

TRBC1 AND TRBC2: A WELCOME ADDITION TO T-CELL ORIENTED DIAGNOSTIC FLOW CYTOMETRY PANELS?

Sjoerd Oude Alink¹, Fleur de Bie¹, Mariëlle Maas¹, Ellen J. van Gastel-Mol,¹ Anton W. Langerak^{1*}, Vincent H.J. van der Velden^{1*}

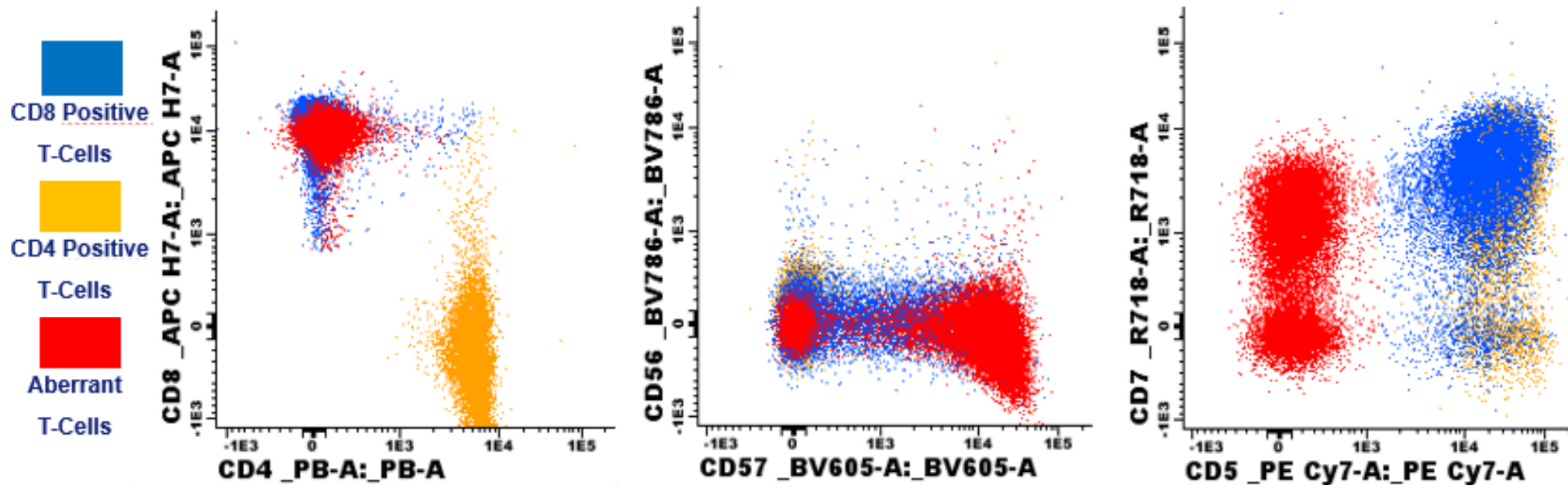
* Shared senior authorship.

¹Laboratory Medical Immunology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands

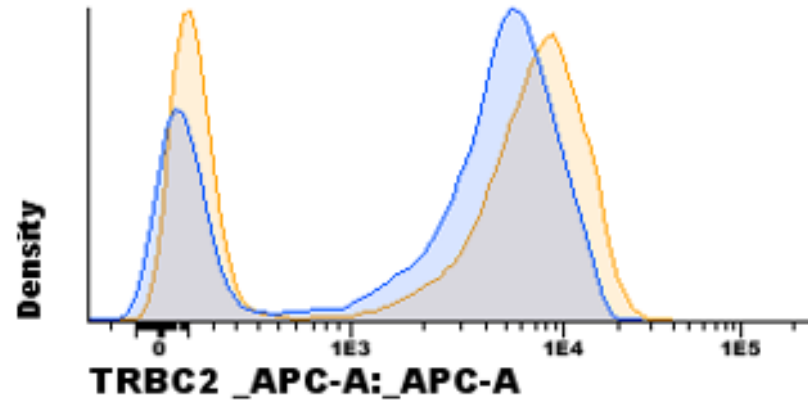
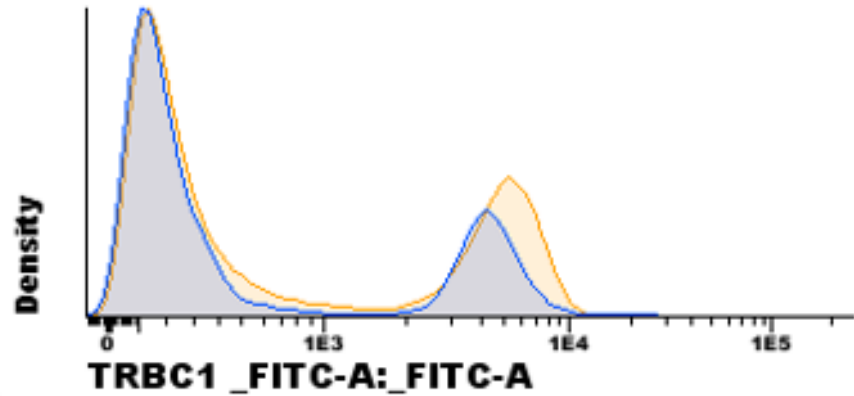
METHODS

