3.18 Ovaries

Table 3.18.1
Overview of key epidemiological parameters for Germany, ICD-10 C56

<table>
<thead>
<tr>
<th></th>
<th>Incidence 2013</th>
<th>Incidence 2014</th>
<th>Incidence 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Women</td>
<td>Women</td>
</tr>
<tr>
<td>Incident cases</td>
<td>7,560</td>
<td>7,250</td>
<td>6,900</td>
</tr>
<tr>
<td>Crude incidence rate¹</td>
<td>18.4</td>
<td>17.6</td>
<td>16.5</td>
</tr>
<tr>
<td>Standardised incidence rate¹-²</td>
<td>11.6</td>
<td>11.0</td>
<td>10.1</td>
</tr>
<tr>
<td>Median age at diagnosis</td>
<td>69</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mortality 2013</th>
<th>Mortality 2014</th>
<th>Mortality 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Women</td>
<td>Women</td>
</tr>
<tr>
<td>Deaths</td>
<td>5,466</td>
<td>5,354</td>
<td>5,431</td>
</tr>
<tr>
<td>Crude mortality rate¹</td>
<td>13.3</td>
<td>13.0</td>
<td>13.1</td>
</tr>
<tr>
<td>Standardised mortality rate¹-²</td>
<td>7.1</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>Median age at death</td>
<td>74</td>
<td>74</td>
<td>75</td>
</tr>
</tbody>
</table>

¹ per 100,000 persons  ² age-standardised (old European Standard)

Prevalence and survival rates

<table>
<thead>
<tr>
<th></th>
<th>after 5 years</th>
<th>after 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Women</td>
</tr>
<tr>
<td>Prevalence</td>
<td>20,900</td>
<td>33,200</td>
</tr>
<tr>
<td>Absolute survival rate (2013–2014)³</td>
<td>37 (34–41)</td>
<td>27 (23–30)</td>
</tr>
</tbody>
</table>

³ in percentages (lowest and highest value of the included German federal states)

Epidemiology

Ovarian cancer accounts for 3.2% of all malignant neoplasms among women and 5.3% of all female cancer-related deaths. The incidence rates increase continually up to the age of 85, while the median age at diagnosis is 70. Histologically, malignant tumours of the ovaries are predominantly moderately and poorly differentiated serous adenocarcinomas. Rare forms of ovarian cancer, such as germ cell tumours may already occur in girls and younger women. One in approximately 71 women will develop ovarian cancer over the course of her lifetime. Since the year 2000, incidence and mortality rates in Germany have continued to fall significantly, as have the absolute numbers of new cases. The differences in incidence and mortality rates between German federal states are small. Since diagnosis often only occurs at a late tumour stage (60% at stage T3), patients with ovarian cancer have relatively unfavourable survival prospects. The 5-year relative survival rate in Germany is currently close to 41%. In 2014, around 33,000 women lived in Germany, who had been diagnosed with ovarian cancer during the past ten years.

Risk factors

The risk of developing ovarian cancer primarily increases with age. Overweight also plays a role. Moreover, there are important associations with hormonal factors: childlessness and infertility increase the risk of developing ovarian cancer, while several births and longer periods of breast-feeding reduce the risk. The impact on risk of early first menstrual period (menarche) or late menopause (climacterium) is not entirely clear. In women with polycystic ovaries, evidence indicates that hormonal factors potentially also translate into a higher risk of ovarian cancer. Hormone replacement therapy (and in particular oestrogen monotherapy) for women after menopause is a further risk factor. In contrast, hormonal ovulation inhibitors («the pill») have a protective effect. Sterilisation by means of tubal ligation also reduces the risk for this cancer.

For women with first-degree relatives diagnosed with breast or ovarian cancer and for women who themselves have been diagnosed with breast, uterine or colorectal cancer, the risk is also higher. Underlying genetic mutations, above all of BRCA1 and BRCA2, considerably increase the risk, but only play a part in one out of ten cases.
Figure 3.18.1a
Age-standardised incidence and mortality rates, ICD-10 C56, Germany 1999 – 2014/2015
per 100,000 (old European Standard)

Figure 3.18.1b
Absolute numbers of incident cases and deaths, ICD-10 C56, Germany 1999 – 2014/2015

Figure 3.18.2
Age-specific incidence rates, ICD-10 C56, Germany 2013 – 2014
per 100,000
### Table 3.18.2
Cancer incidence and mortality risks in Germany by age, ICD-10 C56, database 2014

<table>
<thead>
<tr>
<th>Women aged</th>
<th>Risk of developing cancer</th>
<th>Mortality risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in the next ten years</td>
<td>ever</td>
</tr>
<tr>
<td></td>
<td>ever</td>
<td></td>
</tr>
<tr>
<td>35 years</td>
<td>0.1% (1 in 1,600)</td>
<td>1.4% (1 in 73)</td>
</tr>
<tr>
<td>45 years</td>
<td>0.2% (1 in 600)</td>
<td>1.3% (1 in 75)</td>
</tr>
<tr>
<td>55 years</td>
<td>0.3% (1 in 370)</td>
<td>1.2% (1 in 84)</td>
</tr>
<tr>
<td>65 years</td>
<td>0.4% (1 in 260)</td>
<td>1.0% (1 in 100)</td>
</tr>
<tr>
<td>75 years</td>
<td>0.4% (1 in 230)</td>
<td>0.7% (1 in 150)</td>
</tr>
<tr>
<td>Lifetime</td>
<td>1.4% (1 in 71)</td>
<td></td>
</tr>
</tbody>
</table>

### Figure 3.18.3
Distribution of T-stages at first diagnosis (top: all cases; bottom: only valid reports)
ICD-10 C56, Germany 2013–2014

```
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
28% 12% 60%
```

### Figure 3.18.4a
Absolute survival rates up to 10 years after first diagnosis, ICD-10 C56, Germany 2013–2014

### Figure 3.18.4b
Relative survival rates up to 10 years after first diagnosis, ICD-10 C56, Germany 2013–2014
Figure 3.18.5
Registered age-standardised incidence and mortality rates in German federal states, ICD-10 C56, 2013–2014
per 100,000 (old European Standard)

Hamburg
Lower Saxony
Schleswig-Holstein
Saarland
North Rhine-Westphalia
Bavaria
Berlin
Rhineland-Palatinate
Mecklenburg-West Pomerania
Brandenburg
Bremen
Thuringia
Saxony
Baden-Württemberg
Saxony-Anhalt
Hesse

Incidence complete
Incidence <90% reg'd.
Mortality

Figure 3.18.6
International comparison of age-standardised incidence and mortality rates, ICD-10 C56, 2013–2014 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)

Women

England
Poland
Czech Republic
Denmark
Finland
Sweden
USA
Netherlands
Germany
Switzerland
Austria
Belgium
France

Incidence
Mortality

1 incl. C57.0 to C57.4
2 no data for incidence