



PII: S0959-8049(99)00154-9

Original Paper

Cancer Mortality in Europe, 1990–1994, and an Overview of Trends from 1955 to 1994

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Mortality data, abstracted from the WHO database, are presented in tabular form for 26 cancer sites or groups of sites, plus total cancer mortality, in 35 European countries during the period 1990–1994. Trends in mortality are also given in graphical form for 24 major countries over the period 1955–1994. In most western European countries total cancer mortality was—for the first time—moderately downwards in the early 1990s. Such favourable trends included some decline in lung cancer mortality for males, the persistent decline in stomach cancer for both sexes, and of cervical cancer for women, as well as some decline in breast and colorectal cancers, plus other neoplasms (testis, lymphoid neoplasms), whose treatment has further improved over the last few years. However, cancer mortality was still upwards in a few southern and eastern European countries, including Hungary and Poland, where total cancer mortality rates in middle-aged males are now the highest ever registered in Europe. The favourable trends in western Europe over the recent years are similar to those observed in the U.S.A. © 1999 Elsevier Science Ltd. All rights reserved.

Key words: epidemiology, mortality, neoplasms, time trends, Europe

Eur J Cancer, Vol. 35, No. 10, pp. 1477–1516, 1999

INTRODUCTION

WE REVIEWED and published trends in mortality from 27 cancers or groups of cancers in 28 European countries over the period 1955–1989, to provide a summary documentation of the extent of variation in patterns and trends in cancer mortality across Europe over the last four decades [1].

There are several reasons for updating such work, including the changed political boundaries within Europe, with the consequent definition of new national entities (such as the Russian Federation, the Czech Republic, Slovakia, Slovenia, Macedonia, Republic of Moldova), and the availability of data for a few other countries (Albania, Estonia, Latvia). This work, moreover, may have relevant implications for analytical epidemiology, since substantial changes in standard of life and several risk factor exposures have been observed over

recent years, mostly in a few former non-market economy countries of central and eastern Europe [2–8]. These had major and dramatic implications on increasing total mortality, and have influenced—though to a lesser extent—cancer mortality as well [9–11]. In contrast, over the last few years, some decline in cancer mortality has been reported from the U.S.A. [12] and the European Union [9].

In this paper, therefore, we present in tabular form mortality data for 26 cancer sites or groups of sites, plus total cancer mortality, in 35 European countries during the quinquennium 1990–1994. Long-term age-standardised rates are also given in graphical form for 24 major countries over the period 1955–1994.

MATERIALS AND METHODS

Official death certification numbers for 35 European countries (including the Russian Federation, but excluding a few small countries such as Andorra and Liechtenstein) were derived from the World Health Organization (WHO) database as available on electronic support [1, 8, 9]. Besides the

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Received 22 Mar. 1999; accepted 22 Jun. 1999.

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Table 2. *Cancers or groups of cancers considered*

Type of cancer	8 ICD	9 ICD
Mouth or pharynx	140–149	140–149
Oesophagus	150	150
Stomach	151	151
Intestines, chiefly colon and rectum	152–154	152–154
Liver	155	155.0
Gallbladder and bile ducts	156	156
Pancreas	157	157
Larynx	161	161
Trachea, bronchus and lung	162	162
Pleura	163.0	163
Bone	170	170
Connective and soft tissue sarcomas	171	171
Skin including melanoma	172 + 173	172 + 173
Breast	174	174
Uterus (cervix and corpus)	180–182	179–182
Ovary	183	183
Prostate	185	185
Testis	186	186
Bladder	188	188
Kidney	189	189
Eye	190	190
Thyroid	193	193
Hodgkin's disease	201	201
Non-Hodgkin's lymphomas	200, 202, 208, 209	200, 202
Multiple myeloma	203	203
Leukaemias	204–207	204–208
Total, all sites	140–239	140–239

ICD, International Classification of Diseases.

populations, age-specific rates for each 5-year age group and calendar period were computed. Age-standardised rates, at all ages and truncated 35–64 years, were based on the world standard population [15].

In a few countries, data were missing for one or more calendar years (Table 1). No extrapolation was made for missing data.

RESULTS AND COMMENTS

For each cancer site, one table (Table 3) and one figure is presented. The table includes for the period 1990–1994 (unless mentioned in Table 1), for each site and sex, the observed number of deaths and the age-standardised (world standard) overall and truncated 35–64 years mortality rates.

Figure 1 includes world standardised rates (at all ages and truncated 35–64 years) for 24 countries and 5-year calendar periods from 1955–1959 to 1990–1994 for males and females. Selected scales have been defined for each neoplasm to assist reading.

This report has the major aim of providing a summary description and documentation of the global pattern of trends in cancer mortality in Europe. Only a few general comments, and a selected number of references, are included, to assist reading and interpretation of trends for major cancer sites.

It is important to consider problems related to random variation, which are clearly greater in relation to smaller populations and rarer cancers. Since this is essentially a descriptive report, no inference is made on the statistical significance of rates and trends. Secondly, and more complex, are problems of death certification reliability and validity in various countries [16, 17]. In general, for several common cancer sites, including lung, stomach, colorectum and breast,

death certification is sufficiently reliable to permit meaningful inference on trends for most European countries, particularly those from western Europe, as well as for Hungary and Poland, and chiefly under the age of 65 years (that is the truncated rates). Greater caution is required for a few other countries (particularly new national entities, for which no comparison with previous calendar periods was available), and cancer sites, whose diagnosis and certification may be substantially influenced by the availability of diagnostic techniques and the accuracy of death certification [16–19], reflecting variable data validity and reliability, and different criteria and attitudes towards death certification. These include, amongst others, liver, bone, prostate, myeloma and other lymphoid neoplasms.

The highest mortality rates from cancer of the oral cavity and pharynx in males were registered in the 1970s in France and Italy, but rates in those countries have been levelling off over the last decade. In contrast, substantial rises were observed in Germany and most other central and eastern European countries, reaching exceedingly high rates in Hungary (42/100 000 males aged 35–64 years). Some rise in young males was observed also in the U.K. over the most recent calendar period, whilst trends were inconsistent in Scandinavian countries. These patterns probably reflect trends in alcohol and tobacco consumption in various European countries over the last few decades, and further stress the size and importance of the recent oral cancer epidemic in males in several areas of Europe [20]. Oral and pharyngeal rates were much lower, and trends generally unremarkable, for females. However, some decline in female oral and pharyngeal cancer rates was observed in Finland and the U.K., and some rise in Germany, Hungary and Poland. In 1990–1994 the highest mortality rates were registered in Hungary (17.3/100 000 in males and 2.2/100 000 in females); the lowest were registered in Greece (1.8 and 0.5/100 000 males and females, respectively).

In several aspects, the pattern was similar for oesophageal cancer, another neoplasm strongly related to alcohol and tobacco consumption. Over the last few years, in particular, substantial rises were observed in Denmark, Germany, U.K., Hungary and Poland, confirming previous patterns, which had been related to changes in alcohol drinking in those countries [21]. In 1990–1994 the highest mortality rate was registered in France for males (10.3/100 000) and in Scotland for females (5.5/100 000); the lowest was seen in Macedonia for males (1.4/100 000) and in Romania for females (0.4/100 000).

With reference to gastric cancer, the steady decline in rates observed throughout the continent has persisted over the last few years, although absolute values remain substantially heterogeneous [22]. In 1990–1994 the highest mortality rates were registered in the Russian Federation (39.7/100 000 males, 16.6/100 000 females); the lowest were seen in Denmark for males (7.1/100 000) and in France for females (3.1/100 000).

In contrast, colorectal cancer rates increased in Eastern and Southern Europe (except France and Italy), whilst levelling off in most northern and central European countries, thus leading to a more uniform pattern of colorectal cancer rates across Europe [11]. In 1990–1994, the highest mortality rates were registered in the Czech Republic (37.3/100 000 males, 20.4/100 000 females); the lowest ones (excluding Albania, Macedonia and Romania) were both registered in Greece (9.5/100 000 males, 7.6/100 000 females).

Table 3.

Mouth or pharynx

Oesophagus

Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	102	4.04	5.76	51	1.63	2.01	Albania	37	1.53	2.05	19	0.71	1.39
Austria	1501	6.06	14.06	376	0.96	1.79	Austria	971	3.68	6.84	221	0.46	0.75
Belarus	1349	8.22	18.66	228	0.76	0.98	Belarus	902	5.42	10.95	144	0.45	0.47
Belgium	987	4.81	10.39	286	0.98	1.95	Belgium	1052	4.76	8.33	394	1.11	1.39
Bulgaria	1292	4.27	9.74	254	0.69	1.04	Bulgaria	1130	3.51	6.62	463	1.19	1.91
Croatia	1783	11.88	25.77	259	1.15	1.61	Croatia	818	5.24	10.71	178	0.75	0.98
Czech Republic	1567	6.25	14.41	373	0.95	1.42	Czech Republic	1146	4.45	8.92	264	0.61	0.69
Denmark	627	4.21	8.38	298	1.34	1.97	Denmark	846	5.24	7.91	336	1.39	1.82
Estonia	379	8.69	19.97	74	1.06	2.05	Estonia	248	5.79	11.47	44	0.54	0.76
Finland	367	2.21	3.34	249	0.83	1.09	Finland	500	2.99	4.19	410	1.23	1.04
France	23399	12.43	27.54	3420	1.31	2.61	France	20725	10.34	19.22	3310	1.04	1.62
Germany	18354	6.63	15.46	4592	1.13	2.22	Germany	14492	5.09	10.08	4180	0.87	1.36
Greece	728	1.81	3.01	275	0.49	0.54	Greece	654	1.44	1.57	259	0.42	0.41
Hungary	5534	17.25	42.02	996	2.24	4.79	Hungary	2668	8.17	18.99	388	0.81	1.63
Iceland	13	1.81	3.57	6	0.66	1.38	Iceland	37	4.11	3.12	21	1.98	2.66
Ireland	479	4.51	7.12	161	1.11	1.22	Ireland	877	7.81	9.51	570	3.61	3.75
Italy	12350	5.77	11.11	3054	0.99	1.57	Italy	9028	4.01	6.47	2387	0.65	0.76
Latvia	517	6.94	15.52	103	0.82	1.37	Latvia	378	5.04	9.42	101	0.64	0.77
Lithuania	784	7.89	19.17	149	0.96	1.58	Lithuania	567	5.56	11.45	90	0.51	0.81
Luxembourg	112	8.49	18.21	24	1.41	2.08	Luxembourg	71	5.32	9.62	28	1.71	3.92
Macedonia	134	3.22	5.38	29	0.61	0.85	Macedonia	59	1.41	2.39	27	0.58	0.89
Malta	38	3.49	7.42	18	1.41	2.75	Malta	42	3.92	6.26	17	1.01	1.18
Moldova	1071	10.57	24.03	145	1.02	1.64	Moldova	396	3.91	7.88	89	0.58	0.77
The Netherlands	1381	2.78	4.97	671	1.04	1.99	The Netherlands	2924	5.68	8.15	1438	1.81	2.31
Norway	507	3.14	5.04	204	0.93	1.64	Norway	506	3.06	4.46	187	0.68	0.81
Poland	6457	6.27	13.52	1622	1.06	1.71	Poland	5045	4.83	9.01	1237	0.77	1.09
Portugal	1925	5.97	12.52	426	0.92	1.31	Portugal	1861	5.42	9.55	560	1.01	1.02
Romania	4440	6.45	14.62	881	1.02	1.69	Romania	1455	2.04	4.21	365	0.41	0.69
Russian Federation	34066	8.92	19.21	7225	1.03	1.47	Russian Federation	32724	8.68	15.69	12276	1.58	1.74
Slovenia	679	11.41	26.61	87	0.95	1.56	Slovenia	401	6.71	12.05	77	0.79	1.11
Spain	8912	6.94	15.08	1578	0.83	1.32	Spain	7589	5.63	10.81	1186	0.53	0.68
Sweden	925	2.54	4.11	478	0.91	1.31	Sweden	1155	2.89	3.68	528	0.89	1.05
Switzerland	1485	6.14	12.09	427	1.17	1.96	Switzerland	1345	5.27	8.14	422	1.04	1.39
Ukraine	8295	9.38	21.94	1411	0.91	1.41	Ukraine	5414	6.06	12.53	1099	0.62	0.75
United Kingdom	6337	2.98	5.11	3552	1.15	1.78	United Kingdom	18856	8.19	10.91	12481	3.33	3.63
U.K., England and Wales	5369	2.83	4.84	3068	1.11	1.72	U.K., England and Wales	16554	8.02	10.56	10721	3.21	3.46
U.K., Northern Ireland	159	3.23	5.33	72	0.98	1.34	U.K., Northern Ireland	360	7.09	10.03	247	2.82	2.65
U.K., Scotland	809	4.49	7.62	412	1.52	2.42	U.K., Scotland	1942	10.26	14.45	1513	4.77	5.45

Stomach

Intestines

Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	324	12.93	19.08	175	6.13	9.23	Albania	87	3.37	5.28	78	2.73	3.05
Austria	4524	15.38	15.11	4202	7.77	7.94	Austria	6842	23.51	25.74	7364	13.92	15.03
Belarus	6107	36.95	63.06	4419	15.52	23.16	Belarus	2502	15.27	20.51	2998	10.34	14.95
Belgium	2359	9.52	9.31	1895	4.47	4.27	Belgium	4708	19.19	19.42	5011	12.75	13.61
Bulgaria	6463	19.11	27.85	4233	10.09	13.04	Bulgaria	5724	16.83	23.72	4763	11.73	17.31
Croatia	3378	22.28	28.81	2059	8.71	10.06	Croatia	2924	19.14	21.69	2740	11.61	14.38
Czech Republic	4608	17.05	19.21	3586	8.02	8.52	Czech Republic	10080	37.34	42.82	8874	20.42	23.66
Denmark	1245	7.07	7.79	986	3.91	4.96	Denmark	4204	23.31	23.07	4447	17.44	20.91
Estonia	1212	28.01	42.66	1033	13.46	20.58	Estonia	789	18.27	22.17	1064	12.92	16.22
Finland	1979	11.34	12.23	1725	5.77	6.87	Finland	2391	13.87	14.05	2956	9.51	9.96
France	18762	7.93	8.62	13076	3.14	2.91	France	49546	20.81	21.32	46580	11.94	12.83
Germany	42344	13.75	14.68	40990	7.22	7.96	Germany	69755	22.64	24.16	92374	16.05	16.66
Greece	3947	8.97	11.93	2552	4.56	5.58	Greece	4465	9.54	10.08	4414	7.59	8.25
Hungary	8328	23.12	28.58	5636	9.81	11.49	Hungary	11617	32.15	38.21	11300	19.57	22.29
Iceland	122	14.21	15.29	70	5.88	5.01	Iceland	101	11.51	12.73	99	9.54	13.38
Ireland	1337	11.72	12.67	891	5.69	5.71	Ireland	2845	24.78	28.21	2379	15.39	18.66
Italy	38937	15.87	17.73	28328	7.49	7.87	Italy	48000	19.49	21.03	46280	12.83	14.89
Latvia	2114	28.25	43.81	1654	12.22	18.94	Latvia	1357	18.03	20.69	1658	11.76	16.34
Lithuania	2907	28.11	42.54	1996	11.75	17.53	Lithuania	1839	17.57	21.65	2023	11.58	15.74
Luxembourg	156	10.76	11.82	107	4.76	5.11	Luxembourg	312	21.63	22.91	367	14.74	14.11
Macedonia	936	22.11	33.81	491	10.33	14.28	Macedonia	415	9.86	15.51	345	7.35	10.66
Malta	146	12.79	12.71	99	6.59	7.01	Malta	187	16.75	20.75	180	12.28	16.38
Moldova	2218	21.65	37.92	1368	9.38	16.4	Moldova	1611	15.83	23.44	1583	10.65	17.37
The Netherlands	6304	11.61	12.32	3999	4.62	5.01	The Netherlands	10979	20.15	20.46	12401	14.58	15.97
Norway	1932	10.14	10.68	1290	4.67	5.08	Norway	3883	20.64	23.28	3838	14.37	16.62
Poland	22603	21.23	29.13	12179	7.51	9.41	Poland	17032	15.98	21.06	17417	10.86	14.52
Portugal	8434	23.21	31.14	5761	11.08	13.25	Portugal	7063	18.77	20.63	6495	12.31	14.79
Romania	12933	17.81	28.27	6451	6.91	9.75	Romania	7699	10.56	15.34	7011	7.59	10.91
Russian Federation	148198	39.73	64.67	115863	16.61	4.13	Russian Federation	64140	17.79	22.65	87242	12.39	17.86
Slovenia	1343	22.56	28.81	903	9.04	10.33	Slovenia	1381	22.91	25.26	1379	13.69	16.02
Spain	20126	13.45	17.02	13479	6.03	6.84	Spain	25614	16.66	18.17	23171	10.63	12.81
Sweden	3420	7.79	7.89	2354	4.07	4.86	Sweden	6580	15.16	15.68	6695	11.31	12.53
Switzerland	2434	8.58	8.69	1777	3.86	3.86	Switzerland	5219	18.11	16.91	4737	10.57	10.98
Ukraine	27840	31.28	53.95	19488	12.61	19.8	Ukraine	15081	16.98	23.08	18292	11.48	17.45
United Kingdom	27541	11.27	11.61	18139	4.57	4.43	United Kingdom	51098	21.32	24.15	51898	14.17	16.89
U.K., England and Wales	24562	11.21	11.41	16000	4.48	4.27	U.K., England and Wales	45226	21.07	23.86	45615	13.95	16.57
U.K., Northern Ireland	638	12.01	13.92	422	4.97	5.58	U.K., Northern Ireland	1270	24.03	27.35	1383	16.64	19.65
U.K., Scotland	2341	11.78	12.99	1717	5.33	5.61	U.K., Scotland	4602	23.37	26.18	4900	15.73	19.12

Table 3 (continued)

Liver							Gallbladder						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64		Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64
Albania							Albania	14	0.52	0.56	11	0.38	0.24
Austria	1018	3.71	4.81	407	0.85	0.97	Austria	693	2.35	2.31	1791	3.36	3.48
Belarus							Belarus						
Belgium	554	2.35	2.41	414	1.11	1.13	Belgium	135	1.65	1.76	229	1.65	1.34
Bulgaria	534	8.03	13.35	363	4.49	6.51	Bulgaria	245	0.71	0.89	482	1.17	1.73
Croatia							Croatia	270	1.78	1.86	616	2.54	2.53
Czech Republic	981	3.71	5.36	623	1.62	2.28	Czech Republic	1125	4.11	4.19	2631	6.04	6.71
Denmark	336	1.97	2.28	261	1.24	1.71	Denmark	215	1.22	1.54	397	1.59	1.76
Estonia							Estonia	6	0.72	1.12	23	1.52	2.24
Finland	637	3.67	4.07	643	2.24	2.47	Finland	287	1.63	1.62	802	2.72	2.91
France	14512	6.91	9.74	3098	1.02	1.31	France	3211	1.34	1.38	5842	1.52	1.51
Germany	7278	2.49	3.21	4538	0.92	1.09	Germany	7091	2.31	2.25	19447	3.48	3.52
Greece	313	0.77	1.08	92	0.17	0.28	Greece	297	0.66	0.71	431	0.77	0.85
Hungary	2961	8.27	10.89	2049	3.77	4.75	Hungary	1335	3.68	4.02	3914	6.65	6.81
Iceland	12	1.61	2.48	8	0.79	0.55	Iceland	6	0.64	0.51	14	1.04	1.09
Ireland	69	0.63	0.81	19	0.13	0.11	Ireland	82	0.83	0.62	155	1.27	1.37
Italy	18807	8.13	11.01	8405	2.48	2.59	Italy	5027	2.02	2.16	9497	2.68	3.09
Latvia							Latvia						
Lithuania							Lithuania	52	1.26	1.54	136	1.88	2.65
Luxembourg							Luxembourg	21	1.36	0.81	44	1.85	1.39
Macedonia							Macedonia						
Malta	13	1.29	2.51	6	0.43	0.84	Malta	12	1.03	1.01	19	1.26	0.87
Moldova	499	6.06	10.97	282	2.39	4.16	Moldova						
The Netherlands	552	1.09	1.43	304	0.44	0.56	The Netherlands	761	1.41	1.34	1543	1.87	1.89
Norway	130	0.76	0.92	88	0.37	0.46	Norway	174	0.91	0.91	274	1.08	1.26
Poland	6585	6.22	8.48	7249	4.47	5.58	Poland						
Portugal	720	2.12	3.46	307	0.64	0.73	Portugal	521	1.42	1.77	821	1.47	1.44
Romania	3121	4.34	7.23	1771	1.99	3.04	Romania						
Russian Federation							Russian Federation						
Slovenia	189	3.22	5.07	124	1.34	1.69	Slovenia	136	2.33	1.96	363	3.58	3.69
Spain	6362	4.42	5.99	2656	1.28	1.35	Spain	1544	1.25	1.21	3544	2.01	1.96
Sweden	902	2.26	2.62	645	1.31	1.65	Sweden	959	2.22	2.31	2108	3.79	4.77
Switzerland	1469	5.61	7.19	594	1.51	1.73	Switzerland	406	1.39	1.27	897	2.11	1.94
Ukraine							Ukraine						
United Kingdom	2548	1.17	1.65	1094	0.38	0.54	United Kingdom	1552	0.63	0.61	2705	0.75	0.96
U.K., England and Wales	2209	1.14	1.62	946	0.37	0.53	U.K., England and Wales	1388	0.63	0.61	2312	0.72	0.91
U.K., Northern Ireland	28	0.54	0.53	13	0.21	0.31	U.K., Northern Ireland	32	0.58	0.39	92	1.08	1.27
U.K., Scotland	311	1.65	2.33	135	0.54	0.77	U.K., Scotland	132	0.66	0.59	301	0.98	1.38
Pancreas							Larynx						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64		Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64
Albania	51	2.11	3.21	2401	0.81	1.27	Albania	92	3.72	6.25	19	0.62	1.11
Austria	2566	9.14	12.07	3132	6.18	7.15	Austria	921	3.52	6.74	89	0.22	0.35
Belarus							Belarus	1407	8.47	19.09	43	0.15	0.26
Belgium	1733	7.29	8.92	1638	4.38	4.87	Belgium	953	4.38	8.14	132	0.48	1.02
Bulgaria	2236	6.88	12.07	1290	3.12	4.55	Bulgaria	1496	4.78	10.61	94	0.25	0.39
Croatia	1107	7.32	10.61	966	4.14	5.08	Croatia	1213	7.98	15.42	66	0.28	0.36
Czech Republic	3016	11.33	16.76	2757	6.67	8.36	Czech Republic	1173	4.59	9.25	83	0.22	0.29
Denmark	1391	8.18	10.61	1568	6.52	8.21	Denmark	388	2.42	3.97	96	0.53	1.09
Estonia	94	10.63	18.81	93	5.71	6.12	Estonia	258	6.01	12.74	14	0.25	0.71
Finland	1480	8.64	10.55	1973	6.61	6.94	Finland	178	1.03	1.31	22	0.08	0.12
France	16337	7.41	10.19	14250	3.91	4.31	France	13132	6.68	13.26	826	0.32	0.66
Germany	24444	8.22	10.95	28670	5.32	5.82	Germany	1586	2.65	5.06	819	0.21	0.36
Greece	2629	6.07	8.13	1924	3.42	3.55	Greece	1498	3.39	4.22	134	0.25	0.34
Hungary	3875	11.02	16.98	3585	6.46	8.35	Hungary	3091	9.36	20.44	305	0.71	1.51
Iceland	72	8.54	9.77	67	6.41	8.31	Iceland	4	0.54	1.01	2	0.11	0
Ireland	955	8.51	11.12	855	5.51	6.11	Ireland	227	2.21	3.64	62	0.47	0.68
Italy	17402	7.41	10.15	16532	4.65	5.26	Italy	10959	4.74	7.12	780	0.24	0.33
Latvia							Latvia	492	6.54	13.8	31	0.24	0.42
Lithuania	410	9.88	14.74	348	4.97	6.61	Lithuania	735	7.31	15.96	38	0.24	0.44
Luxembourg	106	7.66	11.32	99	4.23	4.45	Luxembourg	61	4.51	9.55	4	0.17	0.24
Macedonia	247	5.81	9.48	155	3.29	4.71	Macedonia	220	5.25	9.24	20	0.45	0.7
Malta	125	11.01	10.76	63	4.26	4.48	Malta	36	3.29	3.93	1	0.07	0
Moldova	680	8.31	14.91	464	3.91	6.41	Moldova	681	6.65	15.32	27	0.19	0.36
The Netherlands	4070	7.64	9.24	4269	5.34	6.32	The Netherlands	951	1.84	2.57	147	0.25	0.54
Norway	1338	7.38	8.82	1466	5.51	5.94	Norway	145	0.81	1.04	36	0.15	0.19
Poland	8681	8.23	13.18	7980	5.02	6.71	Poland	7774	7.51	14.99	719	0.52	1.03
Portugal	2086	5.75	7.86	1685	3.15	3.41	Portugal	1891	5.59	10.39	153	0.31	0.37
Romania	4765	6.61	10.95	3077	3.31	4.83	Romania	4338	6.17	13.67	326	0.38	0.71
Russian Federation							Russian Federation	32444	8.49	17.43	1853	0.29	0.48
Slovenia	480	8.17	10.46	515	5.21	6.23	Slovenia	338	5.67	10.11	28	0.31	0.55
Spain	8400	5.79	8.25	7240	3.35	3.82	Spain	9469	6.91	12.55	258	0.12	0.15
Sweden	3226	7.81	9.23	3733	6.58	7.94	Sweden	262	0.65	0.81	40	0.08	0.12
Switzerland	2088	7.68	9.33	2105	5.11	5.89	Switzerland	520	2.05	3.34	76	0.21	0.28
Ukraine							Ukraine	7110	7.99	17.98	242	0.16	0.27
United Kingdom	16276	6.93	8.67	17371	4.95	5.99	United Kingdom	3789	1.67	2.32	1060	0.35	0.49
U.K., England and Wales	14497	6.9	8.64	15377	4.92	5.94	U.K., England and Wales	3320	1.63	2.24	901	0.33	0.46
U.K., Northern Ireland	370	6.98	7.83	404	5.16	6.51	U.K., Northern Ireland	88	1.75	2.62	33	0.48	0.73
U.K., Scotland	1409	7.23	9.18	1590	5.21	6.35	U.K., Scotland	381	2.03	3.07	126	0.49	0.73

