

Supplement

# Whole Transcription Profile of Responders to Anti-TNF Drugs in Pediatric Inflammatory Bowel Disease

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Table S1. Characteristics of patients selected for RNAseq. .

Characteristic	Overall (n = 12)	Responders (n = 6)	Non-Responders (n = 6)	p Value
<b>Gender</b>				
Male, n (%)	8 (66.7%)	4 (66.7%)	4 (66.7%)	1
Female, n (%)	4 (33.3%)	2 (33.3%)	2 (33.3%)	
<b>Age (years)</b>				
At diagnosis, median (IQR, range)	10 (3.53, 0.7-13)	9.85 (2.38, 7.9-12)	10.2 (7.2, 0.7-13)	0.630
At start of treatment, median (IQR, range)	10.2 (3.1, 1.1-14.1)	9.9 (1.83, 7.9-12.8)	11.4 (6.25, 1.1-14.1)	0.956
<b>Type of IBD</b>				
CD, n (%)	9 (75%)	4 (66.7%)	5 (83.3%)	1
UC, n (%)	3 (25%)	2 (33.3%)	1 (16.7%)	
<b>Type of Anti-TNF</b>				
Infliximab, n (%)	8 (66.7%)	4 (66.7%)	4 (66.7%)	1
Adalimumab, n (%)	4 (33.3%)	2 (33.3%)	2 (33.3%)	
PCDAI at start of treatment, median (IQR, range)	27.5 (20, 7.5-52.5)	35 (21.25, 27.5-52.5)	15 (12.5, 7.5-30)	0.025**
PUCAI at start of treatment, median (IQR, range)	45 (40-60)*	50 (40-60)*	45*	-

<b>CRP at start of treatment, median (IQR, range)</b>	22.3 (25.1, 0.7-52.3)	28.8 (30.38, 0.7-52.3)	10.58 (19.15, 6.12-27.5)	0.121
<b>FC at start of treatment, median (IQR, range)</b>	1800 (2392, 225.1-3956)	2700 (1934.73, 225.1-3956)	1319 (1352, 288-1800)	0.075
<b>Concomitant immunomodulator at start of treatment</b>				
Azathioprine, <i>n</i> (%)	7 (58.3%)	4 (66.7%)	3 (50%)	
Methotrexate, <i>n</i> (%)	2 (16.7%)	2 (33.3%)	0	0.076
None, <i>n</i> (%)	3 (25%)	0	3 (50%)	

IBD, inflammatory bowel disease; CD, Crohn's disease; UC, ulcerative colitis; IQR, interquartile range; PCDAI, Pediatric Crohn's Disease Activity Index; PUCAI, Pediatric Ulcerative Colitis Activity Index; CRP, C-reactive protein; FC, fecal calprotectin. \* IQR not applicable. \*\* *p* value < 0.05.

**Table S2.** Top diseases and biofunctions of differentially expressed between responders and non-responders prior anti-TNF treatment initiation.

<b>Category</b>	<b>Process</b>	<b><i>p</i> value range</b>
Diseases and disorders	Developmental disorder	$1.96 \times 10^{-2} - 9.23 \times 10^{-15}$
	Hereditary disorder	$1.48 \times 10^{-2} - 9.23 \times 10^{-15}$
	Metabolic disease	$1.25 \times 10^{-2} - 9.23 \times 10^{-15}$
	Neurological disease	$1.96 \times 10^{-2} - 9.23 \times 10^{-15}$
	Ophthalmic disease	$5.27 \times 10^{-2} - 9.23 \times 10^{-15}$
Molecular and Cellular Function	Cell-to-cell signaling interaction	$1.96 \times 10^{-2} - 4.30 \times 10^{-6}$
	Cellular movement	$1.96 \times 10^{-2} - 4.22 \times 10^{-6}$
	Cell signaling	$1.93 \times 10^{-2} - 1.22 \times 10^{-6}$
	Cellular assembly and organization	$1.70 \times 10^{-2} - 5.04 \times 10^{-6}$
	Cellular growth and proliferation	$1.96 \times 10^{-2} - 5.41 \times 10^{-6}$
Physiological System development and function	Hematological system development and function	$1.96 \times 10^{-2} - 4.30 \times 10^{-9}$
	Immune cell trafficking	$1.96 \times 10^{-2} - 4.30 \times 10^{-9}$
	Lymphoid tissue structure and development	$1.93 \times 10^{-2} - 1.10 \times 10^{-5}$
	Cell-mediated immune response	$1.83 \times 10^{-2} - 2.52 \times 10^{-5}$
	Organismal functions	$6.58 \times 10^{-2} - 7.43 \times 10^{-5}$

**Table S3.** Top diseases and biofunctions of differentially expressed between responders and non-responders after two weeks of anti-TNF treatment initiation.

<b>Category</b>	<b>Process</b>	<b><i>p</i> value range</b>
Diseases and disorders	Inflammatory response	$1.30 \times 10^{-2} - 5.74 \times 10^{-23}$
	Organismal injury and abnormalities	$1.30 \times 10^{-2} - 5.21 \times 10^{-6}$
	Dermatological diseases and conditions	$8.55 \times 10^{-3} - 5.86 \times 10^{-6}$
	Connective tissue disorders	$1.30 \times 10^{-2} - 1.40 \times 10^{-5}$
	Inflammatory disease	$1.30 \times 10^{-2} - 1.40 \times 10^{-5}$
Molecular and Cellular Function	Cellular function and maintenance	$1.19 \times 10^{-2} - 5.11 \times 10^{-19}$
	Cellular movement	$1.19 \times 10^{-2} - 1.13 \times 10^{-7}$
	Cellular assembly and organization	$1.02 \times 10^{-2} - 5.99 \times 10^{-5}$
	Cell-to-death signaling and interaction	$1.30 \times 10^{-2} - 7.98 \times 10^{-5}$
	Cell death and survival	$1.19 \times 10^{-2} - 1.02 \times 10^{-4}$
Physiological System development and function	Humoral immune response	$1.23 \times 10^{-2} - 5.74 \times 10^{-23}$
	Immune cell trafficking	$1.20 \times 10^{-2} - 1.13 \times 10^{-7}$
	Connective tissue development and function	$1.02 \times 10^{-2} - 7.98 \times 10^{-5}$
	Tissue morphology	$1.02 \times 10^{-2} - 3.01 \times 10^{-4}$
	Endocrine system development and function	$1.19 \times 10^{-2} - 4.31 \times 10^{-4}$