

21 December 2017

Deaths according to Cause of Death Year 2016

96.2% of deaths in 2016 were due to natural causes, 3.1% less than in the previous year

Diseases of the circulatory system account for 29.2% of deaths and tumours for 27.5%

In 2016, the number of deaths recorded in Spain was 410,611, which is 11,957 less than the previous year (2.8% less). By sex, 208,993 men died (2.0% less than in 2015) and 201,618 women died (3.7% less).

The crude mortality rate stood at 884.0 deaths per 100,000 inhabitants, with a decrease of 2.9%. The male rate was 916.4 deaths per 100,000 men (with a decrease of 2.0%) and the female rate was 852.7 (3.8% lower).

96.2% of deaths were due to natural causes (diseases). In 2016, 394,943 people died from these causes, 3.1% less than in 2015.

Leading causes of death by groups of diseases ¹

The group of *Diseases of the circulatory system* remained the first cause of death in 2016 (with a rate of 257.9 deaths per 100,000 inhabitants), followed by *Tumours* (243.1) and by *Diseases of the respiratory system* (100.8).

Compared to the previous year, deaths due to *Diseases of the circulatory and respiratory systems* fell by 3.6% and 9.7%, respectively. In contrast, deaths from *Tumours* increased by 1.4%.

By sex, *Tumours* were the leading cause of death in men (with a rate of 300.9 deaths per 100,000) and the second in women (with 187.4).

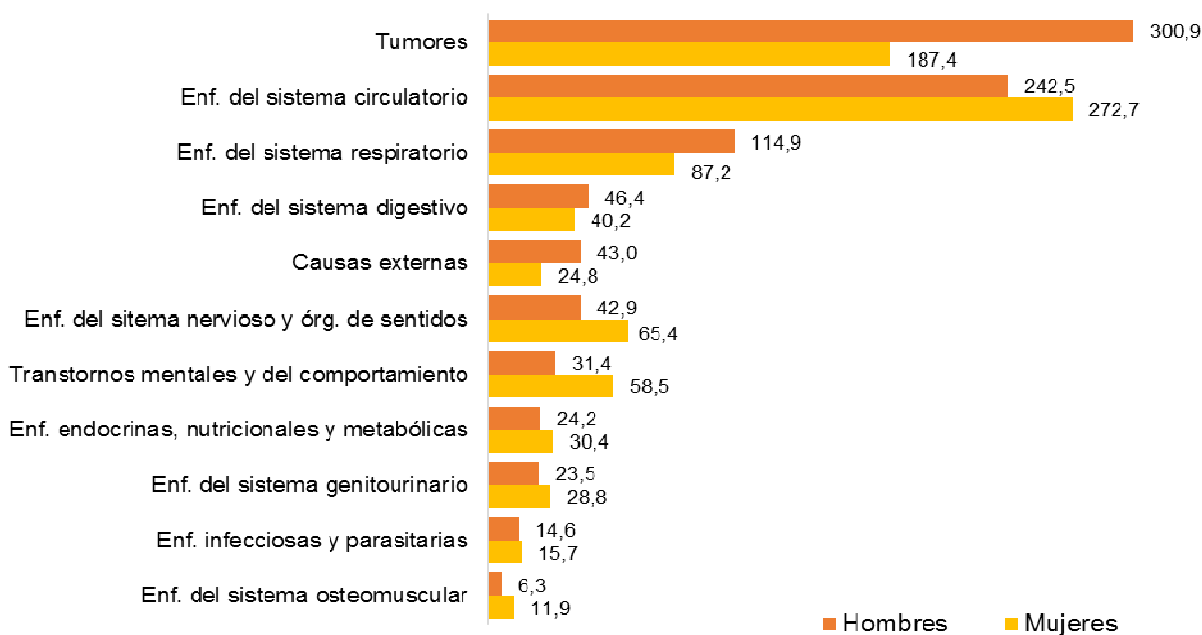
On the other hand, *Diseases of the circulatory system* were the first cause of female mortality (272.7 deaths per 100,000) and the second among males (242.5).

