

The image consists of two panels of fluorescence microscopy. The left panel shows a dense field of cells with blue nuclei, red and green cytoplasmic or membrane staining, and some larger red-stained cells. The right panel shows a similar field but with a prominent green-stained structure, possibly a vessel or duct, winding through the cell population. The overall background is dark, highlighting the fluorescent signals.

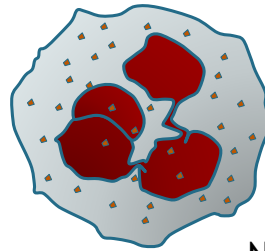
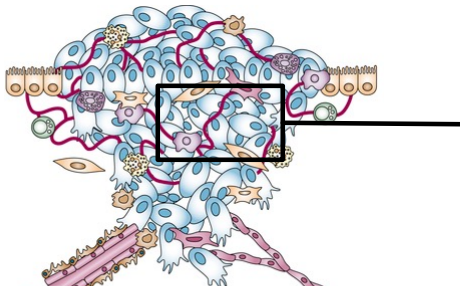
The CXCL5-mediated recruitment of
SiglecF^{high} neutrophil in lung tumor
tissue impair CD8 T cell response

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High plasticity of tumor associated neutrophils (TANs)



Neutrophil

Direct influence of TME:

- Promote proliferation of cancer cells
- ECM remodeling
- Angiogenesis
- Release of ROS

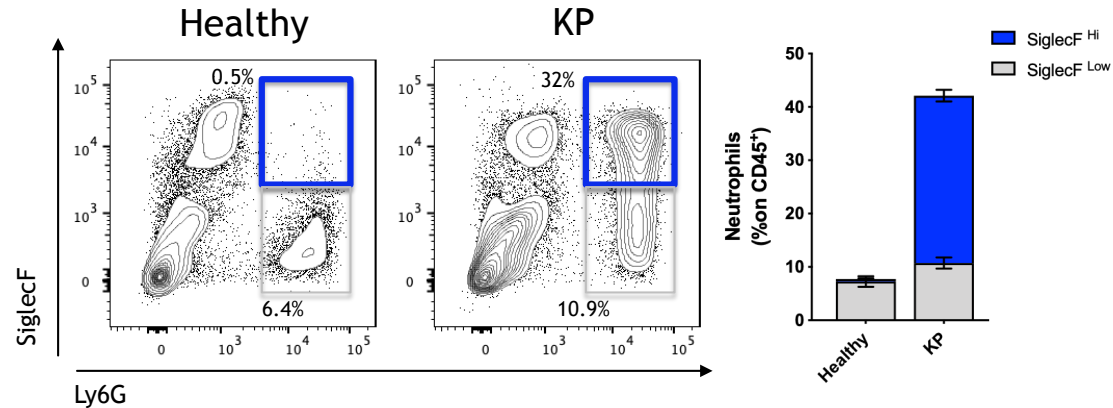
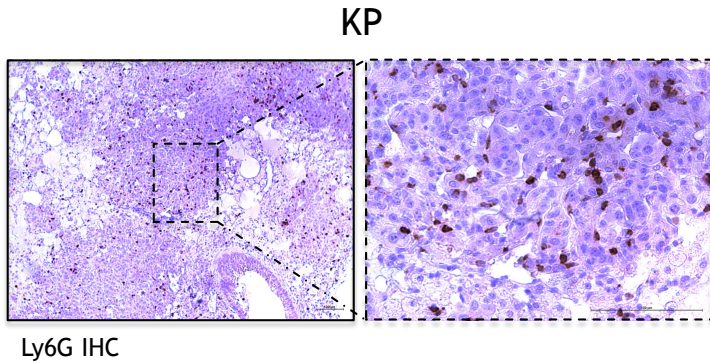
Indirect mechanisms of tumor progression:

