Health statistics at regional level

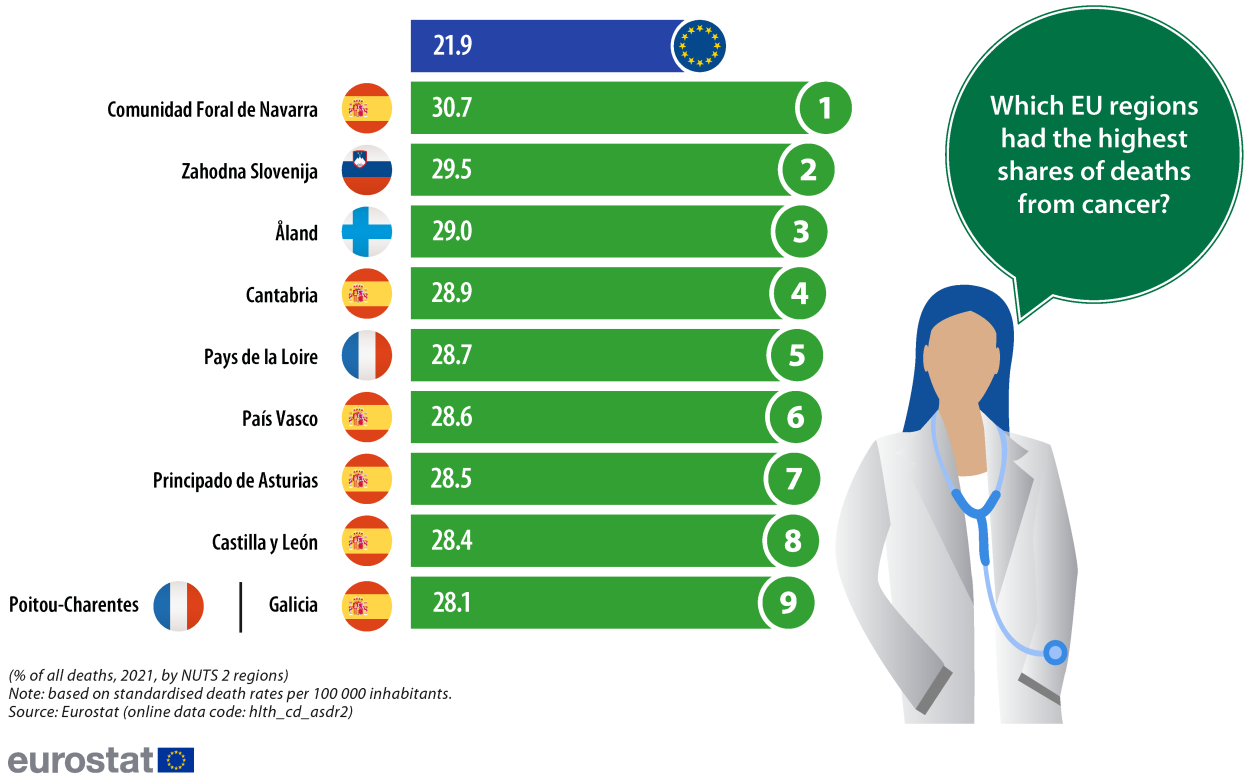
Statistics Explained

Data extracted in May 2024.
Planned article update: September 2025.

Highlights

" In 2023, more than 9 out of every 10 regions in the EU had a majority of their population living within 15 minutes driving time of a hospital. "

" In 2021, cancer accounted for 30.7% of all deaths in the Spanish region of Comunidad Foral de Navarra – the highest regional share across the EU. "



Source: Eurostat (hlth_cd_asdr2)

Health is an important priority for most Europeans who expect to receive efficient healthcare services – for example, if contracting a disease or being involved in an accident – alongside timely and reliable public health information. A key principle included within the European Pillar of Social Rights is that everyone should have access to affordable, preventive and curative health care of good quality. The overall health of the European Union's (EU's) population is closely linked to that of the environment through – among other influences – the quality of the air we breathe, the water we drink and the food we eat.

The President of the European Commission highlighted a 'European plan to fight cancer, to support Member States in improving cancer control and care' among a number of political guidelines for the period 2019–24. *Europe's Beating Cancer Plan* was presented by the European Commission in February 2021. It is built around 10 flagship initiatives and a range of supporting actions and is designed to support the work of EU countries in preventing cancer and ensuring a high quality of life for cancer patients, survivors, their families and carers.

This year's edition of the*Eurostat regional yearbook* has a special focus on cancer. In 2021, 21.9% of all deaths in the EU were attributed to cancer: as such, it was the 2nd most common cause of death , behind circulatory diseases. In the northern Spanish region of Comunidad Foral de Navarra, 30.7% of all deaths were attributed to cancer in 2021 – this was the highest regional share among NUTS level 2 regions (see the infographic above). The next highest shares were recorded in

- Zahodna Slovenija, the capital region of Slovenia
- Åland, an archipelago in Finland that is the smallest region in the EU (in terms of population numbers)
- 5 additional regions located in northern Spain – Cantabria, País Vasco, Principado de Asturias, Castilla y León and Galicia
- Pays de la Loire and Poitou-Charentes in western France.

Health care

In 2023, the share of the EU's population living within 15 minutes driving time of a hospital was 83.2%

Accessibility may be broadly defined as how quickly and easily a destination can be reached given the available means of transport. It is increasingly considered a key policy goal in land-use, transport and regional planning. A lack of access to a range of services is one of the principal challenges faced by people living in rural areas: where is the nearest hospital, pharmacy, school, bank or supermarket, and how easy is it to get there?

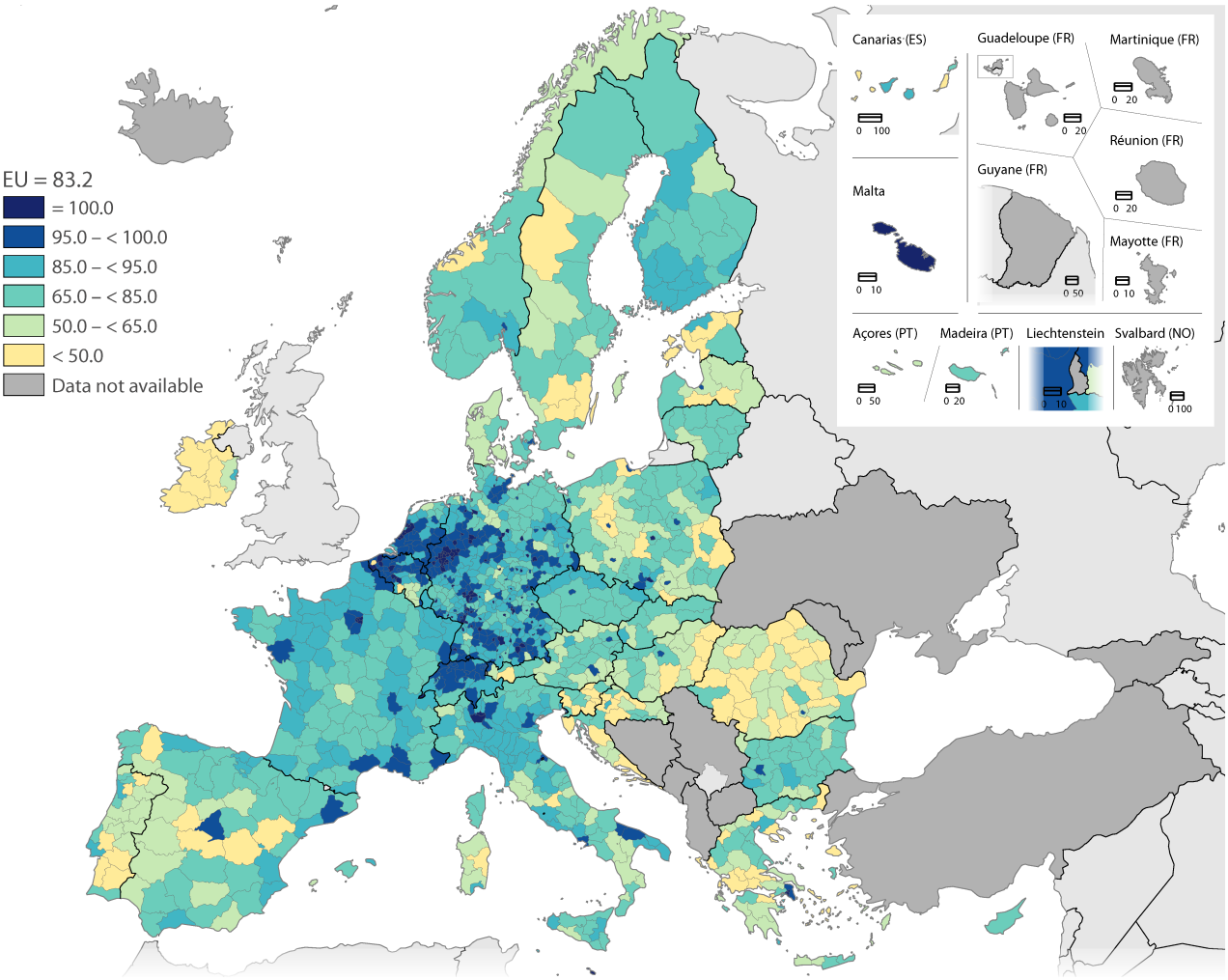
In 2023, the share of the EU population living within 15 minutes driving time of a hospital was 83.2%; the definition applied for a 'hospital' may vary somewhat between EU countries. There were 124 NUTS level 3 regions where all (100.0%) of the population lived within 15 minutes driving time of a hospital (as shown by the darkest shade of blue in **Map 1**). The vast majority – 96 out of the 124 regions – were located in Germany, principally in regions containing towns/cities. The remainder of this group was located in

- Belgium (6 regions)
- the Netherlands (6 regions – including the capital of Groot-Amsterdam)
- Greece (4 regions – all of which form part of the capital)
- France (4 regions – including the capital of Paris and 3 surrounding regions)
- Malta (both regions)
- Spain, Italy and Poland (all 2 regions).

At the other end of the range, there were 97 NUTS level 3 regions where a minority (less than 50.0%) of the population lived within 15 minutes driving time of a hospital in 2023 (they are shown with a yellow shade in **Map 1**). These 97 regions were primarily located in eastern and southern EU countries, with the largest concentration in Romania (21 regions) and Greece (15 regions). There were also several regions across Croatia, Spain (both 9 regions), Poland (8 regions), Ireland, Portugal and Slovenia (all 6 regions) where a minority of the population lived within 15 minutes driving time of a hospital. At the bottom end of the distribution, there were 7 regions in the EU where less than 10.0% of the population lived within 15 minutes driving time of a hospital, they were

- Lefkada, Thesprotia, Lesvos and Limnos, and Chalkidiki in Greece
- Covasna, Tulcea and Mehedinţi in Romania.

