European Crohn's and Colitis Organisation

Deep Immunophenotyping reveals a role for Mucosal Associated Invariant T (MAIT) cells in the response to anti-TNF treatment in Crohn's Disease

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Conflict of interest :

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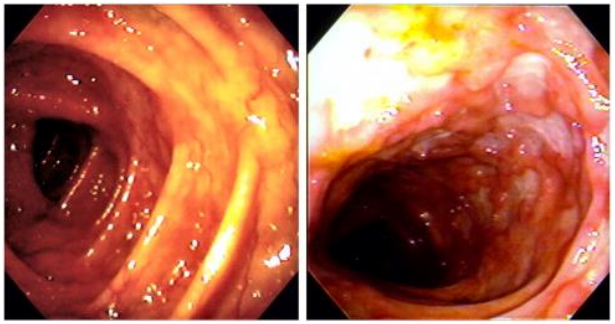
Aims

- Identify differences in immune cell subsets in Crohn's Disease
- Examine markers of response to anti-TNF



Methods

Patients with Crohn's commencing IFX/ADA recruited prospectively with age-matched controls

Patient demographics and clinical information collected

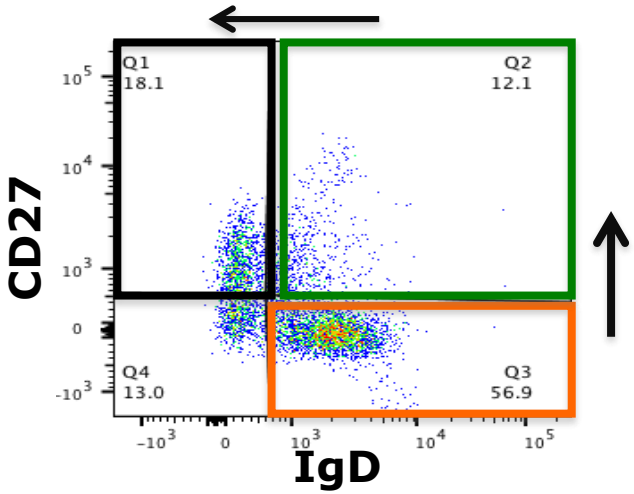
Bloods drawn at weeks 0, 2, 14

Whole blood multicolour flow cytometry analysis

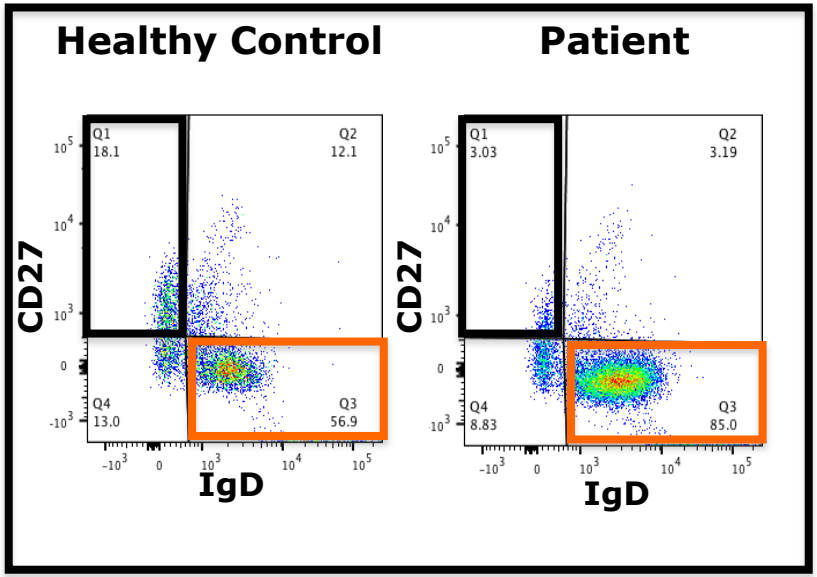
Results 1: Patient Demographics

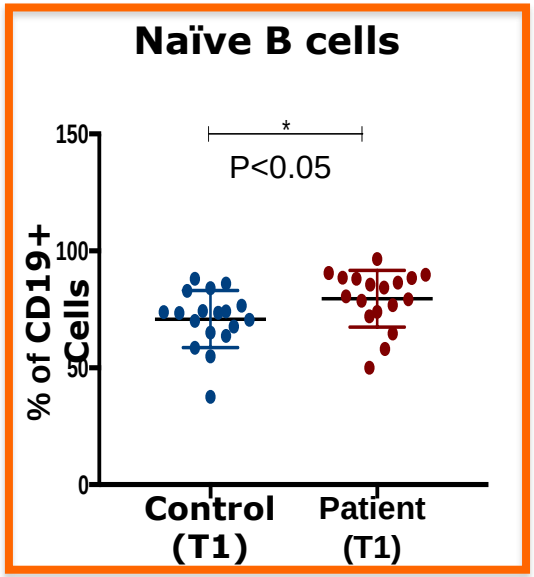
n=18	
Disease distribution: Ileal; n(%) Colonic; n(%) Ileocolonic; n(%) Isolated peri-anal disease; n(%)	 5(28%) 4(22%) 6(33%) 3(17%)
Gender; % male	12(67%)
Age; mean (range)	35years (19-66years)
Previous resection; n(%)	6(33%)
Smoker; n(%) Ex-smoker; n(%)	1(6%) 3(17%)
Infliximab; n(%), Adalimumab; n(%)	IFX; 2(11%), ADA;16(89%)
Immunomodulator; n(%)	7(39%)
Steroids at anti-TNF induction; n(%)	1(6%)
Response week 14	8 of 13 (62%)

