

27 June 2023

**Deaths according to cause of death**  
Year 2022. Provisional data <sup>1</sup>

**A total of 26.0% of deaths in 2022 were due to diseases of the circulatory system and 24.8% to tumours**

**Between May and August, the mortality rate increased a 20.5% in comparison to the year prior to the pandemic, mainly due to hypertensive diseases, diabetes, and senile and presenile disorders, together with COVID-19**

**In 2022, deaths due to the identified COVID-19 virus decreased 20.0%**

In 2022, the number of deaths recorded in Spain was 463,133, which is 12,389 more than the previous year (2.7% more). In terms of gender, 233,690 men and 229,443 women died (1.0% and 4.6% more than in 2021, respectively).

Compared to 2019 (the year prior to the pandemic), in 2022 there were 44,430 more deaths (an increase of 10.6%). In terms of gender, the increase was 9.9% in the case of men, and 11.4% among women.

The highest increase in deaths was registered on the months of May and August (20.5% more than those in the same months in 2019).

### **Main causes of death by diseases and sex groups**

The group known as *diseases of the circulatory system* remained the leading cause of death in 2022, with 26.0% of the total (and a rate of 252.2 deaths per 100,000 inhabitants), followed by *tumours*, with 24.8% of the total (and a rate of 239.8).

*Respiratory diseases* were the third leading cause of death, with 9.3% of the total (and a rate of 89.9).

In regards to the previous year, deaths due to *diseases of the respiratory system* increased 20.9%, deaths due to *diseases of the circulatory system* 1.2%, and deaths due to *tumours* 0.9%.

In terms of gender, tumours were the leading cause of death in men (with a rate of 289.4 deaths per 100,000 men) and the second in women (with 192.1 for every 100,000 women).

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<sup>1</sup> Also published today is the INE Figures issue "Causes of death two years after the start of the pandemic", which can be consulted at the following link:

[https://www.ine.es/ss/Satellite?L=0&c=INECifrasINE\\_C&cid=1259954008107&p=1254735116567&pagename=ProductosYServicios%2FINECifrasINE\\_C%2FPYSDetalleCifrasINE](https://www.ine.es/ss/Satellite?L=0&c=INECifrasINE_C&cid=1259954008107&p=1254735116567&pagename=ProductosYServicios%2FINECifrasINE_C%2FPYSDetalleCifrasINE)

On the other hand, diseases of the circulatory system were the first cause of female mortality (261.9 deaths per 100,000) and the second among males (242.1).

Diseases of the respiratory system were the third leading cause of death in both sexes.

For both sexes, diseases of the respiratory system had the biggest increase in comparison to the year before, 15.6% in men and 28.4% in women.

## Groups of diseases with the highest mortality rate. Year 2022

Absolute data and percentage change

	Total		Men		Women	
	Year 2022	Variation 2022/2021	Year 2022	Variation 2022/2021	Year 2022	Variation 2022/2021
Total Deaths	463,133	2.7%	233,690	1.0%	229,443	4.6%
Diseases of the circulatory system	120,572	1.2%	56,716	1.5%	63,856	0.9%
Neoplasm	114,644	0.9%	67,807	-0.1%	46,837	2.2%
Diseases of respiratory system	42,979	20.9%	23,962	15.6%	19,017	28.4%

## Most frequent diseases as cause of death

At a more detailed level, *identified COVID-19 virus* was the most frequent cause of death in 2022, with 31,559 deaths; 20.0% less than in 2021.

This was followed by *ischemic heart diseases* (with 28,687 deaths, 0.6% less) and *cerebrovascular diseases* (with 24,558, 1.2% less).

Among the most frequent diseases, the causes of death that increased the most were *pneumonia* (28.6%), *dementia* (10.8%) and *chronic diseases of the lower respiratory tract* (8.5%).

