

**APPENDIX**

**Appendix Figure 1. Risk Factors for Colorectal Cancer by Anatomic Site.** Odds ratio findings from unadjusted multinomial logistic regression with corresponding 95% confidence intervals, stratified by anatomic site (proximal, distal, rectal).

**Appendix Figure 2. Post-hoc Analysis of Mean BMI Trends from 10 years Prior to Baseline (index) Colonoscopy.** Numbers correspond to mean (standard deviation).

**Appendix Table A.** CPT Procedure Codes Used to Create the VA Colonoscopy Cohort

Code	Definition
44388	Colonoscopy through stoma; diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)
44389	Colonoscopy through stoma; with biopsy, single or multiple
44390	Colonoscopy through stoma; with removal of foreign body
44391	Colonoscopy through stoma; with control of bleeding (eg, injection, bipolar cautery, unipolar cautery, laser, heater probe, stapler, plasma coagulator)
44392	Colonoscopy through stoma; with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps or bipolar cautery
44393	Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by forceps, cautery or snare
44394	Colonoscopy through stoma; with removal of tumor(s), polyp(s), or other lesion(s) by snare technique
44397	Colonoscopy through stoma; with transendoscopic stent placement (includes predilation)
44401	Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) (includes pre-and post-dilation and guide wire passage)
44402	Colonoscopy through stoma; with endoscopic stent placement (including pre- and post-dilation and guide wire passage, when performed)
44403	Colonoscopy through stoma; with endoscopic mucosal resection
44404	Colonoscopy through stoma; with directed submucosal injection(s), any substance
44405	Colonoscopy through stoma; with transendoscopic balloon dilation
44406	Colonoscopy through stoma; with endoscopic ultrasound examination, limited to the sigmoid, descending, transverse, or ascending colon and cecum
44407	Colonoscopy through stoma; with transendoscopic ultrasound guided intramural/transmural fine needle aspiration/biopsy(s)
45355	Colonoscopy, rigid or flexible, transabdominal via colotomy, single or multiple
45378	Colonoscopy, flexible, proximal to splenic flexure; diagnostic, with or without collection of specimen(s) by brushing or washing
45379	Colonoscopy, flexible, proximal to splenic flexure; with removal of foreign body
45380	Colonoscopy, flexible, proximal to splenic flexure; with biopsy, single or multiple
45381	Colonoscopy, flexible; with directed submucosal injection(s), any substance submucosal injection(s), any substance
45382	Colonoscopy, flexible; with control of bleeding, any method bleeding (eg, injection, cautery, laser, heater probe, stapler, plasma coagulator)
45383	Colonoscopy, flexible, proximal to splenic flexure; with ablation of tumors, polyps, or other lesions not removable by forceps, cautery or snare
45384	Colonoscopy, flexible; with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps cautery
45385	Colonoscopy, flexible; with removal of tumor(s), polyp(s), or other lesion(s) by snare technique
45386	Colonoscopy, flexible; with transendoscopic balloon dilation balloon, 1 or more strictures
45387	Colonoscopy, flexible, proximal to splenic flexure; with transendoscopic stent placement (includes predilation)
45388	Colonoscopy, flexible; with ablation of tumor(s), polyp(s), or other lesion(s) (includes pre- and post-dilation and guide wire passage, when performed)
45389	Colonoscopy, flexible; with endoscopic stent placement (includes pre- and post-dilation and guide wire passage, when performed)
45390	Colonoscopy, flexible; with endoscopic mucosal resection
45391	Colonoscopy, flexible, proximal to splenic flexure; with endoscopic ultrasound examination
45392	Colonoscopy, flexible, proximal to splenic flexure; with transendoscopic ultrasound guided intramural or transmural fine needle aspiration/biopsy(s)
45393	Colonoscopy, flexible; with decompression (for pathologic distention) (eg, volvulus, megacolon), including placement of decompression tube
45398	Colonoscopy, flexible; with band ligation(s) (eg, hemorrhoids)
G0105	Colorectal cancer screening; colonoscopy on individual at high risk
G0121	Colorectal cancer screening; colonoscopy on individual not meeting criteria for high risk
G6019	Colonoscopy through stoma; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by forceps, cautery or snare
G6020	Colonoscopy through stoma; with transendoscopic stent placement (includes predilation)
G6024	Colonoscopy, flexible; proximal to splenic flexure; with ablation of tumors, polyps, or other lesions not removable by forceps, cautery or snare
G6025	Colonoscopy, flexible, proximal to splenic flexure; with transendoscopic stent placement (includes predilation)

