

Piraeus, 23 February 2023

Causes of Death: 2020

The Hellenic Statistical Authority (ELSTAT) announces statistical data on the causes of death for the year 2020. The data sources are the death certificates submitted by medical practitioners and, for violent or sudden deaths, by the Forensic Medicine Authorities.

Data on the causes of death are presented in accordance with the 10th Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10, version 2008) which was adopted in 2014. In particular, the data are as follows:

- In 2020, deaths amounted to 131,025¹ (66,162 men and 64,863 women), recording an increase of 4.9%, in comparison to the 124,954 deaths (63,079 men and 61,875 women) recorded in 2019.
- The main causes of death in 2020 were diseases of the circulatory system with 45,741 deaths, followed by neoplasms with 30,829 deaths and by diseases of the respiratory system with 12,576 deaths (Tables 1-2, Graph 1).
- Deaths caused by COVID-19 amounted to 5,028² (2,955 men and 2,073 women) in 2020. Most of the deaths were recorded in the age group over 75 years (3,226 deaths), followed by the age groups 60-74 years and 45-59 years with 1,362 and 371 deaths, respectively. In the age group under 15 years, no deaths due to the disease were recorded. The COVID-19 disease was the only cause of death, as mentioned in the death certificates, in the 41.0% of the COVID-19 deaths (2,061 deaths), whereas for the 59.0% (2.967 deaths) there was reference to a pre-existing condition (comorbidity). The most common pre-existing conditions of the deceased by COVID-19 were diseases of the circulatory system, neoplasms and endocrine, nutritional and metabolic diseases, with 29.0% (1,456 deaths), 9.6% (485 deaths) and 8.9% (447 deaths), respectively (Table 6, Graph 4).
- In comparison to previous years, the share of deaths caused by diseases of the circulatory system rose from 10.0% in 1938 (first year when analytical data were made available) to 25.0% in 1956 (first year after the Second World War for which data were available) and up to 34.9% in 2020. The corresponding share of deaths caused by neoplasms rose from 4.1% in 1938 to 11.7% in 1956 and up to 23.5% in 2020. On the contrary, deaths caused by infectious and parasitic diseases, which in 1938 accounted for 18.4% of the total deaths, dropped significantly to 3.0% in 2020 (Table 3, Graph 2). It should be noted that classification changes should be considered when assessing the comparability of data over time.

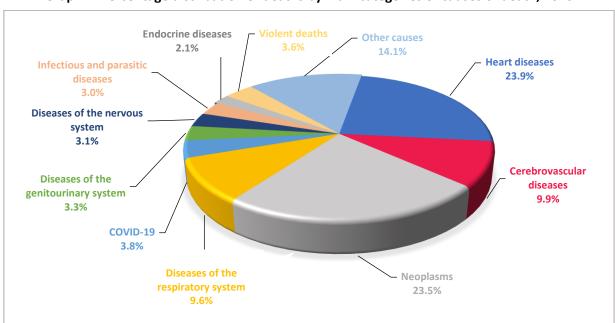
Georgia Thymoglou, tel: +30 213 135 2175, e-mail: g.thymoglou@statistics.gr Christos Christou, tel: +30 213 135 2884, e-mail: c.christou@statistics.gr

¹ It is noted that the data on deaths are finalized after the processing of the data on the causes of death, and therefore, the total number of deaths announced in this Publication does not fully coincide with the data published in the Publication on "Vital Statistics: 2020" of the 1st October 2021.

² Data on deaths caused by COVID-19 presented in this Publication have been compiled according to the International Guidelines for certification and classification (coding) of COVID-19 disease as cause of death, of the World Health Organization and may differ from those announced by the National Public Health Organization (EODY).

- The number of deaths due to suicides, as recorded by the Forensic Medicine and Criminal Investigation Authorities, amounted to 464 in 2020, compared to 530 in 2019 (decrease of 12.5%). It should be noted that any discrepancies between these data and the corresponding data of other agencies may be on account of the different methodology used or other underlying factors, such as the need for time-consuming research by the Forensic Medicine Authorities in order to investigate the conditions resulting to the death, deaths caused by late effects after a suicide attempt, etc.
- The data presented in this Publication do not include data on the number of refugees/migrants who died while border-crossing before being registered in the Country or have drowned in Greek territorial waters. The corresponding figures per year are 302 in 2015, 164 in 2016, 27 in 2017, 72 in 2018, 62 in 2019 and 59 in 2020.

