

Tertiary lymphoid structures in high-grade serous carcinoma

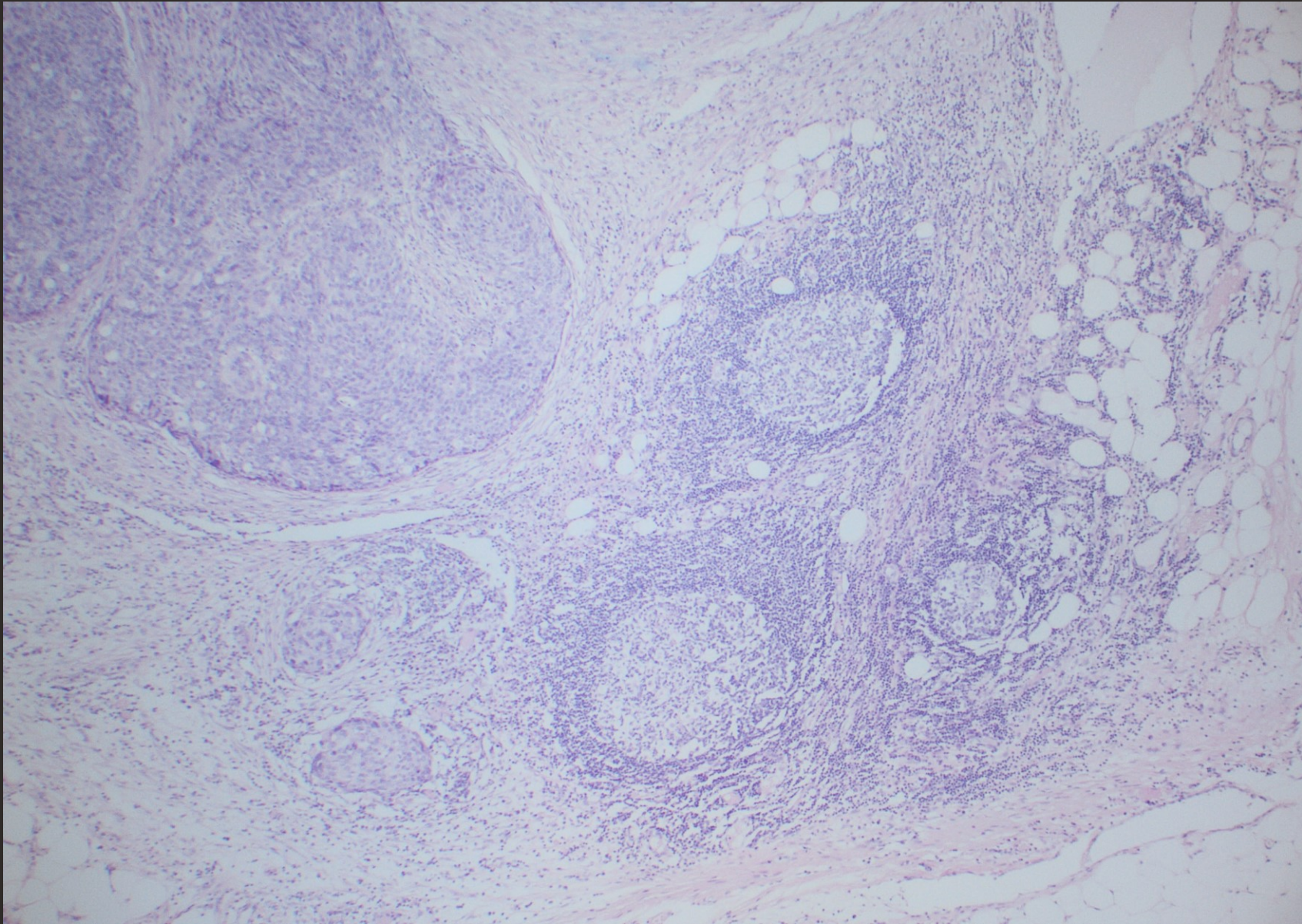
- anatomical site matters

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NSGO annual meeting nov 2024

