

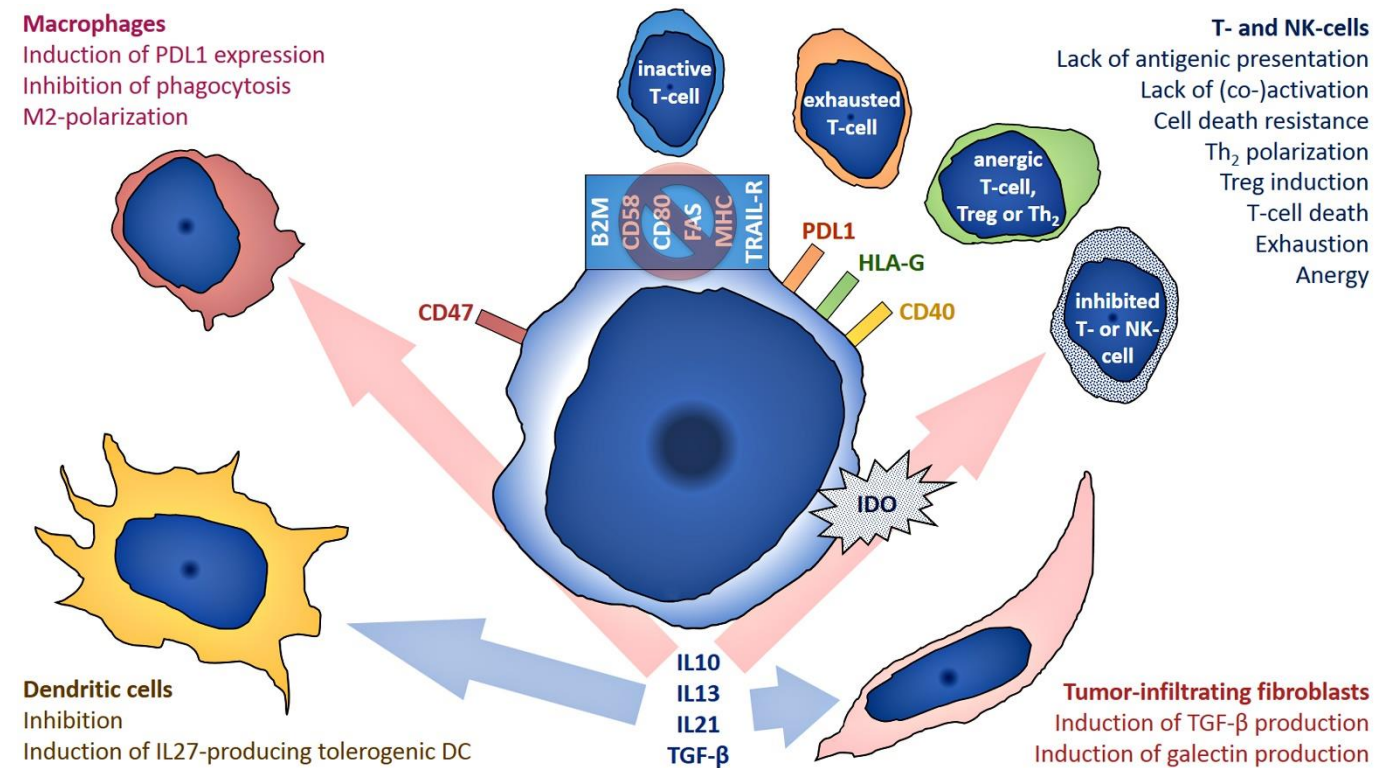
Analysis of the microenvironment of follicular lymphoma by gene expression analysis: importance of the Th17 axis

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DGP05.06

Lymphomas and their microenvironment

Double-edged relationship of lymphomas and their TME

- Dependence of trophic/supportive substances and structures of lymphoma cells
- Manipulation of the immune system by lymphoma cells to avoid recognition by the immune system



The SAKK 35/10 trial

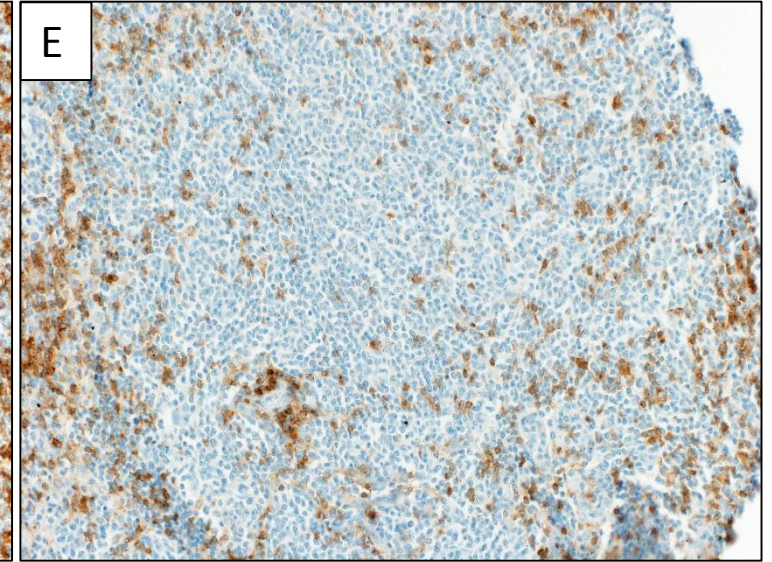
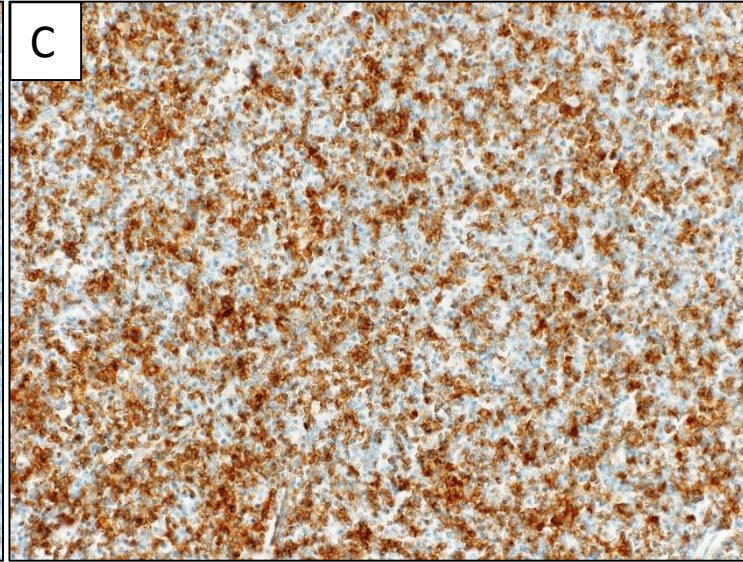
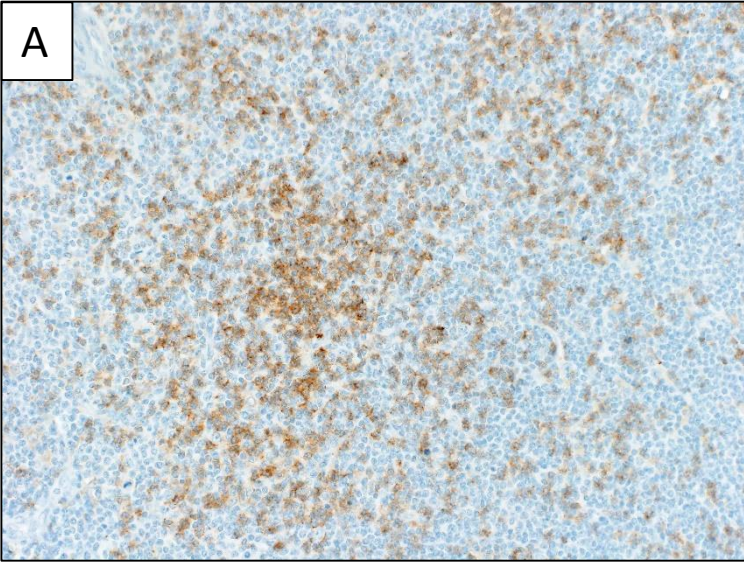
- Cooperation of the SAKK and the Nordic Lymphoma Group
- Evaluation of the addition of Lenalidomide to Rituximab (R²) in treatment-naïve follicular lymphoma in comparison to Rituximab-therapy only
- Enrollement of 154 patients
- Primary endpoint: complete remission in week 23
- Secondary endpoints: overall response rate, complete remission in month 30, progression free survival, time to next treatment

