

# O q t v e r k w ł ' r c w g t p u ' k p ' U r c k p , 2009

№: CFA5HCB'5B8'<95@H<'GH5H-GH-7G2012

MINISTRY OF HEALTH, SOCIAL SERVICES AND EQUALITY

# **Mortality patterns in Spain, 2009**

Mercedes Vinuesa

Mercedes Alfaro

**Persons responsible for edition**

Enrique Regidor

Juan L. Gutiérrez-Fisac

---

**Suggested citation:**

Regidor E, Gutiérrez-Fisac JL. Patrones de mortalidad en España, 2009. Madrid: Ministerio de Sanidad, Servicios Sociales e Igualdad, 2012.

**Editing advance**

**NIPO on line:** 680-12-118-3

## Abstract

**Objectives:** This report presents the overall mortality pattern and by cause of death in the population resident in Spain, according to sex, age and autonomous community of residence in 2009. It also presents the trend in mortality by the leading causes of death and the trend in infant mortality.

**Methods:** The data for producing this report come from the files of deaths by cause of death produced annually by the National Statistical Institute. These files were made based on the information provided by statistical death bulletins completed by family members, public registry officials and physicians at the time that the physician certifies the cause of death. The causes of death in those files have been coded according to the International Classification of Diseases.

**Results:** In 2009, 384,933 deaths occurred in Spain, representing a crude mortality rate of 838.1 deaths per 100,000 population. The age-adjusted mortality rate in 2009 was 503.7 deaths per 100,000 population of European standard population, representing a rate 2.6% less than in 2008 and 37.4% lower than in 1981. The age-adjusted mortality rate of 2009 was 76% higher in men than in women. Between 2008 and 2009, age-specific mortality decreased in all age groups, except in the 1 to 4 years group, which increased by 12.7%. Three fifths of all deaths are due to the four leading causes of death: cancer, heart disease, cerebrovascular disease and chronic lower respiratory diseases. The infant mortality rate in 2009 was 3.3 deaths per 1,000 live births, 3.0% less than in 2008 and 20.3% lower than in 2001.

**Conclusions:** The mortality pattern in 2009 shows that the age-adjusted

mortality rate continues to decline and cancer and heart disease remain the two leading causes of death.

## Main findings

- In 2009, 384,933 deaths occurred in Spain, representing a crude mortality rate of 838.1 deaths per 100,000 population.
- The trend in risk of death, estimated on the basis of the trend in the age-adjusted mortality rates, showed a decrease of 2.6% between 2008 and 2009 and a decrease of 37.4% between 1981 and 2008.
- The age-adjusted mortality rate of 2009 was 76% higher in men than in women.
- The 15 leading causes of death in 2009 according to the number of deaths were:
  - Cancer
  - Heart diseases
  - Cerebrovascular diseases
  - Chronic lower respiratory diseases
  - Alzheimer's disease
  - Unintentional accidents
  - Diabetes mellitus
  - Pneumonia and influenza
  - Nephritis, nephrosis, and nephrotic syndrome
  - Chronic liver disease and cirrhosis
  - Hypertensive disease
  - Suicide
  - Septicemia
  - Parkinson's disease
  - Vascular disorder of intestine

- Almost 60% of deaths are due to the four leading causes of death.
- Between 2001 and only 2009, only 3 of the 15 leading causes of death showed an upward trend in the age-adjusted mortality rate: Alzheimer's disease, hypertensive disease and Parkinson's disease. In other leading causes of death, mortality showed a downward trend.
- Men have a higher age-adjusted mortality rate than women in 13 of the 15 leading causes of death. Only the age-adjusted mortality rate by Alzheimer's disease was higher for women than for men, while the hypertensive disease rate showed a very similar size in both sexes.
- Between 2001 and 2009, the age-adjusted mortality rate for the causes of death attributable to smoking fell 10.1% in men rose 42.6% in women. On the other hand, the age-adjusted mortality rate for causes of death attributable to alcohol consumption remained steady.
- The infant mortality rate in 2009 was 3.3 deaths in children younger than 1 year per 1,000 live births, representing a decrease of 20% with respect to 2001.
- The 10 leading causes of death in 2008 according to the number of deaths were:
  - Congenital malformations, deformations, and chromosomal abnormalities
  - Bacterial sepsis of the newborn
  - Disorders related to short gestation and low birth weight
  - Hemorrhage of the newborn
  - Sudden infant death syndrome
  - Respiratory distress syndrome of the newborn
  - Necrotizing enterocolitis of the fetus and the newborn
  - Fetus and newborn affected by maternal complications of pregnancy
  - Intrauterine hypoxia and asphyxia at birth
  - Fetus and newborn affected by complications of the placenta and membranes

## **Introduction**

This report presents the 2009 data on deaths and mortality rates according to various demographic and geographical characteristics in Spain. Specifically, it provides information on the overall mortality pattern and by cause of death in the population resident in Spain according to sex, age and autonomous community of residence. It also presents the trend in mortality by the leading causes of death and the trend in infant mortality.

Mortality data are frequently used for assessment of the health status of populations (1-2) because the estimates based on them are those presenting a higher degree of validity for geographical and temporal comparisons of health level. The exhaustiveness of the information provided by the mortality registry and objectivity of the phenomenon it contains make mortality indicators, such as life expectancy or mortality by cause of death, a suitable instrument for monitoring health problems and setting health priorities. According to the World Health Organization (WHO), only mortality indicators have a adequate level of confidence to compare the level of health between different countries, given the limitations shown by other health statistics for performing comparisons. Furthermore, the information it provides on the mortality pattern for various causes of death is the only way to estimate the population impact of many diseases.

## **Methods**

The data in this report are based on the information from statistical death

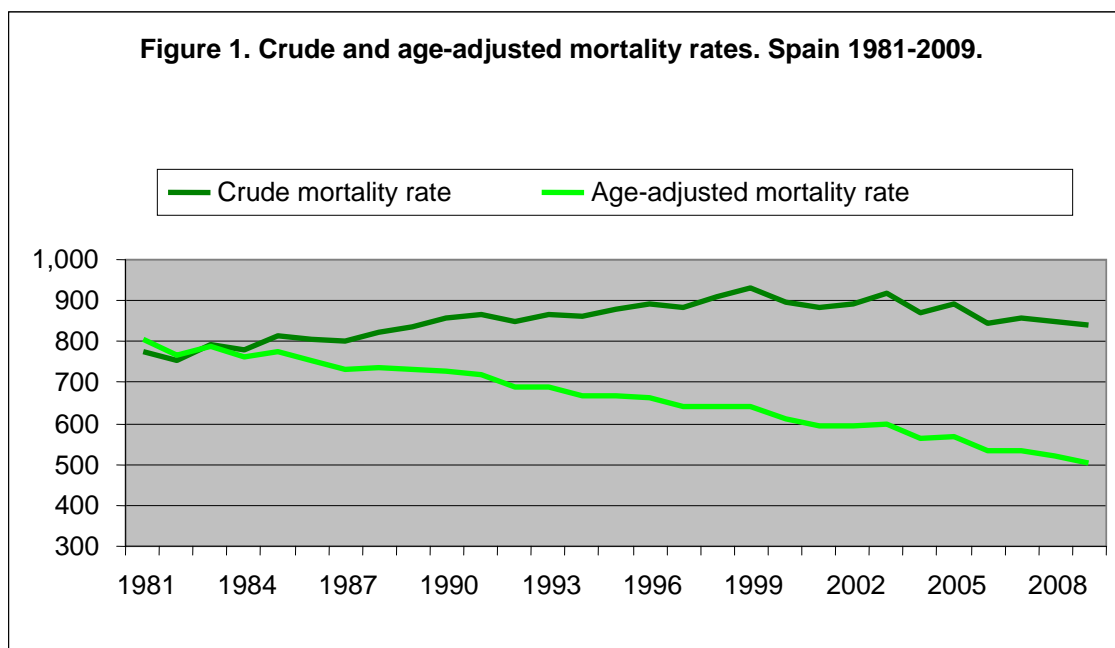
bulletins of the deceased resident in Spain. The information in those bulletins is completed by family members, public registry officials and physicians at the same time as the physician certifies the cause of death. The statistics by cause of death are classified according to the International Classification of Diseases, 10th revision. However, the International Classification of Diseases, 9th revision, was also used to identify before 1999 the 15 causes of death that produced the most deaths in 2009. In fact, since 10th revision of the International Classification of Diseases came into operation in 1999, to study the trend in mortality from the 15 causes of death since 1981 we had to use the 9th revision of the International Classification of Diseases, which was used to code the causes of death between 1981 and 1998. For the selection and grouping of the leading causes of death, the criteria used by the Centers for Disease Control and Prevention in Atlanta were followed (3). A commentary on the classification of causes of death appear in the appendix on data sources and explanatory notes.

The measures of mortality in this report include the number of deaths, gross or crude mortality rate, age-specific mortality, age-adjusted mortality rate, infant mortality rate, neonatal and postneonatal mortality rate. In addition, in the age-specific overall mortality rates and age-adjusted mortality rates for the 15 leading causes of death, the change in the rates between 2008 and 2009 and over the last decade (since 2001) are presented.

The number of deaths was taken from the file on deaths by cause of death, provided annually by the National

Statistical Institute (INE) to the Institute of Health Information of the Ministry of Health, Social Services and Equality. The appendix on data sources and explanatory notes explains how data on deaths contained in the file is obtained. The populations used for calculation of mortality rates come from Spanish

Population Projections for the period 1980-2010 from the 1981 Population Census (years 1981 to 1990), from the Spanish Population Projections calculated from the 1991 Population Census (from 1991 to 2001) and from the Current Population Estimates (from 2002 to 2009), all of them prepared by the INE.



## Results and Discussion

### Deaths and mortality rates

In 2009, 384,933 deaths occurred in Spain, which represents 1391 fewer deaths than in 2008. The number of deaths is very similar to that occurring in the past five years, with a median of 385,361 deaths annually. The crude mortality rate in 2009 was 838.1 deaths per 100,000 population, which represents 1.1% less than the rate in 2008. This crude mortality rate is the lowest since 1990, as the closest year with a lower rate was 1989 with 835.2 deaths per 100,000 population (Table 1).

The age-adjusted mortality rate in 2009 was 503.7 deaths per 100,000 population of the standard population, which represents a very low value with respect to previous years. The rate was 2.6% less than in 2008, in which the rate was 519.7, and 37.4% less than in 1981, in which the rate was 804.8 (Figure 1). The age-adjusted mortality rate in Spain is the lowest in the countries of the European Union, together with those observed in Italy and France. This explains why these three countries are the ones with highest life expectancy of the European Union (4).

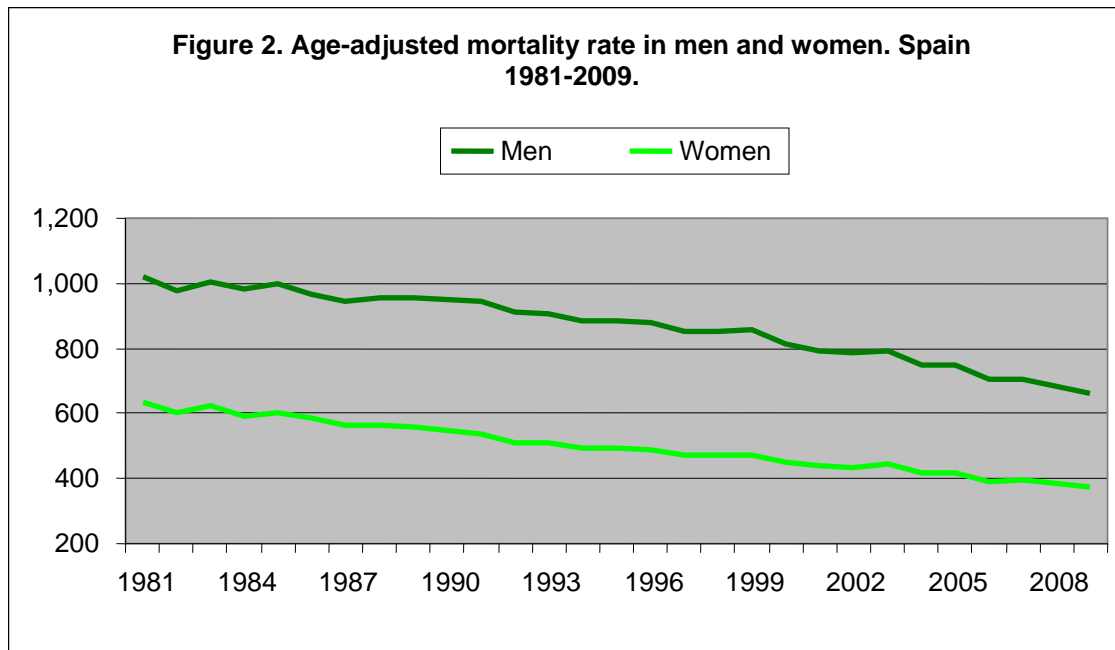
The age-adjusted mortality rate is a theoretical rate that shows what mortality would be if no changes had occurred in the age composition of the population from year to year. A commentary on age-adjusted mortality rates and how to calculate them may

be read in the appendix on data sources and explanatory notes. Thus, age-adjusted mortality rates are better indicators than gross or crude mortality rates to assess the change in the risk of mortality over time, since the distribution by age of the population changes. Likewise, the age-adjusted mortality rates are better indicators when the risk of mortality is compared between different geographic areas or between population subgroups with different age structure, like that seen between men and women. For example, whereas in 2009 the crude mortality rate in men was 10% higher than the crude mortality rate in women, the age-adjusted mortality rate was 76% higher in men than in women. In the countries of the European Union, the excess age-adjusted mortality rate in men with respect to women ranges from 45% to 110% (4).

Between 2008 and 2009, the age-adjusted mortality rate was 2.9% men and 3.2% women. Since 1981 the rate shows a downward trend in both sexes (Figure 2). In men it dropped from 1022.6 in 1981 to 661 in 2009 and in women it fell from 636.2 in 1981 to 374.7 in 2009, representing a decrease of 35.4% for men and 41.1% for women.

During this period the smallest difference between age-adjusted mortality rates for men and women was seen in 1981 while the largest was in 2001. The age-adjusted mortality rate was higher in men than in women by 61% in 1981 and by 82% in 2001.





#### Age- and sex-specific mortality rates

As in most developed countries, the lowest age-specific mortality rate is observed in the 5 to 14 years age group, as shown in Table I. In 2009, the size of the mortality rate in that age group was 9.9 per 100,000 population. The mortality rate in children under one year of age and in the 1 to 4 years age group was, respectively, 319.2 and 20.5 per 100,000 population.

Likewise, starting from the 5 to 14 years age group, the size of the mortality rate experiences an increase in subsequent age groups, so that in the group aged 85 years and over the rate was 14,142 per 100,000 population. In each 10-year age group, the mortality rate almost doubles with respect to the previous group, except in the 75 to 84 years age group, where the rate is three times higher than the rate of the 65 to 74 years age group (Table 2 and Table I).

Table I. Mortality per 100,000 population by age in Spain in 2009

Age	Mortality rate			Ratio between mortality rate in men and women
	Both sexes	Men	Women	
All ages				
Crude	838.1	878.2	799.0	1.10
Age-adjusted	503.7	661.0	374.7	1.76
Under 1 year <sup>1</sup>	319.2	343.4	293.4	1.17
1-4 years	20.5	22.4	18.4	1.22
5-14 years	9.9	11.5	8.3	1.39
15-24 years	31.2	42.1	19.7	2.14
25-34 years	45.7	63.5	26.7	2.38
35-44 years	102.2	134.6	68.2	1.97
45-54 years	276.1	376.4	176.5	2.13
55-64 years	616.1	902.4	346.3	2.61
65-74 years	1455.1	2100.1	899.7	2.33
75-84 years	4345.1	5744.8	3367.8	1.71
85 years and over	14142.5	15579.1	13458.8	1.16

1. It does not refer to the infant mortality rate in children under 1 year of age, because the denominator in the infant mortality rate is live births and here the denominator is residents aged 1 year.

In all age groups, the size of the mortality rate was higher in men than in women. The ratio between the mortality rate in men and in women in 2009 showed the highest size in the 25 to 34 years age group and the lowest size in the group of children under 1 year. In the 25 to 34 years age group, the mortality rate was 2.38 times higher in men than in women, while in the group of children under 1, the mortality rate was only 1.17 times higher in men than in women.

Table II shows that between 2008 and 2009 age-specific mortality rates decreased in all age groups, except in the 1 to 4 years age group where it increased by 12.7%. The largest reduction was seen in the 5 to 14 and 15 to 24 years age groups, with a decline of 14.7%. The smallest reduction was seen in the 55 to

64 years age group, with 2.5% decrease, and in the 65 to 74 group years, with a decline of 2.8%. Between 2001 and 2009, the largest decline in mortality rates was seen in the 25 to 34 years and 15 to 24 years age groups, with a reduction of 39.8% and 37.3%, respectively. In turn, the smallest decline between 2001 and 2009 in mortality rates was seen in the 85 years and over age group and in the 55 to 64 years age group, with a decline of 9.8% and 12.9%, respectively.

The high decline in mortality rate in 15 to 24 years and 25 to 34 years age groups very likely reflects the spectacular decline in mortality from unintentional accidents since 2001, and chiefly from traffic accidents, because it is the main cause of death in this age group.

Table II. Percent change in age-specific mortality rate in 2008-2009 and 2001-2009.

Age	Percent change in 2008-2009			Percent change in 2001-2009		
	Both sexes	Men	Women	Both sexes	Men	Women
All ages						
Crude	-1.2	-1.0	-1.2	-5.2	-7.6	-2.6
Age-adjusted	-2.6	-2.5	-2.8	-16.2	-15.7	-16.5
Under 1 year <sup>1</sup>	-9.4	-11.6	-6.5	-22.2	-22.6	-21.7
1-4 years	12.7	20.3	4.2	-17.0	-21.1	-11.0
5-14 years	-14.7	-16.6	-11.7	-33.7	-33.8	-33.6
15-24 years	-14.7	-19.9	-0.2	-37.3	-42.8	-20.3
25-34 years	-4.9	-6.9	1.0	-39.8	-41.9	-35.0
35-44 years	-9.2	-10.2	-7.3	-30.3	-34.9	-20.9
45-54 years	-4.2	-5.6	-1.1	-13.2	-16.8	-5.0
55-64 years	-2.5	-2.2	-3.2	-12.9	-13.7	-11.0
65-74 years	-2.6	-2.1	-3.7	-18.6	-18.1	-20.7
75-84 years	-2.8	-2.3	-3.5	-13.1	-12.4	-15.3
85 years and over	-2.9	-2.5	-3.2	-9.8	-12.4	-8.8

1. It does not refer to the infant mortality rate in children under 1 year of age, because the denominator in the infant mortality rate is live births and here the denominator is residents aged 1 year.

Indeed, the number of traffic accident deaths in the 15 to 24 years age group was reduced to a third between 2001 and 2009: from 1215 deaths for this cause in 2001 to 389 deaths in 2009 (5). And a similar situation occurred in the 25 to 34 years age group, given that the number of deaths in that interval dropped to less than half: from 1147 deaths in 2001 to 501 in 2009. In turn, the smallest decline in mortality rate in the 55 to 64 group years reflects especially the low mortality from cancer: between 2001 and 2009 the decline was about 7%. Furthermore, in women, mortality from respiratory tract diseases, which remained almost steady in the period considered, also contributed to the decline. (6).

Between 1981 and 2009, the largest decline in mortality rate was seen in the children under 1 and 1 to 4 years age groups, with a decline of 74% and 67%, respectively. Another population group with a large drop in mortality was the 5 to 14 years age group, where the rate fell by 66%. The smallest decline in mortality between 1981 and 2009 was seen in the 85 years and over age group, where the reduction was 24%.

#### Leading causes of death

The 15 leading causes of death in 2009 caused slightly more than three quarters of all deaths in Spain; specifically 77.8% of the total. Three fifths of all deaths are due to the four leading causes of death:

Table III. Leading causes of death in Spain in 2009. Number of deaths, percentage of total number of deaths, and crude mortality rate per 100,000 population by cause of death.

Range <sup>1</sup>	Cause of death (based on the International Classification of Diseases, 10th revision)	Number of deaths	Percentage of total deaths	Crude mortality rate
--	All causes	384,933	100.0	838.1
1	Cancer C00-C97	101,517	26.4	221.0
2	Heart diseases I00-I09.I11. I13. I20-I51	78,262	20.3	170.4
3	Cerebrovascular diseases I60-I69	31,157	8.1	67.8
4	Chronic lower respiratory diseases J40-J47	15,946	4.1	34.7
5	Alzheimer's disease G30	11,169	2.9	24.3
6	Unintentional accidents V01-X59.Y85-Y86	10,206	2.7	22.2
7	Diabetes mellitus E10-E14	9,985	2.6	21.7
8	Pneumonia and influenza J10-J18	8,701	2.3	18.9
9	Nephritis, nephrosis, and nephrotic syndrome N00-N07. N17-N19. N25-N27	6,877	1.8	15.0
10	Chronic liver disease and cirrhosis K70. K73-K74	4,915	1.3	10.7
11	Hypertensive disease I10. I12. I15	4,419	1.1	9.6
12	Suicide X60-X84+Y87.0	3,429	0.9	7.5
13	Septicemia A40-A41	3,200	0.8	7.0
14	Parkinson's disease G20-G21	3,038	0.8	6.6
15	Vascular disorder of intestine K55	2,905	0.8	6.3
--	Other causes	89,207	23.2	194.2

1. Range based on the number of deaths

The 15 leading causes of death in 2009 according to the number of deaths were: 1st) cancer, 2nd) heart disease, 3rd) cerebrovascular disease, 4th) chronic lower respiratory diseases, 5th) Alzheimer's disease, 6th) unintentional accidents, 7th) diabetes

mellitus, 8th) pneumonia and influenza, 9th) nephritis, nephrosis and nephrotic syndrome, 10th) chronic liver disease and cirrhosis, 11th) hypertensive disease, 12th) suicide, 13th) septicemia, 14th) Parkinson's disease and 15th) vascular disorder of intestine.

The number of deaths and mortality rate from these causes are shown in Table III and in Table 3.

Changes in the population age structure may lead to changes in the crude mortality rate by cause of death. Furthermore, these changes may be of greater size in some causes than in others depending on the mortality pattern by age in each cause of death. However, the age-adjusted mortality rate eliminates the influence of these changes in the population age structure.

This is why the age-adjusted mortality rates are better indicators than crude mortality rates to show the changes in mortality by cause of death over time. Therefore, the age-adjusted mortality rates are used to describe the trend in mortality from the leading causes of death.

The fact that mortality patterns by age are different from some causes to others explains why in some causes of death the age-adjusted mortality rate is greater in size than in others, even though the number of deaths in the former is less than the number of deaths in the latter. In general terms, this is due to the fact that mortality at young ages is higher in the former case than in the latter.

Table IV. Leading causes of death in Spain in 2009. Age-adjusted mortality rate per 100,000 population in 2009 and percent change in 2008-2009 and 2001-2009 by cause of death.