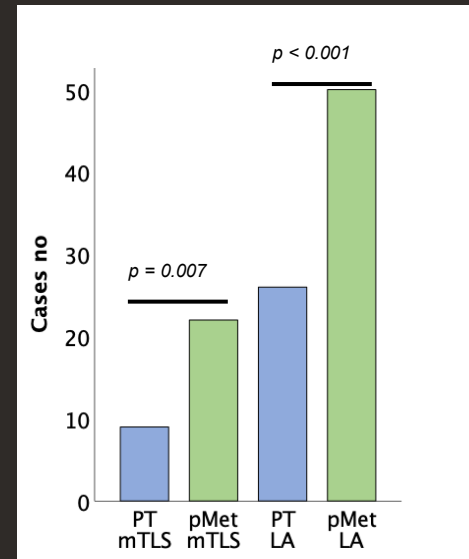
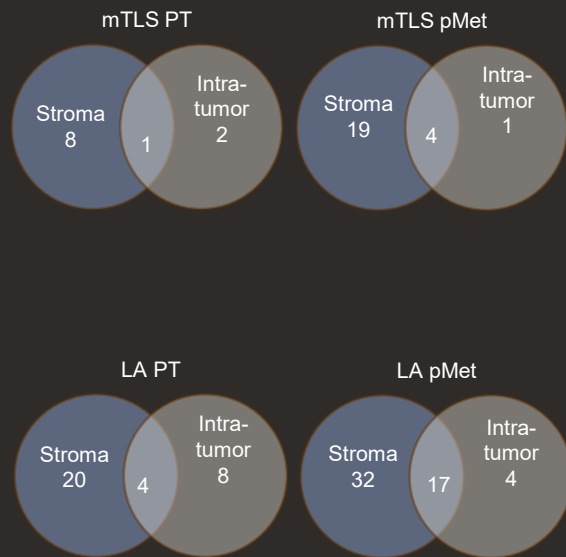
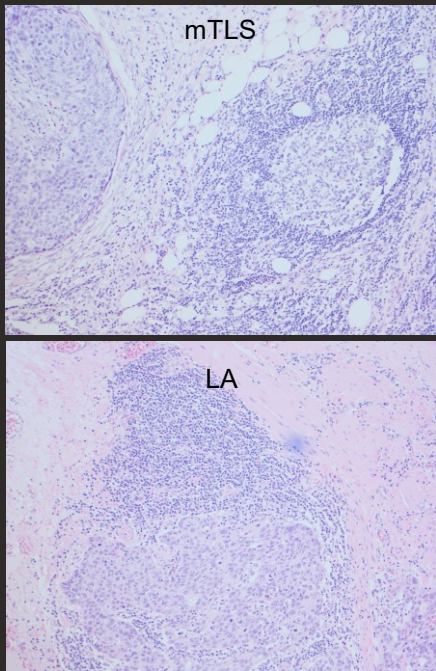


