

19 December 2018

Deaths according to cause of death Year 2017

**28.8% of deaths were due to diseases of the circulatory system and
26.7% to tumours**

**Diseases of the respiratory system increased by 10.3% and were
the third leading cause of death**

In 2017 there were 424,523 deaths in Spain, 13,912 more than in the previous year (3.4% more). By sex, 214,236 men died (2.5% more than in 2016) and 210,287 women (4.3% more).

The crude mortality rate stood at 912.3 deaths per 100,000 inhabitants, an increase of 3.2 per cent over the previous year. The male rate was 938.4 deaths per 100,000 men (with an increase of 2.4%) and the female rate was 887.2 per 100,000 women (4.0% more).

96.3% of deaths were due to natural causes (diseases). In 2017, 408,686 people died from these causes, 3.5% more than in 2016.

Main causes of death by disease group¹

The group of *Diseases of the circulatory system* remained the first cause of death in 2017 (with 263.2 deaths per 100,000 inhabitants), followed by *Tumours* (243.4) and by *Diseases of the respiratory system* (110.9).

Compared with the previous year, deaths due to *diseases of the respiratory system* increased by 10.3%. On the other hand, those due to *diseases of the circulatory system* increased by 2.2% and those due to *tumours* by 0.3%.

By sex, *tumours* were the leading cause of death in men (with a rate of 300.1 deaths per 100,000) and the second in women (with 188.8). The number of deaths due to this cause decreased by 0.2% in men as compared with 2016, and increased by 1.0% in the case of women.

On the other hand, *diseases of the circulatory system* were the first cause of female mortality (279.7 deaths per 100,000) and the second among males (246.1). Deaths from these causes increased by 2.8% in women and 1.6% in men.

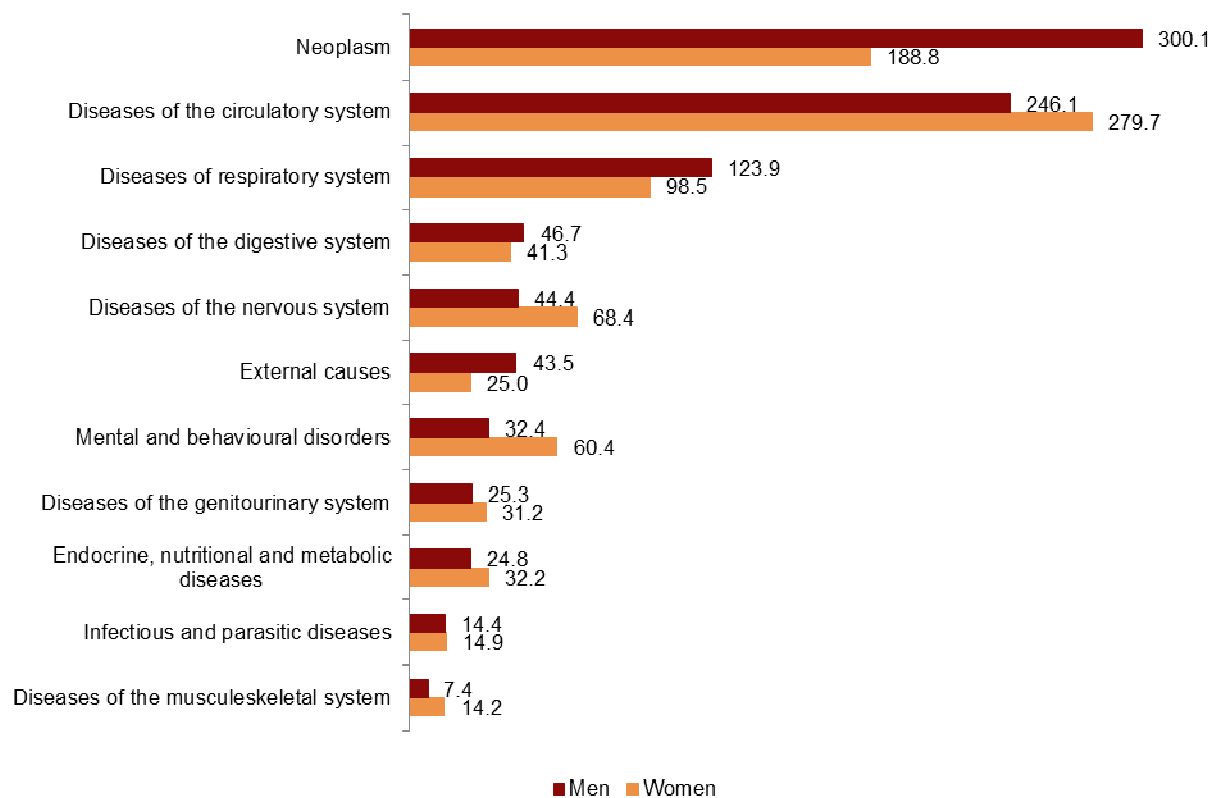
¹ Chapters of the WHO International Classification of Diseases 10th revision (ICD-10).

