

## **Appendix**

### **Computed Tomography Colonography Less Costly Than Colonoscopy for Colorectal Cancer Screening of Commercially Insured Patients**

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This Appendix has not been edited and is provided as supplemental materials for this article, which was published in *American Health & Drug Benefits* in October 2018.

**Supplemental Table A.1. HCPCS codes of optical colonoscopy and related CT imaging.**

<b>Category</b>	<b>Subcategory</b>	<b>Code Type</b>	
		<b><sup>a</sup></b>	<b>Codes</b>
CT Colonography	Screening	HCPCS	74263
	Diagnostic	HCPCS	74261, 74262
Optical Colonoscopy	Sometimes	HCPCS	45378-45382, 45384-45386, 45388-
	Screening <sup>b</sup>		45393, 45398
	Screening	ICD-10 Dx	Z12.11
	Screening	HCPCS	G0105, G0120, G0121
Incomplete OC	Screening <sup>c</sup>	HCPCS modifier	52, 53, 73, 74
Upper Endoscopy		HCPCS	43235-43255
Abdominal CT	Diagnostic	HCPCS	74150
Mammography	Screening	HCPCS	G0202
Complications <sup>d</sup>	Abdominal Pain	ICD-10 Dx	R100-R1033, R1084, R109
	Anemia	ICD-10 Dx	D500, D62, D649

Anesthesia	ICD-10 Dx	I97111, I97121, I97131, I97191,
Complications		I97711, I97791, I9788, I9789, T882XXA, T8851XA
Aspiration	ICD-10 Dx	J690
Pneumonia		
Colitis	ICD-10 Dx	K5150-K51919, K523, K52831-K529, K5931
Diverticulitis	ICD-10 Dx	K5720, K5732, K5780, K5792
Gastrointestinal	ICD-10 Dx	K9161, K91840, K91870, K91872,
Bleeding		K921
Infection	ICD-10 Dx	I38, I39, R7881
Myocardial	ICD-10 Dx	I2101-I228, I2510
Infarction		
Other Pneumonia	ICD-10 Dx	J188, J189
Perforations	ICD-10 Dx	K631, K9171, T888XXA
Procedure	ICD-10 Dx	Y620, Y628, Y629, Y848
Complications		
Stroke	ICD-10 Dx	I610-I619, I6300-I639

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Laxatives	GPI <sup>e</sup>	46xxxxxxxxxxxxxx
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<sup>a</sup> HCPCS codes are the property of the American Medical Association.

<sup>b</sup> If accompanied by an ICD-10 diagnosis code of Z12.11 (screen for malignant neoplasm-colon), a procedure modifier code of PT (colorectal cancer screening test, converted to a diagnostic test or other procedure), or a procedure modifier code of 33 (preventative service).

<sup>c</sup> An OC screening is designated as incomplete if accompanied by the listed procedure modifier code.

<sup>d</sup> Diagnosis codes developed by Milliman

<sup>e</sup> GPI codes are the property of Wolters Kluwer.

**Supplemental Table A.2a. Years until next OC screen.**

OC Colonoscopy Result	Prevalence	
	Rate <sup>a</sup>	Years
No Adenoma	75.4%	10
Non-Advanced Adenoma	16.8%	5
Advanced Adenoma or >3 Non-Advanced Adenoma	7.9%	3
<b>Recommended Years</b>	<b>100.0%</b>	<b>8.6</b>
<b>Observed Mean Years <sup>b</sup></b>		<b>6.0</b>

**Supplemental Table A.2b. Years until next screen for CTC <sup>c</sup>.**

CT Colonography Result	Count	Prevalence Rate	Guideline Recommendation	Guideline
				Time To Rescreen
Normal / Hyperplastic Only ( $\leq 5$ mm)	5,800	85.7%	Follow-up CTC in 5 years	5
Low Risk Adenoma (6-9 mm)	579	8.6%	OC, then follow-up in 5 years	5
High Risk Adenoma ( $\geq 10$ mm)	390	5.8%	OC, then follow-up in 3 years	3
<b>Overall</b>	<b>6,769</b>	<b>100.0%</b>		<b>4.9</b>

<sup>a</sup> Observed prevalence rates are derived from rates presented in Schoen RE, et al. (2010) Utilization of surveillance colonoscopy in community practice. Gastroenterology. 138(1):73. Kruse GR, et al. (2015) Overuse of colonoscopy for colorectal cancer screening and surveillance. J Gen Intern Med. 30:277-283. Murphy et al. (2016) Underuse and overuse of colonoscopy for repeat screening and surveillance in the Veterans Health Administration. Clin Gastroenterol Hepatol. 14(3) 436-444.

<sup>b</sup> Observed mean years are derived from Kruse GR, et al. (2015) Overuse of colonoscopy for colorectal cancer screening and surveillance. J Gen Intern Med. 30:277-283.

<sup>c</sup> Observed prevalence rates for CTC are derived from Pickhardt PJ, et al. (2016) Colorectal findings at repeat CT colonography screening after initial CT colonography screening negative for polyps larger than 5mm. Radiology 282:139-48.