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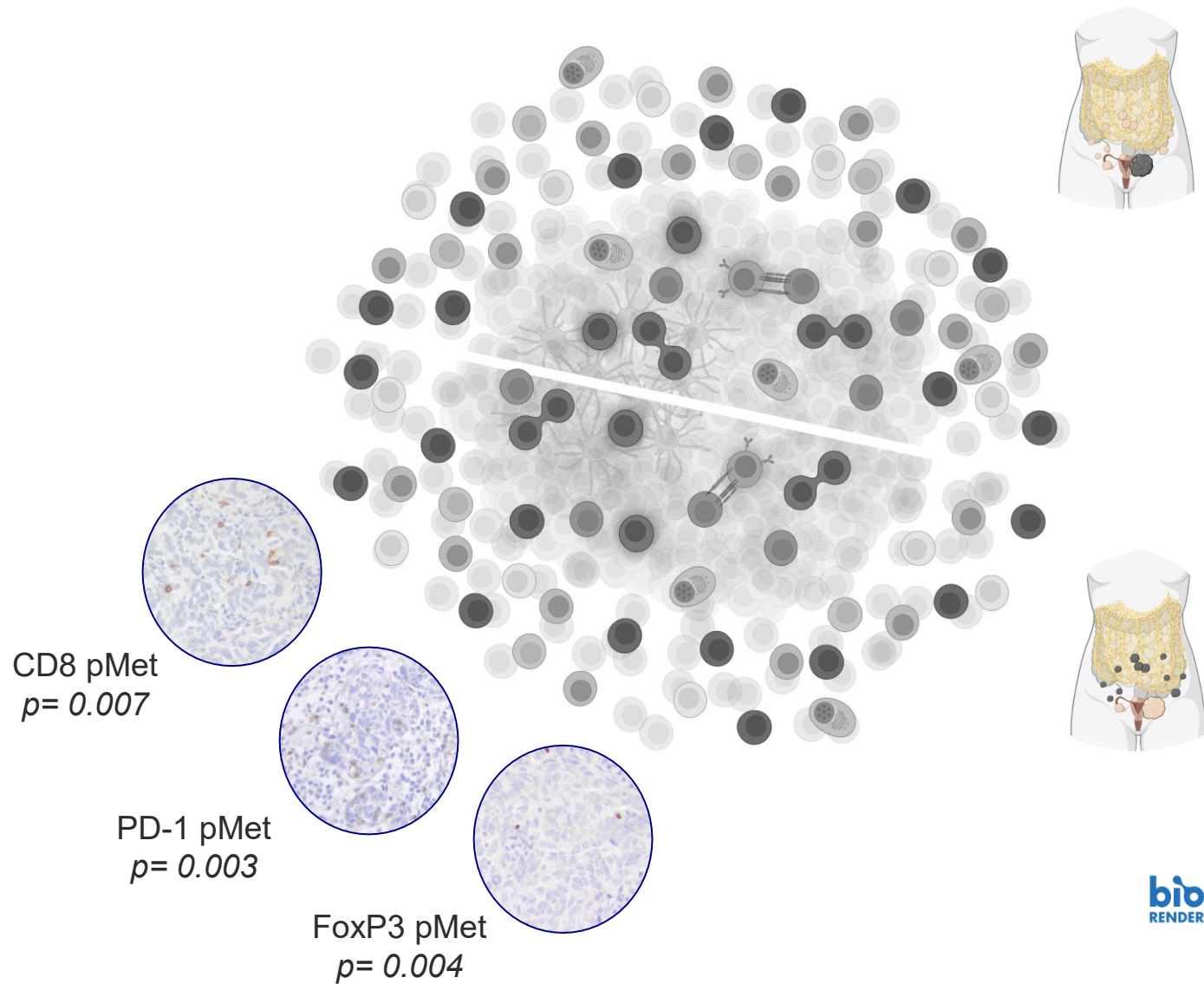


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mTLS and LA in advanced HGSC (n=130)

