

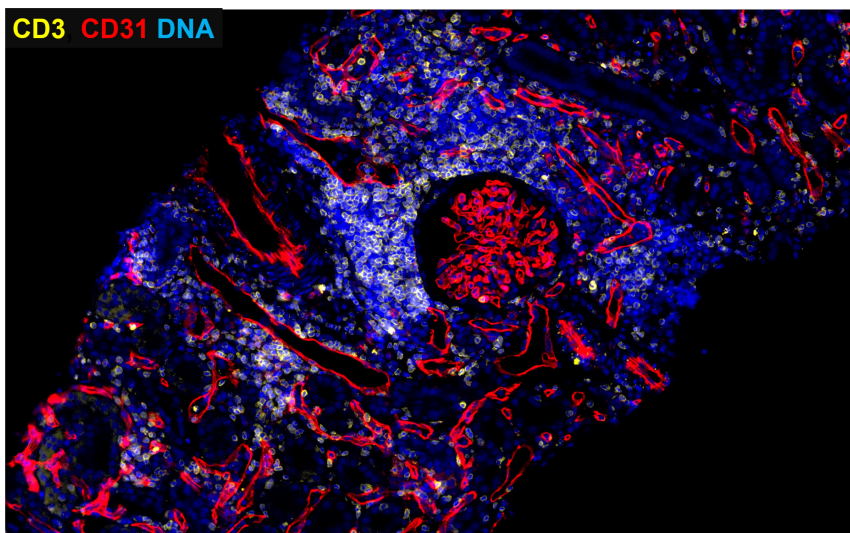
# Kidney Pediatric Renal Allograft

## Study Purpose

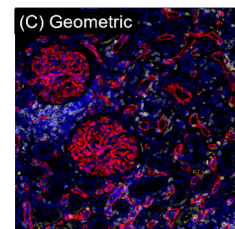
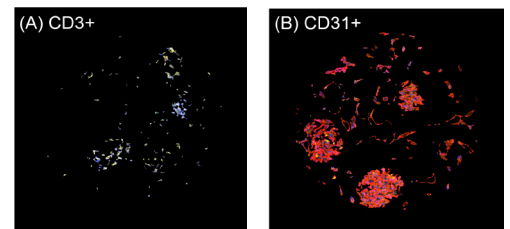
Endothelial cells are the primary targets of injury during antibody-mediated rejection in kidney transplantation. The mechanism related to the resident endothelium has not been well-studied. In this study, regions of immune-mediated endothelial injury and tubulointerstitial injury were profiled using the GeoMx Human Whole Transcriptome Atlas. Differential expression changes in these regions between a normal kidney transplant biopsy and kidney transplant rejection biopsy regions were explored.

## Study Summary

Sample Type	FFPE
Species	Human
AOI* Strategy	Geometric, Cell-type specific
Assay	Human Whole Transcriptome Atlas
Morphology Markers	CD3, CD31, DNA
Targets Detected	14,165 targets
Application	Biomarker discovery

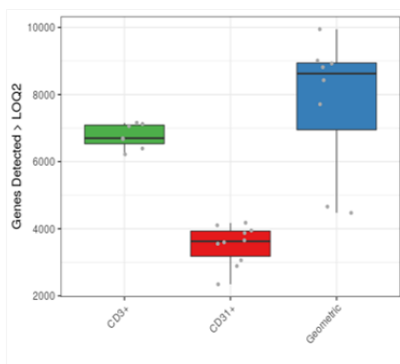


## Segmentation Strategy



### Legend

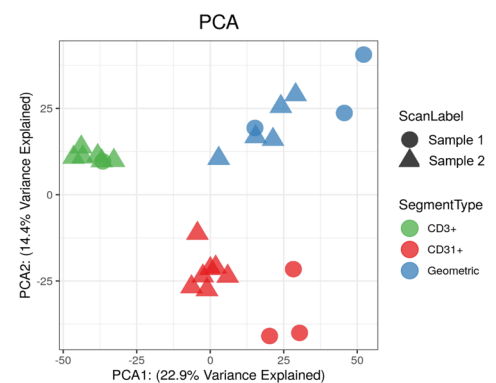
T cells (A) and endothelial cells (B) are enriched according to the CD3 and CD31 fluorescent staining. Representative geometric ROIs (C) were placed on the normal kidney transplant biopsy and kidney transplant rejection biopsy.



## Legend

Left:  
The number of targets detected above the background (LOQ2\*) by AOI groups.

Right:  
Principal component analysis (PCA) plot.



\*AOI = Area of Illumination; LOQ=Limit of Quantitation

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Reference: Melendez-Ferro M, Kelly DR, Seifert ME. [abstract]. Am J Transplant. 2022; 22 (suppl 3).

<https://atcmeetingabstracts.com/abstract/spatially-resolved-molecular-profiling-of-endothelial-cells-in-antibody-mediated-kidney-transplant-rejection/>

For more information, please visit

<https://nanosttring.com/geomx-morphology-markers/>

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