Soz Präventivmed 1991; *36*: 112–126

0303-8408/91/020112-07 $1.50 + 0.20/0

Technical report

Cancer mortality in Switzerland, 1985–89

Fabio Levi [1,2], Carlo La Vecchia [2,3], Alex Randriamiharisoa [2]

[1] Registre vaudois des tumeurs, Institut universitaire de médecine sociale et préventive, Lausanne, Switzerland
[2] Institut universitaire de médecine sociale et préventive, Lausanne, Switzerland
[3] Istituto di Ricerche Farmacologiche „Mario Negri", Milano, Italy

The aim of this report is to update data and statistics on cancer mortality in Switzerland from 1950 to 1984 by sex, age group and calendar period [1]. Aggregate death certification data for the five-year period 1985–89 are now presented.

The materials and methods are similar to those previously utilized [1]. Briefly, death certification numbers by cause and estimates of the resident population, stratified by sex and quinquennia of age, were abstracted from registries provided by the Swiss Federal Statistical Office. All cancers or groups of cancers, originally classified according to the standard International Classification of Diseases (ICD), Eighth Revision [2], were grouped in the same 30 categories adopted for previous reports, besides total cancer mortality and a broad group including "other and unspecified".

In particular, we grouped together all intestinal sites, melanomas and non-melanomatous skin neoplasms, all uterine neoplasms (cervix and corpus), all the neoplasms of the brain and nerves (benign and malignant), all leukaemias and non-Hodgkin's lymphomas [1].

Eight standard tables were produced, providing the following information: 1) average annual crude, age-standardized death certification rates and standardized percentages of all cancer deaths for population at all ages and truncated rates for 35–64 years (Table 1 for males and 2 for females). Two different standards were used: i) the 1980 Swiss census population, corrected for census undercount and subdivided into 16 quinquennia of age from 0–4 to 75–79 plus 80 and over and ii) the World standard population, for purposes of comparison with other countries: 2) average annual age-specific death certification rates for each sex and quinquennium of age from 0–4 to 75–79 plus 80 and over (Table 3 for males and 4 for females); 3) total number of registered deaths in the period 1985–89 for each cancer or groups of cancer, sex and age group (Table 5 for males and 6 for females); 4) average annual percentages of all cancer deaths for each sex and age group (Table 7 for males and 8 for females).

The names of cancer sites or groups of cancers considered, together with the corresponding ICD codes (8th Revision), are listed in Tables 1 and 2, while in Tables 3–8 only the ICDs are reported.

Age-standardized (1980 Swiss Census population) death certification rates for both sexes at all ages and truncated rates for 35–64 years have also been plotted for 8 calendar quinquennia from 1951 to 1989 (Figure 1).

Swiss mortality rates for the period 1985–89 were projected using an age-period-cohort model [3]. To test the reliability of that exercise, an appendix table contains projected and observed age-standardized mortality rates (40 to 79 years).

Since this is a statistical technical report, the figures will not all be discussed at length, but a short comment is included with the aim of assisting in the interpretation of the data for major cancer sites, and to recall underlying long-term tendencies.

Comparisons are specifically made with the previous five year calendar period 1980–84 [1]. The reader interested in the details of the mortality, statistics for any particular cancer site will need to make a careful examination of the whole matrix of age-specific data.

Comment

In the quinquennium 1985–89, the average number of cancer deaths per year was around 16,400. Thus, the annual rise in total number of cancer deaths, compared with the previous calendar period, was over 1.4%. This is essentially due to an increased proportion of elderly people in the population, since the overall age-adjusted rate (Swiss population) was stable in both sexes (268.7/100,000 vs. 267.5 in 1980–84; 201.5 vs. 202.7/100,000 females in 1980–84). Some decline was observed in both sexes in the truncated rates (from 208.9 to 196.5 in males; from 149.7 to 144.0 in females). Even more defined was the pattern of age-specific trends, since all rates declined in males below 75, but increased at older ages, and falls were observed for females in each quinquennium of age (except the last, open-ended category).

For the first time, overall age-standardized lung cancer rates declined, though slightly, in Swiss males (from 70.1 in 1980–84 to 68.8/100,000 in 1985–89). Decreasing rates were evident in men under age 60, while lung cancer rates were still rising in elderly males. Consequently, the decline in the truncated rates for the 35–64 group approached 10% (from 70.8 to 63.9). Still, lung cancer accounted for 25% of all cancer deaths in males, and more than one out of three cancer deaths in males between 50 and 69 years of age. Among females, lung cancer accounted for only 5.2% of all cancer deaths (approximately 400 deaths per year versus over 2200 in males), but this proportion was over 8% in middle aged (45 to 64) women, and rates rose in all age groups over 45. Between 1980–84 and 1985–89, lung cancer mortality in Swiss females increased from 10.2 to 11.4 at all ages, and from 9.9 to 11.9 at age 35 to 64. Some decline was observed for laryngeal cancer in males. These trends in mortality from the two major respiratory sites well reflect the different smoking pattern in the two sexes over previous calendar periods[4].

The second leading site was intestinal cancers, with approximately 1000 deaths per year in each sex. Mortality was stable in males (overall rate, 29.3/100,000 in 1985–89 vs. 29.2 in 1980–84), while in females a steady (though moderate) decline started in the early 1960's (25.5 vs. 26.9/100,000). In both sexes, rates were more favourable in middle age.

The long-term and steady decline in stomach cancer has persisted in both sexes, with overall rates falling from 19.8 to 16.4/100,000 males and from 14.4 to 11.2/100,000 females. This decline was evident in the truncated rates as well, but it seemed to level off under age 50, suggesting a potential asymptote of the decline in gastric cancer mortality[5].

Among other digestive sites, rates for cancer of the oral cavity and pharynx were stable at all ages, although some increase was evident in young males under age 55; mortality was stable for oesophageal cancers; upward trends in both sexes were observed for cancer of the liver and of the pancreas, particularly at olders ages, while some decline was registered for gallbladder cancer.

Mortality from skin cancer increased by over 15% in both sexes as compared to the previous calendar quinquennium (5.5 vs. 4.7/100,000 males; 4.5 vs. 3.9/100,000 females). The rise was distributed over all age groups, including young middle-aged, and was probably due to increased mortality from melanoma, which has been observed since the mid 1960's in both sexes.

Breast cancer was the leading site for cancer death in females, and the third one in both sexes combined, being responsible for over 1600 deaths per year in females (22.3% of the total). Its overall rates were still rising (from 42.9 to 44.9/100,000), although the increase was restricted to the elderly, while mortality was stable under age 65 (45.3 vs. 46.0 for the truncated rates). Declines were observed for cancer of the (cervix) uterus, and for cancer of the ovary only in females under 50, and thus probably reflect the use of oral contraceptives by younger generations[6].

A 30% fall, compared with previous calendar quinquennium, was observed in mortality from testicular cancer, which was probably due to improved treatment of the disease[7]. An appreciable increase, in contrast, was observed in prostate cancer mortality (from 34.6 to 37.4/100,000 males, for a total of over 1300 deaths per year). This rise was, however, moderate in the truncated rate, and observed only in men over age 55. Cancer of the prostate was the second leading site in males and the fourth one in both sexes combined.

