

APPENDIX

Table S1 Disease definitions using ICD and SNOMED codes

	ICD-codes				SNOMED codes
	ICD-10	ICD-9	ICD-8	ICD-7	
Colorectal cancer	C18-C21	153-154.1	153-154.1	153-154.0	M81400-M81404, M81406, M81407, M81409, M81423, M81443, M81453
Precancerous polyp					
Non-advanced	-	-	-	-	M82100, M82160, M82130
Advanced	-	-	-	-	M82630, M82611, M82632, M82112, M82632, M82112, M82612, M81402
Inflammatory bowel disease	K50-K51	555-556	563; 569,02	572,00; 572,09; 572,20; 572,21; 578,03	T67-T68: D6255, D6214; T62-T68: D6216

Table S2 Definitions of baseline comorbidities within 5 years before start of follow-up

Comorbidity	ICD-10 codes (1997-)	ICD9 (1987-1996)	ICD8 (1969-1986)
Cardiovascular disease (CVD)	I00-I99	391-459	391-458
Myocardial infarction	I21-I22	410	410-411
Cancer (excluding Colorectal cancer)	C00-C17, C22-C99	140-152, 154.2-154.9, 155-209	140-152, 154.1-154.9, 155-209
Diabetes	E10-E14	250	250
Neurologic disease	G10-G99	294-319	294-315

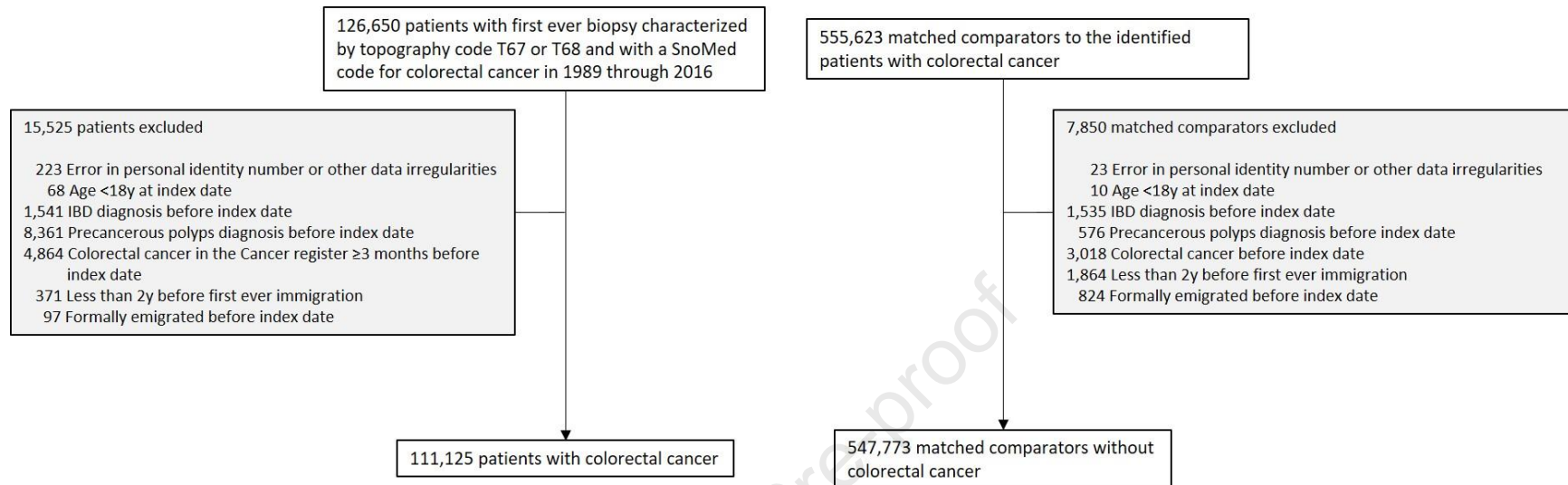


Figure S1 Flow chart of identified patients with chronic constipation* and their matched comparators

*defined as: ≥ 2 visits ever for any constipation using the ICD-9 code 564.xx or the ICD-10 code K59.xx in inpatient or non-primary outpatient care starting in 1987 (when ICD-9 was introduced in Sweden). Similar to, we required the first constipation diagnosis to occur ≥ 2 years before the CRC diagnosis (or matching date for controls), and the second constipation diagnosis needed to occur ≥ 6 months before the CRC diagnosis or matching date.

Table S3 SENSITIVITY ANALYSES Prevalence and odds ratio of chronic constipation using diagnostic codes in patients with colorectal cancer and matched comparators

Group	N		N exposed (%)		Odds ratio* (95%CI)	Odds ratio** (95%CI)
	CRC	Comparators	CRC	Comparators		
Main sensitivity analysis	111 125	547 773	178 (0.16%)	984 (0.18%)	0.88 (0.75-1.04)	0.88 (0.75-1.04)
Main sensitivity analysis + constipation as main diagnosis (≥2 diagnoses)	111 125	547 773	112 (0.10%)	637 (0.12%)	0.86 (0.70-1.05)	0.86 (0.70-1.05)
Sensitivity analysis II	111 125	547 773	190 (0.17%)	921 (0.17%)	1.01 (0.86-1.18)	1.01 (0.86-1.18)
Sensitivity analysis III	38 201	187 855	58 (0.15%)	246 (0.13%)	1.16 (0.87-1.54)	1.18 (0.88-1.57)
Varying time between 2 constipation diagnoses						
6-12 months	111 125	547 773	41 (0.04%)	164 (0.03%)	1.23 (0.87-1.73)	1.23 (0.87-1.73)
1-5 years	111 125	547 773	67 (0.06%)	385 (0.07%)	0.85 (0.66-1.11)	0.85 (0.66-1.11)
≥5 years	111 125	547 773	34 (0.03%)	156 (0.03%)	1.06 (0.73-1.54)	1.06 (0.73-1.54)

CRC, colorectal cancer.

*Conditioned on matching set (age, sex, county, and calendar period);

**Conditioned on matching set and further adjusted for education;

***Restricted to individuals with CRC diagnosed in July 2007 or later (or comparators matched on this date or later)

Main sensitivity analysis: First constipation diagnosis must occur ≥2 years before index date and 2nd constipation diagnosis must occur ≥6 months before index date;

Sensitivity analysis II: ≥2 visits for constipation within 12 months between any 2 constipation diagnoses;

Sensitivity analysis III: Sensitivity analysis I + ≥2 prescriptions of laxatives (ATC code A06A) during an 18-month period starting 6 months before the index date, in patients and comparators with index date from 01 Jan, 2008

