

23 May 2017

Causes of death 2015

More people die due to diseases of the circulatory system, but malignant neoplasms take more lives earlier

Diseases of the circulatory system continued to be the leading cause of death in Portugal, accounting for 29.8% of deaths recorded in 2015, 0.5% more than in the previous year. As regards this group of diseases, strokes caused 10.8% of total deaths in Portugal (11,778), while ischaemic heart diseases caused 6.7% of deaths, and acute myocardial infarctions caused 4.0%.

In the year under review, and similarly to previous ones, malignant neoplasms were the second cause of death in the country, with 24.5% of deaths, which corresponds to an increase of 1.6% over 2014. Among malignant neoplasms, deaths were mainly caused by malignant neoplasm of trachea, bronchus and lung, representing 3.7% of deaths in the country, and by malignant neoplasm of colon, rectum and anus, with 3.5% of deaths.

Although malignant neoplasms were at the origin of fewer deaths than diseases of the circulatory system, their impact is far greater in terms of potential years of life lost: in 2015, 111,820 potential years of life have been lost due to malignant neoplasms, more than the double of potential years of life lost due to diseases of the circulatory system.

In 2015, deaths due to diseases of the respiratory system increased by 10.7% vis-à-vis 2014, and those caused by diabetes mellitus increased by 3.1%.

Statistics Portugal releases the publication Causes of death 2015 ([Causas de morte 2015](#)), with the statistical results on mortality by cause of death in Portugal in 2015.

55 groups of causes of death are under review, based on the list used by the 'OECD Health Data' of the Organisation for Economic Co-operation and Development (OECD), which include the main causes of death by disease, especially malignant neoplasms, diseases of the circulatory system, of the respiratory system, and endocrine, nutritional and metabolic diseases, as well as deaths from external causes of injury or poisoning.

Each cause of death is indicated together with the number of deaths by gender, age group, and place of residence of the diseased, and other derivative indicators: sex ratio; average age at the time of death; crude death rate; average number of years of potential life lost, among others.

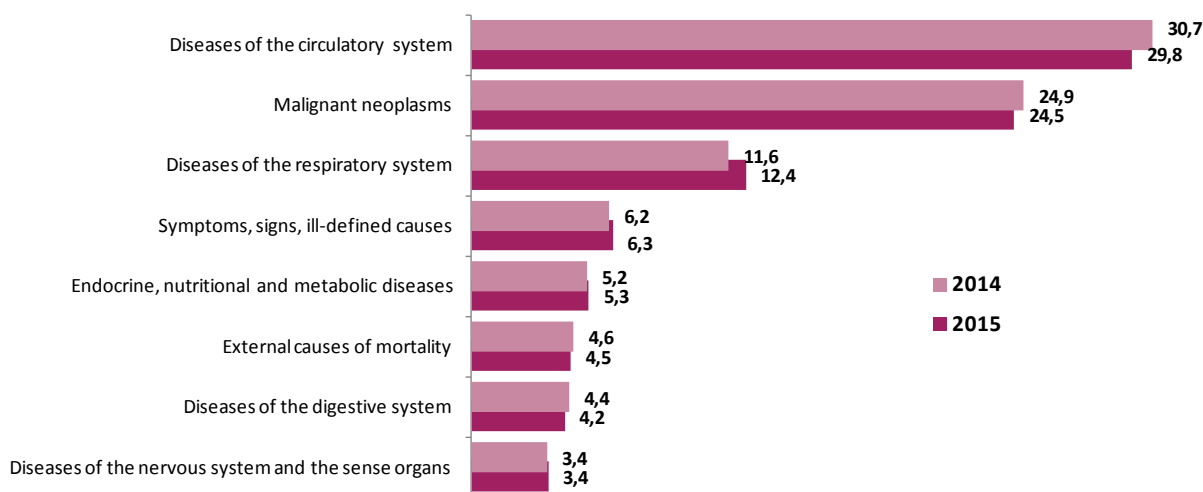
The publication also includes: data broken down by region, according to NUTS 2013 levels 1, 2 and 3, gender, and age group; the indicator calculation methodology, and the correspondence between the 55 groups of causes of death and the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10).

