Combined ASRGL1 and p53 immunohistochemistry as an independent predictor of survival in endometrioid endometrial adenocarcinoma

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I have no conflicts of interest
Background

• Multiple studies have suggested that biomarkers have a prognostic significance in endometrial cancer.

• The prognostication of endometrial cancer is based on clinicopathological risk factors and systematic analysis of an optimal prognostic immunopanel is lacking.
Our aim

- Our aim was to evaluate whether an immunopanel could reliably assess endometrioid endometrial cancer (EEC) outcome independent of clinicopathological information.
Methods

• A cohort of 306 EEC specimens was profiled using tissue microarrays (TMA). Patients were operated at Turku University Hospital 2001-2007.

• Immunohistochemical analysis of well-established tissue biomarkers (ER, PR, HER2, Ki-67, MLH1 and p53) and two new biomarkers (L1CAM and ASRGL1) was carried out
Statistical modelling

• Immunohistochemical staining results were entered in an unsupervised hierarchical clustering analysis.

• Statistical modeling with embedded variable selection was applied on the staining results to identify minimal prognostic panels with maximal prognostic accuracy.
A panel including p53 and ASRGL1 IHC was identified as the most accurate predictor of RFS and DFS.

HR 30.1 (CI 10.93-83.14), P < 0.001
The statistical modeling favored p53 over L1CAM for prognostic role in EEC.
Conclusion

• p53 and ASRGL1 immunoprofiling stratifies EEC patients into three risk groups with significantly different outcomes.

• This easily applicable panel could be a useful tool in EEC risk stratification and guiding the allocation of treatment modalities
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