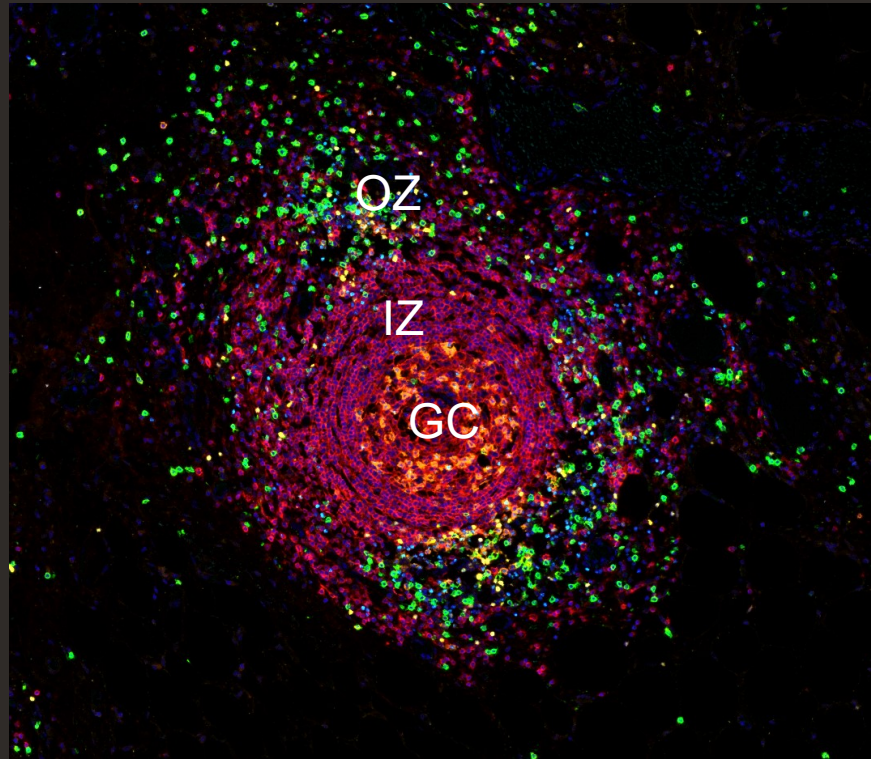


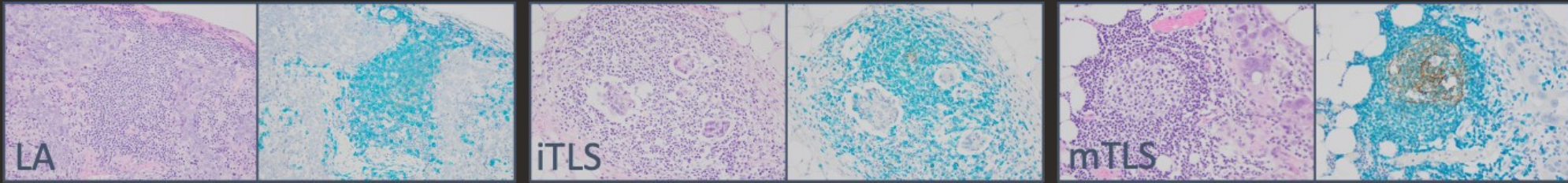
mTLS and/or LA
had no
independent
prognostic impact
on OS or PFS



