Swiss Cancer Prevalence and Language Region

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Objective

- As part of our mandate for cancer monitoring, we updated the 10-year Swiss cancer prevalence figures up to 2014 and we extended projections to 2020. For the first time, we present cancer prevalence by language region.

Background

- Patients alive at different times after diagnosis have different health needs and require specific health provision planning. Diagnostic assessment and clarification of treatment options happen in the first years, while dealing with recurrence and problems related to past treatments come later.
- Swiss language regions show not only differences in incidence, survival and extent of screening programmes, but also in risk avoidance and health seeking behaviour, as well as socioeconomic status.

Data and Methods

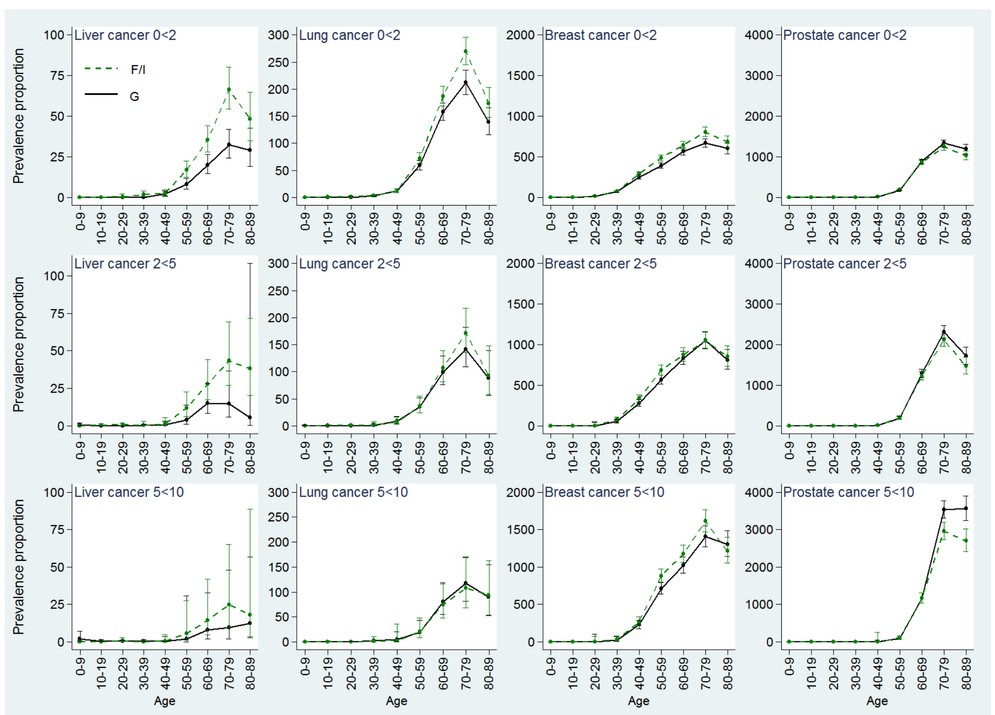
Cancer diagnoses were selected from the National Cancer Dataset (NCD) managed by the National Institute for Cancer Epidemiology and Registration (NICER) with the purpose of national cancer monitoring in Switzerland. Primary malignant cancer diagnoses between 1996 and 2014 were included, restricted to the first occurring diagnosis in the patient's lifetime and analytical cancer group. Only cancer registries that covered the whole analysis period were considered. The predominantly German speaking region (G) was covered by about 40%. The predominantly French and Italian speaking region (F/I) was covered by about 90%. DCO cases were excluded from analysis. They are infrequent for the majority of sites in Swiss cancer registration (<5%) [1]. Completeness of case ascertainment has been recently assessed without detecting signs of overt under-registration.
The probability of each lost to follow-up patient still being alive at index date, conditional of the length of observed survival, was estimated using cancer registry, sex and age at diagnosis as covariates. Prevalence projections until 2020 were calculated by combining estimated future incidence and expected survival, as suggested in Pisani et al. [2].
Swiss population statistics for 1981-2015 and predictions for future population developments 2016-2020, stratified by canton, age and sex were provided by the Federal Statistics Office (FSO).
A detailed description of the methodological procedures is available on our institutional website [3].

