# 3.3 Oesophagus

#### Table 3.3.1

Overview of key epidemiological parameters for Germany, ICD-10 C15

| Incidence                                       |            | 2017       |            | 2018       | Prediction for 2022 |          |
|---|------------|------------|------------|------------|---------------------|----------|
|   | Women      | Men        | Women      | Men        | Women               | Men      |
| Incident cases                                  | 1,660      | 5,600      | 1,840      | 5,710      | 2,000               | 6,300    |
| Crude incidence rate <sup>1</sup>               | 4.0        | 13.7       | 4.4        | 14.0       | 4.8                 | 15.2     |
| Age-standardised incidence rate <sup>1, 2</sup> | 2.3        | 9.3        | 2.4        | 9.3        | 2.6                 | 9.7      |
| Median age at diagnosis                         | 71         | 67         | 71         | 68         |                     |          |
| Mortality                                       |            | 2017       |            | 2018       |                     | 2019     |
|   | Women      | Men        | Women      | Men        | Women               | Men      |
| Deaths  | 1,233      | 4,266      | 1,358      | 4,278      | 1,332               | 4,510    |
| Crude mortality rate <sup>1</sup>               | 2.9        | 10.5       | 3.2        | 10.5       | 3.2                 | 11.0     |
| Age-standardised mortality rate <sup>1, 2</sup> | 1.5        | 6.8        | 1.6        | 6.8        | 1.6                 | 7.0      |
| Median age at death                             | 74         | 70         | 75         | 69         | 75                  | 70       |
| Prevalence and survival rates                   |            | 5 years    |            | 10 years   |                     | 25 years |
|   | Women      | Men        | Women      | Men        | Women               | Men      |
| Prevalence                                      | 3,300      | 10,300     | 4,800      | 14,800     | 6,700               | 21,000   |
| Absolute survival rate (2017–2018) <sup>3</sup> | 21 (18–26) | 22 (20–28) | 16 (14–26) | 15 (13–20) |                     |          |
| Relative survival rate (2017-2018) <sup>3</sup> | 24 (20–28) | 26 (23-33) | 21 (19–34) | 21 (17–27) |                     |          |

<sup>1</sup> per 100,000 persons<sup>2</sup> age-standardised (old European Standard)<sup>3</sup> in percent (lowest and highest value of the included German federal states)

# Epidemiology

Cancer of the oesophagus accounts for about 1.3% of all cancer deaths in women and 3.4% in men. Since 1999, the age-standardised mortality rates have changed only marginally for both women and men. In Germany, men develop oesophageal cancer three times more frequently and, at 68 years of age (2018), on average three years earlier than women. For both sexes, the incidence rates decrease slightly for the age groups below 60 years, while they tend to increase in the higher age groups.

Squamous cell carcinomas account for 43% of all cancers of the oesophagus. The proportion of adenocarcinomas, which occur almost exclusively at the junction with the stomach, has risen to 47% in recent years. In men, the proportion of adenocarcinomas with 51%, is now even considerably higher than that of squamous cell carcinomas. Oesophageal carcinoma is one of the cancers with unfavourable survival prospects, with relative 5-year survival rates of 24% and 26% for women and men respectively. Only just under one in three tumours is diagnosed at an early stage (UICC I/II).

#### **Risk factors**

Oesophageal cancer can be divided into squamous cell carcinoma and the slightly more common adenocarcinoma. Adenocarcinomas often arise due to gastroesophageal reflux disease (persistent reflux of gastric juice into the oesophagus – chronic heartburn). These conditions lead to mucosal changes in the lower part of the oesophagus: A so-called Barrett's oesophagus can be developed, which is considered a precancerous condition. Other important risk factors are obesity and smoking.

The main risk factors for squamous cell carcinoma of the oesophagus in Germany are tobacco and alcohol consumption, especially in combination: If both factors act together, the harmful effect is considerably increased.

A motility disorder of the oesophagus and the sphincter between the oesophagus and the stomach (achalasia) significantly increases the risk of both squamous cell and adenocarcinoma. A familial accumulation of cases of the disease is also known. Whether and to what extent hereditary predisposition or environmental factors play a role is still unclear.



