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# Gynaecological Sarcomas: Incidence and Survival (England: 1985-2009)

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## Introduction

All sarcomas = ~ 1% of all cancers

~ 1.5 – 2% of all gynae cancers

Incidence rates are currently unknown

~ 0.1% of all cancers?

Uterine leiomyosarcomas are the most common type



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## Identifying gynae sarcomas

National Cancer Data Repository (NCDR): England: 1985 – 2009

ICD-10 anatomical location

ICD-03 morphology

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## ICD-10 anatomical sites

ICD-10 Group	Description
C51	Malignant neoplasm of vulva
C52	Malignant neoplasm of vagina
C53	Malignant neoplasm of cervix uteri
C54	Malignant neoplasm of corpus uteri
C55	Malignant neoplasm of uterus, part unspecified
C56	Malignant neoplasm of ovary
C57	Malignant neoplasm of other and unspecified female genital organs
C58	Malignant neoplasm of placenta

Used in conjunction with over 100 ICD-03 morphology codes, including:

M8890- Leiomyosarcoma, NOS

M8930- Endometrial stromal sarcoma

M8800- Sarcoma, NOS

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## Count- Anatomical

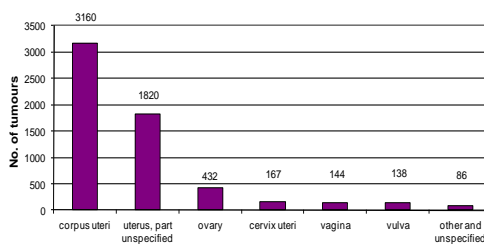
5,947 gynaecological sarcomas diagnosed in England 1985-2009

3160 (53%) in the corpus uteri

1820 (31%) elsewhere in the uterus

432 (7%) in the ovary

535 (9%) elsewhere



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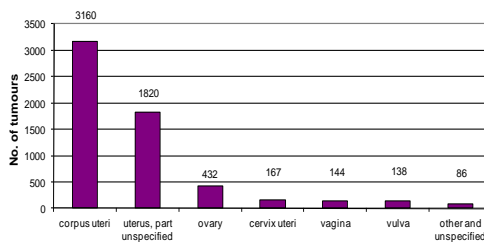
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} 84%





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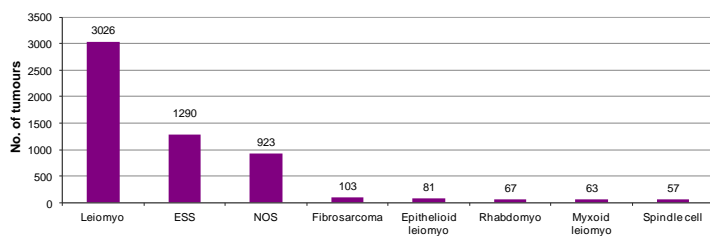
## Count- Morphological

3026 (51%) leiomyosarcoma, NOS

1290 (22%) endometrial stromal sarcoma

923 (16%) sarcoma, not otherwise specified

708 (11%) other morphologies



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## Leiomyosarcomas

Develop from smooth muscle cells

4 sub-types, but leiomyosarcoma NOS accounts for 96% of all cases

26% of all leiomyosarcomas are gynae leiomyosarcomas

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## Morphological distribution

Histological sub-type	Uterus	Ovary	Cervix	Vagina	Vulva	Other	Grand Total
Leiomyosarcoma NOS	52%	38%	53%	46%	35%	74%	3026
ESS	26%	2%	2%	1%	0%	0%	1290
Sarcoma NOS	15%	22%	19%	19%	13%	12%	923
Other leiomyosarcoma	3%	1%	2%	3%	2%	5%	148
Rhabdomyosarcoma	1%	3%	13%	24%	4%	1%	132
Fibrosarcoma	0%	20%	1%	0%	3%	1%	104
Liposarcoma	0%	2%	0%	1%	5%	0%	22
Dermatofibrosarcoma	0%	0%	0%	0%	15%	0%	21
Other	3%	13%	11%	7%	23%	7%	281
Grand Total	4980	432	167	144	138	86	5947