Range <sup>1</sup>	Cause of death (based on the International Classification of Diseases, 10th revision)	Age-adjusted mortality rate 2009	Percent change in 2008-2009	Percent change in 2001-2009
--	All causes	503.7	-2.6	-16.2
1	Cancer C00-C97	153.0	-1.0	-10.6
2	Heart diseases I00-I09,I11, I13, I20-I51	94.4	-5.6	-21.6
3	Cerebrovascular diseases I60-I69	36.1	-6.4	-31.7
4	Chronic lower respiratory diseases J40-J47	18.7	-3.6	-17.8
5	Alzheimer's disease G30	11.6	3.8	32.5
6	Unintentional accidents V01-X59,Y85-Y86	16.7	-11.2	-33.5
7	Diabetes mellitus E10-E14	11.7	-4.6	-18.9
8	Pneumonia and influenza J10-J18	10.0	-9.0	-6.7
9	Nephritis, nephrosis, and nephrotic syndrome N00-N07, N17-N19, N25-N27	7.7	-1.9	-10.3
10	Chronic liver disease and cirrhosis K70, K73-K74	8.7	3.2	-17.2
11	Hypertensive disease I10, I12, I15	4.9	2.5	24.5
12	Suicide X60-X84+Y87.0	6.3	-1.9	-5.2
13	Septicemia A40-A41	4.0	-24.7	-5.8
14	Parkinson's disease G20-G21	3.3	12.3	20.3
15	Vascular disorder of intestine K55	3.3	-6.7	-7.9

1. Range based on the number of deaths

Between 2008 and 2009, the age-adjusted mortality rate for all the causes of death declined by 2.6%. This decline in the risk of death may be due mainly to the reduction in the risk of death from heart diseases, cerebrovascular diseases, chronic lower

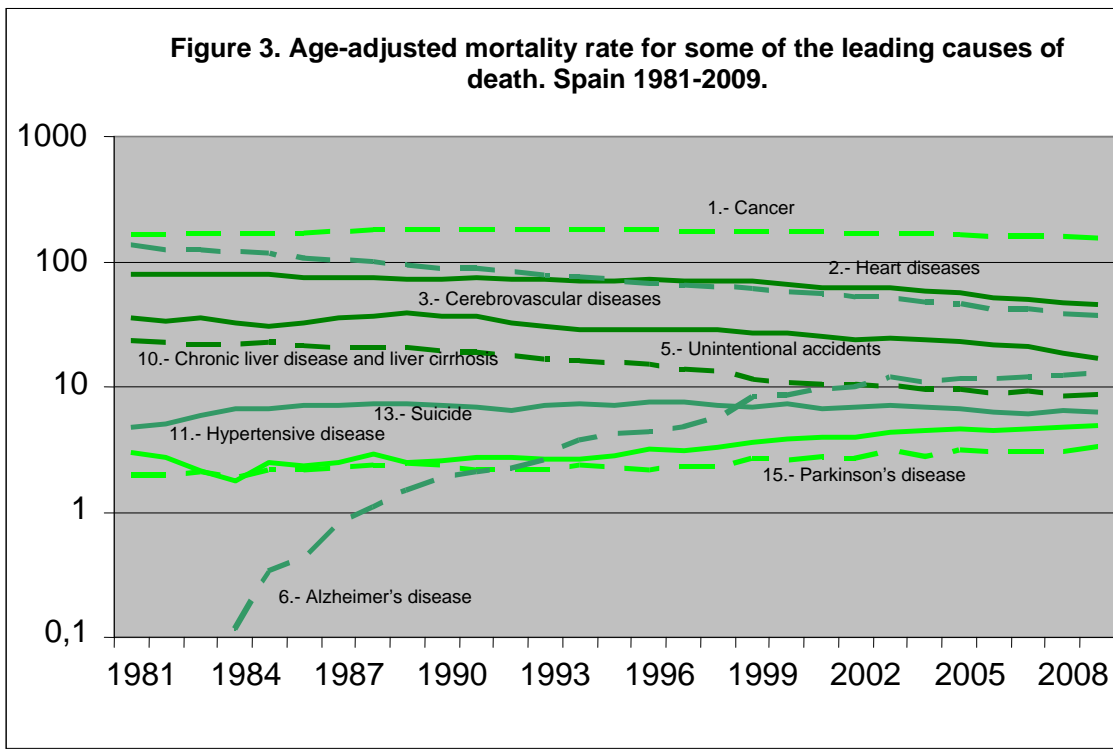
respiratory tract disease, and unintentional accidents.

Table IV shows that in 11 of the 15 leading causes of death age-adjusted mortality rates fell in 2009 with respect to 2008. The four causes of death in which the age-

adjusted mortality rate increased were Alzheimer's disease, chronic liver disease and cirrhosis, hypertensive disease and Parkinson's disease. However, the observed rise in the risk of death from chronic liver disease and cirrhosis may be considered a short-term phenomenon, since this cause of death shows a downward trend in the last decade. Between 2001 and 2009, only 3 of the 15 leading causes of death showed an upward trend in the age-adjusted mortality rate:

Alzheimer's disease, hypertensive disease and Parkinson's disease.

Between 1981 and 2009, the age-adjusted mortality rate shows a downward trend, except for Alzheimer's disease, hypertensive disease, intestinal vascular disease, and Parkinson's disease (Figure 3). The most spectacular rise was in Alzheimer's disease, since in 1981 only 21 deaths occurred from this illness, while 11,169 occurred in 2009. These figures assume the age-adjusted mortality rate changed from 0.05 per 100,000 population in 1981 to 11.6 per 100,000 population in 2009.



Ongoing reduction of mortality from transmissible diseases throughout the 20th century in developed countries has meant that non-transmissible diseases and accidents have become the leading causes of death (7). Specifically, in the last decade of the last century around 85% of deaths in those countries were caused by non-transmissible diseases, and among them, three quarters were due to cardiovascular diseases and cancer (8). This preponderance of non-transmissible diseases contrasts with the downward trend that has been observed in most diseases in the last third of the last century. Thus, the reduction in mortality from cardiovascular diseases starting at the end of 1960s in some countries and over the 1970s in others (9-11) has been added to the reduction in mortality from cancer in the 1990s (12-14). Similarly, mortality from other chronic diseases, such as chronic obstructive pulmonary disease—chronic lower respiratory diseases—, diabetes mellitus or chronic liver disease and cirrhosis, has experienced a decline since the last decade of the last century in these countries (4, 15-16).

Nevertheless, although presumably the risk of mortality from these non-transmissible disorders will continue to decline in developed countries, the disease burden they cause might not decrease in the same way or even remain steady, because most appear in advanced ages and the population of these age groups is increasing. For example, in the Spanish population aged over 74 years, deaths from cancer in 1981 represented 31% of all deaths for this cause of death, while in 2009 this percentage was 50%. Similarly, of all deaths from heart

diseases, 55% of deaths for that cause of death occurred in that age group in 1981, but 78% in 2009. And, in deaths from cerebrovascular diseases, those percentages in 1981 and 2009 were 66% and 82%, respectively. It may be said that gradual population ageing as a result of the reduction in mortality and the consequent increase in life expectancy is the main cause for the importance of these diseases.

Of the 15 leading causes of death that have been observed in Spain, 14 are similar to those observed in the United States (16). In that country, intestinal vascular disease is not listed, but instead homicide. In addition, the hierarchical order is similar, with the exception of heart diseases, which are the second leading cause of death in Spain but the leading cause of death in the United States. In Spain, as in other countries of the European Union, mortality from cancer is the leading cause of death: This is the case in France, Italy, the Netherlands, or Belgium. On the other hand, in other countries of the European Union heart diseases are the leading cause of death (17). This is due to the fact that in many countries the mortality rate from ischemic heart disease, representing the leading cause of death among heart diseases, has a relatively large size: This is the case in Sweden, Germany, Finland, and especially the countries of Eastern Europe (17).

As noted, one of the most relevant findings of this report was the impact on mortality of Alzheimer's disease, not only because it is the fifth-leading cause of death, but because of the spectacular growth seen in mortality since 1981. A similar situation has occurred in other countries (16). At least two factors

could be indicated as responsible for this increase in mortality from Alzheimer's disease. First, an increase in the incidence and/or the prevalence of the disease.

And, secondly, increased sensitivity of physicians to this disease, which would have led them to diagnose cognitive impairments such as Alzheimer's disease more often than in the past, or to note

more precisely this disease as the basic cause of death in death certificates.

The excess in the risk of mortality in one population group compared to another may be expressed by the ratio. The ratio of age-adjusted mortality rates men in men versus women shows that men higher rates than women in 13 of the 15 causes of death, as shown in Table V.

Table V. Leading causes of death in Spain in 2009, ratio between age-adjusted mortality rate in men and women in 2009 and 2001 by cause of death.

Range <sup>1</sup>	Cause of death (based on the International Classification of Diseases, 10th revision)	Ratio between mortality rate in men and women	
		2009	2001
--	All causes	1.76	1.81
1	Cancer C00-C97	2.17	2.28
2	Heart diseases I00-I09,I11, I13, I20-I51	1.59	1.60
3	Cerebrovascular diseases I60-I69	1.28	1.22
4	Chronic lower respiratory diseases J40-J47	4.94	4.87
5	Alzheimer's disease G30	0.79	0.81
6	Unintentional accidents V01-X59,Y85-Y86	2.79	3.33
7	Diabetes mellitus E10-E14	1.23	1.08
8	Pneumonia and influenza J10-J18	1.80	2.11
9	Nephritis, nephrosis, and nephrotic syndrome N00-N07, N17-N19, N25-N27	1.58	1.58
10	Chronic liver disease and cirrhosis K70, K73-K74	3.59	3.78
11	Hypertensive disease I10, I12, I15	0.99	0.99
12	Suicide X60-X84+Y87.0	3.77	3.57
13	Septicemia A40-A41	1.39	1.39
14	Parkinson's disease G20-G21	1.70	1.67
15	Vascular disorder of intestine K55	1.28	1.36

1. Range based on the number of deaths



Only the age-adjusted mortality rate for Alzheimer's disease was higher in women than in men (rate ratio of 0.81), while the hypertensive disease rate showed a very similar size in both sexes (rate ratio of 0.99). The greatest differences in the age-adjusted mortality rates between men and women in 2009 was seen in chronic lower respiratory diseases (rate ratio of 4.87), in chronic liver disease and cirrhosis (rate ratio of 3.78), suicide (rate ratio of 3.57), unintentional accidents (rate ratio of 3.33) and cancer (rate ratio of 2.28).

#### Mortality and tobacco

The total number of deaths for all the causes of death that have shown a relation to smoking is an indicator used by WHO to monitor deaths related to tobacco use (4). The appendix on data sources and explanatory notes includes the causes of death included in this indicator. According to this indicator, in 2009 there were 108,539 deaths related to smoking in Spain and the age-adjusted mortality rate for these causes of death experienced a reduction of 23% in men and 26% in women between 2001 and 2009 (Table 7). However, this indicator overestimates the importance of this risk factor in mortality and hinders the identification of the trend of the causes of death more closely related to tobacco use.

Therefore, this report has also prepared an indicator that only takes into account deaths from lung cancer, since 90% these deaths are due to smoking. It is an indicator that underestimates deaths related to tobacco, but it is more sensitive to the

trend experienced by those deaths. Indeed, deaths for the cause of death can be designated as attributable to tobacco use. Specifically, in 2009 there were 20,425 deaths from lung cancer, representing 212 deaths more than in 2008 (Table 8).

The change in age-adjusted mortality rates shows a different trend in men and women. Between 2001 and 2009, the age-adjusted mortality rate for the causes of death attributable to smoking fell 10% in men but rose 43% in women. This increase in mortality from lung cancer that has been observed in women is a reflection of the late incorporation to tobacco use, while the decline in tobacco use in men observed for some time has resulted in a drop in mortality from lung cancer. As a result of this different trend, the age-adjusted mortality rate went from being 10 times higher in men than in women by 2001 to 6.4 times higher in 2009.

#### Mortality and alcohol

As occurs with smoking, the total number of deaths for all the causes of death that have shown a relation to alcohol uses is an indicator used by WHO to monitor deaths relating to alcohol use (4). In 2009 there were 23,788 deaths related to alcohol use in Spain and the age-adjusted mortality rate for these causes of death experienced a reduction of 26,5% in men and 20% in women between 2001 and 2009 (Table 9), However, as occurs with smoking, this indicator overestimates the importance of this risk factor in mortality and does not adequately identify the trend of the those causes of death more closely related to alcohol use.

Therefore, this report has also prepared an indicator that only takes into account deaths directly attributable to alcohol use. Although it underestimates deaths related to alcohol use, it is a more sensitive indicator to detect the trend of these deaths. Specifically, only causes of death in the International Classification of Diseases, 10th revision, appearing as due to alcohol have been included. The appendix on data sources and explanatory notes includes the causes of death that have been included. According to this indicator, the number of deaths attributable to alcohol in 2009 was 1,795, a figure slightly higher than the previous years (Table 10). In any case, the age-adjusted mortality rate in the last decade for these causes of death has remained practically steady and its size is around six times more in men than in women.

#### Mortality related to quality of the health system

Deaths for any of the causes of death may be regarded as sentinel indicators of the quality of the health system. In this report three of these indicators used by the World Health Organization were selected. These deaths are the deaths from abdominal hernia, appendicitis, and adverse effects of medicinal products (Tables 11, 12 and 13). In 2009 2,257 deaths from abdominal hernia occurred, representing a figure very similar to

that of 2008. Since 2001, where the number of deaths from abdominal hernia was 1,722, there was an continual increase in number of deaths from this disease. But the number of deaths from appendicitis has remained almost steady in recent years—the median number in the last five years was 67—, although in 2009 it was somewhat lower with 58 deaths. And, finally, the number of deaths from adverse drug effects has experienced a downward trend in the last decade: it reached a figure of 264 in 2003, but was 119 in 2009.

#### Infant mortality

In 2009 1,609 deaths occurred in children under 1, which represents 132 fewer deaths than in 2008. That figure is lower than that observed in the past five years where the median number was precisely 1,704 deaths. The infant mortality rate in 2009 was 3.3 deaths per 1,000 live births, a similar figure to 2008 and 20% less than in 2001 (Table VI and Table 17).

From the start of the 20<sup>th</sup> century, the infant mortality rate has shown a downward trend in Spain and since 1940 the rate has decreased year after year.

The rate was below the average of the European Union, whose size in 2009 was 4.23 per 1,000 live births (4).

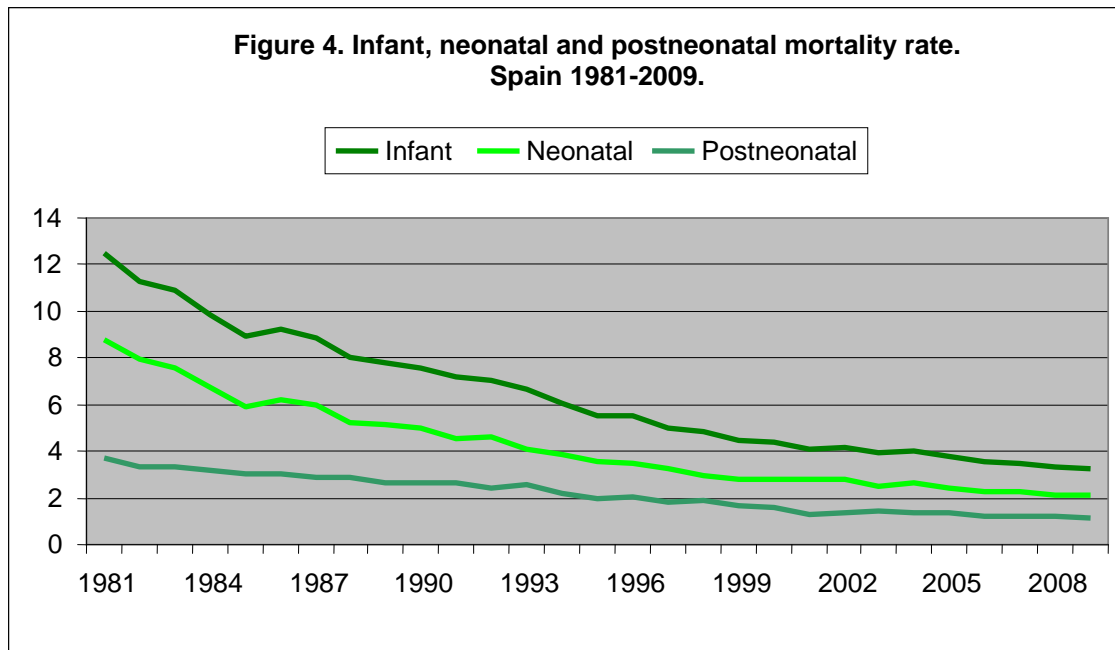
Table VI. Number of infant, neonatal and postneonatal deaths in Spain in 2009. Infant, neonatal and postneonatal mortality rate<sup>1</sup> and percent change in 2008-2009 and 2001-2009.

	Number	Rate	Rate	
			Percent change in 2008-2009	Percent change in 2001-2009
Infant	1,609	3.3	-3.0	-20.3
Neonatal	1,052	2.1	-0.8	-23.3
Postneonatal	557	1.1	-6.7	-13.9

1. Rate per 1,000 live births

In 2009, the neonatal mortality rate was 2.1 deaths per 1,000 live births and the postneonatal mortality rate was 1.1 deaths per 1,000 live births. Since 2001, neonatal and postneonatal mortality rates have declined by 23.3% and 13.9%, respectively (Figure 4).

Table VII shows that the 10 leading causes of death in children in 2009 caused 60% of all deaths in children under 1 year of age in Spain. These 10 causes of death ordered according to the number of deaths are:



1st) congenital malformations, deformations and chromosomal abnormalities, 2nd) bacterial sepsis of the newborn, 3rd) disorders related to short gestation and low birth weight, 4th) hemorrhage of the newborn, 5th) sudden infant death syndrome, 6th) respiratory distress of the newborn, 7th), necrotizing enterocolitis of the fetus and the newborn 8th) fetus and newborn affected by maternal complications of pregnancy, 9th) intrauterine hypoxia and asphyxia at birth, and 10th) fetus and newborn affected by complications of the placenta and membranes.

Most of the decline in infant mortality rate in this period is due to the decrease observed in the deaths from congenital malformations, deformations, and chromosomal abnormalities, as they represent a quarter of all deaths in children under 1 year of age. Specifically, the infant mortality rate for this cause of death decreased by 37% between 2001 and 2009. The rest of the 10 leading causes of death highlight the decline in the

infant mortality rate from respiratory distress of the newborn, whose size decreased by 44% between 2001 and 2009, and the decline in the infant mortality rate from intrauterine hypoxia and asphyxias at birth and by maternal complications of pregnancy, whose size declined by 42% and 40%, respectively, between 2001 and 2009, as shown in Table VIII and Table 19. Only in one of the ten leading causes of death in children under 1 year did the infant mortality rate increase between 2001 and 2009: necrotizing enterocolitis of the fetus and the newborn, although the rate was lower in 2009 than in 2008.

Table VII. Leading causes of death in children under 1 year in Spain in 2009. Number of deaths, percentage of total deaths and infant mortality rate<sup>1</sup> by cause of death.

Range <sup>2</sup>	Cause of death (based on the International Classification of Diseases, 10th revision)		Number of deaths	Percentage of total deaths	Rate
--	All causes		1609	100.0	325.1
1	Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	383	23.8	77.4
2	Bacterial sepsis of the newborn	P36	111	6.9	22.4
3	Disorders related to short gestation and low birth weight	P07	75	4.7	15.2
4	Hemorrhage of the newborn	P50-P52, P54	69	4.3	13.8
5	Sudden infant death syndrome	R95	68	4.2	13.7
6	Respiratory distress syndrome of the newborn	P22	63	3.9	12.7
7	Necrotizing enterocolitis of the fetus and the newborn	P77	57	3.5	11.5
8	Fetus and newborn affected by maternal complications of pregnancy	P01	56	3.5	11.3
9	Intrauterine hypoxia and asphyxia at birth	P20-P21	52	3.2	10.5
10	Fetus and newborn affected by complications of the placenta and membranes	P02	36	2.2	7.3
--	Other causes		639	39.7	129.3

1. Mortality rate per 100,000 live births

2. Range based on the number of deaths

Table VIII. Percentage of change in infant mortality rate from the leading causes of death in children under 1 year in Spain in 2008-2009 and 2001-2009.

Range <sup>1</sup>	Cause of death (based on the International Classification of Diseases, 10th revision)		Percent change in 2008-2009	Percent change in 2001-2009
--	All causes		-3.0	-20.3
1	Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	-13.7	-36.6
2	Bacterial sepsis of the newborn	P36	1.4	-6.1
3	Disorders related to short gestation and low birth weight	P07	-42.5	-34.5
4	Hemorrhage of the newborn	P50-P52, P54	22.8	-21.3
5	Sudden infant death syndrome	R95	-0.8	-22.5
6	Respiratory distress syndrome of the newborn	P22	35.0	-44.4
7	Necrotizing enterocolitis of the fetus and the newborn	P77	-18.0	73.3
8	Fetus and newborn affected by maternal complications of pregnancy	P01	-6.7	-40.3
9	Intrauterine hypoxia and asphyxia at birth	P20-P21	3.0	-42.3
10	Fetus and newborn affected by complications of the placenta and membranes	P02	9.0	-10.1

1. Range based on the number of deaths

## References

1. Ruzicka LT. Lopez AD. The use of cause of death statistics for health situation assessment: national and international experiences. *World Health Statistic Quarterly* 1990; 43: 249-258.
2. Remington PL. Goodman RA. Chronic disease surveillance. En: Brownson RC. Remington PL. Dawis JR. *Chronic disease epidemiology and control*. Washington: American Public Health Association 2005: 55-76.
3. National Center for Health Statistics. ICD-10 cause-of-death list for tabulating mortality statistics (update October 2002). NCHS instruction manual; part 9. Hyattsville. MD: Public Health Service. Available at [http://www.cdc.gov/nchs/data/dvs/im9\\_2002.pdf.pdf](http://www.cdc.gov/nchs/data/dvs/im9_2002.pdf.pdf)
4. World Health Organization/Europe. European Health for all database. Update January 2012.
5. Ministerio de Sanidad y Política Social. Consulta interactiva del SNS. Mortalidad por causa de muerte: Available at <http://pestadistico.msc.es/|pEMSC25/>
6. Regidor E. Gutiérrez-Fisac JL. Alfaro M. *Indicadores de Salud 2009. Evolución de los indicadores del estado de salud en España y su magnitud en el contexto de la Unión Europea*. Madrid: Ministerio de Sanidad y Política Social. 2009.
7. Mackenbach JP. The epidemiology transition theory [editorial]. *J Epidemiol Community Health* 1994; 48: 329-32.
8. Murray CJL. Lopez AD. Mortality by cause for eight regions of the world: Global Burden of Disease Study. *Lancet* 1997; 349: 1269-76.
9. Uemura K. Pisa Z. Trends in cardiovascular disease mortality in industrialized countries since 1950. *World Health Stat Quart* 1988; 41: 155-178.
10. Thom TJ. International mortality from heart disease: rates and trends. *Int J Epidemiol* 1989; 18 (suppl 1): S20-S28.
11. La Vecchia C. Levi F. Lucchini F. Negri E. Trends in mortality from major diseases in Europe. 1980-1993. *Eur J Epidemiol* 1998; 14:1-8.
12. Cole P. Rodu B. Declining cancer mortality in the United States. *Cancer* 1996; 78: 2045-2048.
13. Bailar JC. Gornik LG. Cancer undefeated. *N Engl J Med* 1997; 336: 1569-74.
14. Levi F. La Vecchia C. Negri E. Lucchini F. Declining cancer mortality in European Union [letter]. *Lancet* 1997; 349: 508-9.
15. Hurwitz ES. Holman RC. Strine TW. Chorba TL. Chronic liver disease mortality in the United States. 1979 through 1989. *Am J Public Health* 1995; 85: 1256-1260.
16. Xu JQ. Kochanek KD. Murphy SL. Tejada-Vera B. Deaths: Final data for the 2007. National vital statistics reports. Hyattsville. MD: National Center for Health Statistics. 2010: 58. no 19.

17. World Health Organization. Health statistics and health information systems. WHO Mortality Database: <http://www.who.int/whosis/database/mort/table1.cfm> (Consulted on May 3, 2012).



## List of Tables

Table 1. Number of deaths, crude mortality rate, and age-adjusted mortality rate by sex. Spain 1981-2009.

Table 2. Number of deaths and crude mortality rate by sex and age. Spain 2009.

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain 2001-2009.

Table 4. Number of deaths by cause of death selected by age. Spain 2009.

Table 5. Crude mortality rate by cause of death selected by age. Spain 2009.

Table 6. Number of deaths, crude rate mortality rate, and age-adjusted mortality rate by cause of death selected by sex. Spain 2009.

Table 7. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths related to tobacco by sex. Spain 2001-2009.

Table 8. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths attributable to tobacco by sex. Spain 2001-2009.

Table 9. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths related to alcohol by sex. Spain 2001-2009.

Table 10. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths attributable to alcohol by sex. Spain 2001-2009.

Table 11. Number of deaths, crude mortality rate, and age-adjusted mortality rate from abdominal hernia by sex. Spain 2001-2009.