Among other sites, there was some rise in rates for brain cancer. This was restricted to the elderly. It is probable that the rise is due to an increased rate of diagnosis and certification, rather than to a true increase in prevalence, since the rates in the middle-aged showed, if anything, a downward trend[8]. There were further declines in thyroid cancer rates, following steady falls starting early in this century[9], and in Hodgkin's disease, due to improved treatment[10], while mortality was stable, or increased slightly, for other lymphomas, bladder, kidney, myelomas and leukemias.

In conclusion, the most favourable indications emerging from this update of the data on Swiss cancer mortality are the flattening of the epidemic of lung and other tobacco-related cancers in males, and the persisting favourable trends in cancer of the stomach and cervix uteri. To a lesser degree, there are favourable trends in mortality due to cancer of the thyroid, and of the intestines and ovary in young females, together with the reduced mortality from testicular cancer and Hodgkin's disease due to improved therapies. Of major concern are the spread of the tobacco-related cancer epidemic in females, and the increases of oral cancer in young males and of melanoma of the skin in both sexes, since they reflect changes in exposure to known risk factors and are, at least in principle, preventable[8].

References

1 *Levi F, Decarli A, La Vecchia C, Randriamiharisoa A.* Cancer mortality in Switzerland, 1950–1984. Bundesamt für Statistik. Bern, 1988. (Amtliche Statistik der Schweiz, Nr. 165).

2 Bureau fédéral de statistique – Classification Internationale des maladies et causes de décès. Adaptée aux conditions suisses et utilisée dès 1969 (8e révision). Bureau fédéral de la statistique. Berne, 1970.

3 *Negri E, La Vecchia C, Levi F, Randriamiharisoa A, Decarli A, Boyle P.* The application of age, period and cohort models to predict Swiss cancer mortality. J Cancer Res Clin Oncol 1990; *116*: 207–214.

4 *La Vecchia C, Levi F, Negri E, Wietlisbach V, Decarli A, Gutzwiller F.* Trends in smoking and lung cancer mortality in Switzerland. Prev Med 1988; *17*: 712–724.
5 *Levi F, Decarli A, La Vecchia C, Randriamiharisoa A.* Cancer mortality in Switzerland, 1951–1984; effects of age, birth and period of death. Schweiz med Wschr 1988; *118* (Suppl 26): S7–S85.
6 *Levi F, Gutzwiller F, Decarli A, La Vecchia C.* Oral contraceptives and cancers of the breast and of the genital tract. J Epidemiol Comm Health 1987; *41*: 267–268.
7 *Boyle P, Maisonneuve P, Kaye SB.* Therapy for testicular cancer in Central and Eastern Europe. Lancet 1990; *1*: 1033.
8 *Doll R, Peto R.* The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. JNCI 1981; *66*: 1191–1308.
9 *Gubéran E.* Tendances de la mortalité en Suisse: 3. Tumeurs 1921–1978. Schweiz med Wschr 1980; (Suppl 11): 2–18.
10 *Levi F, Decarli A, La Vecchia C.* Trends in cancer mortality in Switzerland, 1951–1984. Rev Epidemiol Santé Publ 1988; *36*: 15–25.

Address for correspondence:
Dr. Fabio Levi
Registre vaudois des tumeurs
Institut universitaire de médecine
sociale et préventive
CHUV Falaises 1
CH-1011 Lausanne

Appendix table. Comparison of observed and projected age-adjusted (Europe) mortality rates at ages 40–79 for 11 cancer sites. Switzerland, 1985–89.

Cancer site	Age-adjusted (Europe) ages 40–79 mortality rates/100,000/year		
	Sex	Observed	Projected (range)*
Mouth or pharynx	M	20.1	24.4(21.9–24.4)
Oesophagus	M	17.3	18.4(17.6–18.5)
Stomach	M	28.9	30.2(30.2–31.0)
	F	12.0	12.3(12.3–13.2)
Intestines	M	50.8	48.9(48.9–50.3)
	F	30.0	30.1(30.1–31.4)
Pancreas	M	23.6	23.1(22.3–23.1)
	F	15.3	13.9(13.9–14.9)
Larynx	M	7.0	9.9(8.9–9.9)
Lung	M	149.5	165.0(151.9–165.0)
	F	21.2	18.4(18.4–21.3)
Breast	F	71.3	71.4(69.7–73.3)
Ovary		21.6	22.1(21.2–22.1)
Prostate		50.2	45.4(45.4–48.3)
Bladder	M	17.8	18.0(18.0–18.5)
Total, all sites	M	499.1	494.7(478.3–503.4)
	F	279.3	271.2(265.6–279.6)

* The projected rates were derived from models based on linear regression on the logarithms of the seven previous calendar periods, as described by Negri et al.[3] The range was based on the other models, including that with fixed period values and (whenever available) those with *a priori* defined period coefficients in relation to available knowledge or projections on trends in risk factor exposure. Besides observing the generalized excellent fit of the projections, it may be useful to observe how the decline in lung cancer for males has been even greater than projected assuming a 5% decline in smoking-related bronchial carcinoma, whereas for females the rise has been towards the upper limit, which assumed a 5% increase in smoking.

Tab. 1. Cancer death certification rates per 100,000 males in Switzerland, 1985–89.

Type of cancer	ICD VIII	all ages				truncated 35–64			
		crude rate	adj. rate Pop. 80	adj. rate World	% of tumour*	crude rate	adj. rate Pop. 80	adj. rate World	% of tumour*
Mouth or pharynx	140-9	9.4	9.0	6.6	3.3	12.2	12.3	12.4	6.3
Oesophagus	150	8.6	8.2	5.7	3.0	8.5	8.6	8.6	4.4
Stomach	151	17.7	16.4	10.6	6.1	10.8	10.8	10.9	5.5
Intestines (colon and rectum)	152-4	31.6	29.3	18.7	10.9	16.8	16.8	17.0	8.6
Liver	155	8.0	7.7	5.2	2.9	6.2	6.3	6.3	3.2
Gallbladder and ducts	156	2.6	2.4	1.6	0.9	1.6	1.6	1.6	0.8
Pancreas	157	12.6	11.9	7.9	4.4	9.3	9.3	9.4	4.7
Other digestive sites	158, 159	1.4	1.3	0.8	0.5	0.8	0.8	0.8	0.4
Larynx	161	3.4	3.2	2.3	1.2	3.6	3.6	3.7	1.9
Lung	162	71.6	68.7	47.5	25.6	63.8	63.9	64.6	32.5
Pleura	1630	1.8	1.7	1.2	0.6	1.7	1.7	1.8	0.9
Other respiratory sites	160, 1631-9	1.0	0.9	0.7	0.3	1.0	1.0	1.0	0.5
Bone	170	0.5	0.5	0.4	0.2	0.3	0.3	0.3	0.2
Conn. and soft tissue sarcoma	171	1.1	1.0	0.8	0.4	1.0	1.0	1.0	0.5
Skin	172–173	6.0	5.5	3.8	2.1	5.0	5.0	5.0	2.5
Breast	174	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1
Prostata	185	41.7	37.4	21.9	13.9	7.1	7.0	7.3	3.6
Testis	186	0.9	0.8	0.7	0.3	0.8	0.8	0.8	0.4
Other genital (males)	187	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1
Bladder	188	11.4	10.5	6.6	3.9	4.9	4.8	4.9	2.5
Kidney	189**	7.9	7.5	5.1	2.8	6.6	6.7	6.7	3.4
Eye	190	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.1
Brain or nerves (ben. +mal.)	191, 192, 225, 238	7.5	7.2	5.7	2.7	9.1	9.1	9.2	4.6
Thyroid	193	1.1	1.0	0.7	0.4	0.7	0.6	0.7	0.3
Hodgkin's disease	201	1.6	1.5	1.1	0.6	1.6	1.6	1.6	0.8
All other lymphomas	200, 202, 208, 209	9.4	8.9	6.1	3.3	6.4	6.4	6.5	3.3
Multiple myeloma	203	4.1	3.8	2.5	1.4	2.5	2.4	2.5	1.2
Leukaemias	204-7	8.9	8.3	5.9	3.1	5.3	5.3	5.4	2.7
Other sites (ben. + mal.)	other	14.0	12.9	8.3	4.8	8.0	8.0	8.0	4.1
Total	140–239	286.8	268.7	178.8	100.0	195.9	196.5	198.4	100.0

* Age-standardized on the 1980 Swiss population.