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

Distribución por capítulos de la Clasificación internacional de Enfermedades
Año 2016

Capítulos de la CIE-10	Nº de defunciones	%
Total Defunciones	410.611	100,0
Enfermedades del sistema circulatorio	119.778	29,2
Tumores	112.939	27,5
Enfermedades del sistema respiratorio	46.812	11,4
Enfermedades del sistema nervioso y de los órganos de los sentidos	25.236	6,1
Trastornos mentales y del comportamiento	20.980	5,1
Enfermedades del sistema digestivo	20.096	4,9
Causas externas de mortalidad	15.668	3,8
Enfermedades endocrinas, nutricionales y metabólicas	12.700	3,1
Enfermedades del sistema genitourinario	12.173	3,0
Síntomas, signos y hallazgos anormales clínicos y de laboratorio	8.033	2,0
Enfermedades infecciosas y parasitarias	7.033	1,7
Enfermedades del sistema osteomuscular y del tejido conjuntivo	4.256	1,0
Enfermedades de la sangre y de los órganos hematopoyéticos y ciertos trastornos que afectan al mecanismo de la inmunidad	1.886	0,5
Enfermedades de la piel y del tejido subcutáneo	1.523	0,4
Malformaciones congénitas, deformidades y anomalías cromosómicas	846	0,2
Afecciones originadas en el periodo perinatal	637	0,2
Embarazo, parto y puerperio	15	0,0

Tasas brutas por 100.000 habitantes según causa de muerte por capítulos de la CIE-10 y sexo. Año 2016

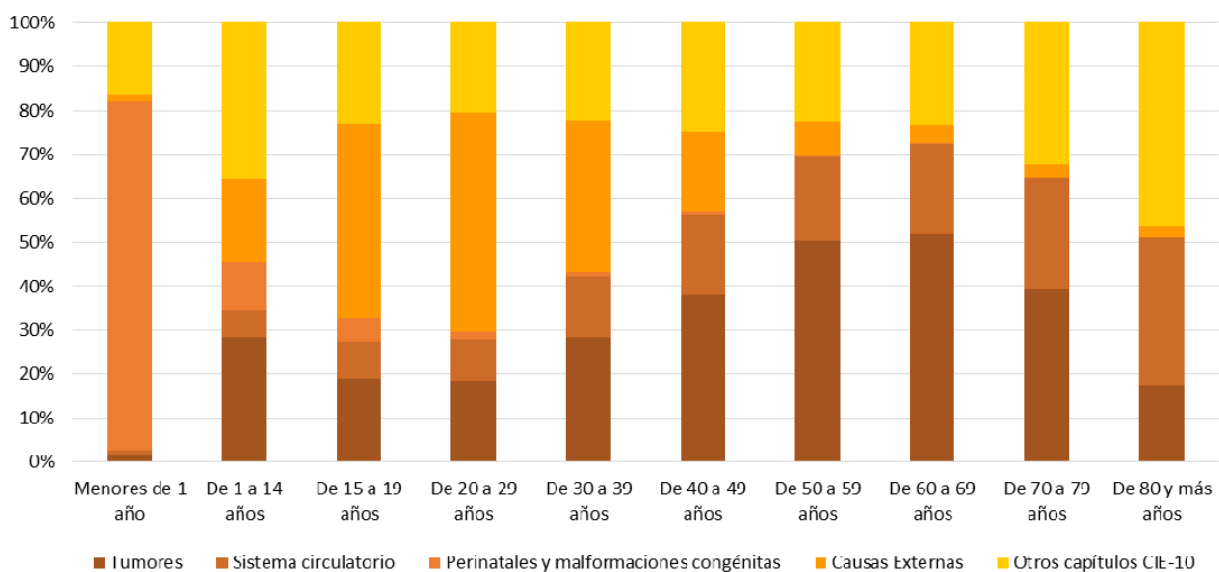


By age, the main cause of death among children under one year of age were *Perinatal conditions and congenital malformations* (79.4% of the total of this group).

In the age groups between one and 14 and between 40 and 79, the main causes of death were *Tumours* (28.4% and 44.5% of the total, respectively); and among those over 79 years of age, *Diseases of the circulatory system* (33.6% of the total).