Deaths by ICD-10 chapters. Year 2017

ICD-10 Chapters	Number of deaths	%
Total Deaths	424,523	100.0
Diseases of the circulatory system	122,466	28.8
Neoplasm	113,266	26.7
Diseases of respiratory system	51,615	12.2
Diseases of nervous system	26,346	6.2
Mental and behavioural disorders	21,722	5.1
Diseases of digestive system	20,447	4.8
External causes	15,837	3.7
Endocrine, nutritional and metabolic diseases	13,296	3.1
Diseases of the genitourinary system	13,188	3.1
Symptoms, signs and abnormal clinical and laboratory findings	9,332	2.2
Infectious and parasitic diseases	6,819	1.6
Diseases of the musculoskeletal system	5,070	1.2
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	1,973	0.5
Diseases of the skin and subcutaneous tissue	1,691	0.4
Congenital malformations, deformations and chromosomal abnormalities	813	0.2
Certain conditions originating in the perinatal period	629	0.1
Pregnancy, childbirth and the puerperium	13	0.0

Deaths by cause of death by ICD-10 chapters and sex. Year 2017

Crude rates per 100,000 inhabitants



Main causes of death by age

Among children under one year of age, 78.9% of deaths were due to *perinatal conditions* and *congenital malformations* (55.9% and 23.0%, respectively).

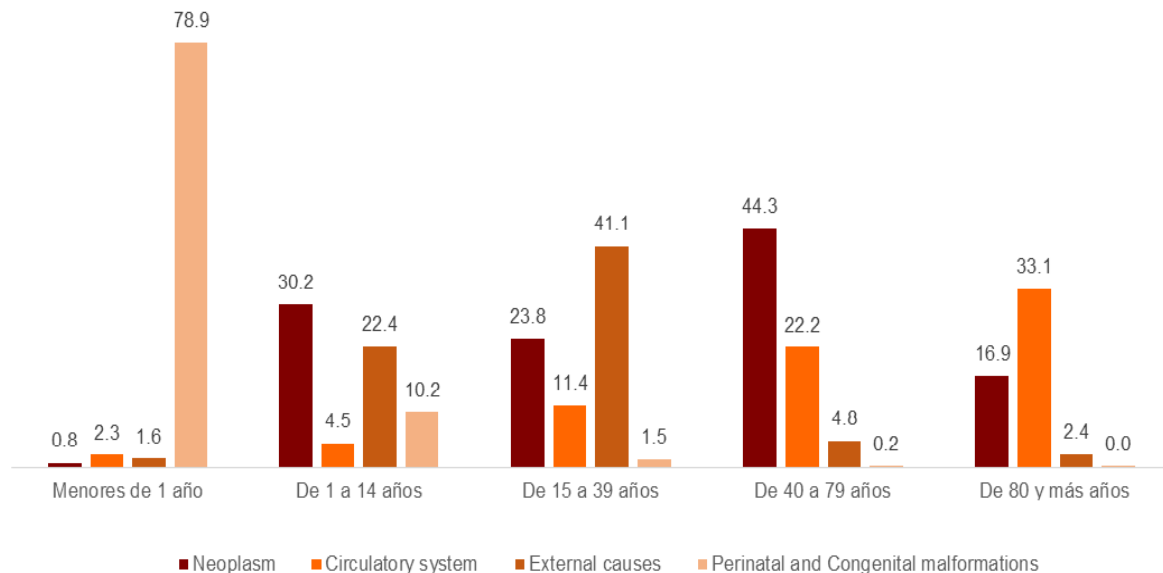
Tumours were the leading cause of death in the age groups between one and 14 years (30.2% of the total) and between 40 and 79 years (44.3%). The second reason in the group from one to 14 years old was *external causes* (22.4% of the total), while in the group from 40 to 79 years old it was *diseases of the circulatory system* (22.2%).

