



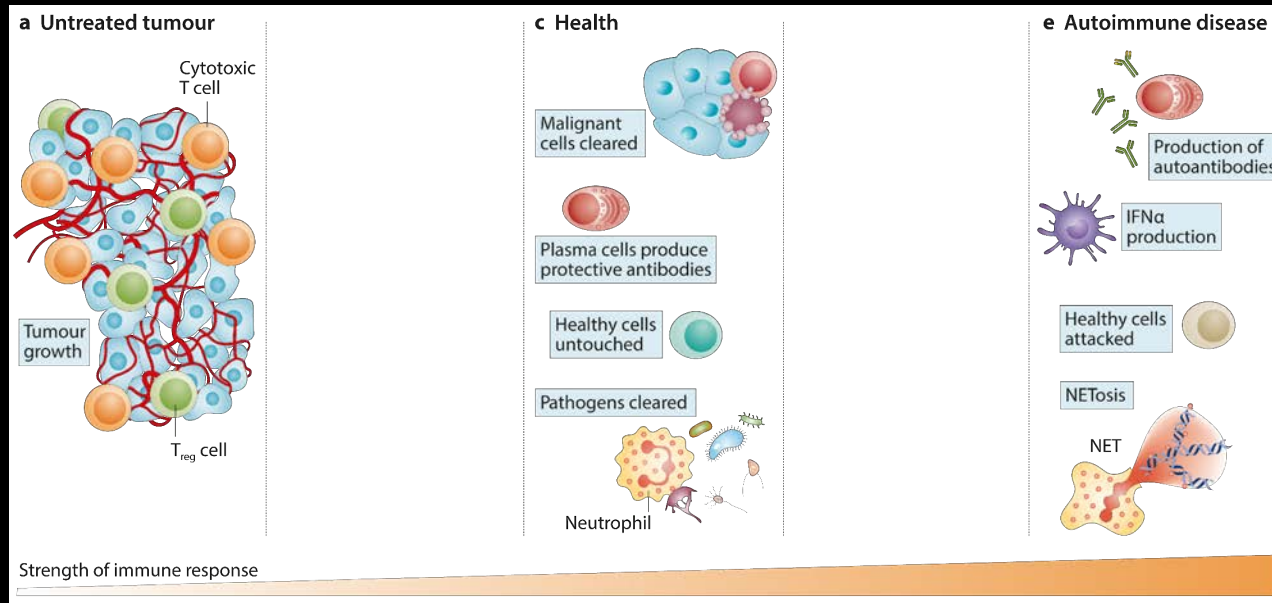
**Spatial analysis reveals distinct signatures in the
tissue landscape during inflammation-driven cancer
development**

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Center for Molecular Medicine

Inflammation and cancer: A balancing act



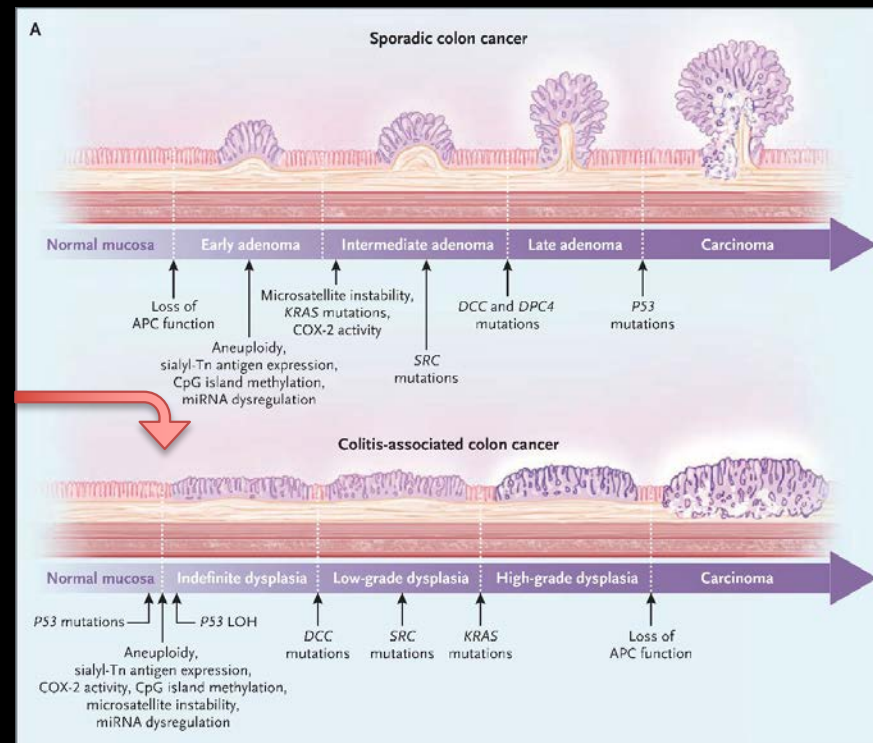
Chronic inflammation (IBD) increases risk of cancer development