On the other hand, *external causes* were the main cause of death among people aged 15 to 39 years (39.4% of the total).

Principales causas de muerte según edad
Porcentaje sobre el total de fallecidos. Año 2016



Most common diseases as cause of death

In more detail, among *circulatory diseases*, *ischaemic heart diseases* (heart attack, angina pectoris, etc.) and *cerebrovascular diseases* were once again the first and second place in the number of deaths. In both cases, there was a decrease in deaths compared to the previous year (5.1% and 4.6%, respectively).

By sex, *ischaemic heart diseases* were the first cause of death in men, although they caused 2.5% fewer deaths than in 2015. Among women were *cerebrovascular diseases* (with a decrease of 4.8%).

Within the group of *tumours*, those responsible for the highest mortality rates were again *bronchial and lung cancer* (with 2.6% more deaths than in 2015) and *colon cancer* (with an increase of 2.2%).

These types of cancer were the most common among men (deaths from bronchial and lung cancer increased by 2.1% and from colon cancer by 3.4%).

On the other hand, among women, the *cancer* with the highest mortality was *breast cancer* (with an increase in deaths of 2.4%), followed by *colon cancer* (0.6% more).

Among the most frequent causes, the greatest declines in deaths compared to 2015 occurred in *diabetes* (8.8% less in men and 11.8% less in women) and in *chronic lower respiratory diseases*—which include, among others, *chronic bronchitis, emphysema and COPD*—(11.0% less in men and 7.5% less in women).

Número de defunciones según las causas de muerte más frecuentes (*)

Año 2016	Total	Hombres	Mujeres
Total enfermedades	410.611	208.993	201.618
Enfermedades isquémicas del corazón	32.056	19.071	12.985
Enfermedades cerebrovasculares	27.122	11.556	15.566
Cáncer de bronquios y pulmón	22.155	17.598	4.557
Demencia	20.150	6.668	13.482
Insuficiencia cardíaca	17.931	6.652	11.279
Enf. crónicas de las vías respiratorias inferiores (ECVRI)	15.071	11.011	4.060
Enfermedad de Alzheimer	14.793	4.370	10.423
Enfermedad hipertensiva	12.153	3.908	8.245
Cáncer de colon	11.781	6.892	4.889
Neumonía	9.310	4.090	5.220
Diabetes mellitus	9.160	4.767	4.393
Cáncer de páncreas	6.789	3.434	3.355
Cáncer de mama	6.477	92	6.385
Insuficiencia renal	6.273	2.903	3.370
Cáncer de próstata	5.752	5.752	0

(*) Causas con peso relativo superior a 1,4%

External causes

In 2016, the number of deaths due to *external causes* was 15,668 (9,807 for men and 5,861 for women) with an increase of 3.9% as compared with the previous year.

Suicide remained as the leading cause of external death, with 3,569 deaths (0.9% less than in 2015). It was followed by *accidental falls* (with 3,019 deaths and an increase of 8.5%) and *accidental drowning, submersion and suffocation* (with 2,732 and an increase of 2.2%).

A total of 1,890 people (1,448 men and 442 women) died due to *traffic accidents*, which is 1.3% less than in 2015.

By sex, *suicide* was the first cause of external death in men (with 11.7 deaths per 100,000 inhabitants) followed by *accidental falls* (7.0) and *traffic accidents* (6.3). On the other hand, *accidental falls* were the first external cause in women (with a rate of 6.0 per 100,000 inhabitants) followed by *drowning, submersion and suffocation* (5.6) and *suicides* (3.8).

Multiple causes of death

In order to interpret the results on *multiple causes of death*, which for the first time are disseminated by the INE, it is necessary to start from the definition of *basic cause of death*: illness or injury that initiates the chain of pathological events that led directly to death.