Population living within 15 minutes driving time of a hospital, 2023
(%, by NUTS 3 regions)



Map 1: Population living within 15 minutes driving time of a hospital, 2023 (%, by NUTS 3 regions) Source: TomTom Multinet 2022, Geostat population grid 2021, Eurostat-GISCO hospital locations 2023

Hospital beds and medical doctors

More about the data: the number of hospital beds and medical doctors

The number of hospital beds and the number of medical doctors are indicators that may be used to measure the capacity of healthcare systems.

The number of hospital beds includes beds which are regularly maintained and staffed and immediately available for the care of patients admitted to hospitals; these statistics cover beds in general hospitals and in speciality hospitals.

The number of medical doctors includes generalists (such as general practitioners (GPs)) as well as medical and surgical specialists. These doctors provide services to patients as consumers of health care, including: giving advice, conducting medical examinations and making diagnoses, applying preventive medical methods, prescribing medication and treating diagnosed illnesses, giving specialised medical or surgical treatment.

Eurostat gives preference to the concept of practising health care staff. The data for Greece, Portugal and Finland relate to medical doctors licensed to practice, while the data for Slovakia, North Macedonia and Türkiye relate to professionally active medical doctors. Within this section on health care resources, only national data are available for Germany, Ireland and the Netherlands.

In 2021, there were 2.35 million hospital beds across the EU. This equated to 525 hospital beds per 100 000 inhabitants, or – expressed in a different way – there was, on average, 1 hospital bed for every 191 people. In 2021, there were 1.81 million medical doctors in the EU; this equated to an average of 406 per 100 000 inhabitants, or 1 medical doctor for every 246 people.

In 2021, the north-western Polish region of Zachodniopomorskie and the Romanian capital region of Bucureşti-Ilfov were the only regions in the EU to report more than 1 000 hospital beds per 100 000 inhabitants

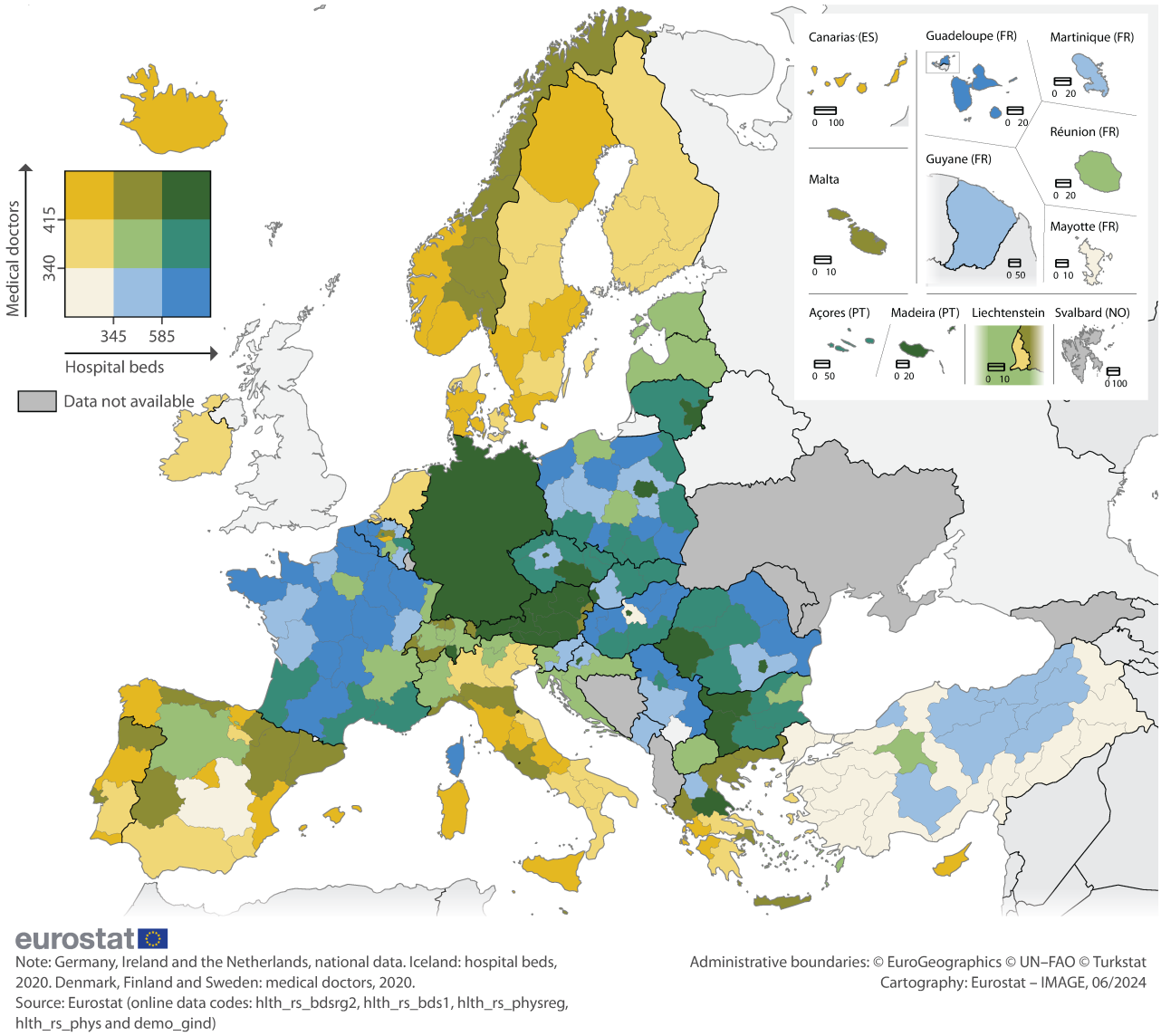
Map 2 shows the number of hospital beds and the number of medical doctors per 100 000 inhabitants. In 2021, there were 20 NUTS level 2 regions with a relatively high concentration of both of these healthcare resources – at least 585.0 hospital beds per 100 000 inhabitants and at least 415.0 medical doctors per 100 000 inhabitants – as shown by the darkest shade of green in the map. A more detailed investigation reveals that this group included

- 8 capital regions predominantly from eastern EU countries – those of Bulgaria, Czechia, Croatia, Lithuania, Hungary, Austria, Poland, Romania and Slovakia (this pattern may reflect, to some extent, a large number of healthcare services and medical doctors being concentrated in urban regions with high levels of population density, as well as country-specific ways of organising health care and the types of service provided to patients)
- all but 2 of the remaining regions from Austria – the exceptions were Burgenland and Vorarlberg
- additional regions from Bulgaria, Czechia and Romania – Severozapaden, Jihovýchod and Vest
- Região Autónoma da Madeira in Portugal
- Germany (only national data are available).

By contrast, there were 9 NUTS level 2 regions with a relatively low concentration of healthcare resources per 100 000 inhabitants in 2021 – fewer than 345.0 hospital beds and fewer than 340.0 medical doctors – as shown by the lightest coloured shade in the map. This group included Pest in Hungary, a region which surrounds the national capital of Budapest (that featured among the 20 regions with the highest ratios of hospital beds and medical doctors per 100 000 inhabitants). This contrasting situation reflects, at least in part, a relatively centralised healthcare system in Hungary, with a high proportion of hospitals and other medical facilities in the region of Budapest, where demand is further stimulated by medical tourism (for example, cosmetic and orthopaedic surgery, fertility treatment, balneotherapy or dentistry).

The remaining 8 regions that had a relatively low concentration of healthcare resources in 2021 were composed of rural, remote and outermost regions

- the Greek region of Sterea Elláda
- the Spanish region of Castilla-La Mancha
- the French outermost regions of Guyane and Mayotte
- the relatively mountainous Italian region of Basilicata
- the southern Portuguese region of Alentejo
- 2 Finnish regions Länsi-Suomi and Åland (the Finnish data for medical doctors relates to 2020).



Map 2: Hospital beds and medical doctors, 2021 (per 100 000 inhabitants, by NUTS 2 regions) Source: Eurostat (hlth_rs_bdsrg2), (hlth_rs_bds1), (hlth_rs_physreg), (hlth_rs_phys) and (demo_gind)

There was a modest reduction in the number of hospital beds across the EU between 2016 and 2021

There was a modest reduction in the number of hospital beds per 100 000 inhabitants in the EU; this ratio fell 3.7% between 2016 and 2021. Falling numbers of hospital beds relative to population numbers may reflect – among other factors – cuts to healthcare spending, medical and technological developments, or changes in healthcare policies. The demand for hospital beds may be reduced through a greater provision of day-care and outpatient services as well as reductions in the average length of hospital stays. Such changes may result from the introduction of new treatments and less invasive forms of surgery. In addition, during the COVID-19 pandemic, some hospital services outside of emergencies were closed (for example, planned operations were postponed and/or staff shortages meant that certain wards were shut down); these factors may also have contributed to a decrease in bed numbers towards the end of the period under consideration.