How does chronic inflammation contribute to cancer?

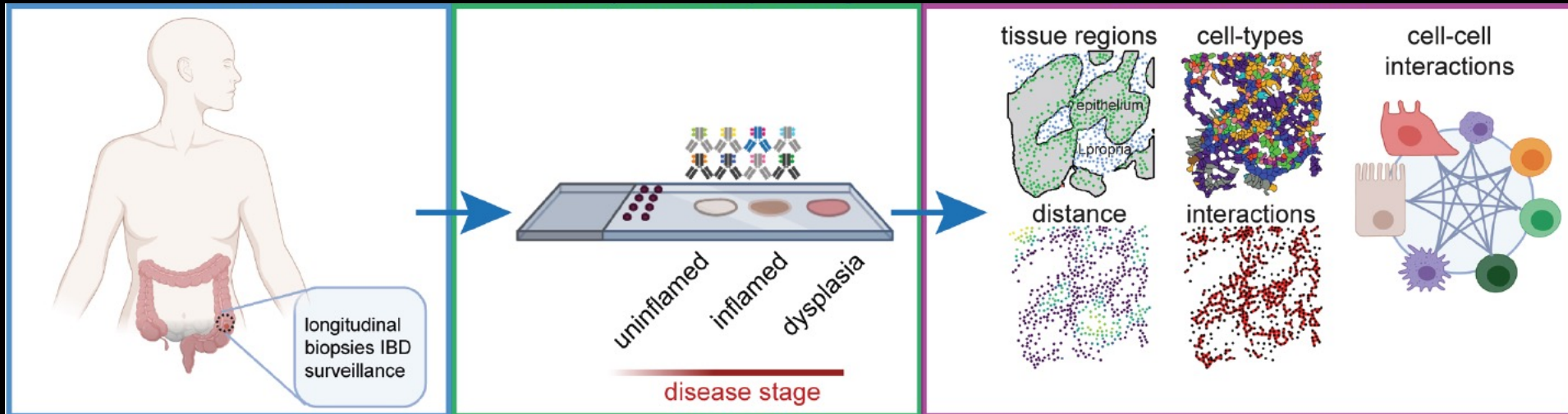


Colitis Associated Cancer is different from sporadic CRC

Inflammation

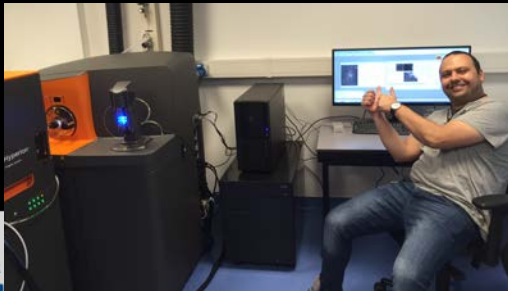


CAC development: Spatial tissue study workflow



HighPlex ab-labeling (35-40)
Proteins, subcellular(1 μ M²)

