

Trends in incidence of oesophageal and gastric cancer according to morphology and anatomical location, in Switzerland 1982–2011

Anita Feller^{a,b}, Martin Fehr^c; Andrea Bordoni^d, Christine Bouchardy^e, Harald Frick^f, Mohsen Mousavi^g, Annik Steiner^h, Volker Arndt^e, Kerri M. Clough-Gorr^b, and the NICER Working Group[§]

^a National Institute for Cancer Epidemiology and Registration (NICER), Zürich, Switzerland

^b Institute of Social and Preventive Medicine (ISPM), University of Bern, Switzerland

^c Kantonsspital St. Gallen, Department Oncology and Haematology, St. Gallen, Switzerland

^d Ticino Cancer Registry, Institute of Pathology, Locarno, Switzerland

^e Geneva Cancer Registry, Institute of Global Health, University of Geneva, Switzerland

^f Cancer Registry St Gallen-Appenzell, Cancer League St. Gallen-Appenzell, St. Gallen, Switzerland

^g Cancer Registry of Basel-Stadt and Basel-Landschaft, Gesundheitsdepartement des Kantons Basel-Stadt, Bereich Gesundheitsdienste, Abteilung Projekte und Services, Basel, Switzerland

^h SAKK Coordinating Centre, Bern, Switzerland

[§] Members of the NICER Working Group for these analyses included: Basel - M. Mousavi, Fribourg - B. Comey, Geneva - C. Bouchardy, Grison/Glarus - S. Ess, Neuchâtel/Jura - M. Maspoli, St. Gallen/Appenzell - S. Ess, Ticino - A. Bordoni, Valais - I. Konzelmann, Vaud - R. Blanc Moya, Zurich - S. Dehler.

Summary

QUESTION UNDER STUDY/PRINCIPLES: This study aimed to evaluate trends in the incidence of oesophageal and gastric cancer by anatomical location and histology using nationally representative Swiss data.

METHODS: We included all oesophageal and gastric cancers recorded in 10 Swiss population-based cancer registries 1982–2011. We calculated age-standardised incidence rates (ASIRs) per 100 000 person-years (PY) (European standard) for both cancer sites stratified by sex, language region (German, French-Italian), morphology and anatomical location. To assess time trends, we estimated annual percentage changes (APCs) with 95% confidence intervals (95% CIs).

RESULTS: ASIR of oesophageal adenocarcinoma increased in both sexes and language regions ($p < 0.001$). The steepest increase occurred in males of the German-speaking region (APC 6.8%, 95% CI 5.8–7.8) with ASIRs of 0.8 per 100,000 PY in 1982–1987 and 3.9 per 100,000 PY in 2007–2011. Incidence of oesophageal squamous cell carcinoma decreased significantly in males of both language regions by around –1.5% per year. In contrast, a slight but significant increase (APC 1.4%, 95% CI 0.3–2.4) of oesophageal squamous cell carcinoma was observed in females of the German-speaking region. We observed stable rates for cancer of the gastric cardia. The incidence of noncardia gastric cancer decreased substantially in both sexes and language regions ($p < 0.001$).

CONCLUSION: In Switzerland, the incidence of oesophageal adenocarcinoma has risen whereas incidence of noncardia gastric cancer has decreased substantially as observed in other developed countries.

Key words: oesophageal cancer; gastric cancer; adenocarcinoma; squamous cell carcinoma; incidence; Switzerland

Abbreviations

95% CI	95% confidence interval
APC	annual percentage change
ASIR	age-standardized incidence rates
BS/BL	Basel
FR	Fribourg
GE	Geneva
GR/GL	Glarus/Graubünden
JU/NE	Jura/Neuchâtel
PY	person-years
SG/AR/AI	Sankt Gallen/Appenzell Ausserhoden/Appenzell Innerhoden
TI	Ticino
US	Unites States
VD	Vaud
VS	Valais
ZH	Zurich