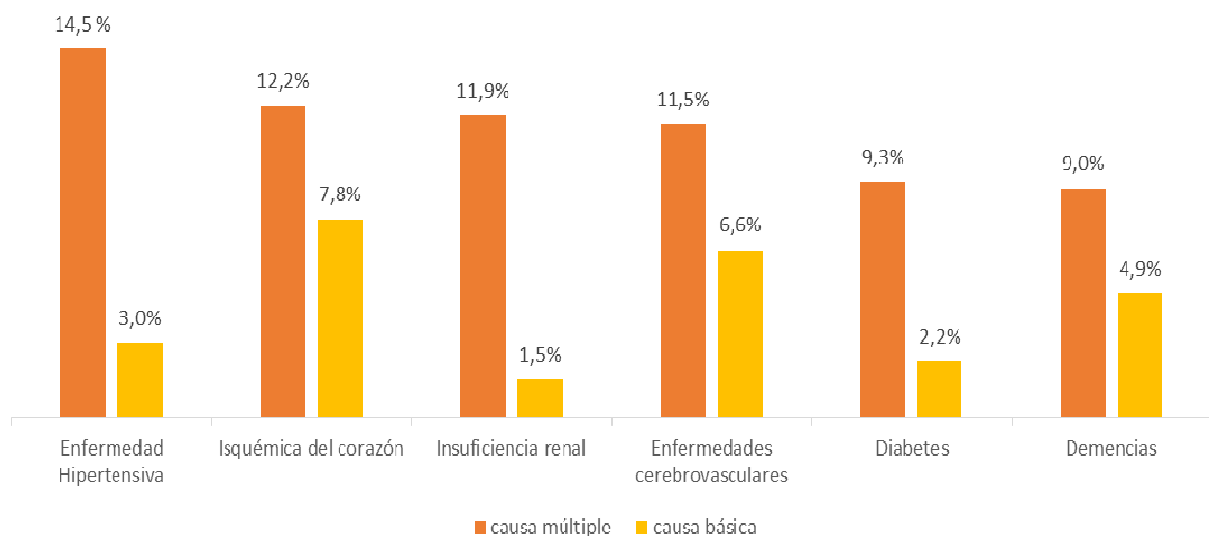
These pathological events are the so-called *multiple causes* and therefore refer to the set of diseases described in the medical death certificate and which contribute to or are associated with the death. In 2016, an average of 3.6 diseases were reported in each certificate.

The most frequent multiple cause was *hypertensive disease*, which contributed to 14.5% of deaths, though in only 3% of the cases it was the triggering cause, that is, the basic cause.

Ischaemic heart disease and *kidney failure* appeared as the second and third most frequent multiple causes, contributing to death in 12.2% and 11.9% of the cases, respectively. *Ischaemic heart diseases* were the basic cause in 7.8% of the cases, while *kidney failure* was in 1.5%.

Causas múltiples más frecuentes

Porcentaje de causa múltiple y causa básica sobre total de fallecidos. Año 2016



Among the most frequent multiple causes, the diseases that presented the greatest difference between their contribution as a multiple cause and as a basic cause were *hypertensive disease*, *kidney failure* and *diabetes*. The latter was reported as multiple cause in 9.3% of deaths and as basic cause in 2.2%.

