

# The costs of oesophageal and gastric cancer

## Factsheet

This factsheet provides a broad picture of the economic burden of oesophageal and gastric cancer and is based on the Swedish Institute for Health Economics' (IHE) study on the **Costs of Cancers of the Digestive System** commissioned in 2020 by **Digestive Cancers Europe**.

## Introduction

In 2020

**189.031**  
new cases  
across  
Europe



**52.993** oesophageal cancer  
**136.038** gastric cancer

**142.508**  
deaths

**45.511** oesophageal cancer  
**96.997** gastric cancer

All data are from 2020 from the [European Cancer Information System \(ECIS\)](#).

## The costs of oesophageal and gastric cancer

The costs of oesophageal and gastric cancer together account to €8,6 billion in Europe.

**Direct healthcare costs:** these constitute the sum of the consumption of all health-related costs which include hospital beds, cancer drugs, surgery, medical experts, medical equipment and even psychosocial care and rehabilitation (in modern cancer care). Both public resources (tax money and social security) and private spending (out-of-pocket payments for medical visits and health insurance) are part of direct costs.

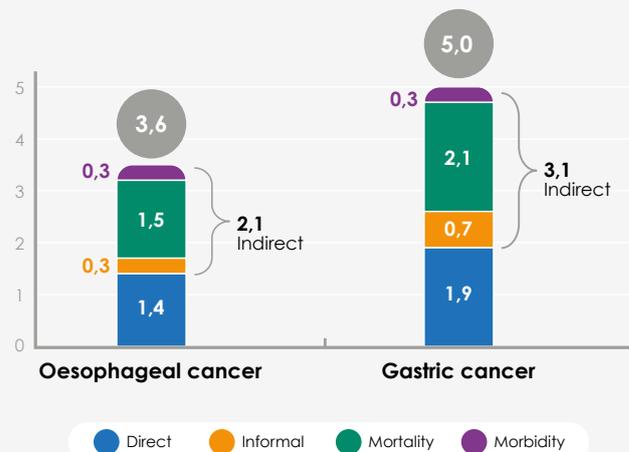
**Informal care costs:** these constitute the many hours of unpaid care spent by family and relatives, creating an opportunity cost of their time. These costs were calculated based on both average wages or minimum wages, depending on the type of caregiver.<sup>1</sup>

**Indirect costs caused by premature mortality:** these constitute the future lost earnings of patients who have died due to their disease, creating productivity loss. These are based on potential years of working life lost (PYWLL) combined with average wages and employment rates per country. These costs were calculated using the Human-Capital Method (HCM).<sup>2</sup>

**Indirect costs caused by morbidity:** these constitute the patient's inability to work due to sickness or incapacity, creating productivity loss for a period of time. Calculations were also based on the Human-Capital Method (HCM).<sup>3</sup>

Figure 1: The costs of oesophageal & gastric cancer in billion € in Europe (2018 data)

For clarity, all numbers have been rounded to one decimal point



<sup>1</sup> Volunteers involved in patient organisations invest a vast amount of their personal time. However, in this current report this type of informal care has not been accounted for. Digestive Cancers Europe plans to perform a separate study on the time volunteers from patient organisations spend to help patients and the cost savings this informal care translates to for our societies.