Diseases of the circulatory system and malignant neoplasms caused more than half of deaths in the country in 2015

In 2015 there were 108,922 deaths in Portugal (383 of residents abroad), i.e. 3.5% more than in 2014 (105,219). Deaths due to disease accounted for 95.5% of total deaths, while external causes of injury or poisoning were at the origin of 4.5% of deaths, in particular resulting from accidental falls (2.4%) and intentional self-harm and sequels (suicide), at 1.0%.

Together, diseases of the circulatory system (32,443 deaths) and malignant tumors (26,647 deaths) were responsible for more than half (54.2%) of deaths in the country in 2015.

Deaths by some causes of death in the country (%), 2014 and 2015



Source: Statistics Portugal, Mortality by causes of death.

Premature mortality due to diseases of the circulatory system decreased in 2015

In 2015 diseases of the circulatory system continued to be the main underlying cause of death, leading to 32,443 deaths, i.e. 29.8% of overall mortality in Portugal, 0.5% more than in 2014 (32,288 deaths).

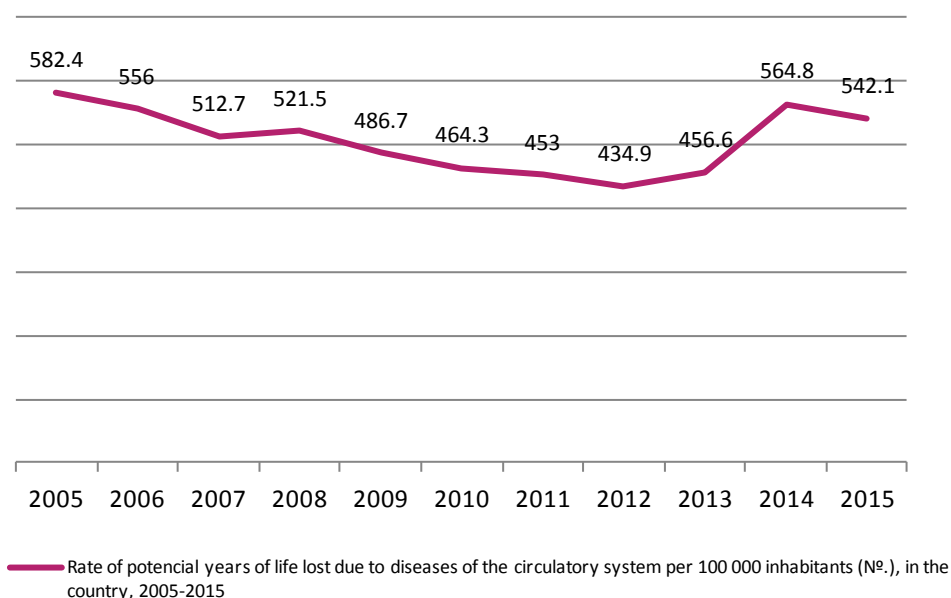
Women were the most affected by this group of causes of death, accounting for 55.5% of deaths due to diseases of the circulatory system, which resulted in a sex ratio of 80.2 male deaths per 100 female deaths. The number of deaths of women due to diseases of the circulatory system corresponded to a death rate of 331 deaths from this cause for every 100 thousand resident women, thus exceeding the value for men (294 deaths of men for every 100 thousand resident men).

However, on average, diseases of the circulatory system hit men almost 6 years earlier than women, with an average age at the time of death of 77.8 for men, compared with 83.6 for women.