Figure 1 shows the NUTS level 2 regions with the highest and lowest overall changes in their number of hospital beds per 100 000 inhabitants between 2016 and 2021. There was a relatively clear development of falling bed numbers over most of the EU. Almost 7 out of 10 regions (129 out of 187 for which data are available) recorded

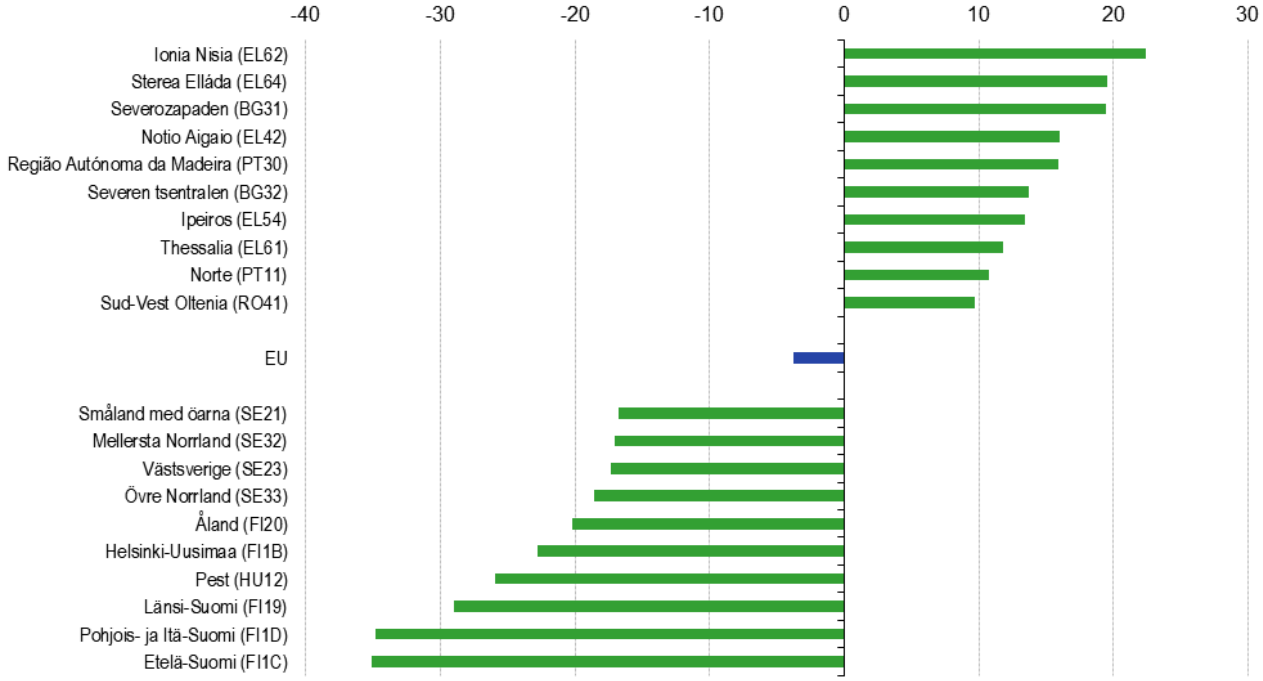
a decrease in their number of hospital beds per 100 000 inhabitants. This pattern was particularly evident across Finland and Sweden, as Pest in Hungary was the only region from outside of these 2 Nordic countries to feature among the 12 regions with the lowest overall reductions. The most rapid declines in hospital bed numbers per 100 000 inhabitants were recorded in the Finnish regions of Etelä-Suomi (down 35.1% between 2016 and 2021) and Pohjois- ja Itä-Suomi (down 34.8%). The rapid decrease in hospital beds in Finland may be linked, at least in part, to a fall in long-term care and psychiatric care beds and a reorganisation/centralisation of key services in a restricted number of university/major hospitals.

By contrast, there were 58 NUTS level 2 regions where the number of hospital beds per 100 000 inhabitants increased between 2016 and 2021. Only 9 of these recorded increases of more than 10.0%

- 5 regions from Greece – Ionia Nisia, Sterea Elláda, Notio Aigaio, Ipeiros and Thessalia
- 2 regions from Bulgaria – Severozapaden and Severen tsentralen
- 2 regions from Portugal – Região Autónoma da Madeira and Norte.

The most rapid increases in hospital bed numbers per 100 000 inhabitants were recorded in the Greek regions of Ionia Nisia (up 22.4% between 2016 and 2021) and Sterea Elláda (up 19.6%), as well as the Bulgarian region of Severozapaden (up 19.5%).

Change in the number of hospital beds, 2021
(%, overall change compared with 2016 based on hospital beds per 100 000 inhabitants, by NUTS 2 regions)



Note: the figure shows the EU regions with the highest and lowest overall rates of change. Germany, Ireland, Croatia and the Netherlands: national data. Warszawski stołeczny (PL91) and Mazowiecki regionalny (PL92): not available.
Source: Eurostat (online data codes: hlth_rs_bdsrg2 and hlth_rs_bds1)

Figure 1: Change in the number of hospital beds, 2021 (%, overall change compared with 2016 based on hospital beds per 100 000 inhabitants, by NUTS 2 regions) Source: Eurostat (hlth_rs_bdsrg2) and (hlth_rs_bds1)

The number of medical doctors in the EU rose by a tenth between 2016 and 2021

In 2021, there were 1.81 million medical doctors in the EU. This figure marked an overall increase of 10.5% when compared with the situation in 2016 (1.64 million medical doctors). Expressed relative to population size, the number of medical doctors per 100 000 inhabitants increased 10.1% across the EU between 2016 and 2021, to reach 406 medical doctors per 100 000 inhabitants, an average increase of 1.9% per year.

Figure 2 shows the NUTS level 2 regions with the highest and lowest overall changes in their number of medical doctors per 100 000 inhabitants. The ratio of medical doctors relative to population increased in the vast majority of regions, rising in almost 9 out of every 10 (or 173 out of 196) regions for which data are available. This ratio increased in every region of Belgium, Bulgaria, Czechia, Denmark, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia and Finland (2016–20); Germany, Ireland, Croatia, Cyprus, Latvia and Malta also recorded increases (only national data are available).

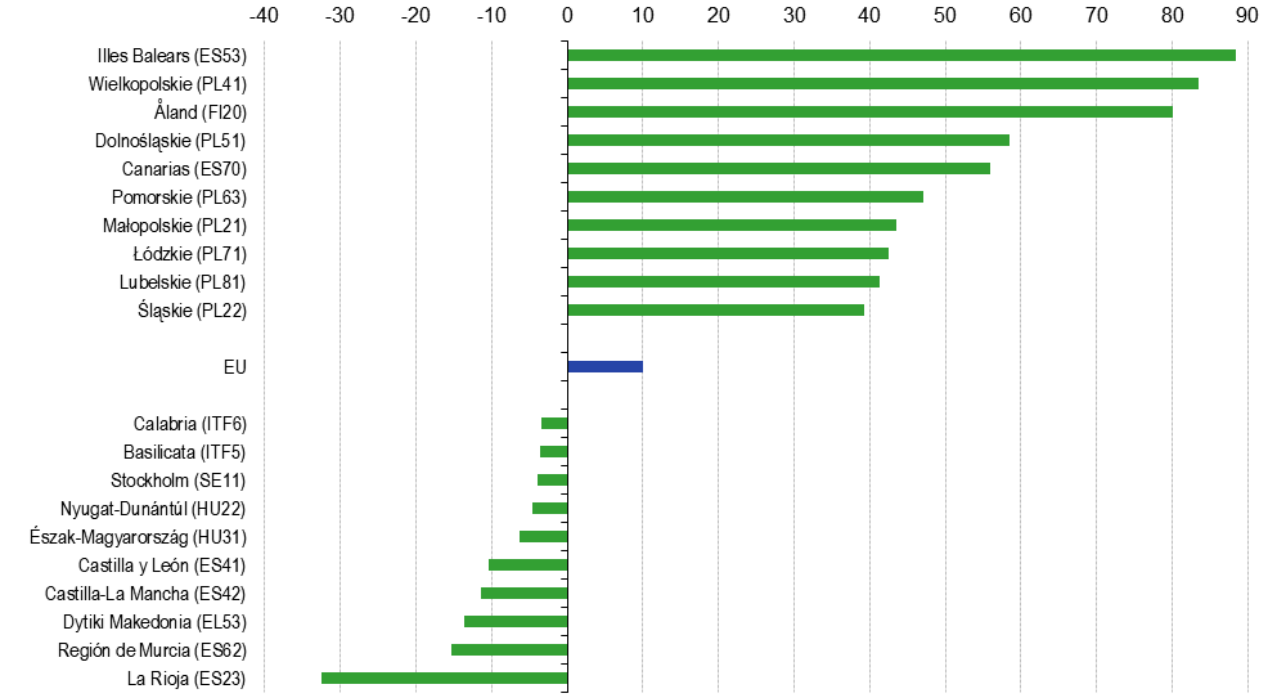
The highest rates of increase were concentrated in Polish and Spanish regions, while the lowest rates were mainly distributed across regions located in southern EU countries and France. At the top end of the distribution, there were 5 NUTS level 2 regions where the number of medical doctors per 100 000 inhabitants increased by more than 50.0% between 2016 and 2021

- the Spanish island regions of Illes Balears and Canarias – the former recorded the highest increase, up 88.4%
- the western Polish regions of Wielkopolskie and Dolnośląskie
- the Finnish archipelago of Åland.

By contrast, there were 5 NUTS level 2 regions where the number of medical doctors per 100 000 inhabitants fell by more than 10.0% between 2016 and 2021

- 4 Spanish regions – Castilla y León, Castilla-La Mancha, Región de Murcia and La Rioja – the latter recording the biggest fall among EU regions, down 32.5%
- a single Greek region – Dytiki Makedonia.

Change in the number of medical doctors, 2021
(%, overall change compared with 2016 based on medical doctors per 100 000 inhabitants, by NUTS 2 regions)



Note: the figure shows the EU regions with the highest and lowest overall rates of change. Germany, Ireland and Croatia: national data. Denmark, Finland and Sweden: 2016–20 instead of 2016–21. Ciudad de Melilla (ES64), Luxembourg, Warszawski stołeczny (PL91) and Mazowiecki regionalny (PL92): not available.
Source: Eurostat (online data codes: hlth_rs_physreg, hlth_rs_phys and demo_gind)

Figure 2: Change in the number of medical doctors, 2021 (%, overall change compared with 2016 based on medical doctors per 100 000 inhabitants, by NUTS 2 regions) Source: Eurostat (hlth_rs_physreg), (hlth_rs_phys) and (demo_gind)

Causes of death

The total number of deaths in the EU reached a high of 5.3 million in 2021

In 2021, there were 5.3 million deaths across the EU. This equated to an increase of 109 500 compared with the year before (up 2.1%), reflecting, at least in part, the continued impact of the COVID-19 crisis.

More about the data: standardised death rates

Information presented in this section is based on standardised death rates , whereby age-specific mortality rates are combined to reflect the structure of a standard population . This removes the influence of different age structures between regions (as elderly people are more likely to die than younger people or are more likely to catch/contract a specific illness/disease); the result is a measure that is more comparable across space and/or over time.

In 2021, almost 1 in 3 deaths in the EU were attributed to diseases of the circulatory system

A wide range of factors determine regional mortality patterns, with deaths linked, among other issues, to age structures, sex distributions, access to healthcare services and the quality of these services, healthcare policies, living/working conditions, types of occupation, and the surrounding environment.