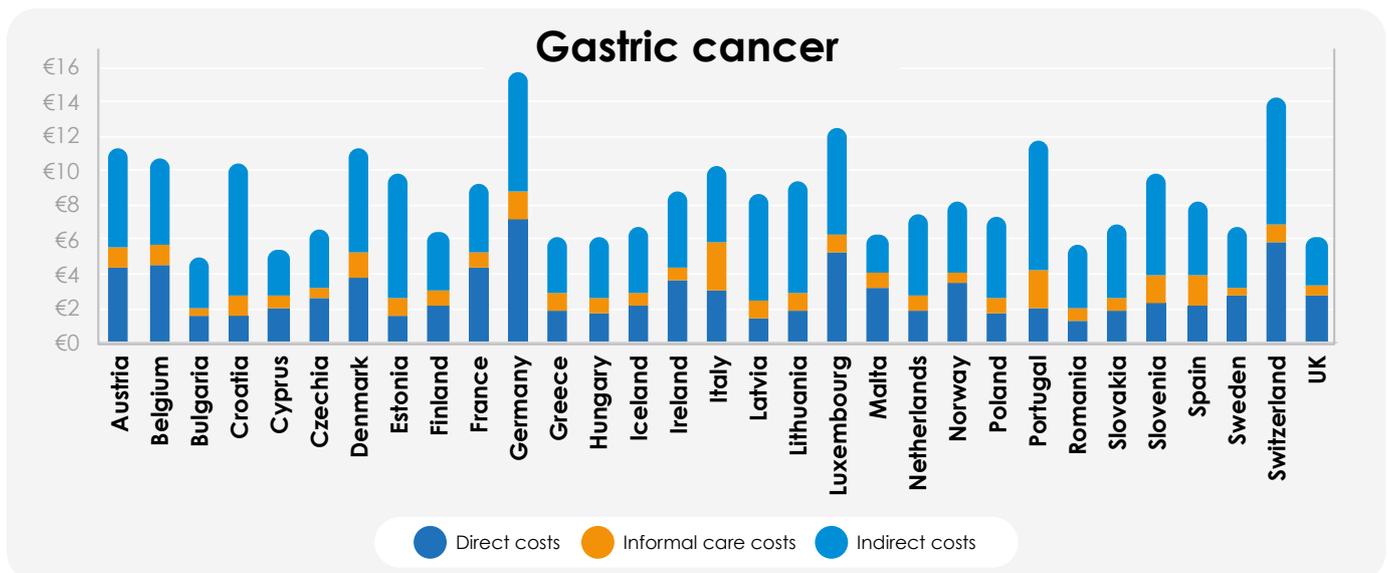
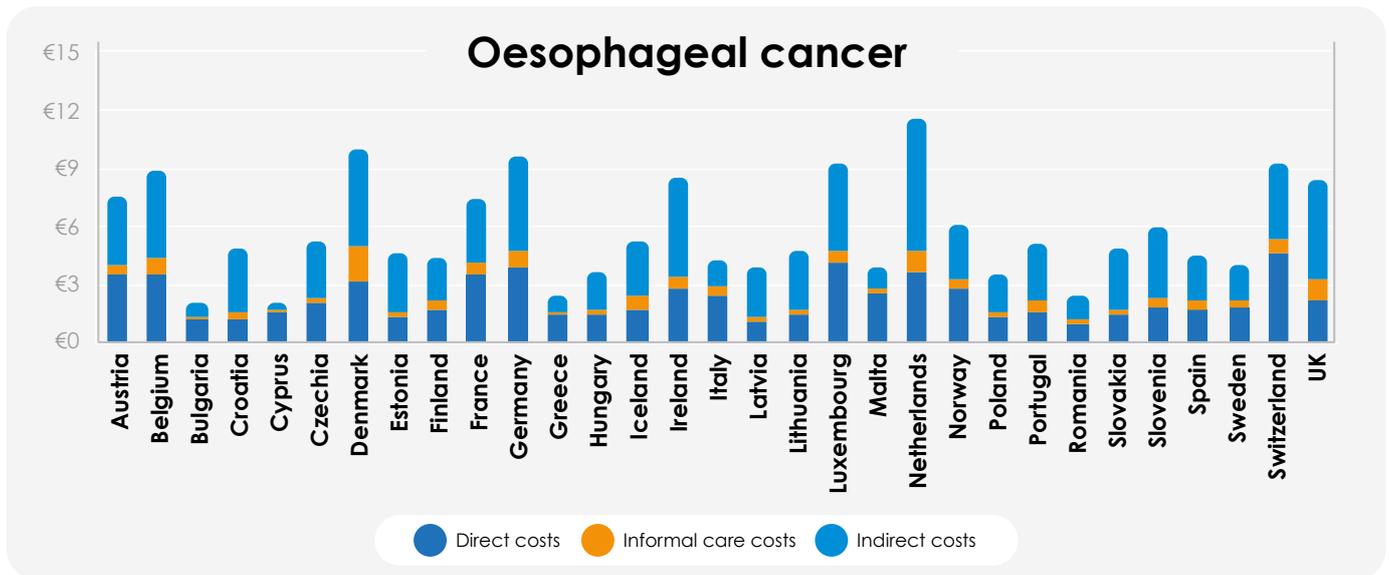
<sup>2</sup> Different methods exist to value productivity. The HCM takes the patient's perspective and counts any hour not worked as an hour lost.

<sup>3</sup> There are other types of indirect costs which have not been calculated in this study. These include costs related to disease comorbidities (such as such as hypertension, osteoarthritis, diabetes mellitus, poor mental health, sleep problems, etc.), treatment-related toxicities or other out-of-pocket expenses such as childcare, legal services or home health.

- **Cancer-specific pharmaceutical treatment costs** amount to **4% of all direct costs** for oesophageal and **10% of all direct costs** for gastric cancer.
- For both oesophageal and gastric cancer, the **sum of all indirect costs is higher to that of direct costs**. This shows that non-healthcare costs form a major part of the total costs.
- The 5-year survival rate for oesophageal cancer is 15% and for gastric cancer 27%. This translates to **higher indirect costs due to premature mortality compared to those observed in colon and rectal cancer, which present a higher survival rate.**

## Differences in costs across European countries

There are important differences in costs from one country to another. The graphs below show the breakdown of costs per country per capita, PPP-adjusted:<sup>4</sup>



<sup>4</sup> Purchasing power parity (PPP): this is a measurement of prices which considers the price of specific goods in different countries when comparing the absolute purchasing power of the countries' currencies. It, therefore, takes into consideration the differences in cost of living and, in this case, the costs of healthcare services.

## Why are there differences?

- **Incidence rates differ.** Some countries have a relatively high number of patients affected by a type of cancer, impacting the total costs of each cancer.
- **Cancer care is not standardised across Europe.** Most countries do not have specific cancer programmes by cancer type. The approach to prevention, screening, diagnostics and treatment varies enormously from one country to another.
- **Survival rates differ** from one country to another, which in turn influences the total costs of each cancer. Higher survival means that indirect costs due to premature mortality are lower but potentially indirect costs due to morbidity are increased. Higher survival also means that patients who live longer receive more treatments, which might increase direct costs.
- **Countries have varying investment policies.**

## Conclusion and recommendations

Based on this data, Digestive Cancers Europe has developed top-line recommendations on how to **optimise the pathway of patients with oesophageal and gastric cancer** and ultimately reduce costs and improve patient outcomes and survival rates.



**Invest in primary prevention and awareness programmes** aiming at eradicating *Helicobacter pylori* at population level; educating citizens on healthy lifestyles and the risk factors related to oesophageal and gastric cancer; and raising awareness among primary care professionals about early symptoms to allow for timely referral and diagnosis and, therefore, better patient outcomes.



**Promote the systematic referral of oesophageal and gastric cancer patients to high-volume, multidisciplinary expert centres** where medical experts provide optimal diagnosis, treatment, care and follow-up to help reduce disease co-morbidities, improve patient outcomes and survival rates.



Promote the **application of harmonised guidelines** which define risk groups, the optimal referral and early diagnosis process and follow-up, specific to oesophageal and gastric cancer.



Invest in **further research which could allow non-invasive mass screening** for pre-cancer medical conditions for oesophageal and gastric cancer.

