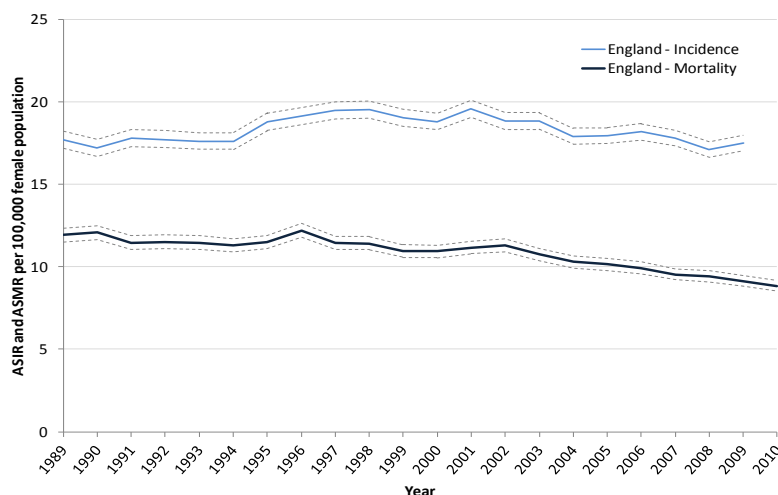


A Profile of Ovarian Cancer

in England

Incidence and Mortality

Over the last 20 years the incidence of ovarian cancer in England has remained fairly stable, although has decreased slightly in the last few years. Mortality rates were stable between 1989 and 2002 but fell by over 20% between 2002 and 2010.



KEY MESSAGE:
Both ovarian cancer incidence and mortality have decreased in recent years whilst survival has improved. However, there are some important differences by age, particularly in survival rates. There are also interesting patterns in recorded tumour type by age.

Figure 1 Trends in incidence and mortality, England, 1989-2010

ASIR is (directly) age-standardised incidence rate. ASMR is (directly) age-standardised mortality rate. Dotted lines represent 95% confidence intervals