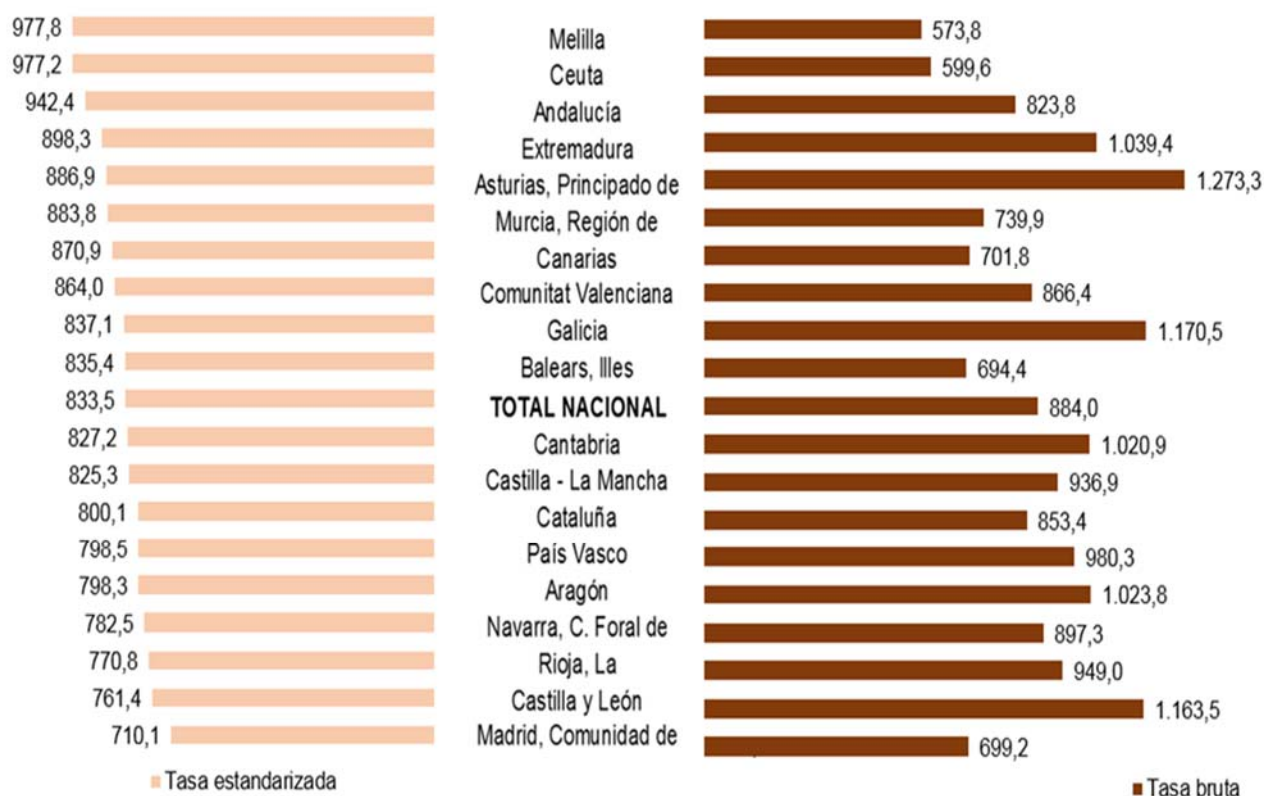
Mortality rates from main causes by Autonomous Community

The highest crude death rates per 100,000 inhabitants in 2016 corresponded to Principado de Asturias (1,273.3), Galicia (1,170.5) and Castilla y León (1,163.5). In turn, the lowest rates were recorded in the autonomous cities of Melilla (573.8) and Ceuta (599.6), and in Illes Balears (694.4).

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 Melilla (977.8) and Ceuta (977.2) and Andalucía (942.4). In turn, the lowest standardised rates were recorded in Comunidad de Madrid (710.1), Castilla y León (761.4) and La Rioja (770.8).

Mortality rates by AACC of residence. Year 2016



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

With regard to causes of death, *diseases of the circulatory system* were the main cause of death in most Autonomous Communities. The highest crude death rates from these diseases were registered in Principado de Asturias (413.1 deaths per 100,000 inhabitants), Galicia (367.5) and Castilla y León (339.9).

When considering standardised rates, Andalucía recorded the highest mortality rate from *diseases of the circulatory system* (307.2), followed by the autonomous cities of Melilla (285.3) and Ceuta (278.6).

Tasas brutas de mortalidad y tasas estandarizadas por 100.000 habitantes de las principales causas de muerte según CCAA de residencia. Año 2016