- Alteration of leukocytes activation
- *T cell inhibition*

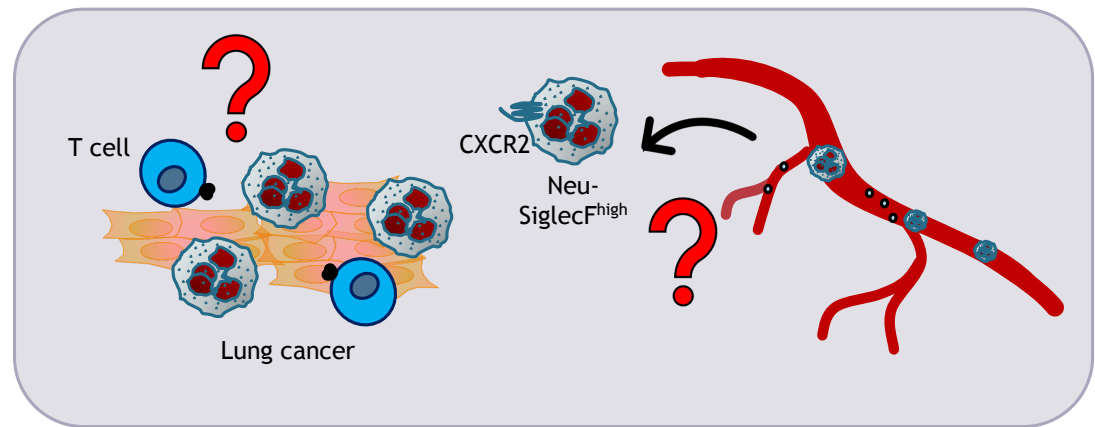
Tumor microenvironment
(TME)

High plasticity is dependent on the tumor type and the constellation of immune modulating factors