The data on the causes of death for the year 2020 are presented broken down by sex, age group, place of usual residence of the deceased and month of occurrence (Tables 4-8, Graphs 3-5).



Graph 1. Percentage distribution of deaths by main categories of causes of death, 2020

Table 1. Deaths by main categories of causes of death, years 2015-2020 and average number of deaths for the years 2015-2019

Year	2015	2016	2017	2018	2019	2020	Average 2015-2019
Total deaths	121,183	118,788	124,495	120,291	124,954	131,025	121,942
Heart diseases	30,592	28,917	31,618	30,526	29,804	31,275	30,291
Cerebrovascular diseases	14,445	13,779	13,797	12,574	12,973	13,022	13,514
Neoplasms	30,252	30,673	30,567	30,331	30,637	30,829	30,492
Diseases of the respiratory system	14,835	13,809	13,847	12,668	13,591	12,576	13,750
Diseases of the genitourinary system	3,663	3,276	3,578	3,544	3,866	4,275	3,585
Diseases of the nervous system	2,963	3,235	3,767	3,652	3,546	4,102	3,433
Infectious and parasitic diseases	3,936	4,013	4,165	4,054	4,234	3,921	4,080
Endocrine, nutritional and metabolic diseases	2,036	2,006	2,464	2,509	2,740	2,767	2,351
Violent deaths	3,946	4,062	4,391	4,518	4,604	4,752	4,304
Other causes	14,515	15,018	16,301	15,915	18,959	18,478	16,142
COVID-19	-	-	-	-	-	5,028	-

Table 2. Deaths by categories of causes of death, broken down by the most important subcategories, 2015-2020

Causes of death	2015	2016	2017	2018	2019	2020
Total deaths	121,183	118,788	124,495	120,291	124,954	131,025
Certain infectious and parasitic diseases	3,936	4,013	4,165	4,054	4,234	3,921
Neoplasms among which:	30,252	30,673	30,567	30,331	30,637	30,829
Malignant neoplasms of colon, rectosigmoid junction, rectum, anus and anal canal	2,805	2,891	2,686	2,681	2,851	2,774
Malignant neoplasm of liver and intrahepatic bile ducts	1,558	1,572	1,422	1,422	1,480	1,384
Malignant neoplasm of pancreas	1,859	1,833	1,882	1,914	1,898	2,000
Malignant neoplasms of trachea, bronchus and lung	7,158	7,127	7,178	7,046	7,117	7,014
Malignant neoplasm of breast	2,138	2,191	2,187	2,201	2,261	2,219
Malignant neoplasm of prostate	1,763	1,646	1,688	1,711	1,706	1,785
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	239	271	332	263	340	338
Endocrine, nutritional and metabolic diseases among which:	2,036	2,006	2,464	2,509	2,740	2,767
Diabetes mellitus	1,780	1,753	2,122	2,220	2,384	2,401
Mental and behavioural disorders among which:	1,159	1,401	1,827	1,940	2,256	2,658
Dementia	1,009	1,244	1,624	1,720	1,949	2,280
Diseases of the nervous system among which:	2,963	3,235	3,767	3,652	3,546	4,102
Parkinson disease	1,158	1,385	1,651	1,609	1,560	1,474
Alzheimer's disease	591	600	645	545	504	514
Diseases of the eye and adnexa	-	-	-	-	-	-
Diseases of the ear and mastoid process	1	1	-	1	2	1
Diseases of the circulatory system among which:	46,411	44,164	46,942	44,590	44,234	45,741
Heart diseases	30,592	28,917	31,618	30,526	29,804	31,275
Cerebrovascular diseases	14,445	13,779	13,797	12,574	12,973	13,022
Diseases of the respiratory system among which:	14,835	13,809	13,847	12,668	13,591	12,576
Influenza	43	135	93	36	139	128
Pneumonia & other acute lower respiratory infections	6,732	6,535	6,766	6,145	6,608	6,038
Chronic lower respiratory diseases	3,486	2,976	3,260	3,029	3,244	3,047
Diseases of the digestive system	3,311	3,500	3,617	3,544	3,585	3,453
Diseases of the skin and subcutaneous tissue	50	43	62	54	79	57
Diseases of the musculoskeletal system and connective tissue	233	310	318	352	408	418
Diseases of the genitourinary system	3,663	3,276	3,578	3,544	3,866	4,275
Pregnancy, childbirth, and the puerperium	5	6	10	4	6	3
Certain conditions originating in the perinatal period	195	219	159	173	195	168
Congenital malformations, deformations and chromosomal abnormalities	182	238	213	184	196	226
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified	7,766	7,561	8,236	7,910	10,435	9,712
External causes of mortality - Violent deaths	3,946	4,062	4,391	4,518	4,604	4,752
Transport accidents	956	1,013	917	865	840	699
Falls	584	658	902	918	1,063	1,395
Accidental drowning and submersion	350	405	347	367	363	272
Accidental poisoning by and exposure to noxious substances	284	238	268	268	276	277
Other accidents	677	704	888	923	848	933
Suicide	529	484	523	567	530	464
Homicide, assault	99	87	89	109	93	86
Other external causes	467	473	457	501	591	626
COVID-19	-	-	-	-	-	5,028