** Other urinary included.

Tab. 2. Cancer death certification rates per 100,000 females in Switzerland, 1985–89.

Type of cancer	ICD VIII	all ages				truncated 35–64			
		crude rate	adj. rate Pop. 80	adj. rate World	% of tumour*	crude rate	adj. rate Pop. 80	adj. rate World	% of tumour*
Mouth or pharynx	140-9	2.3	2.2	1.2	1.1	2.1	2.1	2.1	1.5
Oesophagus	150	2.3	2.1	1.0	1.0	1.4	1.4	1.4	1.0
Stomach	151	12.6	11.2	4.9	5.6	5.0	5.0	4.8	3.5
Intestines (colon and rectum)	152-4	28.3	25.5	11.4	12.7	12.0	11.9	11.5	8.3
Liver	155	3.1	2.8	1.4	1.4	1.5	1.5	1.4	1.0
Gallbladder and ducts	156	5.7	5.2	2.3	2.6	2.4	2.4	2.3	1.7
Pancreas	157	11.8	10.9	5.2	5.4	6.3	6.2	5.9	4.3
Other digestive sites	158, 159	1.7	1.5	0.7	0.7	0.6	0.6	0.6	0.4
Larynx	161	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.2
Lung	162	12.4	11.9	6.9	5.9	11.9	11.9	11.6	8.3
Pleura	1630	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.2
Other respiratory sites	160, 1631-9	0.5	0.4	0.2	0.2	0.3	0.3	0.3	0.2
Bone	170	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.2
Conn. and soft tissue sarcoma	171	1.0	1.0	0.6	0.5	0.7	0.7	0.7	0.5
Skin	172–173	5.0	4.5	2.3	2.2	3.6	3.6	3.5	2.5
Breast	174	48.3	44.9	25.1	22.3	45.3	45.4	44.2	31.6
Uterus (cervix and corpus)	180-2	13.6	12.7	6.6	6.3	9.8	9.7	9.5	6.7
Ovary	183	13.5	12.8	7.1	6.3	12.1	12.1	11.6	8.4
Other genital (females)	184	1.9	1.7	0.7	0.9	0.7	0.7	0.7	0.5
Bladder	188	4.2	3.8	1.5	1.9	1.1	1.0	1.0	0.7
Kidney	189**	5.2	4.9	2.5	2.4	3.2	3.2	3.1	2.2
Eye	190	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Brain or Nerves (ben. + mal.)	191, 192, 225, 238	6.0	5.8	3.9	2.9	6.1	6.0	5.9	4.2
Thyroid	193	2.0	1.8	0.7	0.9	0.6	0.6	0.6	0.4
Hodgkin's disease	201	1.1	1.1	0.7	0.5	0.9	0.9	0.9	0.6
All other lymphomas	200, 202, 208, 209	7.9	7.2	3.4	3.6	3.7	3.7	3.5	2.5
Multiple myeloma	203	4.0	3.7	1.8	1.9	2.1	2.0	2.0	1.4
Leukaemias	204-7	6.9	6.4	3.5	3.2	4.0	4.0	3.9	2.8
Other sites (ben. + mal.)	other	16.1	14.2	6.1	7.0	5.8	5.8	5.6	4.0
Total	140–239	218.9	201.5	102.6	100.0	144.2	144.0	139.6	100.0

* Age-standardized on the 1980 Swiss population.
** Other urinary included.

Tab. 3. Age-specific cancer death certification rates per 100,000 males in Switzerland, 1985–89.

ICD VIII	Age 0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80 +	Total*
140-9	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.9	4.9	10.4	17.4	23.0	27.2	34.0	34.6	40.4	58.4	9.4
150	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.5	6.4	10.8	17.6	22.8	33.8	39.7	51.9	68.6	8.6
151	0.0	0.0	0.0	0.1	0.0	0.2	0.4	1.4	2.9	6.4	11.0	20.0	34.7	52.8	85.1	140.8	246.7	17.7
152-4	0.0	0.0	0.1	0.0	0.2	0.6	0.6	1.8	3.5	9.0	15.2	34.0	57.2	102.4	157.8	258.6	450.0	31.6
155	0.4	0.0	0.0	0.1	0.1	0.2	0.4	0.5	1.1	2.1	5.4	15.9	20.5	33.3	43.9	65.4	58.1	8.0
156	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	1.4	1.4	3.7	4.5	9.5	11.6	23.3	30.8	2.6
157	0.0	0.0	0.0	0.0	0.1	0.0	0.2	1.3	2.7	4.9	9.7	16.5	31.0	52.3	61.3	100.4	121.7	12.6
158, 159	0.1	0.0	0.1	0.0	0.0	0.2	0.1	0.2	0.2	0.5	0.9	1.3	2.7	3.3	6.6	9.5	22.0	1.4
161	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.3	2.0	3.9	7.1	11.4	14.3	12.6	20.7	25.5	3.4
162	0.0	0.0	0.0	0.1	0.2	0.3	0.6	3.8	12.3	27.2	63.7	129.0	226.9	348.8	383.6	475.8	445.3	71.6
1630	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.2	2.1	3.4	4.8	7.7	7.4	13.3	12.3	1.8
160, 1631-9	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.2	0.6	0.6	1.4	1.9	1.7	3.5	3.5	5.9	8.8	1.0
170	0.0	0.3	0.3	0.7	1.4	0.2	0.2	0.5	0.2	0.2	0.3	0.4	0.5	0.7	0.6	2.0	2.9	0.5
171	0.1	0.0	0.2	0.6	0.5	0.5	0.5	0.5	0.6	0.5	1.1	1.8	2.1	2.0	4.3	5.9	8.2	1.1
172–173	0.1	0.0	0.1	0.1	0.1	0.7	1.2	1.9	3.2	3.4	6.3	7.8	10.4	17.8	22.4	33.0	77.2	6.0
174	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.0	0.3	1.2	1.2	3.8	4.1	0.3
185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	3.2	11.1	39.7	94.4	199.0	394.6	890.3	41.7
186	0.1	0.0	0.1	0.3	1.0	1.6	1.7	1.2	0.6	1.2	0.5	0.8	0.7	1.2	1.2	1.8	2.3	0.9
187	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.6	0.1	0.3	1.2	2.1	3.8	9.7	0.5
188	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.6	1.6	3.5	10.1	20.1	37.3	61.9	96.6	173.1	11.4
189	0.2	0.3	0.0	0.0	0.1	0.1	0.1	0.5	1.1	3.1	6.6	16.1	20.4	31.5	37.5	55.7	71.9	7.9
190	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.3	0.8	0.5	0.5	0.8	1.5	2.6	0.3
191, 192, 225, 238	2.2	1.4	1.7	1.2	1.3	1.1	2.4	3.6	4.3	7.3	10.4	15.5	19.6	24.3	25.0	34.0	28.7	7.5
193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.1	0.9	2.9	2.8	7.9	8.4	12.3	1.1
201	0.0	0.0	0.2	0.2	0.8	1.4	1.2	1.3	0.8	1.4	1.4	2.4	2.8	3.5	4.8	10.0	8.8	1.6
200, 202, 208, 209	0.4	0.3	0.6	0.8	1.1	0.9	1.1	1.4	2.1	3.9	5.9	11.2	20.8	33.8	45.6	71.8	95.3	9.4
203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.9	2.5	4.4	8.7	15.5	21.5	31.4	49.0	4.1
204-7	1.2	1.7	1.5	2.3	1.7	1.0	2.0	2.2	1.9	4.2	4.2	9.5	14.4	25.8	39.5	61.8	103.3	8.9
other	0.2	0.0	0.2	0.2	0.2	0.1	0.8	1.0	2.6	4.1	8.1	16.3	24.2	41.6	62.3	97.6	222.1	14.0
140–239	5.1	4.1	5.1	6.7	8.8	9.5	14.7	25.7	51.1	105.4	198.3	382.6	633.7	1030.5	1385.2	2119.8	3310.1	286.8

