

Supplemental Table 2.1. Characteristics of the Crohn's Disease Population at Cohort Entry

		New Initiators of Prolonged Steroids or Anti-TNF			Final Cohort Excluding Outliers From Baseline PS			Final Weighted Cohort		
		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Age at index*	1 = 18-34.9	19.7	25.9	0.15	21.1	24.6	0.08	22.0	23.5	0.04
	2 = 35-49.9	24.2	30.5	0.14	25.9	30.1	0.09	26.9	27.8	0.02
	3 = 50-64.9	16.0	15.5	0.01	15.9	15.6	0.01	15.8	16.1	0.01
	4 = 65-69.9	13.7	11.8	0.06	13.0	12.2	0.02	12.8	12.0	0.02
	5 = 70-74.9	10.2	8.1	0.07	9.8	8.6	0.04	9.5	8.8	0.02
	6 = 75-79.9	7.6	5.0	0.11	7.3	5.3	0.08	6.8	6.5	0.01
	7 = 80-84.9	5.6	2.7	0.15	5.1	2.9	0.11	4.6	4.0	0.03
	8 = 85+	3.0	0.6	0.18	1.9	0.6	0.12	1.7	1.3	0.03
Gender*	Female	62.4	65.1	0.06	62.8	64.7	0.04	63.1	62.5	0.01
Race*	White	83.6	83.9	0.01	82.9	84.3	0.04	83.1	82.4	0.02
Calendar year at index*	2001	11.1	6.5	0.16	11.6	6.9	0.16	10.7	11.5	0.03
	2002	6.8	6.5	0.01	7.3	6.9	0.02	7.2	7.5	0.01

		New Initiators of Prolonged Steroids or Anti-TNF			Final Cohort Excluding Outliers From Baseline PS			Final Weighted Cohort		
		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
	2003	6.0	5.1	0.04	6.2	5.3	0.04	6.0	6.8	0.03
	2004	7.7	5.7	0.08	7.6	6.1	0.06	7.4	7.6	0.01
	2005	6.4	4.9	0.07	6.4	5.1	0.06	6.5	7.4	0.04
	2006	2.3	2.1	0.01	2.2	2.2	0.00	2.2	2.2	0.00
	2007	13.7	10.5	0.10	12.4	10.6	0.06	11.9	11.0	0.03
	2008	8.9	9.1	0.01	8.8	9.4	0.02	8.7	7.6	0.04
	2009	8.2	8.8	0.02	8.0	8.9	0.03	8.1	8.5	0.01
	2010	5.6	9.0	0.13	5.8	8.5	0.10	6.3	6.0	0.01
	2011	6.5	9.4	0.11	6.7	8.4	0.06	6.9	7.0	0.00
	2012	7.6	10.0	0.08	7.5	9.8	0.08	7.8	7.2	0.02
	2013	9.3	12.4	0.10	9.3	11.8	0.08	10.2	9.8	0.01
Urban residence*	Yes	72.1	69.4	0.06	71.6	69.8	0.04	71.5	72.1	0.01
Diabetes*^	Yes	13.1	11.1	0.06	12.6	11.3	0.04	12.3	11.8	0.02
Hypertension*^	Yes	34.4	29.6	0.10	33.3	30.3	0.06	32.6	30.9	0.04

		New Initiators of Prolonged Steroids or Anti-TNF			Final Cohort Excluding Outliers From Baseline PS			Final Weighted Cohort		
		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Coronary artery disease^	Yes	11.4	9.5	0.06	10.7	9.6	0.04	10.2	10.4	0.01
Congestive heart failure^	Yes	4.9	3.1	0.09	4.5	3.3	0.06	4.3	4.0	0.02
Carotid artery disease	Yes	0.7	0.4	0.04	0.6	0.5	0.01	0.6	0.5	0.01
Hypercholesterolemia*^	Yes	23.4	21.4	0.05	22.7	22.0	0.02	22.5	21.1	0.03
Osteoporosis*^	Yes	12.9	11.7	0.04	12.6	12.1	0.02	12.4	12.3	0.00
Stroke/Parkinson's disease^	Yes	1.8	1.4	0.03	1.7	1.5	0.02	1.6	1.4	0.02
Problems with balance*^	Yes	17.0	17.4	0.01	16.8	16.8	0.00	16.8	15.5	0.04
Falls in prior 365 days	Yes	0.3	0.1	0.04	0.3	0.2	0.02	0.3	0.1	0.04
DXA scan in prior 365 days*^	Yes	13.6	13.3	0.01	13.3	13.4	0.00	13.3	13.7	0.01
Combined comorbidity score*^	0 = ≤ 0	31.8	25.0	0.15	31.6	25.9	0.13	30.4	30.0	0.01
	1 = 1	22.0	22.6	0.01	22.2	22.8	0.01	22.3	23.1	0.02
	2 = 2-3	24.8	28.2	0.08	25.1	28.1	0.07	25.8	26.2	0.01
	3 = 4+	21.4	24.2	0.07	21.1	23.2	0.05	21.4	20.7	0.02