Table 3. Main categories of causes of death, years 1938, 1956, 1980, 1990, 2000, 2010 and 2020

Causes of death	1938	1956	1980	1990	2000	2010	2020
Total deaths	93,766	59,460	87,282	94,152	105,170	109,084	131,025
Diseases of the circulatory system	9,347	14,893	38,680	49,079	52,283	47,709	45,741
Neoplasms	3,831	6,928	16,235	19,466	23,775	27,177	30,829
Diseases of the respiratory system	17,849	3,290	6,552	5,171	7,994	10,341	12,576
Infectious and parasitic diseases	17,283	3,185	832	604	483	1,058	3,921
Violent deaths	2,687	2,821	4,695	4,434	4,496	3,554	4,752
Other causes	42,769	28,343	20,288	15,398	16,139	19,245	33,206

Graph 2. Percentage distribution of main categories of causes of death, years 1938, 1956, 1980, 1990, 2000, 2010 and 2020

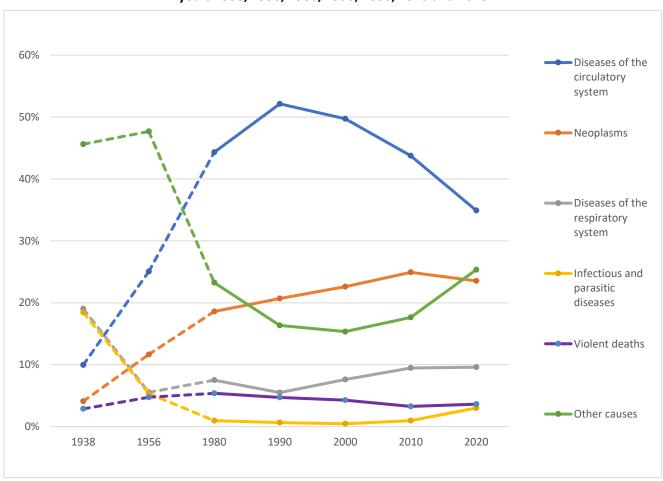


Table 4. Deaths by main categories of causes of death, by age group and sex, 2020