Map 3 is composed of 3 different maps covering the principal causes of death in the EU. In 2021, diseases of the circulatory system – which include heart attacks, heart diseases, hypertensive diseases and diseases of pulmonary circulation – accounted for 32.0% of all deaths. The 2nd most common cause of death was cancer (21.9%), which is the subject of a special focus in this year's edition of the*Eurostat regional yearbook* (see below). Diseases of the respiratory system accounted for 6.1% of all deaths, while the residual category of other causes of death made-up the remaining 40.0%. The EU – in common with many other parts of the world – had a large number of COVID-19 deaths in 2021 (10.8% of the total). While globally death rates for COVID-19 have subsequently been reduced, the long term-epidemiological consequences aren't well known / are still being researched (for example, the impact of long COVID).

In 2021, diseases of the circulatory system were the main cause of death in 71.7% (66 out of 92) of NUTS level 1 regions. There were 9 regions within the EU where more than 45.0% of all deaths were caused by diseases of the circulatory system (as shown by the darkest shade of blue in the map). In both regions of Bulgaria and all 4 regions of Romania, a majority of deaths were accounted for by diseases of the circulatory system, while the 3 Baltic countries recorded shares within the range of 45.0% to 50.0%. The highest share of deaths from diseases of the circulatory system was recorded in Yugozapadna i Yuzhna tsentralna Bulgaria, at 57.1%. By contrast, the southern French region of Provence-Alpes-Côte d'Azur had the lowest share, at 18.1%.

In 2021, cancer was the main cause of death in more than 25% of all NUTS level 1 regions (26 out of 92 regions). There was a relatively narrow range in the share of deaths attributed to cancer across different regions of the EU. The highest regional shares were recorded in

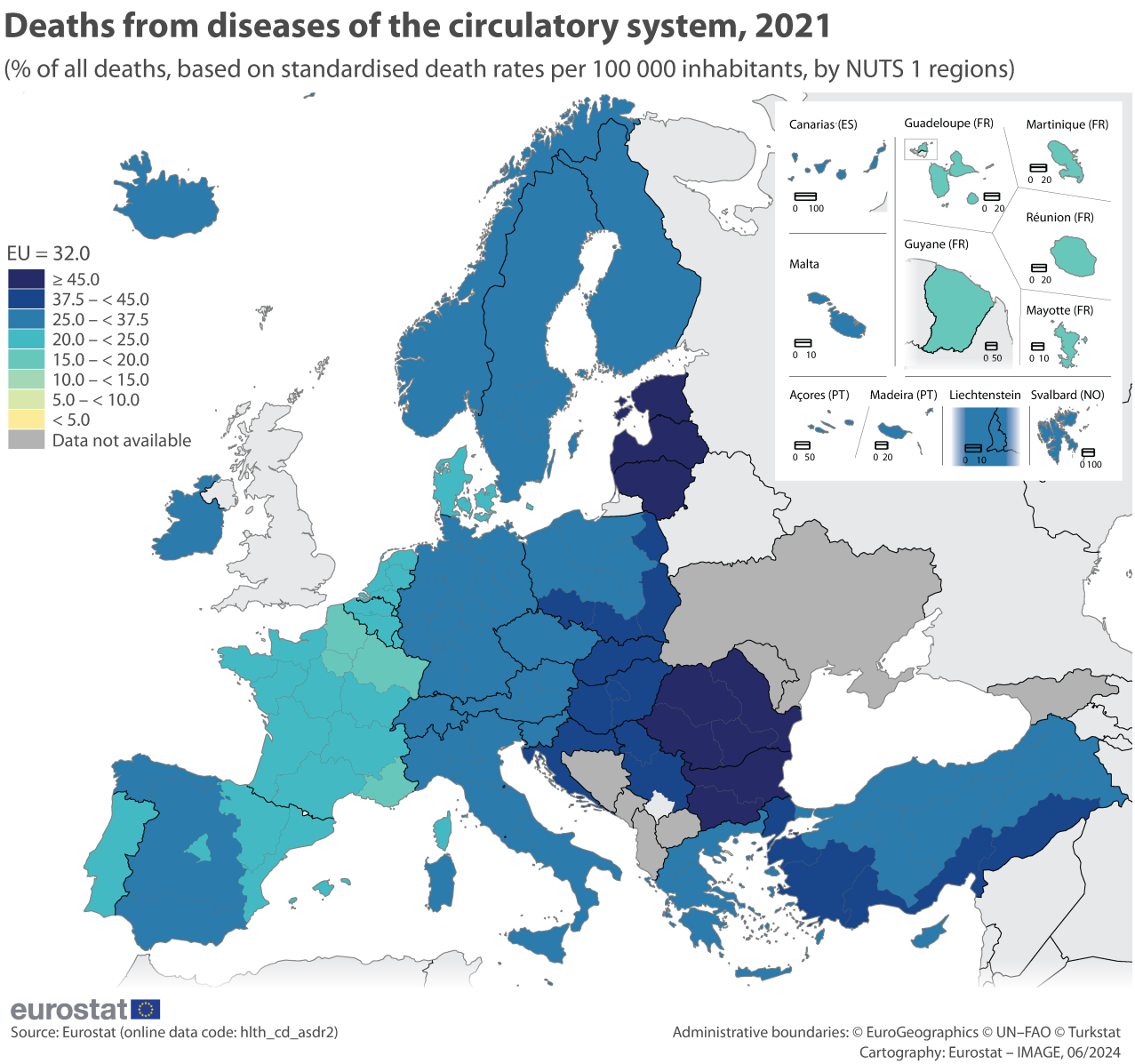
- Åland in Finland (where cancer accounted for 29.0% of all deaths)
- the western French regions of Pays de la Loire (28.7%), Bretagne and Nouvelle-Aquitaine (both 27.6%)
- the northern Spanish regions of Noroeste (28.3%) and Noreste (28.2%).

At the other end of the range, cancer accounted for a relatively low share of the total number of deaths in each of the regions where diseases of the circulatory system accounted for more than 50.0% of all deaths. In both Bulgarian regions and the 4 Romanian regions, cancer accounted for no more than 13.5% of all deaths in 2021; the next lowest share was recorded in Makroregion wschodni in Poland (15.5%).

Diseases of the respiratory system are another main cause of death in the EU. They include conditions such as chronic obstructive pulmonary disease, pneumonia or asthma, but exclude cancers of the respiratory system (for example, lung cancer). In 2021, diseases of the respiratory system accounted for a 15.0% share of all deaths in the Portuguese island Região Autónoma da Madeira – the highest share in the EU. There were 4 other NUTS level 1 regions where in excess of 1 in 10 deaths were accounted for by diseases of the respiratory system

- the Spanish regions of Canarias (11.2%) and Comunidad de Madrid (10.2%)
- Malta (11.2%)
- Denmark (10.5%).

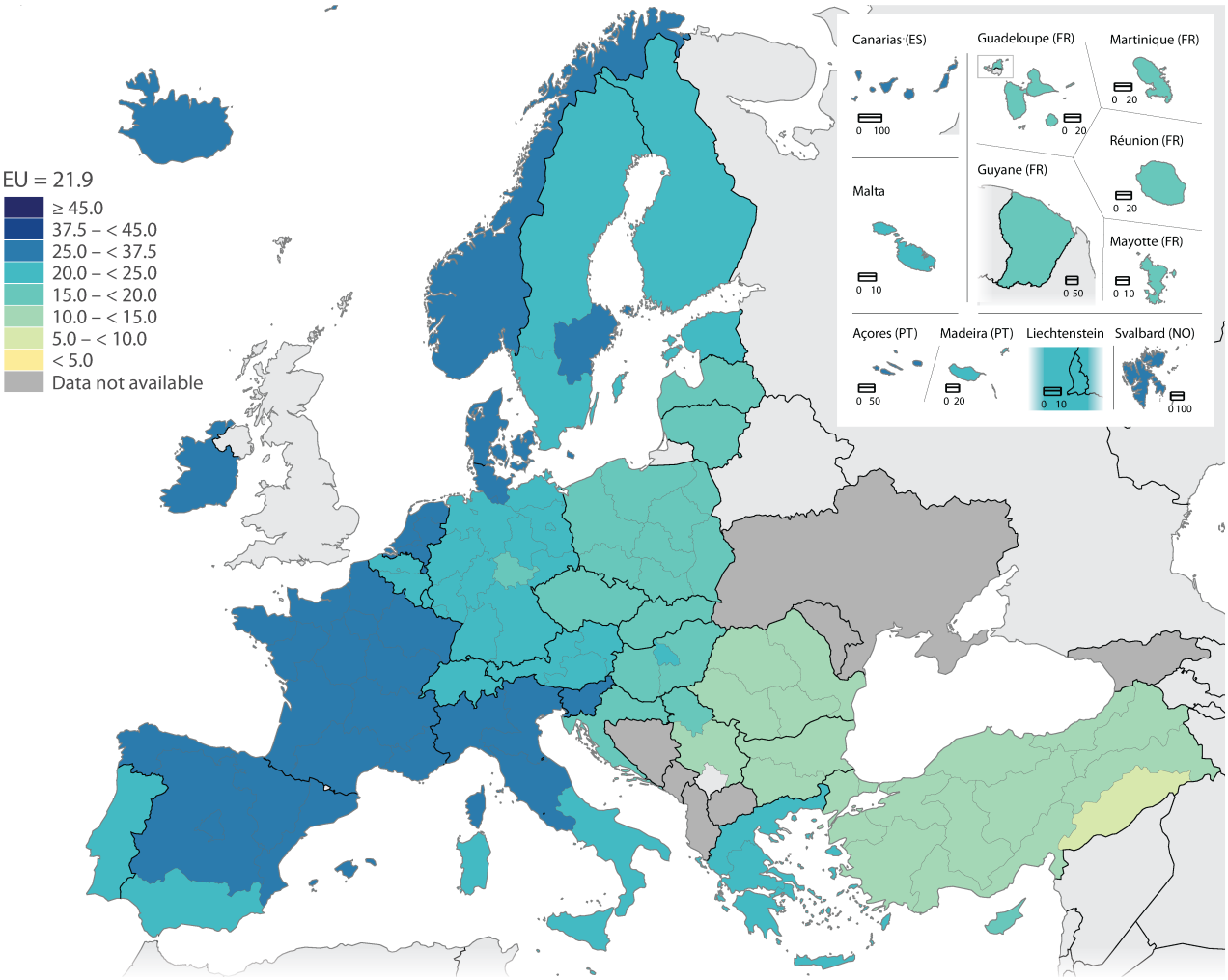
By contrast, diseases of the respiratory system accounted for no more than 3.0% of all deaths in 2021 in Slovenia, Manner-Suomi (mainland Finland) and the Baltic countries of Latvia and Lithuania, the last of these having the lowest regional share, at 2.2%.