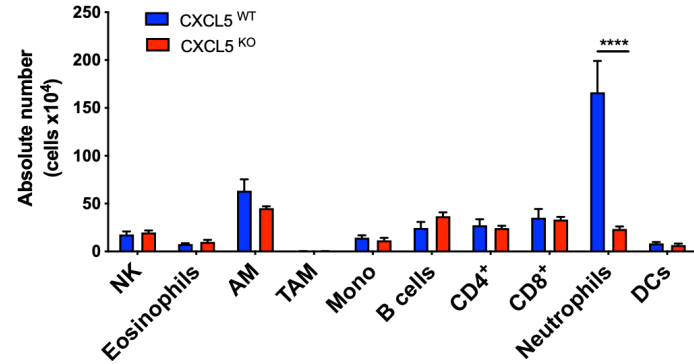
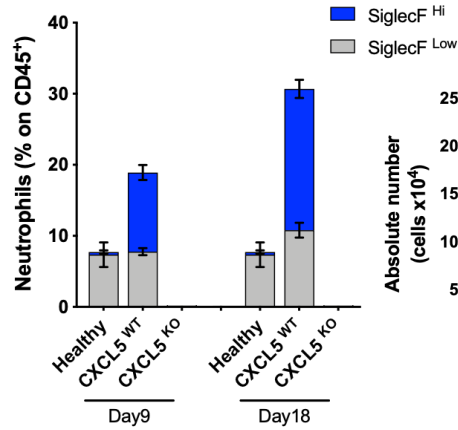
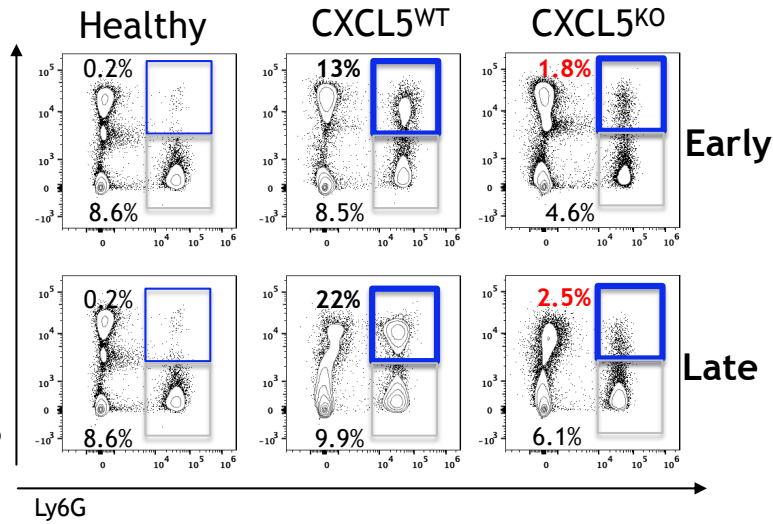
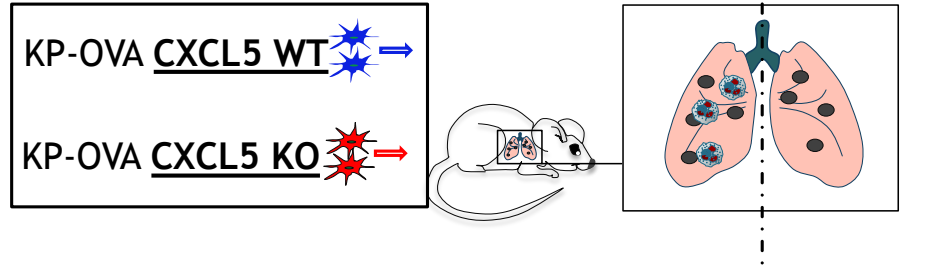
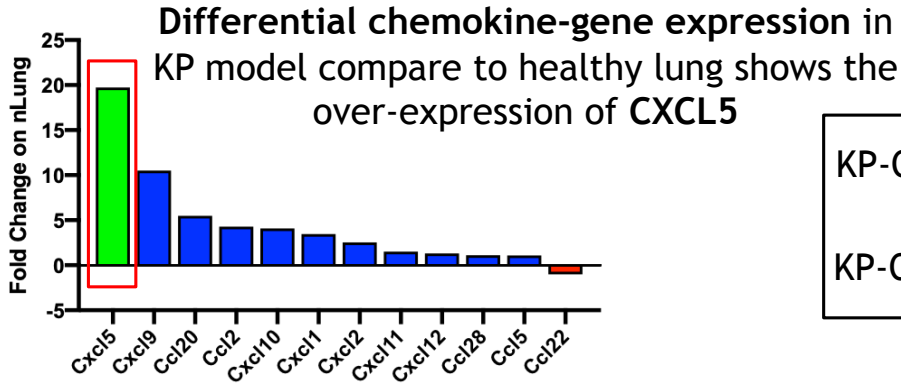
Lung adenocarcinoma (KP) is dominated by Neu-SiglecF^{high}