Table 12. Number of deaths, crude mortality rate, and age-adjusted mortality rate from appendicitis by sex. Spain 2001-2009.

Table 13. Number of deaths, crude mortality rate, and age-adjusted mortality rate by adverse drug effects by sex. Spain 2001-2009.

Table 14. Number of deaths for the leading causes of death, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain 2009.

Table 15. Number of deaths from diseases that are related and attributable to tobacco and alcohol, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain 2009.

Table 16. Number of deaths from abdominal hernia, appendicitis, and adverse drug effects, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain 2009.

Table 17. Number of deaths in children under 1 year, neonatal and postneonatal mortality rate. Spain 1981-2009.

Table 18. Number of deaths in children under 1 year and infant mortality rate by cause of death. Spain 2009.

Table 19. Number of deaths in children under 1 year and infant mortality rate from the leading causes of death. Spain 2001-2009.

All causes of death

Table 1. Number of deaths, crude mortality rate, and age-adjusted mortality rate by sex. Spain 1981-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
1981	293,386	154,437	138,949	777.2	833.7	722.7	804.8	1,022.6	636.2
1982	286,655	151,048	135,607	755.0	810.6	701.3	767.6	979.0	604.5
1983	302,569	158,375	144,194	792.9	845.6	742.0	790.1	1,004.5	624.2
1984	299,409	158,515	140,894	781.2	842.8	721.8	761.9	980.4	592.2
1985	312,532	164,834	147,698	812.3	873.1	753.7	775.3	998.3	601.7
1986	310,413	162,961	147,452	804.1	860.3	749.9	751.8	964.3	584.8
1987	310,073	163,891	146,182	800.9	862.7	741.4	733.1	946.2	565.6
1988	319,437	168,734	150,703	823.1	886.0	762.5	737.7	955.5	566.5
1989	324,796	172,364	152,432	835.2	903.1	769.7	732.9	954.4	557.5
1990	333,142	176,779	156,363	857.5	928.9	788.9	726.3	952.0	548.2
1991	337,691	179,344	158,347	867.2	940.4	797.0	717.8	942.7	539.1
1992	331,515	177,087	154,428	848.5	925.5	774.7	689.1	910.6	512.1
1993	339,661	180,512	159,149	866.7	940.4	795.9	687.8	907.8	512.5
1994	338,242	179,924	158,318	860.8	934.9	789.6	668.7	885.4	495.9
1995	346,227	184,488	161,739	879.0	956.4	804.7	667.3	886.8	492.0
1996	351,449	186,901	164,548	890.2	966.8	816.8	661.0	880.0	485.9
1997	349,521	185,095	164,426	883.0	955.0	813.9	639.6	851.1	471.7
1998	360,511	190,218	170,293	907.6	978.1	840.0	640.9	853.3	472.4
1999	371,102	195,255	175,847	929.4	998.9	862.8	643.3	856.3	473.6
2000	360,391	189,468	170,923	895.1	960.8	832.0	611.5	812.5	450.2
2001	360,131	189,714	170,417	884.4	950.6	820.7	595.8	794.0	437.1
2002	368,618	193,269	175,349	892.2	953.7	833.1	592.7	787.4	435.9
2003	384,828	199,897	184,931	916.2	969.1	865.0	600.1	791.7	445.4
2004	371,934	194,928	177,006	871.2	928.8	815.5	565.2	750.0	415.8
2005	387,355	201,769	185,586	892.6	944.3	842.4	568.5	751.5	419.5
2006	371,478	194,154	177,324	843.0	893.7	793.6	532.3	704.1	391.7
2007	385,361	201,136	184,225	858.8	907.8	810.9	534.0	705.3	394.0
2008	386,324	199,647	186,677	847.3	886.8	808.8	519.7	681.1	387.1
2009	384,933	199,095	185,838	838.1	878.2	799.0	503.7	661.0	374.7

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 2. Number of deaths and crude mortality rate by sex and age. Spain, 2009.

	Deaths			Mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women
All ages	384,933	199,095	185,838	838.1	878.2	799.0
< 1	1,609	892	717	319.2	343.4	293.4
1-4	396	223	173	20.5	22.4	18.4
5-9	206	112	94	9.1	9.6	8.5
10-14	228	146	82	10.8	13.5	8.0
15-19	616	425	191	27.3	36.6	17.4
20-24	921	639	282	34.4	46.7	21.6
25-29	1,426	1,038	388	41.1	58.3	23.0
30-34	2,013	1,427	586	49.6	67.9	30.0
35-39	2,966	2,019	947	75.5	99.6	49.8
40-44	4,830	3,239	1,591	130.6	172.3	87.5
45-49	7,467	5,020	2,447	219.8	295.0	144.4
50-54	10,114	6,920	3,194	340.4	470.7	212.7
55-59	12,887	9,152	3,735	499.8	725.8	283.5
60-64	17,743	12,616	5,127	741.4	1095.8	412.9
65-69	22,262	15,545	6,717	1125.4	1663.3	643.6
70-74	32,883	21,278	11,605	1815.1	2598.7	1168.9
75-79	54,576	32,444	22,132	3219.8	4480.9	2279.4
80-84	71,705	36,201	35,504	5919.8	7688.4	4795.1
85 and over	140,085	49,759	90,326	14142.5	15579.1	13458.8

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death, Spain 2001-2009.

Cause of death (based on the ICD, 10th revision)	Age												Age-adjusted rate
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
All causes													
2001	884.4	410.3	24.6	15.0	49.7	75.8	146.7	318.0	707.2	1788.2	4999.5	15675.4	595.8
2002	892.2	419.4	25.4	14.8	50.0	72.0	143.7	317.2	681.1	1764.4	5023.3	15911.0	592.7
2003	916.2	403.4	27.2	14.7	50.9	69.9	143.3	313.7	682.6	1767.3	5083.2	16662.4	600.1
2004	871.2	406.5	22.4	13.1	45.8	63.7	134.1	308.4	662.6	1672.6	4838.8	15273.8	565.2
2005	892.6	388.0	21.7	12.5	44.8	59.2	130.2	299.0	662.7	1684.1	4944.4	15643.2	568.5
2006	843.0	368.5	19.9	12.1	40.0	54.2	124.1	293.3	642.6	1584.2	4555.7	14416.9	532.3
2007	858.8	357.0	20.8	11.9	38.7	51.7	120.4	289.7	647.5	1574.5	4591.8	14718.8	534.0
2008	847.3	352.3	18.2	11.6	36.5	48.0	112.6	288.1	631.6	1493.5	4469.7	14563.9	519.7
2009	838.1	319.2	20.5	9.9	31.2	45.7	102.2	276.1	616.1	1455.1	4345.1	14142.4	503.7
Cancer (C00-C97)													
2001	231.7	2.5	2.6	3.4	4.7	10.1	41.1	145.5	342.4	703.4	1251.8	1872.3	171.1
2002	228.8	3.6	3.6	3.1	5.5	9.2	40.2	144.6	331.8	687.3	1235.0	1835.3	167.7
2003	229.7	3.3	3.7	3.5	4.9	9.3	39.3	141.5	331.7	688.5	1228.4	1867.8	167.1
2004	227.5	2.5	2.7	2.8	4.5	8.8	36.2	141.1	332.0	673.3	1226.5	1800.4	164.2
2005	222.9	3.7	2.7	3.2	4.4	8.2	36.1	133.0	323.9	662.3	1197.7	1732.2	159.7
2006	223.1	2.6	2.3	3.5	4.5	7.9	34.7	131.5	321.4	659.8	1184.6	1753.3	158.4
2007	222.8	2.1	3.6	3.1	4.2	7.8	31.9	130.7	322.7	647.3	1185.0	1761.2	157.1
2008	220.8	2.8	2.7	2.5	4.8	7.3	30.9	128.5	321.9	623.2	1174.0	1763.8	154.6
2009	221.0	2.2	2.4	2.9	4.4	7.9	29.1	123.4	316.3	620.9	1160.2	1764.2	153.0
Heart diseases (I00-I09, I11, I13, I20-I51)													
2001	189.6	2.2	0.7	0.5	1.7	4.2	14.1	46.9	118.5	352.0	1128.4	4107.9	62.6
2002	191.4	2.7	0.7	0.6	1.8	4.1	15.0	45.8	111.0	344.1	1131.7	4167.2	61.7
2003	194.7	3.5	0.4	0.4	1.5	3.9	14.6	43.2	112.6	343.3	1129.0	4281.4	61.5
2004	185.3	2.9	0.9	0.5	1.7	3.6	13.8	43.6	104.6	318.2	1075.6	3986.9	57.3
2005	187.8	3.3	0.2	0.3	1.6	3.8	13.2	42.4	105.2	316.0	1075.3	4007.9	56.3
2006	176.0	2.8	0.6	0.5	1.4	2.9	13.7	41.6	98.9	289.9	986.3	3680.4	51.9
2007	179.5	3.8	0.4	0.4	1.6	3.6	12.6	38.9	99.4	287.6	979.6	3784.3	50.4
2008	175.8	2.6	0.6	0.5	1.7	3.2	11.7	39.4	94.4	266.9	947.8	3691.7	47.4
2009	170.4	2.4	0.7	0.2	1.6	3.3	11.4	35.7	90.3	244.5	904.9	3503.7	45.3

The rates are per 100,000 population in each specific group

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain, 2001-2009 (continued).

Cause of death (based on the ICD, 10th revision)	Age											Age-adjusted rate	
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84		85 and over
<b>Cerebrovascular diseases (I60-I69)</b>													
2001	89.8	0.2	0.2	0.3	0.4	1.3	5.1	12.8	35.2	138.0	585.6	2147.3	54.4
2002	87.0	1.2	0.3	0.4	0.6	1.6	4.7	12.4	32.5	130.7	557.4	2076.1	52.0
2003	88.6	1.4	0.4	0.2	0.5	1.3	4.4	13.1	30.2	127.7	563.5	2125.5	52.0
2004	80.2	0.9	0.0	0.2	0.6	1.3	4.0	11.4	29.0	118.7	507.9	1847.8	46.5
2005	80.1	0.9	0.3	0.2	0.6	1.2	3.9	11.7	30.4	115.5	504.1	1794.3	45.7
2006	74.7	0.4	0.2	0.1	0.4	1.0	4.5	11.4	29.5	106.0	449.4	1663.6	42.0
2007	73.6	1.3	0.1	0.3	0.5	1.0	4.0	11.4	27.7	105.0	441.3	1598.0	40.8
2008	69.8	0.0	0.4	0.4	0.5	1.3	3.5	11.3	26.1	95.7	409.2	1504.2	38.2
2009	67.8	0.2	0.2	0.2	0.4	1.0	3.3	9.8	25.3	89.0	380.5	1462.1	36.1
<b>Chronic lower respiratory diseases (J40-J47)</b>													
2001	37.4	0.0	0.1	0.1	0.2	0.4	0.8	3.3	16.5	78.0	273.2	702.7	22.8
2002	40.8	0.0	0.2	0.1	0.1	0.4	0.7	4.1	16.4	85.9	296.0	751.2	24.5
2003	40.7	0.0	0.1	0.1	0.3	0.3	0.9	3.8	16.1	80.7	289.5	775.1	24.0
2004	36.3	0.0	0.1	0.0	0.1	0.3	0.7	3.3	14.1	70.2	260.9	676.5	21.1
2005	40.6	0.0	0.0	0.0	0.3	0.3	0.6	3.4	16.4	80.2	288.1	730.7	23.3
2006	32.5	0.0	0.1	0.1	0.2	0.3	0.5	2.6	12.6	60.7	223.5	603.6	18.3
2007	35.0	0.2	0.1	0.1	0.2	0.2	0.5	3.1	14.0	66.8	239.6	620.3	19.5
2008	32.6	0.2	0.1	0.1	0.2	0.3	0.6	3.0	13.5	59.6	211.7	600.7	18.1
2009	34.7	0.0	0.1	0.1	0.2	0.2	0.6	3.0	14.0	58.2	223.7	633.1	18.7
<b>Alzheimer's disease (G30)</b>													
2001	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1	19.7	128.0	350.2	8.8
2002	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8	19.8	131.9	386.2	9.2
2003	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.1	22.4	156.0	470.7	10.9
2004	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0	19.8	141.6	453.6	10.1
2005	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0	18.6	153.1	508.0	10.8
2006	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.2	18.8	151.4	495.7	10.6
2007	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.2	18.8	155.7	531.8	11.1
2008	22.8	0.0	0.0	0.0	0.0	0.0	0.1	0.1	2.0	17.2	153.1	560.8	11.2
2009	24.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6	18.9	156.4	587.4	11.6

The rates are per 100,000 population in each specific group

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain, 2001-2009 (continued).

Cause of death (based on the ICD, 10th revision)	Age											Age-adjusted rate	
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84		85 and over
Unintentional accidents (V01-X59,Y85-Y86)													
2001	29.1	7.7	6.7	4.0	28.1	29.0	25.9	24.8	26.3	36.1	65.6	157.1	33.7
2002	28.0	7.2	6.2	4.1	27.1	27.5	23.5	22.8	26.4	36.5	61.5	158.0	32.9
2003	28.9	9.5	6.6	4.4	28.4	26.3	23.6	22.2	25.5	38.6	68.5	182.7	33.6
2004	28.8	7.8	5.4	4.0	24.5	23.9	22.2	21.5	24.5	35.5	77.7	233.0	32.9
2005	28.8	6.6	4.9	3.6	24.0	21.9	21.7	21.3	24.0	37.0	83.0	240.1	31.7
2006	27.3	4.8	4.4	3.0	21.1	20.5	20.5	19.7	22.8	34.4	78.6	242.3	29.5
2007	26.4	5.7	4.9	2.9	19.8	18.9	20.2	18.9	21.8	33.0	73.6	242.6	28.4
2008	24.0	8.9	4.2	2.9	16.7	15.5	17.6	18.2	20.2	29.2	72.1	217.9	26.8
2009	22.2	5.6	3.9	1.9	12.6	13.5	14.6	16.2	17.0	27.9	71.2	229.4	24.4
Diabetes mellitus (E10-E14)													
2001	23.5	0.0	0.1	0.0	0.1	0.4	0.8	2.7	11.5	48.6	163.5	459.0	14.5
2002	23.6	0.0	0.0	0.0	0.0	0.2	0.8	3.2	10.8	45.8	160.9	475.0	14.3
2003	24.0	0.2	0.1	0.0	0.0	0.2	0.7	3.0	10.6	47.4	158.6	489.3	14.4
2004	23.3	0.0	0.1	0.0	0.1	0.2	0.7	2.7	10.7	42.6	157.1	466.6	13.7
2005	23.8	0.0	0.0	0.0	0.0	0.1	0.7	2.7	11.2	44.3	155.3	470.3	13.8
2006	22.0	0.0	0.0	0.0	0.0	0.2	0.6	2.9	10.0	38.1	143.1	427.1	12.5
2007	22.6	0.0	0.0	0.0	0.0	0.1	0.6	2.4	10.5	39.9	145.4	433.0	12.7
2008	22.3	0.0	0.0	0.0	0.1	0.2	0.7	2.4	9.4	37.9	140.1	429.8	12.3
2009	21.7	0.0	0.0	0.0	0.0	0.1	0.7	2.4	8.9	35.1	130.2	425.1	11.7
Pneumonia and influenza (J10-J18)													
2001	17.6	0.5	0.3	0.1	0.3	0.6	1.4	3.0	6.0	21.1	102.3	487.3	10.7
2002	19.9	2.2	0.3	0.1	0.3	0.6	1.5	2.8	6.5	23.7	112.3	551.4	11.9
2003	19.9	2.6	0.6	0.2	0.3	0.6	1.6	3.5	5.7	24.3	112.5	536.1	11.7
2004	17.4	0.9	0.3	0.1	0.1	0.5	1.1	2.5	5.4	19.6	98.0	471.9	10.0
2005	22.7	1.5	0.5	0.1	0.3	0.6	1.7	3.0	6.2	25.4	127.0	601.0	12.8
2006	17.8	2.4	0.5	0.1	0.2	0.4	1.3	2.5	6.2	19.8	94.5	462.8	10.0
2007	19.3	1.5	0.3	0.1	0.3	0.5	1.5	2.9	6.0	21.0	100.1	492.7	10.6
2008	20.3	1.2	0.4	0.1	0.4	0.4	1.5	3.2	6.4	20.5	106.5	507.4	10.9
2009	18.9	1.0	0.5	0.1	0.3	0.4	1.2	3.0	5.8	19.3	93.4	466.4	10.0

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain, 2001-2009 (continued).

Cause of death (based on the ICD, 10th revision)	Age												Age-adjusted rate
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
<b>Nephritis, nephrosis, and nephrotic syndrome (N00-N07, N17-N19, N25-N27)</b>													
2001	14.1	0.7	0.1	0.0	0.1	0.2	0.6	1.6	6.3	24.4	89.5	331.6	8.6
2002	14.1	0.5	0.1	0.1	0.0	0.2	0.7	1.7	5.7	23.3	88.4	329.7	8.5
2003	14.2	0.0	0.1	0.0	0.1	0.1	0.6	1.8	5.0	22.4	87.9	344.2	8.4
2004	13.5	0.2	0.0	0.0	0.1	0.1	0.5	1.4	5.0	21.0	85.1	315.1	7.8
2005	14.9	0.9	0.1	0.0	0.1	0.2	0.6	1.5	5.0	21.9	91.8	347.6	8.4
2006	13.9	0.2	0.0	0.0	0.0	0.2	0.4	1.4	4.7	19.1	83.9	326.8	7.7
2007	14.8	0.4	0.1	0.0	0.0	0.1	0.5	1.4	5.0	19.6	87.1	345.7	8.1
2008	14.9	0.4	0.1	0.0	0.1	0.2	0.3	1.5	4.5	17.5	85.1	355.3	7.9
2009	15.0	0.2	0.0	0.1	0.0	0.1	0.5	1.3	4.0	18.0	83.8	345.6	7.7
<b>Chronic liver disease and cirrhosis (K70, K73-K74)</b>													
2001	12.4	0.0	0.0	0.0	0.0	0.8	6.1	15.5	26.2	39.9	43.3	32.7	10.5
2002	12.3	0.0	0.0	0.0	0.0	0.7	6.2	14.6	24.4	40.5	45.1	28.1	10.2
2003	11.9	0.0	0.0	0.0	0.0	0.6	5.7	15.1	24.7	37.4	41.9	29.9	9.9
2004	11.5	0.0	0.0	0.0	0.0	0.4	5.3	14.8	23.0	36.2	43.0	28.0	9.5
2005	11.4	0.0	0.1	0.0	0.0	0.3	5.4	14.0	23.7	35.3	42.9	26.8	9.4
2006	10.9	0.0	0.0	0.0	0.1	0.4	4.7	13.9	22.5	34.3	38.0	26.3	9.0
2007	11.0	0.0	0.1	0.0	0.1	0.5	4.5	13.8	23.7	33.2	38.3	28.4	9.0
2008	10.2	0.0	0.0	0.0	0.0	0.4	3.7	13.5	22.2	31.6	36.2	21.6	8.4
2009	10.7	0.0	0.0	0.0	0.0	0.3	3.8	13.9	22.1	32.1	38.5	28.5	8.7
<b>Hypertensive disease (I10, I12, I15)</b>													
2001	6.4	0.0	0.0	0.0	0.1	0.0	0.2	0.8	3.1	10.1	37.9	164.3	3.9
2002	6.8	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.5	9.8	39.5	180.0	4.0
2003	7.5	0.0	0.0	0.0	0.0	0.1	0.2	0.6	2.8	10.4	44.4	199.9	4.4
2004	7.9	0.0	0.0	0.0	0.0	0.0	0.3	0.8	2.7	10.9	44.0	210.7	4.5
2005	8.1	0.0	0.1	0.0	0.0	0.1	0.2	0.9	2.8	10.2	46.0	212.0	4.6
2006	8.2	0.0	0.1	0.0	0.0	0.0	0.1	0.8	2.2	11.0	43.6	217.1	4.5
2007	8.7	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.8	9.4	46.4	230.1	4.7
2008	9.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.2	10.2	45.3	244.6	4.8
2009	9.6	0.0	0.0	0.0	0.0	0.0	0.1	0.7	2.4	10.0	46.9	252.6	4.9

The rates are per 100,000 population in each specific group

Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain, 2001-2009 (continued).

Cause of death (based on the ICD, 10th revision)	Age											Age-adjusted rate	
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84		85 and over
<b>Suicide (X60-X84+Y87.0)</b>													
2001	7.8	0.0	0.0	0.3	4.1	7.3	8.4	8.2	9.1	13.2	18.9	26.6	6.7
2002	8.2	0.0	0.0	0.2	4.3	7.4	8.0	9.4	10.2	13.6	19.6	25.4	7.0
2003	8.3	0.0	0.0	0.1	4.5	7.7	8.4	9.6	10.0	12.8	20.3	24.5	7.1
2004	8.2	0.0	0.0	0.3	4.3	7.0	8.9	10.1	9.4	13.1	19.3	24.0	7.0
2005	7.8	0.0	0.0	0.2	3.9	7.0	8.5	8.3	9.5	13.3	18.7	22.1	6.6
2006	7.4	0.0	0.0	0.1	3.7	6.0	7.9	8.7	9.6	11.7	17.3	19.1	6.2
2007	7.3	0.0	0.0	0.3	2.8	5.6	8.2	8.5	9.5	11.2	17.5	21.5	6.1
2008	7.6	0.0	0.0	0.1	3.3	6.1	8.6	9.4	10.0	12.1	16.5	17.9	6.5
2009	7.5	0.0	0.0	0.2	3.5	5.6	8.0	9.5	10.2	11.5	16.6	18.6	8.7
<b>Septicemia (A40-A41)</b>													
2001	6.4	1.5	0.7	0.2	0.2	0.6	1.0	2.1	4.1	13.5	40.4	105.1	4.2
2002	6.5	1.7	0.7	0.2	0.2	0.3	0.8	1.6	4.2	12.2	41.6	117.1	4.2
2003	7.5	2.8	0.9	0.1	0.1	0.3	1.0	2.2	4.9	16.1	44.5	131.5	4.9
2004	7.1	1.8	0.6	0.2	0.1	0.3	0.8	1.7	3.8	14.2	44.3	125.1	4.4
2005	7.9	2.9	0.6	0.1	0.2	0.3	0.8	2.0	5.4	15.4	49.2	130.6	4.9
2006	7.7	2.2	0.6	0.1	0.1	0.3	0.9	1.7	4.6	14.1	48.0	133.2	4.7
2007	8.7	1.3	0.5	0.1	0.3	0.3	0.9	1.8	5.1	15.5	52.9	151.7	5.1
2008	9.1	2.6	0.4	0.1	0.2	0.3	1.0	2.1	4.9	15.5	53.5	162.0	5.3
2009	7.0	2.0	0.5	0.1	0.1	0.3	0.5	1.8	3.2	12.3	41.4	117.9	7.7
<b>Parkinson's disease (G20-G21)</b>													
2001	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1	8.5	40.7	86.5	2.8
2002	4.7	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.8	7.2	39.3	93.0	2.7
2003	5.5	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.8	9.0	45.1	106.5	3.1
2004	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	7.2	41.1	96.2	2.7
2005	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	7.7	48.4	108.4	3.1
2006	5.7	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0	8.1	45.6	105.8	3.0
2007	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	7.4	44.5	110.4	3.0
2008	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	7.5	45.2	106.7	3.0
2009	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	8.5	49.1	124.7	7.7

The rates are per 100,000 population in each specific group



Table 3. Age-specific mortality rate and age-adjusted mortality rate for 15 leading causes of death. Spain, 2001-2009. (conclusion)