Map 3A: Deaths from diseases of the circulatory system, 2021 (% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions) Source: Eurostat (hlth_cd_asdr2)

Deaths from cancer, 2021

(% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions)

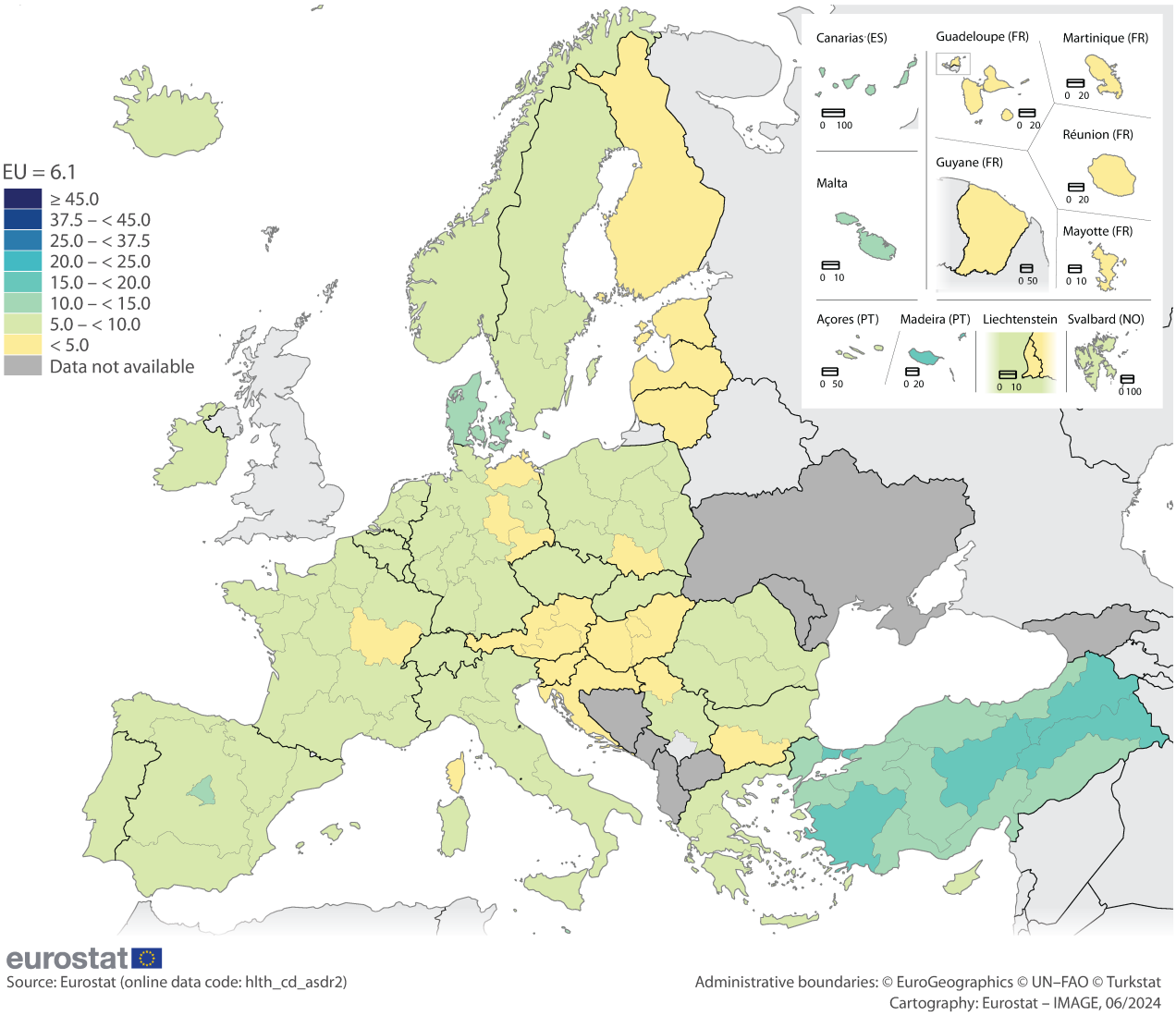


eurostat

Source: Eurostat (online data code: hlth_cd_asdr2)

Cartography: Eurostat – IMAGE, 06/2024

Map 3B: Deaths from cancer, 2021 (% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions) Source: Eurostat (hlth_cd_asdr2)



Map 3C: Deaths from diseases of the respiratory system, 2021 (% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions) Source: Eurostat (hlth_cd_asdr2)

Focus on cancer

In 2021, there were 1.1 million deaths across the EU that were attributed to cancer. **Map 4** provides a more detailed picture than Map 3, providing information for NUTS level 2 regions. The regional distribution was relatively uniform insofar as 47.9% of all regions – 116 out of 242 – reported that their standardised death rate for cancer was equal to or above the EU average (235.4 deaths per 100 000 inhabitants).

Looking in more detail, there were 23 NUTS level 2 regions where the standardised death rate for cancer was at least 275.0 deaths per 100 000 inhabitants in 2021 (as shown by the darkest shade of blue in **Map 4**), they were principally concentrated in eastern EU countries, including

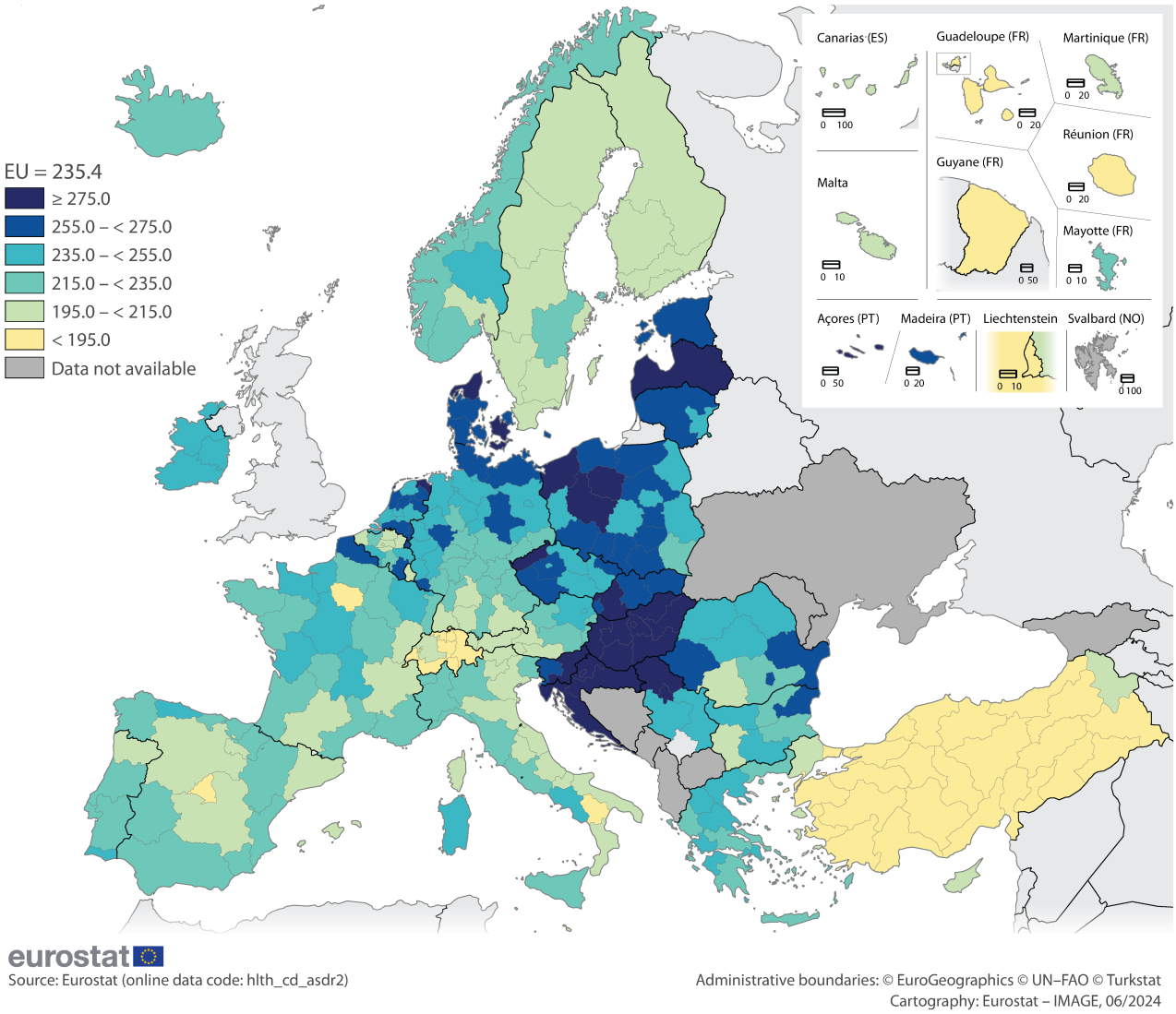
- all 8 regions of Hungary
- all 4 regions of Croatia
- 3 regions from Poland

- single regions from each of Czechia, Slovenia and Slovakia
- this group of 23 regions also included 2 regions from Denmark and single regions from Latvia, the Netherlands and Portugal.

The highest standardised death rate for cancer in 2021 was recorded in the Hungarian industrial region of Dél-Dunántúl (336.1 deaths per 100 000 inhabitants); this was 1.4 times as high as the EU average. There were 5 other regions in Hungary and 3 regions in Croatia where the death rate for cancer was higher than 300.0 per 100 000 inhabitants. Região Autónoma dos Açores in Portugal was the only other region with a death rate above this level.

There were 6 NUTS level 2 regions where the standardised death rate for cancer was less than 195.0 deaths per 100 000 inhabitants in 2021 (they are shown with a yellow shade in **Map 4**). This group was composed of

- 4 regions from France, including the capital region of Ile-de-France and 3 outermost regions – Guadeloupe, La Réunion and Guyane
- Basilicata in southern Italy
- the Spanish capital region of Comunidad de Madrid.



Map 4: Deaths from cancer, 2021 (standardised death rates per 100 000 inhabitants, by NUTS 2 regions)
Source: Eurostat (hlth_cd_asdr2)

In 2021, cancer of the trachea, bronchus and lung accounted for 6.1% of all deaths in the Spanish regions of Noreste and Noroeste, and the French island region of Corse

Figure 3 provides more detailed information for 4 different types of cancer. In 2021, there were 3 NUTS level 1 regions where cancer of the trachea, bronchus and lung accounted for 6.1% of all deaths: the Spanish regions of Noreste and Noroeste, and the French island region of Corse. By contrast, cancer of the trachea, bronchus and lung accounted for 1.9% of all deaths in Yugozapadna i Yuzhna tsentralna Bulgaria, which was less than half the EU average (4.4%).

