

Supplementary Materials

Supplementary Table 1. ICD 9, ICD10 of interest

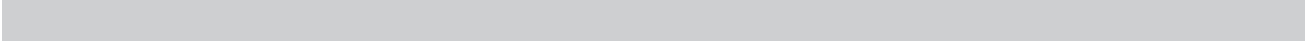
A. Comorbidities of interest

	ICD9	ICD10
Myocardial infarction	410.x, 412.x	I21.x, I22.x, 125.2
Congestive heart failure	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.4-425.9, 428.x	I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-I42.9, I43.x, I50.x, P29.0
Peripheral vascular disease	O93.0, 437.4, 440.x, 441.x, 443.1-443.9, 47.1, 557.1, 557.9 V43.4	I70.x, I71.x, I73.1, I73.8, I73.9, I77.1, I79.0, I79.2, K55.1 K55.8, K55.9, Z95.8, Z95.9
Cerebrovascular accident	362.34, 430.x-438.x	G45.x, G46.x, H34.0, I60.x-I69.x
Dementia	290.x, 294.1, 331.2	FOO.x-F03.x, F05.1, G30.x, G31.1
Chronic Pulmonary Disease	416.8, 416.9, 490.x-505.x, 506.4, 508.1, 508.8	127.8, 127.9, J40.x-J47.x, J60.x-J67.x, J68.4, J70.1, J70.3
Rheumatic disease	446.5, 710.0-710.4, 714.0-714.2, 714.8, 725.x	M05.x, M06.x, M31.5, M32.x-M34.x, M35.1, M35.3, M36.0
Peptic ulcer disease	531.x-534.x	K25.x-K28.x
Mild liver disease	070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 070.6, 070.9, 570.x, 571.x, 573.3, 573.4, 573.8, 573.9, V42.7	B18.x, K70.0-K70.3, K70.9, K71.3-K71.5, K71.7, K73.x, K74.x, K76.0, K76.2-K76.4, K76.8, K76.9, Z94.4
Diabetes without adverse events	250.0-250.3, 250.8, 250.9	E10.0, E10.1, E10.6, E10.8, E10.9, E11.0, E11.1, E11.6, E11.8, E11.9, E12.0, E12.1, E12.6, E12.8, E12.9, E13.0, E13.1, E13.6, E13.8, E13.9, E14.0, E14.1, E14.6, E14.8,

		E14.9
Diabetes with adverse events	250.4-250.7	E10.2-E10.5, E10.7, E11.2-E11.5, E11.7, E12.2-E12.5, E12.7, E13.2- E13.5, E13.7, E14.2-E14.5, E14.7
Hemiplegia	334.1, 342.x, 343.x, 344.0-344.6, 344.9	G04.1, G11.4, G80.1, G80.2, G81.x, G82.x, G83.0-G83.4, G83.9
Renal Disease	403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 582.x, 583.0-583.7, 585.x, 586.x, 588.0, V42.0, V45.1, V56.x	I12.0, I113.1, N03.2-N03.7, N05.2- N05.7, N18.x, N19.x, N25.0, Z49.0-Z49.2, Z94.0, Z99.2
Malignancy	140.x-172.x, 174.x-195.8, 200.x-208.x, 238.6	COO.x-C26.x, C30.x-C34.x, C37.x- C41.x, C43.x, C45.x-C58.x, C60.x-C76.x, C81.x-C85.x, C88.x, C90.x-C97.x
Moderate or severe liver disease	456.0-456.2, 572.2-572.8	185.0, I185.9, I186.4, I198.2, K70.4, K71.1, K72.1, K72.9, K76.5, K76.6, K76.7
Metastatic solid tumor	196.x-199.x	C77.x-C80.x
AIDS/HIV	042.x-044.x	B20.x-B22.x, B24.x
Coagulopathy	286.x, 287.1, 287.3- 287.5	D65-D68.x, D69.1, D69.3-D69.6
Colon cancer	153.0-153.9 159.0, 209.10-209.16, 230.3, V100.5	C18.x, C19.xM
Rectal Cancer	154.0- 154.8,209.17, 230.4-230.6, 796.70-796.76, V100.6	C20.x

