

Table S1 Missing data for all predictors in the derivation cohort

Predictor Variable	Missing, <i>n</i>	Missing, %	Data Collection Source
Number of bowel movements per week	6	0.67	Questionnaire
Period from the last PEG to colonoscopy	8*	0.89	Questionnaire and Electronic Medical Record
Last bowel movement before colonoscopy	9*	1.0	Questionnaire

* Two variables were missed in one case

Table S2 Comparison between adequate and inadequate bowel preparation in the derivation cohort (*n*=815)

	Adequate (<i>n</i> =734)	Inadequate (<i>n</i> =81)	<i>P</i> value
Female	400 (54.5%)	43 (53.1%)	0.901
Age (years, mean (SD))	48.2 (14.5)	51.5 (18.1)	0.059
Diabetes	48 (6.5%)	10 (12.3%)	0.054
Number of bowel movements per week (median [IQR])	7.0 [7.0, 10.5]	2.8 [2.0, 7.0]	<0.001
Bowel movement stratification			
Normal	517 (70.4%)	27 (33.3%)	<0.001
Decreased movement	108 (14.7%)	42 (51.9%)	
Increased movement	109 (14.9%)	12 (14.8%)	
Bristol Stool Chart (mean (SD))	3.99 (1.31)	2.91 (1.81)	<0.001
Stool stratification			
Normal	520 (70.8%)	29 (35.8%)	<0.001
Dry	92 (12.5%)	39 (48.1%)	
Loose	122 (16.6%)	13 (16.0%)	
PEG volume			
2L	109 (14.9%)	25 (30.9%)	<0.001
3L	558 (76.0%)	51 (63.0%)	
4L	67 (9.1%)	5 (6.2%)	
Time of colonoscopy			
Morning	350 (47.7%)	34 (42.0%)	0.390
Afternoon	384 (52.3%)	47 (58.0%)	
Period from the last PEG to colonoscopy (hours, mean (SD))	6.21 (1.73)	6.25 (1.65)	0.853
Last bowel movement before colonoscopy			
1 day	607 (82.7%)	40 (49.4%)	<0.001
2 days	97 (13.2%)	15 (18.5%)	
≥3 days	30 (4.1%)	26 (32.1%)	
Total BBPS (mean (SD))	7.08 (0.82)	4.07 (1.49)	<0.001
BBPS of left hemicolon (mean (SD))	2.43 (0.50)	1.40 (0.66)	<0.001
BBPS of transverse colon (mean (SD))	2.50 (0.50)	1.54 (0.69)	<0.001
BBPS of right hemicolon (mean (SD))	2.17 (0.43)	1.13 (0.62)	<0.001
Reach the cecum	734 (100%)	70 (86.4%)	<0.001
Polyp detection	226 (30.8%)	18 (22.2%)	0.142
Left hemicolon polyps	133 (18.1%)	11 (13.6%)	0.388
Transverse colon polyps	84 (11.4%)	6 (7.4%)	0.361
Right hemicolon polyps	83 (11.3%)	9 (11.1%)	1

BBPS Boston Bowel Preparation Scale, *IQR* interquartile range, *PEG* polyethylene glycol, *SD* standard deviation

Table S3 Logistic regression analysis of potential risk factors for inadequate bowel preparation

Variable	Univariate			Multivariate		
	<i>B</i>	OR 95%CI	<i>P</i> value	<i>B</i>	OR 95%CI	<i>P</i> value
Bowel movement	Normal movement as a reference					
decreased	2.01	7.45 [4.43, 12.73]	<0.001	1.07	2.91 [1.42, 5.91]	0.003
increased	0.75	2.11 [1.00, 4.20]	0.040	1.07	2.90 [1.32, 6.09]	0.006
Last bowel movement ≥ 3 days before colonoscopy	2.41	11.09 [6.12, 20.10]	<0.001	1.78	5.93 [2.93, 12.02]	<0.001
Bristol stool scale	-0.50	0.60 [0.52, 0.71]	<0.001	-0.35	0.71 [0.57, 0.87]	0.001
PEG volume	2L PEG as a reference					
3L	-0.92	0.40 [0.24, 0.68]	<0.001	-1.31	0.27 [0.15, 0.50]	<0.001
4L	-1.12	0.33 [0.11, 0.83]	0.029	-1.99	0.14 [0.04, 0.40]	<0.001

CI confidence interval, *OR* odds ratio, *PEG* polyethylene glycol