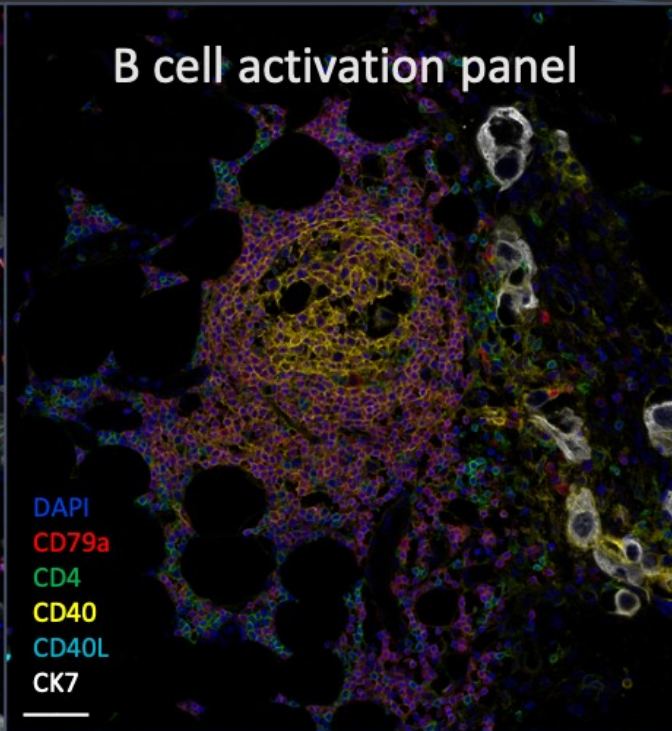
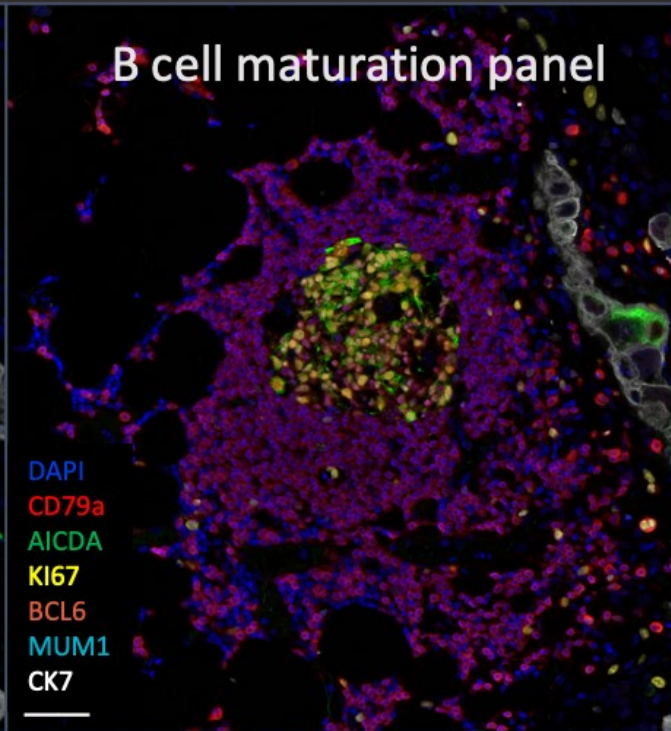
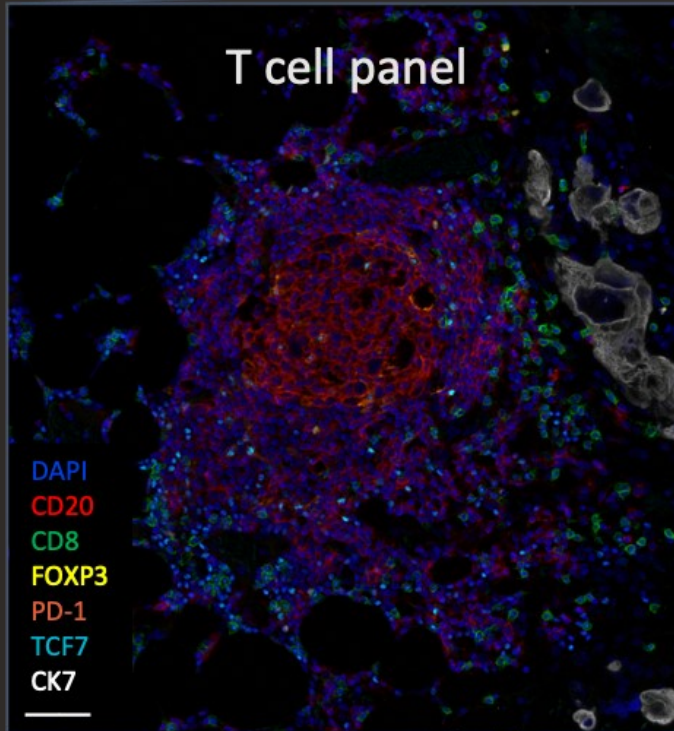
Mature TLS in pMets were associated with high intratumor CD8+, PD-1+ and FoxP3+ TILs