## B. Outcomes of interest

	ICD9	ICD10
<b>GI adverse events</b>		
Upper GI Hemorrhage	456.0, 456.20, 530.7, 530.82, 531.0x, 531.2x, 531.4, 531.6x, 532.0x, 532.2x, 532.4x, 532.6x, 533.0x, 533.2x, 533.4x, 533.6x, 534.0x, 534.2x, 534.4x, 534.6x	K92.2, K92.1, K29.01, K31.811, K57.x, K29.x, K25.0, K25.2, K25.4, K25.6,
Lower GI Hemorrhage	569.3, 578.0, 578.1, 578.9, 998.1x	K62.5, D62, T81.0, K92.2,
Perforation	569.83, 998.2, E870.8, E870.9	K63.1, S36.5, S36.50, S36.51, S36.52, S36.53, S36.54, S36.59, S36.6, S36.7, S36.8x, S36.9
<b>Cardiovascular adverse events</b>		
Myocardial infarction	410.x, 412.x	I21.x, I22.x, 125.2
Congestive heart failure	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.4-425.9, 428.x	I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-I42.9, I43.x, I50.x, P29.0
Cerebrovascular accident	362.34, 430.x-438.x	G45.x, G46.x, H34.0, I60.x-I69.x
Arrhythmia	426.0, 426.13, 426.7, 426.9, 426.10, 426.12, 427.0-427.4, 427.6-427.9, 785.0, 996.01, 996.04, V45.0, V53.3	144.1-I144.3, 145.6, I145.9, I47.x-I49.x, ROO.0, R00.1, R00.8, T82.1, Z45.0, Z95.0
<b>Infectious adverse events</b>		
Pneumonia	507, 507.0, 997.32, 997.39, 486	J13, J14, J18.9, J18.8, J18.1, J18.0, J18.2, J15.0, J15.1, J15.20, J15.211, J15.212, J15.29, J15.3, J15.4, J15.5, J15.6, J15.7, J15.8, J15.9, J16.0, J16.8
Sepsis	038.0, 038.10, 038.11, 038.12, 038.19, 038.2, 038.3, 038.4, 038.41-038.44, 038.49, 038.8, 038.9, 995.91, 995.92	A40.0, A40.1, A40.3, A40.8, A40.9, A41.2, A41.01, A41.02, A41.1, A41.2, A41.4, A41.3, A41.50, A41.51, A41.52,



		A41.53, A41.59, A41.81, A41.89, A41.9, A42.7, A54.86, B37.7 R65.20, R65.21
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Supplementary Table 2. Adjusted odds ratio of adverse events after EMR.

	<b>GIB</b>	<b>Perforation</b>	<b>Cardiac</b>	<b>Infection</b>	<b>Any Admission</b>
<b>Age</b>	1.04 (1.03-1.05)	1.03 (1.00-1.05)	1.09 (1.08-1.10)	1.06 (1.04-1.07)	1.03 (1.02-1.03)
<b>CCI</b>	1.06 (1.01-1.11)	0.97 (0.84-1.12)	1.17 (1.12-1.22)	1.25 (1.19-1.32)	1.09 (1.06-1.11)
<b>Race (vs White)</b>					
Asian	0.55 (0.27-1.11)	0.89 (0.19-3.27)	0.38 (0.16-0.93)	0.99 (0.43-2.27)	0.73 (0.57-0.94)
Black	1.17 (0.87-1.57)	0.49 (0.18-1.36)	0.87 (0.62-1.22)	0.71 (0.42-1.19)	1.01 (0.90-1.14)
Hispanic	0.56 (0.34-0.91)	1.24 (0.57-2.73)	0.67 (0.42-1.08)	1.02 (0.59-1.78)	0.89 (0.76-1.04)
<b>Female (vs Male)</b>	0.79 (0.66-0.96)	0.99 (0.63-1.54)	0.80 (0.65-0.98)	0.95 (0.71-1.27)	0.98 (0.91-1.05)
<b>Procedure Year</b>	0.97 (0.91-1.04)	1.05 (0.88-1.24)	0.99 (0.92-1.07)	0.92 (0.82-1.02)	0.92 (0.90-0.95)
<b>Region (vs West)<sup>1</sup></b>					
Northeast	1.08 (0.78-1.50)	0.60 (0.27-1.32)	0.82 (0.57-1.17)	0.96 (0.58-1.58)	0.88 (0.76-1.01)
Midwest	1.17 (0.87-1.56)	0.70 (0.37-1.35)	0.94 (0.68-1.29)	1.00 (0.63-1.59)	1.09 (0.96-1.22)
South	0.94 (0.70-1.26)	0.83 (0.45-1.52)	1.09 (0.80-1.48)	1.14 (0.74-1.77)	1.25 (1.16-1.40)

<sup>1</sup>West (AZ, CO, ID, MT, NV, NM, UT, WY, AK, CA, HI, OR, WA); Northeast (CT, ME, MA, NH, RI, VT, NJ, NY, PA); Midwest (IL, IN, MI, OH, WI, IA, KS, MN, MO, NE, ND, SD); South (DE, DC, FL, GA, MD, NC, SC, VA, WV, AL, KY, TN, AR, LA, OK, TX).

