

Avoidable cancer mortality in Switzerland and neighbouring countries

Anita Feller¹, Kerri M. Clough-Gorr²

¹National Institute for Cancer Epidemiology and Registration (NICER), Zurich, Switzerland

²Institute of Social and Preventive Medicine (ISPM), University of Bern, Switzerland

BACKGROUND & DATA SOURCES

BACKGROUND

Cancer remains one of the leading causes of morbidity and mortality in the developed world. In Switzerland, approximately 36,900 new cancer cases were diagnosed and 16,300 cancer deaths were registered in 2010. Taken together, around 26% of all deaths in Switzerland could be attributed to some form of malignant neoplasm.

Avoidable mortality is a concept based on a selection of causes of death considered to be amenable to medical care or health policies serving as an indicator of the effectiveness of health care services. This study aims to evaluate achievements of medical care and health policies in Switzerland and neighbouring countries by analyzing time trends in avoidable cancer mortality.

DATA SOURCES

Swiss Federal Statistical Office (SFSO), WHO mortality database (Austria, France, Germany & Italy), time period 1996-2010.

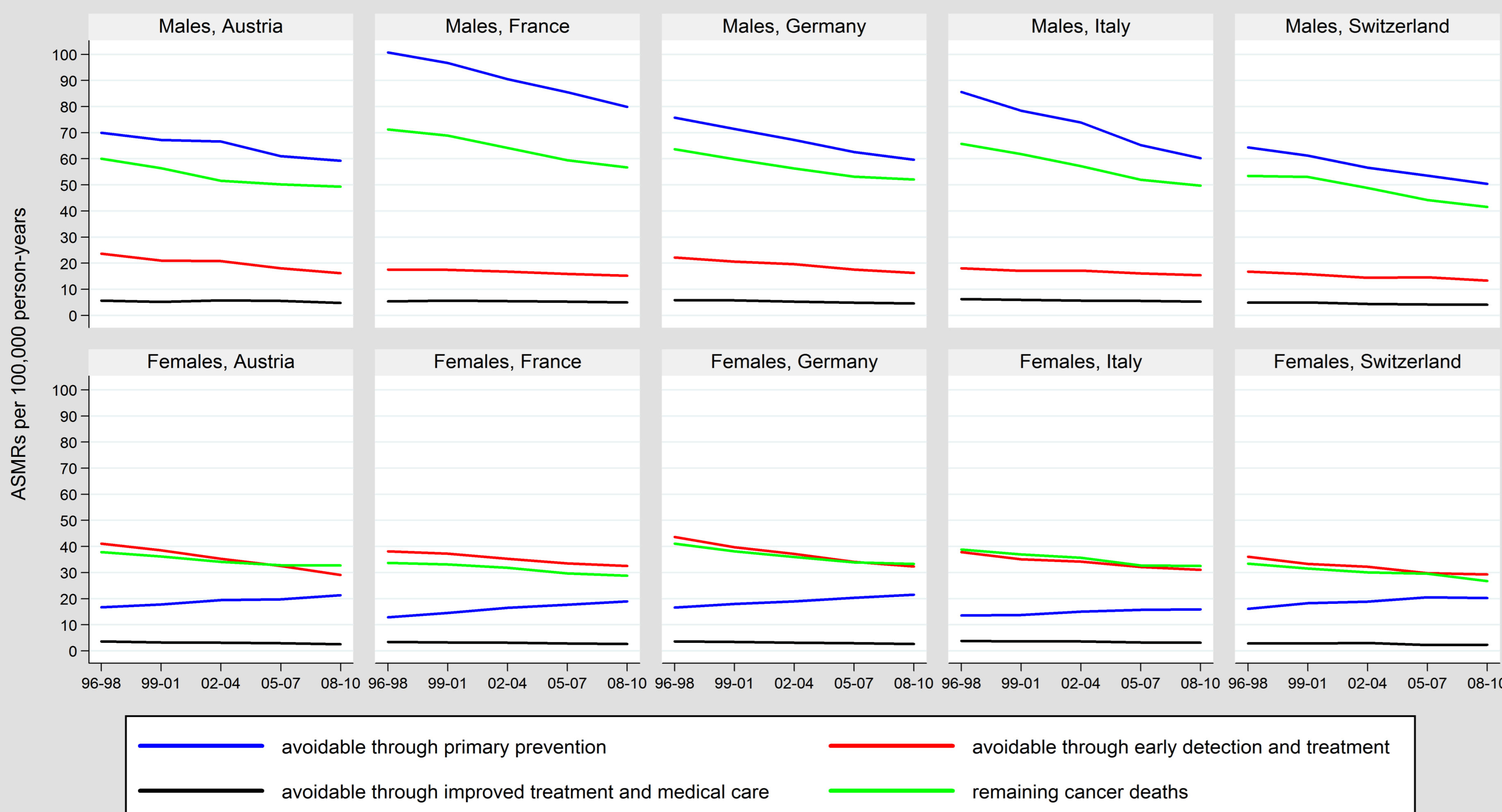
METHODS

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Three-year age standardized mortality rates (ASMRs) (European standard) per 100,000 person-years were calculated for the population aged less than 75 years by sex for the following groups of cancer deaths [1]: **1) cancer deaths avoidable through primary prevention** (cancer of upper airways and digestive tract, cancer of the trachea, bronchus and lung, liver cancer, bladder cancer); **2) avoidable through early detection and treatment** (melanoma and non-melanoma, female breast cancer, cervical cancer, uterine cancer, colorectal cancer [2,3]); **3) avoidable through improved treatment and medical care** (testicular cancer, Hodgkin's disease, leukemia) **4) remaining cancer deaths**.

