

Online Appendix 1. Billing codes indicating colorectal cancer screening procedures or exclusion criteria

Category	Codes
Screening test modality	
Fecal occult blood test (FOBT) or Fecal Immunochemical Test (FIT)	CPT: 82270 (FOBT), 82274 (FIT); 82272*, 82273*, 82271* HCPCS: G0328 (FIT), G0107 (FOBT)
Colonoscopy	CPT: 44388, 44389, 44390, 44391, 44392, 44393, 44394, 44397, 45355, 45378, 45379, 45380, 45381, 45382, 45383, 45384, 45385, 45386, 45387, 45391, 45392 HCPCS: G0105, G0121 ICD-9 Procedure: 45.21, 45.22, 45.23, 45.25, 45.41, 45.42, 45.43, 48.36
Flexible Sigmoidoscopy	CPT: 45300, 45303, 45305, 45307, 45308, 45309, 45315, 45317, 45320, 45321, 45327, 45330, 45331, 45332, 45333, 45334, 45335, 45337, 45338, 45339, 45340, 45341, 45342, 45345 HCPCS: G0104 ICD-9 Procedure: 45.24, 48.21, 48.22, 48.23, 48.24
Exclusion Reason	
Colorectal Cancer	HCPCS: G0213, G0214, G0215, G0231 ICD-9 Diagnosis: 153, 154.0, 154.1, 154.2, 154.3, 197.5, V10.05, V10.06
Total Colectomy	CPT: 44150, 44151, 44152, 44153, 44155, 44156, 44157, 44158, 44210, 44211, 44212 ICD-9 Procedure: 45.8, 45.81, 45.82, 45.83
End Stage Renal Disease	ICD-9 Diagnosis: 585.6

Abbreviations: ICD-9-CM = International Classification of Diseases, 9th Edition, Clinical Modification (ICD-9-CM), CPT = Current Procedural Terminology, HCPCS = Healthcare Common Procedure Coding System

* Indicates a non-specific code for fecal testing; 82271 replaced 82273 in 2006.

Note: We explored billing codes for Barium enema, CT colonography, fecal DNA, and CRC screening review/documentation in descriptive statistics. These codes were infrequently used in claims and they were excluded from the final analysis because they were not endorsed modalities for CRC screening by current national guidelines.