\* Highlighting = greater than 10%

ESS almost exclusively in the uterus

Leiomyosarcoma and sarcoma NOS occur across all sites

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## Morphological distribution

Histological sub-type	Uterus	Ovary	Cervix	Vagina	Vulva	Other	Grand Total
Leiomyosarcoma NOS	86%	5%	3%	2%	2%	2%	3026
ESS	99%	1%	0%	0%	0%	0%	1290
Sarcoma NOS	80%	10%	3%	3%	2%	1%	923
Other leiomyosarcoma	86%	4%	3%	3%	2%	3%	148
Rhabdomyosarcoma	45%	8%	16%	26%	4%	1%	132
Fibrosarcoma	11%	83%	2%	0%	4%	1%	104
Liposarcoma	27%	36%	0%	5%	32%	0%	22
Dermatofibrosarcoma	0%	0%	0%	0%	100%	0%	21
Other	57%	19%	6%	4%	11%	2%	281
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86% of all gynaecological sarcomas are in the uterus

The uterus is the most common site for almost all common gynae sarcoma sub-types



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There are three exceptions:

Fibrosarcoma, NOS (ovary), liposarcoma (ovary) and dermatofibrosarcoma (vulva)



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# Incidence rates

Figure 2: Number of gynaecological sarcomas diagnosed in each age group

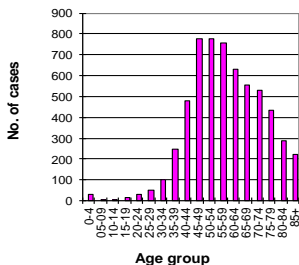


Figure 3: Gynaecological sarcoma age specific rates (England: 1985 – 2009)

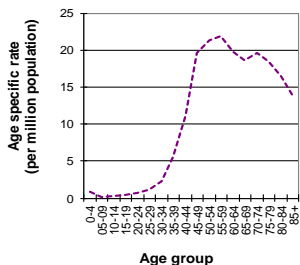
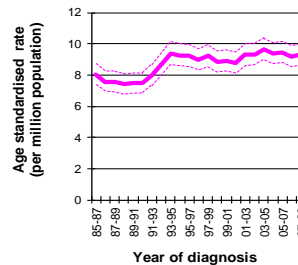


Figure 1: Gynaecological sarcoma 3-year rolling age-standardised incidence rates



55-59 is the peak age group for gynaecological sarcomas  
Large and currently unexplained increase in incidence between 1991-93 and 1993-95



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# Age specific rates

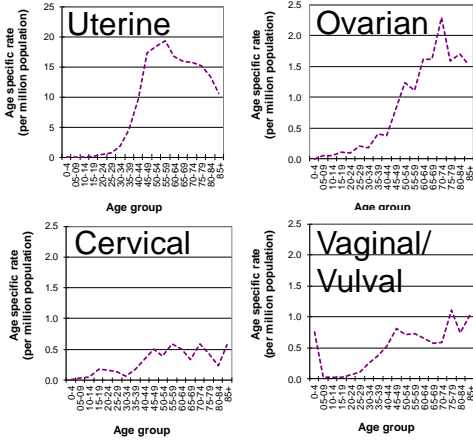
Age specific rates vary by anatomical site



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# Age specific rates

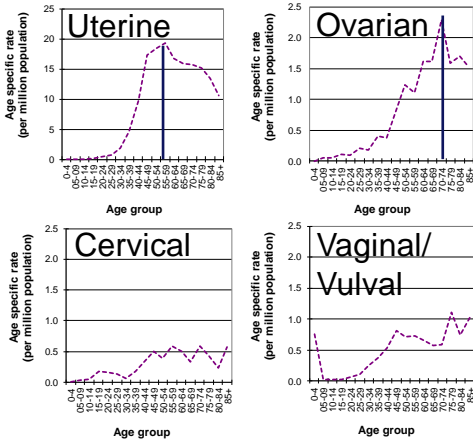
Age specific rates vary by anatomical site