Table 3 (continued)

Lung							Pleura						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	645	26.27	42.13	141	4.87	6.98	Albania	11	0.43	1.13	0	0	0
Austria	12090	44.18	62.71	4047	9.49	14.88	Austria	175	0.64	1.01	148	0.33	0.41
Belarus	9834	59.03	112.87	1354	4.83	7.68	Belarus						
Belgium	16855	71.45	90.41	2560	8.75	15.29	Belgium	82	1.03	1.46	37	0.35	0.54
Bulgaria	13293	41.71	84.69	2502	6.49	10.51	Bulgaria	38	0.12	0.24	21	0.06	0.11
Croatia	9460	62.34	107.06	1723	8.09	13.73	Croatia	102	0.69	1.41	55	0.26	0.45
Czech Republic	19492	75.29	127.19	3697	10.12	17.23	Czech Republic	138	0.52	0.81	93	0.25	0.42
Denmark	8457	50.37	62.95	4649	24.83	43.18	Denmark	218	1.36	2.22	47	0.25	0.51
Estonia	2981	69.15	121.8	548	7.35	11.06	Estonia	2	0.25	0.32	0	0	0
Finland	7692	45.05	49.46	1792	6.91	9.11	Finland	180	1.09	1.62	83	0.32	0.44
France	97479	46.94	76.94	15496	5.44	8.91	France	3089	1.42	2.03	1323	0.41	0.57
Germany	139603	47.74	67.28	37201	8.53	13.57	Germany	3332	1.13	1.69	1713	0.35	0.48
Greece	21158	49.84	70.19	3586	7.01	10.51	Greece	14	0.03	0.06	8	0.01	0.01
Hungary	28096	82.35	149.94	8043	16.79	30.76	Hungary	237	0.71	1.2	117	0.24	0.35
Iceland	242	29.21	30.67	222	25.27	42.75	Iceland	2	0.28	0	1	0.15	0.49
Ireland	5225	45.99	54.11	2479	17.82	23.58	Ireland	327	0.31	0.55	9	0.11	0.19
Italy	128606	55.93	78.33	23670	7.61	10.98	Italy	3005	1.29	1.91	1650	0.51	0.68
Latvia	4885	65.58	117.65	866	6.44	9.21	Latvia						
Lithuania	6415	63.46	111.93	962	5.73	8.42	Lithuania	10	0.24	0.45	3	0.05	0.12
Luxembourg	808	58.59	72.22	171	9.49	16.88	Luxembourg	15	0.96	1.56	3	0.13	0.23
Macedonia	1509	36.17	67.55	257	5.56	9.49	Macedonia						
Malta	474	43.59	64.72	63	4.36	5.99	Malta	7	0.66	1.06	0	0	0
Moldova	4446	43.52	89.42	928	6.26	10.37	Moldova						
The Netherlands	35261	65.65	73.49	7094	11.75	22.58	The Netherlands	1310	2.57	3.72	180	0.26	0.37
Norway	5405	31.36	41.75	2188	11.39	20.25	Norway	195	1.12	1.49	33	0.17	0.33
Poland	74522	71.31	124.15	14837	10.29	17.94	Poland						
Portugal	9672	27.46	43.87	2196	4.56	6.56	Portugal	48	0.15	0.25	29	0.06	0.09
Romania	29583	41.68	91.08	5830	6.73	12.31	Romania						
Russian Federation	275695	72.72	129.92	49591	7.27	10.91	Russian Federation						
Slovenia	3590	60.91	100.23	735	8.53	14.23	Slovenia	52	0.88	1.38	42	0.44	0.48
Spain	68085	47.44	70.26	7070	3.66	5.46	Spain	404	0.36	0.56	219	0.14	0.19
Sweden	9174	23.26	30.28	4621	10.69	18.39	Sweden	451	1.14	1.37	163	0.28	0.28
Switzerland	11089	42.94	57.21	2753	8.61	15.41	Switzerland	361	1.41	2.05	83	0.25	0.46
Ukraine	56634	63.06	118.67	11159	7.18	11.04	Ukraine						
United Kingdom	128701	53.79	59.14	63368	20.94	28.21	United Kingdom	2586	1.21	2.02	453	0.17	0.26
U.K., England and Wales	112505	52.43	57.11	54479	20.18	26.97	U.K., England and Wales	2195	1.16	2.02	406	0.17	0.28
U.K., Northern Ireland	2659	50.61	59.94	1250	17.95	25.09	U.K., Northern Ireland	158	3.06	3.62	11	0.18	0.32
U.K., Scotland	13537	68.79	79.22	7639	29.21	40.72	U.K., Scotland	233	1.22	1.62	36	0.13	0.11

Bone							Soft tissue sarcomas						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	50	1.95	2.63	24	0.84	1.13	Albania	10	0.41	0.47	4	0.13	0
Austria	128	0.54	0.67	88	0.29	0.29	Austria	179	0.71	1.01	227	0.65	0.96
Belarus							Belarus						
Belgium	182	0.95	1.12	139	0.54	0.61	Belgium	26	0.41	0.64	25	0.26	0.27
Bulgaria	376	1.31	1.97	241	0.75	1.11	Bulgaria	81	0.28	0.44	55	0.18	0.19
Croatia	115	0.85	1.15	90	0.51	0.41	Croatia	106	0.76	0.92	94	0.54	0.61
Czech Republic	280	1.16	1.65	221	0.72	0.86	Czech Republic	200	0.85	1.17	206	0.66	0.86
Denmark	76	0.59	0.49	52	0.34	0.36	Denmark	83	0.64	0.82	116	0.71	0.79
Estonia	12	1.51	1.87	6	0.55	0.78	Estonia	2	0.21	0	3	0.21	0.34
Finland	64	0.47	0.58	51	0.27	0.38	Finland	128	0.81	0.96	145	0.68	0.97
France	2239	1.18	1.63	1262	0.48	0.46	France	1570	0.81	1.11	1455	0.61	0.81
Germany	1538	0.61	0.73	1312	0.35	0.38	Germany	2528	0.95	1.32	2673	0.73	1.04
Greece	865	2.13	2.65	573	1.18	1.38	Greece	241	0.59	0.62	216	0.44	0.53
Hungary	521	1.61	2.63	362	0.83	1.01	Hungary	347	1.08	1.63	323	0.72	0.91
Iceland	5	0.77	1.04	1	0.13	0	Iceland	4	0.54	0.51	6	0.82	2.06
Ireland	88	0.81	0.74	46	0.37	0.41	Ireland	58	0.71	0.97	77	0.88	1.28
Italy	1940	0.96	1.08	1438	0.56	0.54	Italy	1061	0.55	0.71	1014	0.41	0.54
Latvia							Latvia						
Lithuania	45	1.15	1.78	36	0.68	0.84	Lithuania	40	1.08	1.31	38	0.73	1.18
Luxembourg	8	0.67	0.97	10	0.76	0.55	Luxembourg	9	0.65	1.28	5	0.34	0.51
Macedonia	74	1.79	2.69	55	1.22	1.41	Macedonia						
Malta	14	1.34	1.28	3	0.17	0	Malta	13	1.33	2.12	13	0.97	1.81
Moldova	191	2.34	4.01	106	1.01	1.47	Moldova						
The Netherlands	213	0.49	0.37	166	0.32	0.25	The Netherlands	525	1.11	1.66	517	0.89	1.32
Norway	56	0.41	0.46	31	0.21	0.21	Norway	114	0.72	0.88	104	0.58	0.81
Poland	1608	1.58	2.41	1086	0.81	1.11	Poland						
Portugal	435	1.39	1.79	292	0.76	0.68	Portugal	235	0.73	1.08	246	0.58	0.81
Romania	1753	2.58	4.55	1089	1.38	2.03	Romania						
Russian Federation							Russian Federation						
Slovenia	56	1.01	1.65	52	0.68	0.85	Slovenia	33	0.55	0.77	39	0.53	0.91
Spain	1182	0.92	1.11	719	0.46	0.42	Spain	769	0.78	1.08	715	0.61	0.88
Sweden	139	0.47	0.29	123	0.32	0.23	Sweden	337	0.95	1.46	351	0.91	1.34
Switzerland	100	0.49	0.45	62	0.21	0.21	Switzerland	159	0.66	1.04	148	0.53	0.79
Ukraine							Ukraine						
United Kingdom	753	0.44	0.41	561	0.27	0.21	United Kingdom	1681	0.86	1.21	1669	0.69	1.02
U.K., England and Wales	657	0.44	0.39	482	0.27	0.21	U.K., England and Wales	1521	0.87	1.23	1472	0.68	1.02
U.K., Northern Ireland	31	0.61	0.31	22	0.34	0.22	U.K., Northern Ireland	22	0.49	0.64	50	0.89	0.99
U.K., Scotland	65	0.42	0.55	57	0.29	0.31	U.K., Scotland	138	0.88	1.21	147	0.72	1.08

Table 3 (continued)

Skin, total							Breast						
Country	Males			Females			Country	Females					
	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64		Deaths No.	World Standard	Trunc. 35–64			
Albania	37	1.66	1.58	21	0.65	0.65	Albania	138	4.88	11.16			
Austria	930	3.45	5.63	816	1.94	2.95	Austria	8624	21.78	40.25			
Belarus							Belarus	3272	14.05	32.61			
Belgium	452	2.13	3.44	386	1.31	2.21	Belgium	7207	25.64	50.43			
Bulgaria	519	1.62	2.36	415	1.02	1.12	Bulgaria	5493	15.51	33.21			
Croatia	426	2.91	3.82	437	1.94	2.63	Croatia	3705	18.07	34.01			
Czech Republic	1040	4.01	6.12	966	2.39	3.41	Czech Republic	7696	21.51	40.29			
Denmark	530	3.42	6.15	461	2.41	4.54	Denmark	5303	27.17	51.88			
Estonia	15	1.71	2.61	26	2.02	5.45	Estonia	1101	16.85	37.05			
Finland	446	2.68	4.12	367	1.46	2.58	Finland	3745	16.51	32.89			
France	3600	1.73	2.77	3559	1.21	2.01	France	52396	19.71	38.15			
Germany	6342	2.21	3.47	6194	1.41	2.32	Germany	91039	22.12	42.51			
Greece	472	1.13	1.58	455	0.82	1.03	Greece	6860	15.54	31.45			
Hungary	1194	3.51	5.46	1109	2.14	2.97	Hungary	11182	23.66	45.25			
Iceland	13	1.61	2.22	9	1.04	2.72	Iceland	200	25.11	56.66			
Ireland	279	2.51	3.12	254	1.87	2.83	Ireland	3210	26.51	53.18			
Italy	4534	2.05	3.31	3803	1.27	2.11	Italy	55909	20.42	39.66			
Latvia							Latvia	1922	17.07	37.56			
Lithuania	75	1.76	2.91	100	1.53	2.46	Lithuania	2534	17.88	40.04			
Luxembourg	18	1.33	2.29	27	1.51	2.45	Luxembourg	428	23.29	44.02			
Macedonia	142	3.33	4.71	108	2.21	2.92	Macedonia	708	15.79	37.18			
Malta	16	1.39	1.63	14	0.99	0.88	Malta	409	30.36	55.94			
Moldova	166	2.14	3.03	156	1.34	1.96	Moldova	2267	16.58	37.84			
The Netherlands	1224	2.46	4.32	1115	1.77	3.12	The Netherlands	17285	26.76	50.49			
Norway	656	4.15	7.37	462	2.29	4.24	Norway	3861	19.04	35.54			
Poland	2936	2.77	4.21	3135	1.96	2.82	Poland	21780	15.88	32.92			
Portugal	557	1.64	2.45	511	1.07	1.36	Portugal	7414	18.08	37.73			
Romania	1694	2.39	3.35	1505	1.61	1.93	Romania	12203	14.89	32.15			
Russian Federation							Russian Federation	88227	15.13	33.61			
Slovenia	196	3.27	5.48	217	2.53	4.21	Slovenia	1833	22.21	43.87			
Spain	2743	1.93	2.69	2390	1.14	1.48	Spain	28250	17.44	36.22			
Sweden	1117	3.11	5.06	784	1.77	3.16	Sweden	7485	17.41	34.01			
Switzerland	1016	3.72	4.58	869	2.22	3.32	Switzerland	8322	23.75	41.87			
Ukraine							Ukraine	20808	16.06	36.71			
United Kingdom	4784	2.25	3.66	4584	1.61	2.78	United Kingdom	74885	27.07	51.78			
U.K., England and Wales	4301	2.27	3.74	4141	1.65	2.87	U.K., England and Wales	66941	27.14	51.75			
U.K., Northern Ireland	92	1.81	2.29	102	1.45	2.21	U.K., Northern Ireland	1611	26.21	54.81			
U.K., Scotland	391	2.16	3.17	341	1.31	2.04	U.K., Scotland	6333	26.52	51.21			

Uterus, total							Ovary							Prostate							Testis						
Country	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64	Country	Deaths No.	World Standard	Trunc. 35–64	Country	Deaths No.	World Standard	Trunc. 35–64	Country	Deaths No.	World Standard	Trunc. 35–64									
Albania	83	2.95	4.93				Albania	162	6.99	3.97	Albania	162	6.99	3.97	Albania	6	0.21	0.37									
Austria	3104	7.56	12.81	3088	7.53	12.59	Austria	5720	17.29	6.67	Austria	5720	17.29	6.67	Austria	101	0.42	0.49									
Belarus	2099	8.24	15.61				Belarus	1240	7.66	6.24	Belarus	1240	7.66	6.24	Belarus												
Belgium	1669	5.42	8.42	756	7.52	12.55	Belgium	4964	18.29	6.48	Belgium	4964	18.29	6.48	Belgium	52	0.26	0.18									
Bulgaria	3648	10.41	20.82				Bulgaria	3117	8.41	4.99	Bulgaria	3117	8.41	4.99	Bulgaria	243	0.99	1.21									
Croatia	1676	7.84	12.81				Croatia	2062	13.47	5.46	Croatia	2062	13.47	5.46	Croatia	59	0.45	0.45									
Czech Republic	3933	10.82	18.15	1847	5.41	10.43	Czech Republic	4322	15.14	7.27	Czech Republic	4322	15.14	7.27	Czech Republic	248	1.11	1.41									
Denmark	1691	8.33	12.95	1854	9.93	18.27	Denmark	3962	19.48	8.96	Denmark	3962	19.48	8.96	Denmark	110	0.79	1.17									
Estonia	806	11.48	20.69				Estonia	574	12.91	8.83	Estonia	574	12.91	8.83	Estonia	4	0.57	0.45									
Finland	1115	3.98	4.78				Finland	3305	18.07	7.31	Finland	3305	18.07	7.31	Finland	37	0.25	0.29									
France	15697	5.38	8.84	15958	5.69	9.53	France	46020	16.57	6.09	France	46020	16.57	6.09	France	622	0.36	0.49									
Germany	28390	6.41	10.27	30934	7.13	11.88	Germany	55863	16.61	6.34	Germany	55863	16.61	6.34	Germany	1513	0.59	0.76									
Greece	1815	3.86	6.73	1498	3.36	6.48	Greece	4710	8.82	3.64	Greece	4710	8.82	3.64	Greece	100	0.29	0.28									
Hungary	5391	11.42	20.02	3162	6.71	12.29	Hungary	6146	15.87	7.19	Hungary	6146	15.87	7.19	Hungary	290	1.02	1.11									
Iceland	43	4.97	7.54	74	8.11	12.93	Iceland	201	20.56	10.36	Iceland	201	20.56	10.36	Iceland	0	0	0									
Ireland	674	5.41	9.67	857	9.05	17.02	Ireland	2382	18.39	6.75	Ireland	2382	18.39	6.75	Ireland	41	0.41	0.39									
Italy	16071	5.27	8.46	12716	4.52	8.11	Italy	31982	11.52	4.36	Italy	31982	11.52	4.36	Italy	525	0.28	0.36									
Latvia	1211	9.71	17.66				Latvia	905	11.83	8.21	Latvia	905	11.83	8.21	Latvia												
Lithuania	1748	11.73	22.69				Lithuania	1480	13.47	8.11	Lithuania	1480	13.47	8.11	Lithuania	24	0.61	0.97									
Luxembourg	133	7.13	12.95				Luxembourg	266	16.49	4.71	Luxembourg	266	16.49	4.71	Luxembourg	5	0.52	0.55									
Macedonia	296	6.44	12.11				Macedonia	255	5.88	2.89	Macedonia	255	5.88	2.89	Macedonia	39	0.89	1.31									
Malta	81	5.98	10.47	87	6.82	13.23	Malta	154	12.87	3.97	Malta	154	12.87	3.97	Malta	4	0.37	0.31									
Moldova	1639	11.61	22.69				Moldova	535	5.36	4.77	Moldova	535	5.36	4.77	Moldova	28	0.31	0.39									
The Netherlands	3253	4.44	6.13	5093	7.69	12.45	The Netherlands	11177	18.74	6.09	The Netherlands	11177	18.74	6.09	The Netherlands	152	0.34	0.41									
Norway	1276	6.35	11.36	1504	7.77	14.19	Norway	5138	22.88	8.31	Norway	5138	22.88	8.31	Norway	36	0.27	0.34									
Poland	15979	11.58	23.01				Poland	10969	10.05	5.89	Poland	10969	10.05	5.89	Poland	784	0.76	0.84									
Portugal	3124	7.16	13.39	1388	3.29	6.09	Portugal	6242	15.18	6.03	Portugal	6242	15.18	6.03	Portugal	85	0.27	0.23									
Romania	11529	14.45	30.11				Romania	5842	7.63	4.34	Romania	5842	7.63	4.34	Romania	400	0.64	0.75									
Russian Federation	62357	9.74	17.24				Russian Federation	23845	6.95	5.15	Russian Federation	23845	6.95	5.15	Russian Federation												
Slovenia	725	8.31	13.12	552	6.79	12.87	Slovenia	871	14.32	5.81	Slovenia	871	14.32	5.81	Slovenia	31	0.52	0.62									
Spain	9020	5.04	8.67	5035	3.88	7.54	Spain	23326	13.47	4.95	Spain	23326	13.47	4.95	Spain	235	0.19	0.17									
Sweden	2348	4.81	7.12	3113	7.32	12.95	Sweden	10745	21.13	9.29	Sweden	10745	21.13	9.29	Sweden	55	0.21	0.22									
Switzerland	2123	5.55	7.45	2300	6.52	9.84	Switzerland	7402	22.54	6.53	Switzerland	7402	22.54	6.53	Switzerland	117	0.56	0.67									
Ukraine	14898	10.42	19.23				Ukraine	6021	6.83	5.63	Ukraine	6021	6.83	5.63	Ukraine												
United Kingdom	16662	6.05	10.57	21778	8.22	15.23	United Kingdom	47134	17.05	6.87	United Kingdom	47134	17.05	6.87	United Kingdom	615	0.35	0.53									
U.K., England and Wales	14847	6.05	10.56	19296	8.23	15.29	U.K., England and Wales	42697	17.18	6.94	U.K., England and Wales	42697	17.18	6.94	U.K., England and Wales	545	0.35	0.53									
U.K., Northern Ireland	338	5.15	9.37	443	7.21	13.59	U.K., Northern Ireland	962	16.11	6.38	U.K., Northern Ireland	962	16.11	6.38	U.K., Northern Ireland	15	0.35	0.41									
U.K., Scotland	1477	6.25	11.03	2039	8.47	15.14	U.K., Scotland	3475	15.79	6.39	U.K., Scotland	3475	15.79	6.39	U.K., Scotland	55	0.36	0.53									