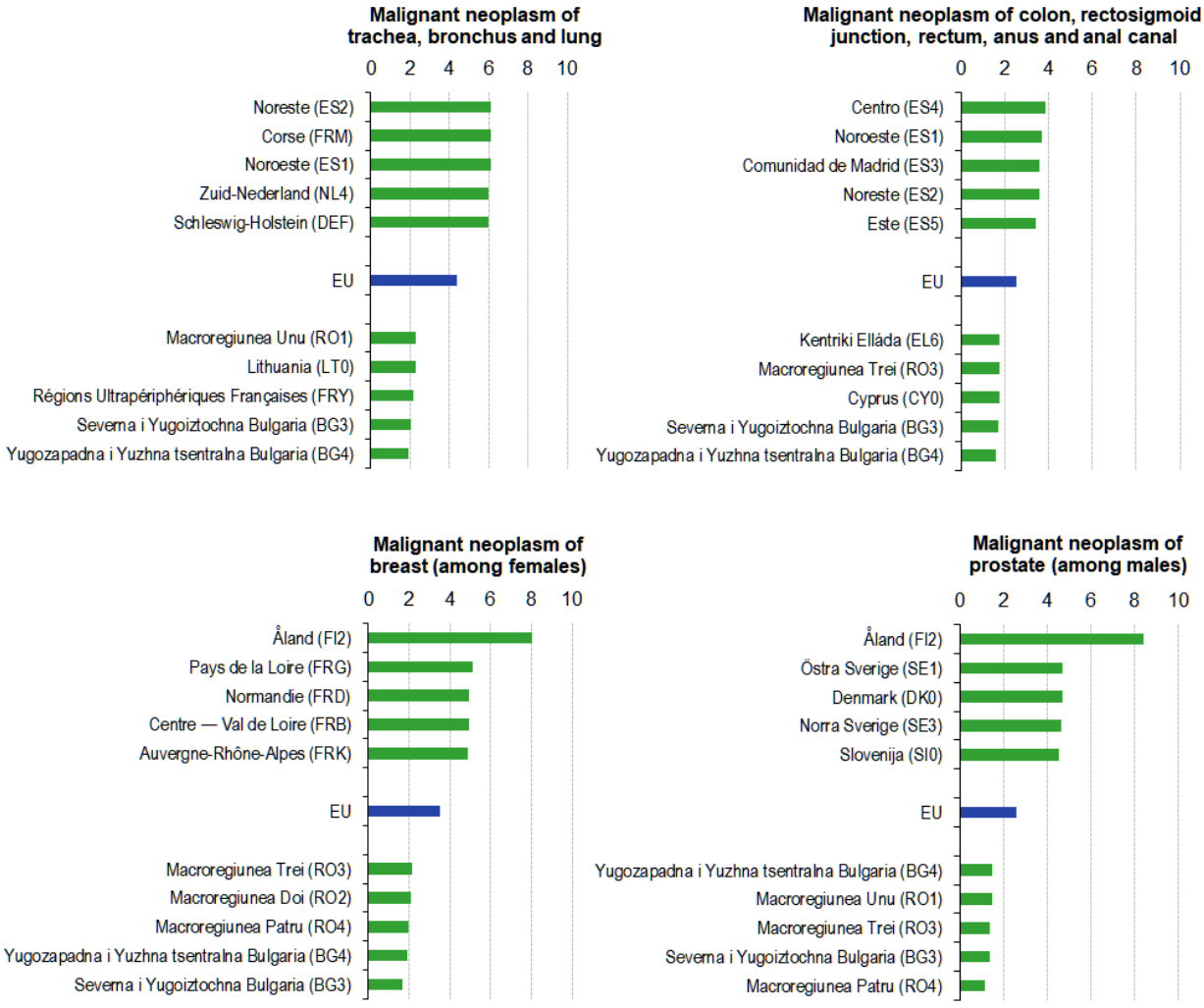
There was less variation across EU regions in terms of the relative weight of cancer of the colon, rectosigmoid junction, rectum, anus and anal canal in the total number of deaths. In 2021, the 5 highest shares were recorded in Spanish regions, peaking at 3.9% in Centro. The lowest share was (again) recorded in Yugozapadna i Yuzhna tsentralna Bulgaria (1.6%), which was approximately two thirds of the EU average (2.5%).

The other charts in **Figure 3** provide information about 2 types of cancer that are largely gender specific. In 2021,

breast cancer accounted for 3.5% of all female deaths within the EU. Among NUTS level 1 regions, the Finnish archipelago of Åland had the highest share of deaths from breast cancer (8.0% of all female deaths). This share was substantially higher than the shares recorded in any of the other EU regions; Åland has a very small population and as such its death rates may fluctuate considerably from 1 year to the next. Breast cancer also accounted for a relatively high proportion of female deaths in France, where the 2nd to 8th highest regional shares were recorded, peaking at 5.1% in Pays de la Loire. Severna i Yugoiztochna Bulgaria had the lowest share of female deaths from breast cancer, at 1.7%, which was approximately half the EU average (3.5%).

In 2021, prostate cancer accounted for 2.6% of all male deaths in the EU. As for breast cancer, the highest share of deaths from prostate cancer was recorded in the Finnish archipelago of Åland (8.4% of all male deaths). More generally, prostate cancer accounted for a relatively high share of male deaths in the Nordic countries. After Åland, the 2nd to 4th highest regional shares were recorded in the Swedish regions of Östra Sverige (where 4.7% of all male deaths were attributed to prostate cancer) and Norra Sverige (4.6%), as well as Denmark (also 4.7%). The lowest share was recorded in the Romanian region of Macroregiunea Patru, as prostate cancer accounted for 1.1% of all male deaths, which was less than half the EU average (2.6%).

Deaths from selected cancers, 2021
(% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions)



Note: the figure shows the EU regions with the highest and lowest shares of total deaths for 4 selected cancers in the EU (based on standardised death rates per 100 000 inhabitants).
Source: Eurostat (online data code: hlth_cd_asdr2)

Figure 3: Deaths from selected cancers, 2021 (% of all deaths, based on standardised death rates per 100 000 inhabitants, by NUTS 1 regions) Source: Eurostat (hlth_cd_asdr2)

There is a broad range of factors that may determine an individual's chances of getting and surviving cancer. These include socioeconomic status, lifestyle habits and where we live. A wide range of different healthcare policies also play a role, such as effective prevention policies, easy access to screening and vaccination initiatives, or the rapid introduction of new medicines to health systems. Hospital discharge rates can be used to analyse the capacity of individual healthcare systems to provide cancer care.

Both in-patient care and day care comprise formal admission into a healthcare facility, such as a hospital, for diagnosis, treatment or other types of healthcare. While in-patient care involves an overnight stay after admission, day care comprises planned medical and paramedical services delivered to patients without an overnight stay: day care patients are formally admitted with the intention of being discharged on the same day.

More about the data: cancer/neoplasm statistics

There are considerable differences across regions in terms of the level and organisation of cancer care (oncology) services. In some EU countries, cancer care is relatively centralised in specialised centres/hospitals that are usually located in major cities. The aim is to ensure high-quality care by bringing together specialised medical ex-

pertise, advanced equipment, and comprehensive treatment options in a single location. By contrast, to improve accessibility for patients living in remote areas, other countries seek to develop telemedicine services and satellite clinics to extend the reach of their specialised care.

The statistics presented above for cancer are based on information pertaining to malignant neoplasms (C00–C97), as defined by 10th revision of the International statistical classification of diseases and related health problems (ICD-10). They relate to malignant tumours / cancerous cells, which can invade the surrounding tissue and spread to other parts of the body. By contrast, the information presented below for hospital discharges covers all forms of neoplasms (C00–D48). As such, these statistics include benign neoplasms and neoplasms of uncertain or unknown behaviour; benign tumours aren't cancerous, they don't invade the surrounding tissue and they don't spread to other parts of the body.

The regional statistics presented below for discharges are based on the location of each hospital. As such, they confirm (or otherwise) the centralisation of cancer services in key locations. As of reference year 2022, this dataset will be adapted to focus on the region of residence for each discharged patient (the 'residency concept') rather than focusing on those regions from which each patient was discharged from hospital.

In 2021, there were at least 5.9 million in-patients discharged from EU hospitals having been treated for neoplasms; this aggregate figure excludes information for Denmark, Greece and Luxembourg and includes 2020 data for Malta. During the same year, there were 3.9 million day case patients treated for neoplasms who were discharged from hospital (this aggregate is based on similar coverage, but also excludes Bulgaria).

The number of hospital discharges for neoplasm in-patients peaked in the Croatian capital region of Grad Zagreb, while the number of hospital discharges for neoplasm day care patients peaked in the Romanian capital region of Bucureşti-Ilfov

In 2021, hospital discharge rates for neoplasm in-patients ranged from highs of 4 258 and 4 105 per 100 000 inhabitants in the Croatian and Bulgarian capital regions of Grad Zagreb and Yugozapaden down to fewer than 500 discharges per 100 000 inhabitants in Ciudad de Melilla in Spain, Malta (2020 data) and 2 French outermost regions – Guyane and Mayotte. For the vast majority of regions within the EU, the discharge rate for neoplasm in-patients was within the range of 750–2 000 discharges per 100 000 inhabitants.

Hospital discharge rates for neoplasm day cases peaked at 12 437 and 12 235 per 100 000 inhabitants in the Romanian and Croatian capital regions of Bucureşti-Ilfov and Grad Zagreb. These rates were nearly twice as high as in any other region of the EU. At the lower end of the distribution, a relatively large number of regions had low rates: there were 52 regions with fewer than 350.0 discharges per 100 000 inhabitants.