To estimate relative effect sizes, comparative mortality ratios (CMRs) and 95%-confidence intervals (CI) were calculated for the time periods under investigation using the years 1996-1998 as reference period.

RESULTS



*population aged less than 75 years

CMRs Switzerland	CMR (95% CI) 2008-2010 (reference period 1996-1998)	
	Males*	Females*
avoidable through primary prevention	0.78 (0.76-0.81)	1.25 (1.18-1.33)
avoidable through early detection and treatment	0.80 (0.74-0.85)	0.81 (0.78-0.85)
avoidable through improved treatment and medical care	0.83 (0.73-0.95)	0.84 (0.72-0.99)
remaining cancer deaths	0.78 (0.75-0.81)	0.80 (0.76-0.84)

Overall cancer mortality* has been decreasing continuously between 1996 and 2010 in all countries under investigation. Comparing the time-period 1996-1998 and 2008-2010, avoidable cancer mortality decreased in all groups of avoidable cancer mortality and both sexes, with one exception: ASMRs for causes avoidable through primary prevention increased in females in all countries. In Switzerland, ASMRs for causes avoidable through primary prevention increased from 16.2 (CI 15.4-16.9) to 20.3 (CI 19.5-21.0) in females (CMR 1.25, 95% CI 1.18-1.33). Switzerland shows comparably low rates for avoidable cancer mortality in males, i.e. for causes avoidable through primary prevention.

CONCLUSIONS

Avoidable cancer mortality through primary prevention showed an increasing trend in females in all countries under investigation, indicating that there is a need to put more effort towards gender-specific primary prevention, i.e. anti-smoking campaigns targeting girls and adult women. Despite this trend, cancer deaths avoidable through primary prevention are still much less common in females than in males.

SELECTED REFERENCES

- 1 Simonato L., Ballard T., Bellini P., Winkelmann R., Avoidable mortality in Europe 1955–1994: a plea for prevention. *J Epidemiol Commun Health.* 1998; 52: 624-30.
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- 3 Sundmacher L., Gaskins M.D., Hofmann K., Busse R., Spatial distribution of avoidable cancer deaths in Germany. *J Public Health.* 2012; 279-288.