TLS composition

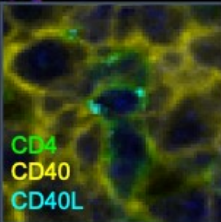
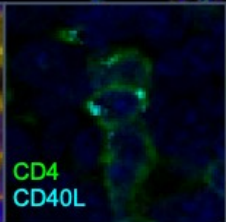
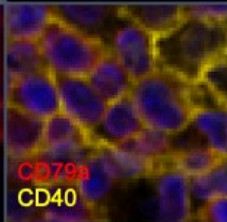
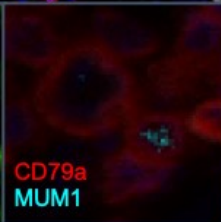
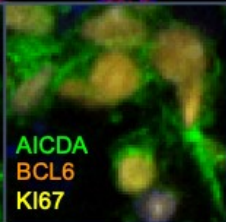
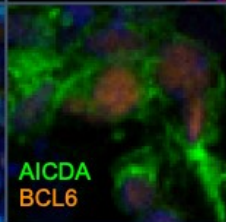
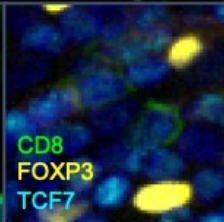
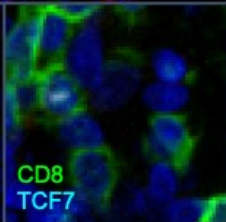
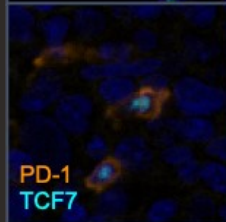




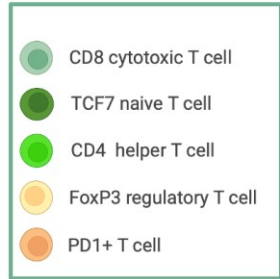
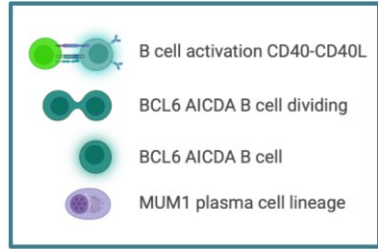
CD20
CD23



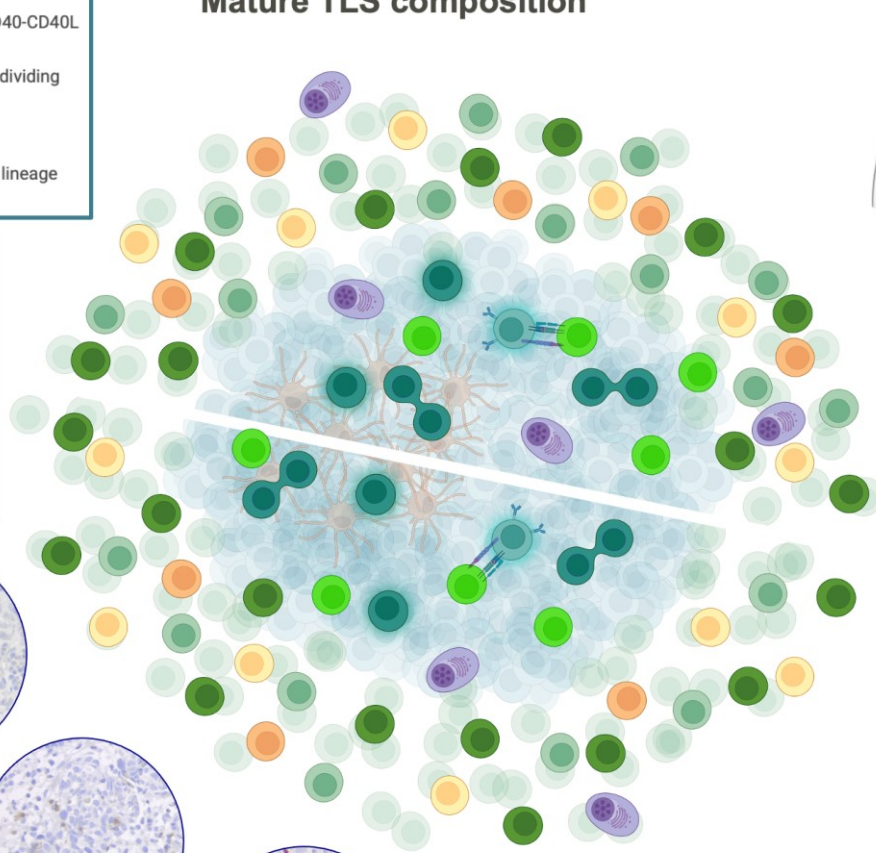
PT=11
pMet=10



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Mature TLS composition



CD8 pMet
 $p=0.007$

PD-1 pMet
 $p=0.003$

FoxP3 pMet
 $p=0.004$

bio
RENDER

mTLS, iTLS and LA compositions are similar in HGSC PT and pMet

Primary tumors had:

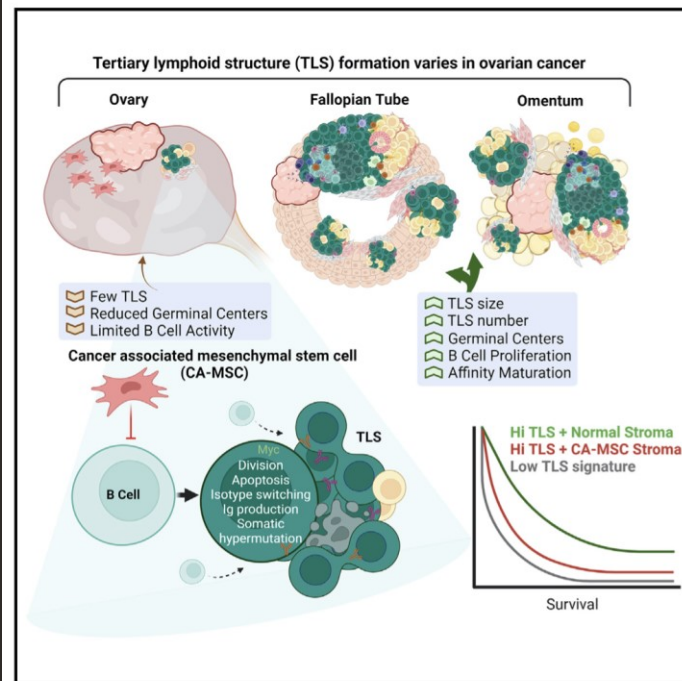
- Higher overall mTLS outer zone lymphocyte density ($p=0.0022$)
- Higher (?) CD8 and PD-1 densities in mTLS outer zone ($p=0.040$ and 0.029)
- More (?) FOXP3 interactions
- More (?) B cell activating interactions



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The activity of tertiary lymphoid structures in high grade serous ovarian cancer is governed by site, stroma, and cellular interactions

Graphical abstract



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In brief

Therapies that harness the immune response are lacking for ovarian cancer patients. MacFawn et al. utilize spatial transcriptomics to understand how tumor site, stroma, and cellular interactions govern the activity of tertiary lymphoid structures. These studies reveal how we may promote development of these prognostic structures to bolster adaptive antitumor immunity.

Tertiary lymphoid structures and B cells determine clinically relevant T cell phenotypes in ovarian cancer

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A list of authors and their affiliations appears at the end of the paper

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Chemotherapy induces myeloid-driven spatial T-cell exhaustion in ovarian cancer

Inga-Maria Launonen¹, Erdogan Pekcan Erkan¹, Iga Niemiec¹, Ada Junquera¹, María Hincapié-Otero¹, Daria Afenteva¹, Zhihan Liang¹, Matilda Salko¹, Angela Szabo¹, Fernando Perez-Villatoro¹, Matias M Falco¹, Yilin Li¹, Giulia Micoli¹, Ashwini Nagaraj¹, Ulla-Maija Haltia^{1,2}, Essi Kahelin^{1,3}, Jaana Oikkonen¹, Johanna Hynninen⁴, Anni Virtanen^{1,3}, Ajit J Nirmla⁵, Tuulia Vallius^{5,6}, Sampsa Hautaniemi¹, Peter Sorger⁵, Anna Vähärautio^{1,7}, Anniina Färkkilä^{1,2,8,9}

Affiliations + expand

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Conclusions

- TLS and LA were more common in HGSC pMets than PTs
- TLS in HGSC had no independent prognostic impact
- TLS in pMets were associated with CD8+, PD-1+ and FOXP3+ TIL
- TLS can have differences in T and B cell compositions and interactions depending on location
- Anatomical site must be considered when studying the HGSC microenvironment



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Immuno lab

Gynaecopathology team

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