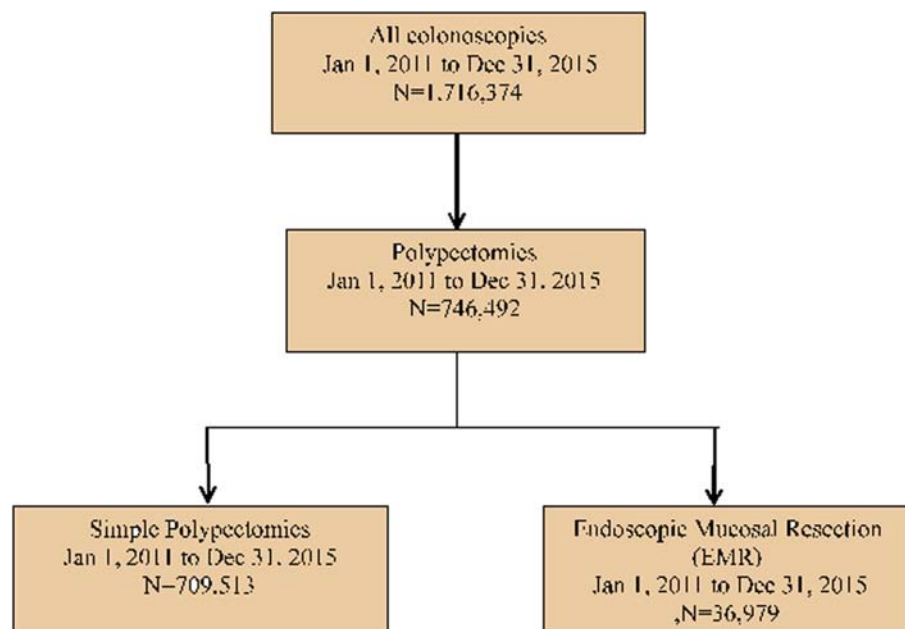
CCI, Charlson comorbidity index; EMR, endoscopic mucosal resection; GIB, gastrointestinal bleed

Supplementary Table 3. Adjusted odds ratio of adverse events after simple polypectomy

	<b>GIB</b>	<b>Perforation</b>	<b>Cardiac</b>	<b>Infection</b>	<b>Any Admission</b>
<b>Age</b>	1.06 (1.05-1.06)	1.04 (1.03-1.04)	1.10 (1.09-1.10)	1.06 (1.05-1.06)	1.03 (1.03-1.04)
<b>CCI</b>	1.26 (1.25-1.27)	1.12 (1.07-1.15)	1.25 (1.24-1.26)	1.34 (1.33-1.35)	1.29 (1.28-1.29)
<b>Race (vs White)</b>					
Asian	0.85 (0.76-0.95)	0.59 (0.26-0.95)	0.58 (0.50-1.67)	0.62 (0.51-0.75)	0.68 (0.64-0.72)
Black	1.30 (1.24-1.37)	0.93 (0.75-1.15)	1.17 (1.10-1.24)	1.30 (1.20-1.39)	1.28 (1.25-1.31)
Hispanic	1.07 (1.00-1.14)	0.90 (0.69-1.16)	0.93 (0.86-1.00)	1.12 (1.02-1.23)	1.09 (1.06-1.12)
<b>Female (vs Male)</b>					
	0.88 (0.84-0.91)	1.41 (1.24-1.61)	0.78 (0.75-0.82)	0.94 (0.89-0.99)	1.01 (0.88-1.03)
<b>Procedure Year</b>	0.96 (0.95-0.97)	0.84 (0.80-0.88)	0.94 (0.93-0.96)	0.95 (0.89-0.99)	0.92 (0.92-0.93)
<b>Region (vs West)<sup>1</sup></b>					
Northwest	1.36 (1.27-1.46)	1.31 (1.02-1.69)	1.43 (1.33-1.55)	1.15 (1.05-1.27)	1.39 (1.25-1.33)
Midwest	1.34 (1.25-1.44)	1.49 (1.18-1.87)	1.44 (1.34-1.55)	1.14 (1.04-1.25)	1.33 (1.29 -1.37)
South	1.28 (1.20-1.37)	1.21 (0.97-1.52)	1.28 (1.20-1.39)	1.14 (1.04-1.24)	1.24 (1.21-1.28)

<sup>1</sup>West (AZ, CO, ID, MT, NV, NM, UT, WY, AK, CA, HI, OR, WA); Northeast (CT, ME, MA, NH, RI, VT, NJ, NY, PA); Midwest (IL, IN, MI, OH, WI, IA, KS, MN, MO, NE, ND, SD); South (DE, DC, FL, GA, MD, NC, SC, VA, WV, AL, KT, MI, TN, AR, LA, OK, TX).

CCI, Charlson comorbidity index; EMR, endoscopic mucosal resection; GIB, gastrointestinal bleed



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