Site-specific prevalence

Cancer	Prop.* G	Prop.* F/I	N G	N F/I	0 <2 year Prop.* G	0 <2 year Prop.* F/I	2 <5 year Prop.* G	2 <5 year Prop.* F/I	5 <10 year Prop.* G	5 <10 year Prop.* F/I
Ten most prevalent cancers at index date 31.12.2014										
Ten year										
Oral cavity	51.9	59.7	3'854	1'884	16.1	19.1	16.8	19.9	19.0	20.7
Thyroid	55.4	71.7	3'672	2'011	14.1	20.5	18.5	24.6	22.8	26.6
Non-Hodgkin L.	79.0	84.9	6'003	2'786	22.9	25.9	22.7	27.5	33.3	31.5
Lung	79.1	88.3	6'046	2'937	37.2	45.1	23.6	26.1	18.3	17.1
Testis	100.0	79.7	3'116	1'018	24.5	15.4	28.5	27.2	47.0	37.1
Corpus uteri	108.1	102.6	4'446	1'876	27.2	29.2	34.8	31.8	46.1	41.5
Melanoma	189.0	180.9	14'357	5'671	51.8	44.5	64.8	59.1	72.4	77.3
Colon, Rectum	190.3	201.0	15'718	7'235	57.6	65.1	59.8	65.3	72.9	70.7
Breast#	774.2	888.0	29'982	14'881	193.7	226.8	264.4	295.2	316.1	366.1
Prostate	848.8	775.4	32'279	12'489	194.3	186.0	291.4	273.0	363.1	316.4
Total cancer* **	1'827.6	1'863.9	139'268	60'773	506.4	545.2	595.4	613.6	725.8	705.0
Ten most prevalent cancers at index date 31.12.2020**										
Oral cavity	50.0	53.7	4'116	1'910	15.5	17.9	16.2	18.8	18.2	17.0
Thyroid	61.6	96.8	4'342	2'946	16.0	28.6	19.0	32.1	26.6	36.1
Non-Hodgkin L.	74.8	87.5	6'277	3'239	21.0	25.8	22.1	29.1	31.7	32.6
Lung	78.3	84.7	6'646	3'195	38.3	43.7	23.0	25.3	17.0	15.6
Corpus uteri	98.1	95.8	4'429	1'953	24.4	28.3	30.6	29.6	43.1	37.9
Testis	103.5	75.9	3'342	1'031	24.3	16.6	30.1	25.1	49.1	34.1
Colon, Rectum	174.3	186.1	16'129	7'663	53.2	59.5	55.2	60.3	65.9	66.3
Melanoma	218.0	175.4	18'186	6'109	62.3	44.6	76.7	58.7	79.0	72.2
Prostate	698.2	648.7	30'817	12'406	177.8	173.6	240.2	218.1	280.2	257.0
Breast#	763.2	863.2	32'075	15'947	201.1	228.1	256.1	286.5	306.0	348.6
Total cancer* **	1719.1	1741.5	144'765	63'878	491.2	522.0	556.2	566.1	671.7	653.4