Conclusions of the first study part

- Analysis of the TME by immunohistochemistry focusing on T-cell subsets
- Insights into the heterogeneity of the tumor microenvironment of follicular lymphoma
- Microenvironment simplified: already a small subset analysis of the microenvironmental T-cells yields prognostic impact
- Lenalidomide influences the prognostic importance of microenvironmental T-cells

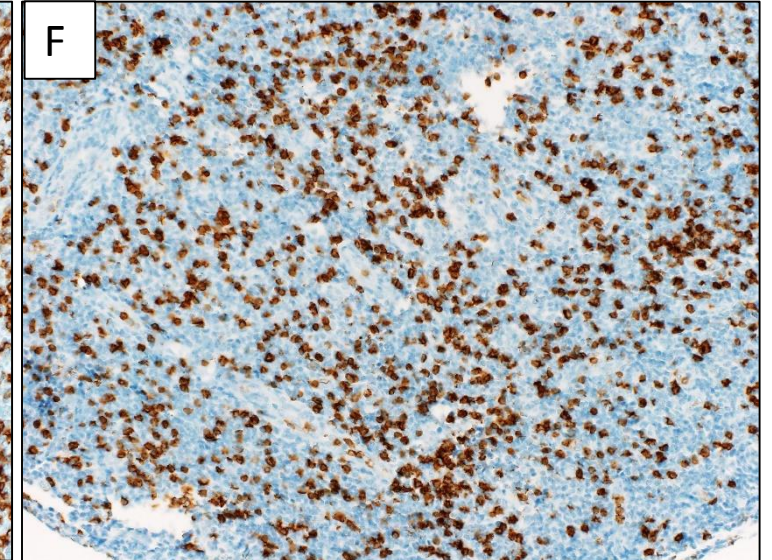
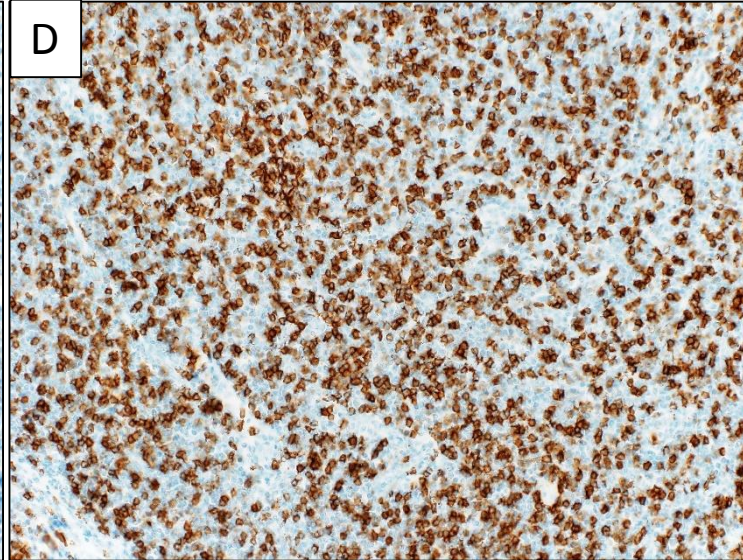
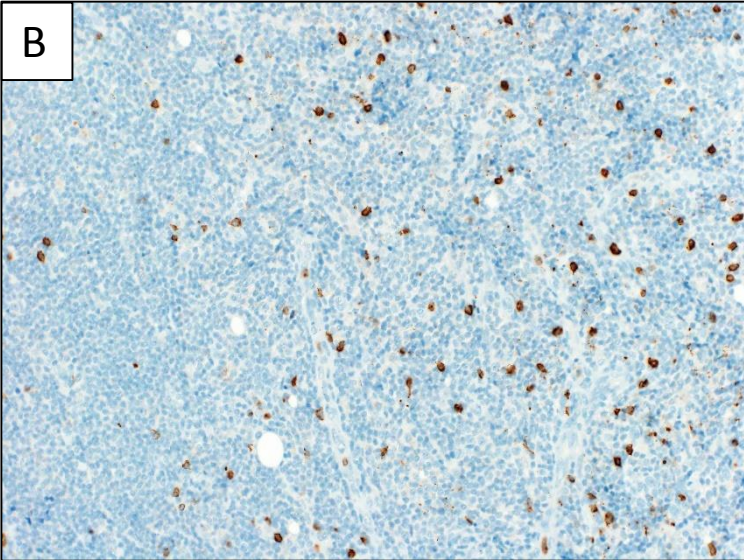
Heterogeneity of the CD4/CD8 ratio