**Appendix Table B.** Case-Control Study Selection Criteria

	Definitions	Criteria	Time Frame
Study Sample n = 1,878,429	CPT code for colonoscopy	See Appendix A for CPT codes used	1999-2011
Exclusion Criteria n = 1,504,379	No TIU notes or report text	Exclude where report text is null	Exclude if no TIU notes within 30 days of baseline
	History of IBD or IBD at baseline	ICD-9 code in (555.x, 556.x)	Exclude if more than 180 days before baseline
	History of CRC (ICD-9)	ICD-9 code in (153.0-154.1)	Exclude if more than 180 days before baseline
	History of Other Primary Cancer (VACCR)	ICD-0-3 Cancer site (C000-C809)	Exclude if more than 180 days before baseline
Case Inclusion Criteria n = 21,744	CRC at baseline (VACCR)	See Appendix C for VACCR definition	Include if 6 months before or after baseline
Controls Inclusion Criteria n = 679,878	Normal colonoscopy at baseline	CPT code in (45378, G0121) only	Include if within 30 days of baseline
		No pathology report	Exclude if report within 30 days of baseline
Controls Exclusion Criteria n = 612,646	Died in < 3 years or < 3 years of follow up	Date of death < 3 years	Exclude if died within 3 years of baseline
		Last visit date > 3 years	Exclude if less than 3 years of follow up time
	CRC at baseline or on follow up (VACCR)	See Appendix C for VACCR definition	Include if 6 months pre or 3 years post baseline
CRC at baseline or on follow up (ICD-9)	ICD-9 code in (153.0-154.1)	Include if 6 months pre or 3 years post baseline	
Total Sample n = 634,390			

**Abbreviations:** Colorectal Cancer (CRC); Current Procedural Terminology (CPT); Inflammatory Bowel Disease (IBD), International Classification of Diseases, 9<sup>th</sup> Revision (ICD-9); Text Integration Utilities (TIU); Veterans Affairs Central Cancer Registry (VACCR)

**Appendix Table C.** Selection criteria for CRC cases

Criteria <sup>1</sup>	
Cancer Site <sup>2</sup>	C18.0 Cecum C18.2 Ascending colon C18.3 Hepatic flexure C18.4 Transverse colon C18.5 Splenic flexure C18.6 Descending colon C18.7 Sigmoid colon C19.9 Rectosigmoid junction C20.9 Rectum, NOS
Cancer Stage <sup>3</sup>	Localized Regional Distant
Histology <sup>4</sup>	81403 Adenocarcinoma 84803 Mucinous adenocarcinoma 84903 Signet ring cell carcinoma 85103 Medullary carcinoma 80203 Undifferentiated carcinoma 82013 Cribriform carcinoma 82133 Serrated adenocarcinoma 82103 Adenocarcinoma adenomatous in polyp 82203 Adenocarcinoma in adenomatous polyposis coli 82613 Adenocarcinoma in villous adenoma 82633 Adenocarcinoma in tubulovillous adenoma

<sup>1</sup> Cases were obtained from the VA Central Cancer Registry

<sup>2</sup> Excluded ICD-O-3 sit codes C18.1, C18.8 and C18.9

<sup>3</sup> Excluded cases with unknown stage or that were carcinoma in situ

<sup>4</sup> Excluded ICD-O-3 histology codes inconsistent with adenocarcinoma