

Breast cancer incidence in younger Swiss women

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BACKGROUND

Approximately 20% of all breast cancers are diagnosed in women before the age of 50 years and less than 4% in women below the age of 35 years. Although breast cancer is uncommon in young women, it is the most frequent cancer in women less than 40 years, accounting for 30-40% of all female cancers and the leading cause of cancer death for young women in developed countries. For Switzerland, the United States and several European countries, declines in breast cancer incidence have been reported since around the year 2000, after decades of increase among women aged 50 years and older. On the other hand, an increase in the incidence of breast cancer in younger women has been reported in recent years. Therefore, this study aims to evaluate time trends in breast cancer incidence in younger women in Switzerland.

METHODS

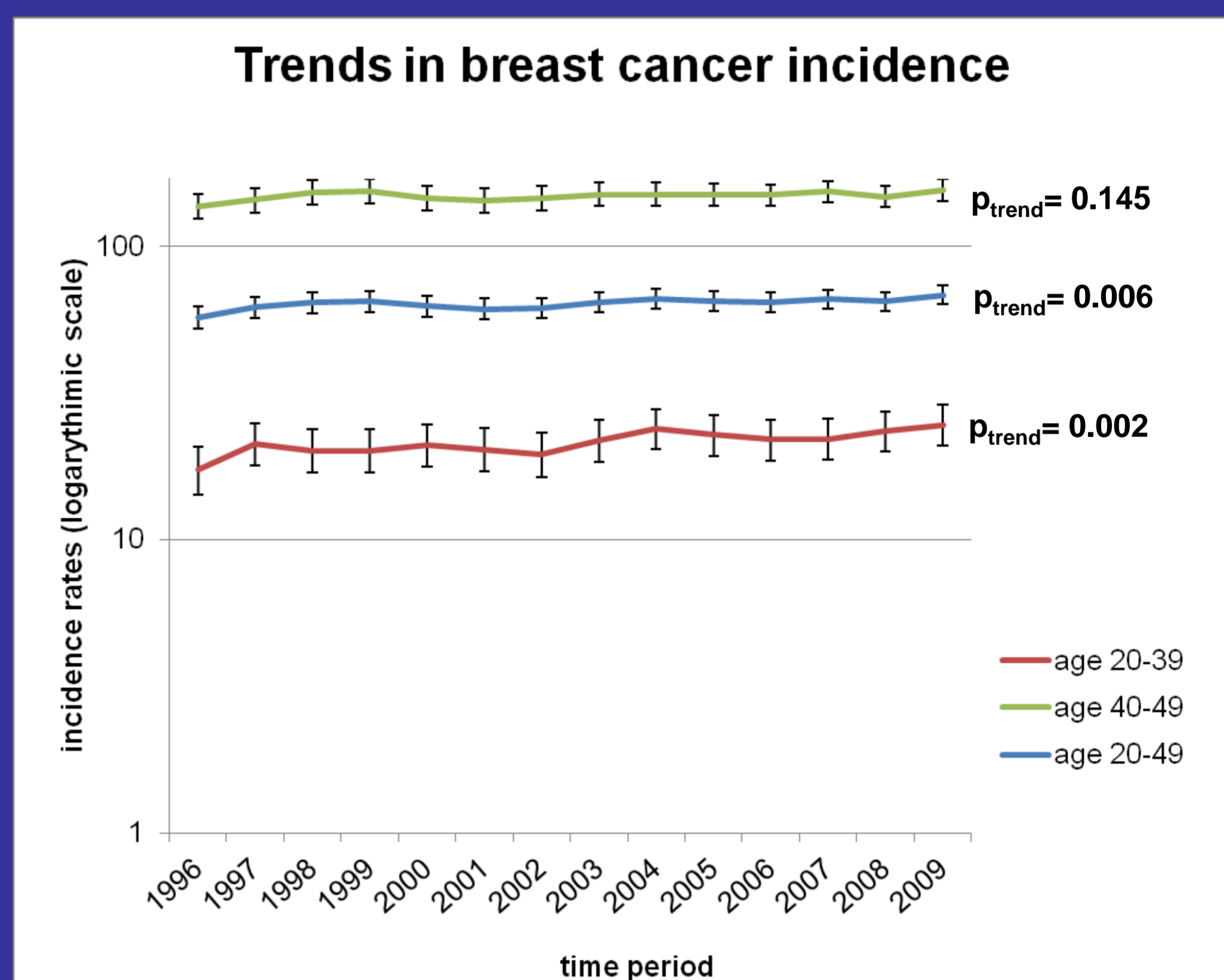
Data on invasive breast cancer cases in females were obtained from 11 Swiss cancer registries* covering the time period 1996 to 2009. Mid-year population estimates for the respective time period were supplied by the Swiss Federal Statistical Office.

Annual age-standardized incidence rates (ASIRs) (European standard) per 100,000 person-years (PYs) and corresponding 95%-confidence intervals (95% CI) were calculated for the age-groups 20-39, 40-49 and 20-49 years.

For the same age groups, poisson regression models were fitted to obtain annual percentage changes (APC) and to assess the statistical significance of log-linear time trends of ASIRs.

*cancer registries of Basel, Fribourg, Geneva, Graubünden/Glarus, Jura, Neuchâtel, St. Gallen-Appenzell, Ticino, Valais, Vaud and Zurich & Zug

RESULTS



Age	ASIRs per 100.000 PYs		APC (95% CI)
	1996	2009	
20-39	17.3	24.6	1.8% (0.6-2.9)
40-49	137.4	155.7	0.4% (-0.1-1.0)
20-49	57.4	68.3	0.7% (0.2-1.3)

ASIRs in women aged 20-49 years increased from 57.4 (95% CI 52.5-62.5) per 100,000 PYs in 1996 to 68.3 (95% CI 63.4-73.6) per 100,000 PYs in 2009. In women aged 20-39 years, ASIRs increased from 17.3 (95% CI 14.3-20.8) to 24.6 (95% CI 21.0-28.8) per 100,000 PYs and in women aged 40-49 years from 137.4 (95% CI 124.4-151.4) to 156.0 (95% CI 143.3-169.6) in the same time.

The APC over the whole period was 1.8% (95% CI 0.6-2.9, $p=0.006$) in women aged 20-39 years and 0.4% (95% CI -0.1-1.0, $p>0.05$) in women aged 40-49 years.

SELECTED REFERENCES

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CONCLUSION

The results of this study suggest that in Switzerland during the period 1996-2009 incidence of invasive breast cancer has increased among women younger than 50 years old. The increase was particularly significant among women younger than 40. This result can be caused by an increase in risk factors and/or by an increase of surveillance or detection. Further investigations are needed to study this rise in incidence and to identify the specific risk factors of breast cancer among very young women.