### 3.15 Vulva

Table 3.15.1
Overview of key epidemiological parameters for Germany, ICD-10 C51

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Incident cases</td>
<td>3,160</td>
<td>3,190</td>
<td>4,400</td>
</tr>
<tr>
<td>Crude incidence rate</td>
<td>7.7</td>
<td>7.7</td>
<td>10.6</td>
</tr>
<tr>
<td>Standardised incidence rate¹²</td>
<td>4.6</td>
<td>4.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Median age at diagnosis</td>
<td>72</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Deaths</td>
<td>860</td>
<td>827</td>
<td></td>
</tr>
<tr>
<td>Crude mortality rate¹</td>
<td>2.1</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Standardised mortality rate¹²</td>
<td>1.0</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>5-year prevalence</td>
<td>10,900</td>
<td>11,200</td>
<td></td>
</tr>
<tr>
<td>Absolute survival rate (2011–2012)¹</td>
<td>59 (47–70)</td>
<td>44 (32–53)</td>
<td></td>
</tr>
<tr>
<td>Relative survival rate (2011–2012)¹</td>
<td>70 (58–81)</td>
<td>64 (50–89)</td>
<td></td>
</tr>
</tbody>
</table>

¹ per 100,000 persons  ² age-standardised (European standard)  ³ in percentages (lowest and highest value of the included German federal states)

### Epidemiology

A significant increase in the number of vulvar carcinomas has been observed in Germany in recent years. In 2012 some 3,200 women were diagnosed with this carcinoma. Just ten years ago there were fewer than half as many cases. The mortality rate has not decreased in recent years, in contrast to the mortality rates for most other gynaecological tumours. Latest data shows that about 830 women die of this disease every year.

The increase in the incidence rate is observed in young women in particular, although the majority of the burden of disease is still accounted for by women over 70 years of age. Median age at diagnosis is 72 years. The relative 5-year survival rate after diagnosis of a malignant vulvar tumour is 70%. The vast majority of invasive carcinomas are diagnosed at an early tumour stage (T1), although lymph nodes are already affected in one of every five of these cases. There are significant regional differences in both the incidence and the mortality rates. The Saarland has by far the highest incidence and mortality rates among Germany’s federal states. Germany has a broadly comparable mortality rate at a higher incidence rate than its neighbours, although data was not available for comparison in all neighbouring countries.

### Risk factors and prevention

The majority of vulvar carcinomas are squamous-cell carcinomas (90%). A distinction is made between two types of these carcinomas: non-keratinising and keratinising squamous-cell carcinomas. The former involve chronic infection with the human papillomavirus (HPV), while the keratinising carcinomas develop independent of HPV.

HPV-dependent vulvar carcinomas and their pre-cancerous conditions (usual-type vulvar intraepithelial neoplasia, uVIN) occur predominantly in younger women. In contrast, HPV-independent carcinomas usually occur in older women, and these are the commonest type of vulvar carcinoma (65% to 80% of cases). Significant risk factors for this type of carcinoma and its precancerous conditions (differentiated VIN, dVIN) are in particular degenerative and chronic inflammatory skin diseases such as Lichen sclerosus.

Further risk factors are smoking and alcohol abuse. Long-standing immunosuppression, e.g. following organ transplants or in case of HIV infection, can facilitate infection with HPV and thus increase the risk. The presence of other cancers or their precursors in the genital area, for example cervical cancer, also constitutes a risk factor for vulvar carcinoma. The incidence in particular of HPV-related precursors to vulvar carcinoma has increased in recent years. One possible means of preventing these precancerous conditions and carcinomas is HPV vaccination.
Figure 3.15.1a
Age-standardised incidence and mortality rates, ICD-10 C51, Germany 1999–2012
per 100,000 (European standard)

Figure 3.15.1b
Absolute numbers of incident cases and deaths, ICD-10 C51, Germany 1999–2012

Figure 3.15.2
Age-specific incidence rates, ICD-10 C51, Germany 2011–2012
per 100,000
Table 3.15.2  
Cancer incidence and mortality risks in Germany by age, ICD-10 C51, database 2012

<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>35 years</td>
<td>&lt;0.1% (1 in 3,300)</td>
<td>0.6% (1 in 160)</td>
</tr>
<tr>
<td>45 years</td>
<td>0.1% (1 in 1,900)</td>
<td>0.6% (1 in 170)</td>
</tr>
<tr>
<td>55 years</td>
<td>0.1% (1 in 1,100)</td>
<td>0.5% (1 in 180)</td>
</tr>
<tr>
<td>65 years</td>
<td>0.1% (1 in 690)</td>
<td>0.5% (1 in 210)</td>
</tr>
<tr>
<td>75 years</td>
<td>0.2% (1 in 440)</td>
<td>0.4% (1 in 270)</td>
</tr>
<tr>
<td>Lifetime risk</td>
<td>0.6% (1 in 160)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.15.3  
Distribution of T-stages at first diagnosis (top: all cases; bottom: only valid reports)  
ICD-10 C51, Germany 2011 – 2012

Figure 3.15.4a  
Absolute survival rates up to 10 years after first diagnosis,  
ICD-10 C51, Germany 2011 – 2012

Figure 3.15.4b  
Relative survival rates up to 10 years after first diagnosis,  
ICD-10 C51, Germany 2011 – 2012
Figure 3.15.5
Registered age-standardised incidence and mortality rates in German federal states, ICD-10 C51, 2011 – 2012 per 100,000 (European standard)

Women

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

Incidence complete
Incidence <90% reg'd.
Mortality

0 2 4 6 8 10 12

Figure 3.15.6
International comparison of age-standardised incidence and mortality rates, ICD-10 C51, 2011 – 2012 or latest available year (details and sources, see appendix) per 100,000 (European standard)

Women

- Germany
- Denmark¹
- Finland¹
- Netherlands
- Czech Republic
- Great Britain
- Sweden¹
- Belgium²
- USA
- Austria
- Poland³
- Switzerland³

Incidence
Mortality

0 2 4 6 8 10 12

¹ incl. C52, C57.7, C57.8 and C57.9
² no comparable data for mortality
³ no comparable data