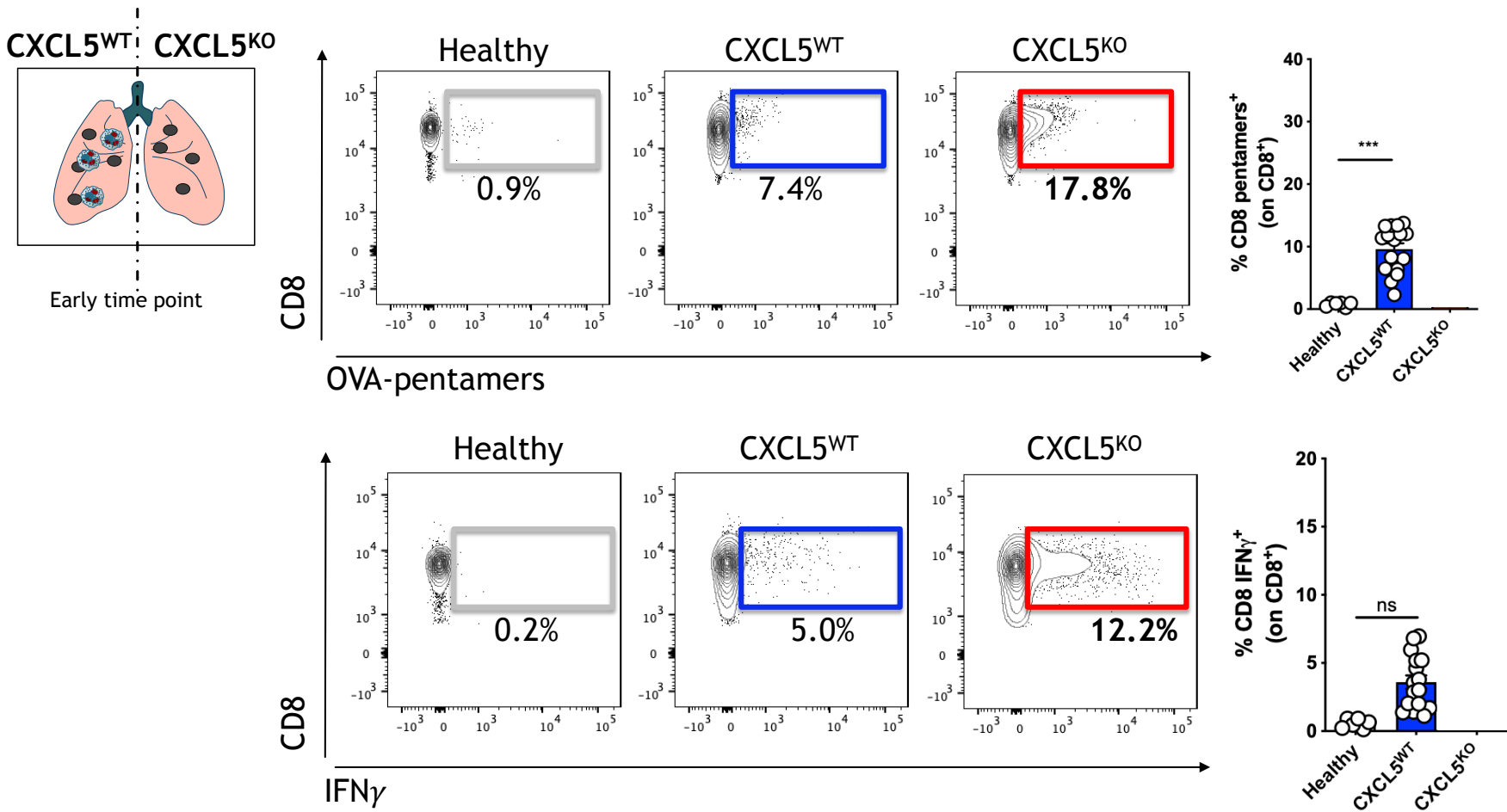
Neu-SiglecF^{high} are mature and long-lived cells