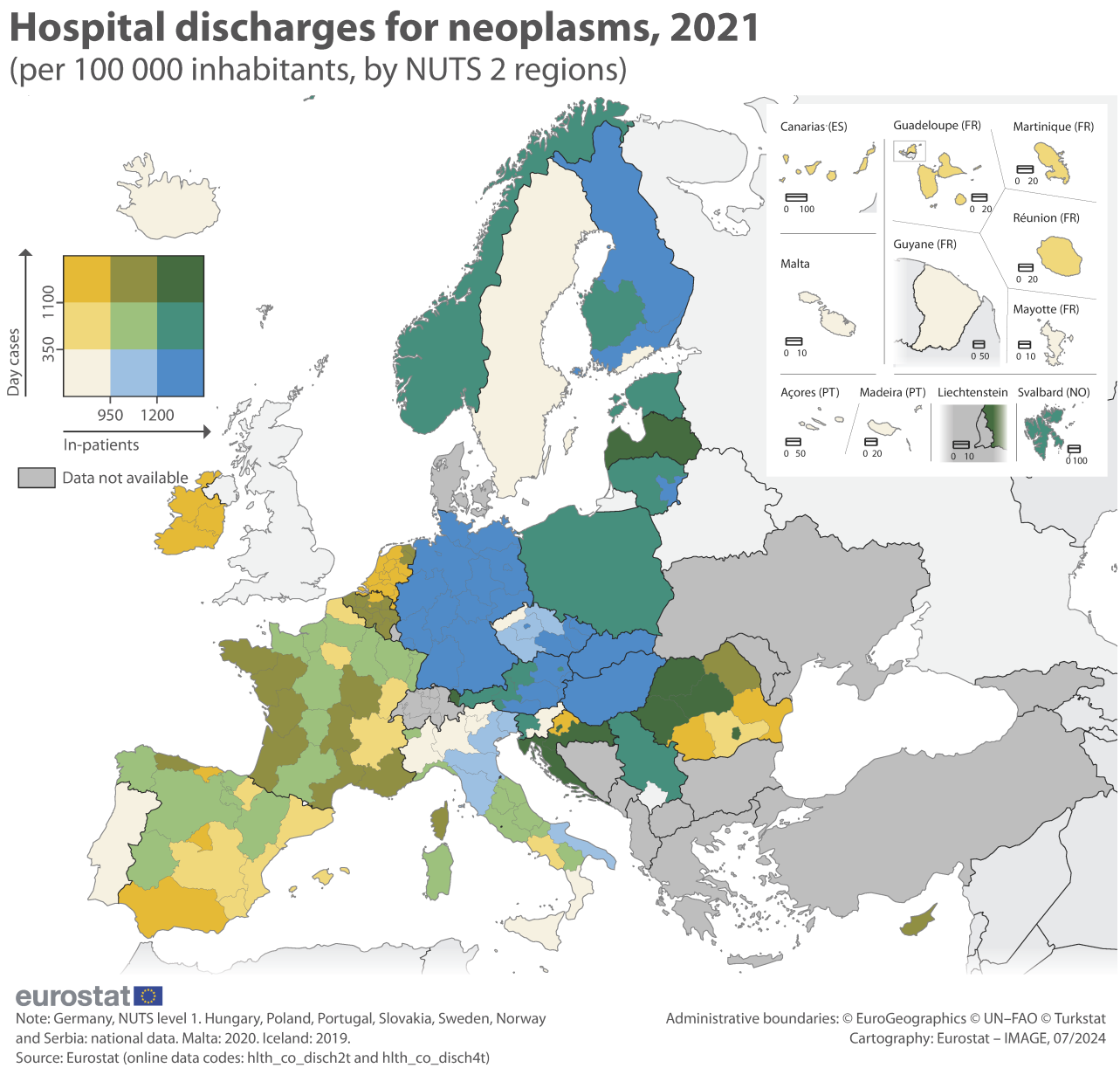
Map 5 shows the number of hospital discharges for neoplasms per 100 000 inhabitants – information is presented for both in-patients and day cases. In 2021, there were 12 NUTS level 2 regions with relatively high numbers of discharges for neoplasms per 100 000 inhabitants – at least 1 200 for in-patients and at least 1 100 for day cases – as shown by the darkest shade of green in the map. A more detailed investigation reveals that this group included

- 4 Romanian regions – Nord-Vest, Centru, Bucureşti-Ilfov and Vest
- 3 rural regions from France – Bourgogne, Auvergne and Corse
- 3 regions from Croatia – Panonska Hrvatska, Jadranska Hrvatska and Grad Zagreb
- the westernmost Austrian region of Vorarlberg
- Latvia.

By contrast, there were 12 NUTS level 2 regions with a relatively low number of hospital discharges for neoplasms per 100 000 inhabitants in 2021 – fewer than 950.0 for in-patients and fewer than 350.0 for day cases – as shown by the lightest coloured shade in the map. This group included

- 4 Italian regions – Lombardia, Calabria, Provincia Autonoma di Bolzano/Bozen and Provincia Autonoma di Trento
- 2 outermost regions from France – Guyane and Mayotte
- single regions from Czechia (Severozápad), Slovenia (Vzhodna Slovenija) and Finland (Helsinki-Uusimaa)
- Malta (2020 data), Portugal and Sweden (only national data are available).

Among the 156 regions for which data are available for both neoplasm in-patients and neoplasm day cases, there were 95 regions where the hospital discharge rate was higher for in-patients than it was for day cases in 2021, while the opposite was true in the remaining 61 regions. In Czech and German (NUTS level 1) regions, the organisation of treatment and care was such that almost all discharges were for in-patients. For example, in the central German region of Hessen, there were more than 200 times as many hospital discharges for neoplasms among in-patients than for day cases. By contrast, there were other EU countries where a majority of hospital discharges for neoplasms were day cases. This was the case, for example, in every region of Belgium, Ireland, Croatia, Latvia, the Netherlands and Romania. It was also the case in Cyprus, where there were 5 times as many hospital discharges for neoplasms among day case patients as among in-patients.



Map 5: Hospital discharges for neoplasms, 2021 (per 100 000 inhabitants, by NUTS 2 regions) Source: Eurostat (hlth_co_disch2t) and (hlth_co_disch4t)

Source data for figures and maps

Data sources=

Healthcare resources Until reference year 2020, non-expenditure data on healthcare resources, such as data on the number of hospital beds or the number of medical doctors, were submitted to Eurostat on the basis of a gentlemen's agreement; in other words, there was no EU legislation for the collection of regional data on these subjects.

As of reference year 2021, countries submit data to Eurostat on the basis of *Commission Regulation (EU) 2022/2294 as regards statistics on healthcare facilities, healthcare human resources and healthcare utilisation* , and based on a gentlemen's agreement established in the framework of the Eurostat Working Group on Public Health Statistics.

The information presented is mainly based on national administrative sources and therefore reflects country-specific ways of organising health care and may not be completely comparable; a few countries compile their statistics from surveys. Annual data for healthcare resources are provided in absolute numbers and as rates per 100 000 inhabitants.

For country specific notes, please refer to the annexes at the end of the national metadata reports that are accessible from a set of links at the beginning of the European metadata report .

The Healthcare non-expenditure statistics manual provides an overview of the classifications used for both mandatory variables and variables provided on a voluntary basis.

Causes of death Data on causes of death provide information on mortality patterns and form an important element of public health information. This dataset refers to the underlying cause of death, which – according to the World Health Organization (WHO) – is 'the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury'.

Since reference year 2011, data for causes of death have been provided based on the *Commission Regulation (EC) No 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work* and the implementing Regulation *(EU) No 328/2011 of 5 April 2011 on Community statistics on public health and health and safety at work, as regards statistics on causes of death* .

Causes of death statistics are based on information derived from the medical certificate of cause of death. The medical certification of death is an obligation in all EU countries. The dataset is built upon standards laid out in the WHO's International statistical classification of diseases and related health problems (ICD). The ICD provides codes, rules and guidelines for mortality coding (as provided on the medical certificate) into ICD codes. The statistics presented in this chapter are classified according to a European shortlist that is based on the 10th revision of the ICD (ICD-10).

As the population structure of a region (or country) can strongly influence crude death rates, regional (and national) comparisons are normally made on the basis of standardised death rates, taking into account age effects. The standardised death rate is computed as a weighted average of age-specific mortality rates (where the weighting factor is the age distribution of a standard reference population). As most causes of death vary significantly with people's age and sex, the use of standardised death rates improves comparability over time and between regions (and countries).

Statistics on causes of death may be broken down by sex, 5-year age group, residency and country of death. Annual data are provided in absolute numbers, as crude death rates and as standardised death rates; Eurostat also collects monthly data from some countries. The information presented in this chapter refers to regional death rates for NUTS level 1 and NUTS level 2 regions of residence for the latest available reference year (2021).

= Indicator definitions

Available beds in hospitals

Hospital bed numbers provide information on healthcare capacities, in this case the maximum number of patients who can be admitted to hospitals. The total number of hospital beds includes all hospital beds which are regularly maintained and staffed and immediately available for the care of admitted patients. This count is equal to the sum of the following categories: i) curative (acute) care beds, ii) rehabilitative care beds, iii) long-term care beds and iv) other hospital beds.

Medical doctors

A medical doctor (or physician) has a degree in medicine. Practising physicians are those who have successfully completed studies in medicine at university level, have a license to practise and who are working to provide services to individual patients (conducting medical examinations, making diagnoses, performing operations). Excluded from the count of practising physicians are students who haven't yet graduated, unemployed physicians, retired physicians or physicians working abroad, as well as physicians working in administration, research or other posts that don't involve direct contact with patients.

Eurostat gives preference to the concept of practising physicians, although some data may be presented for professionally active physicians (a practising physician or any other physician for whom a medical education is a prerequisite for the execution of their job), or for licensed physicians (a broader concept, encompassing the other 2 types of physician as well as other registered physicians who are entitled to practise as healthcare professionals but are unemployed, retired, and so on).

Deaths

A death, according to the United Nations definition, is the 'permanent disappearance of all vital functions without possibility of resuscitation at any time after a live birth has taken place'; this definition therefore excludes foetal deaths (stillbirths).

Causes of death

The underlying cause of death is defined as the disease or injury which started the train (sequence) of morbid (disease-related) events which led directly to death, or the circumstances of the accident or violence which produced the fatal injury. Although international definitions are harmonised, the resulting statistics on causes of death may not be fully comparable, as classifications may vary when the cause of death is multiple or difficult to evaluate, and because of different notification procedures.

Within this publication, data are presented for the main cause of death (according to ICD-10)

- all causes of death (as defined by ICD-10 A00–Y89, excluding S00–T98)
- cancer (malignant neoplasms) (ICD-10 C00–C97)
- neoplasms (ICD-10 C00–C97 and D00–D48)
- diseases of the circulatory system (ICD-10 I00–I99)
- diseases of the respiratory system (ICD-10 J00–J99)
- other causes of death.

Hospital discharges

A hospital discharge occurs when a hospital patient is formally released after an episode of care. The reasons for discharge include finalisation of treatment, signing out against medical advice, transfer to another healthcare institution, or because of death. The data should cover all types of hospitals, including general hospitals, mental health hospitals and other specialised hospitals, as well as all types of diagnosis and treatment.

