

# Trends in histological subtypes of oesophageal cancers in Switzerland

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## BACKGROUND

Studies in the US and Western European countries reported substantial increases in the incidence of oesophageal adenocarcinomas (ACs) and a decrease or stable rates for oesophageal squamous-cell-carcinomas (SCCs) [1-4]. Therefore, this study aims to investigate this topic for Switzerland.

## DATA

Data of oesophageal cancer cases (OCs) were obtained from 12 Swiss cancer registries (CRs) covering the time from 1981 to 2010 (N=7,096). 95% of the cases were histological verified. Mid-year population estimates were provided by the Swiss Federal Statistical Office.

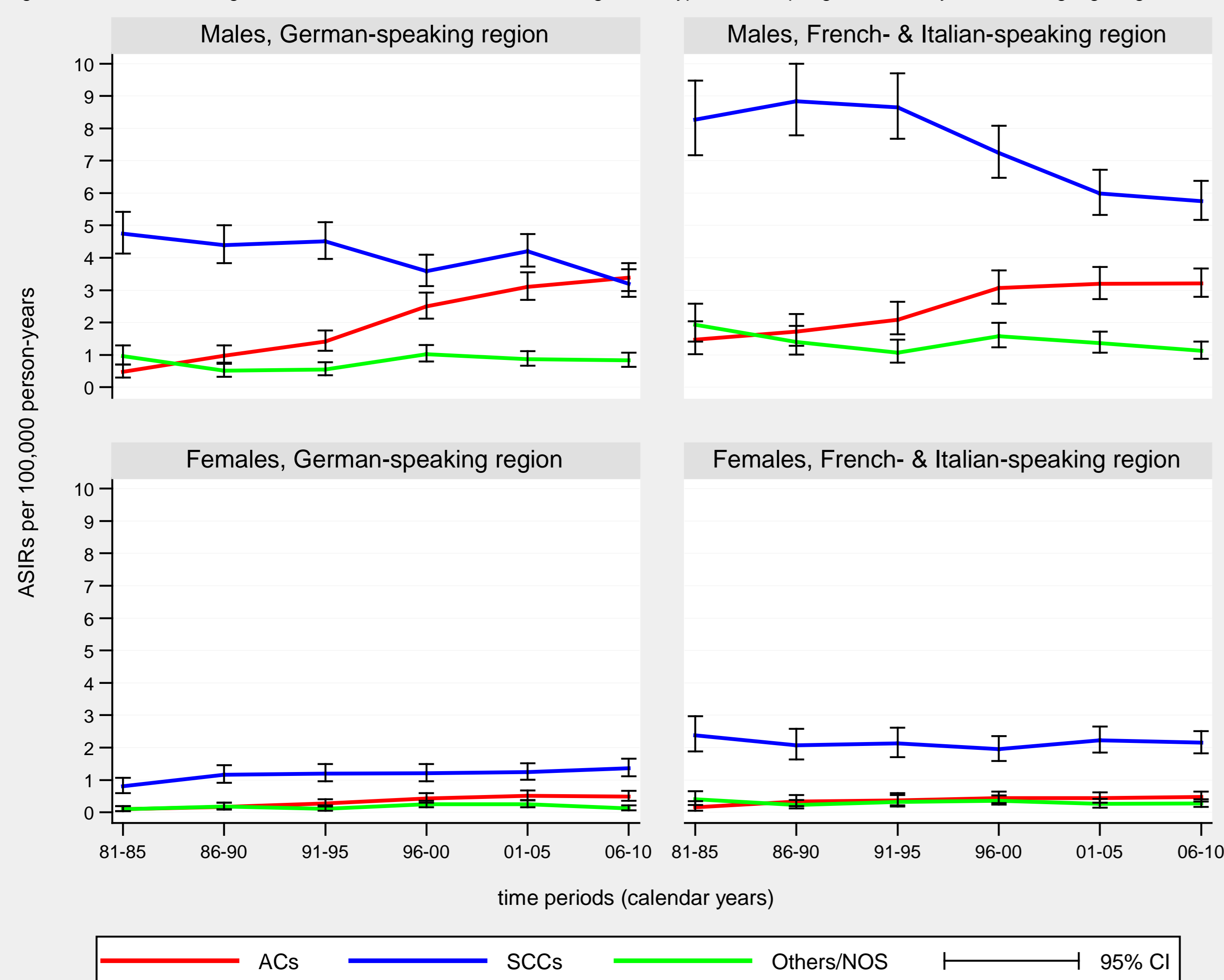
## METHODS

OCs were grouped by histological type into adenocarcinomas (ACs), squamous-cell-carcinoma (SCCs) and carcinomas of other subtypes/unspecified carcinomas (Others/NOS). To assess trends, 5-year and annual age-standardized incidence rates (ASIRs) (European standard) per 100,000 person-years were calculated. Estimated annual percentage changes (EAPC) were obtained by fitting linear regression models using the natural log of annual ASIRs as target variable and the year of incidence as predictor. Time trends in the proportions of histological subtypes were analysed based on histological verified cases.

All analyses were carried out stratified by language-region (German-speaking part, French- & Italian speaking part) and sex.