* Crude.

Tab. 4. Age-specific cancer death certification rates per 100,000 females in Switzerland, 1985–89.

ICD VIII	Age																	
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80 +	Total*
140-9	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.8	1.5	2.7	3.9	4.9	5.9	5.9	6.9	17.6	2.3
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.4	1.6	2.4	3.9	5.5	7.6	8.3	20.0	2.3
151	0.0	0.0	0.0	0.0	0.0	0.2	1.1	0.8	1.9	3.2	5.7	9.3	12.3	21.0	32.9	59.0	140.3	12.6
152-4	0.0	0.0	0.0	0.0	0.1	0.3	0.7	1.2	3.3	5.6	13.3	21.9	35.0	61.0	84.4	135.3	287.3	28.3
155	0.0	0.2	0.0	0.3	0.0	0.2	0.2	0.1	0.3	1.0	1.1	4.0	3.2	7.8	9.6	18.6	23.9	3.1
156	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.8	2.0	6.1	7.1	14.1	20.2	31.0	49.0	5.7
157	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.5	1.0	2.8	6.0	10.7	21.3	28.8	48.0	63.3	87.5	11.8
158, 159	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.7	0.3	0.8	2.1	3.7	4.0	6.6	19.5	1.7
161	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.8	0.8	0.8	0.4	0.5	2.5	0.3
162	0.0	0.0	0.0	0.0	0.1	0.3	1.0	2.4	3.9	9.6	13.2	20.1	29.3	42.4	49.3	48.3	49.8	12.4
1630	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.5	0.3	0.6	1.4	1.4	2.6	2.8	0.4
160, 1631-9	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.8	1.1	1.6	1.9	3.6	0.5
170	0.2	0.0	0.7	0.6	0.1	0.6	0.1	0.1	0.0	0.2	0.4	0.8	0.3	0.3	0.7	1.4	1.5	0.4
171	0.4	0.1	0.2	0.3	0.4	0.2	0.3	0.4	0.3	0.3	1.1	1.0	1.6	2.3	3.0	4.5	5.5	1.0
172–173	0.0	0.0	0.1	0.1	0.2	0.6	1.4	1.1	2.1	2.9	4.9	4.7	7.2	7.0	11.3	14.4	49.3	5.0
174	0.0	0.0	0.0	0.0	0.1	0.7	4.7	10.6	21.1	38.9	56.1	77.3	89.5	115.1	127.9	177.2	321.1	48.3
180-2	0.0	0.0	0.0	0.0	0.2	0.5	1.3	3.2	4.6	6.9	9.4	14.8	24.8	35.6	46.0	59.8	94.4	13.6
183	0.0	0.0	0.1	0.2	0.2	0.8	0.4	1.0	3.6	8.4	13.8	23.0	30.3	37.6	47.1	62.7	66.5	13.5
184	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.6	0.8	1.2	1.7	3.2	5.4	9.0	22.2	1.9
188	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.9	1.5	4.2	8.9	13.8	22.6	45.4	4.2
189	0.2	0.3	0.1	0.1	0.0	0.2	0.2	0.1	1.0	2.0	3.7	6.4	8.3	17.4	19.3	23.4	33.6	5.2
190	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.4	0.5	1.5	1.6	1.1	1.7	0.3
191, 192, 225, 238	1.4	1.3	0.8	0.9	0.8	1.1	1.5	2.4	2.8	4.6	6.3	8.6	14.6	18.5	17.6	21.9	19.5	6.0
193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.8	1.2	1.8	2.7	6.6	12.5	19.8	2.0
201	0.0	0.0	0.0	0.1	0.4	0.8	0.8	0.5	1.0	1.0	0.4	1.2	1.4	3.7	2.6	3.5	5.8	1.1
200, 202, 208, 209	0.0	0.1	0.0	0.3	0.7	0.7	0.7	1.0	1.5	1.6	3.6	7.5	9.0	17.9	27.4	43.3	63.7	7.9
203	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.7	1.4	1.9	2.7	7.1	11.0	15.3	21.9	30.4	4.0
204-7	0.9	1.5	1.1	1.5	1.2	0.6	1.7	2.4	2.2	3.3	3.4	5.8	8.5	12.6	17.6	29.8	56.6	6.9
other	0.3	0.2	0.2	0.3	0.1	0.3	0.4	1.4	1.7	3.5	6.9	10.3	14.3	25.8	38.7	68.5	194.4	16.1
140–239	3.8	3.9	3.4	4.5	4.6	8.5	17.1	30.5	55.1	103.6	162.0	249.0	346.5	514.9	667.3	959.7	1735.0	218.9

* Crude.

Tab. 5. Number of registered deaths from various cancers or groups of cancers in males. Switzerland, 1985–89.

