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## **Risk prediction models and prevention in hormone related gynecologic cancers**

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In summary, the ovarian cancer risk model built from non-invasively measured epidemiologic risk factors showed a modest discriminatory power in a Western European population, comparable to previously developed models on US cohort data. The endometrial cancer risk model showed a somewhat better performance. Future studies should consider adding informative biomarkers to possibly improve the predictive ability of the models.

As yet these well calibrated models can be used as first step in a multilevel prevention procedure and thus build an important resource for further research on the prevention of endometrial and ovarian cancer in the general population in Western Europe.

The analyses on breast cancer indicate small increases in prediction quality, which may in future still be expected with a growing number of genetic markers detected to be associated with breast cancer risk. Extrapolating from our observations and considering further theoretical estimations (Mavaddat et al. 2015) it can be anticipated that the discriminative power will further increase as the number of known common genetic determinants of breast cancer grows. The future for breast cancer prevention lies with improved cancer subtype specific risk models and personalized prevention schemes (Onega et al. 2014).