cases diagnosed 2009 and average number of deaths per year 2008-2010

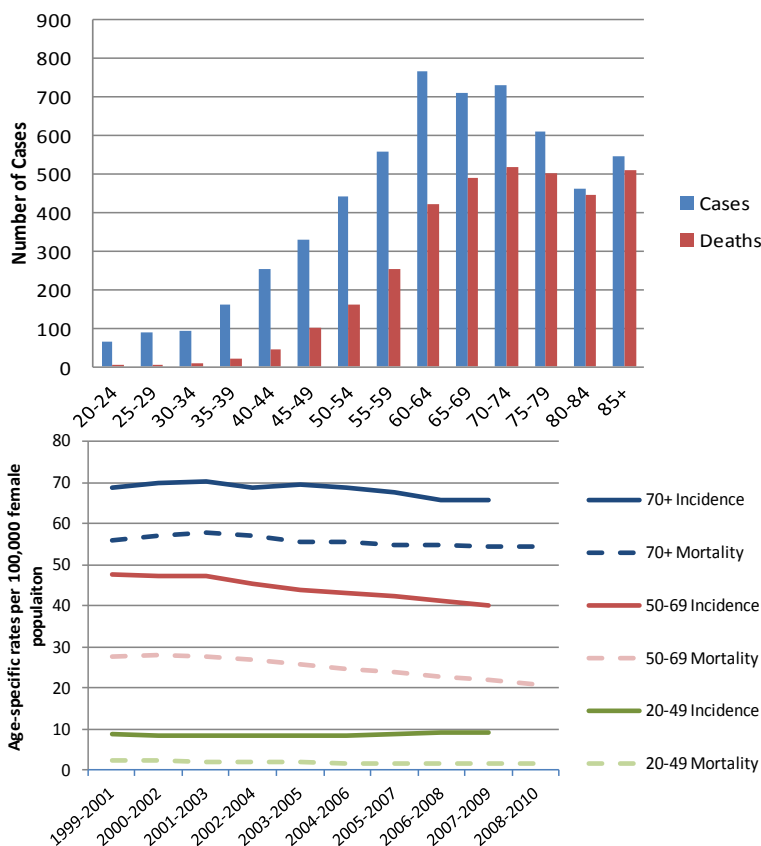


Figure 2 By five year age group, total

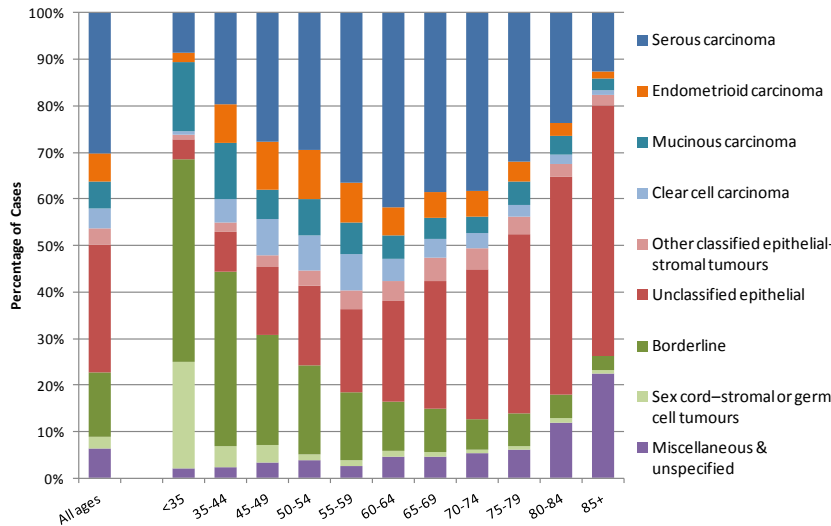
Almost half of all women diagnosed with ovarian cancer in 2009 were in their 60s or 70s, and over 80% of ovarian cancer deaths between 2008 and 2010 were in women aged 60 or over. During the last 10 years, incidence and mortality rates have decreased most notably in women aged 50-69.

The recent downward trend in the incidence of ovarian cancer among women aged 50 and over may reflect the protective benefit of the oral contraceptive pill. Women currently aged 70 and over were the first cohort of child bearing age to have the oral contraceptive pill widely available to them during the 1960s⁽¹⁾⁽²⁾.

Figure 3 Age-specific incidence and mortality rates 1999-2001 to 2008-2010.

Morphology

Serous carcinoma is the most common morphological group for ovarian cancer, accounting for 32% of all cases in 2009, and is particularly common in women aged 45-74 at diagnosis. Unclassified epithelial (i.e. carcinoma which has not been classified according to the WHO categories) is the second most common morphology group overall (25% of cases) and is most common in women aged 75 or over. The higher proportion of unspecified or unclassified morphology in older women may reflect difficulties in obtaining a histological diagnosis. This may be due to the poor health of the patient or in cases where there is only a



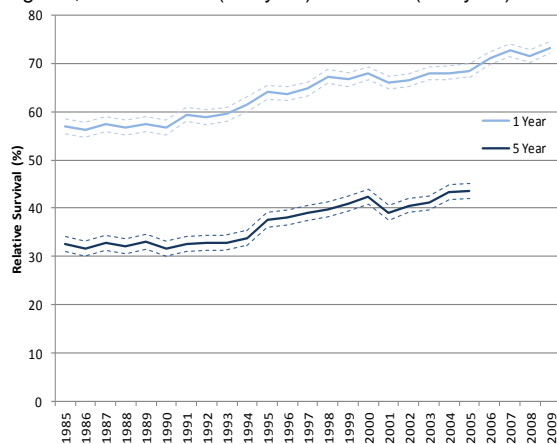
small tissue sample available, particularly where the tumour is poorly differentiated. Borderline is the third most common group overall (14% of cases) and is most common in women aged under 45. Sex cord-stromal or germ cell tumours are most common in women under the age of 35, particularly in girls and young women in their 20's.⁽³⁾

Figure 4 Proportions of cases by morphology group by age band; patients diagnosed, 2007-2009

Survival

Survival following a diagnosis of ovarian cancer has improved in England overall since the mid-1980's, from 57% to 73% for one-year relative survival and from 33% to 44% for five-year relative survival. During this time period one-year survival improved most in women aged 55-79, and five-year survival improved most notably in women aged 40-49. This may reflect improved detection and management of the disease following the establishment of specialist gynaecological cancer centres throughout the UK. Improved access to chemotherapy may also be a factor in the increasing survival rates⁽³⁾⁽⁴⁾. There has been little improvement in survival among the oldest women.

Figure 5 Trends in one- and five-year relative survival, England, 1985 to 2005 (five-year) and 2009 (one-year)



Survival estimates may differ to those presented in other sources.

This may be due to different methods used to calculate survival, or due to differences in the definition of ovarian cancer.