	Sistema circulatorio		Tumores		Sistema respiratorio	
	Tasa Bruta	Tasa estandarizada	Tasa Bruta	Tasa estandarizada	Tasa Bruta	Tasa estandarizada
TOTAL	257,9	239,4	243,1	238,9	111,7	93,2
Andalucía	264,6	307,2	209,9	234,9	86,8	100,3
Aragón	320,9	238,2	291,9	251,7	104,6	77,7
Asturias, Principado de	413,1	275,8	354,6	269,9	140,0	91,4
Balears, Illes	200,6	244,3	194,1	231,0	69,3	84,9
Canarias	198,0	252,9	203,9	241,4	89,9	115,3
Cantabria	272,8	212,9	313,0	277,1	122,1	95,0
Castilla y León	339,9	208,6	321,5	238,8	143,9	86,1
Castilla-La Mancha	256,4	217,8	242,9	234,0	129,7	109,3
Cataluña	228,0	210,0	237,9	234,8	89,1	82,0
Comunitat Valenciana	263,8	263,7	240,5	240,2	88,9	88,7
Extremadura	311,0	262,7	287,7	261,7	139,3	116,5
Galicia	367,5	250,1	320,9	251,4	127,1	86,0
Madrid, Comunidad de	177,5	177,3	200,7	212,3	101,3	101,2
Murcia, Región de	219,8	266,8	201,9	238,8	93,4	113,0
Navarra, Comunidad Foral de	236,8	199,4	253,5	239,7	95,7	80,3
País Vasco	264,5	210,3	291,9	250,9	95,3	75,2
Rioja, La	279,2	214,7	272,5	246,5	91,2	69,8
Ceuta	164,1	278,6	164,1	242,4	61,4	111,6
Melilla	158,2	285,3	158,2	255,3	60,2	106,9

The highest death rates from *Tumours* were recorded in Principado de Asturias (354.6 deaths per 100,000 inhabitants), Castilla y León (321.5) and Galicia (320.9). On the other hand, the highest standardised mortality rates due to *tumours* were registered in Cantabria (277.1), Principado de Asturias (269.9) and Extremadura (261.7).

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 (143.9 deaths per 100,000 inhabitants), Principado de Asturias (140.0) and Extremadura (139.3). On the other hand, Extremadura recorded the highest standardised mortality rate due to *diseases of the respiratory system* (116.5), followed by Canarias (115.3) and Región de Murcia (113.0).

Methodological note

The Death Statistics according to Cause of Death provides annual information on deaths which have occurred in the country dealing, by basic cause of death, in accordance with the International Classification of Diseases (ICD) of the World Health Organisation (WHO). The 10th revision of this classification has been used since 1999.

These are harmonised European statistics that are backed by Commission Regulation (EU) No. 328/2011 of 5 April 2011 concerning statistics on causes of death.

In accordance with the recommendations of the WHO, the classification of causes of death is investigated and tabulated depending of the basic cause of death. This is defined as the illness or injury which started the chain of pathological events which directly led to death. When the cause is a traumatic injury, the basic cause is considered to be the the circumstances of the accident or violence which produced the fatal injury. To be exact, this set or chain of illnesses is what the doctor certifying the death must provide in the Medical Certificate. Starting with these causes, named by the WHO as immediate, intermediate, or fundamental and other processes, and in accordance with the international regulations established in the ICD for selecting the basic cause, the latter is reached.

Data on causes of death are collected in three statistical questionnaire models: the Medical Death Certificate/Statistical Death Bulletin (CMD/BED), the Statistical Legal Death Bulletin (BeDJ) and the Statistical Birth Bulletin (BEP). The first one collects data on deaths due to natural causes, without requiring the intervention of a judge, whereas the second is directed at obtaining information on deaths due to causes requiring judicial intervention, since there are signs of a possible accidental or violent cause; In the case of those who died before 24 hours of life, the data also are collected through the BEP.

The sections in the bulletins containing the causes of death are different in the various models. The CMD/BED describes the four causes that make up the chain of diseases leading to death. In the BEP only two are included, one on the mother and the other on the foetus. The BeDJ contains the external circumstances that led to the death.

These statistics provide information on mortality by dealing with the basic cause of death, its distribution by sex, age, residence and month of death. It also offers indicators that enable the drawing of comparisons on an Autonomous Community, level and large groups of causes of death. In the case of standardised rates it is also possible to make comparisons between EU countries. From 2015 deaths onwards, the European standard population is considered for the calculation of indicators. **The 2016 results provide, for the first time, information on multiple cases.**