Cause of death (based on the ICD, 10th revision)	Age											Age-adjusted rate	
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84		85 and over
Vascular disorder of intestine (K55)													
2001	6.1	0.2	0.1	0.0	0.0	0.1	0.1	0.5	1.8	10.7	43.3	132.1	3.6
2002	6.3	0.5	0.0	0.0	0.0	0.1	0.2	1.0	2.5	9.7	46.5	129.6	3.8
2003	6.7	0.0	0.0	0.0	0.1	0.0	0.1	0.7	2.2	11.3	46.4	143.3	3.9
2004	6.4	0.4	0.0	0.0	0.0	0.0	0.1	0.6	2.3	10.9	43.0	134.8	3.7
2005	6.5	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.6	10.2	44.8	132.4	3.7
2006	6.5	0.0	0.1	0.0	0.0	0.0	0.2	0.5	2.2	9.8	43.1	139.6	3.6
2007	6.7	0.0	0.1	0.0	0.0	0.1	0.2	0.8	2.0	10.1	42.5	140.4	3.7
2008	6.6	0.0	0.0	0.0	0.1	0.0	0.2	0.7	2.4	9.1	41.0	142.0	3.6
2009	6.3	0.0	0.0	0.0	0.0	0.1	0.1	0.7	2.1	8.3	39.9	127.1	4.9

The rates are per 100,000 population in each specific group

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)	Age											
	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
All causes	1609	396	434	1537	3439	7796	17581	30630	55145	126281	140085	
Infectious and parasitic diseases	A00-B99	29	30	9	17	118	590	733	474	943	2048	1852
Diarrhea and infectious gastroenteritis	A09	3	4	0	0	1	1	8	7	33	122	226
Tuberculosis	A16-A19	0	0	2	1	3	17	22	31	44	97	69
Respiratory tuberculosis	A16	0	0	1	0	3	16	17	22	30	77	54
Other tuberculosis	A17-A19	0	0	1	1	0	1	5	9	14	20	15
Septicemia	A40-A41	10	10	3	6	20	40	115	160	465	1203	1168
Viral hepatitis	B15-B19	0	0	0	2	7	64	145	131	227	367	124
HIV disease	B20-B24	1	0	0	2	77	446	410	85	31	21	6
Malignant neoplasms (cancer)	C00-C97	11	46	126	217	592	2219	7858	15724	23530	33719	17475
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0	0	1	2	7	53	341	580	533	435	202
Malignant neoplasm of esophagus	C15	0	0	0	1	9	24	218	440	481	461	136
Malignant neoplasm of esophagus	C16	0	0	0	4	36	133	358	780	1256	2075	1054
Malignant neoplasm of colon and rectum	C18-C20	0	0	0	1	42	161	744	1741	3148	5205	3118
Malignant neoplasm of liver	C22	0	0	1	5	19	71	363	671	1135	1706	639
Malignant neoplasm of pancreas	C25	0	0	0	1	12	95	410	834	1415	1736	739
Malignant neoplasm of larynx	C32	0	0	0	1	0	19	147	345	432	400	129
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0	1	1	3	30	339	2066	4454	5737	6043	1751
Malignant melanoma of skin	C43	0	0	2	3	18	54	107	146	180	212	142
Malignant neoplasm of breast	C50	0	0	0	4	48	374	869	972	1063	1603	1267
Malignant neoplasm of cervix uteri	C53	0	0	0	1	17	93	135	109	105	125	58
Malignant neoplasm of corpus uteri	C54-C55	0	0	0	1	2	15	76	202	323	459	293
Malignant neoplasm of ovary	C56	0	0	0	3	15	69	209	345	446	527	201
Malignant neoplasm of prostate	C61	0	0	1	0	1	6	36	268	995	2353	1862
Malignant neoplasm of kidney and renal pelvis	C64-C65	0	2	3	2	14	35	160	303	400	665	281
Malignant neoplasm of bladder	C67	0	0	0	0	4	20	147	464	1050	1840	1207
Malignant neoplasm of brain	C71	2	9	25	35	63	155	293	535	590	639	162
Lymphomas	C81-C85	0	1	11	32	63	129	183	344	583	963	400
Hodgkin's disease	C81	0	0	0	10	25	25	26	32	41	69	34
Non-Hodgkin's lymphomas	C82-C85	0	1	11	22	38	104	157	312	542	894	366
Multiple myeloma and immunoproliferative diseases	C88, C90	0	0	0	1	2	16	50	191	427	708	311
Leukemias	C91-C95	6	17	34	43	59	88	143	327	620	1132	615
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	13	10	19	11	34	50	151	263	566	1402	1096

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	1	5	2	10	8	13	15	33	76	258	561
Diabetes mellitus	E10-E14	0	0	0	2	9	56	150	444	1329	3784	4211
Vascular dementias and other unspecified	F01, F03	0	0	0	0	0	1	17	77	580	3962	9097
Spinal muscular atrophy	G12	17	3	1	5	9	27	85	177	268	288	51
Parkinson's disease	G20-G21	0	0	0	0	0	1	6	46	324	1426	1235
Alzheimer's disease	G30	0	0	0	0	0	0	12	78	715	4546	5818
Circulatory system diseases	I00-I99	15	17	20	107	347	1178	3086	6260	13897	40709	54421
Heart diseases	I00-I09, I11, I13, I20-I51	12	14	10	78	252	866	2273	4487	9266	26299	34705
Rheumatic heart diseases	I00-I09	0	1	0	2	6	8	35	141	342	749	479
Hypertensive heart disease	I11	0	0	0	0	1	13	21	68	229	1052	2015
Ischemic heart disease	I20-I25	1	0	1	21	91	456	1420	2819	5326	12561	12918
Heart failure	I50	1	1	2	13	39	119	243	392	1086	4952	10744
Hypertensive disease	I10, I12, I15	0	0	0	1	2	9	43	119	380	1363	2502
Cerebrovascular diseases	I60-I69	1	3	10	22	72	251	627	1257	3374	11057	14483
Diseases of arteries, arterioles and capillaries	I70-I78	2	0	0	3	19	41	121	353	801	1801	2425
Atherosclerosis	I70	0	0	0	0	1	1	13	35	87	561	1428
Aortic aneurism and dissection	I71	0	0	0	2	16	33	79	238	480	772	405
Respiratory tract diseases	J00-J99	22	23	24	64	214	395	772	1605	4609	15242	20312
Pneumonia and influenza	J10-J18	5	9	5	16	29	92	192	289	730	2714	4620
Other acute lower respiratory infections	J20-J28	9	2	0	0	1	3	5	14	47	261	731
Chronic lower respiratory diseases	J40-J47	0	1	5	11	13	49	192	696	2207	6501	6271
Bronchitis, chronic and unspecified	J40-J42	0	0	1	0	0	4	11	35	92	362	535
Emphysema	J43	0	0	0	0	0	3	25	81	156	237	158
Asthma	J45-J46	0	1	1	6	9	22	26	42	105	353	406
Pneumonitis due to solids and liquids	J69	1	0	0	2	4	6	20	30	124	535	1041
Respiratory failure, not classified elsewhere	J96	2	3	3	8	33	39	73	115	246	901	1323
Diseases of the digestive system	K00-K93	5	7	5	15	81	508	1419	1944	3031	6313	6229
Peptic ulcer	K25-K28	0	1	0	1	2	7	26	37	62	176	159
Appendicitis	K35-K38	0	1	0	0	0	0	1	5	6	21	24
Hernia and intestinal occlusion	K40-K46, K56	1	0	0	2	3	16	29	61	194	804	1147
Vascular disorder of intestine	K55	0	0	1	2	7	10	47	103	316	1160	1259
Chronic liver disease and cirrhosis	K70, K73-K74	0	0	1	0	20	288	888	1098	1218	1120	282
Alcoholic liver disease	K70	0	0	0	0	6	135	360	435	312	165	21
Cholelithiasis and other gallbladder diseases	K80-K82	0	0	0	2	4	8	12	38	142	569	801
Acute pancreatitis	K85	0	0	0	2	12	27	49	78	207	425	363

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	1	0	6	1	11	35	83	197	684	2436	3423
Renal failure	N17-N19	1	0	4	1	8	34	79	183	656	2322	3355
Infections of kidney	N10-N12, N13.6, N15.1	0	0	0	0	0	7	3	7	19	63	91
Hyperplasia of prostate	N40	0	0	0	0	0	0	0	2	16	71	141
Inflammatory diseases of female pelvic organs	N70-N76	0	0	0	0	2	2	0	1	4	7	5
Certain condition originating in the perinatal period	P00-P96	879	9	2	1	2	3	1	1	2	0	0
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	383	65	28	44	61	49	80	81	39	41	18
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	106	31	18	88	213	464	727	773	1083	2449	5134
External causes of mortality	V01-Y98	30	78	94	835	1532	1823	1730	1445	1608	2740	2581
Unintentional accidents	V01-X59, Y85-Y86	28	75	84	620	1013	1110	1032	844	1058	2070	2272
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6+V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86+V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	12	23	35	398	501	429	353	288	270	265	94
Falls	W00-W19	3	11	7	31	67	92	131	140	218	566	654
Accidental drowning and submersion	W65-W74	1	16	8	48	62	67	71	63	82	72	17
Accidental poisoning by exposure to noxious substances	X40-X49	0	1	2	44	169	255	131	40	29	43	43
Suicide	X60-X84+Y87.0	0	0	8	171	424	614	605	506	435	482	184
Assaults	X85-Y09	1	2	1	37	79	76	56	34	29	16	6
Complications of medical and surgical care	Y40-Y84	1	1	1	6	5	7	20	49	74	153	112

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes		892	223	258	1064	2465	5258	11940	21768	36823	68645	49759
Infectious and parasitic diseases	A00-B99	19	14	5	5	75	449	573	321	538	977	649
Diarrhea and infectious gastroenteritis	A09	1	2	0	0	0	1	4	4	17	55	52
Tuberculosis	A16-A19	0	0	1	1	1	15	20	27	26	58	35
Respiratory tuberculosis	A16	0	0	1	0	1	14	15	22	18	45	30
Other tuberculosis	A17-A19	0	0	0	1	0	1	5	5	8	13	5
Septicemia	A40-A41	8	3	2	2	13	26	73	94	280	564	414
Viral hepatitis	B15-B19	0	0	0	0	5	48	115	85	100	155	44
HIV disease	B20-B24	0	0	0	1	49	343	338	70	29	19	4
Malignant neoplasms (cancer)	C00-C97	5	28	78	123	313	1042	4572	10770	16219	21088	8811
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0	0	0	0	6	38	291	506	443	305	99
Malignant neoplasm of esophagus	C15	0	0	0	1	6	22	191	393	424	376	91
Malignant neoplasm of esophagus	C16	0	0	0	1	20	73	254	562	892	1278	453
Malignant neoplasm of colon and rectum	C18-C20	0	0	0	0	19	84	431	1155	2106	3113	1411
Malignant neoplasm of liver	C22	0	0	1	3	14	59	297	526	813	1016	280
Malignant neoplasm of pancreas	C25	0	0	0	0	6	64	257	538	845	789	233
Malignant neoplasm of larynx	C32	0	0	0	1	0	16	131	328	409	386	118
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0	1	1	2	19	212	1507	3827	5084	5260	1383
Malignant melanoma of skin	C43	0	0	1	2	9	31	56	89	115	119	58
Malignant neoplasm of breast	C50	0	0	0	0	0	3	9	11	17	22	9
Malignant neoplasm of cervix uteri	C53	0	0	0	0	0	0	0	0	0	0	0
Malignant neoplasm of corpus uteri	C54-C55	0	0	0	0	0	0	0	0	0	0	0
Malignant neoplasm of ovary	C56	0	0	0	0	0	0	0	0	0	0	0
Malignant neoplasm of prostate	C61	0	0	1	0	1	6	36	268	995	2353	1862
Malignant neoplasm of kidney and renal pelvis	C64-C65	0	1	1	1	8	25	113	219	281	425	131
Malignant neoplasm of bladder	C67	0	0	0	0	3	16	122	415	933	1507	858
Malignant neoplasm of brain	C71	0	6	17	21	44	93	202	316	318	306	72
Lymphomas	C81-C85	0	1	7	17	41	88	120	214	335	446	136
Hodgkin's disease	C81	0	0	0	4	17	17	20	23	25	29	10
Non-Hodgkin's lymphomas	C82-C85	0	1	7	13	24	71	100	191	310	417	126
Multiple myeloma and immunoproliferative diseases	C88, C90	0	0	0	0	1	9	25	116	247	342	137
Leukemias	C91-C95	2	8	25	27	35	52	73	209	387	633	304
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	7	4	10	9	20	20	89	172	347	748	461

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	0	5	1	8	5	10	8	18	36	105	157
Diabetes mellitus	E10-E14	0	0	0	1	5	39	113	307	722	1745	1242
Vascular dementias and other unspecified	F01, F03	0	0	0	0	0	0	10	47	333	1697	2353
Spinal muscular atrophy	G12	7	1	1	4	3	15	53	91	134	143	20
Parkinson's disease	G20-G21	0	0	0	0	0	1	5	28	205	787	503
Alzheimer's disease	G30	0	0	0	0	0	0	6	35	331	1692	1417
Circulatory system diseases	I00-I99	12	6	12	67	255	897	2385	4773	9188	20313	16907
Heart diseases	I00-I09, I11, I13, I20-I51	10	6	6	49	201	703	1832	3528	6226	13109	10923
Rheumatic heart diseases	I00-I09	0	1	0	0	4	3	23	55	113	199	113
Hypertensive heart disease	I11	0	0	0	0	1	8	12	48	121	361	439
Ischemic heart disease	I20-I25	0	0	0	18	82	395	1213	2402	3969	7324	4917
Heart failure	I50	0	1	1	10	32	92	183	283	631	2021	2860
Hypertensive disease	I10, I12, I15	0	0	0	0	2	6	34	82	235	590	592
Cerebrovascular diseases	I60-I69	0	0	6	15	40	151	395	839	2028	5340	4402
Diseases of arteries, arterioles and capillaries	I70-I78	2	0	0	1	10	31	105	296	649	1197	910
Atherosclerosis	I70	0	0	0	0	0	1	11	27	57	286	419
Aortic aneurism and dissection	I71	0	0	0	0	10	29	73	202	422	632	278
Respiratory tract diseases	J00-J99	15	14	12	33	140	274	535	1227	3517	9935	9227
Pneumonia and influenza	J10-J18	4	6	1	6	15	60	130	222	512	1566	1869
Other acute lower respiratory infections	J20-J28	7	2	0	0	1	1	4	6	26	110	224
Chronic lower respiratory diseases	J40-J47	0	0	3	9	11	32	143	574	1887	5191	4066
Bronchitis, chronic and unspecified	J40-J42	0	0	1	0	0	4	8	28	71	267	274
Emphysema	J43	0	0	0	0	0	1	16	72	137	217	134
Asthma	J45-J46	0	0	1	4	7	10	6	16	32	71	52
Pneumonitis due to solids and liquids	J69	0	0	0	1	4	4	15	23	84	277	384
Respiratory failure, not classified elsewhere	J96	1	3	1	2	25	30	44	79	155	455	424
Diseases of the digestive system	K00-K93	3	2	2	10	54	393	1115	1511	2021	3223	2074
Peptic ulcer	K25-K28	0	1	0	1	1	5	21	30	45	116	73
Appendicitis	K35-K38	0	0	0	0	0	0	1	3	4	16	14
Hernia and intestinal occlusion	K40-K46, K56	1	0	0	1	3	6	15	39	123	379	381
Vascular disorder of intestine	K55	0	0	0	1	2	6	33	78	199	527	375
Chronic liver disease and cirrhosis	K70, K73-K74	0	0	1	0	17	230	723	908	884	696	124
Alcoholic liver disease	K70	0	0	0	0	5	105	299	366	266	148	18
Cholelithiasis and other gallbladder diseases	K80-K82	0	0	0	2	3	5	6	23	84	271	252
Acute pancreatitis	K85	0	0	0	0	10	26	41	55	118	208	116

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	0	0	2	0	5	21	58	128	391	1316	1397
Renal failure	N17-N19	0	0	2	0	4	21	55	122	370	1253	1371
Infections of kidney	N10-N12, N13.6, N15.1	0	0	0	0	0	3	1	3	6	25	19
Hyperplasia of prostate	N40	0	0	0	0	0	0	0	2	16	71	141
Inflammatory diseases of female pelvic organs	N70-N76	0	0	0	0	0	0	0	0	0	0	0
Certain condition originating in the perinatal period	P00-P96	504	6	1	1	1	1	1	0	2	0	0
Congenital malformations, deformities, and chromosomal abnormalities	Q00-Q99	199	34	15	22	40	29	46	43	9	18	5
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	57	20	9	66	162	365	580	601	733	1198	1484
External causes of mortality	V01-Y98	15	54	65	649	1266	1474	1398	1103	1106	1610	1033
Unintentional accidents	V01-X59, Y85-Y86	14	51	57	481	853	937	850	651	715	1156	848
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6+V20-V79+V80.3-	6	16	24	317	408	360	289	220	196	187	62
Falls	W00-W19	0	8	3	25	56	76	108	111	123	293	225
Accidental drowning and submersion	W65-W74	1	11	7	37	58	59	62	43	67	51	10
Accidental poisoning by exposure to noxious substances	X40-X49	0	1	1	28	145	218	101	30	13	21	17
Suicide	X60-X84+Y87.0	0	0	7	139	344	465	480	388	326	368	149
Assaults	X85-Y09	1	2	0	26	58	56	42	27	21	9	4
Complications of medical and surgical care	Y40-Y84	0	1	1	3	3	3	14	30	39	66	28

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes		717	173	176	473	974	2538	5641	8862	18322	57636	90326
Infectious and parasitic diseases	A00-B99	10	16	4	12	43	141	160	153	405	1071	1203
Diarrhea and infectious gastroenteritis	A09	2	2	0	0	1	0	4	3	16	67	174
Tuberculosis	A16-A19	0	0	1	0	2	2	2	4	18	39	34
Respiratory tuberculosis	A16	0	0	0	0	2	2	2	0	12	32	24
Other tuberculosis	A17-A19	0	0	1	0	0	0	0	4	6	7	10
Septicemia	A40-A41	2	7	1	4	7	14	42	66	185	639	754
Viral hepatitis	B15-B19	0	0	0	2	2	16	30	46	127	212	80
HIV disease	B20-B24	1	0	0	1	28	103	72	15	2	2	2
Malignant neoplasms (cancer)	C00-C97	6	18	48	94	279	1177	3286	4954	7311	12631	8664
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0	0	1	2	1	15	50	74	90	130	103
Malignant neoplasm of esophagus	C15	0	0	0	0	3	2	27	47	57	85	45
Malignant neoplasm of esophagus	C16	0	0	0	3	16	60	104	218	364	797	601
Malignant neoplasm of colon and rectum	C18-C20	0	0	0	1	23	77	313	586	1042	2092	1707
Malignant neoplasm of liver	C22	0	0	0	2	5	12	66	145	322	690	359
Malignant neoplasm of pancreas	C25	0	0	0	1	6	31	153	296	570	947	506
Malignant neoplasm of larynx	C32	0	0	0	0	0	3	16	17	23	14	11
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0	0	0	1	11	127	559	627	653	783	368
Malignant melanoma of skin	C43	0	0	1	1	9	23	51	57	65	93	84
Malignant neoplasm of breast	C50	0	0	0	4	48	371	860	961	1046	1581	1258
Malignant neoplasm of cervix uteri	C53	0	0	0	1	17	93	135	109	105	125	58
Malignant neoplasm of corpus uteri	C54-C55	0	0	0	1	2	15	76	202	323	459	293
Malignant neoplasm of ovary	C56	0	0	0	3	15	69	209	345	446	527	201
Malignant neoplasm of prostate	C61	0	0	0	0	0	0	0	0	0	0	0
Malignant neoplasm of kidney and renal pelvis	C64-C65	0	1	2	1	6	10	47	84	119	240	150
Malignant neoplasm of bladder	C67	0	0	0	0	1	4	25	49	117	333	349
Malignant neoplasm of brain	C71	2	3	8	14	19	62	91	219	272	333	90
Lymphomas	C81-C85	0	0	4	15	22	41	63	130	248	517	264
Hodgkin's disease	C81	0	0	0	6	8	8	6	9	16	40	24
Non-Hodgkin's lymphomas	C82-C85	0	0	4	9	14	33	57	121	232	477	240
Multiple myeloma and immunoproliferative diseases	C88, C90	0	0	0	1	1	7	25	75	180	366	174
Leukemias	C91-C95	4	9	9	16	24	36	70	118	233	499	311
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	6	6	9	2	14	30	62	91	219	654	635



Table 4. Number of deaths by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	1	0	1	2	3	3	7	15	40	153	404
Diabetes mellitus	E10-E14	0	0	0	1	4	17	37	137	607	2039	2969
Vascular dementias and other unspecified	F01, F03	0	0	0	0	0	1	7	30	247	2265	6744
Spinal muscular atrophy	G12	10	2	0	1	6	12	32	86	134	145	31
Parkinson's disease	G20-G21	0	0	0	0	0	0	1	18	119	639	732
Alzheimer's disease	G30	0	0	0	0	0	0	6	43	384	2854	4401
Circulatory system diseases	I00-I99	3	11	8	40	92	281	701	1487	4709	20396	37514
Heart diseases	I00-I09,I11, I13, I20-I51	2	8	4	29	51	163	441	959	3040	13190	23782
Rheumatic heart diseases	I00-I09	0	0	0	2	2	5	12	86	229	550	366
Hypertensive heart disease	I11	0	0	0	0	0	5	9	20	108	691	1576
Ischemic heart disease	I20-I25	1	0	1	3	9	61	207	417	1357	5237	8001
Heart failure	I50	1	0	1	3	7	27	60	109	455	2931	7884
Hypertensive disease	I10, I12, I15	0	0	0	1	0	3	9	37	145	773	1910
Cerebrovascular diseases	I60-I69	1	3	4	7	32	100	232	418	1346	5717	10081
Diseases of arteries, arterioles and capillaries	I70-I78	0	0	0	2	9	10	16	57	152	604	1515
Atherosclerosis	I70	0	0	0	0	1	0	2	8	30	275	1009
Aortic aneurism and dissection	I71	0	0	0	2	6	4	6	36	58	140	127
Respiratory tract diseases	J00-J99	7	9	12	31	74	121	237	378	1092	5307	11085
Pneumonia and influenza	J10-J18	1	3	4	10	14	32	62	67	218	1148	2751
Other acute lower respiratory infections	J20-J28	2	0	0	0	0	2	1	8	21	151	507
Chronic lower respiratory diseases	J40-J47	0	1	2	2	2	17	49	122	320	1310	2205
Bronchitis, chronic and unspecified	J40-J42	0	0	0	0	0	0	3	7	21	95	261
Emphysema	J43	0	0	0	0	0	2	9	9	19	20	24
Asthma	J45-J46	0	1	0	2	2	12	20	26	73	282	354
Pneumonitis due to solids and liquids	J69	1	0	0	1	0	2	5	7	40	258	657
Respiratory failure, not classified elsewhere	J96	1	0	2	6	8	9	29	36	91	446	899
Diseases of the digestive system	K00-K93	2	5	3	5	27	115	304	433	1010	3090	4155
Peptic ulcer	K25-K28	0	0	0	0	1	2	5	7	17	60	86
Appendicitis	K35-K38	0	1	0	0	0	0	0	2	2	5	10
Hernia and intestinal occlusion	K40-K46, K56	0	0	0	1	0	10	14	22	71	425	766
Vascular disorder of intestine	K55	0	0	1	1	5	4	14	25	117	633	884
Chronic liver disease and cirrhosis	K70, K73-K74	0	0	0	0	3	58	165	190	334	424	158
Alcoholic liver disease	K70	0	0	0	0	1	30	61	69	46	17	3
Cholelithiasis and other gallbladder diseases	K80-K82	0	0	0	0	1	3	6	15	58	298	549
Acute pancreatitis	K85	0	0	0	2	2	1	8	23	89	217	247