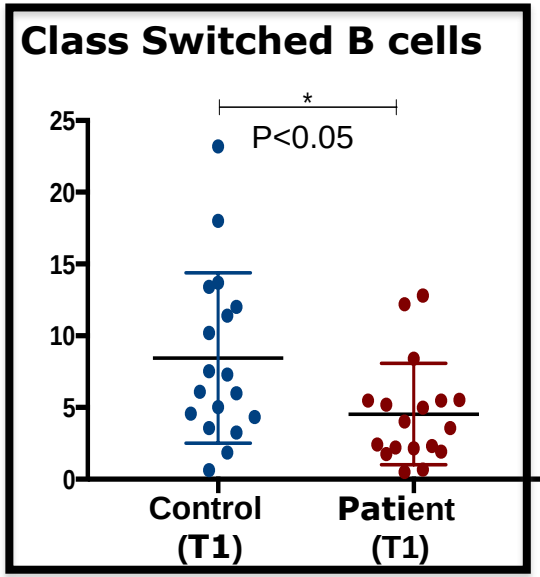
Results 2: Reduced Effector B cells



Antigen Naïve B cells → **Switched Memory** → **Class-switched Memory**

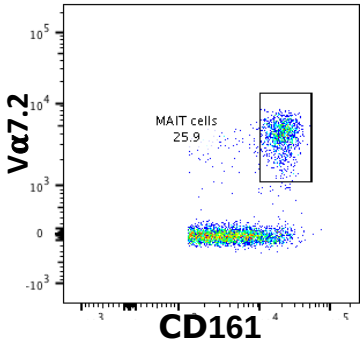




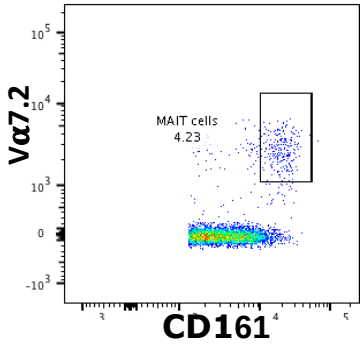


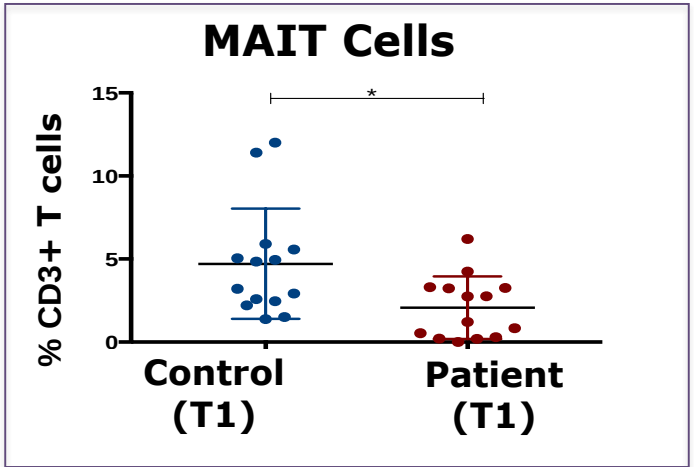
Results 3:Low Peripheral MAIT cells are Associated with Response to anti-TNF

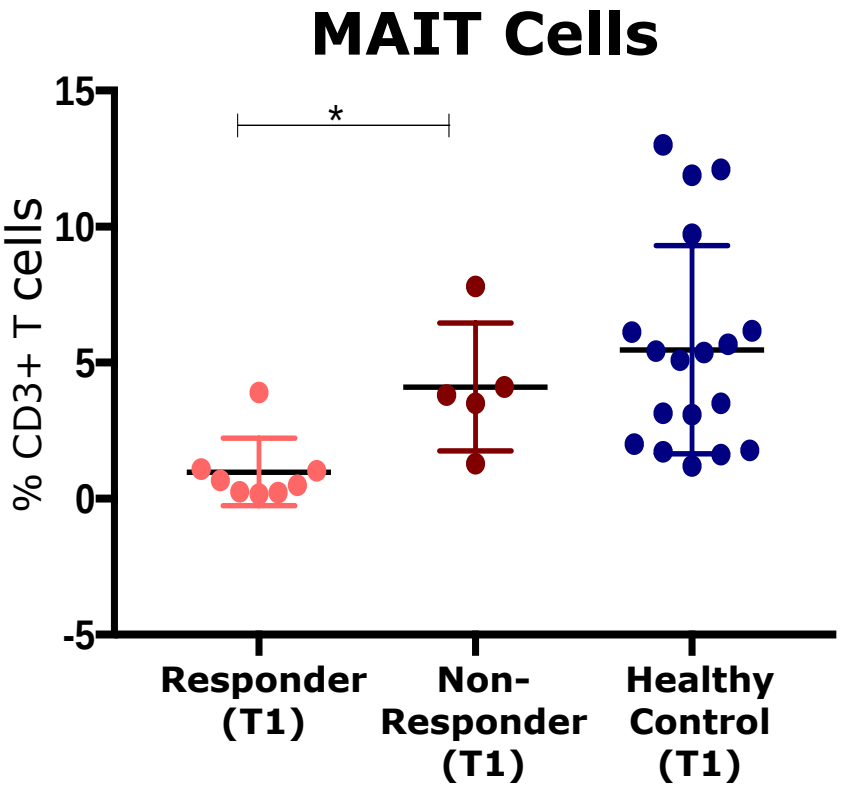
Healthy Control



Patient







Conclusion

- Reduced effector B cells
- Reduced MAIT cells
- Low MAIT cells are associated with anti-TNF response
- Immune-profiling may assist more targeted treatment

Thank you

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