CXCL5 KO tumors do not accumulate Neu-SiglecF^{high}

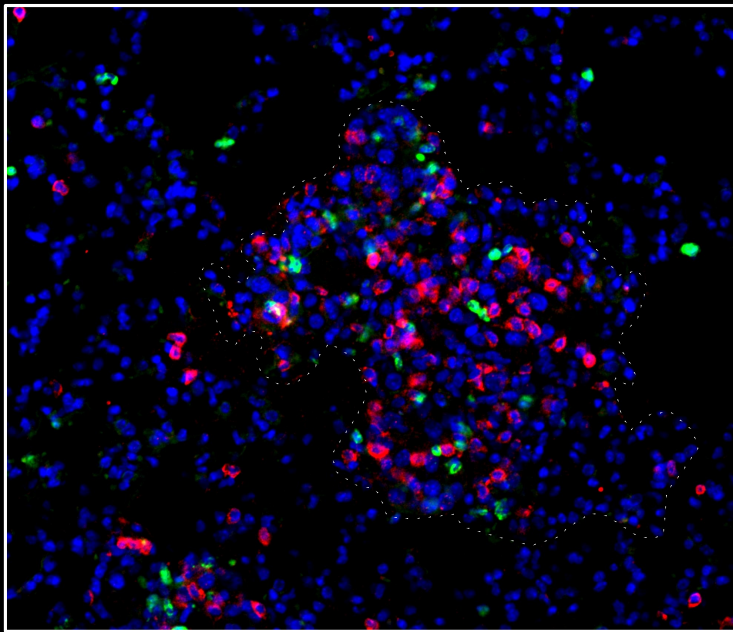


Enhanced tumor specific CD8 T cell response in CXCL5 KO tumors



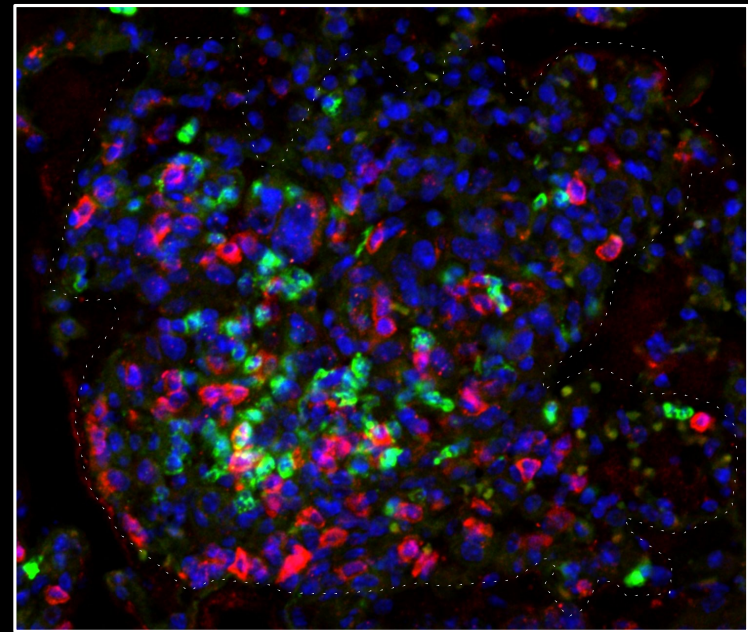
Contact-mediated mechanism of inhibition in the established nodule

Small nodule

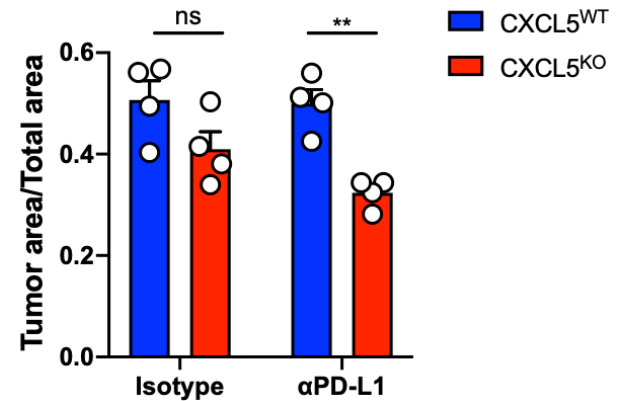
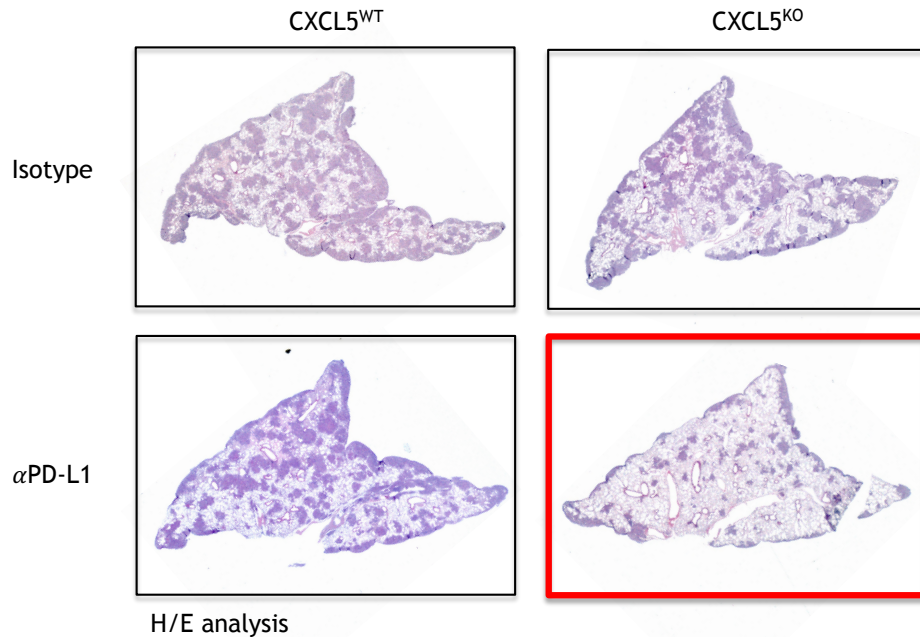
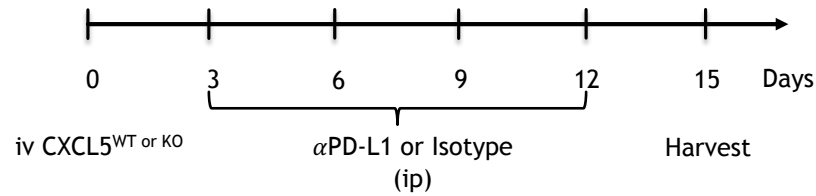