CD4



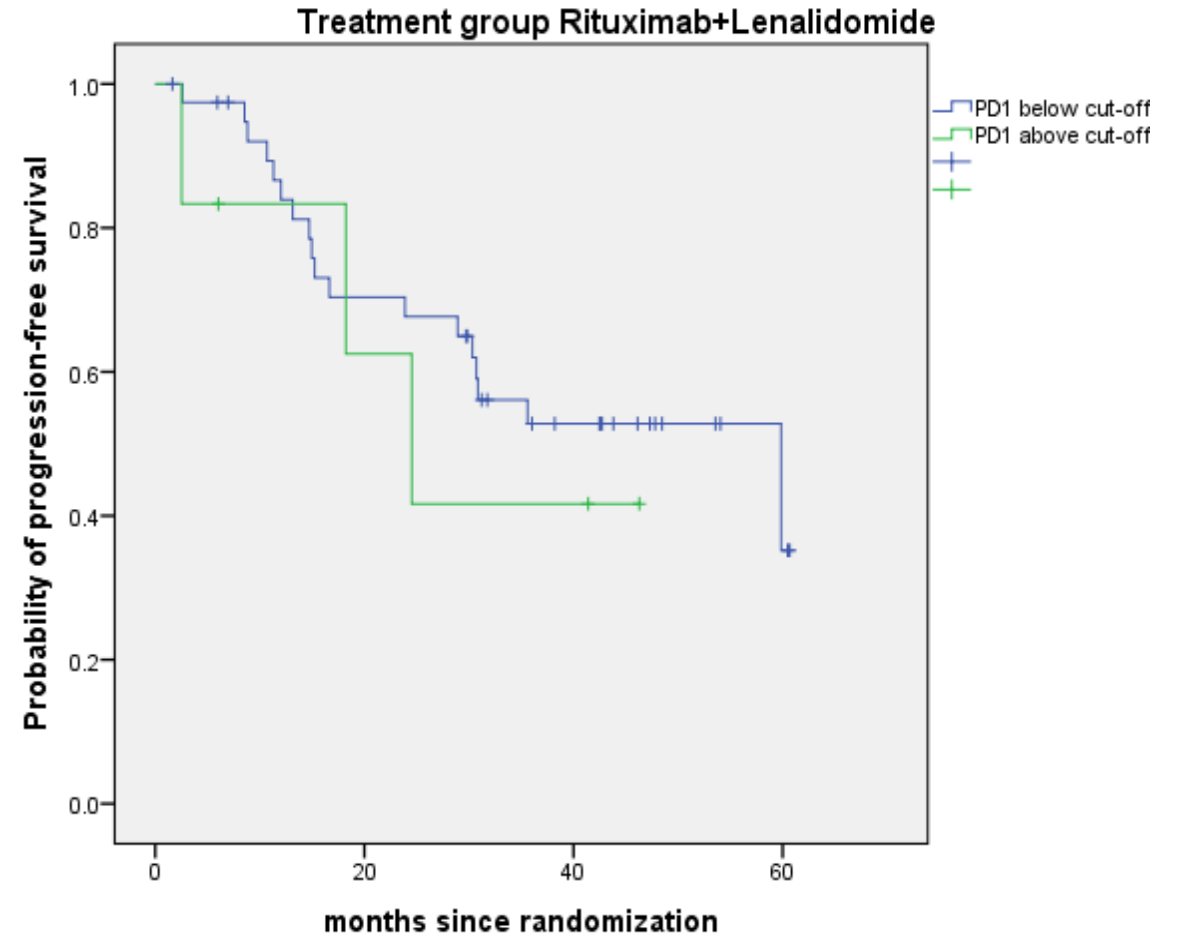
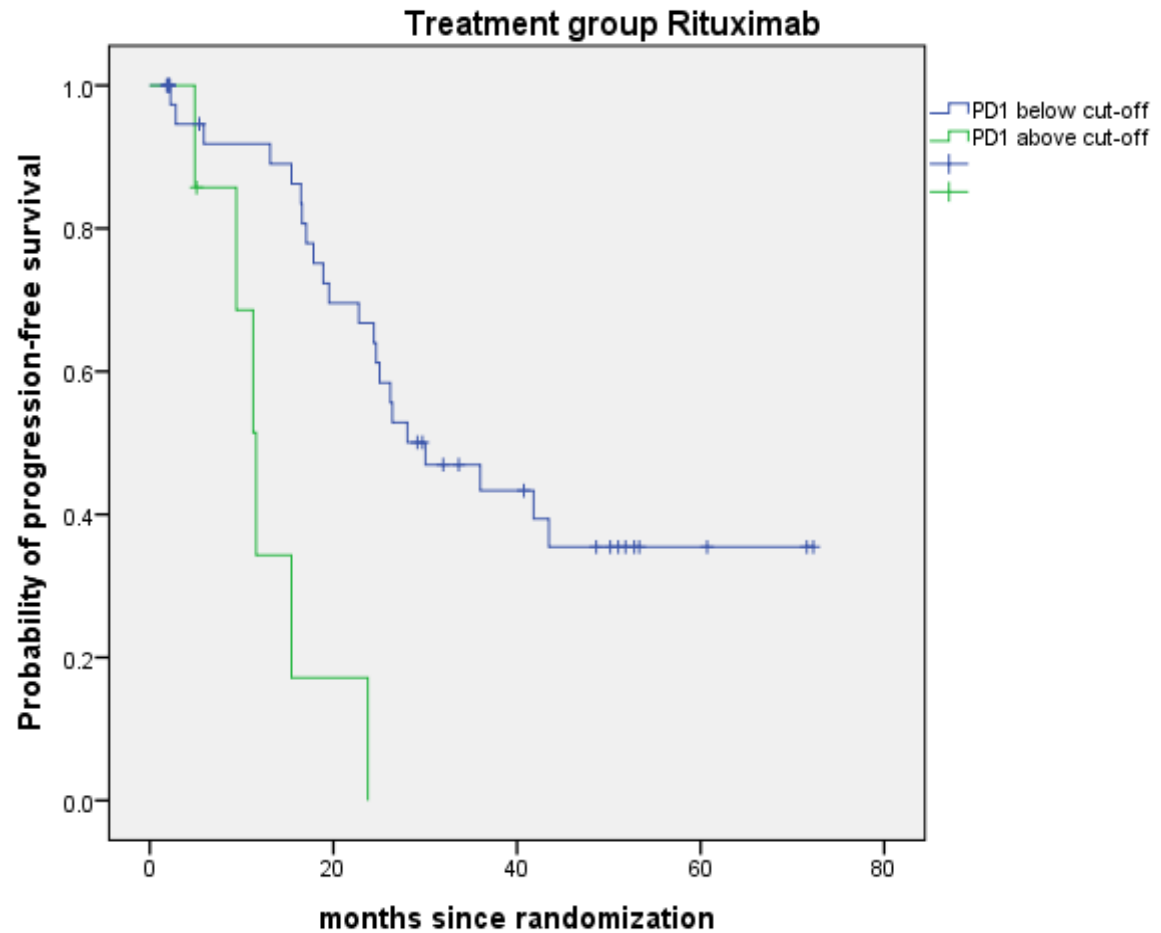
CD4