On the other hand, unlike 2013 and 2014, this group of diseases registered a decreased in premature mortality (ratio of individuals deceased before the age of 70 to total deaths from this cause) from 13.9% in 2014 to 13.6% in 2015, and from 50,236 potential years of life lost in 2014 to 47,850 in 2015. In Portugal, in 2015, there were 542.1 years of

potential life lost for every 100 thousand inhabitants due to diseases of the circulatory system, a value still higher than the minimum registered in 2012 (434.9 potential years of life for every 100 thousand inhabitants).

Rate of potencial years of life lost due to diseases of the circulatory system per 100 000 inhabitants (No.), in the country, 2005-2015



Source: Statistics Portugal, Mortality by causes of death

As regards this group of deaths as a whole, strokes caused 10.8% of total deaths in Portugal (11,778), a value close to that observed in the previous year (11.2% in 2014). Ischaemic heart diseases were the cause of 7,328 deaths in 2015 (6.7%), and acute myocardial infarctions were associated with 4,342 deaths (4.0%).

Deaths due to cerebrovascular diseases hit mainly women, with a ratio of 75.2 male deaths for every 100 female deaths, contrary to deaths caused by ischaemic heart disease and acute myocardial infarction, which recorded a higher ratio for men (124.4 and 125.9 male deaths respectively for every 100 female deaths).

Deaths caused by cerebrovascular diseases generally occurred at an older age (81.8 on average for both men and women) than those caused by acute myocardial infarction (77.1) and ischaemic heart disease (77.6).

Malignant neoplasms were the main cause of death in terms of potential years of life lost

Malignant neoplasms were the second underlying cause of death in 2015, with 26,647 deaths, corresponding to 24.5% of mortality in Portugal, i.e. 1.6% more than in 2014 (26,220 deaths). This group of diseases hit more men (59.6% of deaths from malignant neoplasms) than women (40.4%), resulting in a sex ratio of 147.7 male deaths for every 100 female deaths.

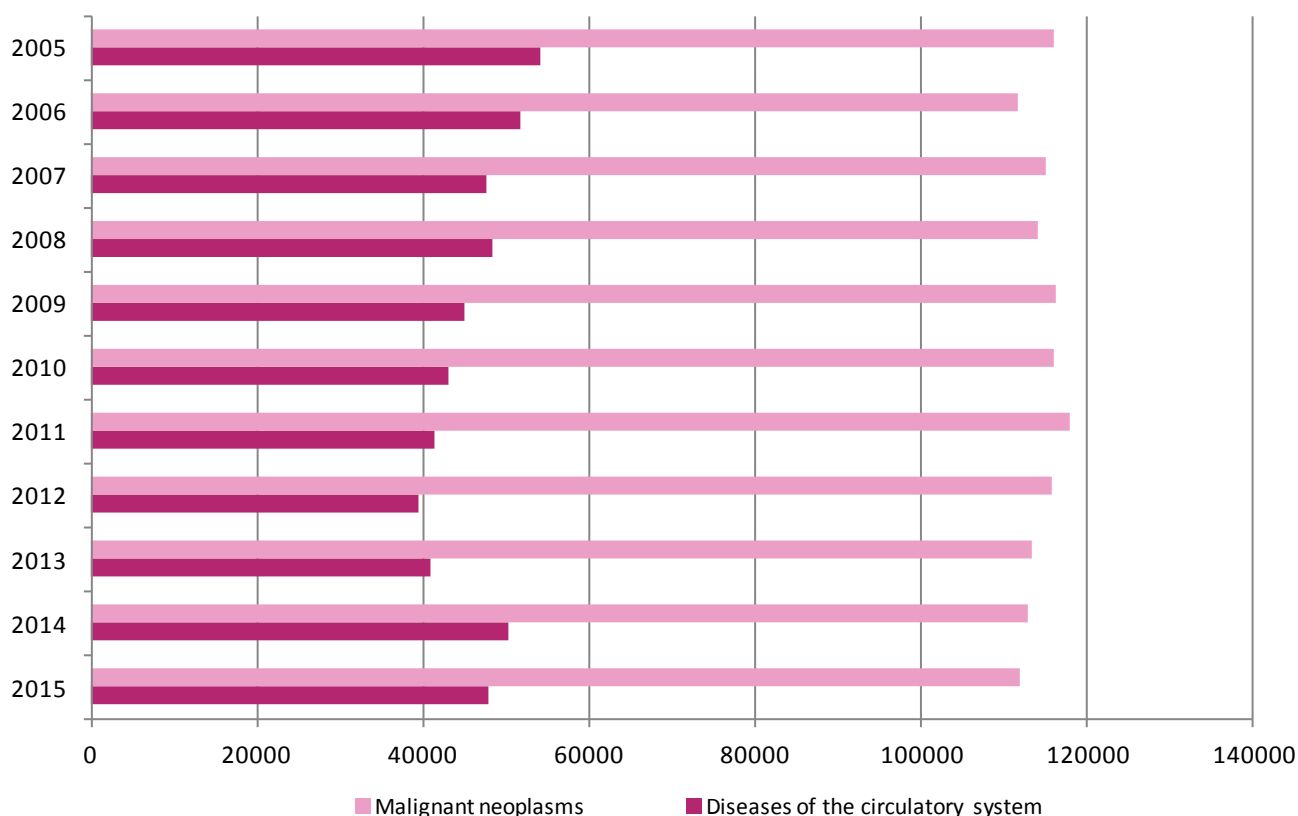
The average age of people deceased due to this group of causes at the time of death was 72.8, which was higher for women (74.0) than for men (72.0).

