

Long-term survival and prognostic factors in endometrial cancer

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i Hjärtat, Sahlgrenska Universitetssjukhuset, den 5 april, klockan 9.00

av Teresia Svanvik

Fakultetsopponent:

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Lunds Universitet

Avhandlingen baseras på följande delarbeten

- I. Svanvik T, Sundfeldt K, Strömberg U, Holmberg E, Marcickiewicz J. Population-based cohort study of the effect of endometrial cancer classification and treatment criteria on long-term survival. *Int J Gynecol Obstet* 2017; 138: 183-189. doi: 10.1002/ijgo.12214.
- II. Svanvik T, Strömberg U, Holmberg E, Marcickiewicz J, Sundfeldt K. DNA ploidy status, s-phase fraction, and p53 are not independent prognostic factors for survival in endometrioid endometrial carcinoma FIGO stage I-III. *Int J Gynecol Cancer*. 2019 Jan 2013 doi: 10.1136/ijgc-2018-000082. [Epub ahead of print]
- III. Svanvik T, Marcickiewicz J, Sundfeldt K, Holmberg E, Strömberg U. Sociodemographic disparities in stage-specific incidences of endometrial cancer: A registry-based study in west Sweden, 1995-2016. Accepted for publication in *Acta Oncologica*, 07-Feb- 2019.

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR KLINISKA VETENSKAPER**



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Abstract

Aims: The over-all aims of this thesis were to evaluate the associations between prognostic factors and excess mortality rate, between socioeconomic and immigrant status and incidence rate, in endometrioid (EEC) and non-endometrioid (NEC) endometrial carcinoma.

Material and methods: Study I-III were retrospective population-based cohort studies including women resident in a defined geographical area, with endometrial carcinoma. Data on clinicopathological variables were collected from the Western Swedish Healthcare Region Clinical Registry for Endometrial Cancer and the Swedish Quality Registry of Gynecologic Cancer. In study III, data on education and immigrant status were collected from the Swedish Registry of Education and the Statistics Sweden Population Registry.

Results: Cohort 2, had a decreased excess mortality rate compared to cohort 1, EMRR 0.62 (95% CI 0.44-0.87) in the NEC group. There was a significant difference in distribution of treatment in cohort 2 ($p < 0.001$), with increased adjuvant chemotherapy in combination with radiotherapy. Excess mortality was not increased with presence of P53 overexpression, EMRR 1.53 (95% CI 0.79-2.97), s-phase fraction $\geq 8\%$, EMRR 1.31 (95% CI 0.68-2.53), and aneuploidy, EMRR 1.79 (95% CI 0.89-3.24). In aneuploidy stage I, grade 2, 5-year relative survival was 0.88 (95% CI 0.78-0.96). Women, aged 50-74-years, with low level of education had higher incidence rate of stage II and III-IV EEC, IRR 1.65 (95% CI 1.13-2.42) and IRR 1.82 (1.33-2.49) compared to high level of education.

Conclusions: Clinical protocol used in cohort 2, NEC, was associated with decreased excess mortality. We did not find P53 overexpression, s-phase fraction $\geq 8\%$ or aneuploidy associated with increased excess mortality although aneuploidy identified women with impaired survival in stage I grade 2. Lower level of education was associated with increased incidence rates of stage II-IV EEC in 50-74-year-old women.

Keywords: excess mortality rate, EEC, NEC, incidence rate