Table 4. Number of deaths by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	1	0	4	1	6	14	25	69	293	1120	2026
Renal failure	N17-N19	1	0	2	1	4	13	24	61	286	1069	1984
Infections of kidney	N10-N12, N13.6, N15.1	0	0	0	0	0	4	2	4	13	38	72
Hyperplasia of prostate	N40	0	0	0	0	0	0	0	0	0	0	0
Inflammatory diseases of female pelvic organs	N70-N76	0	0	0	0	2	2	0	1	4	7	5
Certain condition originating in the perinatal period												
Congenital malformations, deformities, and chromosomal abnormalities	P00-P96	375	3	1	0	1	2	0	1	0	0	0
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	Q00-Q99	184	31	13	22	21	20	34	38	30	23	13
External causes of mortality	R00-R99	49	11	9	22	51	99	147	172	350	1251	3650
Unintentional accidents	V01-Y98	15	24	29	186	266	349	332	342	502	1130	1548
Motor vehicle accidents	V01-X59, Y85-Y86	14	24	27	139	160	173	182	193	343	914	1424
	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6+V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86+V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	6	7	11	81	93	69	64	68	74	78	32
Falls	W00-W19	3	3	4	6	11	16	23	29	95	273	429
Accidental drowning and submersion	W65-W74	0	5	1	11	4	8	9	20	15	21	7
Accidental poisoning by exposure to noxious substances	X40-X49	0	0	1	16	24	37	30	10	16	22	26
Suicide	X60-X84+Y87.0	0	0	1	32	80	149	125	118	109	114	35
Assaults	X85-Y09	0	0	1	11	21	20	14	7	8	7	2
Complications of medical and surgical care	Y40-Y84	1	0	0	3	2	4	6	19	35	87	84

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)	Age										
	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes	319.2	20.5	9.9	31.2	45.7	102.2	276.1	616.1	1455.1	4345.1	14142.4
Infectious and parasitic diseases	A00-B99	5.8	1.6	0.2	0.3	1.6	7.7	11.5	9.5	24.9	187.0
Diarrhea and infectious gastroenteritis	A09	0.6	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.9	22.8
Tuberculosis	A16-A19	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.6	1.2	7.0
Respiratory tuberculosis	A16	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.8	5.5
Other tuberculosis	A17-A19	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	1.5
Septicemia	A40-A41	2.0	0.5	0.1	0.1	0.3	0.5	1.8	3.2	12.3	117.9
Viral hepatitis	B15-B19	0.0	0.0	0.0	0.0	0.1	0.8	2.3	2.6	6.0	12.5
HIV disease	B20-B24	0.2	0.0	0.0	0.0	1.0	5.8	6.4	1.7	0.8	0.6
Malignant neoplasms (cancer)	C00-C97	2.2	2.4	2.9	4.4	7.9	29.1	123.4	316.3	620.9	1160.2
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0.0	0.0	0.0	0.0	0.1	0.7	5.4	11.7	14.1	20.4
Malignant neoplasm of esophagus	C15	0.0	0.0	0.0	0.0	0.1	0.3	3.4	8.9	12.7	13.7
Malignant neoplasm of esophagus	C16	0.0	0.0	0.0	0.1	0.5	1.7	5.6	15.7	33.1	106.4
Malignant neoplasm of colon and rectum	C18-C20	0.0	0.0	0.0	0.0	0.6	2.1	11.7	35.0	83.1	179.1
Malignant neoplasm of liver	C22	0.0	0.0	0.0	0.1	0.3	0.9	5.7	13.5	29.9	64.5
Malignant neoplasm of pancreas	C25	0.0	0.0	0.0	0.0	0.2	1.2	6.4	16.8	37.3	74.6
Malignant neoplasm of larynx	C32	0.0	0.0	0.0	0.0	0.0	0.2	2.3	6.9	11.4	13.8
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0.0	0.1	0.0	0.1	0.4	4.4	32.4	89.6	151.4	207.9
Malignant melanoma of skin	C43	0.0	0.0	0.0	0.1	0.2	0.7	1.7	2.9	4.7	7.3
Malignant neoplasm of breast	C50	0.0	0.0	0.0	0.1	0.6	4.9	13.6	19.6	28.0	55.2
Malignant neoplasm of cervix uteri	C53	0.0	0.0	0.0	0.0	0.2	1.2	2.1	2.2	2.8	4.3
Malignant neoplasm of corpus uteri	C54-C55	0.0	0.0	0.0	0.0	0.0	0.2	1.2	4.1	8.5	15.8
Malignant neoplasm of ovary	C56	0.0	0.0	0.0	0.1	0.2	0.9	3.3	6.9	11.8	18.1
Malignant neoplasm of prostate	C61	0.0	0.0	0.0	0.0	0.0	0.1	0.6	5.4	26.3	81.0
Malignant neoplasm of kidney and renal pelvis	C64-C65	0.0	0.1	0.1	0.0	0.2	0.5	2.5	6.1	10.6	22.9
Malignant neoplasm of bladder	C67	0.0	0.0	0.0	0.0	0.1	0.3	2.3	9.3	27.7	63.3
Malignant neoplasm of brain	C71	0.4	0.5	0.6	0.7	0.8	2.0	4.6	10.8	15.6	22.0
Lymphomas	C81-C85	0.0	0.1	0.3	0.6	0.8	1.7	2.9	6.9	15.4	33.1
Hodgkin's disease	C81	0.0	0.0	0.0	0.2	0.3	0.3	0.4	0.6	1.1	2.4
Non-Hodgkin's lymphomas	C82-C85	0.0	0.1	0.3	0.4	0.5	1.4	2.5	6.3	14.3	30.8
Multiple myeloma and immunoproliferative diseases	C88, C90	0.0	0.0	0.0	0.0	0.0	0.2	0.8	3.8	11.3	24.4
Leukemias	C91-C95	1.2	0.9	0.8	0.9	0.8	1.2	2.2	6.6	16.4	39.0
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	2.6	0.5	0.4	0.2	0.5	0.7	2.4	5.3	14.9	48.2

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	0.2	0.3	0.0	0.2	0.1	0.2	0.2	0.7	2.0	8.9	56.6
Diabetes mellitus	E10-E14	0.0	0.0	0.0	0.0	0.1	0.7	2.4	8.9	35.1	130.2	425.1
Vascular dementias and other unspecified	F01, F03	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5	15.3	136.3	918.4
Spinal muscular atrophy	G12	3.4	0.2	0.0	0.1	0.1	0.4	1.3	3.6	7.1	9.9	5.1
Parkinson's disease	G20-G21	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	8.5	49.1	124.7
Alzheimer's disease	G30	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6	18.9	156.4	587.4
Circulatory system diseases	I00-I99	3.0	0.9	0.5	2.2	4.6	15.4	48.5	125.9	366.7	1400.7	5494.1
Heart diseases	I00-I09,I11, I13, I20-I51	2.4	0.7	0.2	1.6	3.3	11.4	35.7	90.3	244.5	904.9	3503.7
Rheumatic heart diseases	I00-I09	0.0	0.1	0.0	0.0	0.1	0.1	0.5	2.8	9.0	25.8	48.4
Hypertensive heart disease	I11	0.0	0.0	0.0	0.0	0.0	0.2	0.3	1.4	6.0	36.2	203.4
Ischemic heart disease	I20-I25	0.2	0.0	0.0	0.4	1.2	6.0	22.3	56.7	140.5	432.2	1304.2
Heart failure	I50	0.2	0.1	0.0	0.3	0.5	1.6	3.8	7.9	28.7	170.4	1084.7
Hypertensive disease	I10, I12, I15	0.0	0.0	0.0	0.0	0.0	0.1	0.7	2.4	10.0	46.9	252.6
Cerebrovascular diseases	I60-I69	0.2	0.2	0.2	0.4	1.0	3.3	9.8	25.3	89.0	380.5	1462.1
Diseases of arteries, arterioles and capillaries	I70-I78	0.4	0.0	0.0	0.1	0.3	0.5	1.9	7.1	21.1	62.0	244.8
Atherosclerosis	I70	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.3	19.3	144.2
Aortic aneurism and dissection	I71	0.0	0.0	0.0	0.0	0.2	0.4	1.2	4.8	12.7	26.6	40.9
Respiratory tract diseases	J00-J99	4.4	1.2	0.5	1.3	2.8	5.2	12.1	32.3	121.6	524.5	2050.6
Pneumonia and influenza	J10-J18	1.0	0.5	0.1	0.3	0.4	1.2	3.0	5.8	19.3	93.4	466.4
Other acute lower respiratory infections	J20-J28	1.8	0.1	0.0	0.0	0.0	0.0	0.1	0.3	1.2	9.0	73.8
Chronic lower respiratory diseases	J40-J47	0.0	0.1	0.1	0.2	0.2	0.6	3.0	14.0	58.2	223.7	633.1
Bronchitis, chronic and unspecified	J40-J42	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.7	2.4	12.5	54.0
Emphysema	J43	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	4.1	8.2	16.0
Asthma	J45-J46	0.0	0.1	0.0	0.1	0.1	0.3	0.4	0.8	2.8	12.1	41.0
Pneumonitis due to solids and liquids	J69	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.6	3.3	18.4	105.1
Respiratory failure, not classified elsewhere	J96	0.4	0.2	0.1	0.2	0.4	0.5	1.1	2.3	6.5	31.0	133.6
Diseases of the digestive system	K00-K93	1.0	0.4	0.1	0.3	1.1	6.7	22.3	39.1	80.0	217.2	628.9
Peptic ulcer	K25-K28	0.0	0.1	0.0	0.0	0.0	0.1	0.4	0.7	1.6	6.1	16.1
Appendicitis	K35-K38	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.7	2.4
Hernia and intestinal occlusion	K40-K46, K56	0.2	0.0	0.0	0.0	0.0	0.2	0.5	1.2	5.1	27.7	115.8
Vascular disorder of intestine	K55	0.0	0.0	0.0	0.0	0.1	0.1	0.7	2.1	8.3	39.9	127.1
Chronic liver disease and cirrhosis	K70, K73-K74	0.0	0.0	0.0	0.0	0.3	3.8	13.9	22.1	32.1	38.5	28.5
Alcoholic liver disease	K70	0.0	0.0	0.0	0.0	0.1	1.8	5.7	8.7	8.2	5.7	2.1
Cholelithiasis and other gallbladder diseases	K80-K82	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.8	3.7	19.6	80.9
Acute pancreatitis	K85	0.0	0.0	0.0	0.0	0.2	0.4	0.8	1.6	5.5	14.6	36.6

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Both sexes

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	0.2	0.0	0.1	0.0	0.1	0.5	1.3	4.0	18.0	83.8	345.6
Renal failure	N17-N19	0.2	0.0	0.1	0.0	0.1	0.4	1.2	3.7	17.3	79.9	338.7
Infections of kidney	N10-N12, N13.6, N15.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5	2.2	9.2
Hyperplasia of prostate	N40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4	14.2
Inflammatory diseases of female pelvic organs	N70-N76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5
Certain condition originating in the perinatal period	P00-P96	174.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Congenital malformations, deformities, and chromosomal abnormalities	Q00-Q99	76.0	3.4	0.6	0.9	0.8	0.6	1.3	1.6	1.0	1.4	1.8
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	21.0	1.6	0.4	1.8	2.8	6.1	11.4	15.5	28.6	84.3	518.3
External causes of mortality	V01-Y98	6.0	4.0	2.1	16.9	20.4	23.9	27.2	29.1	42.4	94.3	260.6
Unintentional accidents	V01-X59, Y85-Y86	5.6	3.9	1.9	12.6	13.5	14.6	16.2	17.0	27.9	71.2	229.4
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6+V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86+V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	2.4	1.2	0.8	8.1	6.7	5.6	5.5	5.8	7.1	9.1	9.5
Falls	W00-W19	0.6	0.6	0.2	0.6	0.9	1.2	2.1	2.8	5.8	19.5	66.0
Accidental drowning and submersion	W65-W74	0.2	0.8	0.2	1.0	0.8	0.9	1.1	1.3	2.2	2.5	1.7
Accidental poisoning by exposure to noxious substances	X40-X49	0.0	0.1	0.0	0.9	2.2	3.3	2.1	0.8	0.8	1.5	4.3
Suicide	X60-X84+Y87.0	0.0	0.0	0.2	3.5	5.6	8.0	9.5	10.2	11.5	16.6	18.6
Assaults	X85-Y09	0.2	0.1	0.0	0.8	1.0	1.0	0.9	0.7	0.8	0.6	0.6
Complications of medical and surgical care	Y40-Y84	0.2	0.1	0.0	0.1	0.1	0.1	0.3	1.0	2.0	5.3	11.3

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes		343.4	22.4	11.5	42.1	63.5	134.6	376.4	902.4	2100.1	5744.8	15579.1
Infectious and parasitic diseases	A00-B99	7.3	1.4	0.2	0.2	1.9	11.5	18.1	13.3	30.7	81.8	203.2
Diarrhea and infectious gastroenteritis	A09	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.2	1.0	4.6	16.3
Tuberculosis	A16-A19	0.0	0.0	0.0	0.0	0.0	0.4	0.6	1.1	1.5	4.9	11.0
Respiratory tuberculosis	A16	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.9	1.0	3.8	9.4
Other tuberculosis	A17-A19	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	1.1	1.6
Septicemia	A40-A41	3.1	0.3	0.1	0.1	0.3	0.7	2.3	3.9	16.0	47.2	129.6
Viral hepatitis	B15-B19	0.0	0.0	0.0	0.0	0.1	1.2	3.6	3.5	5.7	13.0	13.8
HIV disease	B20-B24	0.0	0.0	0.0	0.0	1.3	8.8	10.7	2.9	1.7	1.6	1.3
Malignant neoplasms (cancer)	C00-C97	1.9	2.8	3.5	4.9	8.1	26.7	144.1	446.5	925.0	1764.8	2758.7
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0.0	0.0	0.0	0.0	0.2	1.0	9.2	21.0	25.3	25.5	31.0
Malignant neoplasm of esophagus	C15	0.0	0.0	0.0	0.0	0.2	0.6	6.0	16.3	24.2	31.5	28.5
Malignant neoplasm of esophagus	C16	0.0	0.0	0.0	0.0	0.5	1.9	8.0	23.3	50.9	107.0	141.8
Malignant neoplasm of colon and rectum	C18-C20	0.0	0.0	0.0	0.0	0.5	2.2	13.6	47.9	120.1	260.5	441.8
Malignant neoplasm of liver	C22	0.0	0.0	0.0	0.1	0.4	1.5	9.4	21.8	46.4	85.0	87.7
Malignant neoplasm of pancreas	C25	0.0	0.0	0.0	0.0	0.2	1.6	8.1	22.3	48.2	66.0	73.0
Malignant neoplasm of larynx	C32	0.0	0.0	0.0	0.0	0.0	0.4	4.1	13.6	23.3	32.3	36.9
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0.0	0.1	0.0	0.1	0.5	5.4	47.5	158.6	290.0	440.2	433.0
Malignant melanoma of skin	C43	0.0	0.0	0.0	0.1	0.2	0.8	1.8	3.7	6.6	10.0	18.2
Malignant neoplasm of breast	C50	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	1.0	1.8	2.8
Malignant neoplasm of cervix uteri	C53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malignant neoplasm of corpus uteri	C54-C55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malignant neoplasm of ovary	C56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malignant neoplasm of prostate	C61	0.0	0.0	0.0	0.0	0.0	0.2	1.1	11.1	56.7	196.9	583.0
Malignant neoplasm of kidney and renal pelvis	C64-C65	0.0	0.1	0.0	0.0	0.2	0.6	3.6	9.1	16.0	35.6	41.0
Malignant neoplasm of bladder	C67	0.0	0.0	0.0	0.0	0.1	0.4	3.8	17.2	53.2	126.1	268.6
Malignant neoplasm of brain	C71	0.0	0.6	0.8	0.8	1.1	2.4	6.4	13.1	18.1	25.6	22.5
Lymphomas	C81-C85	0.0	0.1	0.3	0.7	1.1	2.3	3.8	8.9	19.1	37.3	42.6
Hodgkin's disease	C81	0.0	0.0	0.0	0.2	0.4	0.4	0.6	1.0	1.4	2.4	3.1
Non-Hodgkin's lymphomas	C82-C85	0.0	0.1	0.3	0.5	0.6	1.8	3.2	7.9	17.7	34.9	39.4
Multiple myeloma and immunoproliferative diseases	C88, C90	0.0	0.0	0.0	0.0	0.0	0.2	0.8	4.8	14.1	28.6	42.9
Leukemias	C91-C95	0.8	0.8	1.1	1.1	0.9	1.3	2.3	8.7	22.1	53.0	95.2
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	2.7	0.4	0.4	0.4	0.5	0.5	2.8	7.1	19.8	62.6	144.3

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	0.0	0.5	0.0	0.3	0.1	0.3	0.3	0.7	2.1	8.8	49.2
Diabetes mellitus	E10-E14	0.0	0.0	0.0	0.0	0.1	1.0	3.6	12.7	41.2	146.0	388.9
Vascular dementias and other unspecified	F01, F03	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9	19.0	142.0	736.7
Spinal muscular atrophy	G12	2.7	0.1	0.0	0.2	0.1	0.4	1.7	3.8	7.6	12.0	6.3
Parkinson's disease	G20-G21	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	11.7	65.9	157.5
Alzheimer's disease	G30	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5	18.9	141.6	443.7
Circulatory system diseases	I00-I99	4.6	0.6	0.5	2.7	6.6	23.0	75.2	197.9	524.0	1700.0	5293.4
Heart diseases	I00-I09,I11, I13, I20-I51	3.9	0.6	0.3	1.9	5.2	18.0	57.8	146.2	355.1	1097.1	3419.9
Rheumatic heart diseases	I00-I09	0.0	0.1	0.0	0.0	0.1	0.1	0.7	2.3	6.4	16.7	35.4
Hypertensive heart disease	I11	0.0	0.0	0.0	0.0	0.0	0.2	0.4	2.0	6.9	30.2	137.4
Ischemic heart disease	I20-I25	0.0	0.0	0.0	0.7	2.1	10.1	38.2	99.6	226.4	612.9	1539.5
Heart failure	I50	0.0	0.1	0.0	0.4	0.8	2.4	5.8	11.7	36.0	169.1	895.4
Hypertensive disease	I10, I12, I15	0.0	0.0	0.0	0.0	0.1	0.2	1.1	3.4	13.4	49.4	185.4
Cerebrovascular diseases	I60-I69	0.0	0.0	0.3	0.6	1.0	3.9	12.5	34.8	115.7	446.9	1378.2
Diseases of arteries, arterioles and capillaries	I70-I78	0.8	0.0	0.0	0.0	0.3	0.8	3.3	12.3	37.0	100.2	284.9
Atherosclerosis	I70	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	3.3	23.9	131.2
Aortic aneurism and dissection	I71	0.0	0.0	0.0	0.0	0.3	0.7	2.3	8.4	24.1	52.9	87.0
Respiratory tract diseases	J00-J99	5.8	1.4	0.5	1.3	3.6	7.0	16.9	50.9	200.6	831.5	2888.9
Pneumonia and influenza	J10-J18	1.5	0.6	0.0	0.2	0.4	1.5	4.1	9.2	29.2	131.1	585.2
Other acute lower respiratory infections	J20-J28	2.7	0.2	0.0	0.0	0.0	0.0	0.1	0.2	1.5	9.2	70.1
Chronic lower respiratory diseases	J40-J47	0.0	0.0	0.1	0.4	0.3	0.8	4.5	23.8	107.6	434.4	1273.0
Bronchitis, chronic and unspecified	J40-J42	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.2	4.0	22.3	85.8
Emphysema	J43	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.0	7.8	18.2	42.0
Asthma	J45-J46	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.7	1.8	5.9	16.3
Pneumonitis due to solids and liquids	J69	0.0	0.0	0.0	0.0	0.1	0.1	0.5	1.0	4.8	23.2	120.2
Respiratory failure, not classified elsewhere	J96	0.4	0.3	0.0	0.1	0.6	0.8	1.4	3.3	8.8	38.1	132.8
Diseases of the digestive system	K00-K93	1.2	0.2	0.1	0.4	1.4	10.1	35.2	62.6	115.3	269.7	649.4
Peptic ulcer	K25-K28	0.0	0.1	0.0	0.0	0.0	0.1	0.7	1.2	2.6	9.7	22.9
Appendicitis	K35-K38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3	4.4
Hernia and intestinal occlusion	K40-K46, K56	0.4	0.0	0.0	0.0	0.1	0.2	0.5	1.6	7.0	31.7	119.3
Vascular disorder of intestine	K55	0.0	0.0	0.0	0.0	0.1	0.2	1.0	3.2	11.3	44.1	117.4
Chronic liver disease and cirrhosis	K70, K73-K74	0.0	0.0	0.0	0.0	0.4	5.9	22.8	37.6	50.4	58.2	38.8
Alcoholic liver disease	K70	0.0	0.0	0.0	0.0	0.1	2.7	9.4	15.2	15.2	12.4	5.6
Cholelithiasis and other gallbladder diseases	K80-K82	0.0	0.0	0.0	0.1	0.1	0.1	0.2	1.0	4.8	22.7	78.9
Acute pancreatitis	K85	0.0	0.0	0.0	0.0	0.3	0.7	1.3	2.3	6.7	17.4	36.3

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Men

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	0.0	0.0	0.1	0.0	0.1	0.5	1.8	5.3	22.3	110.1	437.4
Renal failure	N17-N19	0.0	0.0	0.1	0.0	0.1	0.5	1.7	5.1	21.1	104.9	429.2
Infections of kidney	N10-N12, N13.6, N15.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	2.1	5.9
Hyperplasia of prostate	N40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	5.9	44.1
Inflammatory diseases of female pelvic organs	N70-N76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Certain condition originating in the perinatal period	P00-P96	194.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Congenital malformations, deformities, and chromosomal abnormalities	Q00-Q99	76.6	3.4	0.7	0.9	1.0	0.7	1.5	1.8	0.5	1.5	1.6
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	21.9	2.0	0.4	2.6	4.2	9.3	18.3	24.9	41.8	100.3	464.6
External causes of mortality	V01-Y98	5.8	5.4	2.9	25.7	32.6	37.7	44.1	45.7	63.1	134.7	323.4
Unintentional accidents	V01-X59, Y85-Y86	5.4	5.1	2.5	19.0	22.0	24.0	26.8	27.0	40.8	96.7	265.5
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6	2.3	1.6	1.1	12.5	10.5	9.2	9.1	9.1	11.2	15.6	19.4
	V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86	0.0	0.8	0.1	1.0	1.4	1.9	3.4	4.6	7.0	24.5	70.4
	V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	0.4	1.1	0.3	1.5	1.5	1.5	2.0	1.8	3.8	4.3	3.1
Falls	W00-W19	0.0	0.1	0.0	1.1	3.7	5.6	3.2	1.2	0.7	1.8	5.3
Accidental drowning and submersion	W65-W74	0.0	0.0	0.3	5.5	8.9	11.9	15.1	16.1	18.6	30.8	46.7
Accidental poisoning by exposure to noxious substances	X40-X49	0.4	0.2	0.0	1.0	1.5	1.4	1.3	1.1	1.2	0.8	1.3
Suicide	X60-X84+Y87.0	0.0	0.1	0.0	0.1	0.1	0.1	0.4	1.2	2.2	5.5	8.8
Assaults	X85-Y09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Complications of medical and surgical care	Y40-Y84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Table 5. Mortality rate by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
All causes		293.4	18.4	8.3	19.7	26.7	68.2	176.5	346.3	899.7	3367.8	13458.8
Infectious and parasitic diseases	A00-B99	4.1	1.7	0.2	0.5	1.2	3.8	5.0	6.0	19.9	62.6	179.2
Diarrhea and infectious gastroenteritis	A09	0.8	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.8	3.9	25.9
Tuberculosis	A16-A19	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.9	2.3	5.1
Respiratory tuberculosis	A16	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.6	1.9	3.6
Other tuberculosis	A17-A19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	1.5
Septicemia	A40-A41	0.8	0.7	0.0	0.2	0.2	0.4	1.3	2.6	9.1	37.3	112.3
Viral hepatitis	B15-B19	0.0	0.0	0.0	0.1	0.1	0.4	0.9	1.8	6.2	12.4	11.9
HIV disease	B20-B24	0.4	0.0	0.0	0.0	0.8	2.8	2.3	0.6	0.1	0.1	0.3
Malignant neoplasms (cancer)	C00-C97	2.5	1.9	2.3	3.9	7.7	31.6	102.8	193.6	359.0	738.1	1291.0
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0.0	0.0	0.0	0.1	0.0	0.4	1.6	2.9	4.4	7.6	15.3
Malignant neoplasm of esophagus	C15	0.0	0.0	0.0	0.0	0.1	0.1	0.8	1.8	2.8	5.0	6.7
Malignant neoplasm of esophagus	C16	0.0	0.0	0.0	0.1	0.4	1.6	3.3	8.5	17.9	46.6	89.6
Malignant neoplasm of colon and rectum	C18-C20	0.0	0.0	0.0	0.0	0.6	2.1	9.8	22.9	51.2	122.2	254.3
Malignant neoplasm of liver	C22	0.0	0.0	0.0	0.1	0.1	0.3	2.1	5.7	15.8	40.3	53.5
Malignant neoplasm of pancreas	C25	0.0	0.0	0.0	0.0	0.2	0.8	4.8	11.6	28.0	55.3	75.4
Malignant neoplasm of larynx	C32	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.7	1.1	0.8	1.6
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0.0	0.0	0.0	0.0	0.3	3.4	17.5	24.5	32.1	45.8	54.8
Malignant melanoma of skin	C43	0.0	0.0	0.0	0.0	0.2	0.6	1.6	2.2	3.2	5.4	12.5
Malignant neoplasm of breast	C50	0.0	0.0	0.0	0.2	1.3	10.0	26.9	37.5	51.4	92.4	187.4
Malignant neoplasm of cervix uteri	C53	0.0	0.0	0.0	0.0	0.5	2.5	4.2	4.3	5.2	7.3	8.6
Malignant neoplasm of corpus uteri	C54-C55	0.0	0.0	0.0	0.0	0.1	0.4	2.4	7.9	15.9	26.8	43.7
Malignant neoplasm of ovary	C56	0.0	0.0	0.0	0.1	0.4	1.9	6.5	13.5	21.9	30.8	29.9
Malignant neoplasm of prostate	C61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malignant neoplasm of kidney and renal pelvis	C64-C65	0.0	0.1	0.1	0.0	0.2	0.3	1.5	3.3	5.8	14.0	22.4
Malignant neoplasm of bladder	C67	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.9	5.7	19.5	52.0
Malignant neoplasm of brain	C71	0.8	0.3	0.4	0.6	0.5	1.7	2.8	8.6	13.4	19.5	13.4
Lymphomas	C81-C85	0.0	0.0	0.2	0.6	0.6	1.1	2.0	5.1	12.2	30.2	39.3
Hodgkin's disease	C81	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.4	0.8	2.3	3.6
Non-Hodgkin's lymphomas	C82-C85	0.0	0.0	0.2	0.4	0.4	0.9	1.8	4.7	11.4	27.9	35.8
Multiple myeloma and immunoproliferative diseases	C88, C90	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.9	8.8	21.4	25.9
Leukemias	C91-C95	1.6	1.0	0.4	0.7	0.7	1.0	2.2	4.6	11.4	29.2	46.3
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	2.5	0.6	0.4	0.1	0.4	0.8	1.9	3.6	10.8	38.2	94.6

