

Supplementary Material

Supplement Table 1. Sensitivity analysis in Patient and Polyp Characteristics

	Original Cohort				Propensity Score Matched Cohort*			
	EMR	UEMR	d	p	EMR	UEMR	d	p
No. of polyps	157	158			114	114		
Age (mean, SD)	63.4 (9.7)	65.2 (11.8)	.17	.14	63.2 (9.5)	64.0 (12.1)	.07	.59
Sex			.06	.61			.07	.58
Male	96 (61.1)	101 (63.9)			70 (61.4)	74 (64.9)		
Female	61 (38.9)	57 (36.1)			44 (38.6)	40 (35.1)		
Colon preparation			-.22	.05			.10	.40
Good-excellent	144 (91.7)	153 (96.8)			112 (98.2)	110 (96.5)		
Fair	13 (8.3)	5 (3.2)			2 (1.8)	4 (3.5)		
Polyp location			.02	.87			-.14	.28
Left Colon	70 (44.3)	69 (43.9)			45 (39.5)	53 (46.5)		
Right Colon	87 (55.1)	89 (56.7)			69 (60.5)	61 (53.5)		
Polyp size			.39	<.01			.03	.66
Mean (SD)	15.7 (6.1)	18.2 (7.7)			16.2 (6.7)	16.7 (6.8)		
Group			.35	.02			.16	.69
10-19 mm	112 (71.3)	88 (55.7)			75 (65.8)	73 (64)		
20-24 mm	31 (19.7)	41 (25.9)			26 (22.8)	31 (27.2)		
25-29 mm	8 (5.1)	17 (10.8)			7 (6.1)	7 (6.1)		
> 30 mm	6 (3.8)	12 (7.6)			6 (5.3)	3 (2.6)		
Polyp morphology			.23	.24			.06	.96
Type 0-Is	66 (42)	50 (31.6)			43 (37.7)	46 (40.4)		
Type IIa (LST-G)	29 (18.5)	36 (22.8)			21 (18.4)	21 (18.4)		
Type IIa (LST-NG)	42 (26.8)	53 (33.5)			35 (30.7)	34 (29.8)		
SSA/P (> 10 mm)	20 (12.7)	19 (12)			15 (13.2)	13 (11.4)		
Prior manipulation			.19	.09			.06	.66

	Original Cohort				Propensity Score Matched Cohort*			
	EMR	UEMR	d	p	EMR	UEMR	d	p
None	116 (73.9)	103 (65.2)			81 (71.1)	78 (68.4)		
Yes	41 (26.1)	55 (34.8)			33 (28.9)	36 (31.6)		
Polyp pathology			.26	.27			.10	.98
Adenoma without HGD	76 (48.4)	70 (44.3)			56 (49.1)	54 (47.4)		
HGD or CIS	54 (34.4)	62 (39.2)			39 (34.2)	42 (36.8)		
Adenocarcinoma (T1-shallow)	1 (0.6)	5 (3.2)			1 (0.9)	2 (1.8)		
Adenocarcinoma (T1-deep)	3 (1.9)	5 (3.2)			3 (2.6)	3 (2.6)		
SSA/P	23 (14.6)	16 (10.1)			15 (13.2)	13 (11.4)		
Water jet scope			.53	<.01			.01	.88
No	125 (79.6)	88 (55.7)			83 (72.8)	82 (71.9)		
Yes	32 (20.4)	70 (44.3)			31 (27.2)	32 (28.1)		

\* Variables in the propensity score included age, sex, colon preparation, polyp location, polyp size, polyp morphology, polyp pathology, usage of water jet, and prior endoscopic manipulation of the target polyp  
EMR: standard endoscopic mucosal resection; UEMR: underwater endoscopic mucosal resection; d: standardized difference; SD: standard deviation; d: standardized difference; LST-G: granular type lateral spreading tumor; LST-NG: non-granular type lateral spreading tumor; SSA/P: sessile serrated adenoma/polyp; HGD: high-grade dysplasia; CIS: carcinoma *in situ*

Supplement Table 2. Sensitivity analysis in Comparison of Resection Outcomes

	Original Cohort			Propensity Score Matched Cohort		
	EMR	UEMR	Difference (95% CI)	EMR	UEMR	Difference (95% CI)
No. of polyps	157	158		114	114	
Resection result						
En bloc	136 (86.6)	130 (82.3)	-4.3 ([-12.3]-3.6)	95 (83.3)	100 (87.7)	4.4 ([-4.7]-13.5)
Piecemeal	21 (13.4)	28 (17.7)		19 (16.7)	14 (12.3)	
Resection time						
Mean (SD)	10.3 (8.2)	9.9 (7.8)	-0.4 ([-2.1]-1.4)	11.1 (8.7)	8.4 (5.9)	-2.7 ([-4.6]-[-0.7])
Bleeding						
Intraprocedural	28 (17.8)	9 (5.7)	-12.1 ([-19.1]-[-5.1])	21 (18.4)	4 (3.5)	-14.9 ([-22.8]-[-7.0])
Delayed	2 (1.3)	2 (1.3)	0.0 ([-2.5]-2.5)	1 (0.9)	2 (1.8)	0.9 ([-2.1]-3.8)
Colon wall injury						
Muscle defect	2 (1.3)	3 (1.9)	0.6 (-2.2-3.4)	2 (1.8)	0 (0)	-1.8 ([-4.2]-0.7)
Delayed perforation	0 (0)	1 (0.6)	0.6 ([-0.6]-1.9)	0 (0)	1 (0.9)	0.9 ([-0.8]-2.6)

EMR: standard endoscopic mucosal resection; UEMR: underwater endoscopic mucosal resection; d: standardized difference; SD: standard deviation

Supplemental Fig. 1 Definition of endoscopic en bloc resection.