HighPlex probe-labeling (>3000)
RNA, ROI of >100 cells

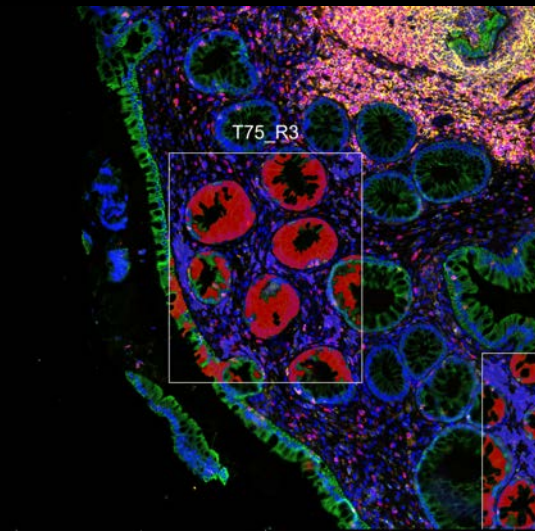
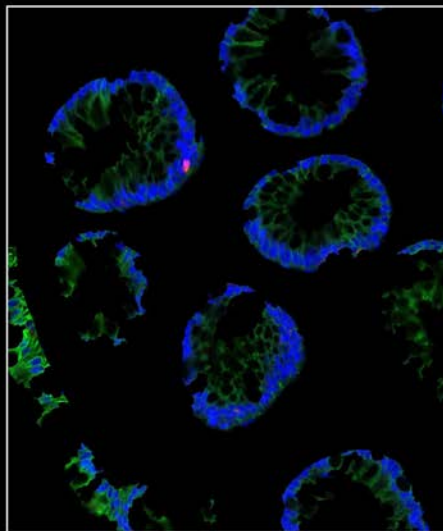
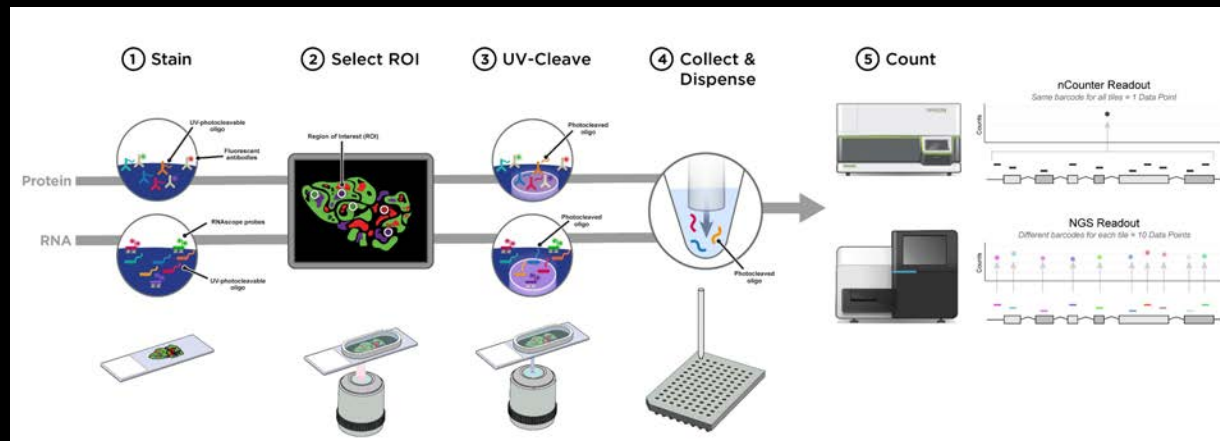