ICD VIII	Age																	
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80 +	Total
140-9	0	0	0	0	3	3	1	12	60	107	165	194	204	204	179	158	199	1489
150	0	0	0	0	0	0	1	10	19	66	102	149	171	203	205	203	234	1363
151	0	0	0	1	0	3	5	18	36	66	104	169	261	317	440	551	841	2812
152-4	0	0	1	0	2	7	7	23	43	93	144	287	430	615	816	1012	1534	5014
155	4	0	0	1	1	3	5	6	13	22	51	134	154	200	227	256	198	1275
156	0	0	0	0	0	0	3	1	2	14	13	31	34	57	60	91	105	411
157	0	0	0	0	1	0	3	16	33	50	92	139	233	314	317	393	415	2006
158, 159	1	0	1	0	0	3	1	2	2	5	9	11	20	20	34	37	75	221
161	0	0	0	0	0	0	1	1	16	21	37	60	86	86	65	81	87	541
162	0	0	0	1	3	4	7	48	152	280	604	1090	1704	2095	1983	1862	1518	11351
1630	0	0	0	0	0	0	0	1	7	12	20	29	36	46	38	52	42	283
160, 1631-9	0	0	0	2	0	1	3	3	7	6	13	16	13	21	18	23	30	156
170	0	3	3	8	18	3	3	6	3	2	3	3	4	4	3	8	10	84
171	1	0	2	7	6	6	6	6	7	5	10	15	16	12	22	23	28	172
172–173	1	0	1	1	1	9	15	24	39	35	60	66	78	107	116	129	263	945
174	0	0	0	0	0	0	1	0	0	1	3	0	2	7	6	15	14	49
185	0	0	0	0	0	0	0	0	1	10	30	94	298	567	1029	1544	3035	6608
186	1	0	1	4	13	20	21	15	7	12	5	7	5	7	6	7	8	139
187	0	0	0	0	0	0	0	1	0	1	6	1	2	7	11	15	33	77
188	0	0	0	0	0	1	0	2	8	16	33	85	151	224	320	378	590	1808
189	2	3	0	0	1	1	1	6	14	32	63	136	153	189	194	218	245	1258
190	0	0	1	0	0	1	3	0	1	1	3	7	4	3	4	6	9	43
191, 192, 225, 238	21	13	17	15	17	14	30	46	53	75	99	131	147	146	129	133	98	1184
193	0	0	0	0	0	0	0	2	4	3	1	8	22	17	41	33	42	173
201	0	0	2	2	10	17	15	17	10	14	13	20	21	21	25	39	30	256
200, 202, 208, 209	4	3	6	10	14	11	14	18	26	40	56	95	156	203	236	281	325	1498
203	0	0	0	0	0	0	0	3	11	9	24	37	65	93	111	123	167	643
204-7	11	16	15	28	23	12	24	28	24	43	40	80	108	155	204	242	352	1405
other	2	0	2	2	3	1	10	13	32	42	77	138	182	250	322	382	757	2215
140–239	48	38	52	82	116	120	180	328	630	1083	1880	3232	4760	6190	7161	8295	11284	45479

Tab. 6. Number of registered deaths from various cancers or groups of cancers in females. Switzerland, 1985–89.

ICD VIII	Age																	
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80 +	Total
140-9	0	1	0	0	1	1	0	3	9	15	26	36	43	43	41	43	128	390
150	0	0	0	0	0	0	0	1	1	14	15	22	34	40	53	52	145	377
151	0	0	0	0	0	2	13	10	23	33	55	85	107	153	230	369	1020	2100
152-4	0	0	0	0	1	4	9	15	40	57	129	201	305	444	589	846	2088	4728
155	0	2	0	3	0	2	2	1	4	10	11	37	28	57	67	116	174	514
156	0	0	0	0	0	0	0	3	2	8	19	56	62	103	141	194	356	944
157	0	0	0	0	1	4	3	6	12	29	58	98	186	210	335	396	636	1974
158, 159	0	0	0	0	0	0	1	2	3	7	3	7	18	27	28	41	142	279
161	0	0	0	0	0	0	0	0	0	1	5	7	7	6	3	3	18	50
162	0	0	0	0	1	4	12	30	46	98	128	185	255	309	344	302	362	2076
1630	0	0	0	0	0	0	0	1	0	3	5	3	5	10	10	16	20	73
160, 1631-9	1	0	0	1	0	1	1	2	1	3	1	3	7	8	11	12	26	78
170	2	0	7	7	1	7	1	1	0	2	4	7	3	2	5	9	11	69
171	4	1	2	3	5	2	4	5	4	3	11	9	14	17	21	28	40	173
172–173	0	0	1	1	2	7	17	14	25	30	47	43	63	51	79	90	358	828
174	0	0	0	0	1	9	57	132	252	398	543	710	780	838	893	1108	2334	8055
180-2	0	0	0	0	3	6	16	40	55	71	91	136	216	259	321	374	686	2274
183	0	0	1	2	3	10	5	13	43	86	133	211	264	274	329	392	483	2249
184	0	0	0	0	0	0	1	2	3	6	8	11	15	23	38	56	161	324
188	0	0	0	0	0	1	0	0	4	3	9	14	37	65	96	141	330	700
189	2	3	1	1	0	2	2	1	12	20	36	59	72	127	135	146	244	863
190	1	0	0	0	0	0	0	0	1	2	4	4	4	11	11	7	12	57
191, 192, 225, 238	13	12	8	10	10	14	18	30	33	47	61	79	127	135	123	137	142	999
193	0	0	0	0	0	0	0	1	1	3	8	11	16	20	46	78	144	328
201	0	0	0	1	5	10	10	6	12	10	4	11	12	27	18	22	42	190
200, 202, 208, 209	0	1	0	3	9	9	8	12	18	16	35	69	78	130	191	271	463	1313
203	0	0	0	0	0	0	1	2	8	14	18	25	62	80	107	137	221	675
204-7	8	13	11	18	15	7	21	30	26	34	33	53	74	92	123	186	411	1155
other	3	2	2	3	1	4	5	17	20	36	67	95	125	188	270	428	1413	2679
140–239	34	35	33	53	59	106	207	380	658	1059	1567	2287	3019	3749	4658	6000	12610	36514

Tab. 7. Percent of all cancer deaths in males. Switzerland, 1985–89.

ICD VIII	Age																	
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80+	Total*
140-9	0.0	0.0	0.0	0.0	2.6	2.5	0.6	3.7	9.5	9.9	8.8	6.0	4.3	3.3	2.5	1.9	1.8	3.3
150	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.0	3.0	6.1	5.4	4.6	3.6	3.3	2.9	2.4	2.1	3.0
151	0.0	0.0	0.0	1.2	0.0	2.5	2.8	5.5	5.7	6.1	5.5	5.2	5.5	5.1	6.1	6.6	7.5	6.2
152-4	0.0	0.0	1.9	0.0	1.7	5.8	3.9	7.0	6.8	8.6	7.7	8.9	9.0	9.9	11.4	12.2	13.6	11.0
155	8.3	0.0	0.0	1.2	0.9	2.5	2.8	1.8	2.1	2.0	2.7	4.1	3.2	3.2	3.2	3.1	1.8	2.8
156	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.3	0.3	1.3	0.7	1.0	0.7	0.9	0.8	1.1	0.9	0.9
157	0.0	0.0	0.0	0.0	0.9	0.0	1.7	4.9	5.2	4.6	4.9	4.3	4.9	5.1	4.4	4.7	3.7	4.4
158, 159	2.1	0.0	1.9	0.0	0.0	2.5	0.6	0.6	0.3	0.5	0.5	0.3	0.4	0.3	0.5	0.4	0.7	0.5
161	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	2.5	1.9	2.0	1.9	1.8	1.4	0.9	1.0	0.8	1.2
162	0.0	0.0	0.0	1.2	2.6	3.3	3.9	14.6	24.1	25.9	32.1	33.7	35.8	33.8	27.7	22.4	13.5	25.0
1630	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	1.1	1.1	0.9	0.8	0.7	0.5	0.6	0.4	0.6
160, 1631-9	0.0	0.0	0.0	2.4	0.0	0.8	1.7	0.9	1.1	0.6	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3
170	0.0	7.9	5.8	9.8	15.5	2.5	1.7	1.8	0.5	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2
171	2.1	0.0	3.8	8.5	5.2	5.0	3.3	1.8	1.1	0.5	0.5	0.5	0.3	0.2	0.3	0.3	0.2	0.4
172–173	2.1	0.0	1.9	1.2	0.9	7.5	8.3	7.3	6.2	3.2	3.2	2.0	1.6	1.7	1.6	1.6	2.3	2.1
174	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.2	0.1	0.1
185	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.6	2.9	6.3	9.2	14.4	18.6	26.9	14.5
186	2.1	0.0	1.9	4.9	11.2	16.7	11.7	4.6	1.1	1.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3
187	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.0	0.0	0.1	0.2	0.2	0.3	0.2
188	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.6	1.3	1.5	1.8	2.6	3.2	3.6	4.5	4.6	5.2	4.0
189	4.2	7.9	0.0	0.0	0.9	0.8	0.6	1.8	2.2	3.0	3.4	4.2	3.2	3.1	2.7	2.6	2.2	2.8
190	0.0	0.0	1.9	0.0	0.0	0.8	1.7	0.0	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1
191, 192, 225, 238	43.8	34.2	32.7	18.3	14.7	11.7	16.7	14.0	8.4	6.9	5.3	4.1	3.1	2.4	1.8	1.6	0.9	2.6
193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.3	0.1	0.2	0.5	0.3	0.6	0.4	0.4	0.4
201	0.0	0.0	3.8	2.4	8.6	14.2	8.3	5.2	1.6	1.3	0.7	0.6	0.4	0.3	0.3	0.5	0.3	0.6
200, 202, 208, 209	8.3	7.9	11.5	12.2	12.1	9.2	7.8	5.5	4.1	3.7	3.0	2.9	3.3	3.3	3.3	3.4	2.9	3.3
203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.7	0.8	1.3	1.1	1.4	1.5	1.6	1.5	1.5	1.4
204-7	22.9	42.1	28.8	34.1	19.8	10.0	13.3	8.5	3.8	4.0	2.1	2.5	2.3	2.5	2.8	2.9	3.1	3.1
other	4.2	0.0	3.8	2.4	2.6	0.8	5.6	4.0	5.1	3.9	4.1	4.3	3.8	4.0	4.5	4.6	6.7	4.9
140–239	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Crude.

