Intratumoral T- cell infiltration improves selection of patients at risk for recurrence of disease in type II endometrial cancer.

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Aims: In endometrial cancer, there is a quest to improve selection of patients requiring adjuvant treatment in order to avoid side effects for those with low risk of recurrence as well as improving outcome for those with high risk of recurrence of disease. Immunologic variables could contribute to selection. We evaluated this hypothesis using data from a large, well described cohort of type 1-2 endometrial cancer. The findings of the experimental cohort were validated in an independent cohort.

Methods: A dataset containing classical clinicopathological parameters and immunological parameters of 355 patients with type 1-2 endometrial cancer was used. This dataset was imputed for missing values. Relevant predictors were selected by backward selection. Discriminatory power for prediction of distant recurrence was calculated using a concordance index and stratified for type of cancer. To validate our prediction model, data from an independent cohort of 74 patients with type 2 cancer was used.

Results: In type 2 cancer, predictive value of immunologic variables equals clinicopathological variables (C-index 0.71 vs 0.70 respectively) and combining these variables has superior predictive value (C-index 0.79). Findings were confirmed in the validation cohort with a combined C-index of 0.85.

Conclusion: Intratumoral T-cell infiltration predicts recurrent disease as well as classical variables in type II endometrial cancer. Combination has an even higher predictive value and might therefore by used to select patients whom require adjuvant treatment. An immune profile in type 2 endometrial cancer may assist in determining the optimal treatment schedule for each individual patient.