Table 3 (*continued*)

Bladder							Kidney						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	3	0.13	0	2	0.06	0.12	Albania	48	1.96	2.49	20	0.74	1.57
Austria	1714	5.51	4.02	905	1.51	1.15	Austria	1588	5.68	7.38	1362	2.81	3.26
Belarus							Belarus						
Belgium	1858	7.37	6.11	764	1.74	1.44	Belgium	340	4.32	5.35	273	2.19	1.96
Bulgaria	1622	4.68	5.56	443	1.04	1.12	Bulgaria	702	2.26	3.89	411	1.11	1.76
Croatia	863	5.76	4.64	306	1.22	1.11	Croatia	552	3.65	5.88	355	1.64	2.24
Czech Republic	2142	7.81	7.26	758	1.66	1.55	Czech Republic	2844	10.88	16.87	1825	4.94	7.74
Denmark	1697	8.91	6.37	609	2.41	2.64	Denmark	827	4.92	6.65	690	3.21	4.44
Estonia	59	6.91	7.18	17	1.01	0.52	Estonia	66	7.62	15.17	42	3.05	3.13
Finland	732	4.13	2.43	361	1.01	0.72	Finland	911	5.48	8.19	783	2.83	3.25
France	16070	6.63	6.19	5494	1.21	0.79	France	9895	4.47	5.86	5806	1.76	2.18
Germany	21904	6.81	4.61	10911	1.69	1.22	Germany	18515	6.25	8.68	13431	2.76	3.65
Greece	3278	6.77	5.15	737	1.13	0.73	Greece	1079	2.51	3.48	540	1.04	1.27
Hungary	2969	8.09	7.43	969	1.63	1.54	Hungary	2259	6.47	9.91	1417	2.67	3.62
Iceland	34	4.01	4.57	15	1.45	1.58	Iceland	57	6.56	7.74	36	3.82	5.59
Ireland	546	4.52	3.71	253	1.47	1.16	Ireland	305	3.55	5.11	163	1.61	2.57
Italy	22411	8.71	6.95	5496	1.31	0.89	Italy	9955	4.27	5.72	5198	1.61	2.05
Latvia							Latvia						
Lithuania	350	8.41	7.95	80	1.09	1.35	Lithuania	298	7.39	12.36	212	3.39	4.61
Luxembourg	105	6.71	4.52	40	1.61	1.72	Luxembourg	57	3.91	5.09	41	2.21	3.77
Macedonia	178	4.17	5.96	48	0.99	0.97	Macedonia						
Malta	116	9.84	6.38	43	2.58	0.31	Malta	37	3.36	3.81	18	1.18	1.42
Moldova	438	5.46	7.06	120	0.96	1.05	Moldova						
The Netherlands	3911	6.91	4.74	1542	1.66	1.43	The Netherlands	2736	5.25	7.03	1914	2.61	3.32
Norway	1137	5.41	3.66	499	1.69	1.59	Norway	821	4.51	5.55	555	2.27	2.71
Poland	8433	7.86	8.51	1842	1.08	1.14	Poland						
Portugal	2017	5.18	4.04	743	1.23	0.93	Portugal	786	2.19	2.85	444	0.95	1.17
Romania	3895	5.25	6.63	1192	1.21	1.31	Romania						
Russian Federation							Russian Federation						
Slovenia	388	6.48	5.26	140	1.25	0.91	Slovenia	231	3.89	4.73	185	2.08	3.07
Spain	13774	8.61	7.07	3058	1.19	0.82	Spain	3359	2.91	3.79	1773	1.12	1.32
Sweden	1999	4.21	3.01	850	1.27	1.07	Sweden	2030	5.11	6.63	1473	2.81	3.54
Switzerland	1950	6.49	4.59	788	1.61	1.31	Switzerland	1237	4.57	5.17	814	2.21	2.71
Ukraine							Ukraine						
United Kingdom	18301	7.12	5.38	8976	2.17	1.82	United Kingdom	8785	3.98	6.01	5718	1.94	2.85
U.K., England and Wales	16477	7.14	5.32	7939	2.14	1.75	U.K., England and Wales	7762	3.93	5.98	4945	1.89	2.79
U.K., Northern Ireland	303	5.41	4.51	151	1.68	1.51	U.K., Northern Ireland	208	4.14	6.24	140	2.17	3.12
U.K., Scotland	1521	7.33	6.26	886	2.65	2.51	U.K., Scotland	815	4.39	6.28	633	2.37	3.43
Thyroid							Hodgkin's disease						
Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64		Deaths No.	World Standard	Trunc. 35-64	Deaths No.	World Standard	Trunc. 35-64
Albania	4	0.17	0	6	0.21	0.24	Albania	10	0.34	0.83	12	0.41	0.45
Austria	176	0.61	0.61	377	0.73	0.82	Austria	331	1.26	1.86	320	0.77	1.01
Belarus							Belarus						
Belgium	14	0.17	0.21	40	0.33	0.43	Belgium	129	0.66	0.93	82	0.31	0.48
Bulgaria	107	0.33	0.65	177	0.46	0.72	Bulgaria	321	1.21	1.94	161	0.54	0.82
Croatia	46	0.31	0.45	127	0.55	0.79	Croatia	113	0.78	1.18	87	0.49	0.74
Czech Republic	117	0.43	0.76	355	0.84	1.08	Czech Republic	365	1.48	2.14	263	0.83	1.03
Denmark	49	0.31	0.45	106	0.44	0.69	Denmark	109	0.76	1.21	74	0.44	0.57
Estonia	5	0.59	0.74	11	0.66	0.61	Estonia	12	1.35	2.54	7	0.79	0.61
Finland	61	0.37	0.51	199	0.63	0.61	Finland	108	0.67	1.01	89	0.38	0.57
France	816	0.39	0.61	1662	0.47	0.54	France	965	0.51	0.85	602	0.26	0.36
Germany	1580	0.54	0.72	3470	0.65	0.76	Germany	2200	0.81	1.17	2034	0.51	0.67
Greece	102	0.24	0.34	178	0.33	0.44	Greece	469	1.23	1.94	281	0.63	0.81
Hungary	216	0.62	1.11	410	0.77	1.03	Hungary	387	1.22	2.16	290	0.72	0.94
Iceland	10	0.93	0.51	10	1.15	2.27	Iceland	4	0.51	0.94	6	0.58	0.55
Ireland	36	0.41	0.42	71	0.59	0.79	Ireland	70	0.73	1.08	58	0.51	0.71
Italy	1078	0.46	0.68	2087	0.63	0.79	Italy	1522	0.76	1.15	1187	0.49	0.66
Latvia							Latvia						
Lithuania	22	0.48	0.76	48	0.73	1.22	Lithuania	62	1.53	3.13	41	0.85	1.19
Luxembourg	10	0.68	0.74	17	0.81	0.51	Luxembourg	9	0.72	1.31	4	0.33	0.88
Macedonia							Macedonia	42	1.02	1.89	23	0.53	0.59
Malta	3	0.27	0.37	8	0.59	0.31	Malta	6	0.52	0.31	7	0.47	0.57
Moldova							Moldova	118	1.42	1.97	72	0.71	0.93
The Netherlands	160	0.31	0.43	336	0.42	0.47	The Netherlands	297	0.61	0.93	235	0.37	0.44
Norway	65	0.37	0.41	133	0.42	0.35	Norway	53	0.37	0.66	44	0.26	0.36
Poland							Poland	1461	1.41	2.61	889	0.71	1.12
Portugal	116	0.32	0.44	254	0.49	0.56	Portugal	187	0.63	1.07	149	0.39	0.54
Romania							Romania	724	1.13	1.99	432	0.61	1.02
Russian Federation							Russian Federation						
Slovenia	28	0.49	0.67	72	0.71	0.87	Slovenia	47	0.82	1.14	30	0.37	0.48
Spain	329	0.29	0.45	677	0.42	0.52	Spain	848	0.69	1.07	591	0.37	0.46
Sweden	127	0.31	0.41	279	0.46	0.51	Sweden	127	0.36	0.51	90	0.22	0.21
Switzerland	157	0.56	0.61	287	0.62	0.44	Switzerland	187	0.77	1.16	134	0.45	0.67
Ukraine							Ukraine						
United Kingdom	531	0.24	0.33	1241	0.36	0.44	United Kingdom	1168	0.64	0.99	859	0.39	0.48
U.K., England and Wales	464	0.23	0.32	1121	0.36	0.45	U.K., England and Wales	1022	0.63	1.11	739	0.38	0.45
U.K., Northern Ireland	17	0.34	0.63	32	0.42	0.51	U.K., Northern Ireland	41	0.92	1.27	27	0.44	0.53
U.K., Scotland	50	0.26	0.37	88	0.28	0.32	U.K., Scotland	105	0.64	0.79	93	0.48	0.65

Table 3 (continued)

Non-Hodgkin's lymphomas

Multiple myeloma

Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64		Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64
Albania	25	0.86	1.27	14	0.47	0.13	Albania	7	0.27	0.35	5	0.18	0.35
Austria	955	3.42	4.42	1043	2.19	2.33	Austria	522	1.85	2.11	702	1.45	1.73
Belarus							Belarus						
Belgium	286	3.71	4.37	295	2.65	3.44	Belgium	191	2.26	1.92	177	1.38	1.61
Bulgaria	596	2.07	3.12	371	1.11	1.67	Bulgaria	156	0.49	0.91	128	0.35	0.59
Croatia	405	2.84	3.57	347	1.71	2.28	Croatia	192	1.24	1.61	254	1.16	1.84
Czech Republic	1062	4.19	5.74	852	2.24	2.82	Czech Republic	558	2.06	2.47	604	1.47	1.86
Denmark	1009	5.91	6.84	874	3.69	4.52	Denmark	440	2.51	2.83	375	1.62	2.02
Estonia	19	2.28	2.74	18	1.68	2.77	Estonia	9	1.05	1.41	13	0.84	1.08
Finland	866	5.13	6.29	1031	3.64	4.55	Finland	446	2.55	2.36	571	1.96	2.18
France	9512	4.38	5.61	8553	2.71	3.32	France	4553	1.91	1.91	4956	1.34	1.34
Germany	10838	3.73	4.84	11270	2.36	3.01	Germany	6103	2.02	2.37	7370	1.42	1.65
Greece	713	1.82	2.62	488	0.96	1.21	Greece	520	1.17	1.42	482	0.92	1.18
Hungary	1373	4.08	5.71	1144	2.31	2.81	Hungary	581	1.64	2.32	683	1.31	1.88
Iceland	37	4.44	6.81	19	2.08	3.08	Iceland	23	2.79	4.54	18	1.89	4.01
Ireland	440	5.15	6.81	393	3.91	6.21	Ireland	295	3.19	3.54	209	1.72	1.91
Italy	9829	4.49	6.18	8647	2.81	3.61	Italy	5108	2.07	2.35	5382	1.54	1.82
Latvia							Latvia						
Lithuania	98	2.54	3.83	65	1.14	1.46	Lithuania	55	1.32	1.84	93	1.42	2.01
Luxembourg	59	4.37	4.56	71	3.07	2.79	Luxembourg	33	2.22	1.25	23	0.92	0
Macedonia							Macedonia						
Malta	31	2.82	4.17	43	3.16	4.41	Malta	18	1.74	2.05	18	1.25	1.17
Moldova							Moldova						
The Netherlands	2681	5.17	6.37	2451	3.24	4.14	The Netherlands	1474	2.74	2.97	1532	1.86	1.91
Norway	844	4.89	6.14	747	3.33	5.09	Norway	594	3.17	3.56	576	2.11	2.23
Poland							Poland						
Portugal	1109	3.36	4.98	902	2.06	2.79	Portugal	576	1.55	1.94	559	1.13	1.37
Romania							Romania						
Russian Federation							Russian Federation						
Slovenia	187	3.21	4.81	191	2.01	2.21	Slovenia	93	1.56	1.82	120	1.28	1.53
Spain	3655	3.44	5.05	2947	2.04	2.81	Spain	2048	1.69	1.89	2041	1.23	1.42
Sweden	1988	5.14	6.67	1679	3.11	3.88	Sweden	1225	2.78	2.74	1088	1.76	1.73
Switzerland	1740	6.25	5.97	1591	3.77	3.94	Switzerland	765	2.68	2.41	712	1.72	1.79
Ukraine							Ukraine						
United Kingdom	11013	5.03	7.21	10114	3.24	4.54	United Kingdom	5921	2.46	2.86	6009	1.69	1.98
U.K., England and Wales	9836	5.03	7.21	8894	3.22	4.53	U.K., England and Wales	5310	2.48	2.91	5345	1.69	1.99
U.K., Northern Ireland	284	5.61	7.93	221	3.04	4.27	U.K., Northern Ireland	148	2.73	2.95	157	2.01	2.61
U.K., Scotland	893	4.88	6.95	999	3.58	4.73	U.K., Scotland	463	2.26	2.31	507	1.62	1.72

Leukaemias

Total, all sites

Country	Males			Females			Country	Males			Females		
	Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64		Deaths No.	World Standard	Trunc. 35–64	Deaths No.	World Standard	Trunc. 35–64
Albania	76	2.81	2.83	68	2.23	2.57	Albania	2573	102.77	145.88	1366	47.08	72.71
Austria	1443	5.27	5.01	1500	3.55	4.01	Austria	49455	174.25	211.84	49375	108.08	150.61
Belarus	901	5.84	6.71	801	3.64	4.68	Belarus	32457	197.28	339.41	23175	89.15	153.89
Belgium	1338	6.01	5.73	1133	3.55	3.64	Belgium	47039	197.82	229.74	34558	104.87	154.08
Bulgaria	1233	4.48	5.74	833	2.72	4.05	Bulgaria	46297	143.27	238.54	31886	85.45	144.74
Croatia	803	5.59	6.05	683	3.35	4.11	Croatia	30754	203.92	298.38	21513	98.51	143.84
Czech Republic	1807	7.23	7.97	1530	4.39	5.25	Czech Republic	62727	238.41	335.97	50081	129.16	189.18
Denmark	1059	6.47	6.25	824	3.85	4.43	Denmark	31660	182.82	206.84	30401	141.81	217.27
Estonia	272	6.76	8.18	255	3.88	4.71	Estonia	6297	147.17	235.21	5104	72.31	120.64
Finland	798	4.87	4.64	754	3.17	3.46	Finland	26011	151.61	158.44	24577	90.92	122.99
France	12645	5.82	5.56	10847	3.51	3.88	France	437171	199.58	278.45	283612	89.01	127.95
Germany	16523	5.86	5.91	16555	3.61	3.97	Germany	542151	180.96	222.55	540319	110.72	154.21
Greece	2299	5.55	5.42	1652	3.55	3.89	Greece	63308	144.92	180.32	39211	77.71	113.91
Hungary	2380	7.19	8.31	2134	4.57	5.19	Hungary	90952	262.47	408.41	70215	137.72	208.55
Iceland	41	4.74	6.17	30	2.76	3.27	Iceland	1159	134.32	145.81	1079	116.39	193.76
Ireland	656	5.74	5.27	461	3.21	3.26	Ireland	20049	175.22	194.91	17023	123.88	182.43
Italy	13812	6.37	6.15	11283	4.01	4.43	Italy	445278	189.21	234.09	315827	99.26	139.06
Latvia	464	6.69	8.15	455	4.37	5.94	Latvia	15441	207.93	326.25	12536	100.14	166.15
Lithuania	759	7.72	9.83	672	4.72	5.31	Lithuania	13300	130.78	206.81	10231	66.04	108.53
Luxembourg	97	7.26	7.68	67	2.94	2.67	Luxembourg	2695	190.32	228.67	2203	107.43	152.81
Macedonia	160	3.98	4.91	98	2.31	2.76	Macedonia	5539	132.01	213.26	3707	80.52	135.71
Malta	53	4.74	5.31	49	3.67	4.62	Malta	1715	154.02	180.31	1433	101.71	146.83
Moldova	521	5.16	5.66	442	3.57	4.46	Moldova	16966	166.79	301.04	13099	93.21	168.95
The Netherlands	2871	5.67	5.38	2362	3.25	3.49	The Netherlands	103186	191.87	203.95	80775	111.56	163.94
Norway	762	4.52	4.55	645	2.84	3.27	Norway	27701	149.45	163.27	23560	102.85	152.61
Poland	5843	5.72	6.46	4800	3.54	4.38	Poland	217138	206.77	320.21	160485	109.02	176.92
Portugal	1633	5.03	4.99	1368	3.57	3.74	Portugal	54411	151.81	200.31	41171	88.12	129.76
Romania	2836	4.43	5.61	2070	3.03	3.78	Romania	101668	143.45	253.24	72756	86.53	152.63
Russian Federation	19142	5.42	6.57	18509	3.61	4.78	Russian Federation	832945	223.69	367.36	656424	101.85	167.78
Slovenia	319	5.39	6.05	296	3.78	4.43	Slovenia	12212	205.73	287.93	9929	110.07	162.32
Spain	6820	5.11	5.16	5588	3.35	3.68	Spain	257099	175.76	230.13	160150	83.24	120.87
Sweden	1786	4.74	4.73	1522	3.18	3.51	Sweden	54981	129.98	137.94	49985	98.71	141.71
Switzerland	1487	5.82	5.05	1163	3.29	3.42	Switzerland	46394	168.25	181.28	37720	97.95	133.91
Ukraine	4991	6.18	8.26	4354	3.92	5.31	Ukraine	176495	199.93	348.09	136736	96.39	168.17
United Kingdom	10663	4.96	4.93	9049	3.06	3.54	United Kingdom	424315	178.11	195.48	390449	124.51	181.52
U.K., England and Wales	9698	5.05	5.01	8166	3.08	3.58	U.K., England and Wales	376021	176.11	192.41	344183	123.16	179.46
U.K., Northern Ireland	218	4.49	4.13	188	2.98	3.96	U.K., Northern Ireland	9292	176.06	197.78	8775	122.59	162.64
U.K., Scotland	747	4.19	4.42	695	2.81	3.08	U.K., Scotland	39002	199.36	225.66	37491	138.12	200.49

Mouth or pharynx

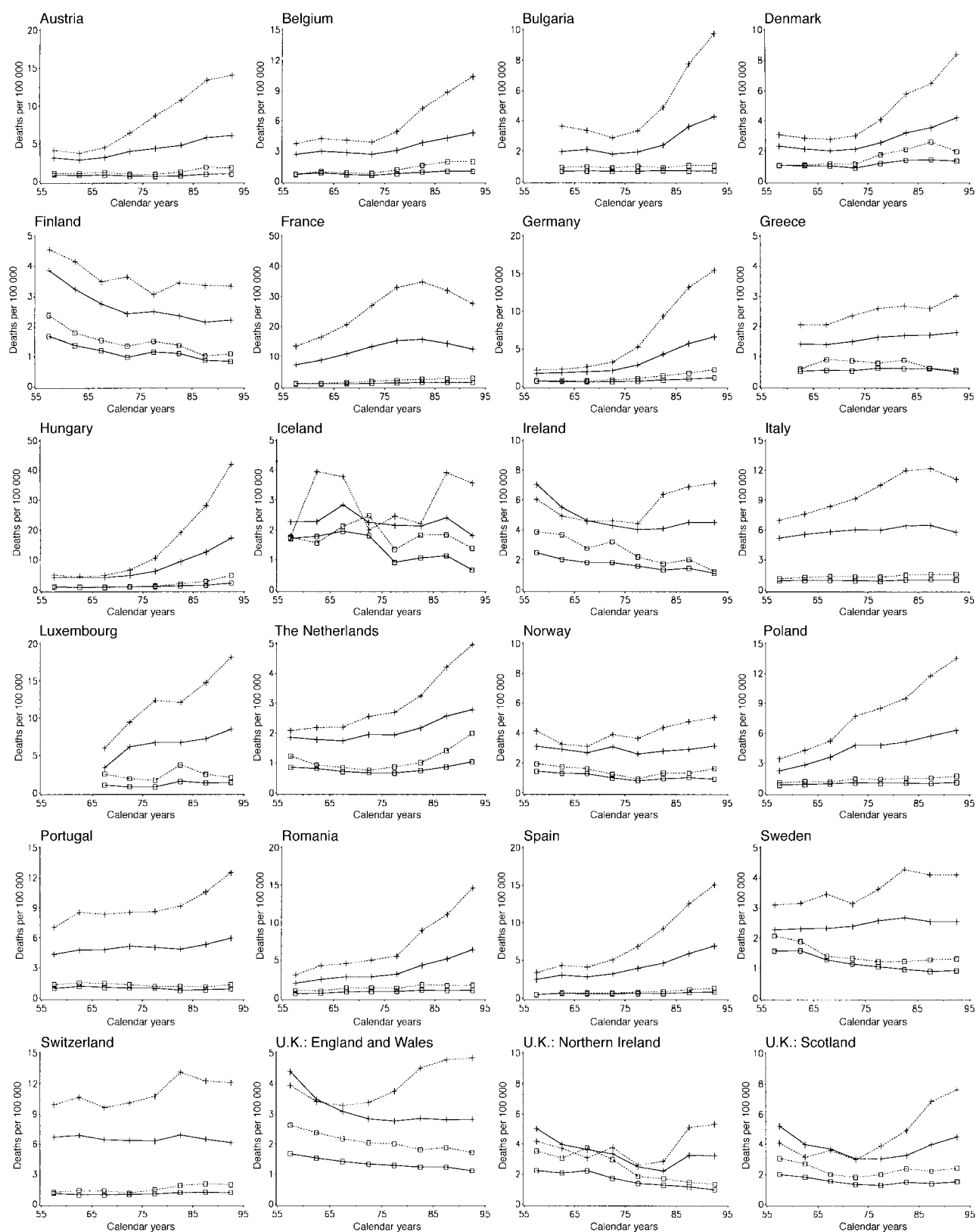


Figure 1. Trends in age-standardised (world population) death certification rates per 100 000 from various cancers or groups of cancers in 24 European countries, 1955-94. +—+, males, all ages; □—□, females, all ages; +---+ males, 35-64 years; □---□, females, 35-64 years. Scales utilised ($n=18$) were: 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 50, 75, 80, 100, 150, 200, 300, 400, 500/100 000 population.