	Total					De	eaths by age	e group ar	nd sex				
Causes of death	deaths	unc	ler 15	15	5-29	30	0-44	4!	5-59	60)-74	75 ar	nd over
	per cause	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Total deaths	131,025	232	159	410	133	1,228	581	5,344	2,717	16,090	8,479	42,858	52,794
Certain infectious and parasitic diseases	3,921	1	2	10	2	32	7	81	38	233	171	1,247	2,097
Neoplasms among which:	30,829	13	11	44	38	218	273	1,745	1,435	6,761	3,675	9,657	6,959
Malignant neoplasm of colon	2,442	0	0	2	0	19	14	100	81	426	257	840	703
Malignant neoplasm of bronchus and lung	7,013	0	0	0	0	31	25	507	221	2,579	709	2,248	693
Malignant neoplasm of breast	2,219	0	0	0	4	0	73	4	310	8	593	16	1,211
Malignant neoplasm of prostate	1,785	0	0	0	0	2	0	24	0	293	0	1,466	0
Malignant neoplasm of brain	1,051	1	6	7	11	32	19	108	80	244	162	189	192
Leukaemia	1,172	3	1	8	3	13	13	46	35	210	109	419	312
Diseases of the circulatory system among which:	45,741	3	3	33	13	325	90	1,791	483	4,534	2,014	15,181	21,271
Heart diseases	31,275	2	1	29	11	262	64	1,470	331	3,284	1,321	10,325	14,175
Cerebrovascular diseases	13,022	1	2	4	1	41	23	229	134	990	594	4,334	6,669
Diseases of the respiratory system	12,576	7	5	6	2	35	12	183	82	843	436	5,209	5,756
Congenital malformations, deformations and chromosomal	226	69	55	8	8	4	11	30	16	14	11	0	0
Other pathological causes	27,952	118	72	36	27	166	85	732	434	2,168	1,548	8,697	13,869
Violent deaths	4,752	21	11	267	42	408	81	516	124	590	209	1,171	1,312
Transport accidents	699	8	1	149	18	113	18	120	24	102	28	101	17
Falls	1,395	2	0	7	2	17	3	57	6	72	29	482	718
Accidental drowning and submersion	272	6	1	16	1	14	2	19	2	62	30	77	42
Accidental poisoning by and exposure to noxious substances	277	0	0	26	3	119	22	71	13	6	3	6	8
Other accidents	933	5	5	15	4	49	8	100	18	144	43	262	280
Suicide	464	0	1	36	10	71	17	105	31	93	14	71	15
Homicide, assault	86	0	2	14	3	18	8	13	6	9	1	8	4
Other external causes	626	0	1	4	1	7	3	31	24	102	61	164	228
COVID-19	5,028	0	0	6	1	40	22	266	105	947	415	1,696	1,530

Graph 3. Percentage distribution of deaths by main categories of causes of death, in total deaths by age group and sex, 2020

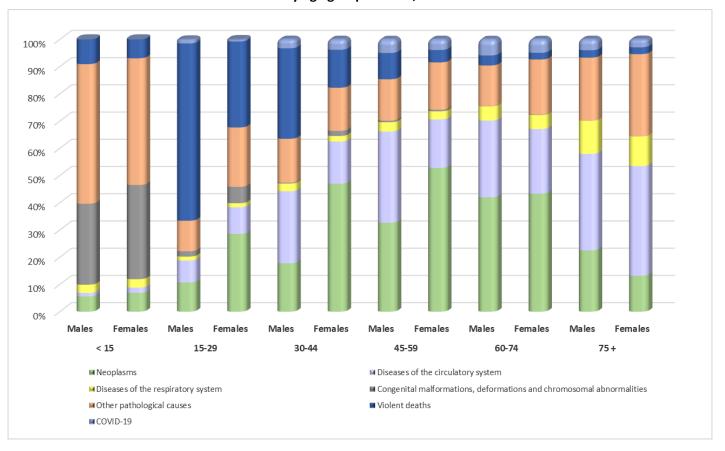


Table 5. Deaths by month of occurrence and cause of death, 2020

	Total				C	auses of death				
Month	deaths per month	Certain infectious and parasitic diseases	Neoplasms	Heart diseases	Heart Cerebrovascular diseases diseases		Influenza, pneumonia & other Transport acute lower respiratory infections		COVID- 19	Other causes
Total deaths	131,025	3,921	30,829	31,275	13,022	6,166	699	464	5,028	39,621
January	12,676	351	2,838	2,932	1,367	826	49	40	-	4,273
February	11,126	534	2,460	2,805	982	671	57	32	-	3,585
March	11,330	271	2,545	2,784	1,287	811	34	45	47	3,506
April	9,868	175	2,386	2,608	1,070	480	33	33	96	2,987
May	9,873	288	2,558	2,259	1,013	419	54	33	41	3,208
June	9,546	415	2,573	2,248	863	331	57	42	14	3,003
July	10,419	382	2,566	2,270	1,085	452	69	45	14	3,536
August	10,838	483	2,631	2,415	970	446	76	42	65	3,710
September	9,599	267	2,506	2,119	1,015	408	86	40	126	3,032
October	9,979	206	2,608	2,464	969	432	83	45	250	2,922
November	12,572	285	2,573	2,987	1,307	440	66	29	1,958	2,927
December	13,199	264	2,585	3,384	1,094	450	35	38	2,417	2,932