Tab. 8. Percent of all cancer deaths in females. Switzerland, 1985–89.

ICD VIII	Age																	
	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80 +	Total*
140-9	0.0	2.9	0.0	0.0	1.7	0.9	0.0	0.8	1.4	1.4	1.7	1.6	1.4	1.1	0.9	0.7	1.0	1.1
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	1.3	1.0	1.0	1.1	1.1	1.1	0.9	1.1	1.0
151	0.0	0.0	0.0	0.0	0.0	1.9	6.3	2.6	3.5	3.1	3.5	3.7	3.5	4.1	4.9	6.2	8.1	5.8
152-4	0.0	0.0	0.0	0.0	1.7	3.8	4.3	3.9	6.1	5.4	8.2	8.8	10.1	11.8	12.6	14.1	16.6	12.9
155	0.0	5.7	0.0	5.7	0.0	1.9	1.0	0.3	0.6	0.9	0.7	1.6	0.9	1.5	1.4	1.9	1.4	1.4
156	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.8	1.2	2.4	2.1	2.7	3.0	3.2	2.8	2.6
157	0.0	0.0	0.0	0.0	1.7	3.8	1.4	1.6	1.8	2.7	3.7	4.3	6.2	5.6	7.2	6.6	5.0	5.4
158, 159	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.7	0.2	0.3	0.6	0.7	0.6	0.7	1.1	0.8
161	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
162	0.0	0.0	0.0	0.0	1.7	3.8	5.8	7.9	7.0	9.3	8.2	8.1	8.4	8.2	7.4	5.0	2.9	5.7
1630	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0.2
160, 1631-9	2.9	0.0	0.0	1.9	0.0	0.9	0.5	0.5	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
170	5.9	0.0	21.2	13.2	1.7	6.6	0.5	0.3	0.0	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.2
171	11.8	2.9	6.1	5.7	8.5	1.9	1.9	1.3	0.6	0.3	0.7	0.4	0.5	0.5	0.5	0.5	0.3	0.5
172–173	0.0	0.0	3.0	1.9	3.4	6.6	8.2	3.7	3.8	2.8	3.0	1.9	2.1	1.4	1.7	1.5	2.8	2.3
174	0.0	0.0	0.0	0.0	1.7	8.5	27.5	34.7	38.3	37.6	34.7	31.0	25.8	22.4	19.2	18.5	18.5	22.1
180-2	0.0	0.0	0.0	0.0	5.1	5.7	7.7	10.5	8.4	6.7	5.8	5.9	7.2	6.9	6.9	6.2	5.4	6.2
183	0.0	0.0	3.0	3.8	5.1	9.4	2.4	3.4	6.5	8.1	8.5	9.2	8.7	7.3	7.1	6.5	3.8	6.2
184	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.8	0.9	1.3	0.9
188	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.6	0.3	0.6	0.6	1.2	1.7	2.1	2.4	2.6	1.9
189	5.9	8.6	3.0	1.9	0.0	1.9	1.0	0.3	1.8	1.9	2.3	2.6	2.4	3.4	2.9	2.4	1.9	2.4
190	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.1	0.3	0.2	0.1	0.1	0.2
191, 192, 225, 238	38.2	34.3	24.2	18.9	16.9	13.2	8.7	7.9	5.0	4.4	3.9	3.5	4.2	3.6	2.6	2.3	1.1	2.7
193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.5	0.5	0.5	0.5	1.0	1.3	1.1	0.9
201	0.0	0.0	0.0	1.9	8.5	9.4	4.8	1.6	1.8	0.9	0.3	0.5	0.4	0.7	0.4	0.4	0.3	0.5
200, 202, 208, 209	0.0	2.9	0.0	5.7	15.3	8.5	3.9	3.2	2.7	1.5	2.2	3.0	2.6	3.5	4.1	4.5	3.7	3.6
203	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.2	1.3	1.1	1.1	2.1	2.1	2.3	2.3	1.8	1.8
204-7	23.5	37.1	33.3	34.0	25.4	6.6	10.1	7.9	4.0	3.2	2.1	2.3	2.5	2.5	2.6	3.1	3.3	3.2
other	8.8	5.7	6.1	5.7	1.7	3.8	2.4	4.5	3.0	3.4	4.3	4.2	4.1	5.0	5.8	7.1	11.2	7.3
140–239	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Crude.