On the other hand, the main causes of death among persons aged 15 to 39 years old were *external causes* (41.1% of the total) and *tumours* (23.8%).

Finally, among those over 79 years of age, *diseases of the circulatory system* (33.1% of the total) and *tumours* (16.9%) were the main causes.

Main causes of death according to age. Year 2017

Percentage over the total number of deaths



Most frequent diseases as cause of death

In more detail, among *circulatory diseases*, *ischaemic heart diseases* (heart attack, angina pectoris, etc.) returned to the first place in number of deaths with an increase of 0.8% over the previous year. It was followed by *cerebrovascular diseases*, which fell by 0.7%.

By sex, *ischaemic heart diseases* were the first cause of death in men, causing 0.3% more deaths than in 2016. Among women were *cerebrovascular diseases* (with a decrease of 1.2%).

The *tumours* responsible for the highest mortality were again *bronchial and lung cancer* (although it produced 0.3% fewer deaths than in 2016) and *colon cancer* (which caused 3.2% less deaths).

By sex, these types of cancer were the most common among men. And in both cases, they caused fewer deaths than in the previous year (bronchial and lung deaths fell by 2.0% and colon deaths by 4.4%).

Among women, the cancer with the highest mortality was *breast cancer* (with 1.6% more deaths than in 2016), followed by *bronchial and lung cancer* (6.4% more). For the first time, the latter was ranked second among women.

Among the most frequent causes, the greatest increase in the number of deaths with respect to 2016 occurred in *pneumonia* (10.7% more in men and 12.5% more in women).

Deaths according to the most frequent causes of death¹. Year 2017

	Total	Men	Women
All diseases	424,523	214,236	210,287
Ischaemic heart disease	32,325	19,132	13,193
Cerebrovascular disease	26,937	11,555	15,382
Cancer of lung and bronchus	22,089	17,241	4,848
Dementia	21,001	6,977	14,024
Cardiac insufficiency	19,165	6,964	12,201
Acute lower respiratory infections	15,486	11,233	4,253
Alzheimer disease	15,202	4,335	10,867
Hypertensive disease	12,560	3,986	8,574
Colon cancer	11,406	6,586	4,820
Pneumonia	10,222	5,279	4,943
Diabetes mellitus	9,773	4,293	5,480
Cancer of pancreas	6,868	3,590	3,278
Renal insufficiency	6,618	3,043	3,575
Breast cancer	6,573	84	6,489
Prostate cancer	5,938	5,938	0 ¹

Causes with a relative weight greater than 1.4%

External causes

In 2017 there were 15,837 deaths due to *external causes*, 169 more than in the previous year (1.1%). By sex, 9,923 men died from these causes (1.2% more than in 2016) and 5,914 women (0.9% more).

Suicide remained as the leading cause of external death, with 3,679 deaths, 3.1% more than in 2016.