Statistics on healthcare activities such as information on discharges are documented in this background article which provides information on the scope of the data, its legal basis, the methodology employed, as well as related concepts and definitions.

A day-care discharge is the release of a patient who was formally admitted to a hospital to receive planned medical and paramedical services, and who was discharged on the same day. An in-patient discharge is the release of a patient who was formally admitted into a hospital for treatment and/or care and who stayed for a minimum of 1

night. Emergency cases and urgent admissions are included if they result in an overnight stay and formal admission. Patients admitted as day-care patients, but who were retained in hospital overnight (due to a complication) are also included. In cases where national statistics exclude certain types of hospital this will understate, to a greater or lesser extent, the number and rate of discharges.

Discharges by diagnosis refer to the principal diagnosis, in other words, the main condition diagnosed at the end of a patient's hospitalisation. The main condition is that which is primarily responsible for the patient's need for treatment or investigation. The main diagnoses for discharges are based on the ICD-10, with data presented for neoplasms (as defined by malignant cancer, benign and uncertain behaviour neoplasms: C00–D48).

Context

Health systems across the EU are organised, financed and managed in very different ways and the responsibility for the delivery of health services largely resides with individual EU countries. Policy developments for the EU are based on an open method of coordination, a voluntary process that seeks to agree common objectives that help national authorities cooperate. The COVID-19 crisis underlined the issue of cooperation on health matters and focused attention on the ability of the EU to respond to shocks and health crises.

The EU's main policy objectives within this domain include

- improving access to health care for all people, through effective, accessible and resilient health systems
- fostering health coverage as a way of reducing inequalities and tackling social exclusion
- promoting health information and education, healthier lifestyles and individual well-being
- investing in health through disease prevention
- delivering affordable, accessible and innovative medicines
- improving safety standards for patients, pharmaceuticals/drugs and medical devices
- beating cancer
- guaranteeing/recognising prescriptions in other EU countries
- crisis preparedness (for pandemics such as COVID-19).

Within the European Commission, policy actions for health generally fall under the responsibility of the Directorate-General for Health and Food Safety and the Directorate-General for Employment, Social Affairs and Inclusion . Such actions are focused on protecting people from health threats and disease, providing consumer protection (food safety issues), promoting lifestyle choices (fitness and healthy eating), as well as workplace safety.

In May 2024, the European Commission summarised work done and progress made within the health domain through a Communication on the European Health Union (COM(2024) 206 final), highlighting that the European Health Union

- aims to ensure that EU countries are better prepared for future health crises
- supports modern and innovative health policies
- is backed by substantial funding from the EU4Health programme (see below)
- will continue to promote European innovation and competitiveness in the healthcare sector so that the needs of patients are fully addressed
- will aim to ensure that the EU continues to be a global partner and contributor to improving the health of people around the world.

EU4Health

Regulation (EU) 2021/522 establishing a Programme for the Union's action in the field of health ('EU4health programme') for the period 2021–27 provides funding to EU countries, health organisations and non-governmental organisations (NGOs) and is designed, among other objectives, to boost the EU's preparedness for major cross-border health threats by creating

- reserves of medical supplies for crises
- a reserve of healthcare staff and experts that can be mobilised to respond to crises across the EU
- increased surveillance of health threats.

EU4Health has a budget of € 5.8 billion for the period 2021–27 and aims to support a longer-term vision of improving health outcomes via efficient and inclusive health systems, through 10 specific objectives that are classified under 4 general goals

- improve and foster health in the EU
  - disease prevention and health promotion
  - international health initiatives and cooperation
- tackle cross-border health threats
  - prevention, preparedness and response to cross-border health threats
  - complementing national stockpiling of essential crisis-relevant products
  - establishing a reserve of medical, healthcare and support staff
- improve medicinal products, medical devices and crisis-relevant products
  - making medicinal products, medical devices and crisis-relevant products available and affordable
- strengthen health systems, their resilience and resource efficiency
  - strengthening health data, digital tools and services, digital transformation of health care
  - improving access to health care
  - developing and implementing EU health legislation and evidence-based decision making
  - integrated work among national health systems.

As part of an initiative to build a stronger European Health Union, *Regulation (EU) 2022/2371 of the European Parliament and of the Council of 23 November 2022 on serious cross-border threats to health* aims to ensure that the EU will have

- a robust preparedness planning and a more integrated surveillance system
- a better capacity for accurate risk assessment and targeted response
- solid mechanisms for joint procurement of medical countermeasures
- the possibility to adopt common measures in the EU to address future cross-border health threats.

Regulation (EC) No 851/2004 establishing a European Centre for disease prevention and control was amended in November 2022 by Regulation (EU) 2022/2370 which provides for a stronger and more robust European Centre for Disease Prevention and Control (ECDC). As such, the ECDC won't only issue recommendations to EU countries about health threat preparedness but also host a new network of EU reference laboratories and establish an EU Health Task Force for rapid health interventions in the event of a major outbreak.

Beating Cancer Plan

EU4Health also invests in urgent health priorities, including *Europe's Beating Cancer Plan* . The President of the European Commission highlighted a 'European plan to fight cancer, to support Member States in improving cancer control and care' among a number of political guidelines for the period 2019–24.

Europe's Beating Cancer Plan was presented by the European Commission in February 2021. It is built around

10 flagship initiatives and several supporting actions and is designed to support the work of EU countries in preventing cancer and ensuring a high quality of life for cancer patients, survivors, their families and carers. The plan aims to tackle the entire disease pathway of cancer. It is structured around 4 key action areas: i) prevention, ii) early detection, iii) diagnosis and treatment and iv) quality of life of cancer patients and survivors.

European Health Insurance Card

The European health insurance card (EHIC) allows travellers from an EU country to obtain medical treatment if they fall ill whilst temporarily visiting another EU country, an EFTA country or the United Kingdom. The EU has also introduced legislation on the application of patients' rights in cross-border health care (Directive 2011/24/EU), which allows patients to travel abroad for treatment when this is either necessary (specialist treatment is only available abroad) or easier (if the nearest hospital is just across a border).

Horizon Europe

The research framework programme – Horizon Europe – funds vital research in health. This includes initiatives to scale up the research effort for challenges such as those experienced during the COVID-19 pandemic (for example, the extension of clinical trials, innovative protective measures, virology, vaccines, treatments and diagnostics, and the translation of research findings into public health policy measures).

Within the Horizon programme, 5 missions have been identified, one of which is the cancer mission. By joining efforts across the EU, the mission on cancer , together with Europe's Beating Cancer Plan, aims to provide a better understanding of cancer, support earlier diagnosis, optimise treatment and improve cancer patients' quality of life during and beyond their cancer treatment.

Health agencies in the EU

The European Centre for Disease Prevention and Control (ECDC) in Frösunda (Sweden) is an EU agency that provides surveillance of emerging health threats so that the EU can respond more rapidly. It pools knowledge on current and emerging threats and works with national counterparts to develop disease monitoring across the EU.

The European Medicines Agency (EMA), which is located in Amsterdam (the Netherlands), helps national regulators by coordinating scientific assessments about the quality, safety and efficacy of medicines used across the EU. All medicines in the EU must be approved nationally or by the EU before being placed on the market. The safety of pharmaceuticals that are sold in the EU is monitored throughout a product's life cycle: individual products may be banned or their sales/marketing suspended.

The European Union Drugs Agency (EUDA) in Lisbon (Portugal) is the central authority on illicit drugs in the EU. It frequently identifies important drug-related threats, helping EU countries be better prepared to handle them.

This article forms part of Eurostat's annual flagship publication, the *Eurostat regional yearbook* .

Maps can be explored interactively using *Eurostat's Statistical Atlas* .

Explore further

Other articles

- Causes of death statistics
- Causes of death – monthly statistics
- Health in the European Union – facts and figures – online publication

Database

- Health (hlth) , see

Health care (hlth_care)

Health care resources (hlth_res)

Heath care staff (hlth_staff)

Physicians by NUTS 2 region (hlth_rs_physreg)

Health care facilities (hlth_facil)

Available beds in hospital by NUTS 2 region (hlth_rs_bdsrg2)

Causes of death (hlth_cdeath)]

General mortality (hlth_cd_gmor)

Causes of death - standardised death rate by NUTS 2 region of residence (hlth_cd_asdr2)

- Regional statistics by NUTS classification (reg) , see

Regional health statistics (reg_hlth)

Causes of death (reg_hlth_cdeath)

Health care: resources and patients (non-expenditure data) (reg_hlth_care)

Dedicated section

- Health
- Regions and cities

Publications

News articles

- Circulatory diseases, cancer: 54% of all EU deaths in 2021
- Circulatory disease deaths: majority among people over 65
- How healthy did EU citizens feel in 2021?
- How many people live 15 minutes away from a hospital?
- Looking for a local doctor?
- Older people report better health status in cities
- 22% of people in the EU have high blood pressure
- Breast cancer screening rates across the EU

Paper and PDF publications

- Atlas on mortality in the European Union, 2009
- Eurostat regional yearbook – 2024 edition

Online publications

- Regions in Europe – 2024 interactive edition
- Rural Europe – online publication
- Urban Europe – online publication

Main tables

- Health (t_hlth) , see

Health status (t_hlth_state)

Health care (t_hlth_care)

Causes of death (t_hlth_cdeath)

- Regional statistics (t_reg) , see

Regional health statistics (t_reg_hlth)

All causes of death by NUTS 2 regions (tgs00057)
Death due to cancer by NUTS 2 regions (tgs00058)
Death due to ischaemic heart diseases by NUTS 2 regions (tgs00059)
Available beds in hospitals by NUTS 2 regions (tgs00064)

Methodology

Manuals and further methodological information

- Methodological manual on territorial typologies
- Statistical regions in the European Union and partner countries: NUTS and statistical regions 2021 – 2022 edition

Metadata

- Causes of death (SIMS metadata file – hlth_cdeath_sims)
- Healthcare resources (ESMS metadata file – hlth_res_esms)
- Health variables of EU-SILC (ESMS metadata file – hlth_silc_01_esms)

External links

- European Commission – Directorate General for Health and Food Safety – Public health
- European Commission – Directorate General for Regional and Urban Policy – Cohesion policy and health
- European Commission – EU4Health 2021–27 – a vision for a healthier European Union
- European Commission – Europe's Beating Cancer Plan
- Health at a Glance: Europe (OECD)
- World Health Organization (WHO)

Visualisation

- Eurostat statistical atlas (Chapter 2)
- Healthcare services
- Regional statistics illustrated