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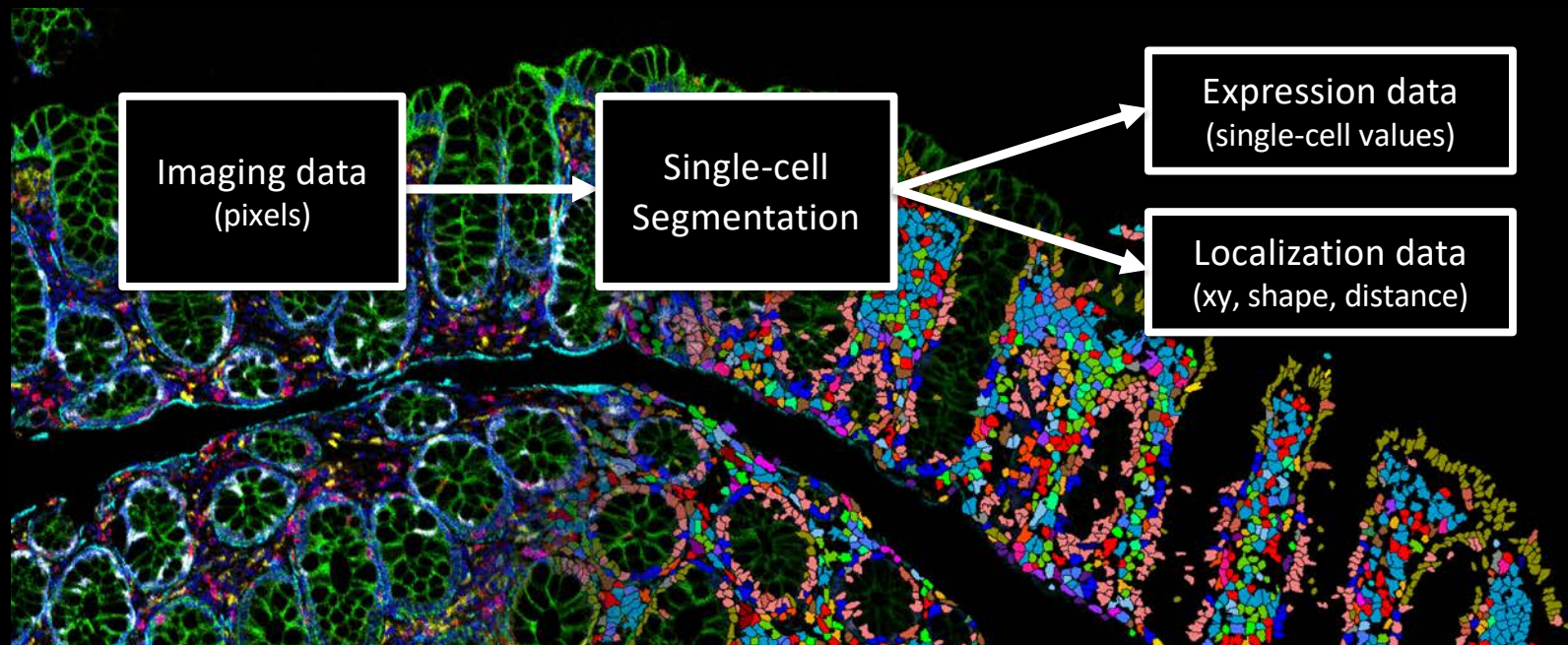
USEQ.nl

Epithelial compartment: untargeted approach (DSP)



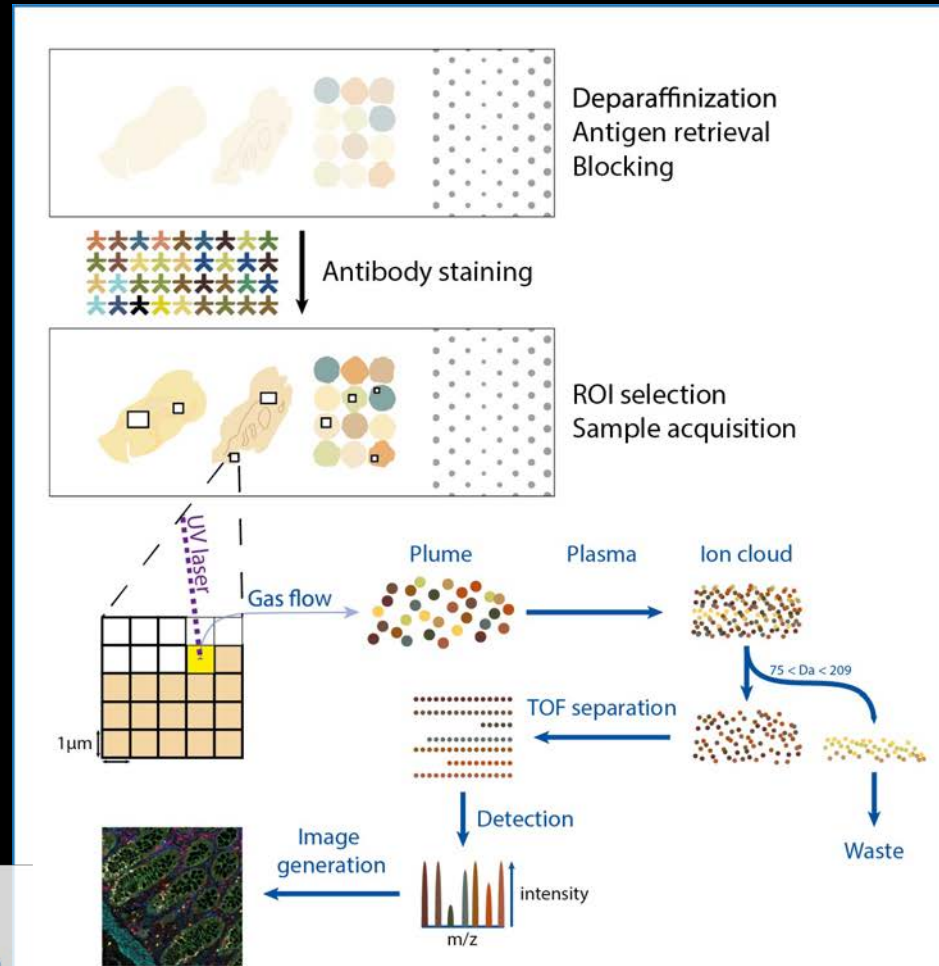
Neeraj Sinha
Matthijs Baars
Robin Geene
Ies Nijman