It was followed by *drowning, submersion and suffocation* (with 3,116 deaths and an increase of 14.1%) and *accidental falls* (with 3,057 and an increase of 1.3%).

A total of 1,943 people died due to *traffic accidents*, which is 2.8% more than in 2016. Among the people who died in traffic accidents, 406 were pedestrians (51.7% of them were 70 or older).

By sex, the main causes of external death in men were *suicide* (2,718 deaths), *accidental falls* (1,603) and *traffic accidents* (1,507). And in women *accidental falls* (1,454 dead), *drowning, submersion and suffocation* (1,450) and *suicides* (961).

Multiple causes of death

In order to interpret the results on *multiple causes of death*, it is necessary to start from the definition of *underlying cause of death*: illness or injury that initiates the chain of pathological events that led directly to death.

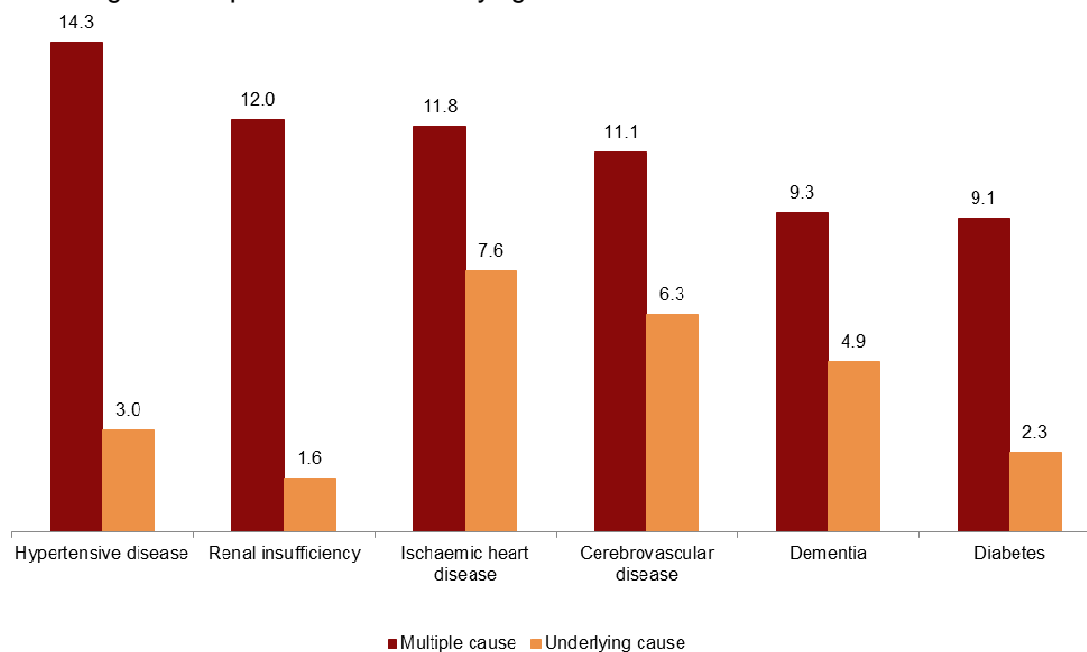
These pathological events are the so-called *multiple causes* and therefore refer to the set of diseases described in the medical death certificate and which contribute to or are associated with the death. In 2017, an average of 3.6 diseases were reported in each certificate.

The most frequent multiple cause was *hypertensive disease*, which contributed to 14.3% of deaths, though in only 3% of the cases it was the triggering cause, that is, the underlying cause.

This was followed by *renal failure* and *ischaemic heart diseases* as the most frequent multiple causes, contributing to death in 12.0% and 11.8% of cases, respectively. *Renal failure* was the underlying cause of 1.6% of deaths and *ischaemic heart diseases* in 7.6%.