## Deaths according to the most frequent causes of death. 2018-2022 Series.

Absolute values and percentage change

	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022*	Variation 2022/2021
All diseases	427,721	418,703	493,776	450,744	463,133	2.7%
Covid-19 virus identify	0	0	60,358	39,444	31,559	-20.0%
Ischaemic heart disease	31,152	29,247	29,654	28,852	28,687	-0.6%
Cerebrovascular disease	26,420	25,712	25,817	24,858	24,558	-1.2%
Cancer of lung and bronchus	22,133	21,987	21,893	22,413	22,682	1.2%
Dementia	21,629	22,117	20,822	19,650	21,773	10.8%
Cardiac insufficiency	19,142	19,040	19,358	20,173	20,606	2.1%
Hypertensive disease	12,496	11,854	14,271	14,149	14,790	4.5%
Alzheimer disease	14,929	14,634	15,571	13,045	13,969	7.1%
Acute lower respiratory infections	14,607	13,808	12,734	11,295	12,253	8.5%
Colon cancer	11,265	11,546	11,131	11,021	11,122	0.9%
Diabetes mellitus	9,921	9,644	11,297	10,748	11,020	2.5%
Pneumonia	10,415	9,384	8,768	6,799	8,742	28.6%
Renal insufficiency	7,132	7,229	7,351	7,561	8,104	7.2%
Cancer of pancreas	7,120	7,313	7,427	7,663	7,964	3.9%
Breast cancer	6,621	6,452	6,651	6,614	6,747	2.0%

\* The 2022 data published today are temporary

## Deaths in May and August<sup>2</sup>

During May and August of 2022, 157,580 deaths were registered, 26,849 more (20.5%) than the same months in 2019 (year prior to the pandemic). July was the month with the biggest increase (10,991 more deaths, a 32.8%). This increase in mortality was mainly in persons of 75 years of age and more.

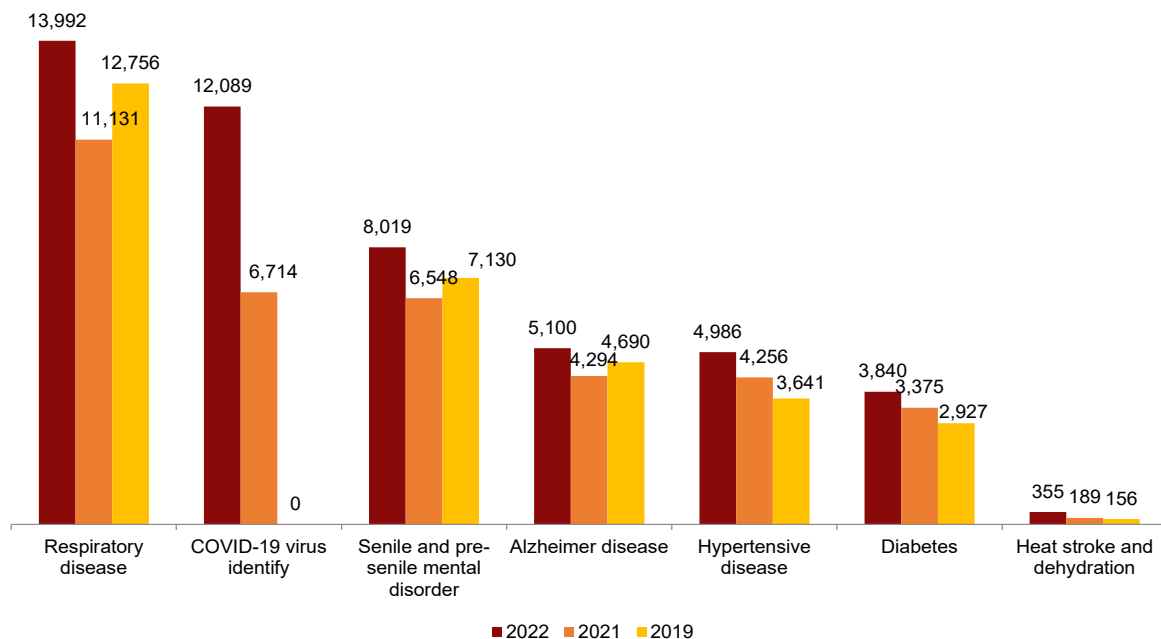
From the causes of death directly related with heat, *heat stroke* (122 cases, in comparison to the 47 of 2019) and *dehydration* (233 in comparison to 109) were the ones that stood out.