Table 6. Deaths caused by COVID-19 disease by main pre-existing conditions, age group and sex, 2020

	Total	Deaths by age group and sex										
Pre-existing condition (comorbidity)	COVID-19 deaths	Unde	er 44	45-59		60-	-74	75 and over				
	per cause	Males	Females	Males	Females	Males	Females	Males	Females			
Total COVID-19 deaths	5,028	46	23	266	105	947	415	1,696	1,530			
Without pre-existing condition	2,061	24	11	133	45	391	163	670	624			
Diseases of the circulatory system	1,456	0	2	47	9	254	89	544	511			
Neoplasms	485	10	6	23	16	115	52	176	87			
Endocrine, nutritional and metabolic diseases	447	5	1	31	20	95	53	128	114			
Diseases of the respiratory system	163	2	0	6	1	39	14	59	42			
Diseases of the genitourinary system	137	0	1	1	2	19	9	56	49			
Diseases of the nervous system	86	2	0	6	3	10	14	28	23			
Other pathological causes	193	3	2	19	9	24	21	35	80			

Graph 4. Percentage distribution of deaths caused by COVID-19 disease by main pre-existing conditions, in total COVID-19 deaths, by age group and sex, 2020

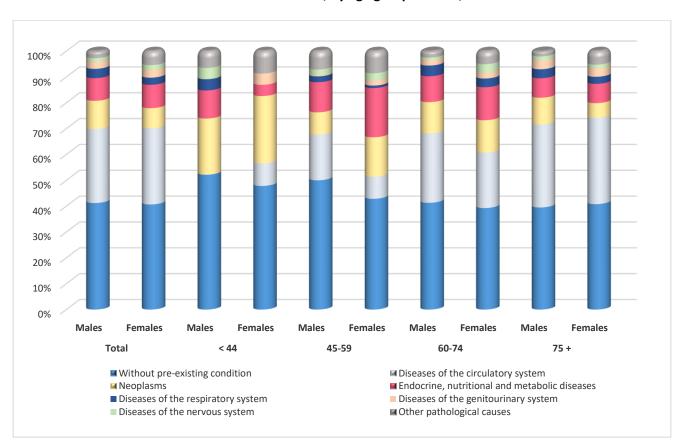


Table 7. Cause-specific mortality by sex, for important categories of causes of death, 2020

Causes of Death	Total	Males	Females
Septicaemia	32.0	26.1	37.5
Malignant neoplasm of colon	22.8	26.6	19.2
Malignant neoplasm of pancreas	18.7	21.1	16.4
Malignant neoplasm of bronchus and lung	65.6	103.1	30.0
Malignant neoplasm of breast	20.7	0.5	39.9
Malignant neoplasm of prostate	16.7	34.3	0.0
Malignant neoplasm of bladder	12.2	20.7	4.1
Diabetes mellitus	22.4	23.6	21.4
Dementia and Alzheimer's disease	26.1	19.3	32.6
Heart diseases	292.3	295.3	289.5
Cerebrovascular diseases	121.7	107.6	135.1
Influenza, pneumonia & other acute lower respiratory infections	57.6	56.1	59.1
Chronic obstructive pulmonary disease	28.1	33.5	23.0
COVID-19	47.0	56.8	37.7
Senility	23.0	13.6	31.9
Transport accidents	6.5	11.4	1.9
Suicide	4.3	7.2	1.6

Graph 5. Cause-specific mortality by sex, for important categories of causes of death, 2020

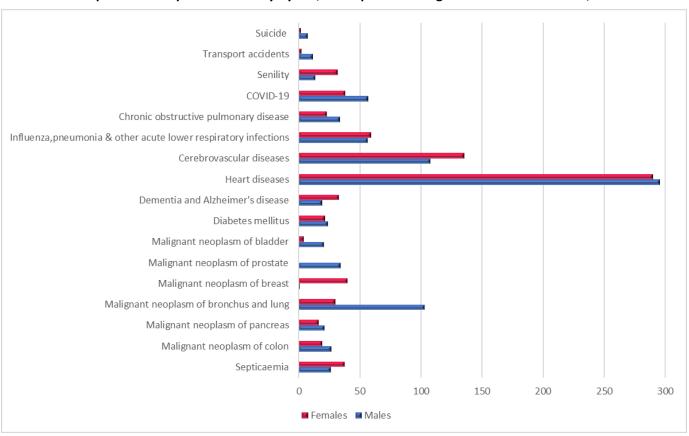


Table 8. Cause-specific mortality by main cause of death and NUTS2 Region of the usual residence, 2020*