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Anemias	D50-D64	0.4	0.0	0.0	0.1	0.1	0.1	0.2	0.6	2.0	8.9	60.2
Diabetes mellitus	E10-E14	0.0	0.0	0.0	0.0	0.1	0.5	1.2	5.4	29.8	119.1	442.4
Vascular dementias and other unspecified	F01, F03	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	12.1	132.4	1004.9
Spinal muscular atrophy	G12	4.1	0.2	0.0	0.0	0.2	0.3	1.0	3.4	6.6	8.5	4.6
Parkinson's disease	G20-G21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	5.8	37.3	109.1
Alzheimer's disease	G30	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	18.9	166.8	655.8
Circulatory system diseases	I00-I99	1.2	1.2	0.4	1.7	2.5	7.6	21.9	58.1	231.2	1191.8	5589.7
Heart diseases	I00-I09,I11, I13, I20-I51	0.8	0.9	0.2	1.2	1.4	4.4	13.8	37.5	149.3	770.7	3543.6
Rheumatic heart diseases	I00-I09	0.0	0.0	0.0	0.1	0.1	0.1	0.4	3.4	11.2	32.1	54.5
Hypertensive heart disease	I11	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	5.3	40.4	234.8
Ischemic heart disease	I20-I25	0.4	0.0	0.0	0.1	0.2	1.6	6.5	16.3	66.6	306.0	1192.2
Heart failure	I50	0.4	0.0	0.0	0.1	0.2	0.7	1.9	4.3	22.3	171.3	1174.7
Hypertensive disease	I10, I12, I15	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.4	7.1	45.2	284.6
Cerebrovascular diseases	I60-I69	0.4	0.3	0.2	0.3	0.9	2.7	7.3	16.3	66.1	334.1	1502.1
Diseases of arteries, arterioles and capillaries	I70-I78	0.0	0.0	0.0	0.1	0.2	0.3	0.5	2.2	7.5	35.3	225.7
Atherosclerosis	I70	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.5	16.1	150.3
Aortic aneurism and dissection	I71	0.0	0.0	0.0	0.1	0.2	0.1	0.2	1.4	2.8	8.2	18.9
Respiratory tract diseases	J00-J99	2.9	1.0	0.6	1.3	2.0	3.3	7.4	14.8	53.6	310.1	1651.7
Pneumonia and influenza	J10-J18	0.4	0.3	0.2	0.4	0.4	0.9	1.9	2.6	10.7	67.1	409.9
Other acute lower respiratory infections	J20-J28	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.3	1.0	8.8	75.5
Chronic lower respiratory diseases	J40-J47	0.0	0.1	0.1	0.1	0.1	0.5	1.5	4.8	15.7	76.5	328.5
Bronchitis, chronic and unspecified	J40-J42	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.0	5.6	38.9
Emphysema	J43	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.9	1.2	3.6
Asthma	J45-J46	0.0	0.1	0.0	0.1	0.1	0.3	0.6	1.0	3.6	16.5	52.7
Pneumonitis due to solids and liquids	J69	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.3	2.0	15.1	97.9
Respiratory failure, not classified elsewhere	J96	0.4	0.0	0.1	0.2	0.2	0.2	0.9	1.4	4.5	26.1	134.0
Diseases of the digestive system	K00-K93	0.8	0.5	0.1	0.2	0.7	3.1	9.5	16.9	49.6	180.6	619.1
Peptic ulcer	K25-K28	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.8	3.5	12.8
Appendicitis	K35-K38	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	1.5
Hernia and intestinal occlusion	K40-K46, K56	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.9	3.5	24.8	114.1
Vascular disorder of intestine	K55	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.0	5.7	37.0	131.7
Chronic liver disease and cirrhosis	K70, K73-K74	0.0	0.0	0.0	0.0	0.1	1.6	5.2	7.4	16.4	24.8	23.5
Alcoholic liver disease	K70	0.0	0.0	0.0	0.0	0.0	0.8	1.9	2.7	2.3	1.0	0.4
Cholelithiasis and other gallbladder diseases	K80-K82	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.6	2.8	17.4	81.8
Acute pancreatitis	K85	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.9	4.4	12.7	36.8

Table 5. Mortality rate by selected causes of death by age, Spain 2009. Women

Cause of death (based on the ICD, 10th revision)		Age										
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	0.4	0.0	0.2	0.0	0.2	0.4	0.8	2.7	14.4	65.4	301.9
Renal failure	N17-N19	0.4	0.0	0.1	0.0	0.1	0.3	0.8	2.4	14.0	62.5	295.6
Infections of kidney	N10-N12, N13.6, N15.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.6	2.2	10.7
Hyperplasia of prostate	N40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammatory diseases of female pelvic organs	N70-N76	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.4	0.7
Certain condition originating in the perinatal period	P00-P96	153.4	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Congenital malformations, deformities, and chromosomal abnormalities	Q00-Q99	75.3	3.3	0.6	0.9	0.6	0.5	1.1	1.5	1.5	1.3	1.9
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	20.0	1.2	0.4	0.9	1.4	2.7	4.6	6.7	17.2	73.1	543.9
External causes of mortality	V01-Y98	6.1	2.6	1.4	7.7	7.3	9.4	10.4	13.4	24.7	66.0	230.7
Unintentional accidents	V01-X59, Y85-Y86	5.7	2.6	1.3	5.8	4.4	4.6	5.7	7.5	16.8	53.4	212.2
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6	2.5	0.7	0.5	3.4	2.6	1.9	2.0	2.7	3.6	4.6	4.8
	V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86	1.2	0.3	0.2	0.2	0.3	0.4	0.7	1.1	4.7	16.0	63.9
	V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	0.0	0.5	0.0	0.5	0.1	0.2	0.3	0.8	0.7	1.2	1.0
Falls	W00-W19	0.0	0.0	0.0	0.7	0.7	1.0	0.9	0.4	0.8	1.3	3.9
Accidental drowning and submersion	W65-W74	0.0	0.0	0.0	1.3	2.2	4.0	3.9	4.6	5.4	6.7	5.2
Accidental poisoning by exposure to noxious substances	X40-X49	0.0	0.0	0.0	0.5	0.6	0.5	0.4	0.3	0.4	0.4	0.3
Suicide	X60-X84+Y87.0	0.4	0.0	0.0	0.1	0.1	0.1	0.2	0.7	1.7	5.1	12.5
Assaults	X85-Y09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Complications of medical and surgical care	Y40-Y84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. Number of deaths, crude mortality rate, and age-adjusted mortality rate by selected causes of death by age, Spain 2009.

Cause of death (based on the ICD, 10th revision)		Number of deaths			Crude mortality rate			Age-adjusted mortality rate		
		Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
All causes		384933	199095	185838	838.1	878.2	799.0	503.7	661.0	374.7
Infectious and parasitic diseases	A00-B99	6843	3625	3218	14.9	16.0	13.8	9.8	12.6	7.2
Diarrhea and infectious gastroenteritis	A09	405	136	269	0.9	0.6	1.2	0.5	0.4	0.5
Tuberculosis	A16-A19	286	184	102	0.6	0.8	0.4	0.4	0.6	0.2
Respiratory tuberculosis	A16	220	146	74	0.5	0.6	0.3	0.3	0.5	0.1
Other tuberculosis	A17-A19	66	38	28	0.1	0.2	0.1	0.1	0.1	0.1
Septicemia	A40-A41	3200	1479	1721	7.0	6.5	7.4	4.0	4.7	3.4
Viral hepatitis	B15-B19	1067	552	515	2.3	2.4	2.2	1.7	2.0	1.3
HIV disease	B20-B24	1079	853	226	2.3	3.8	1.0	2.1	3.4	0.9
Malignant neoplasms (cancer)	C00-C97	101517	63049	38468	221.0	278.1	165.4	153.0	219.2	101.2
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	2154	1688	466	4.7	7.4	2.0	3.8	6.6	1.3
Malignant neoplasm of esophagus	C15	1770	1504	266	3.9	6.6	1.1	3.0	5.7	0.7
Malignant neoplasm of esophagus	C16	5696	3533	2163	12.4	15.6	9.3	8.2	12.1	5.1
Malignant neoplasm of colon and rectum	C18-C20	14160	8319	5841	30.8	36.7	25.1	19.9	27.9	13.8
Malignant neoplasm of liver	C22	4610	3009	1601	10.0	13.3	6.9	6.9	10.6	3.8
Malignant neoplasm of pancreas	C25	5242	2732	2510	11.4	12.1	10.8	8.0	9.9	6.4
Malignant neoplasm of larynx	C32	1473	1389	84	3.2	6.1	0.4	2.5	5.1	0.3
Malignant neoplasm of trachea, bronchus and lung	C33-C34	20425	17296	3129	44.5	76.3	13.5	33.6	62.6	9.8
Malignant melanoma of skin	C43	864	480	384	1.9	2.1	1.7	1.4	1.7	1.1
Malignant neoplasm of breast	C50	6200	71	6129	13.5	0.3	26.4	9.7	0.2	17.6
Malignant neoplasm of cervix uteri	C53	643	0	643	1.4	0.0	2.8	1.1	0.0	2.2
Malignant neoplasm of corpus uteri	C54-C55	1371	0	1371	3.0	0.0	5.9	2.0	0.0	3.6
Malignant neoplasm of ovary	C56	1815	0	1815	4.0	0.0	7.8	2.9	0.0	5.5
Malignant neoplasm of prostate	C61	5522	5522	0	12.0	24.4	0.0	6.6	16.8	0.0
Malignant neoplasm of kidney and renal pelvis	C64-C65	1865	1205	660	4.1	5.3	2.8	2.8	4.2	1.7
Malignant neoplasm of bladder	C67	4732	3854	878	10.3	17.0	3.8	6.3	12.5	1.8
Malignant neoplasm of brain	C71	2508	1395	1113	5.5	6.2	4.8	4.4	5.4	3.4
Lymphomas	C81-C85	2709	1405	1304	5.9	6.2	5.6	4.1	5.0	3.3
Hodgkin's disease	C81	262	145	117	0.6	0.6	0.5	0.4	0.5	0.3
Non-Hodgkin's lymphomas	C82-C85	2447	1260	1187	5.3	5.6	5.1	3.6	4.4	3.0
Multiple myeloma and immunoproliferative diseases	C88, C90	1706	877	829	3.7	3.9	3.6	2.4	2.9	1.9
Leukemias	C91-C95	3084	1755	1329	6.7	7.7	5.7	4.5	6.0	3.4
Carcinoma in situ, benign neoplasms and neoplasms of uncertain behavior	D00-D48	3615	1887	1728	7.9	8.3	7.4	4.7	6.1	3.7

Table 6. Number of deaths, crude mortality rate, and age-adjusted mortality rate by selected causes of death by age, Spain 2009.

Cause of death (based on the ICD, 10th revision)		Number of deaths			Crude mortality rate			Age-adjusted mortality rate		
		Both sexes	Men	Women	Both sexes	Men	Women	Both sexes		
Anemias	D50-D64	982	353	629	2.1	1.6	2.7	1.1	1.1	1.1
Diabetes mellitus	E10-E14	9985	4174	5811	21.7	18.4	25.0	11.7	13.0	10.6
Vascular dementias and other unspecified	F01, F03	13734	4440	9294	29.9	19.6	40.0	14.1	12.9	14.5
Spinal muscular atrophy	G12	931	472	459	2.0	2.1	2.0	1.6	1.7	1.4
Parkinson's disease	G20-G21	3038	1529	1509	6.6	6.7	6.5	3.3	4.4	2.6
Alzheimer's disease	G30	11169	3481	7688	24.3	15.4	33.1	11.6	9.9	12.5
Circulatory system diseases	I00-I99	120057	54815	65242	261.4	241.8	280.5	143.1	174.8	115.1
Heart diseases	I00-I09,I11, I13, I20									
	I51	78262	36593	41669	170.4	161.4	179.2	94.4	118.1	73.6
Rheumatic heart diseases	I00-I09	1763	511	1252	3.8	2.3	5.4	2.3	1.7	2.7
Hypertensive heart disease	I11	3399	990	2409	7.4	4.4	10.4	3.7	3.0	3.9
Ischemic heart disease	I20-I25	35614	20320	15294	77.5	89.6	65.8	45.3	66.9	27.8
Heart failure	I50	17592	6114	11478	38.3	27.0	49.3	19.2	18.8	18.7
Hypertensive disease	I10, I12, I15	4419	1541	2878	9.6	6.8	12.4	4.9	4.7	4.8
Cerebrovascular diseases	I60-I69	31157	13216	17941	67.8	58.3	77.1	36.1	40.9	31.9
Diseases of arteries, arterioles and capillaries	I70-I78	5566	3201	2365	12.1	14.1	10.2	6.8	10.3	4.1
Atherosclerosis	I70	2126	801	1325	4.6	3.5	5.7	2.2	2.4	2.1
Aortic aneurism and dissection	I71	2025	1646	379	4.4	7.3	1.6	2.8	5.4	0.8
Respiratory tract diseases	J00-J99	43282	24929	18353	94.2	110.0	78.9	50.2	76.2	32.3
Pneumonia and influenza	J10-J18	8701	4391	4310	18.9	19.4	18.5	10.0	13.5	7.5
Other acute lower respiratory tract infections	J20-J28	1073	381	692	2.3	1.7	3.0	1.2	1.2	1.1
Chronic lower respiratory tract diseases	J40-J47	15946	11916	4030	34.7	52.6	17.3	18.7	36.0	7.3
Bronchitis, chronic and unspecified	J40-J42	1040	653	387	2.3	2.9	1.7	1.2	1.9	0.7
Emphysema	J43	660	577	83	1.4	2.5	0.4	0.9	1.9	0.2
Asthma	J45-J46	971	199	772	2.1	0.9	3.3	1.2	0.6	1.5
Pneumonitis due to solids and liquids	J69	1763	792	971	3.8	3.5	4.2	1.9	2.4	1.6
Respiratory failure, not classified elsewhere	J96	2746	1219	1527	6.0	5.4	6.6	3.2	3.8	2.8
Diseases of the digestive system	K00-K93	19557	10408	9149	42.6	45.9	39.3	26.6	35.9	18.4
Peptic ulcer	K25-K28	471	293	178	1.0	1.3	0.8	0.6	0.9	0.3
Appendicitis	K35-K38	58	38	20	0.1	0.2	0.1	0.1	0.1	0.0
Hernia and intestinal occlusion	K40-K46, K56	2257	948	1309	4.9	4.2	5.6	2.5	2.9	2.2
Vascular disorder of intestine	K55	2905	1221	1684	6.3	5.4	7.2	3.3	3.8	2.9
Chronic liver disease and cirrhosis	K70, K73-K74	4915	3583	1332	10.7	15.8	5.7	8.7	13.9	3.9
Alcoholic liver disease	K70	1434	1207	227	3.1	5.3	1.0	2.8	4.9	0.9
Cholelithiasis and other gallbladder diseases	K80-K82	1576	646	930	3.4	2.8	4.0	1.7	1.9	1.6
Acute pancreatitis	K85	1163	574	589	2.5	2.5	2.5	1.5	1.9	1.2

Table 6. Number of deaths, crude mortality rate, and age-adjusted mortality rate by selected causes of death by age, Spain 2009.

Cause of death (based on the ICD, 10th revision)		Number of deaths			Crude mortality rate			Age-adjusted mortality rate		
		Both sexes	Men	Women	Both sexes		Men	Women	Both sexes	
Nephritis, nephrosis, and nephrotic syndrome	N00-N07, N17-N19, N25-N27	6877	3318	3559	15.0	14.6	15.3	7.7	9.9	6.3
Renal failure	N17-N19	6643	3198	3445	14.5	14.1	14.8	7.4	9.6	6.1
Infections of kidney	N10-N12, N13.6, N15.1	190	57	133	0.4	0.3	0.6	0.2	0.2	0.3
Hyperplasia of prostate	N40	230	230	0	0.5	1.0	0.0	0.2	0.7	0.0
Inflammatory diseases of female pelvic organs	N70-N76	21	0	21	0.0	0.0	0.1	0.0	0.0	0.1
Certain condition originating in the perinatal period	P00-P96	900	517	383	2.0	2.3	1.6	2.8	3.2	2.5
Congenital malformations, deformities, and chromosomal abnormalities	Q00-Q99	889	460	429	1.9	2.0	1.8	2.3	2.4	2.3
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	11086	5275	5811	24.1	23.3	25.0	14.8	18.5	11.1
External causes of mortality	V01-Y98	14496	9773	4723	31.6	43.1	20.3	24.4	37.0	12.6
Unintentional accidents	V01-X59, Y85-Y86	10206	6613	3593	22.2	29.2	15.4	16.7	24.8	8.9
Motor vehicle accidents	V02-V04+V09.0+V09.2+V12-V14+V19.0-V19.2+V19.4-V19.6+V20-V79+V80.3-V80.5+V81.0-V81.1+V82.0-V82.1+V83-V86+V87.0-V87.8+V88.8-V88.9+V89.0-V89.2	2668	2085	583	5.8	9.2	2.5	5.4	8.5	2.3
Falls	W00-W19	1920	1028	892	4.2	4.5	3.8	2.7	3.6	1.8
Accidental drowning and submersion	W65-W74	507	406	101	1.1	1.8	0.4	1.0	1.6	0.4
Accidental poisoning by exposure to noxious substances	X40-X49	757	575	182	1.6	2.5	0.8	1.4	2.2	0.6
Suicide	X60-X84+Y87.0	3429	2666	763	7.5	11.8	3.3	6.3	10.3	2.7
Assaults	X85-Y09	337	246	91	0.7	1.1	0.4	0.7	1.0	0.4
Complications of medical and surgical care	Y40-Y84	429	188	241	0.9	0.8	1.0	0.6	0.7	0.5

Table 7. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths related to tobacco by sex. Spain 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	114,540	69,818	44,722	281.3	349.8	215.4	186.6	288.8	106.7
2002	116,010	70,675	45,335	280.8	348.7	215.4	184.2	284.9	105.3
2003	119,201	72,457	46,744	283.8	351.3	218.7	183.6	283.9	105.3
2004	113,384	69,271	44,113	265.6	330.1	203.2	170.8	264.3	97.0
2005	116,352	71,346	45,006	268.1	333.9	204.3	169.7	263.6	95.9
2006	109,307	67,438	41,869	248.0	310.4	187.4	156.5	243.7	87.3
2007	111,426	68,954	42,472	248.3	311.2	187.0	154.7	241.2	86.2
2008	108,252	66,826	41,426	237.4	296.8	179.5	147.0	228.6	82.0
2009	108,539	67,329	41,210	236.3	297.0	177.2	143.0	223.7	79.1

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 8. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths attributable to tobacco by sex. Spain, 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	18,214	16,254	1,960	44.7	81.4	9.4	35.0	69.6	6.9
2002	18,114	15,995	2,119	43.8	78.9	10.1	34.2	67.4	7.3
2003	18,801	16,537	2,264	44.8	80.2	10.6	34.7	67.9	7.6
2004	19,092	16,651	2,441	44.7	79.3	11.2	34.8	67.1	8.3
2005	19,118	16,647	2,471	44.1	77.9	11.2	33.9	65.4	8.1
2006	19,532	16,894	2,638	44.3	77.8	11.8	34.1	65.1	8.7
2007	19,992	17,194	2,798	44.6	77.6	12.3	34.0	64.6	9.0
2008	20,213	17,163	3,050	44.3	76.2	13.2	33.8	63.1	9.6
2009	20,425	17,296	3,129	44.5	76.3	13.5	33.6	62.6	9.8

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women



Table 9. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths related to alcohol by sex. Spain 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	25,946	19,404	6,542	63.7	97.2	31.5	53.9	87.9	23.0
2002	25,674	19,070	6,604	62.1	94.1	31.4	52.4	84.7	22.8
2003	26,540	19,589	6,951	63.2	95.0	32.5	52.9	85.3	23.4
2004	26,664	19,326	7,338	62.5	92.1	33.8	51.4	82.0	23.5
2005	26,396	19,213	7,183	60.8	89.9	32.6	49.5	79.8	21.7
2006	25,405	18,511	6,894	57.6	85.2	30.9	46.6	75.1	20.5
2007	25,173	18,199	6,974	56.1	82.1	30.7	45.1	72.1	20.3
2008	24,339	17,612	6,727	53.4	78.2	29.1	42.8	68.5	19.2
2009	23,788	17,035	6,753	51.8	75.1	29.0	40.5	64.7	18.5

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 10. Number of deaths, crude mortality rate, and age-adjusted mortality rate by deaths attributable to alcohol by sex. Spain, 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	1,574	1,325	249	3.9	6.6	1.2	3.6	6.3	1.1
2002	1,498	1,276	222	3.6	6.3	1.1	3.4	6.0	1.0
2003	1,626	1,381	245	3.9	6.7	1.1	3.6	6.4	1.0
2004	1,593	1,321	272	3.7	6.3	1.3	3.5	6.0	1.2
2005	1,620	1,382	238	3.7	6.5	1.1	3.4	6.1	1.0
2006	1,639	1,406	233	3.7	6.5	1.0	3.4	6.1	1.0
2007	1,675	1,411	264	3.7	6.4	1.2	3.4	6.0	1.0
2008	1,626	1,357	269	3.6	6.0	1.2	3.2	5.6	1.0
2009	1,795	1,515	280	3.9	6.7	1.2	3.5	6.1	1.1

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 11. Number of deaths, crude mortality rate, and age-adjusted mortality rate from abdominal hernia by sex. Spain 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	1,722	711	1,011	4.2	3.6	4.9	2.5	2.9	2.2
2002	1,828	749	1,079	4.4	3.7	5.1	2.6	2.9	2.4
2003	2,004	834	1,170	4.8	4.0	5.5	2.8	3.2	2.5
2004	2,023	795	1,228	4.7	3.8	5.7	2.6	2.8	2.5
2005	2,069	844	1,225	4.8	3.9	5.6	2.6	2.9	2.4
2006	2,161	903	1,258	4.9	4.2	5.6	2.7	3.0	2.4
2007	2,118	876	1,242	4.7	4.0	5.5	2.5	2.8	2.3
2008	2,269	918	1,351	5.0	4.1	5.9	2.6	2.8	2.4
2009	2,257	948	1,309	4.9	4.2	5.6	2.5	2.9	2.2

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 12. Number of deaths, crude mortality rate, and age-adjusted mortality rate from appendicitis by sex. Spain 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	77	45	32	0.2	0.2	0.2	0.1	0.2	0.1
2002	81	48	33	0.2	0.2	0.2	0.1	0.2	0.1
2003	74	48	26	0.2	0.2	0.1	0.1	0.2	0.1
2004	72	41	31	0.2	0.2	0.1	0.1	0.2	0.1
2005	77	43	34	0.2	0.2	0.2	0.1	0.2	0.1
2006	68	36	32	0.2	0.2	0.1	0.1	0.1	0.1
2007	67	28	39	0.1	0.1	0.2	0.1	0.1	0.1
2008	66	37	29	0.1	0.2	0.1	0.1	0.1	0.1
2009	58	38	20	0.1	0.2	0.1	0.1	0.1	0.0

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 13. Number of deaths, crude rate mortality rate, and age-adjusted mortality rate from adverse effects of medicinal products by sex. Spain 2001-2009.