CD8

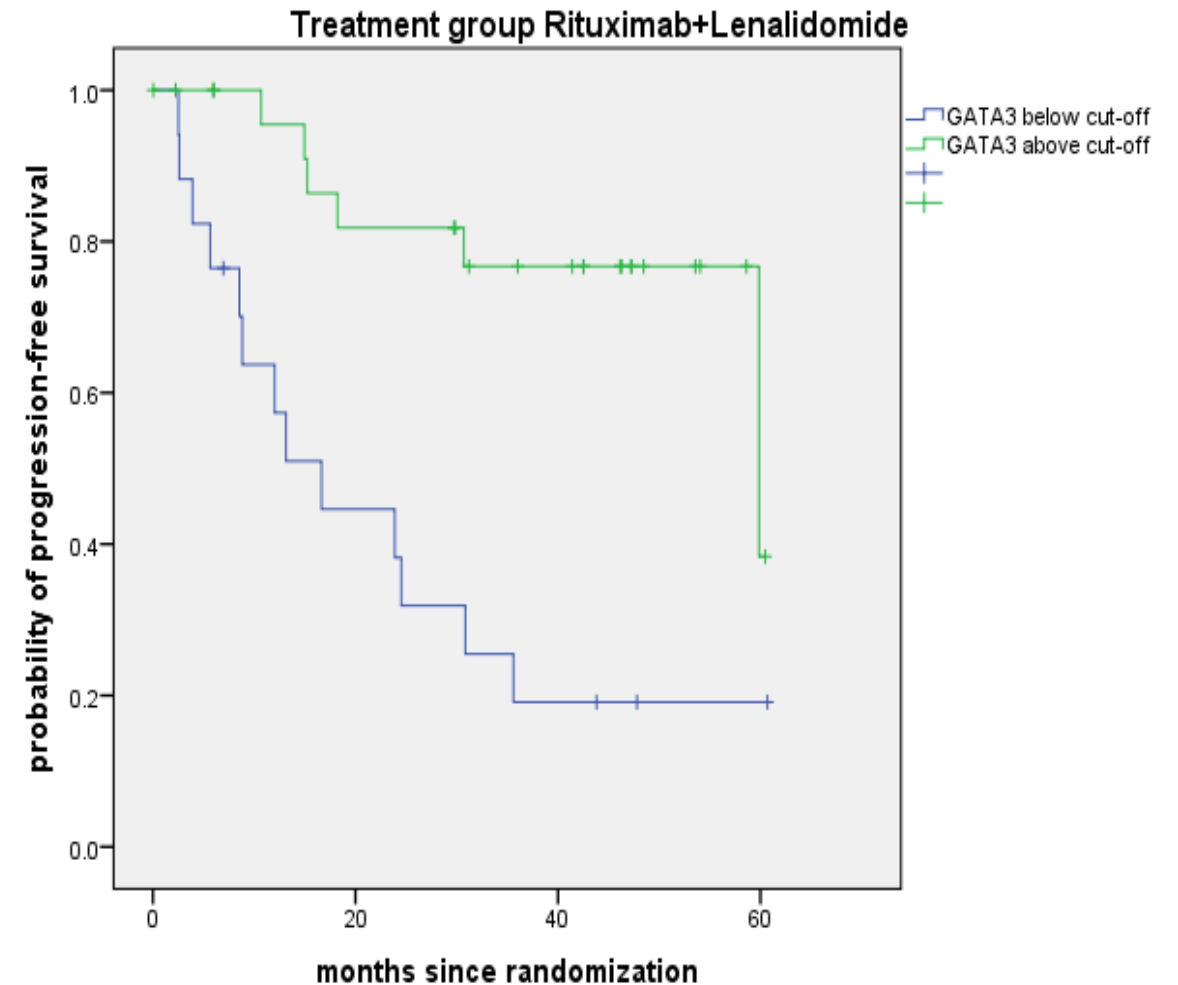
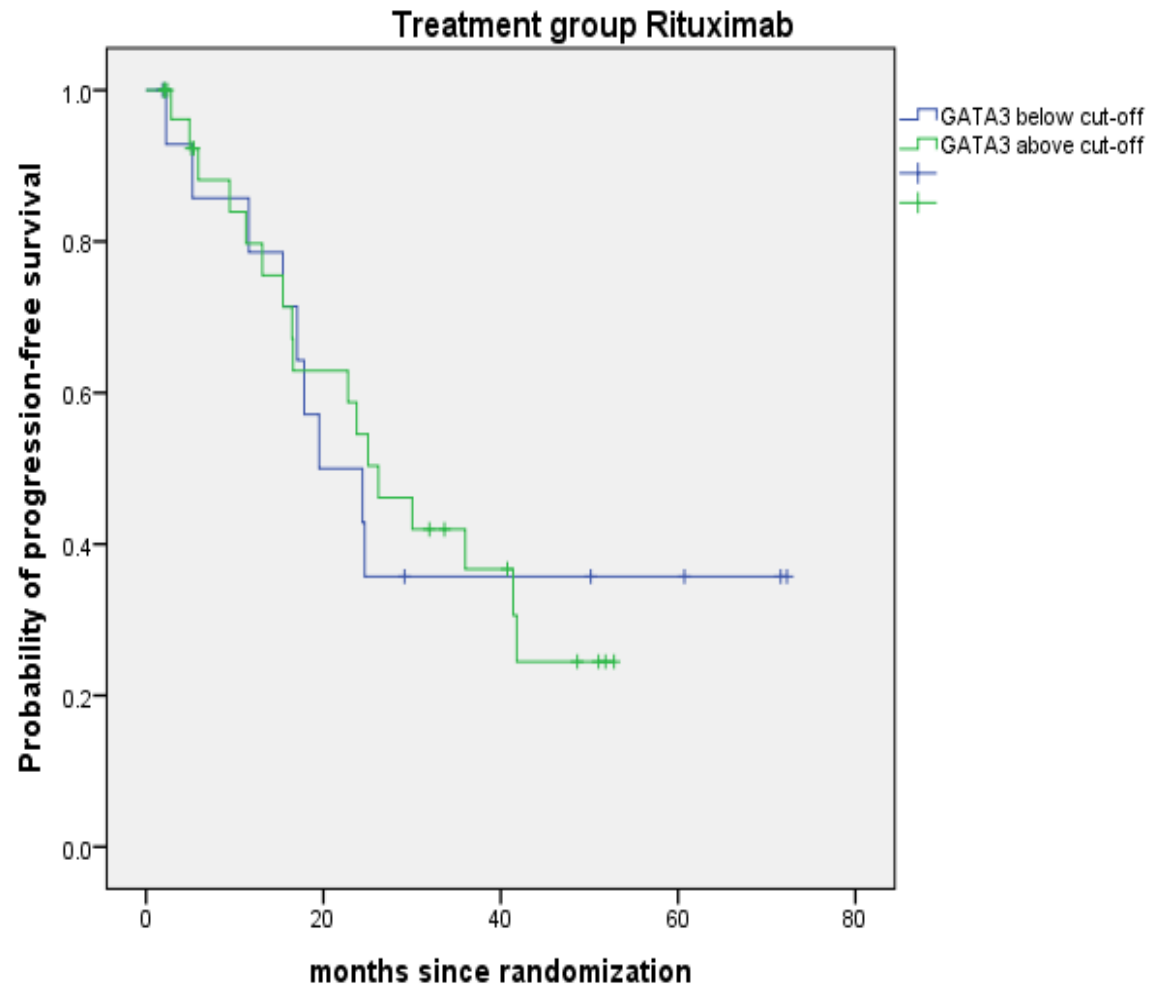