Most frequent multiple causes

Percentage of multiple cause and underlying cause



Among the most frequent multiple causes, the diseases that presented the greatest difference between their contribution as a multiple cause and as an underlying cause were *hypertensive diseases*, *renal failure* and *diabetes*. The latter was reported as multiple cause in 9.1% of deaths and as underlying cause in 2.3%.

Mortality rates of the main causes by Autonomous Communities and Cities

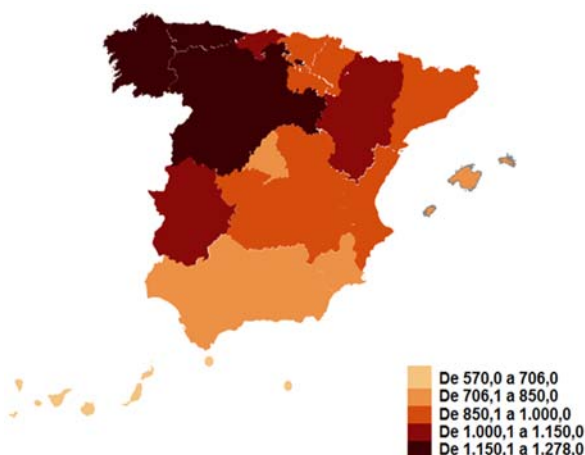
The highest crude death rates per 100,000 inhabitants in 2017 corresponded to Principado de Asturias (1,277.0), Castilla y León (1,195.8) and Galicia (1,182.3). In turn, the lowest rates were recorded in the Autonomous Cities of Melilla (582.5) and Ceuta (658.9), and in Canarias (705.2).

Crude death rates were higher in the territories with a greater elderly population, since there are usually more deaths due to the effect of the age structure of the population. To correct this, the standardised mortality rates² are calculated which represent mortality in the Autonomous Community if all of them had the same age composition.

In this case, the regions with the highest standardised rates were the Autonomous Cities of Ceuta (1,020.4) and Melilla (986.9) and Andalucía (951.9). In turn, the lowest standardised rates were recorded in Comunidad de Madrid (718.9), Castilla y León (761.8) and La Rioja (769.8).

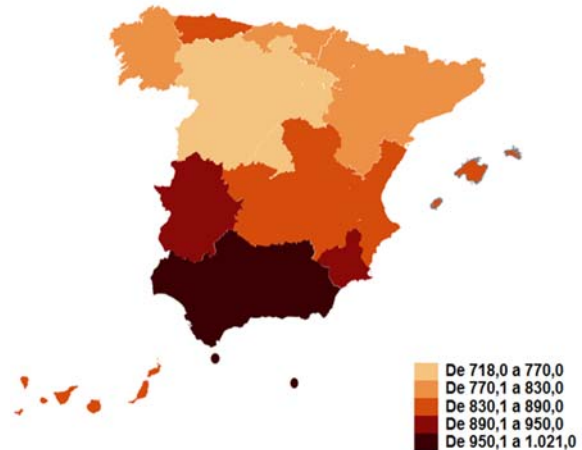
Crude mortality rates

Deaths per 100,000 inhabitants



Standardised mortality rates

Deaths per 100,000 inhabitants



In terms of the main causes of death, the highest crude mortality rates from *diseases of the circulatory system* were recorded in Principado de Asturias (385.5 deaths per 100,000 inhabitants), Galicia (358.0) and Castilla y León (349.6).

Considering standardised rates, the Autonomous City of Melilla registered the highest mortality rate due to *diseases of the circulatory system* (342.4), followed by Andalucía (309.9) and Región de Murcia (273.1).

The highest death rates from *tumours* occurred in Principado de Asturias (352.1 deaths per 100,000 inhabitants), Galicia (321.5) and Castilla y León (319.6).

On the other hand, the highest standardised mortality rates due to *tumours* were registered in Principado de Asturias (262.9), the Autonomous City of Melilla (257.6) and Extremadura (255.4).

