3.4 Stomach

Epidemiology
Most malignant neoplasms of the stomach are adenocarcinomas. Neuroendocrine tumours (NET) and gastrointestinal stromal tumours (GIST) are found in about 4% to 5% of all cases, with the latter being more frequent among women.

As in other industrial nations, a steady decline in incidence and mortality from stomach cancer has been observed in Germany over the last few decades. This trend is continuing and applies to all age groups, and both sexes. Tumours of the gastric outlets (the antrum and pylorus) have decreased the most.

The risk of developing stomach cancer increases steadily with age. On average, men who develop the condition do so at the age of 72, whereas the condition is usually diagnosed among women at the age of 76. Relative 5-year survival rates are 34% for women and 32% for men. Survival prospects have improved recently, although they are still unfavourable compared to other cancers. In about two-thirds of cases with adequate cancer staging data, the cancer had already metastasised by the time it had been diagnosed (stage IV).

Risk factors
Helicobacter pylori infection of the stomach is the most important risk factor associated with stomach cancer. In addition, between 5% and 10% of gastric carcinomas can be attributed to an infection with the Epstein-Barr virus. Smoking and excessive alcohol consumption also increase the risk of stomach cancer. Foods preserved with salt, a diet high in salt, and meat products are further risk factors. There are indications that chronic heartburn and gastro-oesophageal reflux disease increase the risk of certain tumours of the transitional zone between the stomach and the oesophagus. Low socio-economic status and stomach surgery in the past continue to be associated with a higher frequency of stomach cancer.

First-degree relatives of people who have developed stomach cancer are two to three times more likely to develop stomach cancer themselves than the general population. Individuals with more than one first-degree relative who has developed stomach cancer have a 10-fold higher risk. It is unclear whether this risk stems from a shared lifestyle, a shared genetic disposition, or a combination of both. Some hereditary syndromes increase the risk of gastric carcinomas. Pernicious anaemia is a further risk factor, but it affects comparatively few people.
**Figure 3.4.1a**
Age-standardised incidence and mortality rates by sex, ICD-10 C16, Germany 1999–2016/2017, projection (incidence) through 2020
per 100,000 (old European Standard)

**Figure 3.4.1b**
Absolute numbers of incident cases and deaths by sex, ICD-10 C16, Germany 1999–2016/2017, projection (incidence) through 2020

**Figure 3.4.2**
Age-specific incidence rates by sex, ICD-10 C16, Germany 2015–2016
per 100,000
### Table 3.4.2
Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C16, database 2016

<table>
<thead>
<tr>
<th>Age</th>
<th>Women Risk of developing cancer</th>
<th>Women Mortality risk</th>
<th>Men Risk of developing cancer</th>
<th>Men Mortality risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in the next ten years ever</td>
<td>ever</td>
<td>in the next ten years ever</td>
<td>ever</td>
</tr>
<tr>
<td></td>
<td>(1 in 3,500)</td>
<td>(1 in 90)</td>
<td>(1 in 6,900)</td>
<td>(1 in 130)</td>
</tr>
<tr>
<td>35 years</td>
<td>&lt; 0.1% (1 in 3,500)</td>
<td>1.1% (1 in 90)</td>
<td>&lt; 0.1% (1 in 6,900)</td>
<td>0.8% (1 in 130)</td>
</tr>
<tr>
<td>45 years</td>
<td>0.1% (1 in 1,400)</td>
<td>1.1% (1 in 92)</td>
<td>&lt; 0.1% (1 in 2,700)</td>
<td>0.8% (1 in 130)</td>
</tr>
<tr>
<td>55 years</td>
<td>0.1% (1 in 690)</td>
<td>1.0% (1 in 96)</td>
<td>0.1% (1 in 1,300)</td>
<td>0.8% (1 in 130)</td>
</tr>
<tr>
<td>65 years</td>
<td>0.3% (1 in 380)</td>
<td>0.9% (1 in 110)</td>
<td>0.1% (1 in 680)</td>
<td>0.7% (1 in 140)</td>
</tr>
<tr>
<td>75 years</td>
<td>0.4% (1 in 230)</td>
<td>0.8% (1 in 130)</td>
<td>0.3% (1 in 300)</td>
<td>0.6% (1 in 160)</td>
</tr>
<tr>
<td>Lifetime</td>
<td>1.1% (1 in 91)</td>
<td></td>
<td>0.8% (1 in 130)</td>
<td></td>
</tr>
</tbody>
</table>

### Figure 3.4.3
Distribution of UICC-stages at first diagnosis by sex, ICD-10 C16, Germany 2015–2016
(top: all cases; bottom: only valid reports)

### Figure 3.4.4
Absolute and relative survival rates up to 10 years after first diagnosis, by sex, ICD-10 C16, Germany 2015–2016

### Figure 3.4.5
Relative 5-year survival by UICC-stage and sex, ICD-10 C16, Germany 2015–2016
Figure 3.4.6
Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C16, 2015–2016
(Incidence in Bremen for 2014 and 2016, incidence in eastern Germany for 2014 to 2015)
per 100,000 (old European Standard)

Figure 3.4.7
International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C16, 2015–2016 or latest available year (details and sources, see appendix)
per 100,000 (old European Standard)