		New Initiators of Prolonged Steroids or Anti-TNF			Final Cohort Excluding Outliers From Baseline PS			Final Weighted Cohort		
		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Fistula w/in 365 and 56 days prior to index**^	0 = none in past 365 days	78.0	65.6	0.28	76.7	67.3	0.21	74.7	73.9	0.02
	1 = w/in 57-365 days prior	14.9	17.7	0.08	15.7	17.8	0.06	16.1	16.4	0.01
	2 = w/in 56 days prior	7.1	16.7	0.30	7.5	14.9	0.24	9.3	9.7	0.01
Small bowel follow-through exam w/in 365 and 56 days prior to index**^	0 = none in past 365 days	76.9	72.8	0.09	76.3	73.7	0.06	75.4	72.5	0.07
	1 = w/in 57-365 days prior	18.2	16.7	0.04	18.5	16.8	0.04	18.3	20.0	0.04
	2 = w/in 56 days prior	4.9	10.5	0.21	5.2	9.5	0.17	6.3	7.5	0.05
Colonoscopy or sigmoidoscopy w/in 365 and 56 days prior to index**^	0 = none in past 365 days	51.2	39.0	0.25	49.8	41.1	0.18	47.8	45.7	0.04
	1 = w/in 57-365 days prior	38.5	36.7	0.04	39.1	37.8	0.03	38.8	39.3	0.01

		New Initiators of Prolonged Steroids or Anti-TNF			Final Cohort Excluding Outliers From Baseline PS			Final Weighted Cohort		
		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
	2 = w/in 56 days prior	10.3	24.3	0.38	11.2	21.0	0.27	13.4	15.0	0.05
CT or MRI scan of abdomen/pelvis w/in 365 and 56 days prior to index**^	0 = none in past 365 days	55.2	48.3	0.14	54.1	48.7	0.11	52.9	49.9	0.06
	1 = w/in 57-365 days prior	30.7	28.5	0.05	30.9	28.8	0.05	30.4	31.5	0.02
	2 = w/in 56 days prior	14.1	23.2	0.24	15.0	22.5	0.19	16.7	18.6	0.05
<i>C difficile</i> w/in 183 and 56 days prior to index^	0 = none in past 183 days	97.5	97.9	0.03	97.7	97.9	0.01	97.5	98.4	0.06
	1 = w/in 57-183 days prior	1.9	1.4	0.04	1.7	1.3	0.03	1.8	1.1	0.06
	2 = w/in 56 days prior	0.6	0.7	0.01	0.6	0.7	0.01	0.7	0.5	0.03
Testing for <i>C difficile</i> w/in 183 and 56 days prior to index**^	0 = none in past 183 days	84.8	82.9	0.05	84.8	83.1	0.05	84.5	84.7	0.01

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Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
	1 = w/in 57-183 days prior	11.9	11.0	0.03	11.6	11.5	0.00	11.8	10.2	0.05
	2 = w/in 56 days prior	3.3	6.1	0.13	3.5	5.4	0.09	3.7	5.1	0.07
Ostomy w/in 183 days prior to index^	Yes	5.7	10.1	0.16	6.0	9.3	0.12	6.2	7.9	0.07
Bowel resection w/in 183 days prior to index^	Yes	2.6	3.9	0.07	2.7	3.7	0.06	2.9	2.8	0.01
Serious infection w/in 183 days prior to index^	Yes	4.8	5.7	0.04	4.8	5.4	0.03	5.0	5.3	0.01
Opportunistic infection w/in 183 days prior to index	Yes	0.7	0.4	0.04	0.7	0.5	0.03	0.7	0.5	0.03
Blood transfusion w/in 183 days prior to index^	Yes	4.3	5.6	0.06	4.5	5.4	0.04	4.6	4.9	0.01
Intravenous iron w/in 183 days prior to index^	Yes	1.2	1.3	0.01	1.2	1.3	0.01	1.2	1.4	0.02
Parenteral nutrition w/in 183 days prior to index^	Yes	2.1	4.0	0.11	2.3	3.7	0.08	2.5	3.2	0.04
Anemia from iron deficiency or NOS w/in 183 days prior to index*^	Yes	27.0	31.6	0.10	26.8	30.6	0.08	27.6	27.8	0.00
Other nutritional anemia (e.g., B12) w/in 183 days prior to index^	Yes	6.3	5.5	0.03	6.1	5.6	0.02	5.9	5.0	0.04