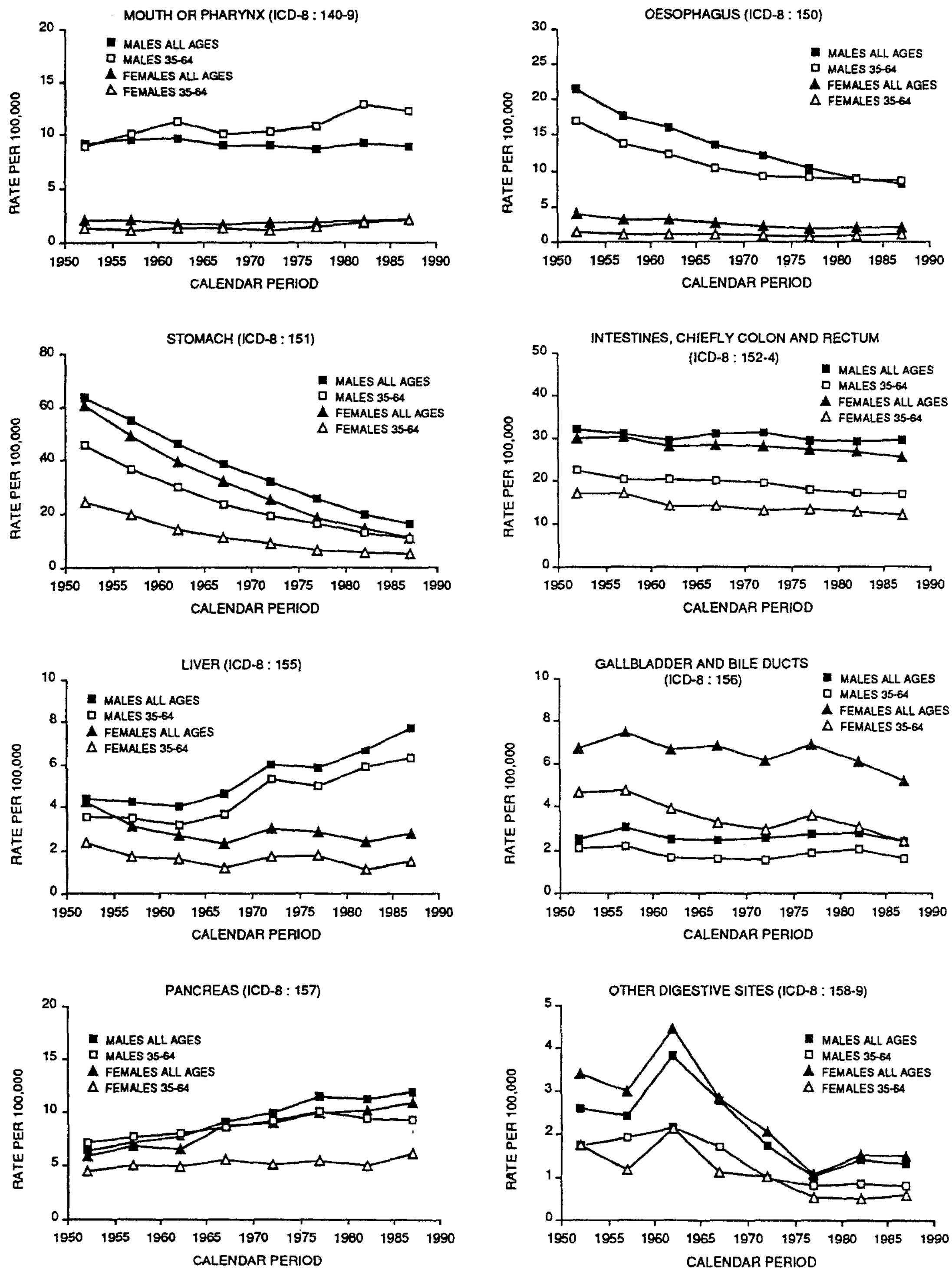

Fig. 1. Trends in cancer mortality in Switzerland from 1951 to 1989. Age-standardized (1980 Swiss Census population) rates per 100,000 males and females of all ages and at ages 35–64.

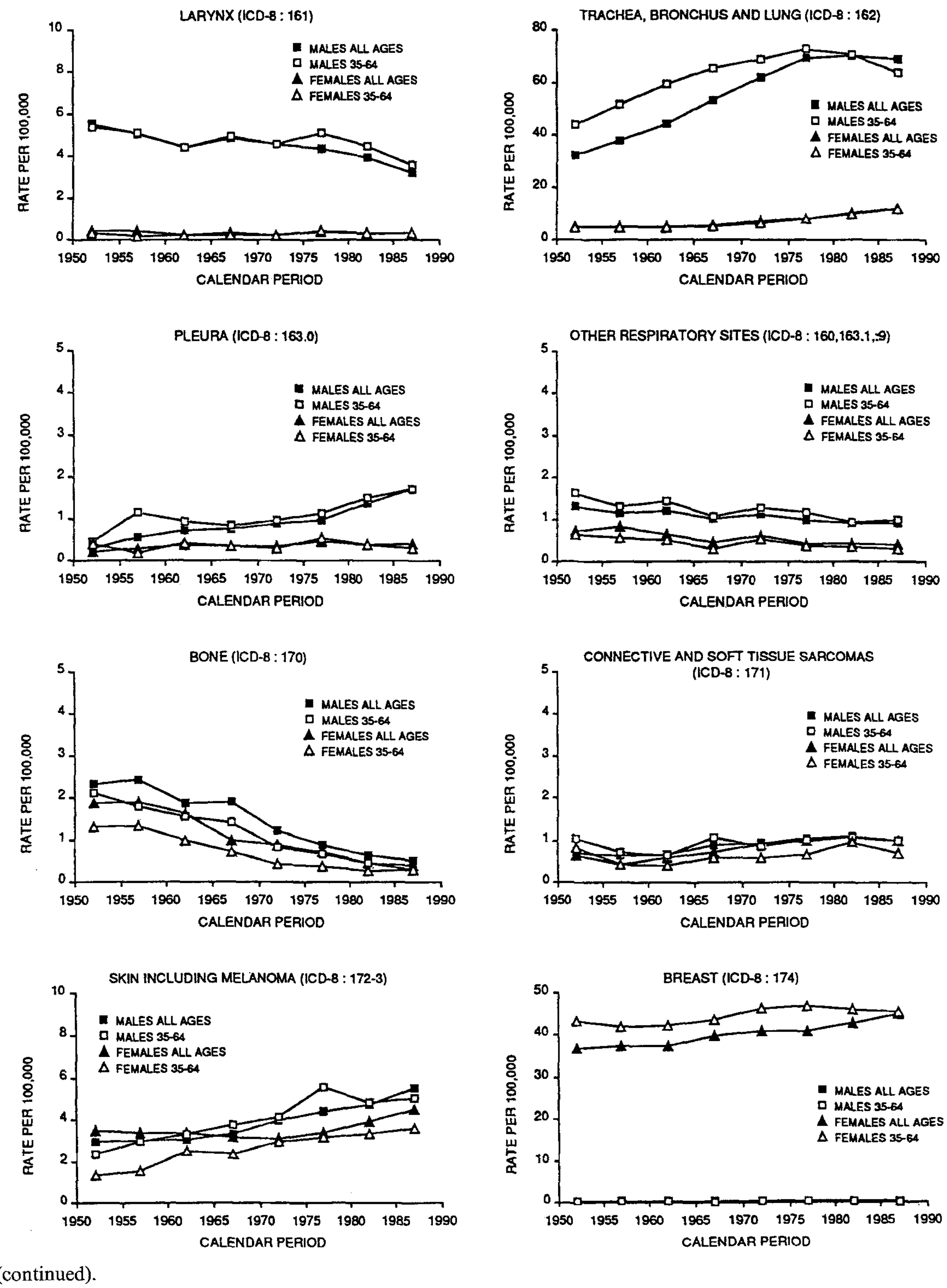

Fig. 1 (continued).