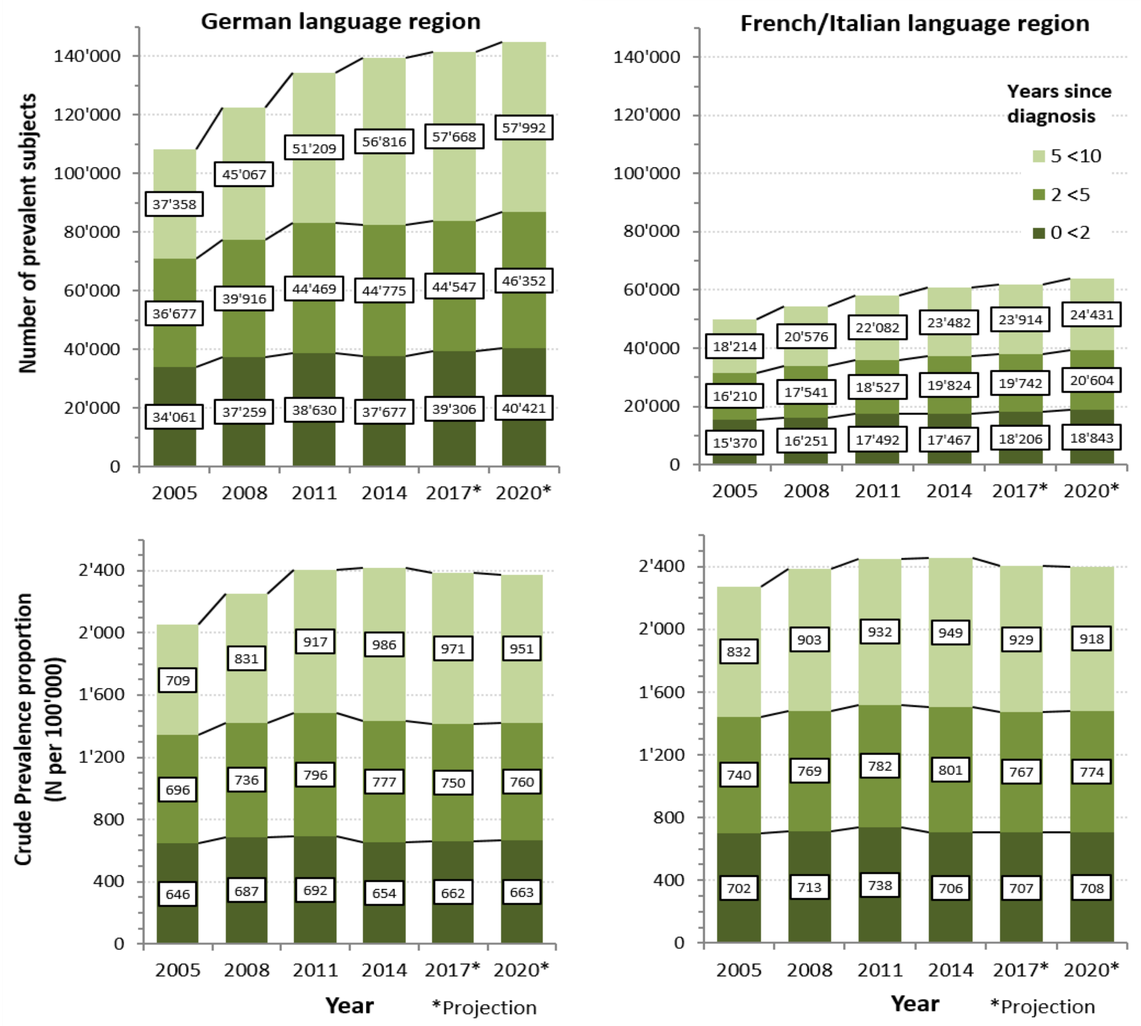
*: Age-adjusted proportion per 100'000 persons
**: Projected data based on 2005-2014
***: Excluding non-melanotic skin cancer
#: Women

►Prostate, breast and colorectal cancers, and melanoma, are the most prevalent.
►Testicular cancer is 25% more prevalent in the G region, while the F/I region presents a 29% higher prevalence of thyroid cancer.



►Lung cancer prevalence is higher in the F/I region among patients alive up to five years after diagnosis, but is the same among survivors between five and ten years.
►Prostate cancer prevalence is higher in G region in the 5-10 years survivor group.
►Differences in proportions of liver cancer by language region remain constant across all survivor groups.

Overall prevalence time trends



►Survivors between 5 and 10 years after diagnosis were the fastest growing prevalence group between 2005 and 2014.
►Slightly decreasing proportions (bottom panels) indicate that the increasing trend is slowing down.

Summary and Conclusions

- Total number of cancer survivors is predicted to increase by 5% in 2020, but age-adjusted proportions are expected to decrease by 6% in both regions.
- Overall prevalence is very similar in the two regions, however significant site-specific differences exist and can be mainly explained by pertinent differences in cancer incidence. Association with selected risk factors should be further investigated.
- While survivors up to 10 years represent 2.4% of the Swiss population, the proportion among individuals aged 70 or more is 23-25%. It is therefore essential to account for the specific health care needs of the elderly survivors.

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