

Publication

Regional differences and trends in breast cancer surgical procedures and their relation to socioeconomic disparities and screening patterns

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 4530022**Author(s)** Herrmann, C.; Ess, S.; Walser, E.; Frick, H.; Thürlimann, B.; Probst-Hensch, N.; Rothermundt, C.; Vounatsou, P.**Author(s) at UniBasel** [Herrmann, Christian](#) ; [Probst Hensch, Nicole](#) ; [Vounatsou, Penelope](#) ;**Year** 2020**Title** Regional differences and trends in breast cancer surgical procedures and their relation to socioeconomic disparities and screening patterns**Journal** Journal of public health**Volume** 28**Number** 1**Pages / Article-Number** 71-80

Background Important regional disparities in patterns of care in breast cancer have recently been described. In Switzerland, nationwide data on hospitalisations have been collected since 1998. They have not been used up to now to explore space–time patterns and trends of breast cancer healthcare-related procedures for control and health planning purposes. We aimed to assess geographical and temporal variation of mastectomy rates. **Methods** Bayesian negative-binomial spatio-temporal models have been applied. Covariates included patient characteristics as provided in the hospital data, data on mammography screening programme duration, and surgeon and gynaecologist density. **Results** We analyzed more than 70,000 patients. Mastectomy rates declined from 43% to 30% in Switzerland between 2000 and 2012 for patients aged 50–69 and from 61% to 43% for those 70+, and remained stable for those under 50. Important geographical differences in rates were present. Rates were significantly influenced by age [relative rate ratio (RR) 50–69: 0.92, RR 70+: 1.25], differences in co-morbidity (RR one co-morbidity: 1.17, RR more than one: 1.35), higher surgeon or gynaecologist density (RR surgeons: 1.01, RR gynaecologists: 1.06). Regions in the French-speaking part (RR: 0.72) and/or with mammography screening programmes showed significantly lower rates (RR: 0.87). No difference was found for patients in different socio-economic groups or with different insurance types. **Conclusion** This research unveiled important differences in mastectomy rates in Switzerland. The results play an essential role in the identification of regions where special attention is required, and indications for extensive surgery in breast cancer should be revisited.

Publisher Oxford University Press**ISSN/ISBN** 1741-3842**edoc-URL** <https://edoc.unibas.ch/75678/>**Full Text on edoc** Available;**Digital Object Identifier DOI** 10.1007/s10389-018-01007-7**ISI-Number** WOS:000511988100010**Document type (ISI)** Article