Single-cell-data depends on identification of cells

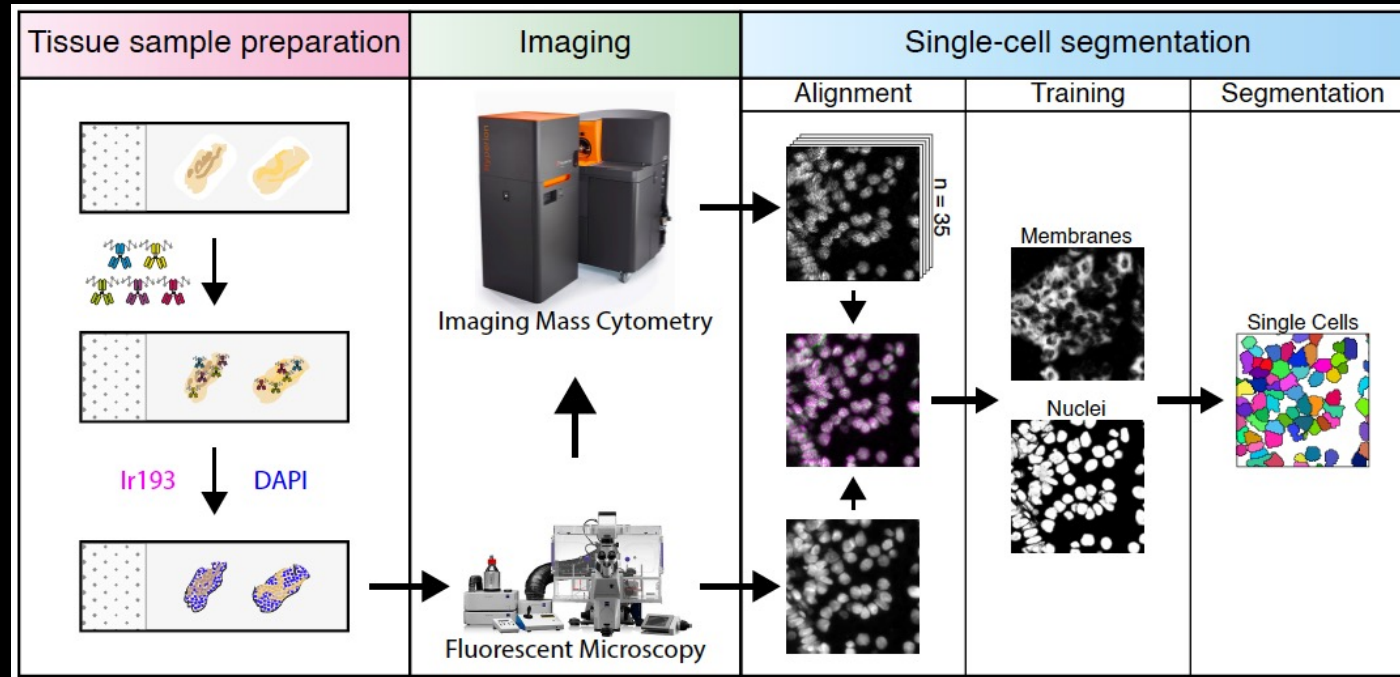


Matthijs Baars

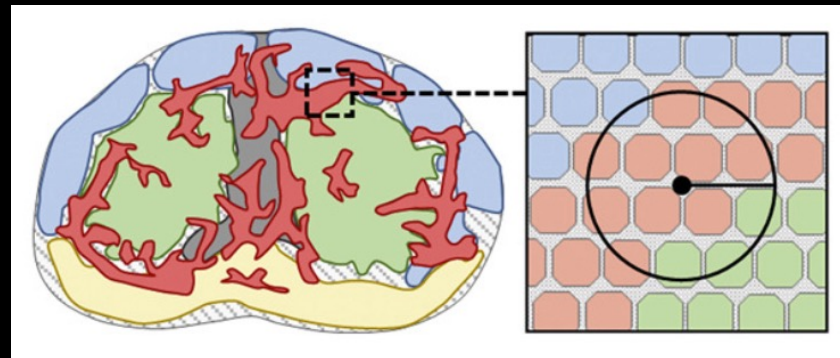