CD8

Lenalidomide overcomes the prognostic importance of PD1⁺ TIL



Positive influence of GATA3⁺ T-cells in the lenalidomide group

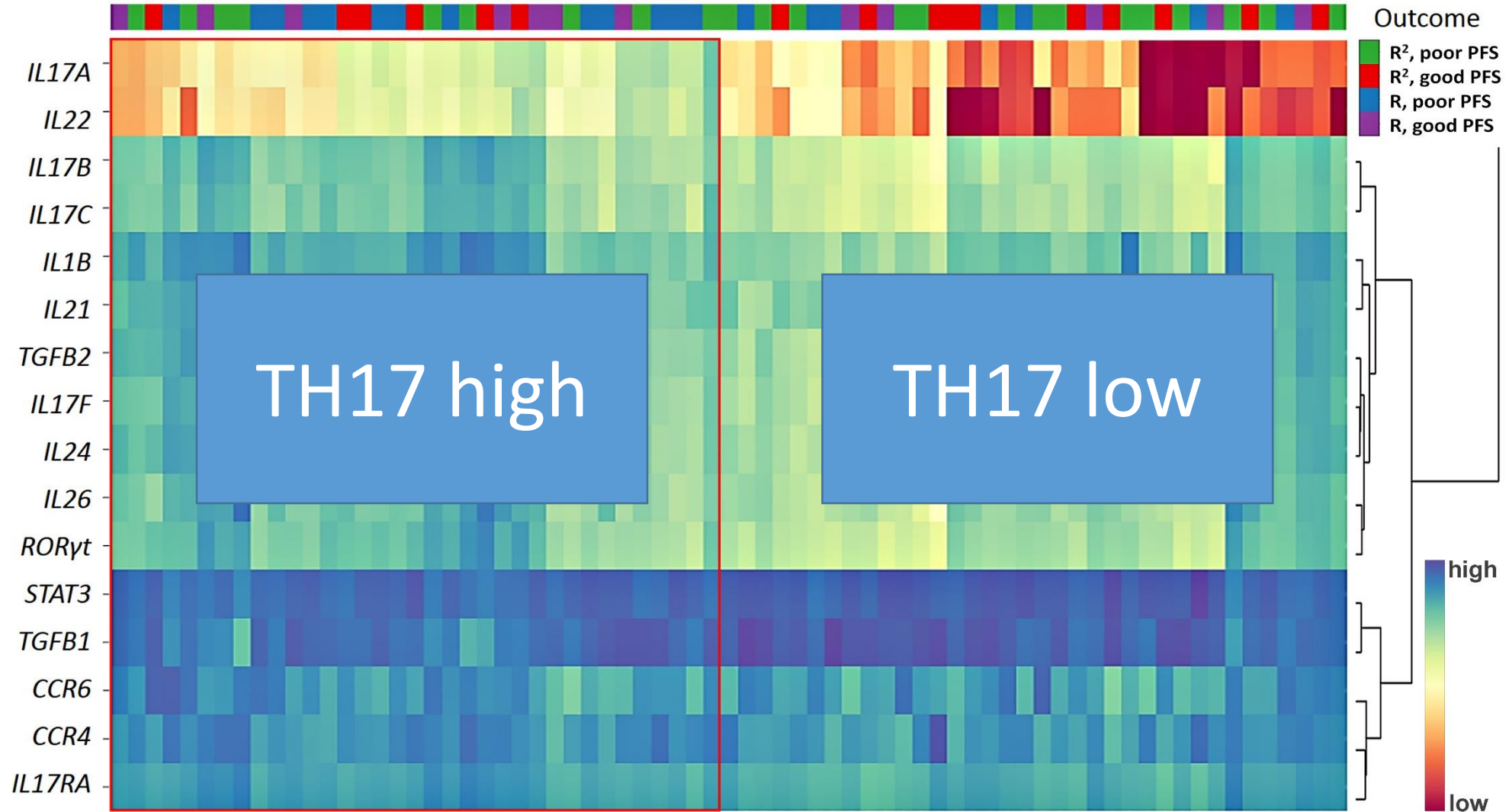


Gene expression profiling

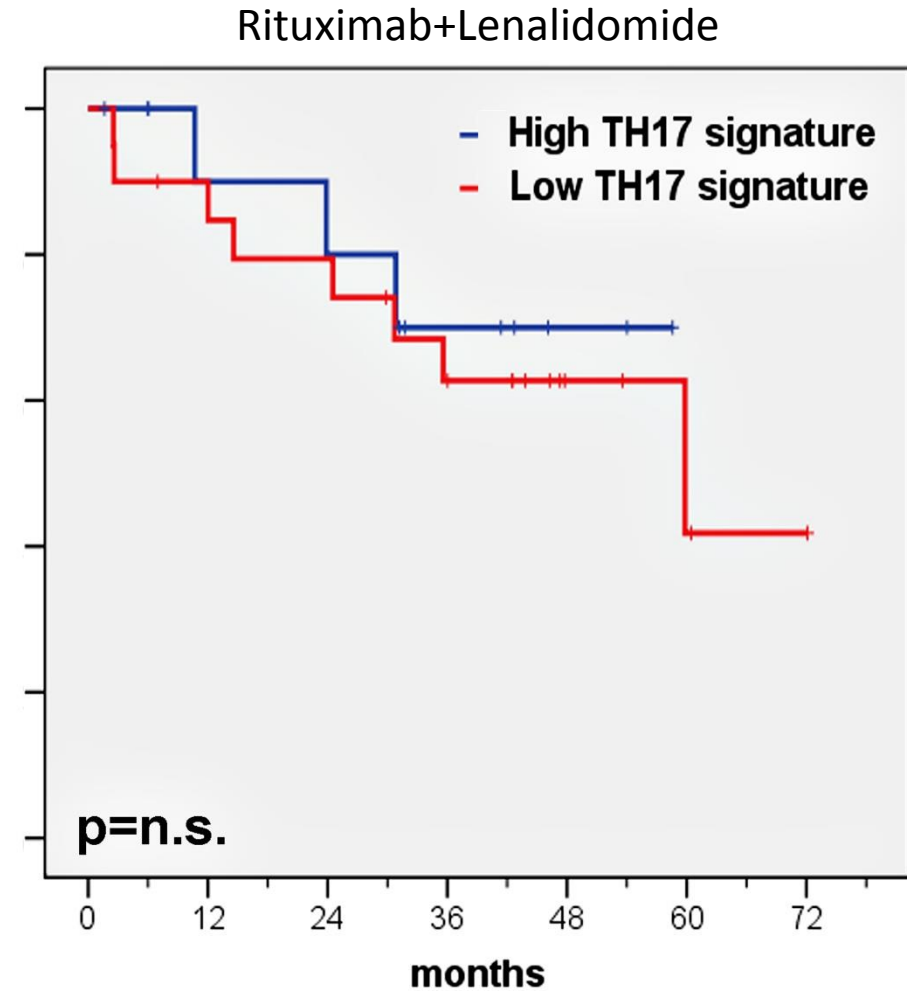