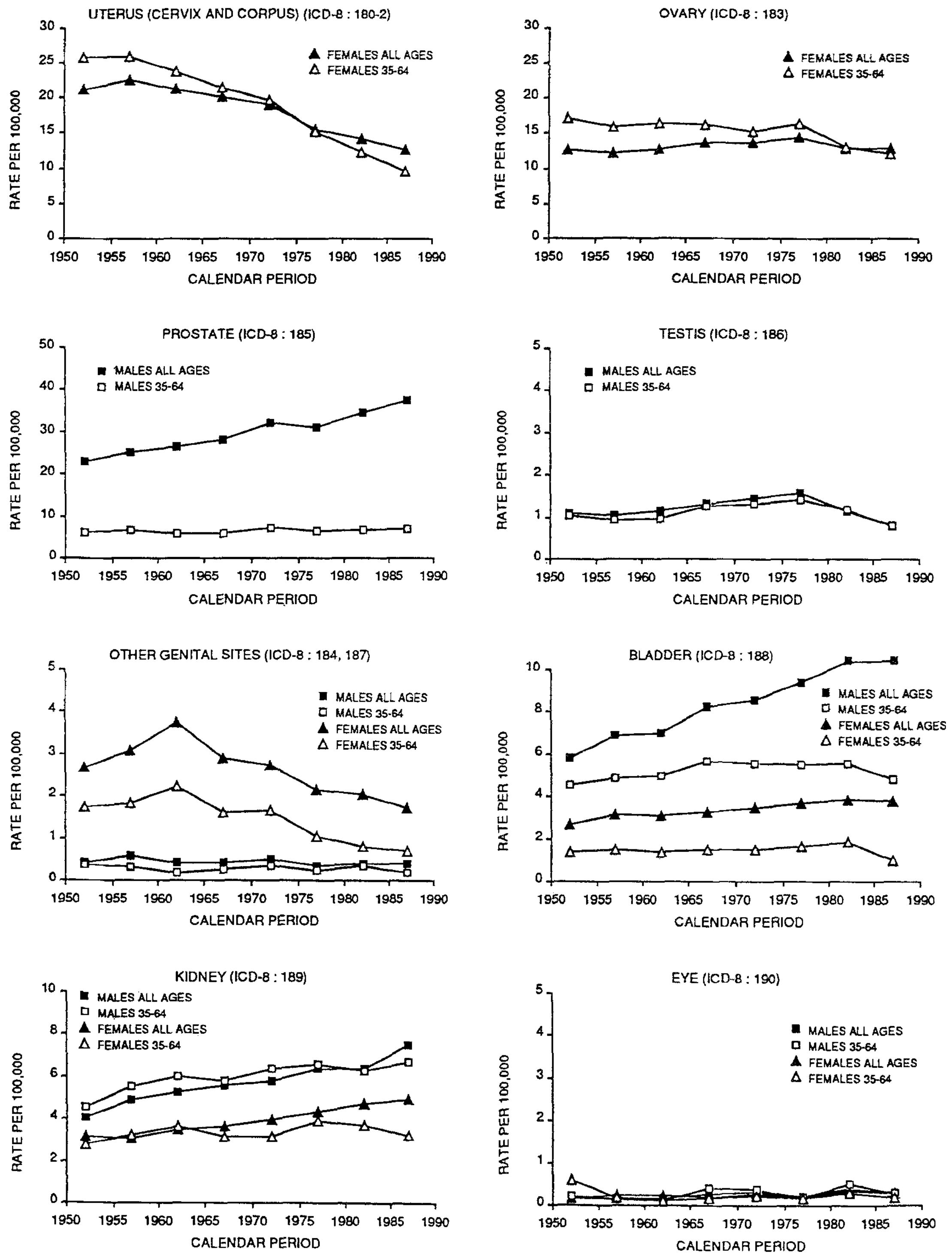

Fig. 1 (continued).

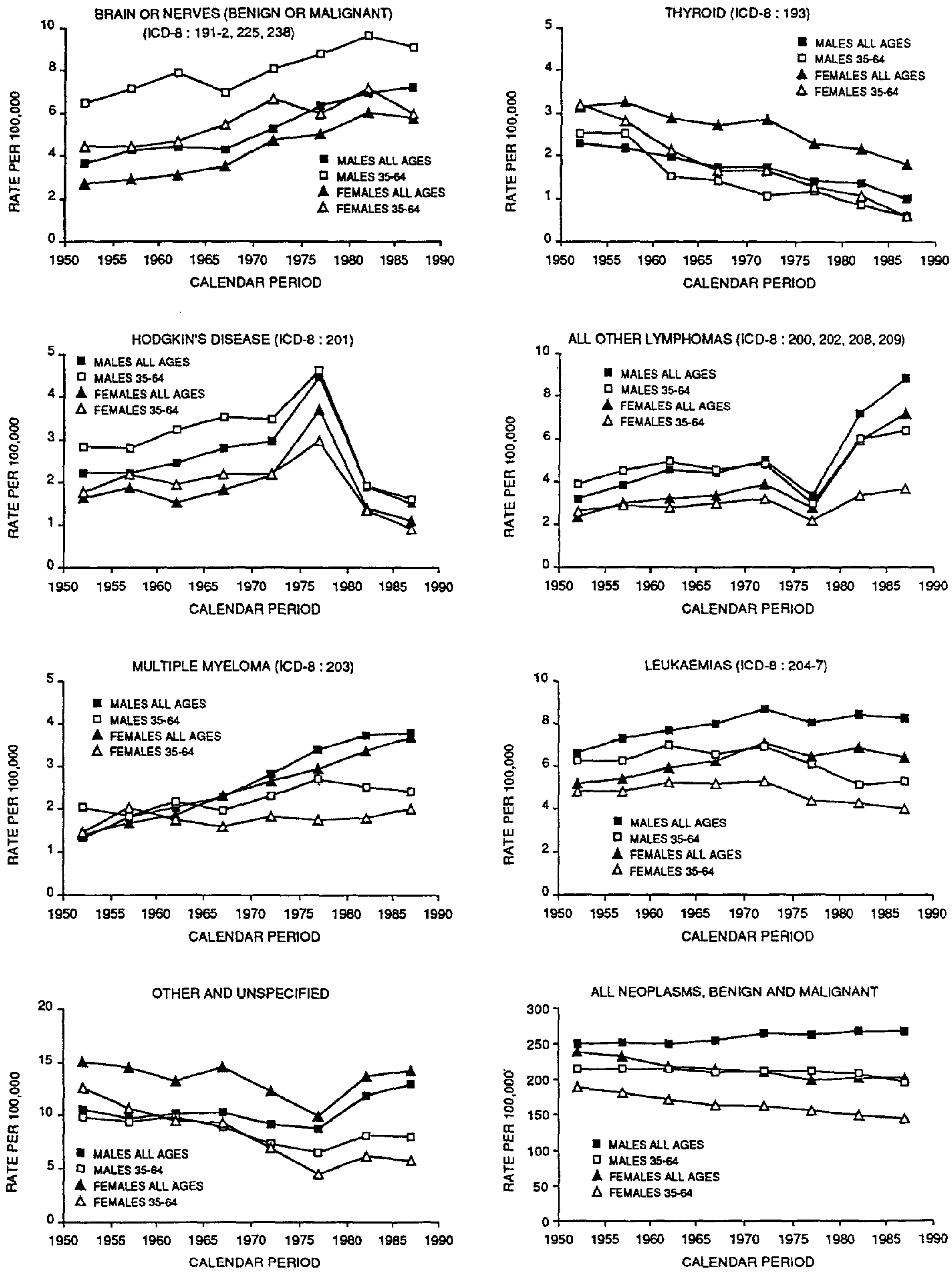

Fig. 1 (continued).