Year	Deaths			Crude mortality rate			Age-adjusted mortality rate		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
2001	180	72	108	0.4	0.4	0.5	0.3	0.3	0.3
2002	203	78	125	0.5	0.4	0.6	0.3	0.3	0.3
2003	264	115	149	0.6	0.6	0.7	0.4	0.4	0.3
2004	263	108	155	0.6	0.5	0.7	0.4	0.4	0.4
2005	224	90	134	0.5	0.4	0.6	0.3	0.3	0.3
2006	166	67	99	0.4	0.3	0.4	0.2	0.2	0.2
2007	147	54	93	0.3	0.2	0.4	0.2	0.2	0.2
2008	119	44	75	0.3	0.2	0.3	0.1	0.1	0.1
2009	119	44	75	0.3	0.2	0.3	0.1	0.1	0.1

The rates are expressed per 100,000 population of both sexes, per 100,000 men or per 100,000 women

Table 14. Number of deaths for the leading causes of death, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain 2009.

	All causes			Cancer (C00-C97)			Heart diseases (I00-I09,I11, I13, I20-I51)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	384,933	838.1	503.7	101,517	221.0	153.0	78,262	170.4	94.4
Andalusia	64,730	791.6	563.5	15,833	193.6	153.7	13,981	171.0	115.0
Aragon	13,268	1006.0	482.5	3,489	264.5	152.1	2,475	187.7	82.7
Asturias	12,759	1206.9	540.1	3,499	331.0	176.6	2,964	280.4	113.2
Balearic Islands	7,794	725.1	522.1	2,036	189.4	155.8	1,818	169.1	112.4
Canary Islands	12,896	618.2	518.6	3,562	170.8	151.5	2,565	123.0	100.1
Cantabria	5,513	954.0	491.5	1,470	254.4	157.1	1,016	175.8	81.4
Castile-La Mancha	17,771	872.1	471.9	4,403	216.1	140.2	3,459	169.7	84.4
Castile and Leon	27,148	1081.3	459.8	7,378	293.9	154.6	5,690	226.6	84.1
Catalonia	60,261	826.8	487.0	15,994	219.5	150.2	11,218	153.9	82.4
Valencia	40,085	798.6	520.7	10,414	207.5	151.6	8,625	171.8	105.7
Extremadura	10,748	994.2	534.3	2,766	255.9	162.9	2,222	205.5	99.8
Galicia	30,180	1102.6	514.6	7,916	289.2	162.5	6,224	227.4	92.1
Madrid	41,268	655.0	439.8	11,781	187.0	141.1	7,886	125.2	78.3
Murcia	10,331	711.4	534.2	2,574	177.3	148.3	2,208	152.1	109.6
Navarre	5,147	834.3	443.0	1,468	238.0	152.3	984	159.5	76.5
Basque Country	19,614	918.8	484.1	5,780	270.8	165.6	3,668	171.8	83.1
La Rioja	2,745	867.7	452.4	750	237.1	146.8	553	174.8	82.3
Ceuta	550	757.6	645.1	118	162.5	150.8	106	146.0	118.8
Melilla	401	569.3	495.3	85	120.7	118.6	79	112.2	94.0

	Cerebrovascular diseases (I60-I69)			Chronic lower respiratory diseases (J40-J47)			Alzheimer's disease (G30)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	31,157	67.8	36.1	15,946	34.7	18.7	11,169	24.3	11.6
Andalusia	6,366	77.8	50.7	2,776	33.9	22.5	1,828	22.4	13.2
Aragon	1,192	90.4	36.8	510	38.7	16.5	440	33.4	11.8
Asturias	1,019	96.4	37.0	579	54.8	21.2	330	31.2	10.5
Balearic Islands	509	47.4	30.5	330	30.7	21.2	289	26.9	16.0
Canary Islands	758	36.3	29.1	406	19.5	15.5	308	14.8	11.0
Cantabria	468	81.0	36.0	160	27.7	12.5	103	17.8	6.8
Castile-La Mancha	1,450	71.2	33.9	911	44.7	20.8	476	23.4	9.9
Castile and Leon	2,051	81.7	28.9	1,009	40.2	14.2	724	28.8	8.7
Catalonia	4,351	59.7	31.3	2,696	37.0	19.7	2,216	30.4	14.3
Valencia	3,323	66.2	39.2	1,752	34.9	20.7	1,361	27.1	14.7
Extremadura	984	91.0	42.2	364	33.7	16.7	271	25.1	10.6
Galicia	2,893	105.7	40.8	1,282	46.8	17.8	695	25.4	8.6
Madrid	2,524	40.1	24.1	1,515	24.0	14.9	818	13.0	7.2
Murcia	912	62.8	43.9	506	34.8	23.9	342	23.6	15.1
Navarre	391	63.4	29.3	201	32.6	15.4	201	32.6	13.5
Basque Country	1,541	72.2	33.3	777	36.4	16.6	637	29.8	12.3
La Rioja	247	78.1	35.0	101	31.9	14.1	112	35.4	14.2
Ceuta	40	55.1	42.6	25	34.4	29.6	12	16.5	12.1
Melilla	29	41.2	33.7	13	18.5	14.7	4	5.7	4.7

Table 14. Number of deaths for the leading causes of death, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain, 2009. (continued)

	Unintentional accidents (V01-X59,Y85-Y86)			Diabetes mellitus (E10-E14)			Pneumonia and influenza (J10-J18)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	10,206	22.2	16.7	9,985	21.7	11.7	8,701	18.9	10.0
Andalusia	1,504	18.4	15.6	1,623	19.8	13.2	1,280	15.7	10.1
Aragon	345	26.2	18.2	440	33.4	13.3	361	27.4	11.1
Asturias	318	30.1	19.9	326	30.8	12.2	206	19.5	6.7
Balearic Islands	196	18.2	15.5	182	16.9	11.1	127	11.8	7.9
Canary Islands	390	18.7	16.4	876	42.0	33.5	324	15.5	12.4
Cantabria	150	26.0	17.9	120	20.8	8.8	155	26.8	11.0
Castile-La Mancha	461	22.6	16.4	527	25.9	12.5	451	22.1	10.1
Castile and Leon	690	27.5	16.6	595	23.7	8.4	604	24.1	8.5
Catalonia	1,968	27.0	18.4	1,679	23.0	12.1	869	11.9	6.2
Valencia	882	17.6	14.1	1,184	23.6	14.1	901	18.0	10.7
Extremadura	194	17.9	13.6	240	22.2	10.0	397	36.7	16.6
Galicia	884	32.3	21.4	632	23.1	9.3	701	25.6	10.0
Madrid	937	14.9	11.2	615	9.8	5.9	1,514	24.0	14.3
Murcia	269	18.5	15.9	248	17.1	11.7	255	17.6	12.2
Navarre	174	28.2	19.6	125	20.3	9.3	135	21.9	9.3
Basque Country	461	21.6	15.4	439	20.6	9.2	343	16.1	7.2
La Rioja	79	25.0	18.4	68	21.5	10.2	44	13.9	6.1
Ceuta	15	20.7	18.8	20	27.5	23.2	14	19.3	14.6
Melilla	5	7.1	7.2	18	25.6	21.6	4	5.7	4.6

	Nephritis, nephrosis, and nephrotic syndrome (N00-N07, N17-N19, N25-N27)			Chronic liver disease and cirrhosis (K70, K73-K74)			Hypertensive disease (I10, I12, I15)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	6,877	15.0	7.7	4,915	10.7	8.7	4,419	9.6	4.9
Andalusia	1,118	13.7	8.8	1,122	13.7	12.1	753	9.2	5.9
Aragon	367	27.8	10.7	138	10.5	7.6	82	6.2	2.4
Asturias	181	17.1	6.3	192	18.2	12.3	112	10.6	3.9
Balearic Islands	168	15.6	9.8	116	10.8	9.8	97	9.0	5.4
Canary Islands	159	7.6	5.9	212	10.2	9.7	94	4.5	3.5
Cantabria	113	19.6	8.9	54	9.3	7.3	60	10.4	4.7
Castile-La Mancha	277	13.6	6.4	153	7.5	6.3	229	11.2	5.0
Castile and Leon	448	17.8	6.2	228	9.1	6.2	348	13.9	4.5
Catalonia	1,288	17.7	8.9	781	10.7	8.2	993	13.6	6.7
Valencia	764	15.2	8.7	570	11.4	9.5	497	9.9	5.6
Extremadura	171	15.8	6.9	67	6.2	5.0	61	5.6	2.5
Galicia	487	17.8	6.8	373	13.6	10.0	224	8.2	3.2
Madrid	713	11.3	6.7	400	6.3	5.3	444	7.0	4.2
Murcia	206	14.2	9.5	150	10.3	10.1	103	7.1	5.0
Navarre	88	14.3	5.8	53	8.6	7.0	49	7.9	3.4
Basque Country	266	12.5	5.5	235	11.0	7.7	230	10.8	4.8
La Rioja	34	10.7	4.9	30	9.5	7.2	26	8.2	3.4
Ceuta	14	19.3	16.4	8	11.0	10.7	4	5.5	3.8
Melilla	8	11.4	7.9	6	8.5	7.1	5	7.1	6.0

Table 14. Number of deaths for the leading causes of death, crude mortality rate, and age-adjusted mortality rate by autonomous community. Spain, 2009. (conclusion)

	Suicide (X60-X84+Y87.0)			Septicemia (A40-A41)			Parkinson's disease (G20-G21)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	3,429	7.5	6.3	3,200	7.0	4.0	3,038	6.6	3.3
Andalusia	750	9.2	8.3	448	5.5	3.8	394	4.8	3.0
Aragon	114	8.6	6.6	85	6.4	3.0	101	7.7	3.1
Asturias	117	11.1	8.0	69	6.5	2.7	167	15.8	5.4
Balearic Islands	104	9.7	8.6	33	3.1	1.9	71	6.6	4.3
Canary Islands	160	7.7	7.0	161	7.7	6.3	99	4.7	3.8
Cantabria	33	5.7	4.7	90	15.6	7.6	34	5.9	2.4
Castile-La Mancha	157	7.7	6.4	170	8.3	4.2	134	6.6	2.8
Castile and Leon	221	8.8	7.0	313	12.5	5.0	213	8.5	2.8
Catalonia	440	6.0	5.1	459	6.3	3.6	609	8.4	4.1
Valencia	381	7.6	6.6	293	5.8	3.8	357	7.1	4.0
Extremadura	73	6.8	5.9	130	12.0	6.4	56	5.2	2.4
Galicia	340	12.4	9.5	297	10.9	4.8	233	8.5	3.1
Madrid	153	2.4	2.2	312	5.0	3.1	223	3.5	2.0
Murcia	97	6.7	6.1	101	7.0	4.9	70	4.8	3.1
Navarre	59	9.6	8.1	26	4.2	1.9	36	5.8	2.3
Basque Country	167	7.8	6.3	158	7.4	3.6	190	8.9	3.9
La Rioja	27	8.5	7.1	21	6.6	3.2	42	13.3	5.4
Ceuta	8	11.0	10.7	16	22.0	18.8	5	6.9	5.2
Melilla	5	7.1	6.0	4	5.7	5.5	2	2.8	1.9

	Vascular disorder of intestine (K55)		
	Number	Rate	Age-adjusted rate
Spain	2,905	6.3	3.3
Andalusia	551	6.7	4.3
Aragon	117	8.9	3.4
Asturias	107	10.1	3.5
Balearic Islands	42	3.9	2.6
Canary Islands	73	3.5	2.7
Cantabria	45	7.8	3.6
Castile-La Mancha	125	6.1	2.9
Castile and Leon	229	9.1	3.2
Catalonia	408	5.6	3.0
Valencia	244	4.9	2.9
Extremadura	97	9.0	4.3
Galicia	269	9.8	3.9
Madrid	304	4.8	2.9
Murcia	68	4.7	3.2
Navarre	48	7.8	3.5
Basque Country	135	6.3	2.8
La Rioja	24	7.6	3.5
Ceuta	2	2.8	2.2
Melilla	6	8.5	6.0



Table 15. Number of deaths, crude mortality rate, and age-adjusted mortality rate by diseases related and attributable to tobacco and alcohol by autonomous community. Spain 2009.

	Deaths related to tobacco <sup>1</sup>			Deaths attributable to tobacco (C33-C34)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	108,539	236.3	143.0	20,425	44.5	33.6
Andalusia	20,032	245.0	173.4	3,283	40.1	33.6
Aragon	3,577	271.2	134.1	643	48.8	32.9
Asturias	3,892	368.2	166.4	663	62.7	37.5
Balearic Islands	2,190	203.7	150.4	463	43.1	38.4
Canary Islands	3,535	169.5	143.6	698	33.5	31.1
Cantabria	1,429	247.3	131.4	312	54.0	36.8
Castile-La Mancha	4,910	240.9	131.7	819	40.2	29.3
Castile and Leon	7,125	283.8	123.8	1,237	49.3	30.7
Catalonia	15,944	218.8	130.4	3,417	46.9	35.1
Valencia	12,306	245.2	160.2	2,226	44.4	34.7
Extremadura	3,192	295.3	161.1	692	64.0	44.3
Galicia	8,597	314.1	143.9	1,411	51.6	33.1
Madrid	10,591	168.1	114.0	2,444	38.8	31.1
Murcia	3,021	208.0	156.7	502	34.6	31.1
Navarre	1,343	217.7	120.0	279	45.2	31.9
Basque Country	5,334	249.9	134.4	1,129	52.9	35.7
La Rioja	737	233.0	122.0	121	38.3	26.4
Ceuta	150	206.6	180.1	29	39.9	40.0
Melilla	95	134.9	118.1	12	11.2	18.0

	Deaths related to alcohol <sup>2</sup>			Deaths attributable to alcohol (E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K86.0, R78.0, X45 X65 and Y15)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	23,788	51.8	40.5	1,795	3.9	3.5
Andalusia	4,379	53.6	46.3	408	5.0	4.7
Aragon	748	56.7	40.5	29	2.2	2.0
Asturias	799	75.6	50.5	93	8.8	7.0
Balearic Islands	522	48.6	42.7	49	4.6	4.5
Canary Islands	971	46.5	42.2	100	4.8	4.6
Cantabria	341	59.0	43.1	22	3.8	3.2
Castile-La Mancha	1,000	49.1	36.9	66	3.2	3.1
Castile and Leon	1,487	59.2	38.7	105	4.2	3.2
Catalonia	3,921	53.8	39.3	207	2.8	2.5
Valencia	2,320	46.2	38.1	195	3.9	3.6
Extremadura	456	42.2	32.4	36	3.3	2.8
Galicia	1,990	72.7	50.5	168	6.1	5.0
Madrid	2,037	32.3	26.0	117	1.9	1.7
Murcia	652	44.9	40.3	72	5.0	5.1
Navarre	361	58.5	44.3	28	4.5	4.0
Basque Country	1,216	57.0	40.6	71	3.3	2.6
La Rioja	165	52.2	39.1	14	4.4	3.6
Ceuta	36	49.6	45.8	2	2.8	2.7
Melilla	25	35.5	32.7	1	1.4	1.8

1. Codes of deaths related to tobacco: C00-C14+C32-C34+C15+I20-I25+I60-I69+J40-J47

2. Codes of deaths related to alcohol: C15+C32+F10+K70+K73-K74+K76+V00-V99+W00 - W99+X00-X99+Y00-Y99

Table 16. Number of deaths, crude mortality rate, and age-adjusted mortality rate for abdominal hernia, appendicitis and adverse effects of medicinal products by autonomous community. Spain 2009.

	Abdominal hernia (K40-K46+K56)			Appendicitis (K35-K38)			Adverse effects of medicinal products (Y40-Y59)		
	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate	Number	Rate	Age-adjusted rate
Spain	2,257	4.9	2.5	58	0.1	0.1	119	0.3	0.1
Andalusia	417	5.1	3.2	13	0.2	0.1	34	0.4	0.3
Aragon	99	7.5	3.2	0	0.0	0.0	1	0.1	0.0
Asturias	56	5.3	1.9	4	0.4	0.1	5	0.5	0.3
Balearic Islands	45	4.2	2.6	0	0.0	0.0	3	0.3	0.2
Canary Islands	36	1.7	1.4	1	0.0	0.0	5	0.2	0.2
Cantabria	15	2.6	0.9	1	0.2	0.1	2	0.3	0.1
Castile-La Mancha	162	7.9	3.6	0	0.0	0.0	10	0.5	0.2
Castile and Leon	204	8.1	2.7	4	0.2	0.1	8	0.3	0.1
Catalonia	301	4.1	2.1	12	0.2	0.1	13	0.2	0.1
Valencia	205	4.1	2.4	8	0.2	0.1	9	0.2	0.1
Extremadura	79	7.3	3.4	1	0.1	0.1	2	0.2	0.1
Galicia	124	4.5	1.7	4	0.1	0.1	7	0.3	0.1
Madrid	279	4.4	2.5	4	0.1	0.0	8	0.1	0.1
Murcia	48	3.3	2.1	3	0.2	0.1	3	0.2	0.1
Navarre	45	7.3	3.1	1	0.2	0.1	0	0.0	0.0
Basque Country	98	4.6	2.0	2	0.1	0.0	5	0.2	0.1
La Rioja	29	9.2	3.7	0	0.0	0.0	2	0.6	0.2
Ceuta	3	4.1	3.0	0	0.0	0.0	0	0.0	0.0
Melilla	4	5.7	4.5	0	0.0	0.0	1	1.4	1.4

Table 17. Number of deaths in children under 1 year, infant, neonatal and postneonatal mortality rate. Spain 1981-2009.

Year	Deaths			Mortality rate		
	Less than 28 days	More than 28 days and children under 1 year	Children under 1 year	Neonatal	Postneonatal	Infant
1981	4,659	1,985	6,644	8.7	3.7	12.5
1982	4,094	1,728	5,822	7.9	3.4	11.3
1983	3,666	1,619	5,285	7.6	3.3	10.9
1984	3,178	1,492	4,670	6.7	3.2	9.9
1985	2,705	1,366	4,071	5.9	3.0	8.9
1986	2,719	1,319	4,038	6.2	3.0	9.2
1987	2,546	1,243	3,789	6.0	2.9	8.9
1988	2,173	1,198	3,371	5.2	2.9	8.0
1989	2,088	1,091	3,179	5.1	2.7	7.8
1990	1,997	1,053	3,050	5.0	2.6	7.6
1991	1,809	1,037	2,846	4.6	2.6	7.2
1992	1,830	968	2,798	4.6	2.4	7.1
1993	1,589	992	2,581	4.1	2.6	6.7
1994	1,431	808	2,239	3.9	2.2	6.0
1995	1,285	711	1,996	3.5	2.0	5.5
1996	1,266	742	2,008	3.5	2.0	5.5
1997	1,188	668	1,856	3.2	1.8	5.0
1998	1,086	688	1,774	3.0	1.9	4.9
1999	1,071	629	1,700	2.8	1.7	4.5
2000	1,113	627	1,740	2.8	1.6	4.4
2001	1,126	531	1,657	2.8	1.3	4.1
2002	1,165	572	1,737	2.8	1.4	4.1
2003	1,106	627	1,733	2.5	1.4	3.9
2004	1,199	614	1,813	2.6	1.4	4.0
2005	1,127	638	1,765	2.4	1.4	3.8
2006	1,113	591	1,704	2.3	1.2	3.5
2007	1,120	584	1,704	2.3	1.2	3.5
2008	1,114	627	1,741	2.1	1.2	3.3
2009	1,052	557	1,609	2.1	1.1	3.3

The rates are expressed per 1000 live births

Table 18. Number of deaths in children under 1 year and infant mortality rate by cause of death, Spain 2009.

Cause of death (based on the ICD, 10th revision)		Deaths	Rate <sup>1</sup>
All causes		1609	325.1
Infectious and parasitic diseases	A00-B99	29	5.9
Diarrhea and infectious gastroenteritis	A09	3	0.6
Whooping cough	A37	3	0.6
Meningococcal disease	A39	5	1.0
Septicemia	A40-A41	10	2.0
Malignant neoplasms	C00-D48	24	4.8
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89	7	1.4
Endocrine, nutritional and metabolic disorders	E00-E90	42	8.5
Diseases of the nervous system	G00-G99	66	13.3
Meningitis	G00, G03	14	2.8
Spinal muscular atrophy and related syndromes	G12	17	3.4
Diseases of the myoneural junction and muscle	G70-G72	9	1.8
Diseases of the circulatory system	I00-I99	15	3.0
Cardiomyopathy	I42	5	1.0
Pulmonary heart disease and diseases of pulmonary circulation	I26-I28	2	0.4
Diseases of the respiratory system	J00-J99	22	4.4
Pneumonia and influenza	J10-J18	5	1.0
Bronchitis and acute bronchiolitis	J20-J21	8	1.6
Diseases of the digestive system	K00-K93	5	1.0
	K40-K46, K56	1	0.2
Hernia of the abdominal cavity and intestinal obstruction without hernia			
Diseases of the genitourinary system	N00-N99	1	0.2
Certain condition originating in the perinatal period	P00-P96	879	177.6
Fetus and newborn affected by maternal complications of pregnancy	P01	56	11.3
Fetus and newborn affected by complications of the placenta, umbilical cord and membranes	P02	36	7.3
Disorders related to short gestation period and low birth weight, not classified elsewhere	P07	75	15.2
Intrauterine hypoxia and asphyxia at birth	P20-P21	52	10.5
Respiratory distress syndrome of the newborn	P22	63	12.7
Neonatal aspiration syndromes	P24	18	3.6
Interstitial emphysema and related condition originating in the perinatal period	P25	19	3.8
Pulmonary hemorrhage originating in the perinatal period	P26	25	5.1
	P27	27	5.5
Chronic respiratory disease originating in the perinatal period			
Primary atelectasis of the newborn	P28.0-P28.1	17	3.4

<sup>1</sup> The rate expresses the number of deaths a 100,000 live births.

Table 18. Number of deaths in children under 1 year and infant mortality rate by cause of death, Spain 2009.