<u></u>													
Causes of Death	Anatoliki Makedonia & Thraki	Kentriki Makedonia	Dytiki Makedonia	Thessalia	Ipeiros	Ionia Nisia	Dytiki Ellada	Sterea Ellada	Peloponnisos	Attiki	Voreio Aigaio	Notio Aigaio	Kriti
Total deaths	1,459.4	1,339.3	1,445.9	1,365.4	1,267.3	1,307.4	1,243.5	1,229.5	1,326.5	1,133.4	1,057.8	853.1	999.8
Certain infectious and parasitic diseases	27.0	34.7	42.9	43.5	44.6	55.7	43.6	34.1	41.5	34.9	34.4	21.0	40.2
Neoplasms	314.4	304.1	298.1	300.9	298.1	299.8	290.2	264.0	295.4	288.1	257.3	215.1	246.3
Diseases of the circulatory system among which:	557.3	452.2	556.3	457.7	508.6	448.8	430.9	475.3	469.4	389.8	338.4	297.1	319.6
Heart diseases	386.1	300.4	391.5	292.5	317.1	293.9	276.6	313.2	324.7	280.6	222.4	200.2	223.7
Cerebrovascular diseases	156.0	139.0	154.2	153.3	174.0	135.6	143.5	149.3	127.6	95.5	103.3	85.4	83.4
Diseases of the respiratory system	126.9	99.9	101.8	126.3	108.4	135.6	150.4	113.8	159.6	117.7	103.8	86.9	106.5
Other pathological causes	280.7	276.9	304.1	316.4	246.0	310.7	271.5	285.1	295.9	238.1	271.7	191.3	246.5
Violent deaths	50.4	45.0	44.4	44.8	44.0	46.9	43.3	44.0	57.3	41.7	32.3	38.0	36.4
Transport accidents	6.4	5.3	4.2	6.3	7.5	6.4	9.6	6.7	8.8	6.2	4.8	8.3	4.7
Falls	17.6	15.1	19.4	13.5	14.8	13.3	10.3	12.8	16.1	11.2	11.8	8.6	11.2
Accidental drowning and submersion	1.3	2.4	1.5	1.4	3.0	3.5	1.8	1.6	2.1	2.5	2.6	3.7	1.1
Accidental poisoning by and exposure to noxious substances	1.2	2.6	1.1	2.2	1.2	1.5	1.2	2.7	2.3	3.7	0.9	1.4	1.7
Other accidents	10.2	9.1	9.5	9.3	6.0	10.4	10.6	10.3	11.6	7.7	5.7	6.3	7.7
Suicide	5.4	3.1	3.4	4.5	6.0	5.9	4.0	4.5	6.5	4.0	2.2	3.5	6.0
Homicide, assault	0.8	0.4	0.0	0.6	0.6	0.5	1.1	0.5	1.2	0.8	1.3	0.3	1.4
Other external causes	7.5	7.0	5.3	7.0	4.8	5.4	4.6	4.9	8.8	5.5	3.1	5.8	2.7
COVID-19	102.7	126.5	98.3	75.8	17.8	9.9	13.6	13.3	7.4	23.3	20.1	3.7	4.2

^{*}Deaths of foreign residents, as well as those whose permanent residence was unknown, are not included.

EXPLANATORY NOTES

Vital Statistics

Data on the causes of death are part of the Vital Statistics Survey, which is conducted in its current form since 1956. In cooperation with the Regional Statistical Offices of ELSTAT, individual statistical data on vital events (Marriages, Births, Deaths and Registered Partnerships) are collected on a monthly basis from the Civil Register Offices all over Greece. From 1938 onwards, data on the causes of death are compiled based on death certificates filled in by medical practitioners or forensic pathologists. As regards violent or sudden deaths, where the cause of death is not specified and more investigation is needed, data on the causes of death are collected through the Forensic Medicine Authorities. The survey produces statistical results on a yearly basis. Annual data are announced no later than two years after the reference year according to Commission Regulation (EU) No 328/2011.