Premature mortality, calculated by the ratio of individuals deceased due to malignant neoplasm before the age of 70 to total deaths of this cause, stood at 37.3%, higher for men (40.0%) than for women (33.3%).

The number of potential years of life lost in Portugal in 2015 due to malignant neoplasms was 111,820 (112,817 in 2014), corresponding to a rate of potential years of life lost of 1,266.8 years per 100 thousand inhabitants, slightly lower than in 2014 (1268.3 potential years of life lost per 100 thousand inhabitants).

These results show that deaths from malignant neoplasms affect fewer people than diseases of the circulatory system, but have a far greater impact in terms of potential years of life lost.

Potencial years of life lost due to diseases of the circulatory system and to malignant neoplasms, in the country, 2005-2015

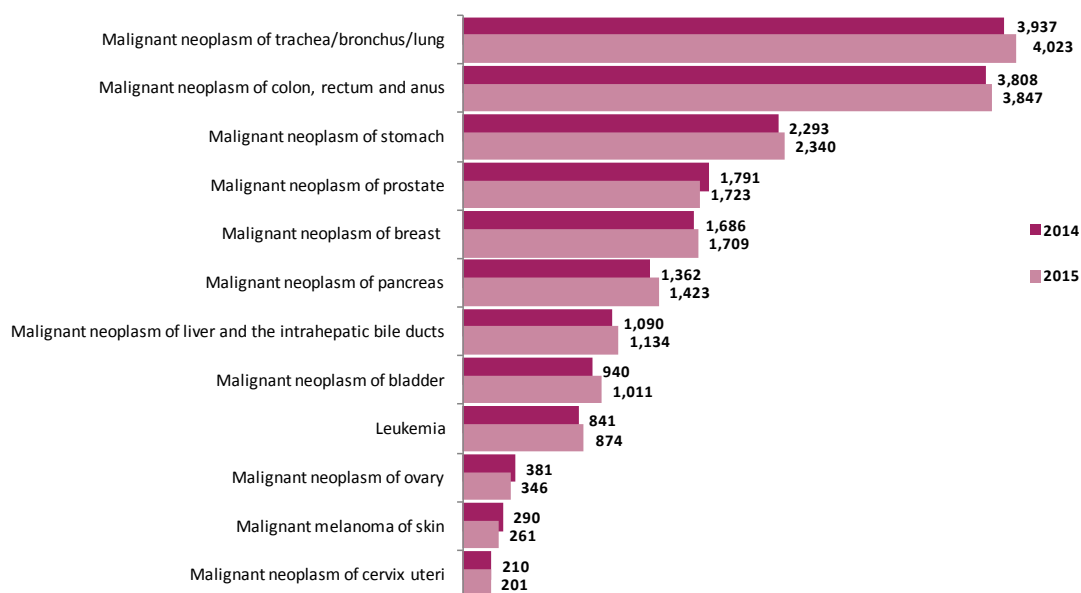


Source: Statistics Portugal, Mortality by causes of death

Deaths due to malignant neoplasms of skin and of ovary decreased in 2015

In 2015 malignant neoplasms deaths were mainly caused by malignant neoplasm of trachea, bronchus and lung, representing 3.7% of deaths in Portugal (4,023), i.e. 2.2% more than in 2014 (3,937), and by malignant neoplasm of colon, rectum and anus, with 3.5% of deaths (3,847), 1.0% more than in the previous year (3,808 deaths).

Deaths caused by some malignant neoplasms (No.), in the country, 2014 and 2015



Source: Statistics Portugal, Mortality by causes of death.

Deaths caused by malignant neoplasm of trachea, bronchus and lung hit mainly men (75.6%), corresponding to a ratio of 309.7 male deaths for every 100 female deaths, the highest value in unspecified neoplasms among men.

Deaths caused by malignant neoplasm of colon, rectum and anus were also more frequent in men (59.8%), although less markedly (the sex ratio in this case was 148.5 male deaths for every 100 female deaths). Deaths caused by malignant neoplasm of colon, rectum and anus occurred on average five years later (75.2) than those caused by malignant neoplasm of trachea, bronchus and lung (70.0).

In 2015 it is also to be noted that deaths due to malignant neoplasm of stomach accounted for 2.1% of total deaths (2.2% in 2014), and those caused by malignant neoplasm of pancreas accounted for 1.3% of total deaths both in 2015 and 2014).

Malignant neoplasm of prostate was responsible for 1,723 deaths in 2015, i.e. 3.8% less than in 2014 (1,791), with the average age at the time of death continuing to be close to 81.

1,690 deaths of women were caused by malignant neoplasm of breast in 2015, i.e. 1.6% more than in the previous year (1,664). The average age at the time of death was in this case 71.0, i.e. remaining in the previous year.

In 2015, there were increases of 7.6% in deaths caused by malignant neoplasms of bladder and 4.5% in malignant neoplasms of pancreas, as well as decreases of 10.0% in deaths due to malignant neoplasms of skin and 9.2% in deaths due to malignant neoplasm of ovary.

The increase in deaths due to pneumonia was at the origin of almost 40% of the increase in mortality due to diseases of the respiratory system