Oesophagus

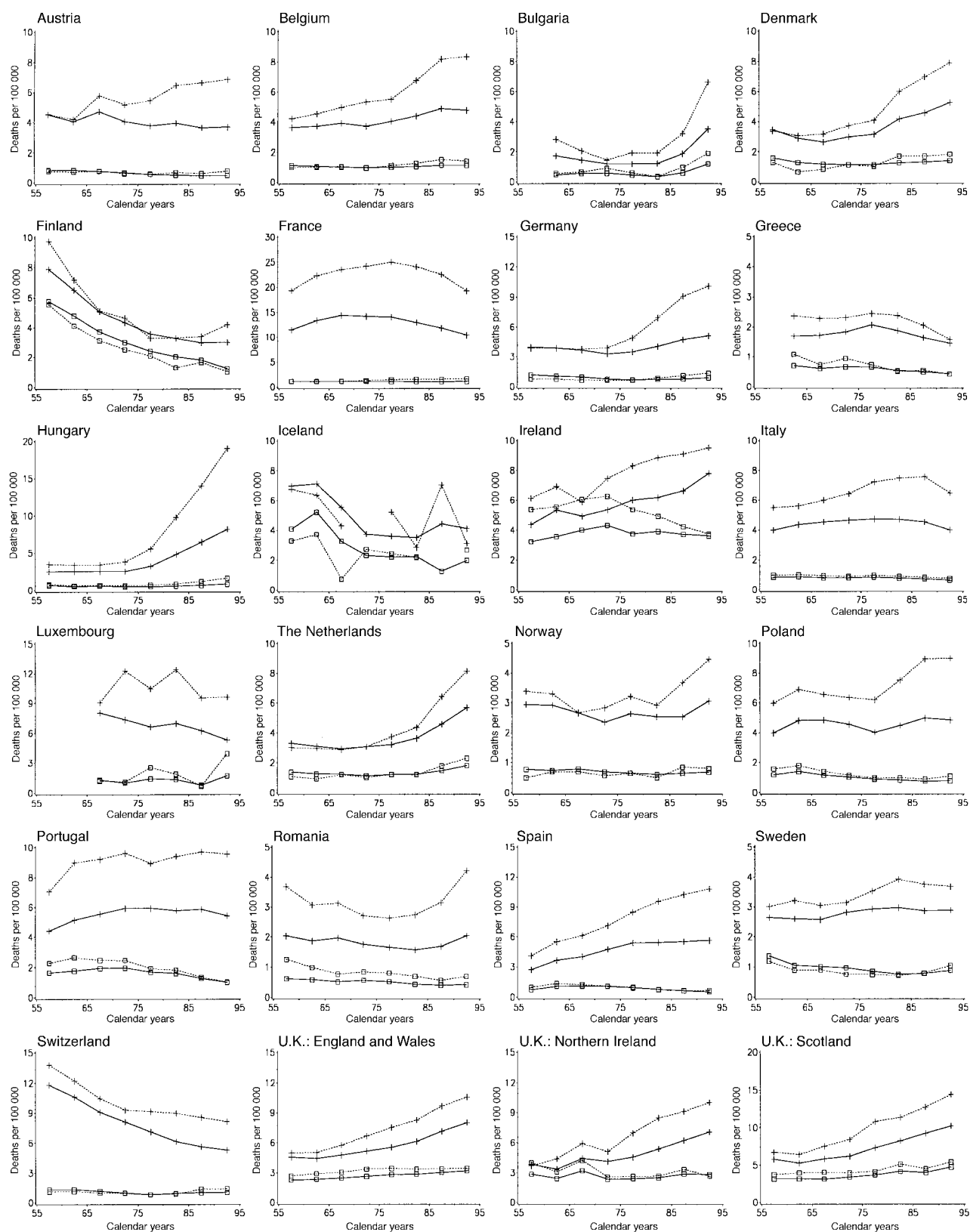


Figure 1. (continued)

Stomach

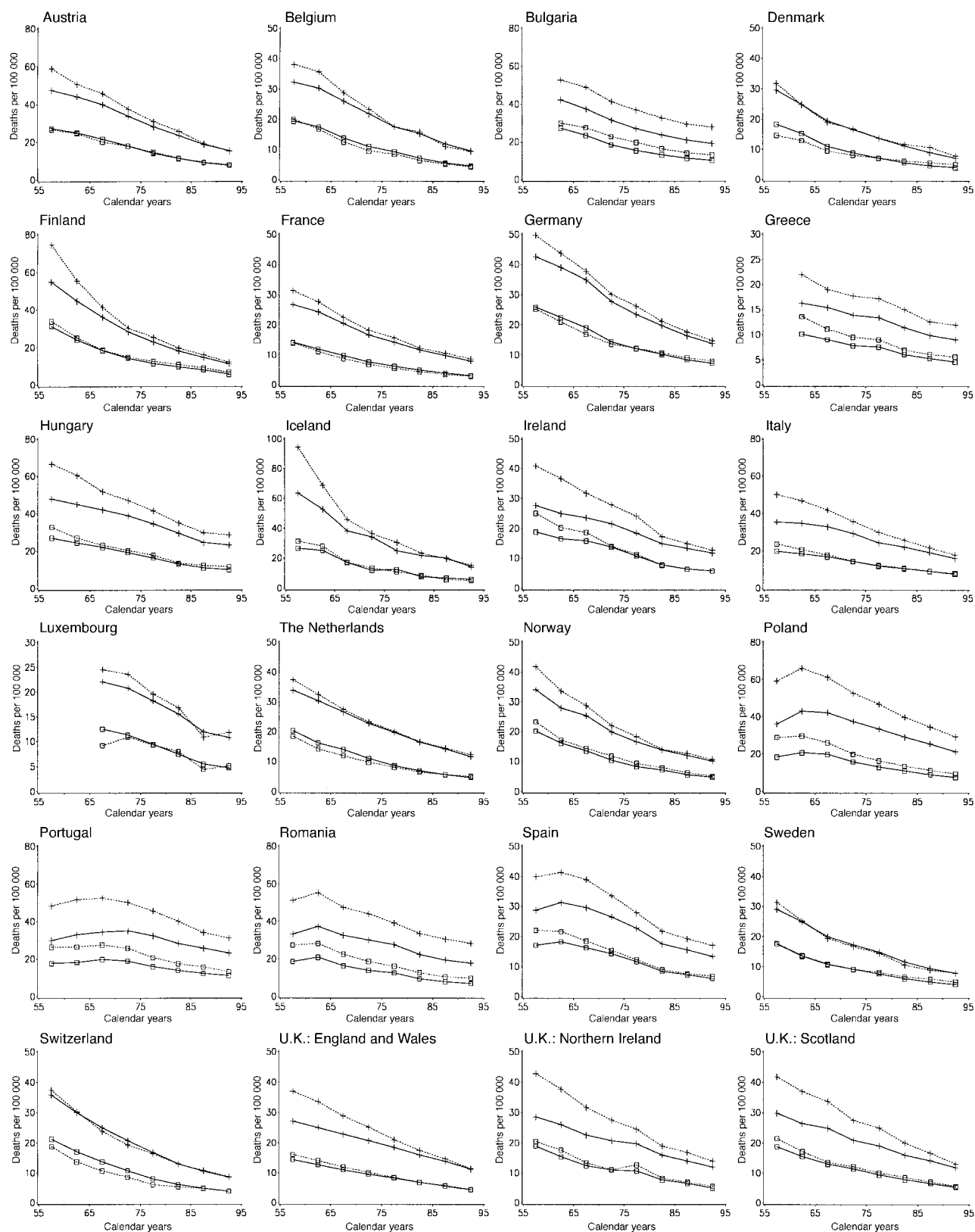


Figure 1. (continued)

Intestines, chiefly colon and rectum

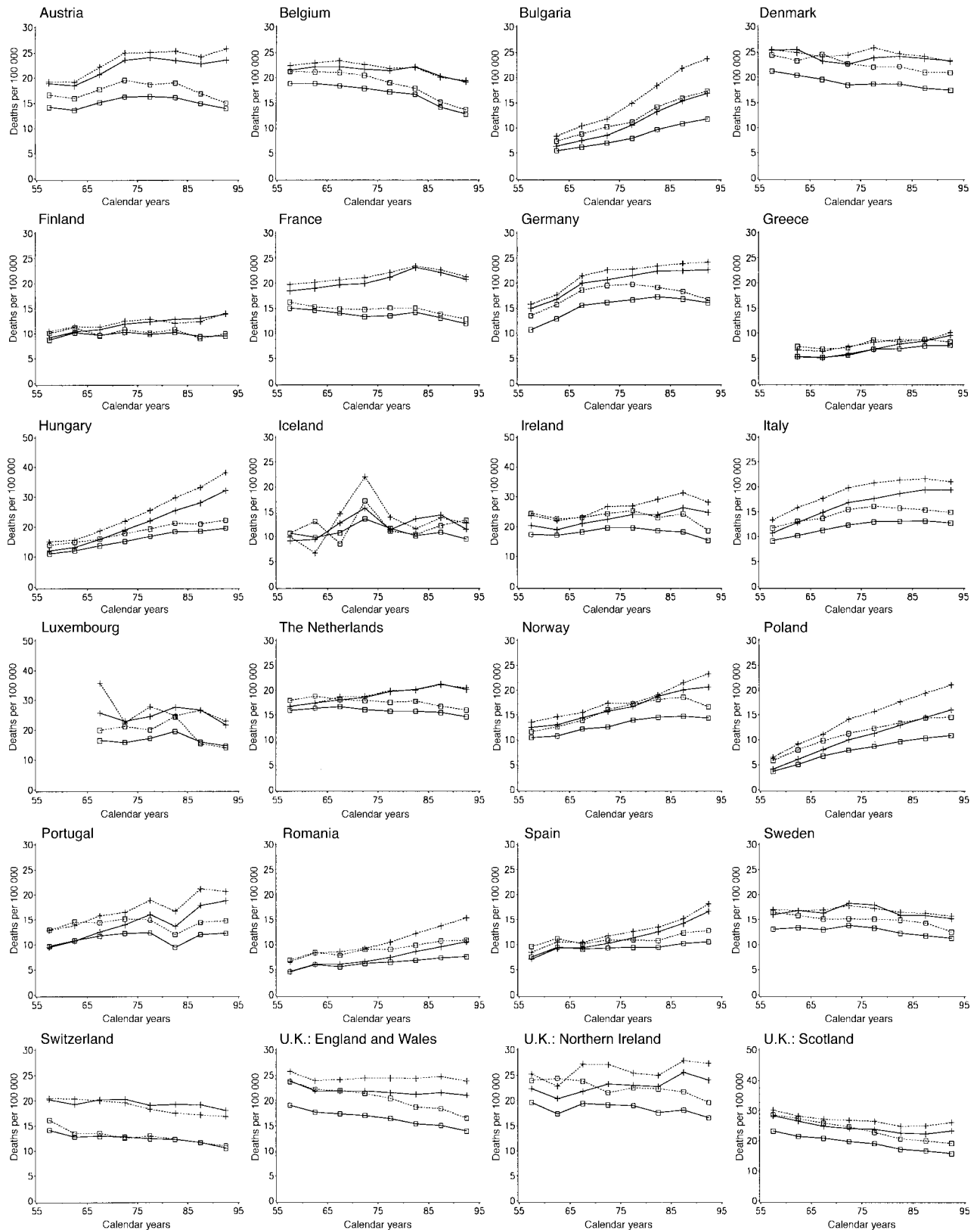


Figure 1. (continued)

Liver

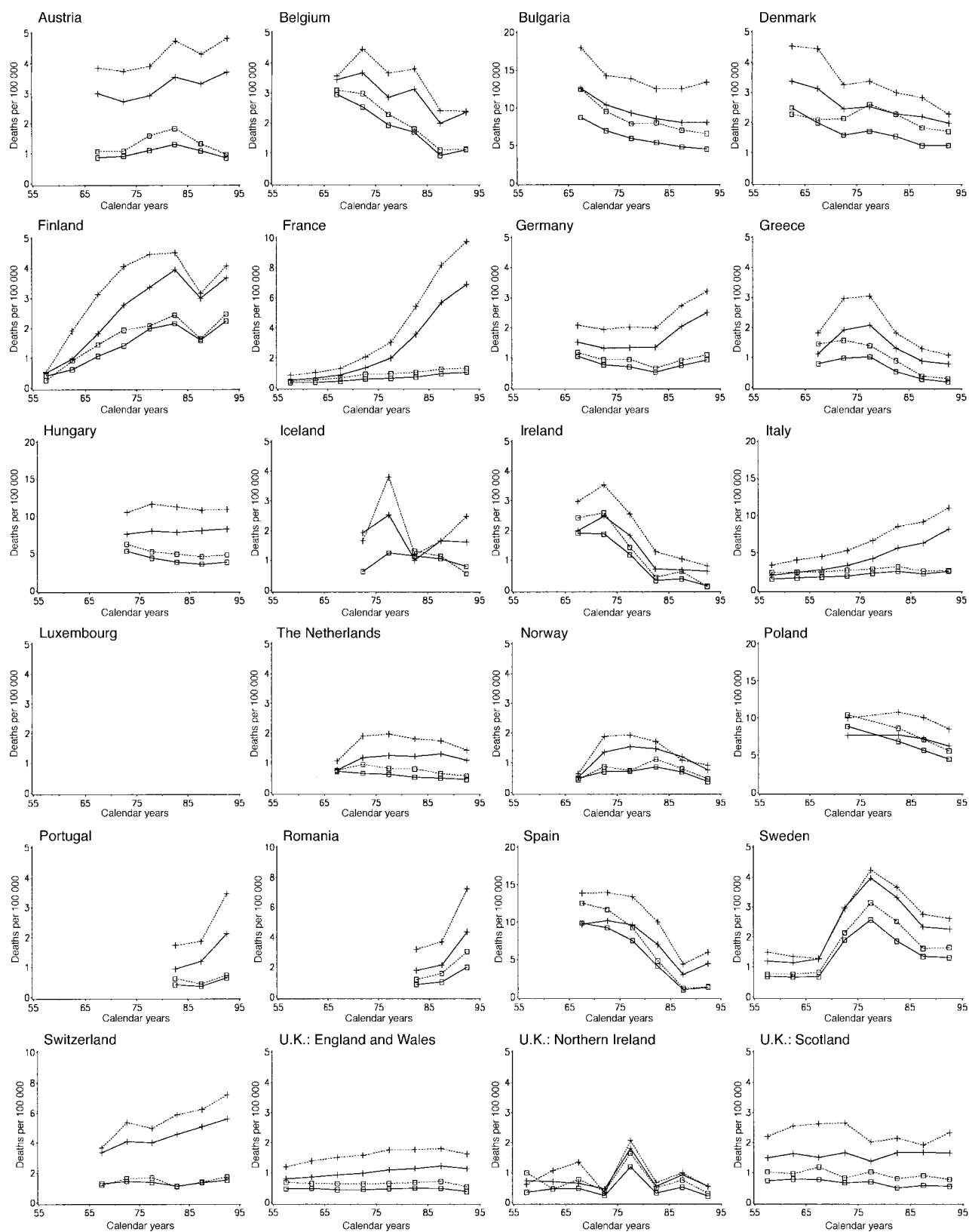


Figure 1. (continued)

Gallbladder and bile ducts

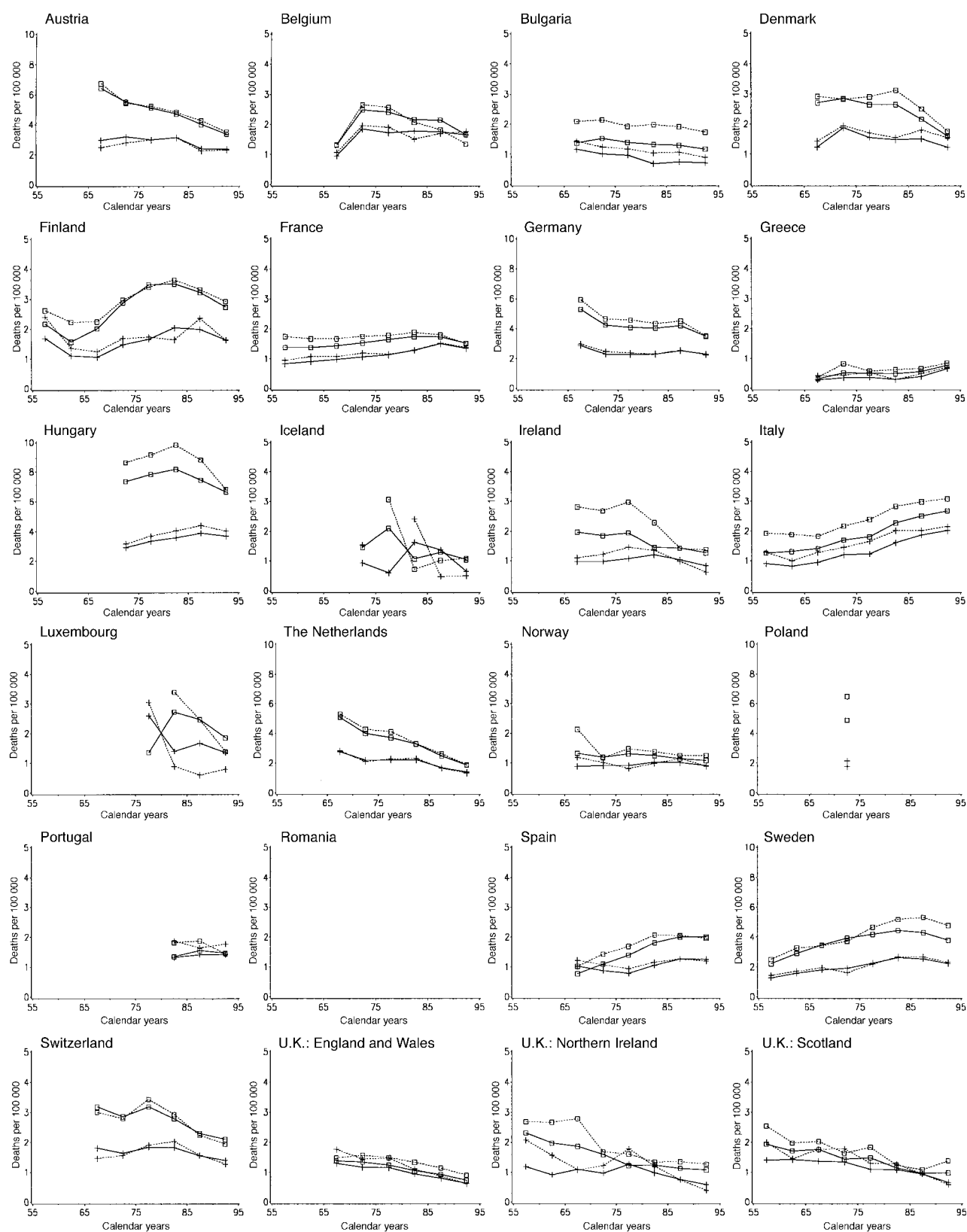


Figure 1. (continued)

Pancreas

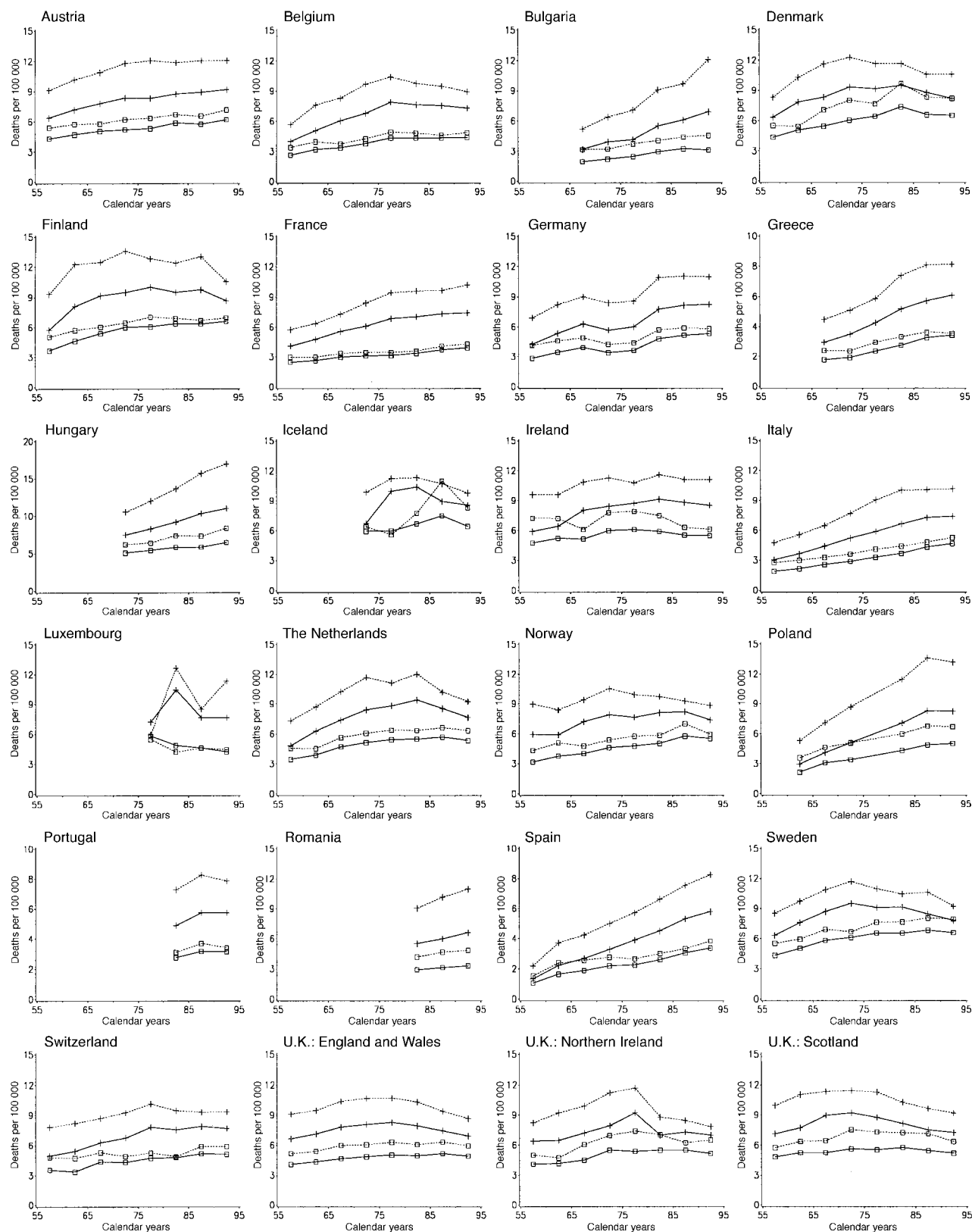


Figure 1. (continued)

