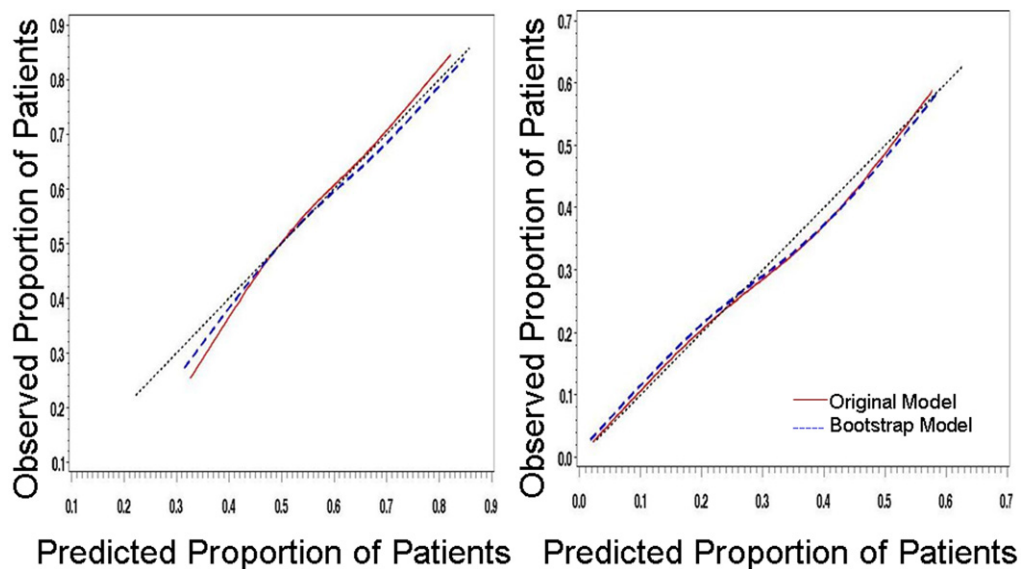


Supplementary Figure 1. CONSORT diagram. IBS, irritable bowel syndrome.

Supplementary Table 1. Variable Loading Factors for PC Scores

Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7
Anal resting pressure	0.44	0.60	0.15	-0.07	-0.18	-0.39	-0.49
Length of HPZ	0.12	0.06	-0.22	0.91	0.30	-0.14	-0.01
Anal squeeze pressure	0.39	-0.03	0.57	0.24	-0.17	0.66	-0.01
Anal squeeze duration	0.13	0.49	-0.49	-0.21	0.39	0.55	-0.002
Simulated evacuation: anal relaxation	-0.37	0.61	0.37	0.09	0.01	-0.09	0.58
Simulated evacuation: rectal pressure	0.21	-0.15	0.42	-0.22	0.82	-0.21	0.01
Simulated evacuation: anal Pressure	0.67	-0.09	-0.22	-0.11	-0.16	-0.20	0.65

NOTE. These loading factors were not applied to the raw anorectal variables but to the residual values obtained after partialling out the variation in each anorectal variable explained by age and BMI. More specifically, each of the anorectal variables was regressed on age and BMI and the resulting differences (observed value minus predicted value, ie, the residuals) were used in the principal components analysis. HPZ, high-pressure zone.



Supplementary Figure 2. Calibration plot for predicting which patients have a normal balloon expulsion test (*left panel*) and which control subjects (Controls) and patients have an abnormal balloon expulsion test (*right panel*). The x-axis corresponds to the predicted proportion of patients by decile of predicted probability, and the y-axis corresponds to the actual observed proportion of patients in each decile. The black dotted line represents the line of equality (ie, the predicted and actual proportions of patients in each decile are identical). The red and blue lines represent the initial model and final bootstrap models, respectively.