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# Age specific rates

Age specific rates vary by anatomical site



Uterine peak age: 55-59

Ovarian peak age: 70-74

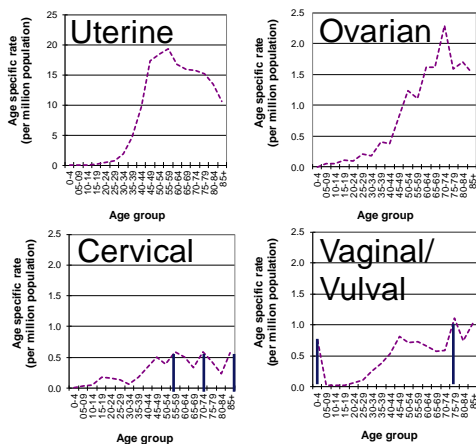




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## Age specific rates

Age specific rates vary by anatomical site



More varied age distribution:

Cervical: 55-59, 70-74, 85+

Vaginal/vulval: 0-4, 75-79

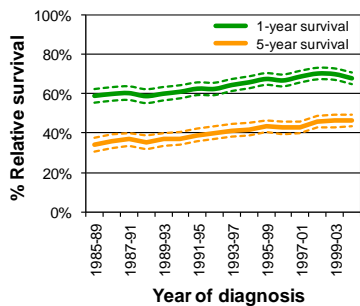
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## Survival



1-year survival

1985-89: 59%

2000-04: 68%

(significant increase)

5-year survival

1985-89: 34%

2000-04: 46%

(significant increase)

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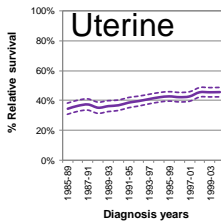
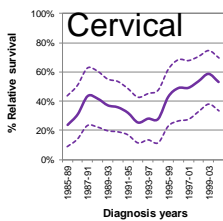
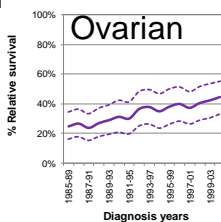
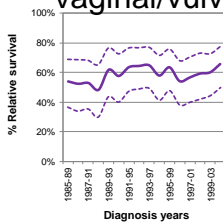


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## Site specific survival rates

5-year relative site specific survival rates vary by anatomical site

### Vaginal/vulval



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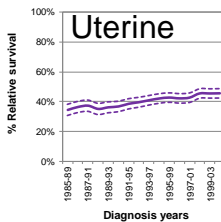
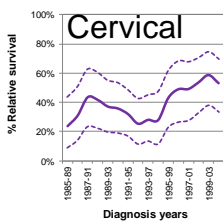
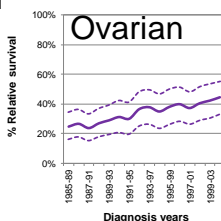
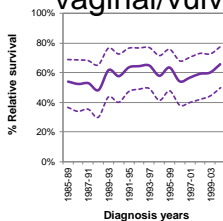


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## Site specific survival rates

5-year relative site specific survival rates vary by anatomical site

### Vaginal/vulval



Significant increase in uterine survival: 35% - 46%

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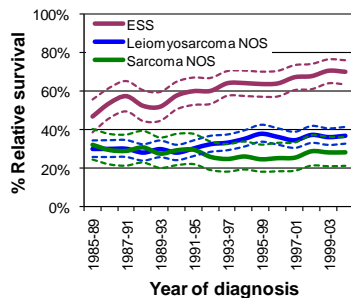
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## Uterine survival by morphology

Uterine 5-year relative site specific survival rates vary by morphology type



ESS sarcoma survival significantly higher than leiomyosarcoma, NOS and sarcoma, NOS survival in uterine sarcoma patients

Uterine ESS sarcoma survival has increased significantly: 47% - 70%

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## Future work

Treatment pathways

What proportion of patients in each age group were treated surgically?

Were patients treated in a specialist centre?

What were the specialties of the consultants treating gynaecological sarcoma patients?

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## Conclusions

These are the first national analyses of gynaecological sarcoma incidence and survival data based on English Cancer Registry data

Gynaecological sarcoma incidence rates have remained steady since the early 1990s

Uterine leiomyosarcomas are the most common sub-type

1- and 5-year relative survival rates have increased significantly

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# Thank you!

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