Larynx

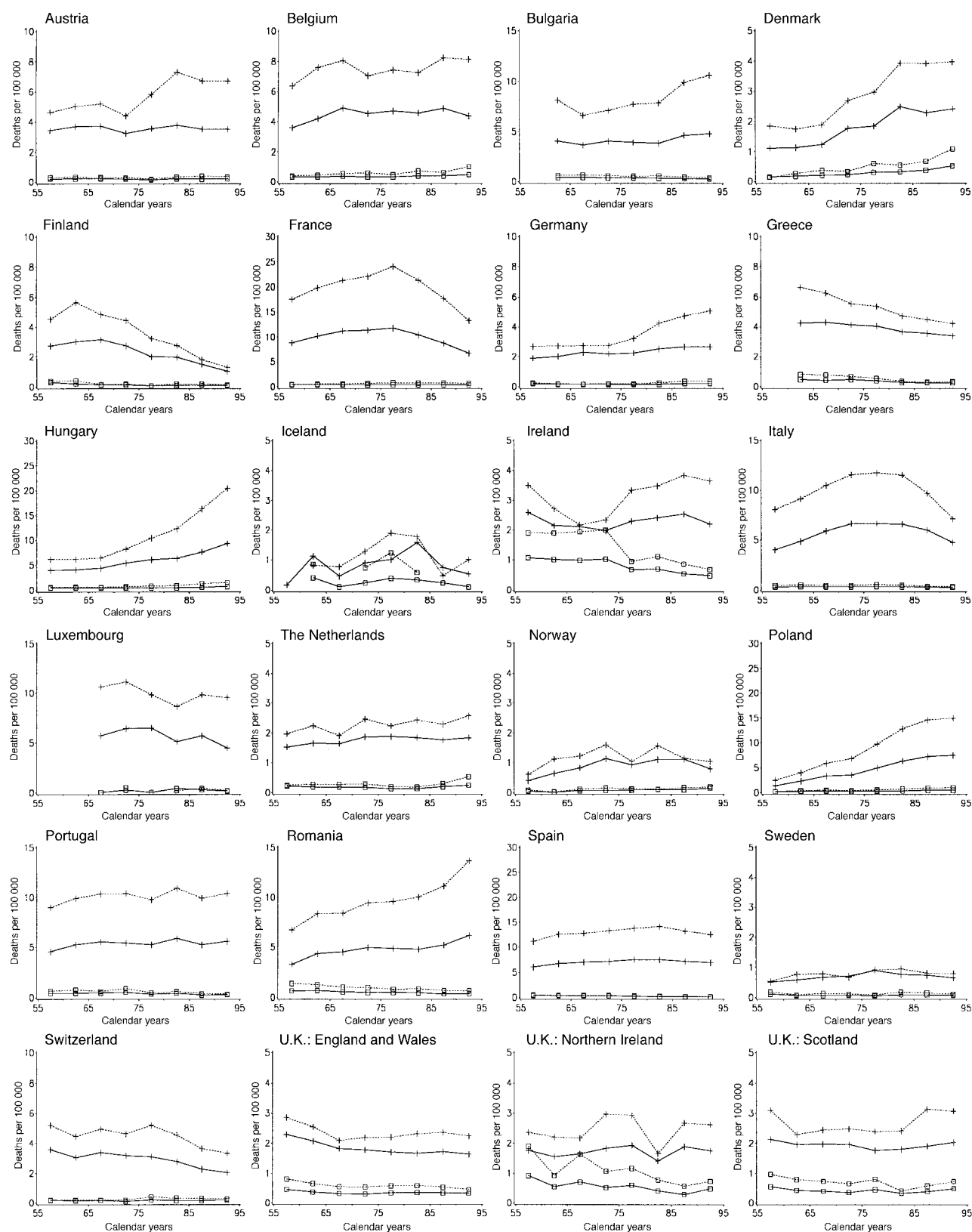


Figure 1. (continued)

Trachea, bronchus and lung

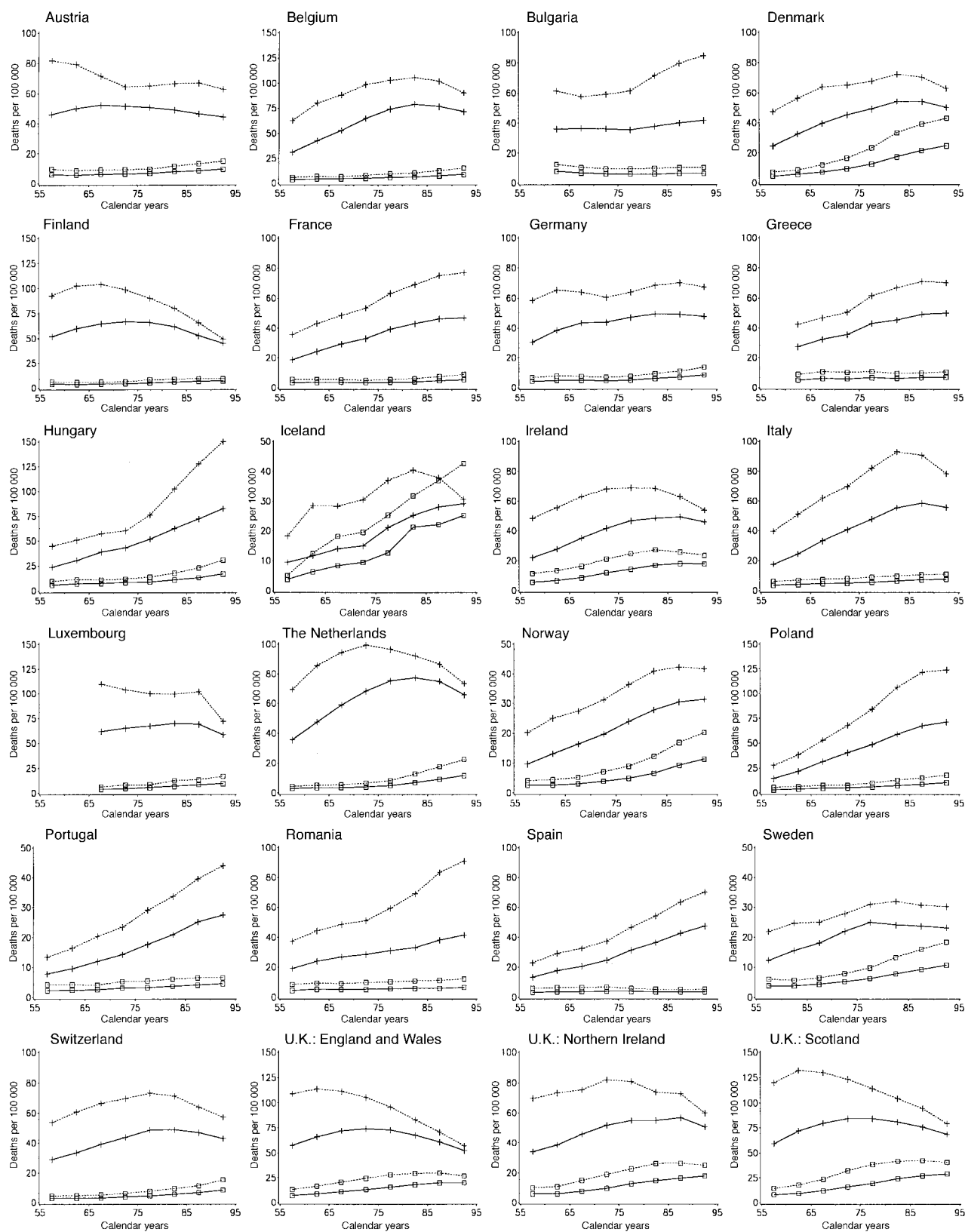


Figure 1. (continued)

Trachea, bronchus and lung — females

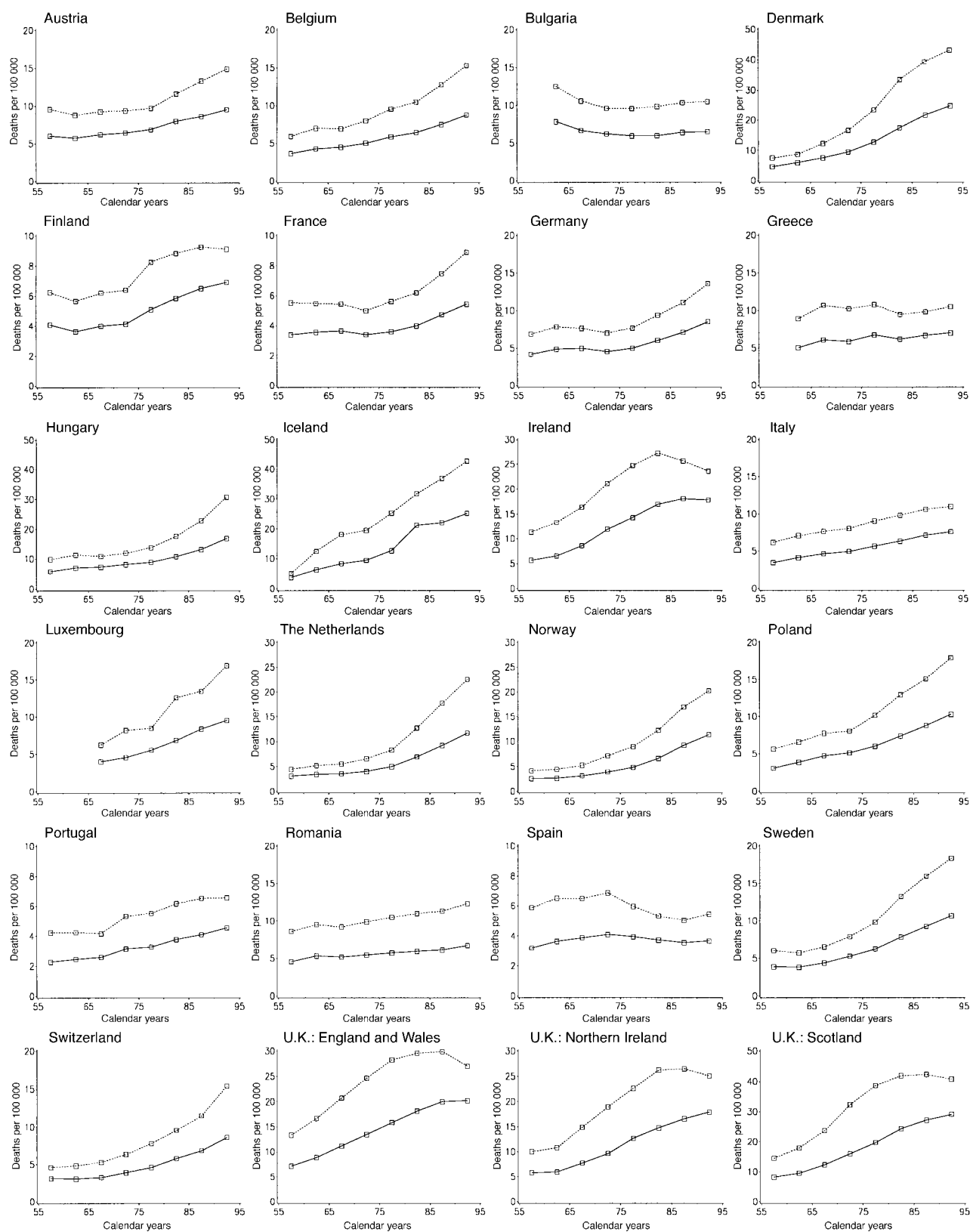


Figure 1. (continued)

Pleura

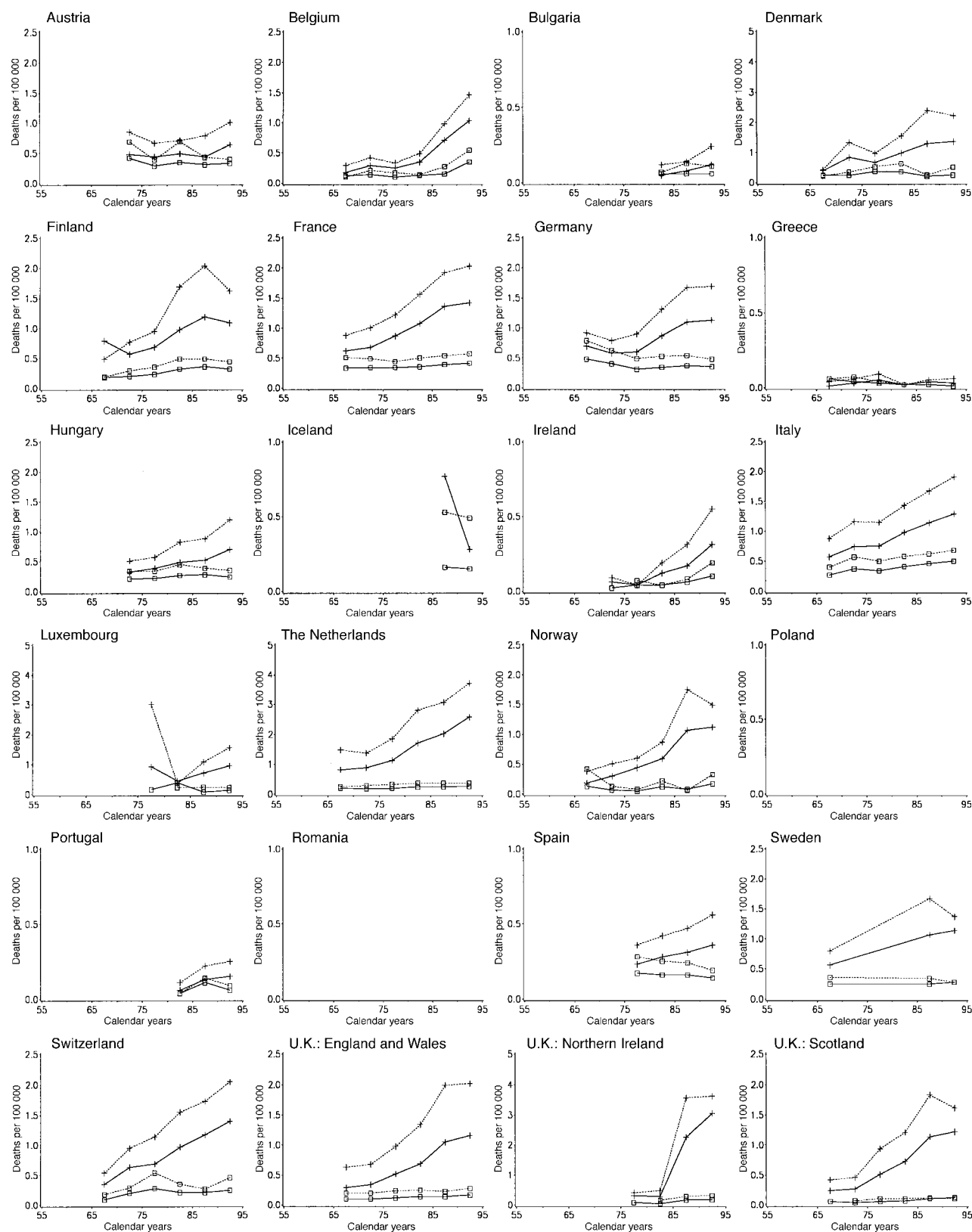


Figure 1. (continued)

Bone

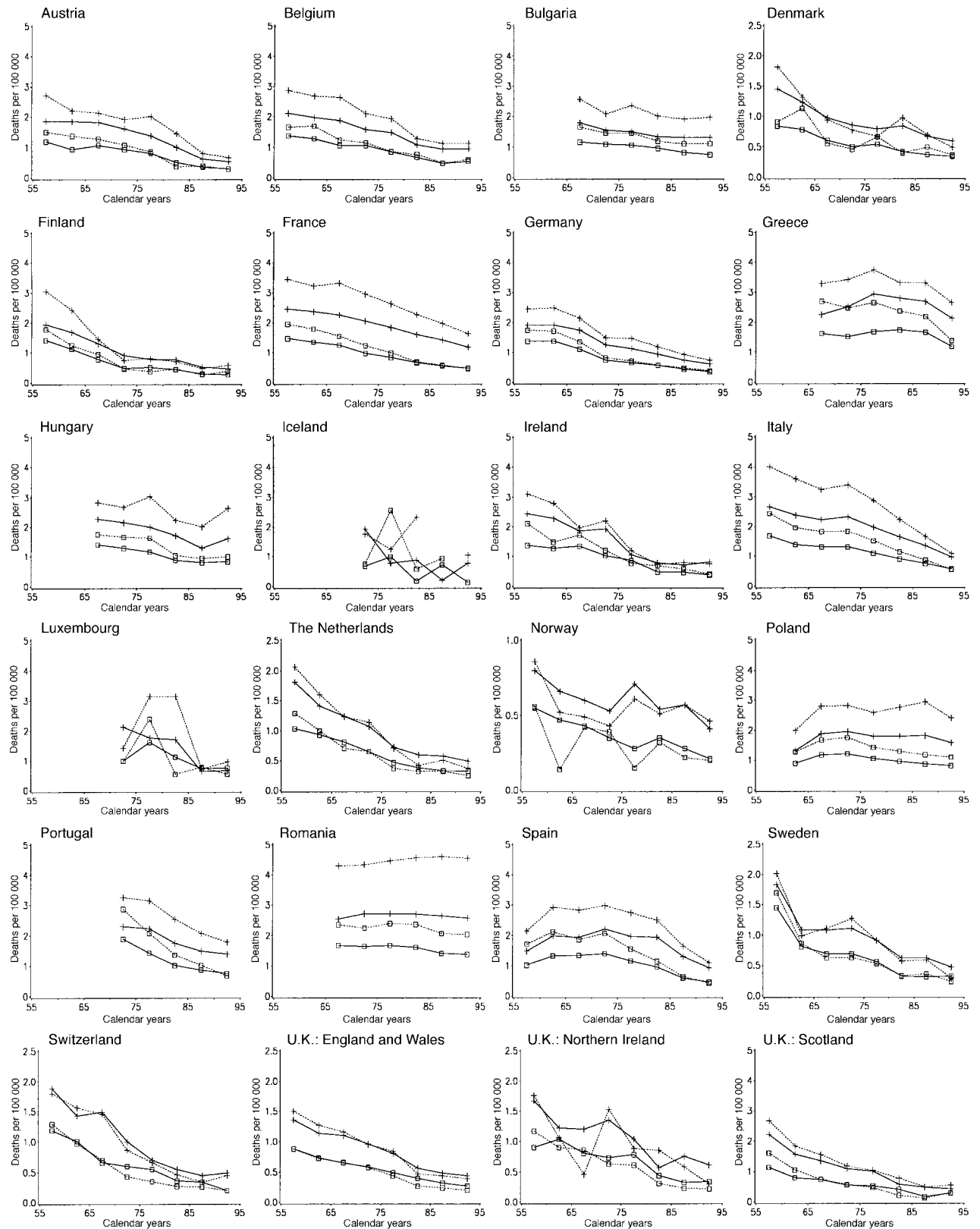


Figure 1. (continued)

Connective and soft tissue sarcomas

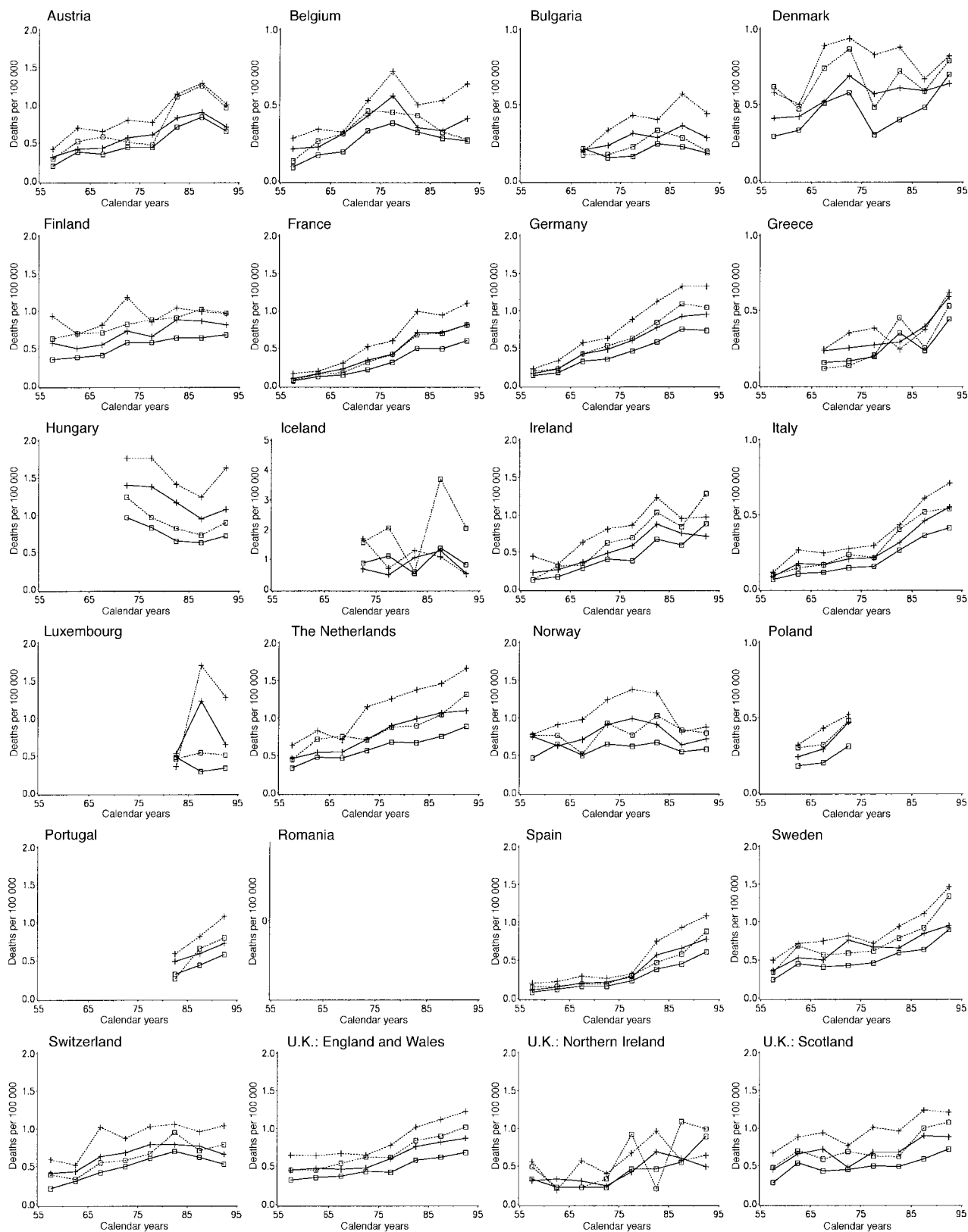


Figure 1. (continued)