² As of 2015, the European standard population is considered as the standard population.

Diseases of the respiratory system were the third leading cause of death in all the Autonomous Communities. The highest crude death rates due to these diseases were registered in Castilla y León (155.9 deaths per 100,000 inhabitants), Extremadura (155.6) and Principado de Asturias (153.3).

On the other hand, the Autonomous City of Melilla recorded the highest standardised mortality rate due to *diseases of the respiratory system* (128.2), followed by Extremadura (127.6) and Región de Murcia (123.5).

Crude death rates and standardised rates of the main causes of death, by Autonomous Community and city of residence. Year 2017

Rates per 100,000 inhabitants

	Circulatory System		Neoplasm		Respiratory System	
	Crude Rate	Standardised Rate	Crude Rate	Standardised Rate	Crude Rate	Standardised Rate
TOTAL	263.2	238.6	243.4	235.6	110.9	100.1
Andalucía	272.6	309.9	215.8	237.8	93.4	106.2
Aragón	327.7	236.6	291.8	247.2	124.7	89.7
Asturias, Principado de	385.5	252.8	352.1	262.9	153.3	97.1
Balears, Illes	206.5	247.2	199.1	233.3	72.6	88.1
Canarias	196.3	243.7	203.7	236.2	92.9	115.5
Cantabria	281.6	215.8	289.7	250.2	129.4	97.2
Castilla y León	349.6	208.3	319.6	233.8	155.9	90.6
Castilla-La Mancha	270.3	224.7	243.3	232.2	148.4	121.2
Cataluña	234.4	211.3	235.6	229.9	99.8	89.9
Comunitat Valenciana	274.0	266.6	238.9	235.0	98.9	96.3
Extremadura	319.9	264.3	283.6	255.4	155.6	127.6
Galicia	358.0	235.8	321.5	246.2	147.1	94.9
Madrid, Comunidad de	182.4	177.6	203.8	212.5	107.7	104.5
Murcia, Región de	229.3	273.1	200.7	235.4	103.6	123.5
Navarra, Comunidad Foral de	247.0	205.1	247.6	231.9	100.6	84.3
País Vasco	265.6	205.5	293.2	247.2	108.2	82.9
Rioja, La	301.2	223.9	261.8	232.1	105.3	77.4
Ceuta	207.1	342.4	175.3	251.5	63.5	106.9
Melilla	136.8	245.1	154.5	257.6	70.7	128.2

Review and update of data

The data published today are final. All results are available on INEBase.

Methodological note

The Death Statistics according to Cause of Death provides annual information on deaths occurring within the national territory according to the underlying cause, based on the International Classification of Diseases (ICD) of the World Health Organization (WHO). As of 1999, the 10th revision of this classification is used.

This is a harmonised European statistic which is supported by Commission Regulation (EU) No. 328/2011 of 5 April 2011 on statistics on causes of death.

Data on causes of death are collected in three model statistical questionnaires: Medical Death Certificate/Statistical Death Bulletin (MDC/SDB), Judicial Statistical Death Register (JSDR) and the Statistical Birth Bulletin (SBB). The first collects the data of the deceased due to natural causes without the need for the intervention of a judge, while the second is aimed at obtaining the information of the deceased due to causes that require judicial intervention because there are indications of possible accidental or violent causes. In the case of those who die before 24 hours of life, the data are also collected through the SBB.

Type of operation: annual continuous statistics.

Population scope: deaths occurring in the national territory.

Geographical scope: the entire national territory.

Reference period of the results: the calendar year.

Reference period of the information: date on which the death occurs.

Collection method: statistical form based on an administrative act.

For more information you can access the methodology at:

https://www.ine.es/en/daco/daco42/sanitarias/metodologia_00_en.pdf

And the standardised methodological report at:

<https://www.ine.es/dynt3/metadatos/en/RespuestaDatos.html?oe=30417>

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