Targeted approach: Imaging Mass Cytometry



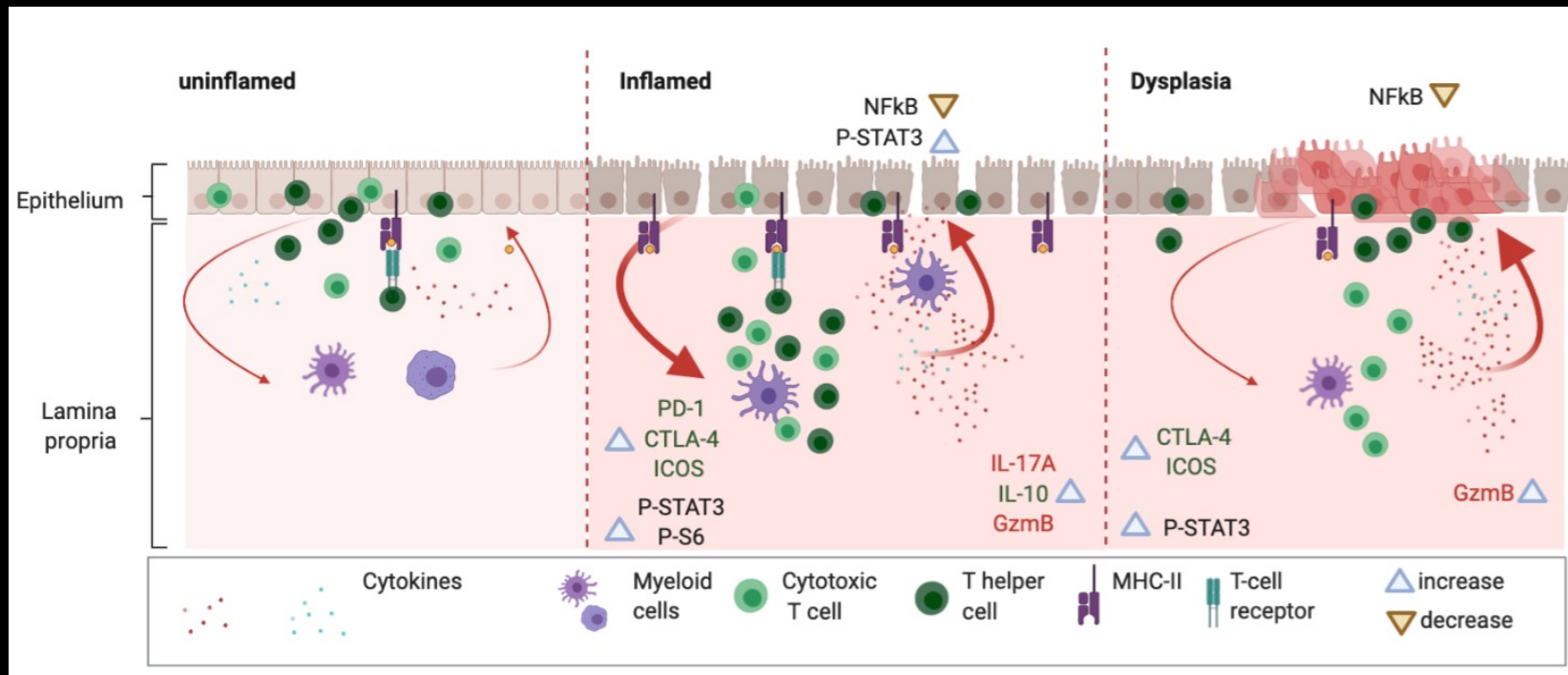
New Method MATISSE high-quality single cell segmentation: combine IMC & IF-microscopy