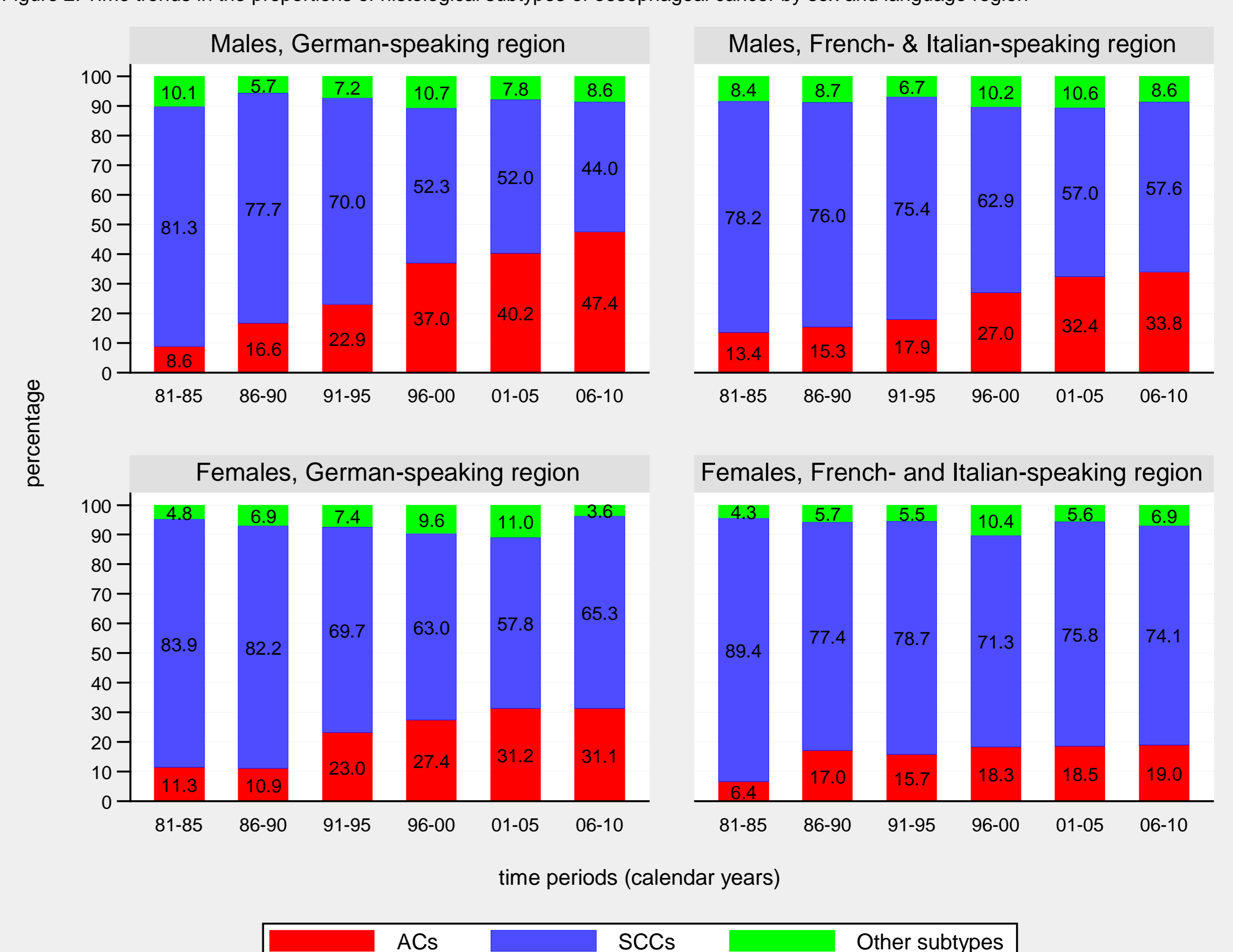
## RESULTS

Figure 1: Time trends in age-standardized incidence rates of histological subtypes of oesophageal cancer by sex and language region



	German-speaking region			French- & Italian-speaking region		
	EAPC	95%-CI	p <sub>trend</sub>	EAPC	95%-CI	p <sub>trend</sub>
<b>Males</b>						
ACCs	8.6%	[7.2; 10.1]	<.001	3.9%	[2.5; 5.2]	<.001
SCCs	-1.3%	[-2.0; -0.6]	<.001	-1.6%	[-2.3; -1.0]	<.001
Other/NOS	1.4%	[-0.6; 3.5]	.161	-1.3%	[-2.6; 0.1]	.061
<b>Females</b>						
ACCs	6.1%	[4.1; 8.1]	<.001	4.1%	[2.5; 5.7]	<.001
SCCs	1.7%	[0.5; 2.9]	.006	-0.3%	[-1.1; 0.5]	.466
Other/NOS	1.1%	[-1.6; 3.8]	.402	-0.7%	[-3.5; 2.0]	.575

Figure 2: Time trends in the proportions of histological subtypes of oesophageal cancer by sex and language region\*



ASIRs of ACs increased significantly in both language-regions ( $p < .001$ ). The rising trends were more pronounced in the German-speaking part (EAPC males: 8.6%, females: 6.1%) than in the French- & Italian speaking part (EAPC males: 3.9%; females: 4.1%).

ASIRs of SCCs decreased significantly ( $p < .001$ ) in males in both language regions (EAPCs: -1.3% and -1.6%) whereas females of the German-speaking part showed a significant rising trend (1.7%,  $p < .01$ ). The group of Others/NOS showed no significant changes.

For all time periods and in both sexes, ASIRs of oesophageal cancers were higher in the French- & Italian-speaking part with almost doubled rates for SCCs compared to the German-speaking region.

## CONCLUSIONS

The results confirmed increasing incidence trends of oesophageal ACs in Switzerland. For SCCs, decreasing trends were observed in males whereas an increasing trend was found for females of the German-speaking region. Overall, the findings suggest substantial changes in patterns of environmental and/or lifestyle risk factors over time as well as risk differences by sex and language region. However, also differences between the CRs and/or changes over time regarding diagnostic, completeness and/or coding rules may have influenced the results.

## SELECTED REFERENCES

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