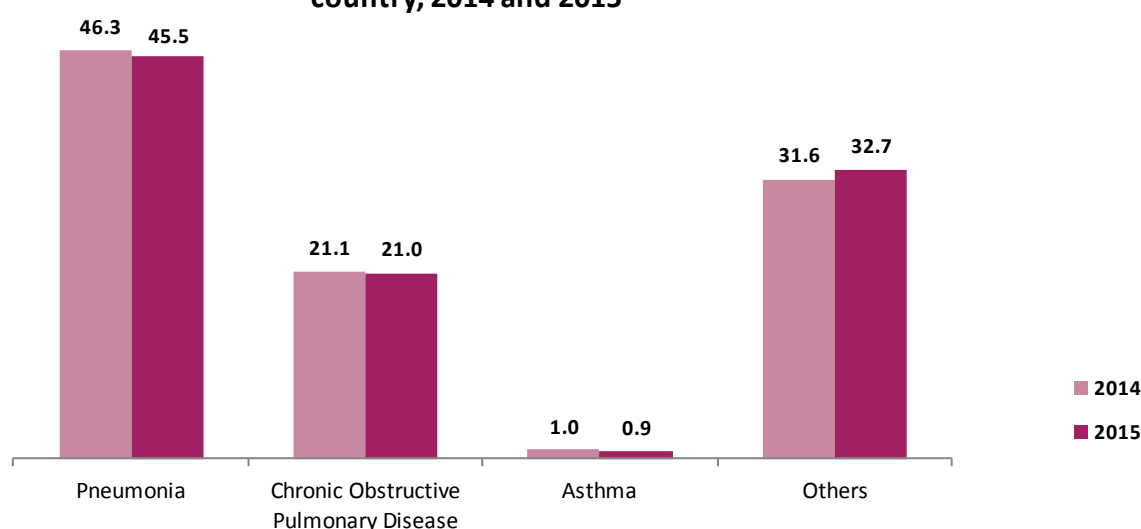
Diseases of the respiratory system caused in 2015 13,470 deaths, i.e. 10.7% more than in the previous year (12,164). The increase in deaths due to pneumonia was at the origin (+497 deaths compared to 2014) of almost 40% of the increase in mortality due to diseases of the respiratory system (+1,306 deaths than in 2014).

Deaths due to diseases of the respiratory system hit men and women similarly (50.0%). However, the average age at the time of death caused by diseases of the respiratory system was higher for women (84.8) than for men (81.3).

The proportion of deaths before the age of 70 was 8.2%, with 11,461 potential years of life lost and 129.8 years lost per 100 thousand inhabitants.

As regards diseases of the respiratory system as a whole, pneumonia, with 6,126 deaths, and chronic obstructive pulmonary disease, with 2,827 deaths, caused the highest number of deaths (5.6% and 2.6% respectively of the total in Portugal). The number of deaths due to Influenza tripled between 2014 and 2015 (from 24 deaths to 74).

Distribution of deaths (%) for diseases of the respiratory system, in the country, 2014 and 2015



Source: Statistics Portugal, Mortality by causes of death.

Deaths due to diabetes mellitus increased by 3.1% in Portugal

Endocrine, nutritional and metabolic diseases caused 5,766 deaths in 2015, 4.9% more than in the previous year (5,497).

These diseases caused more deaths in women (3,312) than in men (2,454), with a sex ratio of 74.1 male deaths for every 100 female deaths. However, the average age at the time of death was higher for women (82.1) than for men (77.6).

The number of potential years of life lost, which reflects premature mortality (before the age of 70), was 8,437 in 2015. This was a relatively low figure due to the fact that only 14.2% of deaths occurred before the age of 70. The rate of potential years of life lost was 95.6 per 100 thousand inhabitants.

As regards endocrine, nutritional and metabolic diseases as a whole, diabetes mellitus, with 4,406 deaths, caused the highest number of deaths, having increased by 3.1% in the previous year. This cause of death hit mainly women, with a sex ratio of 76.3 male deaths for every 100 female deaths.

Deaths caused by mental and behavioural disorders increased by 24%

In 2015 mental and behavioural disorders caused 3,267 deaths, i.e. 23.8% more than in 2014 (2,639).

These disorders mainly hit women (61.1% of total deaths due to these causes), with a sex ratio of 63.6 male deaths per 100 female deaths.

The average age at the time of death was 84.5, and higher in women (85.8) than in men (82.4). This group of diseases hit especially the eldest: in 2015 only 4.8% of deaths occurred before the age of 70. As a result, the number of potential years of life lost was relatively low (1,900). The rate of potential years of life lost was 21.5 years per 100 thousand inhabitants.

94.2% of deaths from mental and behavioural disorders were caused by dementia (3,076 deaths).