Legal Framework

The survey is fully harmonized with the European statistical practice: Regulation (EC) No 1338/2008 of the European Parliament and of the Council on "Community statistics on public health and health and safety at work" and Implementing Commission Regulation (EU) No 328/2011, as regards "statistics on causes of death". The survey is governed by Law 344/76 concerning the "Registration of vital events" which lays down the obligations of the Civil Register Offices to collect and then to transmit the data, as well as by Law 3832/2010 on the "Hellenic Statistical System", as in force.

Coverage

The survey is exhaustive and covers all deaths, that have occurred in the Greek territory. Cases of refugees/migrants who died while border-crossing before being registered in the Country or have drowned in Greek territorial waters, are not included in the national data on the Causes of Death.

Reference Period

1/1/2020-31/12/2020.

Definitions

Death: means the permanent disappearance of all evidence of life at any time after live birth has taken place.

Main or underlying cause of death: pursuant to the 10th Revision of the International Classification of Diseases (ICD-10) of the World Health Organisation (WHO), is the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which caused the fatal injury.

Cause-Specific mortality: the rate refers to the number of deaths assigned to a specific cause during a given time interval divided by the estimated population in the middle of the year, per 100,000 inhabitants.

Methodology

Vital statistics data, after having been collected from the Civil Register Offices, undergo the necessary quality checks and then they are processed and tabulated. All causes of death are coded at a central level by a single team of coders to ensure internal coherence. From 2014 onwards, ELSTAT applies the 4-digit ICD-10 Classification of Diseases, 2008 version. The time series up to 2014 are available in the 4-digit ICD-9 Classification of Diseases. Data for the years 2014-2016 are available in both ICD-9 and ICD-10. From 2017 onwards, data will be available only in ICD-10.

According to the International Guidelines for certification and classification (coding) of COVID-19 as cause of death of the World Health Organization, a death due to COVID-19 is defined for surveillance purposes as a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID disease (e.g. trauma). There should be no period of complete recovery from COVID-19 between illness and death. A death due to COVID-19 may not be attributed to another disease (e.g. cancer), even if there are preexisting pathological conditions that are suspected of triggering a severe course of COVID-19.

According to ICD-10-GrM: International Statistical Classification of Diseases and Related Health Problems 10th Revision, Greek Amendement, Version 2017-v.2, as revised and reissued, including the additional codes for the classification of COVID-19, the disease is classified in Chapter XXII – Codes for special purposes (U00-U99) and specifically in the codes U07.1: COVID-19, virus identified $\kappa\alpha$ U07.2: virus not identified for the clinically or epidemiologically diagnosed cases, the possible cases and the suspected cases of COVID-19.

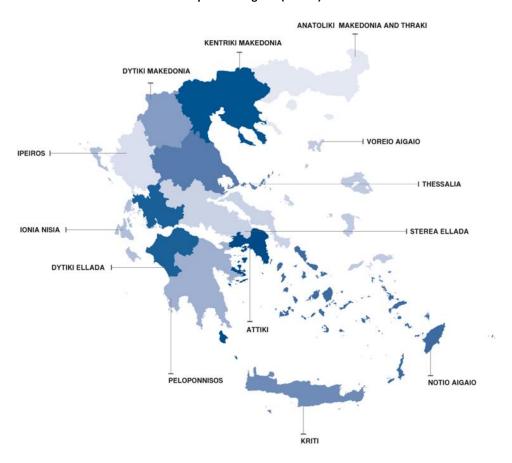
Comments

It should be noticed that in Tables 2, 4 and 8, the subcategory "other external causes" of "violent deaths" includes deaths due to misadventures to patients during surgical and medical care, deaths in cases where an investigation by a medical or legal authority has not determined whether the injuries are accidental, suicidal or homicidal, deaths caused by injuries inflicted by law-enforcing agents (including military) on duty while attempting to enforce the law and deaths caused by injuries during war operations.

Geographical Classification

Geographical classification is based on the Nomenclature of Territorial Units for Statistics (NUTS).

Map of the Regions (NUTS2) of Greece



References

More information (tables, methodology) concerning Vital Statistics is available on the website of ELSTAT: https://www.statistics.gr/, at the link Statistics, Population and Social Conditions, Demography, Deaths-Causes of death (ICD-9) and Deaths-Causes of death (ICD-10).