Location matters: Cell Neighborhood analysis



Reduced immune-epithelial interactions in dysplasia



Acknowledgements

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Dorotea Neuman

Iris Langerak

Annelies Pieterman

Maroussia Ganpat

IBD/Colitis associated cancer:

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José ter Linde

Bas Oldenburg

Johan Offerhaus

Miangela Laclé

Femke van Wijk

Julia Drylewicz

USEQ: Ies Nijman

Robin Geene

UCyTOF: Mojtaba Amini

UMCU

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Karijn Suijkerbuijk

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PMC

Jan Molenaar

Judith Wienke

NKI/AVL

Hugo Horlings/Marleen Kok

Daniela Thommen

TigaTx BV

CUCO SOS consortium

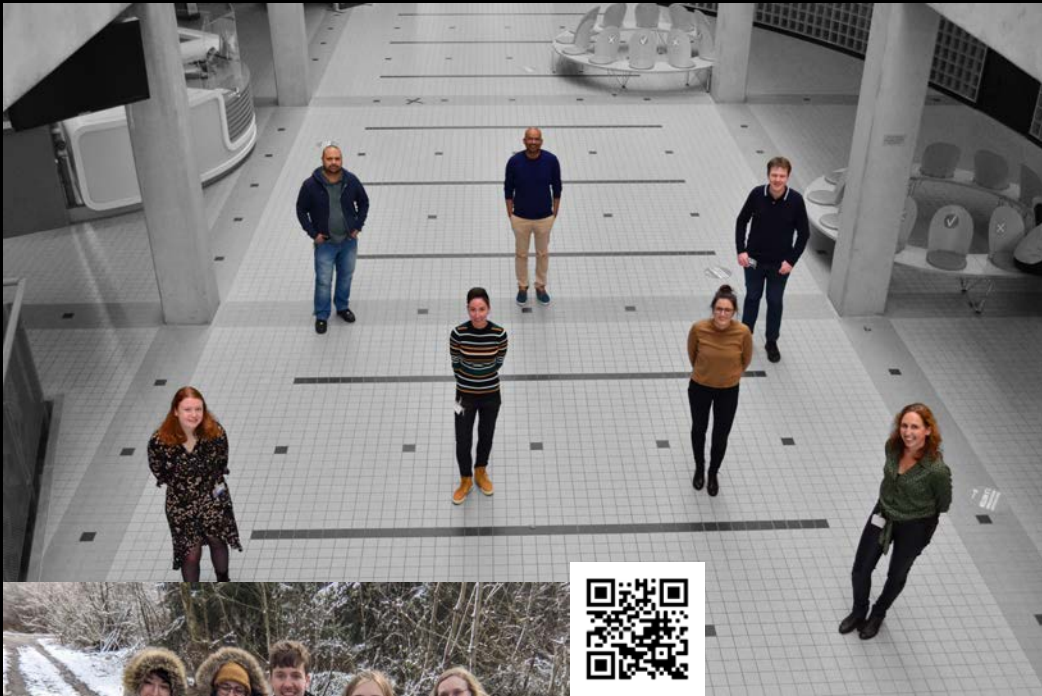


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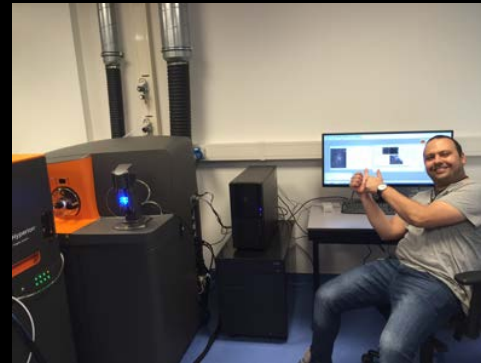
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