Skin including melanoma

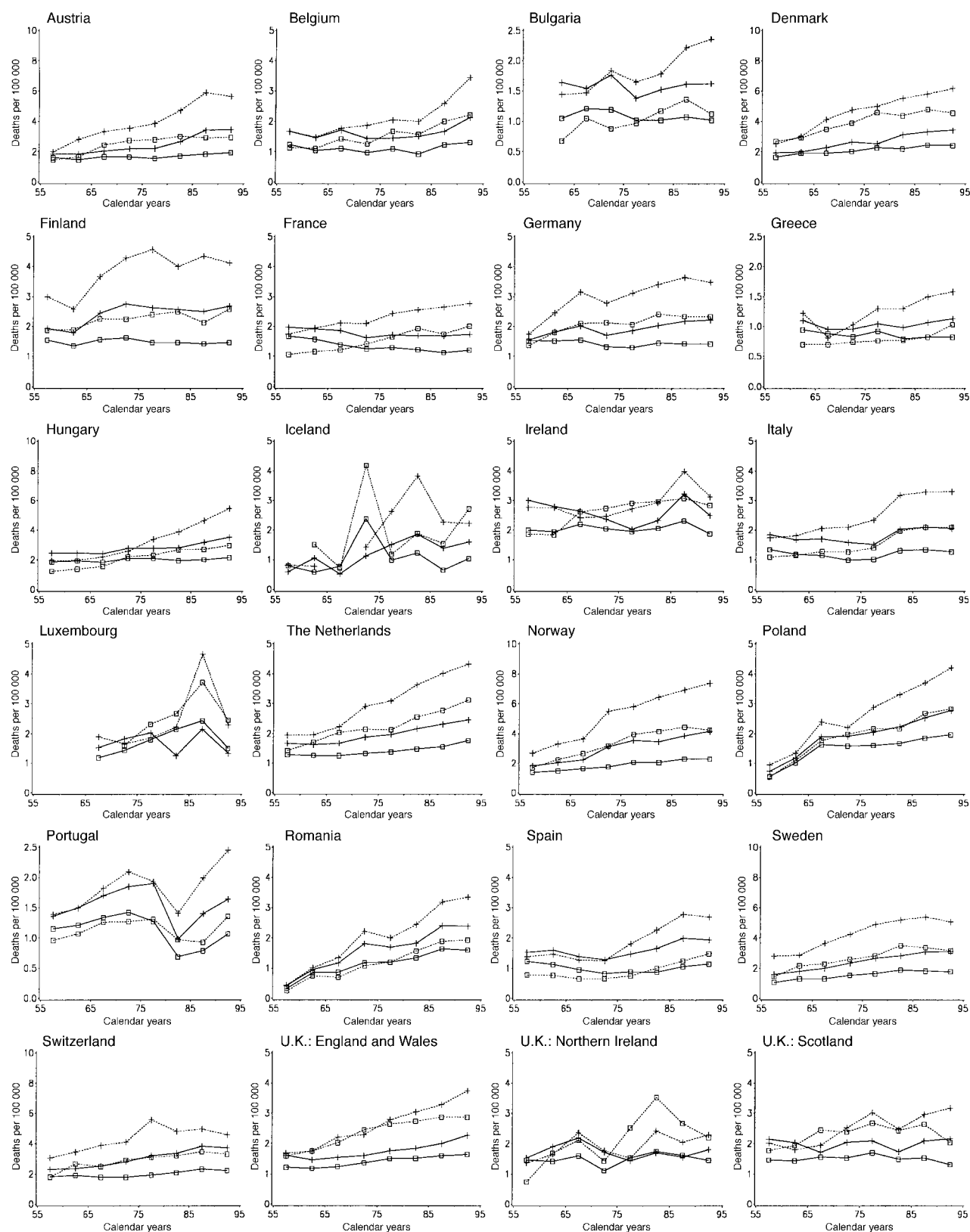


Figure 1. (continued)

Breast

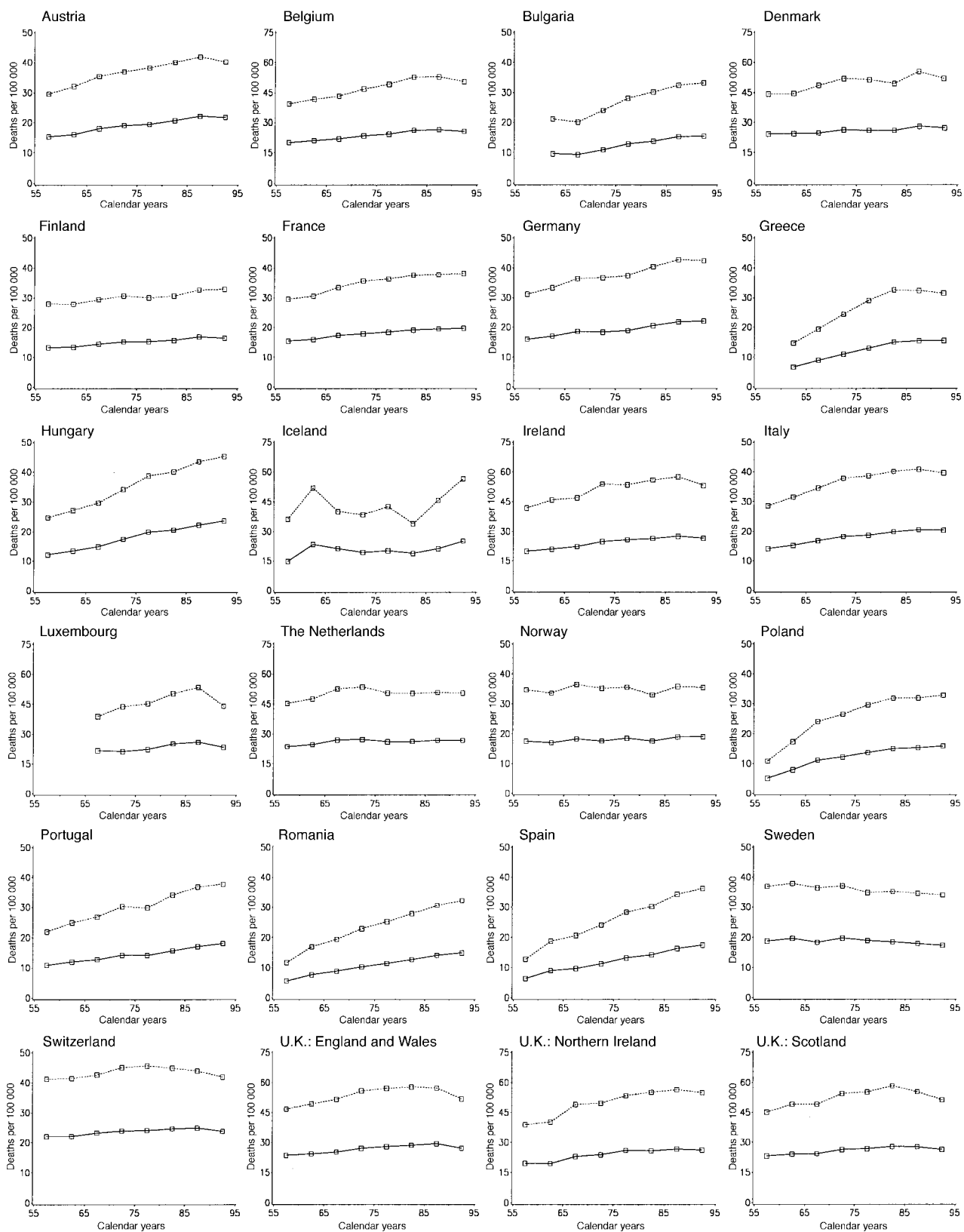


Figure 1. (continued)

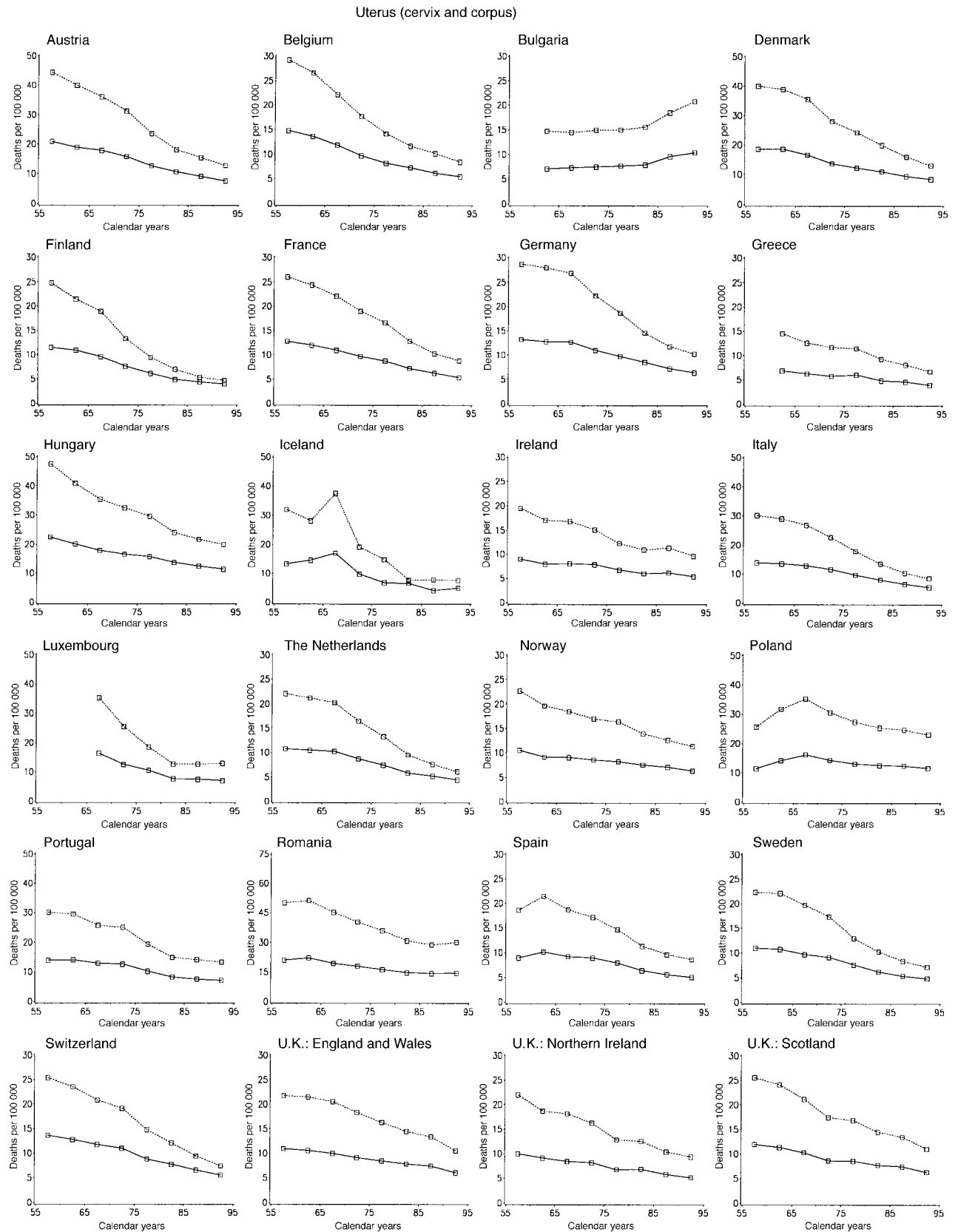


Figure 1. (continued)

Ovary

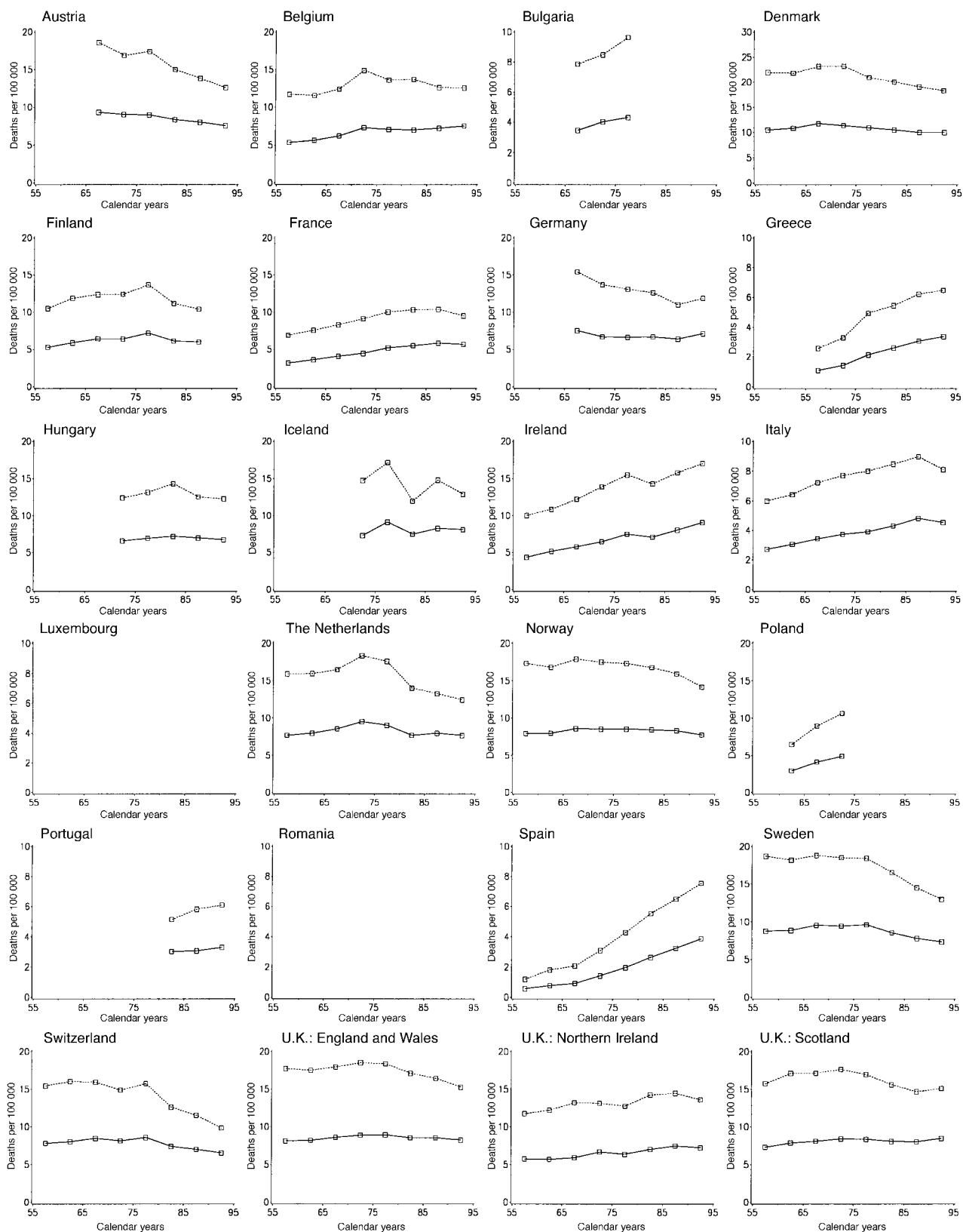


Figure 1. (continued)

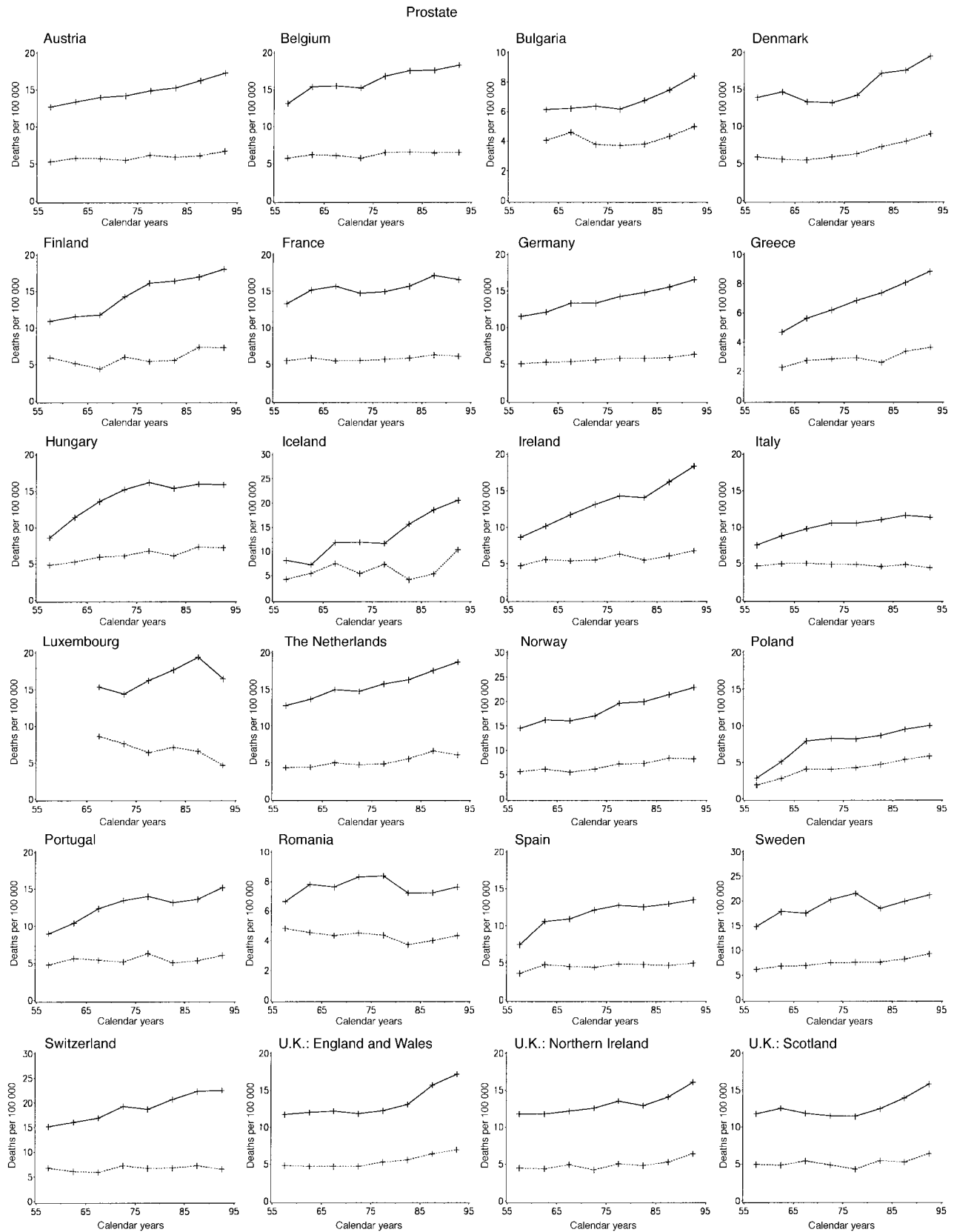


Figure 1. (continued)