CD8 T cell - Neutrophil - nuclear staining

Large nodule



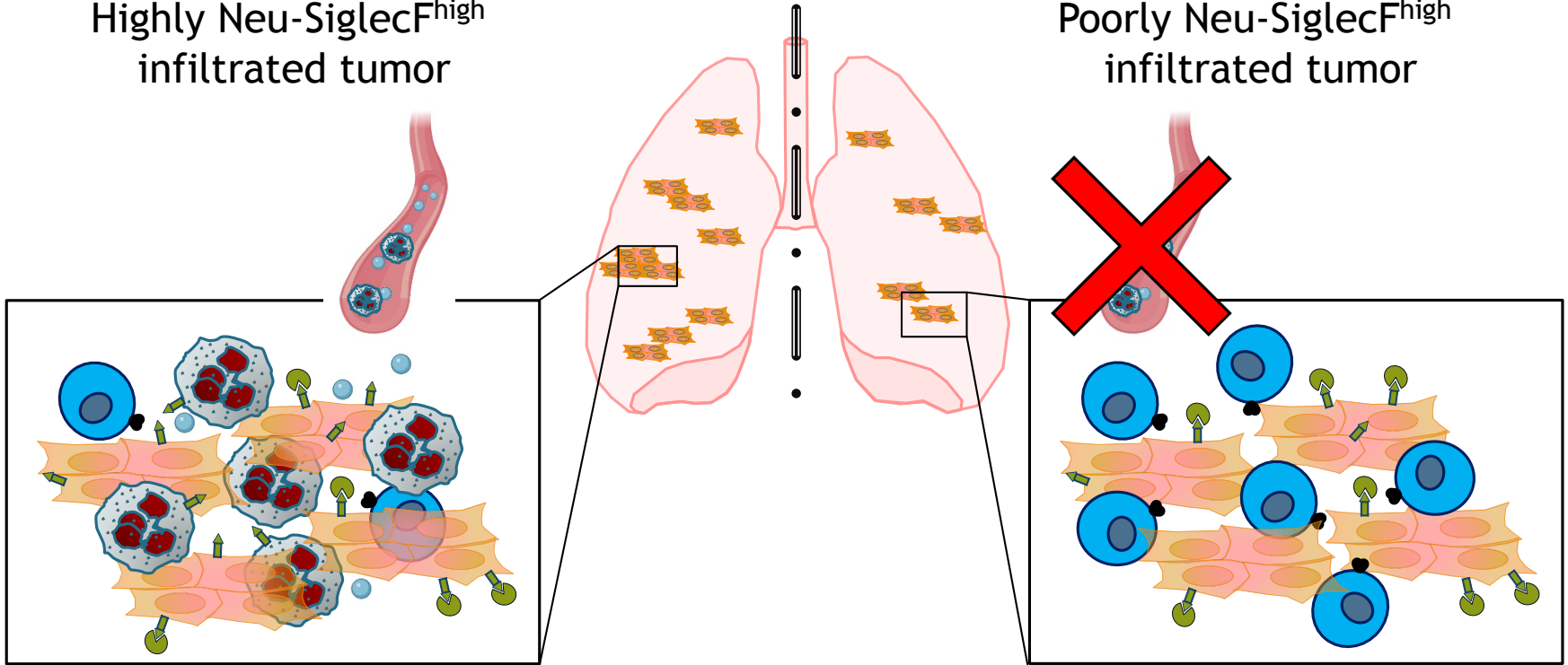
Neu-SiglecF^{high} hamper the full activity of PD-L1 treatment



Conclusions

Highly Neu-Siglec^{Fhigh}
infiltrated tumor

Poorly Neu-Siglec^{Fhigh}
infiltrated tumor



Tumor escape

Tumor control



Neu-Siglec^{Fhigh}



CXCL5



Cancer cell



CD8⁺ T cell



PD-L1 blockade



ICGEB

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Developing
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Cellular Immunology, ICGEB, Trieste