Cause of death (based on the ICD, 10th <sup>5</sup> revision)		Deaths	Rate <sup>1</sup>
Cardiovascular disorders originating in the perinatal period	P29	26	5.3
Bacterial sepsis of the newborn	P36	111	22.4
Hemorrhage of the newborn	P50-P52, P54	69	13.9
Hematological disorders of the newborn	P60-P61	6	1.2
Necrotizing enterocolitis of the fetus and the newborn	P77	57	11.5
	Q00-Q99	383	77.4
Congenital malformations, deformities, and chromosomal abnormalities			
Anencephaly and similar congenital malformations	Q00	6	1.2
Congenital hydrocephalus	Q03	3	0.6
Other congenital malformations of the nervous system	Q01-Q02, Q04-Q07	27	5.5
Congenital malformations of the heart	Q20-Q24	137	27.7
Other congenital malformations of the circulatory system	Q25-Q28	45	9.1
Congenital malformations of the respiratory system	Q30-Q34	15	3.0
Congenital malformations of the digestive system	Q35-Q45	21	4.2
Congenital malformations of the genitourinary system	Q50-Q64	8	1.6
Congenital malformations and deformities of the musculoskeletal system	Q65-Q79	26	5.3
Down's syndrome	Q90	3	0.6
Edwards' syndrome and Patau's syndrome	Q91	28	5.7
Other chromosomal abnormalities, not classified elsewhere	Q92-Q99	5	1.0
Symptoms, signs and abnormal clinical and laboratory findings, not classified elsewhere	R00-R99	106	21.4
Sudden infant death syndrome	R95	68	13.7
External causes of mortality	V01-Y98	30	6.1
Unintentional accidents	V01-X59	28	5.7
Motor vehicle accidents	V02-V04+V09.0+V09.2+ V12-V14+V19.0-V19.2+ V19.4-V19.6+V20-V79+ V80.3-V80.5+V81.0- V81.1+V82.0- V82.1+V83- V86+V87.0- V87.8+V88.8- V88.9+ V89.0-V89.2	12	2.4
Falls	W00-W19	3	0.6
Accidental drowning and submersion	W65-W74	1	0.2
Other accidents obstructing breathing	W75-W84	8	1.6
	X40-X49	0	0.0
Accidental poisoning by exposure to noxious substances			
Assaults	X85-Y09	1	0.2

<sup>1</sup> The rate expresses the number of deaths a 100,000 live births.

Table 19. Number of deaths in children under 1 year and infant mortality rate from the leading causes of death, Spain 2001-2009.

Cause of death (based on the ICD, 10th <sup>a</sup> revision)	Deaths	Rate
<b>All causes</b>		
2001	1657	407.7
2002	1737	414.7
2003	1733	392.2
2004	1813	398.8
2005	1765	378.5
2006	1704	352.8
2007	1704	346.0
2008	1741	335.0
2009	1609	325.1
<b>Congenital malformations, deformations, and chromosomal abnormalities</b>		
2001	496	122.1
2002	518	123.7
2003	519	117.5
2004	488	107.3
2005	492	105.5
2006	468	96.9
2007	431	87.5
2008	466	89.7
2009	383	77.4
<b>Bacterial sepsis of the newborn</b>		
2001	97	23.9
2002	110	26.3
2003	118	26.7
2004	113	24.9
2005	110	23.6
2006	97	20.1
2007	135	27.4
2008	115	22.1
2009	111	22.4
<b>Disorders related to short gestation and low birth weight, not classified elsewhere</b>		
2001	94	23.1
2002	116	27.7
2003	111	25.1
2004	126	27.7
2005	108	23.2
2006	99	20.5
2007	112	22.7
2008	137	26.4
2009	75	15.2

Table 19. Number of deaths in children under 1 year and infant mortality rate from the leading causes of death, Spain 2001-2009.

Cause of death (based on the ICD, 10th <sup>a</sup> revision)		Deaths	Rate <sup>1</sup>
Hemorrhage of the newborn	P50-P52, P54		
2001		72	17.7
2002		82	19.6
2003		78	17.7
2004		72	15.8
2005		91	19.5
2006		73	15.1
2007		94	19.1
2008		59	11.4
2009		69	13.9
Sudden infant death syndrome	R95		
2001		72	17.7
2002		78	18.6
2003		75	17.0
2004		78	17.2
2005		88	18.9
2006		71	14.7
2007		59	12.0
2008		72	13.9
2009		68	13.7
Respiratory distress syndrome of the newborn	P22		
2001		93	22.9
2002		82	19.6
2003		72	16.3
2004		93	20.5
2005		75	16.1
2006		78	16.2
2007		73	14.8
2008		49	9.4
2009		63	12.7
Necrotizing enterocolitis of the fetus and the newborn	P77		
2001		27	6.6
2002		54	12.9
2003		61	13.8
2004		50	11.0
2005		50	10.7
2006		62	12.8
2007		65	13.2
2008		73	14.0
2009		57	11.5

<sup>1</sup> The rate expresses the number of deaths a 100,000 live births.

Table 19. Number of deaths in children under 1 year and infant mortality rate from the leading causes of death, Spain 2009.

Cause of death (based on the ICD, 10th <sup>a</sup> revision)		Deaths	Rate <sup>1</sup>
Fetus and newborn affected by maternal complications of pregnancy	P01		
2001		77	18.9
2002		58	13.8
2003		48	10.9
2004		88	19.4
2005		63	13.5
2006		57	11.8
2007		54	11.0
2008		63	12.1
2009		56	11.3
Intrauterine hypoxia and asphyxia at birth	P20-P21		
2001		74	18.2
2002		58	13.8
2003		52	11.8
2004		54	11.9
2005		55	11.8
2006		46	9.5
2007		47	9.5
2008		53	10.2
2009		52	10.5
Fetus and newborn affected by complications of the placenta and membranes	P02		
2001		33	8.1
2002		40	9.6
2003		17	3.8
2004		41	9.0
2005		36	7.7
2006		32	6.6
2007		36	7.3
2008		35	6.7
2009		36	7.3

<sup>1</sup> The rate expresses the number of deaths a 100,000 live births.



## Appendix

## **Source of data on deaths**

The information on deaths in residents in Spain comes from the file on deaths by cause of death provided annually by the National Statistical Institute (INE) to the Subdirector General of Health Information innovation of the Ministry of Health, Social Services and Equality.

The file of deaths by cause of death is based on the information contained in the statistical death bulletin and the statistical birth bulletin that is completed when a death occurs. The former collects data on the deaths of all persons who have lived over 24 hours and the latter on those who died before 24 hours. These statistical bulletins contain information on various demographic, social and health characteristics of the deceased. Furthermore, in the event of the deaths in which the court acts, in addition to the bulletins, another questionnaire recording the external circumstances that caused the injuries should be completed by the examining courts. For this report, the following characteristics that appear in the bulletins were used: age and sex of the deceased, autonomous community of residence, and the basic cause of death.

The process established to collect the data appearing in the file of deaths by cause of death begins when the INE sends the forms for the statistical death and birth bulletins to all civil registry offices. The section of these statistics bulletins on causes of death should be completed and signed by the physician who certifies the death; the rest of the data are indicated by the family members or persons required by law to perform the declaration. The civil registry offices send the completed

bulletins to the INE. Since 1983, the INE established collaboration agreements with the autonomous communities, so that the statistics departments of the communities are those who carry out the tasks of coding the information of the aforementioned bulletins for deaths in their territorial area. The autonomous communities then return to the INE the duly coded information of the bulletins, but before they have incorporated the information they contain on each deceased person to their respective mortality files.

This report analyzed deaths of the population resident in Spain. On one hand, deaths of the entire population by age, sex, and autonomous community of residence were studied, and on the other, deaths in children under 1 year of age for the purpose of obtaining the size and trend of infant mortality. And in both cases, overall deaths and deaths by a list of selected causes of death were analyzed.

## **Classification of basic cause of death**

The cause of death is coded according to International Classification of Diseases and Causes of Death (ICD) of the World Health Organization. Since 1999, the basic cause of death appearing in statistical death and birth bulletins is coded with the codes from the 10th revision of the ICD, where 21 large groups and 2036 specific categories of causes of death are listed.

Between 1980 and 1998, the 9th revision of the ICD was in force with 17 large groups and 1178 categories of causes of death. And in previous years, previous revisions of the ICD were

used. These changes in the classification of causes of death as a result of the revisions of the ICD may lead to changes in mortality trends for some causes of death. Therefore, comparison of causes of death between different revisions of the ICD requires a detailed examination about the code or codes including the definition of each of the causes of death. Furthermore, a marked change in the mortality trend in the year in which a new ICD has been introduced suggests that there may be problems for comparison of the cause of death under analysis.

In this report, tabulations of the causes of death are based on the basic cause of death. According to the World Health Organization, the basic cause of death is the illness or injury which started the chain of pathological events which directly led to death. When the cause is a traumatic injury, the circumstances of the accident or violence causing the fatal injury is considered the basic cause. The basic cause of death is selected from the various conditions which the physician certifies in the statistical death bulletin. When there are more than one cause or condition certified by the physician, the basic cause is determined by the sequence of conditions appearing in the bulletin, along with a list of rules provided by the ICD for selection of the basic cause.

There are some indicators to assess the quality of the information on the cause of death indicated in the mortality records. One of them is the proportion of deaths that have had to be allocated to groups with ill-defined signs and symptoms. In Spain, deaths for ill-defined causes of death accounted for 2.93% in 2009. In countries of the

European Union, this percentage ranges from 0.5% to 5.5%.

### **Lists of tabulation of causes of death**

Most data tables of this report contain the causes of death that caused a greater number of deaths in the entire population. As a result of this, there will be some demographic groups according to age or sex who will not have deaths from any of the selected causes. To select the causes of death that were the subject of tabulation, the criteria of the U.S. Centers for the Disease Control and Prevention were followed.

We studied in a more detailed manner the mortality trend for the 15 causes of death that produced the most deaths. Specifically, this information is provided since 2001. In addition, the report provides the trend in the age-adjusted mortality rate for these causes of death since 1981. As noted, the 9th revision of the ICD was used between 1981 and 1998, so it was necessary to select the codes from the 9th revision of the ICD corresponding to these 15 causes of death. In any case, with each revision of the ICD there are changes in the classification and for some causes of death those changes may artificially alter the trend. Thus, in some these cases, the mortality trend by cause of death over different periods in which various ICDs have been used should be assessed with prudence.

This report also includes different data tables of deaths in 2009 for 83 selected causes of death. One of these selected causes of death may be formed by a specific category of the ICD or by grouping of specific causes. Furthermore, the 83 selected causes of

death are not mutually exclusive of each other, but sometimes a cause of death is a grouping of other causes of death, some of which may appear in the list, but others not.

### **Codes of causes of death related to tobacco and alcohol**

Apart from the aforementioned causes of death, causes of death related to tobacco and alcohol use have been tabulated. The selected causes of death are those proposed by the World Health Organization (WHO) in the European Health for All Database.

In the case of deaths related to tobacco use, the WHO combines mortality from different causes of death which are known by the scientific literature to be related to smoking. Specifically, it includes the following codes from the 10th revision of the ICD: C00-C14, malignant neoplasms, lip, oral cavity and pharynx; C32, malignant neoplasm of larynx; C33-C34, malignant neoplasm of trachea, bronchus and lung; C15, malignant neoplasm of esophagus; I20-I25, ischemic heart disease; I60-I69, cerebrovascular diseases; and J40-J47, chronic lower respiratory tract diseases.

Similarly, in the case of deaths related to alcohol use, the WHO combines mortality from different causes of death which are known by the scientific literature to be related to alcohol use. Specifically, it includes the following codes from the 10th revision of the ICD: C15, malignant neoplasm of esophagus; C32, malignant neoplasm of larynx; F10, mental and behavioural disorders due to use of alcohol; K70, alcoholic liver disease; K73-K74, K76, cirrhosis

and other chronic diseases of liver; and V00-Y 99, external causes.

These groupings, regardless of the proportion of deaths in each of the causes of death that may be attributed to smoking or alcohol use, are helpful for assessment of the trend of deaths relating to the presence of these risk factors.

### **Codes of causes of death attributable to tobacco and alcohol**

In addition to the causes of death related to tobacco and alcohol use, other causes of death that may be considered attributable to use of these substances were studied. In the case of smoking, was selected deaths from malignant neoplasms of the trachea, bronchus and lung (C33-C34 of the 10th revision of the ICD). According to the scientific literature, 90% of deaths for these causes of death are due to smoking.

In the case of alcohol, the causes of death were selected in which alcohol is explicitly indicated in the name of the cause of death in the 10th revision of the ICD. These are the causes of death they generally do not appear included in epidemiological studies investigating the causes of death associated with alcohol use because their frequency is very low. The codes of the 10th revision of the ICD and causes of death are: E24.4, alcohol-induced pseudo-Cushing's syndrome; F10, mental and behavioural disorders due to use of alcohol; G31.2, degeneration of the nervous system due to alcohol; G62.1, alcoholic polyneuropathy; G72.1, alcoholic myopathy; I42.6, alcoholic cardiomyopathy; K29.2, alcoholic

gastritis; K70, alcoholic liver disease; K86.0, alcohol-induced chronic pancreatitis; R78.0, finding of alcohol in blood; X45, accidental poisoning by alcohol; X65, self-inflicted intentional poisoning by alcohol and Y15, poisoning by alcohol of undetermined intent.

In theory, deaths attributable to tobacco and deaths attributable to alcohol must provide a more sensitive indicator of the trend of causes of death associated with these risk factors.

### **Codes of causes of death related to the quality of the health system**

Some causes of death may be used to assess the quality of health services. In this report the causes that appear in the WHO European Health for All Database were chosen. Specifically, they are appendicitis (code K35-K38 of the 10th revision off the ICD), hernia, and intestinal obstruction (code K40-K46 and K56) and adverse effects of medicinal products and other therapeutic agents (code Y40-Y59).

### **Infant mortality**

Infant mortality rates are the most widely used indicator to measure the risk of mortality in the first year of life. The rates presented in this report are calculated by dividing the number of infant deaths in each year by the number of live births in the same year. The rates are presented by 1000 live births or by 100,000 live births. The information on the number of births each year was obtained from the file of births provided by the INE. The information on births is obtained from

the statistical birth bulletin, which after being completed by parents or family members and by health professionals, is sent by the civil registry offices to the INE. This report provides the trend in infant mortality since 1981.

It should be kept in mind that in the tables in which mortality rates are presented according to age of the deceased, the rates in children under one year of age are shown. These rates may not agree with the infant mortality rate. While the denominator for infant mortality rates is based on live births each year, the denominator of mortality in children under one year of age is comprised by the population of children under 1 estimated at 1st July of each year.

### **List of tabulation of causes of death in children under 1**

The data table on causes of death in children of this report contain the causes of death that produced a greater number of deaths in children under one year of age. To select the causes of death that were subject to tabulation, the criteria of the U.S. Centers for the Disease Control and Prevention were followed.

We studied in a more detailed manner the mortality trend for the 10 causes of death that produced the most deaths. Specifically, this information is provided since 2001. And, on the other hand, different data tables were prepared with the deaths in 2009 for 59 selected causes of death. One of these selected causes of death may be formed by a specific category of the ICD or by groupings of specific causes. Furthermore, those 59 selected causes

of death are not mutually exclusive of each other, but sometimes a cause of death is a grouping of other causes of death, some of which may appear in the list, but others not.

### **Source of data on population**

The populations used for calculation of mortality rates come from Spanish Population Projections for the period 1980-2010 from the 1981 Population Census (years 1981 to 1990), from the Spanish Population Projections calculated from the 1991 Population Census (from 1991 to 2001) and from the Current Population Estimates (from 2002 to 2009), all of them prepared by the INE. In all cases, data refer to the population at 1st July of each year. The table of the appendix shows the populations used.

In the population projections, the number of subjects by sex and age resulting in each census are used as the baseline population. In turn, the populations estimated in the projection are compared later to those obtained in the relevant census. The differences between the calculated and observed populations causes breaks in population series, which makes it necessary to link or to correct the projections established in accordance with the results of successive censuses, that is, they require that intercensal population estimates be obtained.

On the other hand, the baseline population used for estimates of the current population was the 2001 Population and Housing Census. Estimation of the trend in fertility and mortality is made from the information available from the final results of the

Natural Movement of Population and adjustment for migratory movements in each period is done using migrations estimated from the movements of the Ongoing Population Census.

### **Calculation of mortality rates**

Except for infant mortality rates, mortality rates were calculated by taking as the numerator the number of deaths in the respective year and as the denominator the population at 1st July of that year. The result is expressed per 100,000 population in each group analyzed. As noted, the infant mortality rates are per 1,000 or 100,000 live births.

Age distribution of the population varies from one year to the next and age distribution is also different between autonomous communities. Furthermore, the age distribution of the population is different in men from women. In fact, there is a greater proportion of women in advanced ages which are precisely the ages where there is a greater risk of mortality. Thus, comparison over time of the mortality rate in the entire country, comparison of the mortality rate among autonomous communities, or comparison of the mortality rate among men and women, without adjusting for the different age structure, offers distorted results of the real differences in the risk of mortality. On the other hand, the age-adjusted death mortality rate allows us to compare mortality among the different populations under study, because it eliminates distortion resulting from the different age structure in the comparison.

The age-adjusted mortality rate in each group is simply a weighted mean of the specific mortality rates by age, where the weighting is determined by the size of the standard population in each age category. The age-adjusted mortality rates in this report were estimated using the age distribution of the European standard population (Waterhouse JAH. Muir CS. Correa P. Powell J eds. Incident cancer in five continents. Lyon: IARC. 1976; 3: 456.). This population is as follows:

If  $T_i$  is the mortality rate per 100,000 population in the age category  $i$  in a given population group and  $P_i$  is the size of the standard population in age category  $i$ , the age-adjusted mortality rate in that group is  $\frac{\sum T_i P_i}{\sum P_i}$ .

Age	Population
Under 1	1600
1-4	6400
5-9	7000
10-14	7000
15-19	7000
20-24	7000
25-29	7000
30-34	7000
35-39	7000
40-44	7000
45-49	7000
50-54	7000
55-59	6000
60-64	5000
65-69	4000
70-74	3000
75-79	2000
80-84	1000
85 and over	1000

## Appendix. Population by age. Spain 2001-2009.

	Age											
	All ages	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
<b>Both sexes</b>												
2001	40,721,447	403,869	1,501,513	4,044,325	5,704,349	6,818,846	6,240,844	5,032,691	4,080,232	3,892,786	2,292,171	709,821
2002	41,314,019	414,156	1,559,252	4,031,186	5,575,712	6,983,974	6,430,207	5,148,663	4,173,539	3,891,481	2,376,599	729,250
2003	42,004,575	429,563	1,627,456	4,042,986	5,458,516	7,159,994	6,614,144	5,290,333	4,287,698	3,876,835	2,466,649	750,401
2004	42,691,751	445,971	1,689,957	4,059,818	5,341,098	7,316,895	6,789,823	5,451,359	4,410,563	3,852,856	2,555,020	778,391
2005	43,398,190	454,922	1,747,789	4,088,366	5,237,238	7,460,862	6,968,974	5,622,835	4,548,763	3,815,999	2,639,780	812,662
2006	44,068,244	462,461	1,796,935	4,134,050	5,139,794	7,557,199	7,142,877	5,799,942	4,678,611	3,782,589	2,721,098	852,688
2007	44,873,567	477,301	1,848,939	4,208,774	5,087,114	7,652,589	7,338,803	6,002,184	4,792,656	3,775,260	2,794,203	895,744
2008	45,593,385	494,188	1,899,713	4,301,762	5,037,981	7,672,211	7,517,170	6,203,043	4,891,008	3,781,045	2,855,316	939,948
2009	45,929,477	504,126	1,935,265	4,375,692	4,932,541	7,527,585	7,627,610	6,368,426	4,971,668	3,789,770	2,906,268	990,526
<b>Men</b>												
2001	19,956,780	207,701	771,449	2,077,148	2,921,038	3,471,586	3,127,378	2,497,112	1,976,768	1,779,656	910,315	216,629
2002	20,266,005	212,731	800,853	2,069,866	2,855,801	3,566,812	3,229,071	2,555,234	2,024,216	1,780,080	949,485	221,856
2003	20,626,192	221,429	835,831	2,075,819	2,795,116	3,667,417	3,329,890	2,626,095	2,081,021	1,774,408	991,040	228,126
2004	20,987,670	229,883	868,613	2,084,465	2,735,115	3,758,199	3,428,470	2,707,015	2,141,259	1,765,381	1,031,871	237,399
2005	21,367,297	234,489	898,694	2,099,387	2,683,966	3,844,965	3,531,474	2,793,693	2,208,536	1,751,045	1,071,171	249,877
2006	21,725,232	238,360	924,496	2,122,756	2,635,454	3,903,848	3,632,232	2,883,558	2,271,382	1,738,859	1,109,039	265,248
2007	22,155,286	245,850	951,643	2,161,485	2,609,810	3,962,434	3,746,598	2,986,735	2,326,346	1,739,500	1,142,736	282,149
2008	22,512,354	254,484	977,123	2,209,304	2,581,615	3,966,630	3,845,720	3,087,905	2,373,266	1,745,947	1,170,895	299,465
2009	22,670,866	259,728	995,330	2,247,483	2,527,370	3,882,169	3,906,821	3,172,000	2,412,311	1,753,362	1,194,897	319,395
<b>Women</b>												
2001	20,764,667	196,168	730,064	1,967,177	2,783,311	3,347,260	3,113,466	2,535,579	2,103,464	2,113,130	1,381,856	493,192
2002	21,048,014	201,425	758,399	1,961,320	2,719,911	3,417,162	3,201,136	2,593,429	2,149,323	2,111,401	1,427,114	507,394
2003	21,378,383	208,134	791,625	1,967,167	2,663,400	3,492,577	3,284,254	2,664,238	2,206,677	2,102,427	1,475,609	522,275
2004	21,704,081	216,088	821,344	1,975,353	2,605,983	3,558,696	3,361,353	2,744,344	2,269,304	2,087,475	1,523,149	540,992
2005	22,030,893	220,433	849,095	1,988,979	2,553,272	3,615,897	3,437,500	2,829,142	2,340,227	2,064,954	1,568,609	562,785
2006	22,343,012	224,101	872,439	2,011,294	2,504,340	3,653,351	3,510,645	2,916,384	2,407,229	2,043,730	1,612,059	587,440
2007	22,718,281	231,451	897,296	2,047,289	2,477,304	3,690,155	3,592,205	3,015,449	2,466,310	2,035,760	1,651,467	613,595
2008	23,081,031	239,704	922,590	2,092,458	2,456,366	3,705,581	3,671,450	3,115,138	2,517,742	2,035,098	1,684,421	640,483
2009	23,258,611	244,398	939,935	2,128,209	2,405,171	3,645,416	3,720,789	3,196,426	2,559,357	2,036,408	1,711,371	671,131



## Table of Contents

<b>Abstract</b> .....	<b>3</b>
<b>Main findings</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>5</b>
<b>Methods</b> .....	<b>5</b>
<b>Results and Discussion</b> .....	<b>7</b>
<b>Deaths and mortality rates</b> .....	<b>7</b>
<b>Age- and sex-specific mortality rates</b> .....	<b>8</b>
• <b>Leading causes of death</b> .....	<b>11</b>
• <b>Mortality and tobacco</b> .....	<b>16</b>
• <b>Mortality and alcohol</b> .....	<b>16</b>
• <b>Mortality related to quality of the health system</b> .....	<b>17</b>
<b>References</b> .....	<b>22</b>
<b>List of Tables</b> .....	<b>24</b>
<b>Appendix</b> .....	<b>72</b>
• <b>Source of data on deaths</b> .....	<b>73</b>
• <b>Classification of basic cause of death</b> .....	<b>73</b>
• <b>Lists of tabulation of causes of death</b> .....	<b>74</b>
• <b>Codes of causes of death related to tobacco and alcohol</b> .....	<b>75</b>
• <b>Codes of causes of death attributable to tobacco and alcohol</b> .....	<b>75</b>
• <b>Codes of causes of death related to the quality of the health system</b> .....	<b>76</b>
• <b>Infant mortality</b> .....	<b>76</b>
• <b>List of tabulation of causes of death in children under 1</b> .....	<b>76</b>
• <b>Source of data on population</b> .....	<b>77</b>
• <b>Calculation of mortality rates</b> .....	<b>77</b>
<b>Appendix. Population by age. Spain 2001-2009</b> .....	<b>79</b>