Table 1 Percentage change in one- and five-year relative survival by age group.

	One-Year			Five-Year		
	1987-1989 (%)	2007-2009 (%)	% point change	1988-1990 (%)	2003-2005 (%)	% point change
All Ages	57.1	72.5	+15 *	32.2	42.6	+10 *
15-39	87.2	95.6	+8 *	72.2	84.2	+12 *
40-44	83.6	92.3	+9 *	51.6	74.5	+23 *
45-49	76.5	91.0	+15 *	41.8	61.5	+20 *
50-54	74.0	86.6	+13 *	39.9	53.3	+13 *
55-59	67.0	85.9	+19 *	33.7	47.0	+13 *
60-64	58.3	81.0	+23 *	28.5	39.1	+11 *
65-69	53.2	74.9	+22 *	24.3	34.4	+10 *
70-74	42.2	67.9	+26 *	19.7	28.8	+9 *
75-79	36.6	56.6	+20 *	17.2	24.5	+7 *
80-84	31.2	42.0	+11 *	17.3	18.3	+1
85+	23.0	24.0	+1	13.8	13.7	-0.1

* represents a statistically significant percentage change between the time periods analysed

There is strong evidence that ovarian cancer survival is worse in older women. For example, one-year relative survival in those aged 15-39 is 96% compared with 24% in those aged 85 or over. Similarly, five-year survival in those aged 15-39 is 84% compared with 14% in those aged 85 or over. As with many cancers, this marked difference may, in part, be due to difficulties in treating the disease in older women, relating to comorbidities. However, there is also evidence that GPs may be less likely to recognise and refer older women presenting with ovarian cancer. This may also contribute to the lower survival rates in older women⁽⁵⁾.

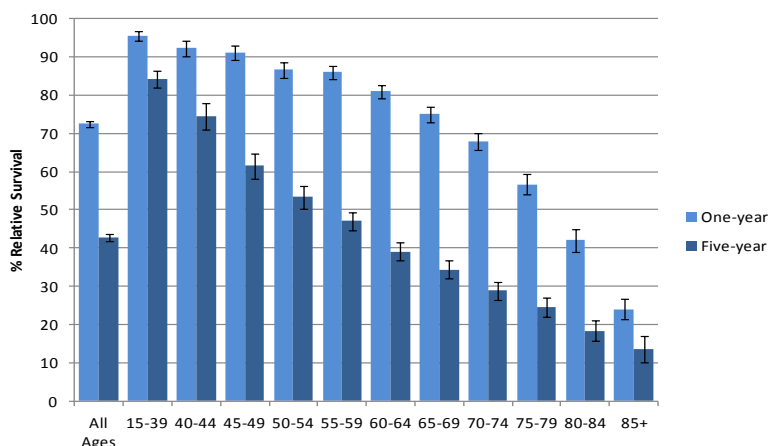


Figure 6 Age-specific relative survival, England, 2007-2009 (1 year) and 2003-2005 (5 year).

Further Information

This analysis is taken from the accompanying report published by Trent Cancer registry, 'Overview of Ovarian Cancer in England: Incidence, Mortality and Survival'. This report is one of three 'overview' reports included in the registry's work programme; a cervical cancer report has already been published and a uterine cancer report is to be published later in 2012/13. www.ncin.org.uk

References

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- 2). Collaborative Group on Epidemiological Studies of Ovarian C, Beral V, Doll R, Hermon C, Peto R, Reeves G. [Ovarian cancer and oral contraceptives: collaborative reanalysis of data from 45 epidemiological studies including 23,257 women with ovarian cancer and 87,303 controls.](#) Lancet, 2008. 371(9609):303-14.
- 3). The Cancer Research UK website <http://info.cancerresearchuk.org/cancerstats/types/ovary/>
- 4). Kitchener H C, 2008. Trends and inequalities in survival for 20 cancers in England and Wales 1986-2001: population-based analyses and clinical commentaries. British Journal of Cancer, 99:S73-S74.
- 5) Tate AR, Nicholson A, Cassell JA. [Are GPs under-investigating older patients presenting with symptoms of ovarian cancer? Observational study using General Practice Research Database.](#) Br J Cancer 2010;102(6):947-51.

FIND OUT MORE:

Trent Cancer Registry

Trent Cancer Registry is the NCIN lead Cancer Registry for Gynaecological Cancer

<http://www.empho.org.uk/tcr/aboutUs.aspx>

Other useful resources within the NCIN partnership:

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

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.