Age-standardised incidence and mortality rates by sex, ICD-10 C15, Germany 1999–2018/2019, projection (incidence) through 2022

per 100,000 (old European Standard)



# Figure 3.3.1b

Absolute numbers of incident cases and deaths by sex, ICD-10 C15, Germany 1999–2018/2019, projection (incidence) through 2022



#### Figure 3.3.2 Age-specific incidence rates by sex, ICD-10 C15, Germany 2017-2018

per 100,000



## Table 3.3.2

# Cancer incidence and mortality risks in Germany by age and sex, ICD-10 C15, database 2018

|               | Risk of developing cancer |               |       |            | Mortality risk       |               |       |            |  |
|---------------|---------------------------|---------------|-------|------------|----------------------|---------------|-------|------------|--|
| Women aged    | in the next 10 years      |               | ever  |            | in the next 10 years |               | ever  |            |  |
| 35 years      | < 0.1%                    | (1 in 19,100) | 0.3 % | (1 in 290) | < 0.1 %              | (1 in 39,500) | 0.3 % | (1 in 390) |  |
| 45 years      | < 0.1%                    | (1 in 4,600)  | 0.3 % | (1 in 300) | < 0.1 %              | (1 in 8,200)  | 0.3 % | (1 in 390) |  |
| 55 years      | 0.1%                      | (1 in 1,500)  | 0.3 % | (1 in 310) | < 0.1 %              | (1 in 2,700)  | 0.3 % | (1 in 400) |  |
| 65 years      | 0.1%                      | (1 in 920)    | 0.3 % | (1 in 370) | 0.1 %                | (1 in 1,400)  | 0.2 % | (1 in 440) |  |
| 75 years      | 0.1%                      | (1 in 930)    | 0.2 % | (1 in 550) | 0.1 %                | (1 in 1,100)  | 0.2 % | (1 in 570) |  |
| Lifetime risk |                           |               | 0.3 % | (1 in 300) |                      |               | 0.3 % | (1 in 390) |  |
| Men aged      | in the next 10 years      |               |       | ever       | in the               | next 10 years |       | ever       |  |
| 35 years      | < 0.1%                    | (1 in 6,100)  | 1.0 % | (1 in 96)  | < 0.1 %              | (1 in 11,700) | 0.8 % | (1 in 130) |  |
| 45 years      | 0.1%                      | (1 in 1,100)  | 1.0 % | (1 in 97)  | 0.1 %                | (1 in 1,700)  | 0.8 % | (1 in 130) |  |
| 55 years      | 0.3 %                     | (1 in 380)    | 1.0 % | (1 in 100) | 0.2 %                | (1 in 560)    | 0.8 % | (1 in 130) |  |
| 65 years      | 0.4 %                     | (1 in 250)    | 0.8 % | (1 in 130) | 0.3 %                | (1 in 350)    | 0.6 % | (1 in 160) |  |
| 75 years      | 0.4 %                     | (1 in 270)    | 0.5 % | (1 in 200) | 0.3 %                | (1 in 330)    | 0.5 % | (1 in 220) |  |
| Lifetime risk |                           |               | 1.0 % | (1 in 98)  |                      |               | 0.8 % | (1 in 130) |  |

# Figure 3.3.3

## **Distribution of UICC stages at diagnosis by sex, ICD-10 C15, Germany 2017–2018** top: according to 7<sup>th</sup> edition TNM; bottom: according to 8<sup>th</sup> edition TNM.

The DCO proportion was 6%. For 51% of the remaining cases, no UICC stage could be assigned.



## Figure 3.3.4





# Figure 3.3.5

Relative 5-year survival by UICC stage (7<sup>th</sup> edition TNM) and sex, ICD-10 C15, Germany 2016-2018



## Figure 3.3.6

Age-standardised incidence and mortality rates in German federal states by sex, ICD-10 C15, 2017–2018 per 100,000 (old European Standard)



#### Figure 3.3.7 International comparison of age-standardised incidence and mortality rates by sex, ICD-10 C15, 2017–2018 or latest available year (details and sources, see appendix) per 100,000 (old European Standard)