In turn, almost all of the most frequent natural causes of death and external causes increased, although the largest increases were in previous chronic pathologies considered to be at risk in situations of high temperatures. Among these causes, *hypertensive diseases* (with a 36.9% increase), *diabetes* (with a 31.2% increase) and *senile and presenile disorder* (with a 19.8% increase) stood out.

During this period, 12,089 deaths by COVID-19 were also registered, in comparison to the 6,714 registered in the same period of 2021, although the number of deaths from this cause declined over the year as a whole.

## Deaths according to causes of death in May and August Years 2019, 2021 and 2022

Absolute Values



\* In 2019, there are 0 cases of COVID-19 since the disease emerged in 2020

## External causes

In 2022, there were 18,330 deaths due to *external causes*, 1,499 more than in the previous year (8.9%). In terms of gender, 11,551 men died from these causes (8.1% more than in 2021) and 6,779 women (10.4% more).

<sup>2</sup> The AEMT 2022 climate report classified May and August as extremely hot

It is worth noting that between May and August of 2022, there were 6,745 deaths due to external causes, an increase of 14.9% compared to the same period the previous year (877 more deaths).

The external cause that increased the most compared to 2021 was *accidental drowning, submersion and suffocation*<sup>3</sup>, with a 17.1% increase (the total deaths due to this cause was 4,102).

In turn, there were 4,097 *suicides*, which is an increase of 2.3% compared to the year before. The number of *suicides* in persons younger than 20 years of age was 84, compared to the 75 in 2021.

Deaths by *accidental falls* (with 3,707 deaths, 1.4% more) and traffic accidents (1,790 deaths, 11.9% more) also increased.

## Main causes of external death. 2018-2022 Series.

Absolute data and percentage change

	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022*	Variation 2022/2021
Drowning, submersion and suffocation	3,090	3,248	2,913	3,504	4,102	17.1%
Suicide	3,539	3,671	3,941	4,003	4,097	2.3%
Accidental falls	3,143	3,297	3,605	3,655	3,707	1.4%
Traffic accidents	1,896	1,842	1,463	1,599	1,790	11.9%

\* The 2022 data published today are temporary

## Euthanasia<sup>4</sup>

In 2022, doctors informed in medical death certificates that 260 persons ended their life using the euthanasia procedure, from which 134 were men and 126 were women. 78.1% of them were over 60 years of age.

The *diseases of the nervous system* were the most frequent causes among those who were euthanised (117 deaths). Among this group, 41.9% of the persons had *amyotrophic lateral sclerosis (ALS)*, 11.1% had *multiple sclerosis* and 8.5% had *Parkinson's*. The average age of those who died from these three causes was 63.4 years, 59.5 years and 79.2 years, respectively.

Lastly, 74 persons who received assistance in dying in 2022 had *cancer*. The average age was 71.2 years.

According to information available in the death certificates of 2021, 59 persons were euthanised the first year in which the Law came into force.

<sup>3</sup> In the accidental drowning, submersion and suffocation group, accidental drownings in water, as well as other accidents that obstruct breathing such as choking, are included.

<sup>4</sup> Organic Law 3/2021 of 24 March, on euthanasia regulation was approved in March 2021. According to its Article 1, its purpose is to regulate the right of all eligible persons to request and receive the necessary assistance in dying, the procedure to be followed and the guarantees to be observed. The "Euthanasia best practices manual", published by the Ministry of Health, specifically indicates, in section 5.4, how to certify the death of a patient as a result of the provision of assistance in dying.

## Excess mortality rate by autonomous communities and cities

Regarding the excess of deaths in May and August, the autonomous communities that had an increase in deaths compared to 2019 were Ceuta (37.9% more compared to the same period of the previous year), Canarias (26.8%) and Illes Balears (26.1%).

By diseases, the community with the highest increase in deaths due to *hypertensive diseases* during this period was the Region of Murcia, with 93.9% more. The highest increase in *diabetes* was in Galicia (116.2%), while the highest increase in *senile and presenile mental disorders* was in Andalucía (38.1%).

In 2022 as a whole, the autonomous communities with the highest increase in deaths in comparison to 2019 were Canarias (18.5% more than in 2019), Illes Balears (16.6%) and the Region of Murcia (13.7%).