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Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Weight loss or malnutrition w/in 183 days prior to index^	Yes	5.8	8.5	0.10	6.0	7.9	0.07	6.2	6.9	0.03
Dehydration/hypovolemia w/in 183 days prior to index**^	Yes	12.1	15.8	0.11	12.6	15.6	0.09	13.3	14.1	0.02
Electrolyte disorders w/in 183 days prior to index**^	Yes	14.2	17.9	0.10	14.4	16.9	0.07	14.9	15.0	0.00
Pyoderma gangrenosum w/in 183 days prior to index^	Yes	0.6	0.7	0.01	0.7	0.8	0.01	0.7	0.8	0.01
Stool culture w/in 183 days prior to index**^	Yes	7.2	9.1	0.07	7.5	8.7	0.04	7.8	8.3	0.02
Quinolone Rx w/in 183 days prior to index**^	Yes	27.8	34.6	0.15	28.7	33.0	0.09	29.7	30.9	0.03
Metronidazole Rx w/in 183 days prior to index**^	Yes	21.2	31.7	0.24	22.5	29.7	0.16	24.2	25.9	0.04
Other antibiotic Rx w/in 183 days prior to index**^	Yes	42.6	44.4	0.04	42.8	43.8	0.02	42.8	41.1	0.03
Herpes antiviral Rx w/in 183 days prior to index^	Yes	3.1	3.4	0.02	2.9	3.4	0.03	3.0	2.8	0.01
Antifungal Rx w/in 183 days prior to index^	Yes	7.3	9.8	0.09	7.5	9.4	0.07	7.7	8.2	0.02
Mesalamine Rx w/in 183 days prior to index**^	Yes	50.7	51.4	0.01	51.3	51.3	0.00	51.5	53.3	0.04
AZA/6MP Rx w/in 183 days prior to index**^	Yes	25.6	34.8	0.20	27.1	33.7	0.14	28.5	30.7	0.05
Methotrexate Rx w/in 183 days prior to index^	Yes	2.1	3.5	0.08	2.3	3.4	0.07	2.2	3.7	0.09

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Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Narcotics Rx (excluding Belladonna/Opium) w/in 183 days prior to index*^	Yes	52.4	62.4	0.20	53.8	61.0	0.15	55.3	56.9	0.03
PPI Rx w/in 183 days prior to index*^	Yes	41.6	41.0	0.01	41.3	40.6	0.01	41.1	40.8	0.01
Benzodiazepine Rx w/in 183 days prior to index*^	Yes	14.9	13.4	0.04	15.3	13.8	0.04	15.2	15.1	0.00
Bisphosphonate Rx w/in 183 days prior to index*^	Yes	13.2	8.8	0.14	12.5	9.1	0.11	11.7	11.4	0.01
High dose vitamin D Rx w/in 183 days prior to index	Yes	0.3	0.3	0.00	0.3	0.3	0.00	0.3	0.3	0.00
Stains Rx w/in 183 days prior to index*^	Yes	15.9	11.7	0.12	14.9	12.2	0.08	14.2	12.7	0.04
Fibrates Rx w/in 183 days prior to index^	Yes	3.6	3.2	0.02	3.3	3.2	0.01	3.3	2.9	0.02
Prednisone use in 183 days prior to index*	Yes	63.3	73.3	0.22	67.2	72.8	0.12	68.6	71.5	0.06
Budesonide use in 183 days prior to index*	Yes	40.6	17.1	0.54	34.5	18.0	0.38	31.1	30.0	0.02
# of non-IBD medication classes taking during 183 days prior to index*^	0-3	17.2	16.7	0.01	17.3	17.4	0.00	17.5	17.3	0.01
	4-6	26.7	27.0	0.01	27.1	27.3	0.00	27.1	26.7	0.01
	7-10	30.7	32.2	0.03	30.7	31.7	0.02	30.8	31.1	0.01
	> 10	25.4	24.1	0.03	24.9	23.6	0.03	24.7	24.8	0.00

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		Steroids (N = 8818)	Anti-TNF (N = 2031)		Steroids (N = 7694)	Anti-TNF (N = 1879)		Steroids	Anti-TNF	
Characteristic	Group	%	%	SMD	%	%	SMD	%	%	SMD
Total IBD hospitalization days in 183 days prior to index*^	0 = none	71.0	57.0	0.29	69.0	58.6	0.22	66.6	63.7	0.06
	1 = ≥ 1 day	29.0	43.0	0.29	31.0	41.4	0.22	33.4	36.3	0.06
# of hospitalizations other than IBD in 183 days prior to index*^	0	83.3	86.6	0.09	83.7	86.4	0.08	84.2	84.8	0.02
	1+	16.7	13.4	0.09	16.3	13.6	0.08	15.8	15.2	0.02

* Included in baseline model.

^ Included in time-updating models.