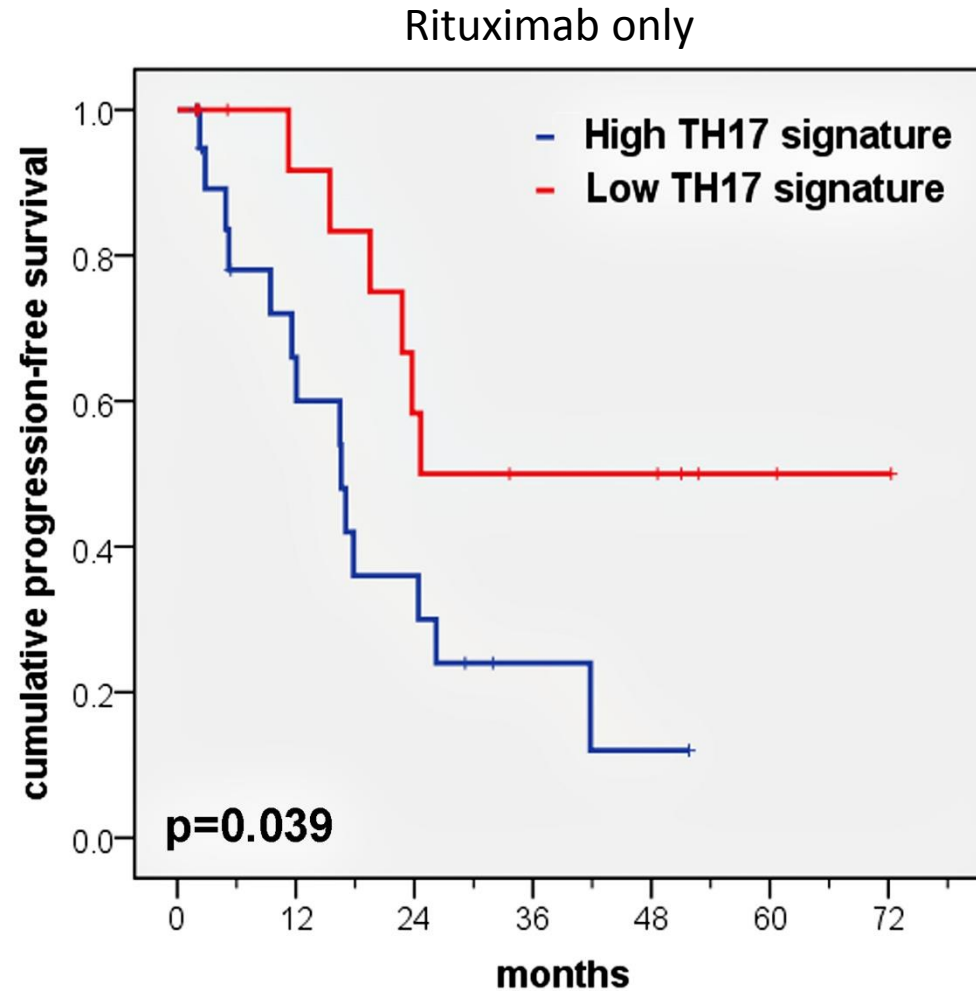
- Analysis of remaining 71 cases with sufficient material
- Gene expression profiling using the HTG EdgeSeq Precision Immuno-Oncology Panel
- Additional immunohistochemistry for Th17 cells (ROR γ t)