Testis

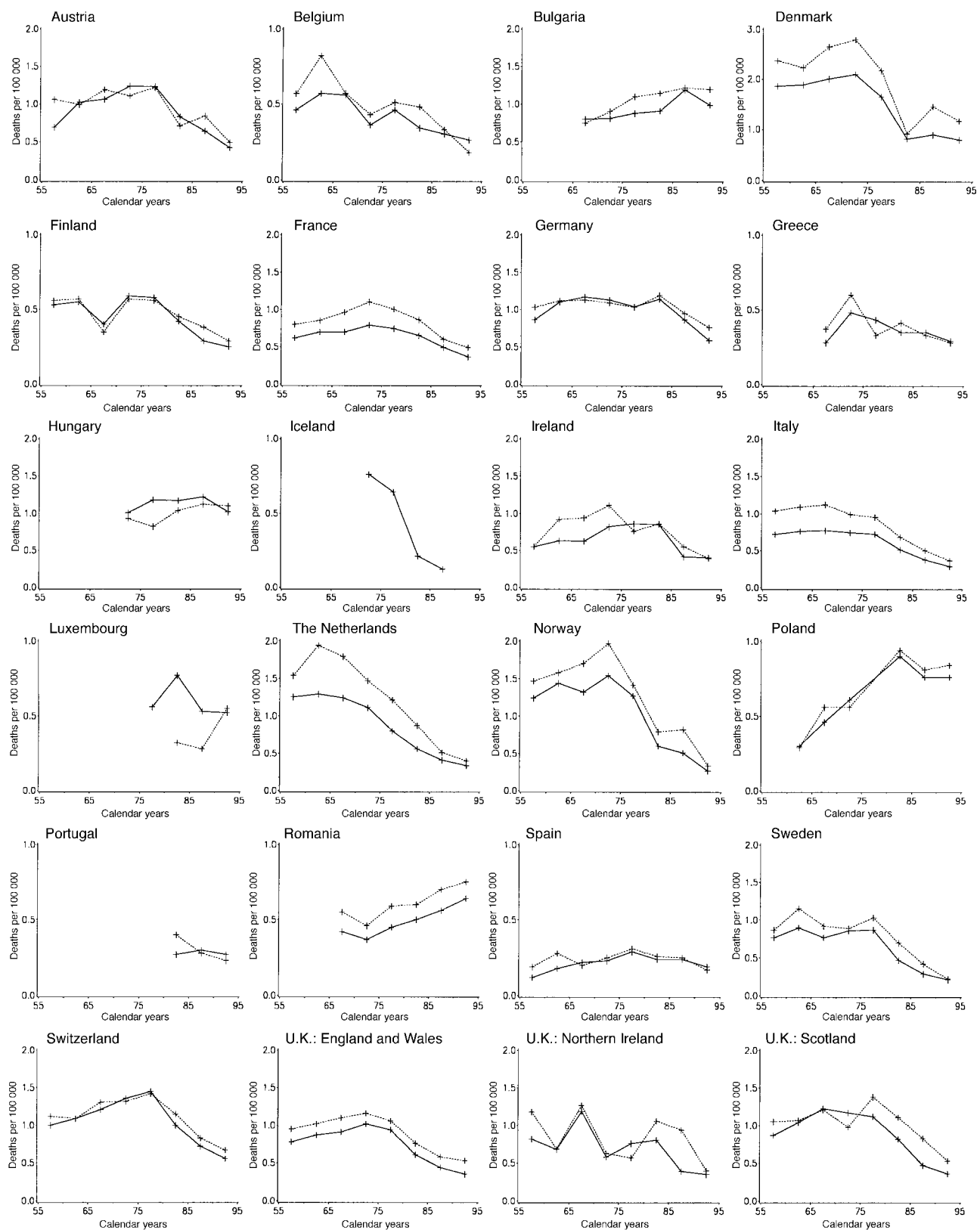
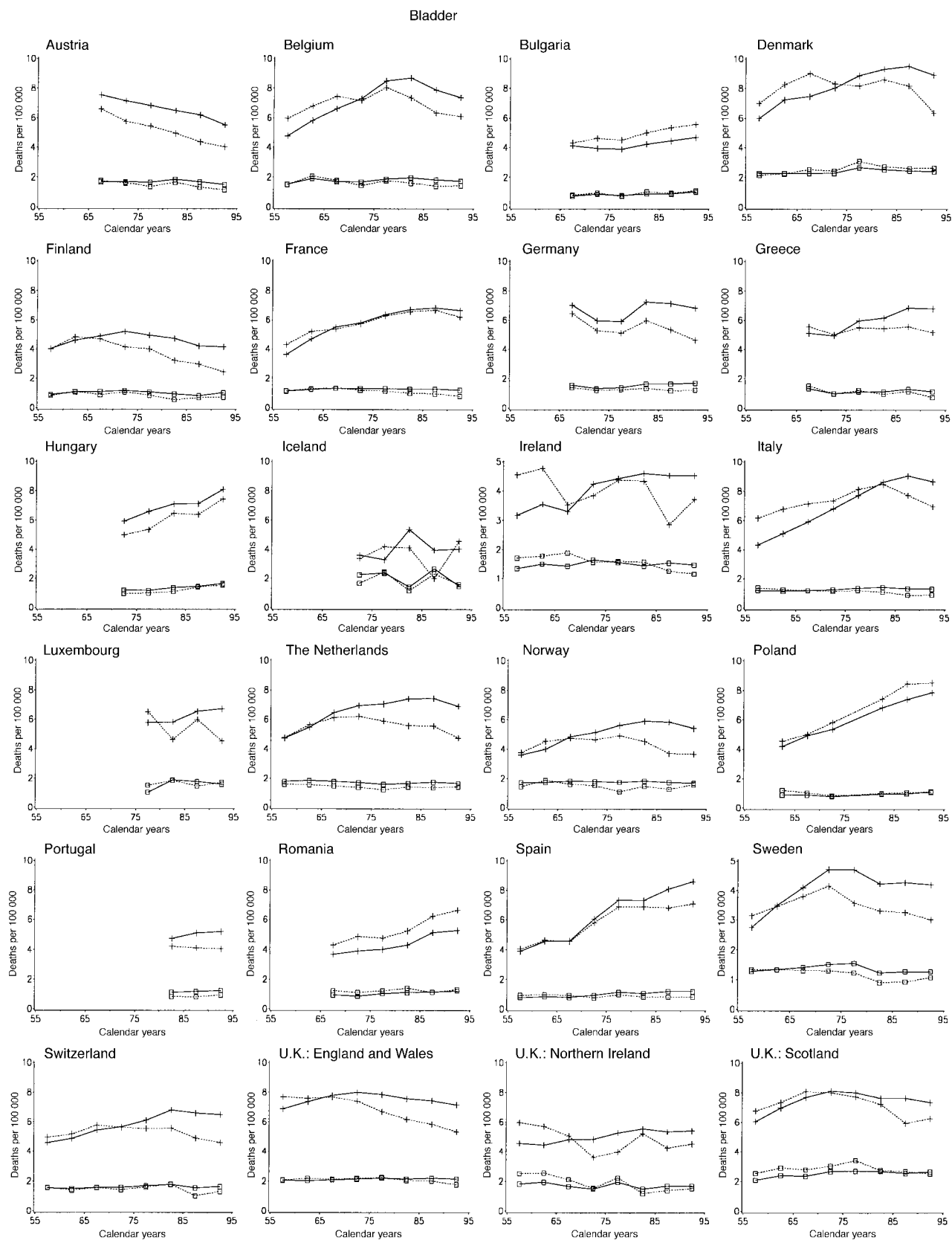


Figure 1. (continued)



Kidney

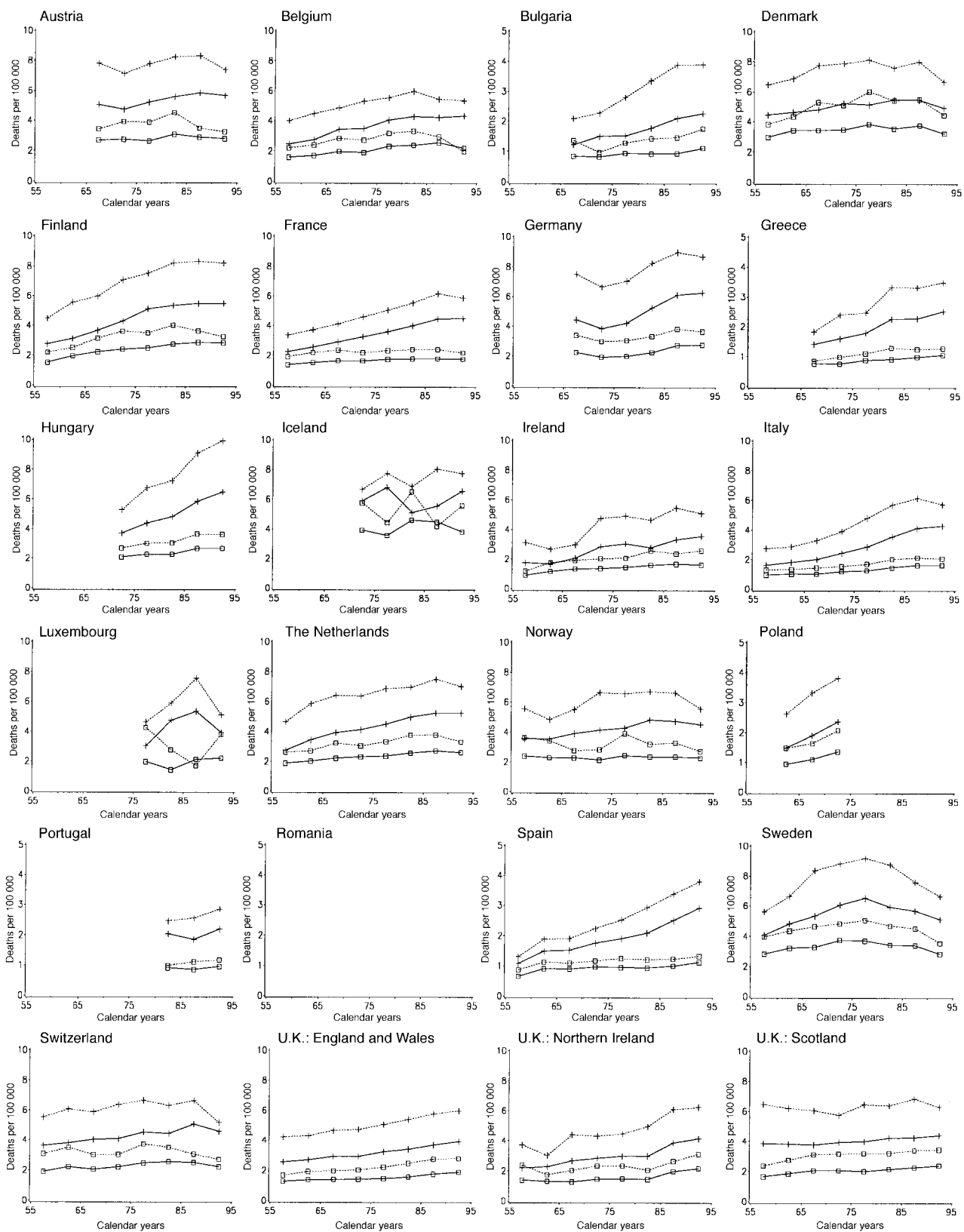


Figure 1. (continued)

Eye

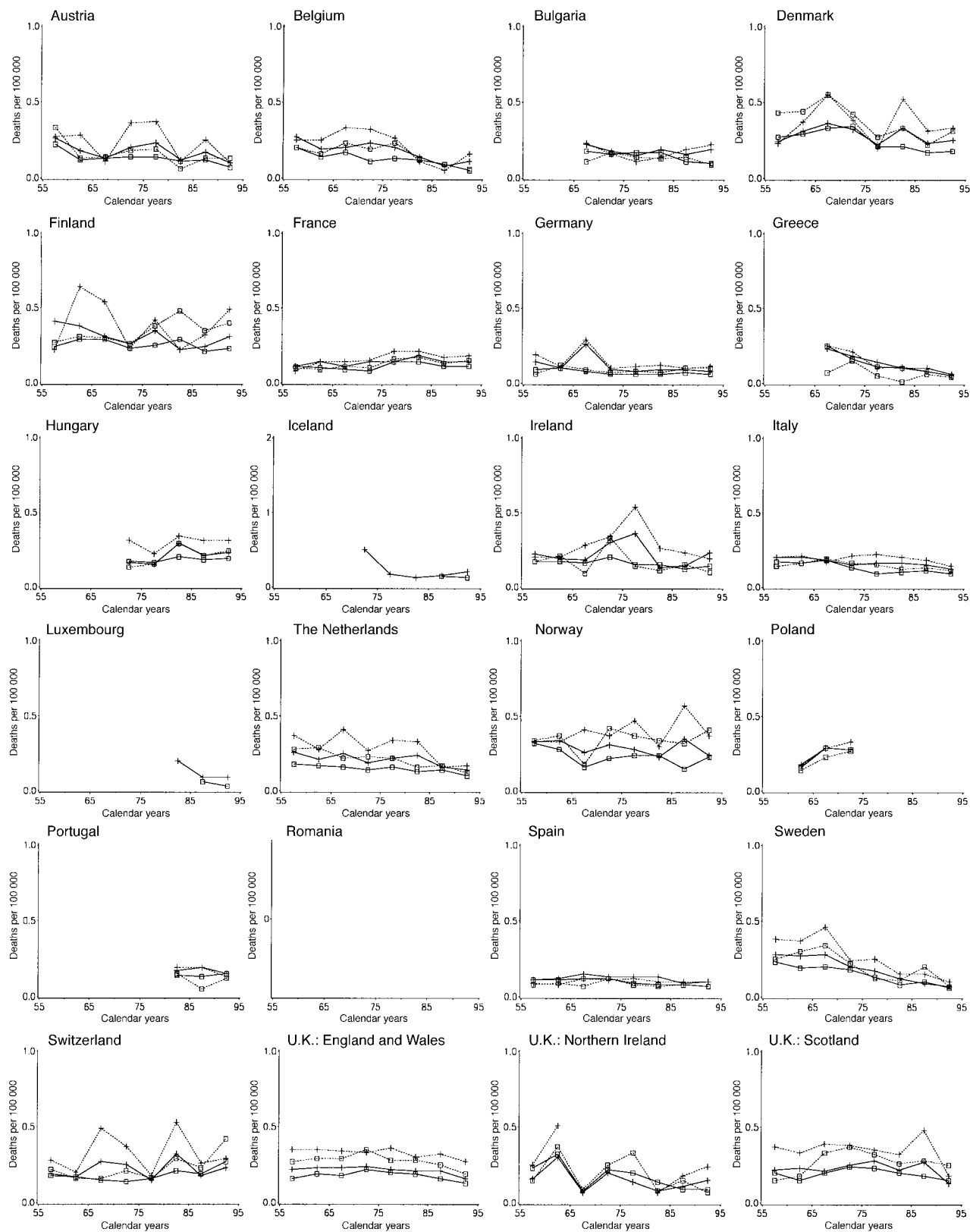


Figure 1. (continued)

Thyroid

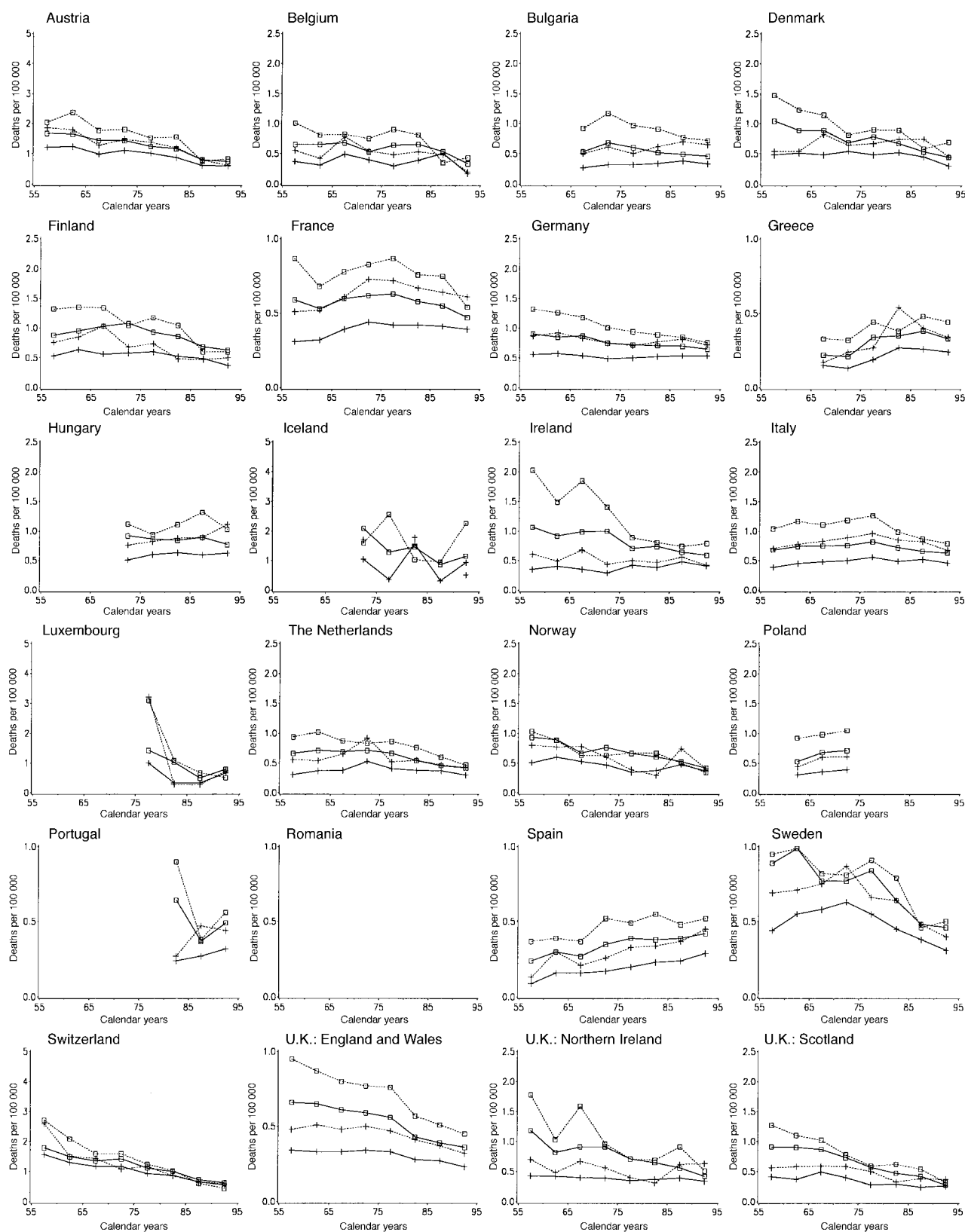


Figure 1. (continued)

Hodgkin's disease

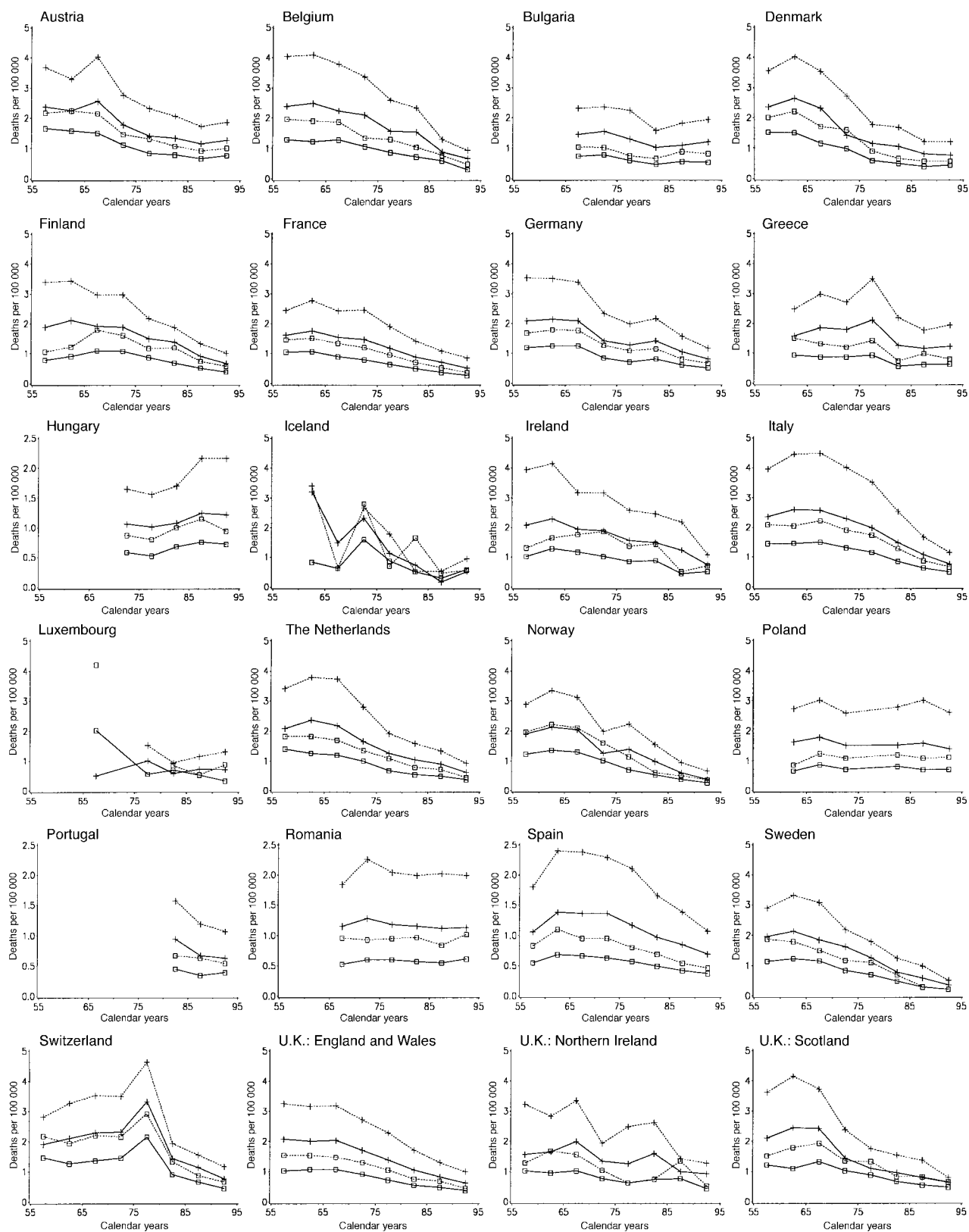


Figure 1. (continued)

Non Hodgkin's lymphomas

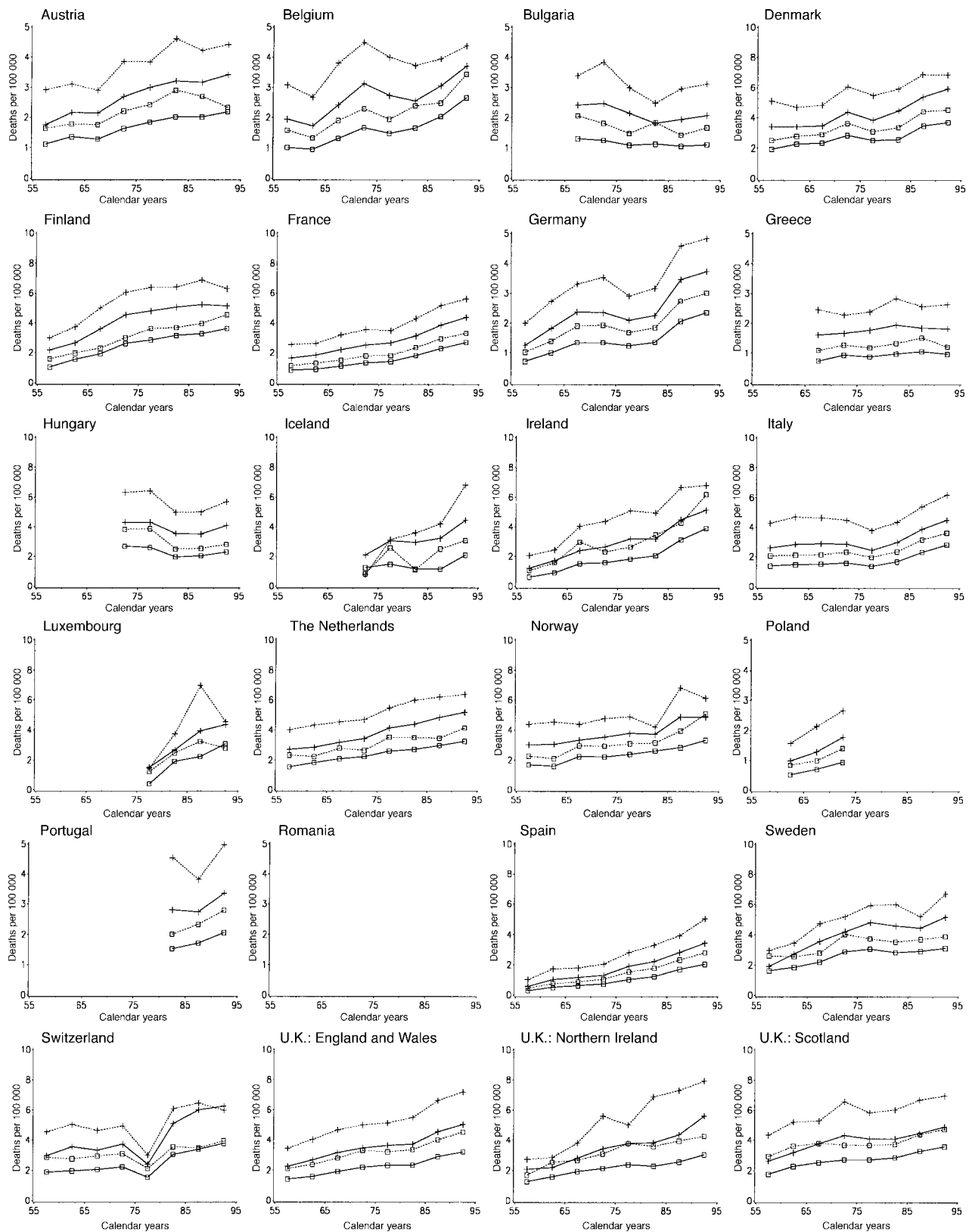


Figure 1. (continued)