By diseases, the community with the highest increase in deaths due to *hypertensive diseases* in comparison to 2019 was the Region of Murcia (75.1%), due to *diabetes* was Galicia (72.3%) and due to *senile and presenile mental disorders* was País Vasco (17.6%).

## Variations of the main causes of death, by autonomous communities and cities of residence

Percentage

	All diseases		Hypertensive disease		Diabetes		Senile and presenile disorder	
	Variation		Variation		Variation		Variation	
	2022-19 May- August	Variation 2022-19 Annual	2022-19 May- August	Variation 2022-19 Annual	2022-19 May- August	Variation 2022-19 Annual	2022-19 May- August	Variation 2022-19 Annual
TOTAL	20.5%	10.6%	36.9%	24.8%	31.2%	14.3%	12.5%	-1.5%
Andalucía	23.4%	11.5%	24.6%	21.3%	42.9%	21.4%	38.1%	9.0%
Aragón	15.0%	12.7%	55.5%	33.8%	6.9%	-8.9%	-14.7%	-19.6%
Asturias, Principado de	15.9%	8.1%	18.5%	10.4%	24.4%	15.1%	8.7%	1.7%
Balears, Illes	26.1%	16.6%	47.2%	37.0%	21.4%	11.5%	25.5%	6.4%
Canarias	26.8%	18.5%	-10.0%	-3.9%	-6.3%	-3.6%	28.6%	15.6%
Cantabria	17.8%	12.5%	63.3%	51.9%	80.6%	47.2%	-24.5%	-19.9%
Castilla y León	21.2%	7.9%	29.4%	21.6%	44.8%	23.1%	18.0%	-12.6%
Castilla-La Mancha	15.4%	4.8%	22.9%	19.1%	14.4%	2.7%	7.9%	-7.7%
Cataluña	16.4%	9.2%	28.3%	24.5%	7.5%	3.7%	11.7%	-5.1%
Comunitat Valenciana	24.5%	13.2%	65.1%	43.6%	36.5%	9.6%	9.0%	-1.2%
Extremadura	25.4%	9.6%	65.6%	46.5%	73.9%	29.7%	-18.8%	-28.8%
Galicia	22.2%	12.0%	68.5%	39.6%	116.2%	72.3%	12.9%	-0.3%
Madrid, Comunidad de	18.5%	7.6%	32.4%	-5.3%	11.0%	-10.4%	7.2%	-2.3%
Murcia, Región de	25.9%	13.7%	93.9%	75.1%	89.4%	44.8%	8.7%	-4.2%
Navarra, Comunidad Foral de	18.8%	13.5%	6.5%	4.3%	-16.3%	4.0%	0.8%	4.0%
País Vasco	20.6%	12.3%	25.8%	15.4%	3.4%	7.0%	27.5%	17.6%
Rioja, La	19.8%	10.0%	22.9%	13.3%	90.5%	32.8%	29.8%	1.7%
Ceuta	39.7%	13.6%	-75.0%	-9.1%	100.0%	63.6%	-66.7%	-38.1%
Melilla	-0.6%	-1.6%	50.0%	20.0%	-50.0%	-47.1%	-66.7%	-40.0%

## Data Review and Update

The data published today are temporary and will be issued as definitive next December. 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.

The methodology followed by the INE in the Statistics of deaths by cause of death is based on the detailed analysis of the medical death certificates (CMD). In the case of those who died in the first 24 hours of life, the information from the CMD is complemented by that of the Statistical Birth Bulletin (SBB). The source of information for deaths with legal intervention is the Statistical Legal Death Bulletin completed by the courts or the information directly provided by the Institutes of Legal Medicine and Forensic Sciences (IMLCF). In both cases, the information is provided through a web application designed by the INE.

**Type of operation:** annual continuous statistics.

**Population scope:** deaths occurring in the national territory.

**Geographical scope:** the entire national territory.

**Reference period for the results:** the calendar year.

**Reference period for the information:** date on which death occurs.

**Collection method:** statistical form based on an administrative act.

For more information the methodology can be accessed at:

[https://www.ine.es/daco/daco42/sanitarias/metodologia\\_00.pdf](https://www.ine.es/daco/daco42/sanitarias/metodologia_00.pdf)

The standardized methodological report is at:

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

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