference list can be found in the report.



References

1. http://www.ncin.org.uk/publications/routes_to_diagnosis.aspx
2. <http://emedicine.medscape.com/article/258148-overview#a0101>
3. Health and Social Care Information Centre, 2012. HSE 2011: Vol. 1 | Chapter 10: Adult anthropomorphic measures. Overweight and obesity.
4. NCIN, 2011. Major surgical resections England, 2004-2006

FIND OUT MORE:

Knowledge and Intelligence Team (East Midlands)

The Knowledge and Intelligence Team (East Midlands) is the lead for gynaecological cancer

Other useful resources within the NCIN partnership:

Cancer Research UK CancerStats – Key facts and detailed statistics for health professionals

<http://info.cancerresearchuk.org/cancerstats/>

The National Cancer Intelligence Network is a UK-wide initiative, working to drive improvements in standards of cancer care and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research. Sitting within the National Cancer Research Institute (NCRI), the NCIN works closely with cancer services in England, Scotland, Wales and Northern Ireland. In England, the NCIN is part of the National Cancer Programme. The National Cancer Intelligence Network will be part of Public Health England from 1st April 2013.