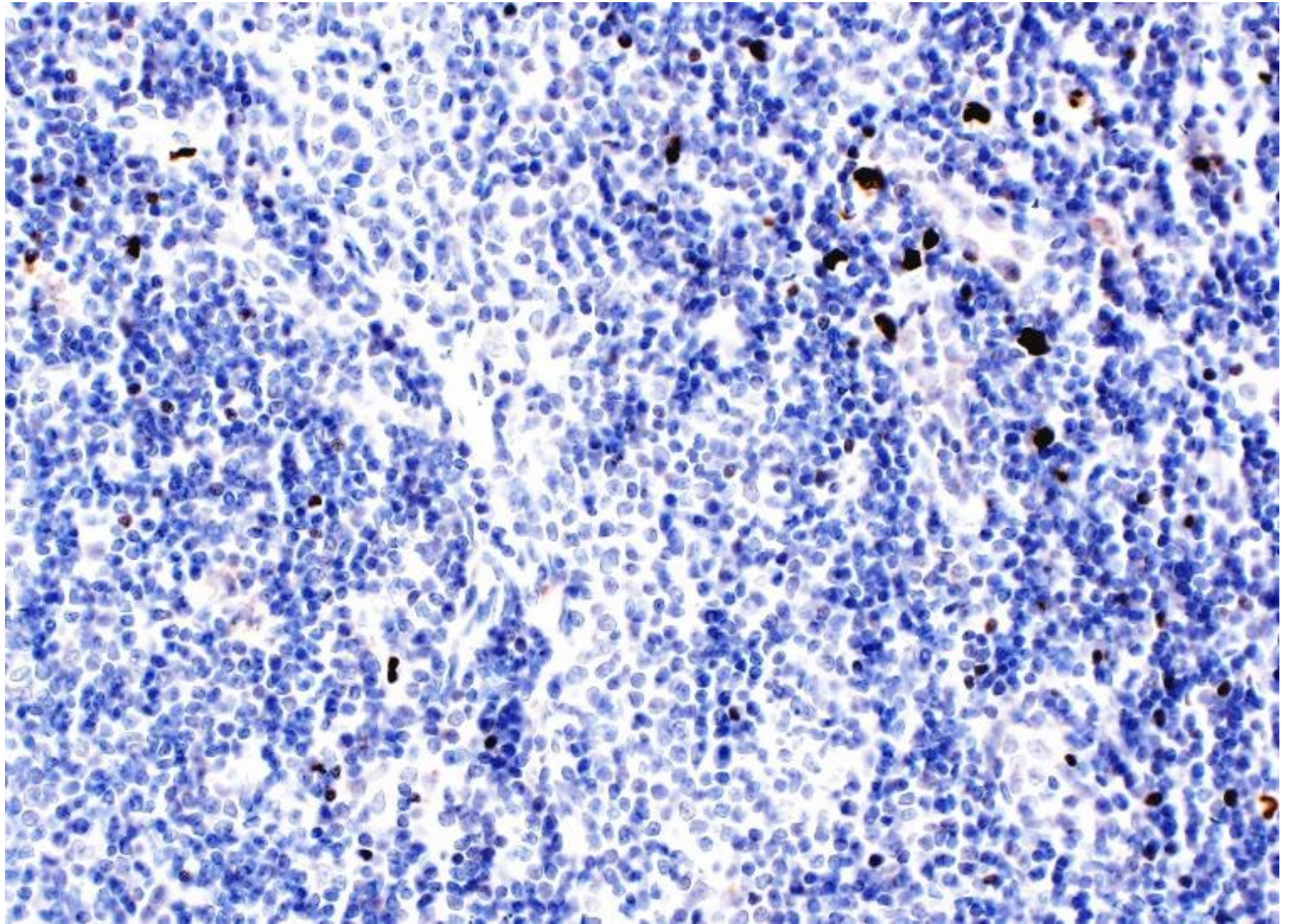
Cluster analysis



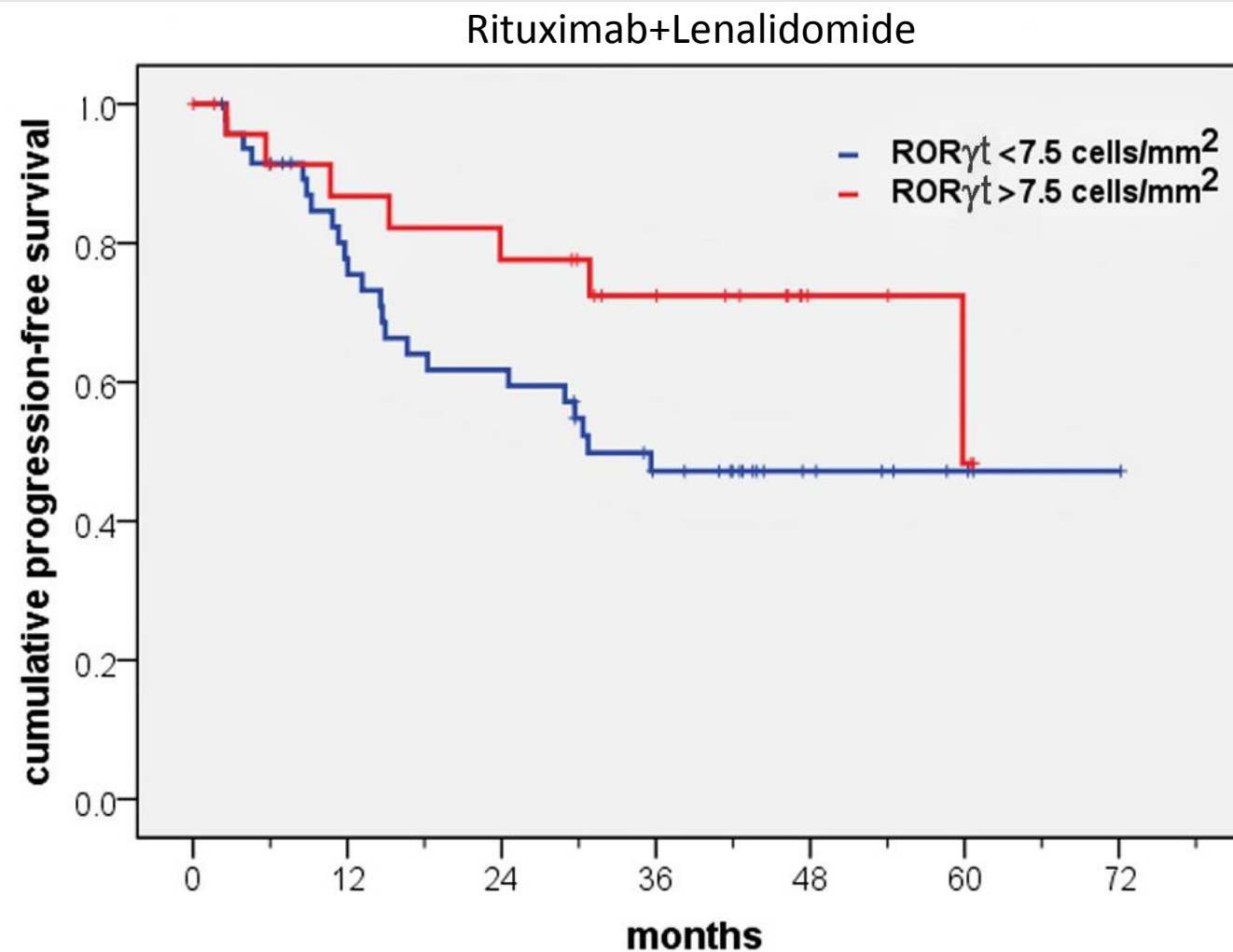
Progression-free survival analysis



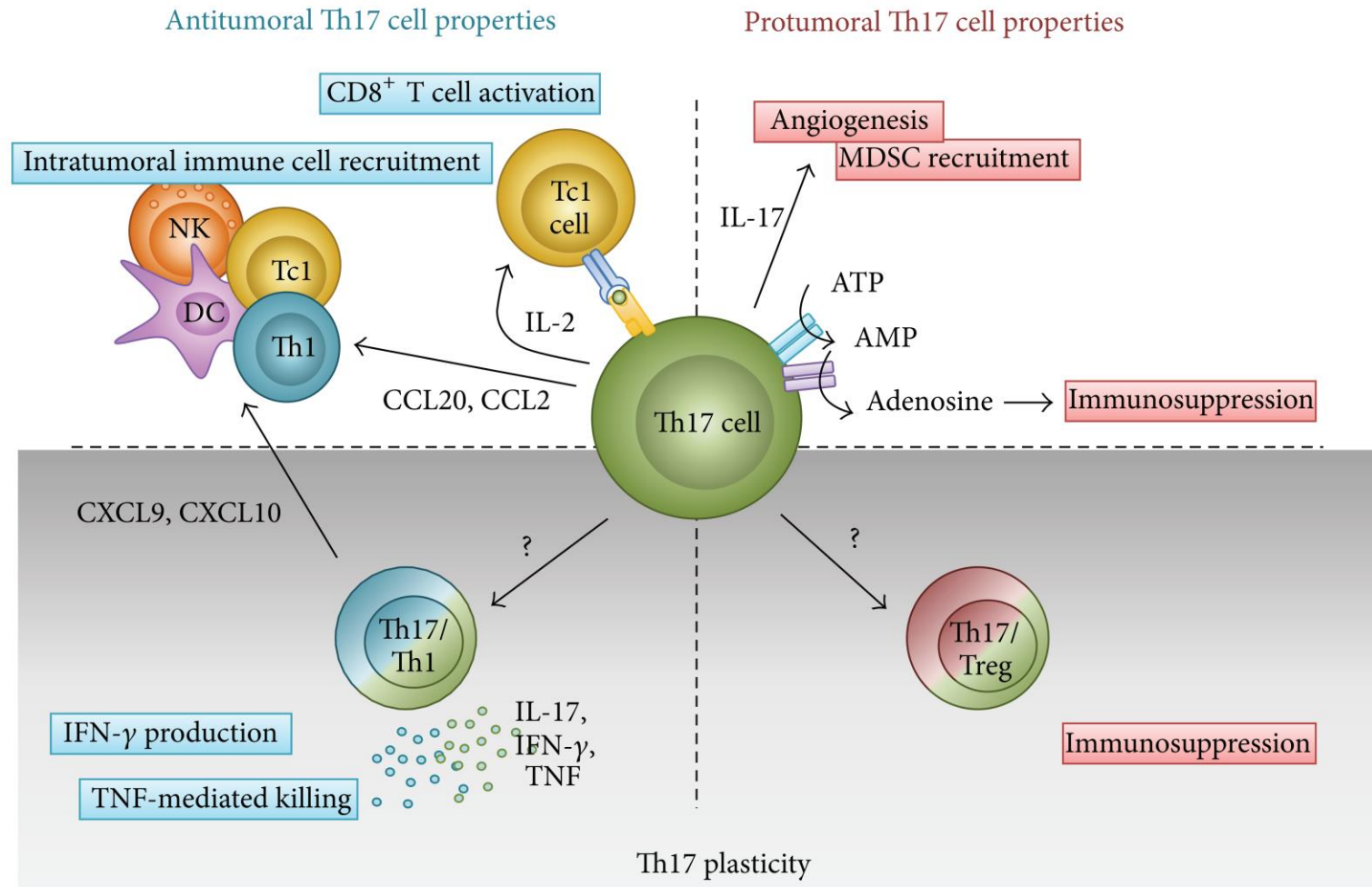
ROR γ t⁺
T-cells in
follicular
lymphoma



Progression-free survival analysis



Role(s) of Th17 cells



Conclusions

- Correlation between immunohistochemical analysis and gene expression profiling data
- Similar to the role of GATA3- and PD1-positive T-cells, the prognostic role of Th17 cells depends on the treatment given
- Potential mode of action: induction of Th17 cells and downregulation of regulatory T-cells by lenalidomide

The Power of Diagnostics

Pathology Basel

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