91 fewer suicides in 2015

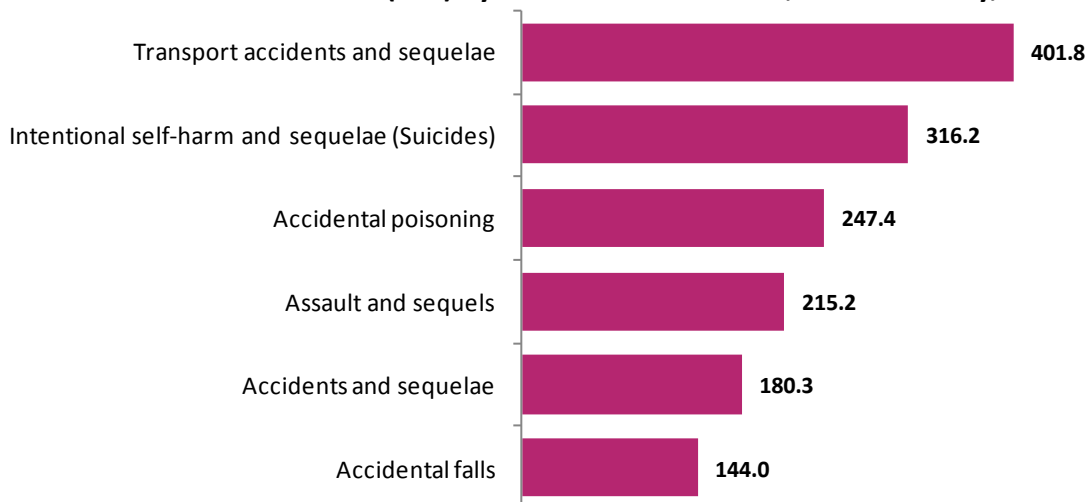
In 2015 there were 4,870 deaths from external causes of injury and poisoning, representing a 1.1% increase from 2014 (4,818).

Almost 66% of these deaths were men's, with a sex ratio of 190.9 male deaths for every 100 female deaths.

The average age at the time of death was 66.0, considerably higher for women (73.4) than for men (62.1). In turn, this group of causes, when compared with the other causes of death, affects younger individuals (41.9% of the diseased were aged less than 65). The number of potential years of life lost was 51,391, and the rate of years of years of life lost was 582.2 years per 100 thousand inhabitants.

As regards deaths from external causes of injury and poisoning as a whole, the most frequent were intentional self-harm, or suicides, which caused 1,132 deaths in 2015, less 7.4% in 2014 (1,223). Approximately 76% of deaths due to this cause were men's, with a sex ratio of 316.2 male deaths for every 100 female deaths, corresponding to 1.6% of total male deaths in Portugal. The average age at the time of death was 60.7, similar for both genders (60.3 for men and 61.9 for women).

Sex ratio (No.) by some causes of death, in the country, 2015



Source: Statistics Portugal, Mortality by causes of death.

Methodological note

Data on deaths by cause of death resulted from the utilisation of administrative data for statistical purposes, from information subject to civil registration and collected from civil registries through the *Sistema Integrado do Registo e Identificação* (integrated civil identification and registration system) and the *Sistema de Informação dos Certificados de Óbito* (death certificate information system). The Portuguese Directorate-General of Health collaborates with Statistics Portugal, coding the causes of death according to the International Classification of Diseases (ICD-10) of the World Health Organisation (WHO).

Years of potential life lost: number of years that theoretically a certain population ceases to live if dying prematurely (under the age of 70). It is calculated by summing the number of deaths in each age group, multiplied by the difference between a selected upper limit and the midpoint of the age group.

Average age at death: the ratio of the sum of each midpoint in the age group, multiplied by the number of observations, in each age group, to the total number of observations.

Sex ratio: the ratio of male deaths to female deaths, for every 100 women.

Rate of potential years of life lost: the number of potential years of life lost for every 100,000 inhabitants. It is obtained from the ratio of potential years of life lost to the average population (under the age of 70), in a given period, usually a calendar year.

In https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&xlang=en are available the publication [Causes of death 2015](#), associated with this press release