FITC	PE	PerCP-Cy5.5	PE-Cy7	APC	APC-H7	PB	PO
TRBC1	CD2	CD3	TCRgd	CD7	CD8	CD4	CD45

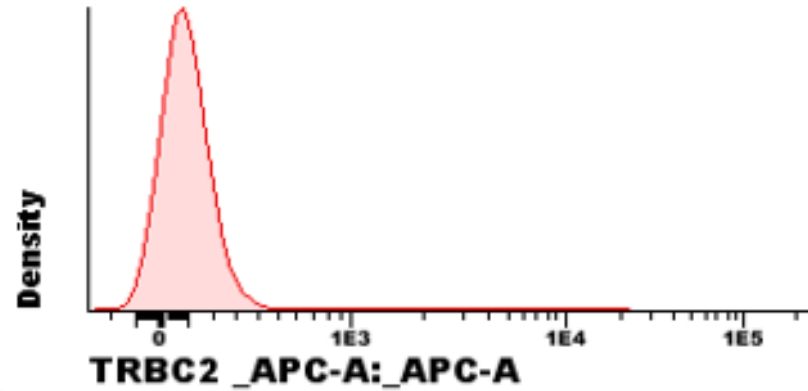
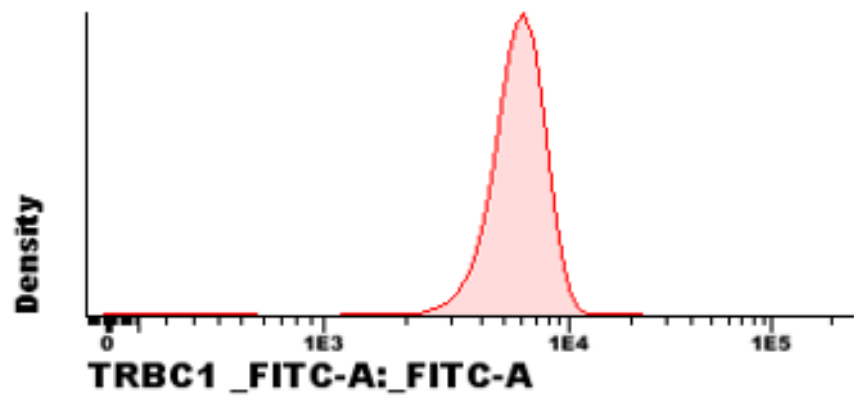
FITC	PE	PerCP-Cy5.5	PE-Cy7	APC	APC-H7	R718	PB	PO	BV605	BV711	BV786
TRBC1	CD2	CD3	CD5	TRBC2	CD8	CD7	CD4	CD45	CD57	TCRgd	CD56



METHODS



Normal T-Cells

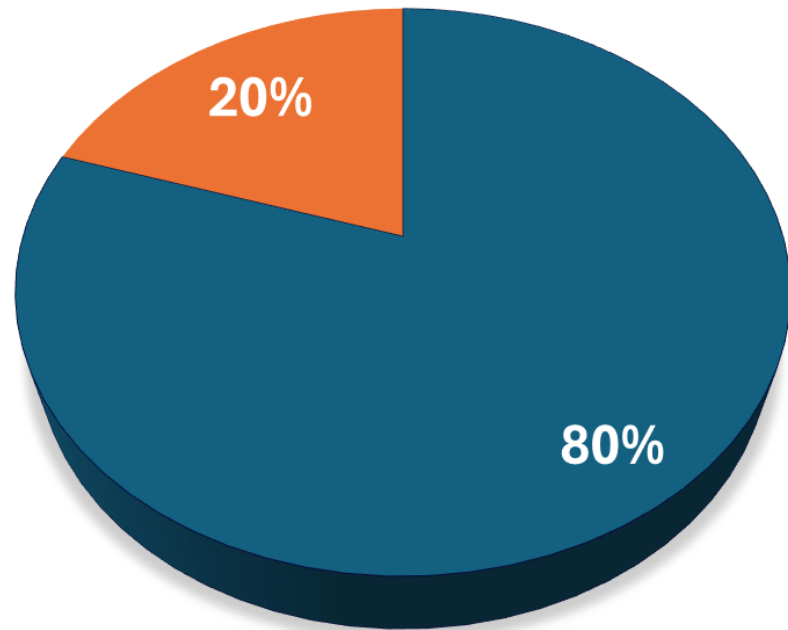


Aberrant T-Cells

RESULTS

Comparing flow cytometry data and molecular data

Added value of 12-color labeling



■ Concordance

■ Exceeded 8 color

- Specificity 100%
- Sensitivity 71%
- Positive Predictive Value 100%

DISCUSSION/CONCLUSIONS

- The upgrade from an 8 color T-cell assay to a 12 color assay has resulted in an increase in samples in which aberrant (clonal) T-cells could be detected.
- TR gene rearrangement analysis still proves to be of crucial significance for detecting clonal T-cells where flow cytometry would not.
- Notably, the exact clinical significance of small T-cell clones (with flow cytometry and on a molecular level) still remains to be determined.