Multiple myelomas

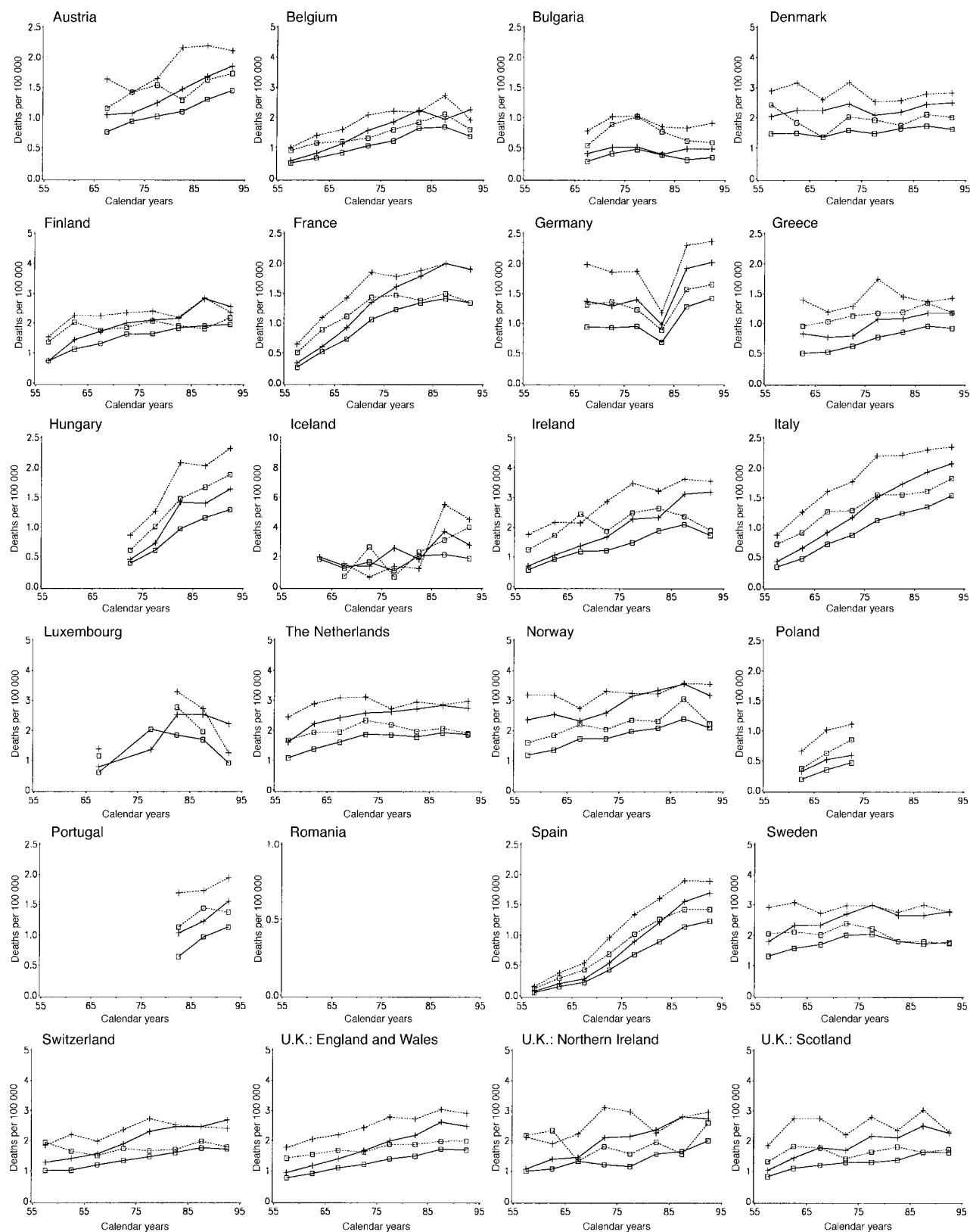


Figure 1. (continued)

Leukaemias

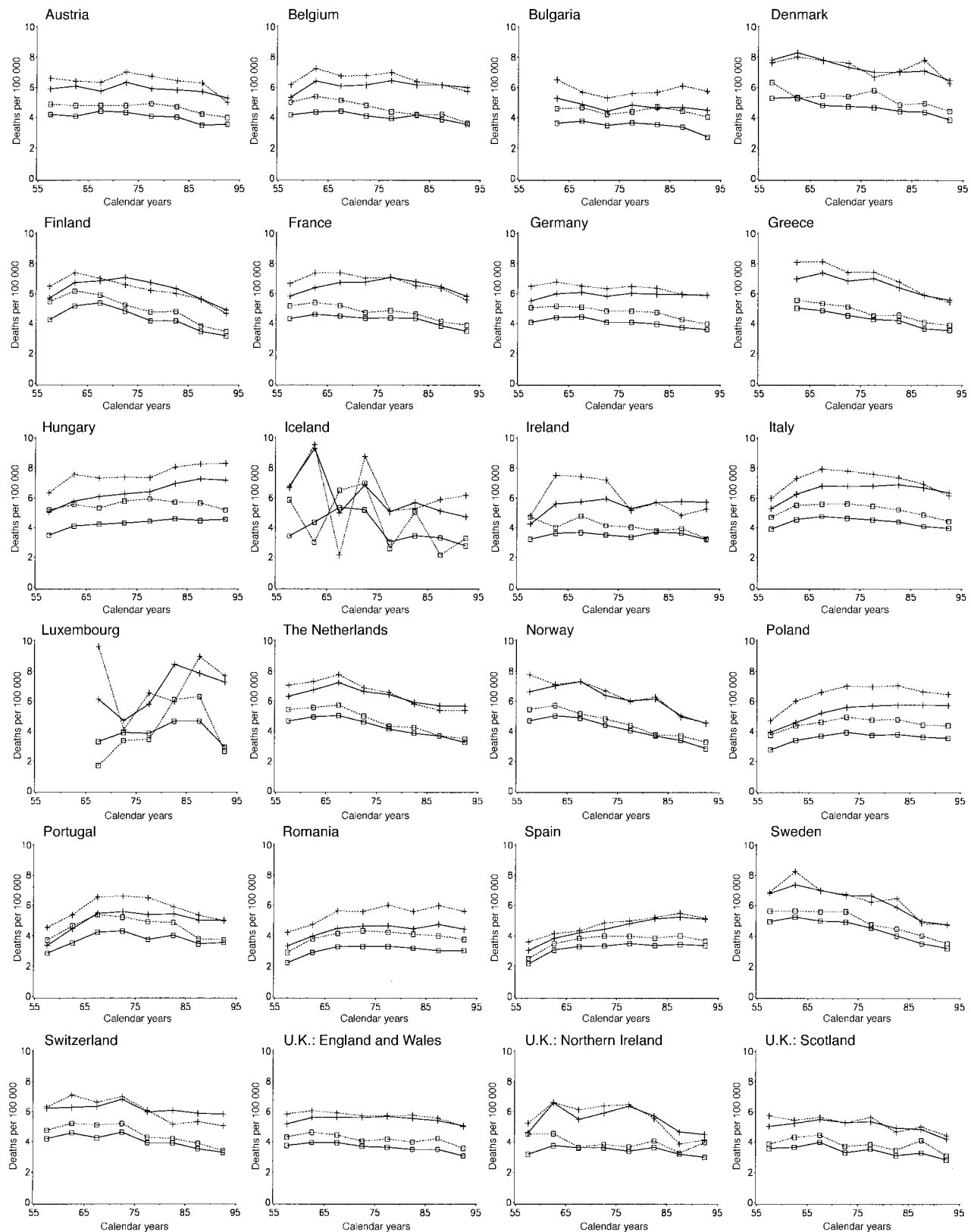


Figure 1. (continued)

All neoplasms, benign and malignant

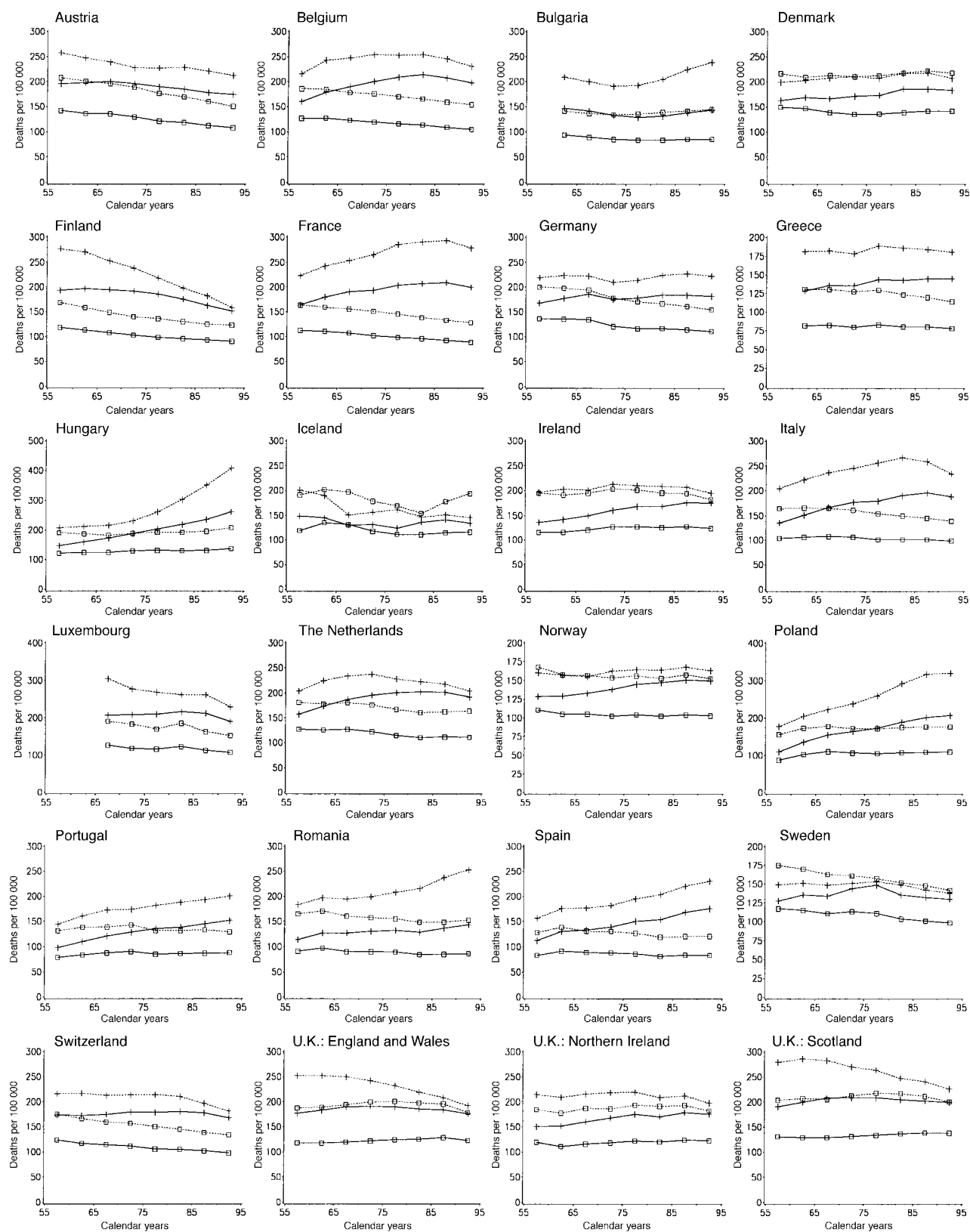


Figure 1. (continued)

Liver cancer rates have to be interpreted with utmost caution, due to the substantial problem of death certification reliability and validity for this neoplasm, which is one of the most common sites of metastases [19]. No clear pattern, in any case, was evident across various European countries, and the trends registered essentially reflected changes in classification in various countries and calendar periods.

With reference to cancers of the gallbladder and bile ducts, steady declines were observed in several countries of northern and central (but not southern or eastern) Europe, which are probably related to different trends in cholecystectomy rates across the countries [23].

Of major interest, for pancreatic cancer, are recent leveling off and decline in the U.K., and a few Nordic countries, after decades of upward trends [24]. Such upward trends persisted in most countries of southern and eastern Europe, as well as in France and Germany. In 1990–1994 the highest mortality rates were registered in the Czech Republic (11.3/100 000 males, 6.7/100 000 females); the lowest, excluding Albania, were observed in Portugal (5.8/100 000 males) and Bulgaria (3.1/100 000 females).

Mortality from cancer of the larynx was in several aspects similar to that of cancer of the oral cavity and oesophagus, with some persistent decline in France, Italy, as well as in Finland, and further substantial rises in Germany and other Central and mostly Eastern countries, again pointing to the dramatic extent of the epidemic of alcohol- and tobacco-related neoplasms in these areas of Europe [3, 7, 25]. In 1990–1994 the highest mortality rates were registered in Hungary (9.4/100 000 males, 0.7/100 000 females); the lowest ones were seen in Iceland for males (0.5/100 000) and in Malta for females (0.1/100 000).

The epidemic of tobacco-related cancers is chiefly reflected in recent trends in lung cancer mortality, which have reached in the early 1990s the highest rates ever registered within Europe in Hungarian and Polish males aged 35–64 years [8, 26, 27]. Since most lung cancer trends were on a cohort of birth basis [11], this indicates that further rises are likely in these countries, in the absence of effective intervention on tobacco smoking [28]. Trends for males were also steadily upwards in other eastern European countries, and in Southern Europe, including France, Spain and Greece (but not Italy). Male lung cancer mortality was approximately stable in Germany and at comparatively low levels in Sweden, but started to decline in Luxembourg and Italy, and continued to decline in other European countries. Lung cancer rates for females started to decline in middle-aged women in the U.K. and Ireland, but were upwards (though starting from variable and generally moderate levels) in all other areas of the continent. In Iceland, lung cancer rates in women aged 35–64 years have overtaken those in males in the early 1990s. In 1990–1994 the highest mortality rates were registered in Hungary for males (82.4/100 000) and in Scotland for females (29.2/100 000); the lowest were registered in Sweden for males (23.3/100 000) and in Spain for females (3.7/100 000).

Mortality from cancer of the pleura has continued to rise in males of all European countries—with the exception of middle-aged men from Nordic countries—indicating that the asbestos-related epidemic of pleural mesothelioma is still expanding in Europe, and is likely to reach its peak levels in the early decades of the next century, that is 15–20 years later than in the U.S.A. [11, 29, 30]. This confirms the delay in the adoption of measures to control asbestos exposure in Europe.

Bone cancer mortality rates were steadily downwards in most European countries in the early 1990s. Since bone is a common site of metastases, such a pattern of trend may be taken as an indirect indicator of improved death certification reliability across Europe.

Mortality from connective and soft tissue sarcomas was moderately upwards in the early 1990s in most European countries. This may reflect increased diagnostic awareness and ascertainment, but has also been related to changed risk factor exposure such as herbicides or perhaps the increased prevalence of obesity [31].

At all ages, mortality from skin cancer—including melanoma—continued to rise across Europe. In several countries, however, skin cancer mortality started to level off in middle age in the late 1980s or early 1990s, particularly for women, indicating that the epidemic of skin neoplasms is likely to level off in the near future. These trends probably reflect a favourable modification in risk factor exposure—including reduced exposure to sunshine and other sources of ultraviolet (UV) radiation, improved and more rational use of sunscreens—as well as better access to health care and earlier diagnosis and prevention of skin melanoma [32]. In 1990–94 the highest mortality rates were registered in Norway for males (4.2/100 000) and in Denmark for females (2.4/100 000); the lowest, excluding Albania, were registered in Greece (1.1/100 000 males and 0.8/100 000 females).

Breast cancer mortality declined, for the first time, in the early 1990s in middle age (35–64 years) women in the U.K., Ireland, Luxembourg, and, although to a lower degree, in Austria, Belgium, Sweden, Switzerland and Italy. In most other European countries, rates levelled off around the rates reached in the 1980s, with the exception of Hungary, Poland, Romania, Portugal and Spain, where persistent upward trends were observed. There is, therefore, a persistent leveling of breast cancer rates across Europe towards relatively high values [33]. The favourable trends in breast cancer rates over the last few years in the U.K. and other countries probably reflect some impact of screening, as well as improved treatment of the disease [34].

With the sole exceptions of Iceland, Bulgaria, and Romania, uterine cancer mortality has continued to decline throughout Europe. Mortality from uterine cancer includes both cervix and endometrium [35], but the downward trends registered in most European countries are mostly related to the persisting favourable effect of cervical screening on a population level [36]. This indicates the importance and urgency of adopting rational screening programmes for cervical cancer, mostly in Eastern Europe, where rates remain exceedingly high. In 1990–1994 the highest mortality rate for all uterine neoplasms, excluding Albania, was registered in Romania (14.5/100 000), and the lowest in Greece (3.9/100 000).

In most European countries, ovarian cancer rates have declined over recent years. This probably reflects the favourable effect of oral contraceptive use in reducing ovarian cancer risk [37]. The only exceptions were Greece, Portugal and Spain, whose rates were originally low, and where oral contraceptives use had not been commonly used in the past. In 1990–1994 the highest mortality rate was registered in Denmark (9.9/100 000) and the lowest in Portugal (3.3/100 000).

Overall, age-standardised mortality from prostatic cancer was moderately, but steadily, upwards in most European countries. The rises, however, were much smaller—or absent—in France and Italy, and in most countries at age

35–64 years, suggesting that at least part of the rise in overall age-standardised rates are due to improved ascertainment and diagnosis of the disease, following prostate-specific antigen (PSA) adoption and other diagnostic measures [38, 39]. In 1990–1994 the highest mortality rate was registered in Norway (22.9/100 000) and the lowest was seen in the Moldovan Republic (5.4/100 000).

The decline in mortality from testicular cancer, started in the 1970s in most western European countries following the adoption of platinum-based therapies, has continued over recent years, indicating that advancements in the treatment of testicular cancer are still in progress. However, testicular cancer rates did not decline in Eastern Europe, again confirming the substantial delay in adopting efficacious treatment for the disease in these areas of the continent, and stressing the importance of adequate intervention on a rational approach to therapy of this largely curable neoplasm [40–42].

Like most other tobacco-related neoplasms, bladder cancer mortality rates declined for males (mostly at age 35–64 years) in most northern and central European countries, and in Italy, but continued to increase in Eastern Europe, and particularly in Hungary and Poland, where rates are now among the highest on a European scale [9]. This again indicates the size of the tobacco-related cancer epidemic in Eastern Europe, although bladder cancer has also been related to occupational carcinogens such as aromatic amines [43]. In 1990–1994 the highest mortality rate was registered in Malta for males (9.8/100 000) and in Scotland for females (2.7/100 000); the lowest (except Albania) were registered in Iceland for males (4.0/100 000) and in Finland for females (1.0/100 000).

Kidney cancer is another tobacco-related neoplasm, and its rates have shown a long-term and steady rise across Europe during the last few decades [44]. Over the last few years, however, some levelling of rates has been observed in Sweden and other Nordic countries, Belgium, France and Italy, mostly for males. In 1990–1994 the highest mortality rates were registered in the Czech Republic (10.9/100 000 males, 4.9/100 000 females); the lowest ones (apart from Albania) were observed for both sexes in Portugal (2.2/100 000 males, 0.9/100 000 females).

Thyroid cancer mortality declined in most European countries, except Hungary and Spain. It is unclear how much this reflects improved diagnosis and treatment of thyroid neoplasms, rather than decreased incidence and better control of benign thyroid disease, which are a recognised risk factor for thyroid cancer [45, 46].

Like testicular cancer, Hodgkin's disease is another neoplasm showing major therapeutic advancements, and substantial declines in death certification from the mid 1960s onwards. However, no material progress has been observed in Eastern Europe, again indicating the delay in the adoption of efficacious therapies in these countries [18]. The highest rates were in Lithuania for both sexes (1.5/100 000 males, 0.8/100 000 females), the lowest (except Albania) in Sweden (0.4/100 000 males, 0.2/100 000 females).

Mortality from non-Hodgkin's lymphomas continued steadily to rise in most European countries over the last few years. Although this may indicate some change in classification between Hodgkin's and non-Hodgkin's lymphomas [18], these systematic rises were partly or largely real, although their causes remain largely undefined. In 1990–1994 the highest mortality rates were registered in Switzerland for males (6.3/100 000) and in Ireland for females

(3.9/100 000); the lowest were seen (excluding Albania) in Greece (1.8/100 000 males, 1.0/100 000 females).

After earlier rises, death certification rates from multiple myeloma tended to level off over the last few years in Sweden and other Nordic countries, France, Greece, the U.K., and The Netherlands, while they were still rising in most other European countries, mostly in the overall rates. This pattern of trends would confirm that most earlier rises in mortality from multiple myeloma were attributable to improved diagnosis of the disease [47], which has now become widespread in most countries of Western Europe.

Mortality from leukaemias tended to decline in Western Europe, reflecting the impact of therapeutic advancement. Such favourable trends, again, were not observed in Eastern Europe [42]. In 1990–94 the highest mortality rate was registered in Lithuania for both sexes (7.7/100 000 males, 4.7/100 000 females); the lowest (excluding Albania and Macedonia) were seen in Scotland (4.2/100 000 males) and in Bulgaria (2.7/100 000 females).

In most western European countries total cancer mortality was—for the first time—moderately downwards for both sexes in the early 1990s, confirming that the long-term rise in cancer mortality trends stopped not only in the U.S.A. [12], but also in Western Europe [9]. Such favourable trends in total cancer mortality included some decline in lung cancer mortality for males, the persistent decline in stomach cancer for both sexes, and of cervical cancer for women, as well as some decline in breast cancer and other neoplasms (testis, lymphoid neoplasms), whose treatment has improved over the last few years. In contrast, total cancer mortality rates were still upwards in the early 1990s in Portugal, Spain, Bulgaria and Romania, and mostly in Hungary and Poland, where total cancer mortality rates in middle-aged males are now the highest ever registered in Europe.

This emphasises the importance of urgent intervention on cancer mortality—mainly through preventive intervention on tobacco, alcohol and diet modification—in these areas of the continent [5, 7, 33]. In Finland, where comprehensive effective measures were adopted on tobacco as well as on diet [48], total cancer mortality declined by over 40% from 276.8/100 000 males aged 35 to 64 years in 1955–1959 to 158.4/100 000 in 1990–1994, indicating the importance and scope for intervention on cancer control on a population level.

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Acknowledgements—This work was supported by the Swiss League against Cancer, the Swiss Foundation for Cancer Research and the Italian Association for Cancer Research.