

Table S1 Comparisons of SCS ratios between males and females

| Colon segments | Male (n=96) | Female (n=109) | P |
|----------------|-------------------|-------------------|-------|
| R | 1.59 (1.45, 1.75) | 1.65 (1.46, 1.81) | 0.224 |
| S | 1.17 (1.07, 1.38) | 1.22 (1.13, 1.40) | 0.185 |
| D | 1.06 (0.99, 1.13) | 1.06 (1.00, 1.13) | 0.897 |
| T | 1.17 (1.09, 1.31) | 1.21 (1.08, 1.30) | 0.582 |
| A | 1.13 (0.95, 1.25) | 1.16 (0.90, 1.24) | 0.627 |
| RS | 12.7 (10.8, 15.2) | 12.8 (10.7, 15.2) | 0.975 |

Data are expressed as median (interquartile range). SCS, standardized colon size; R, rectum; S, sigmoid colon; D, descending colon; T, transverse colon; A, ascending colon; RS, rectosigmoid.

Table S2 Comparisons of SCS ratios among different ages

| Colon segments | 1 years (n=24) | 2 years (n=38) | 3 years (n=43) | 4 years (n=28) | 5 years (n=25) | 6 years (n=12) | 7 years (n=7) | 8 years (n=6) | 9 years (n=6) | 10 years (n=4) | 11 years (n=7) | 12 years (n=2) | 13 years (n=3) | P |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|-------|
| R | 1.59 (1.36, 1.77) | 1.47 (1.35, 1.70) | 1.62 (1.48, 1.73) | 1.70 (1.53, 1.84) | 1.71 (1.52, 1.92) | 1.76 (1.50, 1.95) | 1.76 (1.47, 1.82) | 1.65 (1.41, 1.91) | 1.60 (1.48, 1.97) | 1.54 (1.45, 1.74) | 1.76 (1.49, 1.94) | 1.36 (1.30, -) | 1.48 (1.44, -) | 0.069 |
| S | 1.23 (1.08, 1.40) | 1.17 (1.04, 1.26) | 1.17 (1.08, 1.32) | 1.27 (1.11, 1.48) | 1.27 (1.19, 1.52) | 1.22 (1.10, 1.52) | 1.21 (1.15, 1.51) | 1.27 (1.12, 1.55) | 1.17 (1.10, 1.47) | 1.16 (1.11, 1.18) | 1.21 (1.07, 1.44) | 1.07 (0.94, -) | 1.09 (0.99, -) | 0.252 |
| D | 1.07 (0.99, 1.20) | 1.05 (0.95, 1.11) | 1.07 (1.00, 1.15) | 1.08 (1.00, 1.22) | 1.08 (1.03, 1.14) | 1.09 (1.01, 1.21) | 1.01 (0.92, 1.04) | 1.04 (1.00, 1.07) | 1.03 (0.97, 1.13) | 1.11 (1.02, 1.13) | 1.05 (1.01, 1.13) | 1.07 (0.96, -) | 1.02 (1.02, -) | 0.813 |
| T | 1.23 (1.08, 1.33) | 1.15 (1.06, 1.25) | 1.17 (1.08, 1.32) | 1.22 (1.10, 1.31) | 1.21 (1.12, 1.31) | 1.34 (1.08, 1.45) | 1.10 (1.00, 1.26) | 1.19 (1.09, 1.32) | 1.19 (1.08, 1.42) | 1.17 (1.13, 1.20) | 1.19 (1.11, 1.32) | 1.09 (1.05, -) | 1.13 (1.03, -) | 0.909 |
| A | 1.18 (1.11, 1.23) | 1.16 (1.06, 1.23) | 1.19 (1.11, 1.31) | 1.25 (1.12, 1.32) | 1.23 (1.17, 1.31) | 1.23 (1.12, 1.42) | 1.07 (0.99, 1.24) | 1.21 (1.02, 1.31) | 1.34 (1.19, 1.51) | 1.18 (1.08, 1.33) | 1.18 (1.11, 1.40) | 1.21 (1.17, -) | 1.05 (1.00, -) | 0.218 |
| RS | 12.3 (8.71, 14.1) | 11.9 (9.45, 16.8) | 13.4 (11.1, 14.5) | 13.7 (11.3, 15.7) | 13.8 (12.0, 16.5) | 13.5 (12.0, 15.9) | 13.1 (12.2, 14.2) | 13.1 (8.72, 16.3) | 12.8 (10.2, 18.6) | 12.2 (10.9, 14.1) | 11.7 (9.07, 16.9) | 11.5 (10.8, -) | 11.3 (10.2, -) | 0.493 |

Data are expressed as median (interquartile range). SCS, standardized colon size; R, rectum; S, sigmoid colon; D, descending colon; T, transverse colon; A, ascending colon; RS, rectosigmoid.

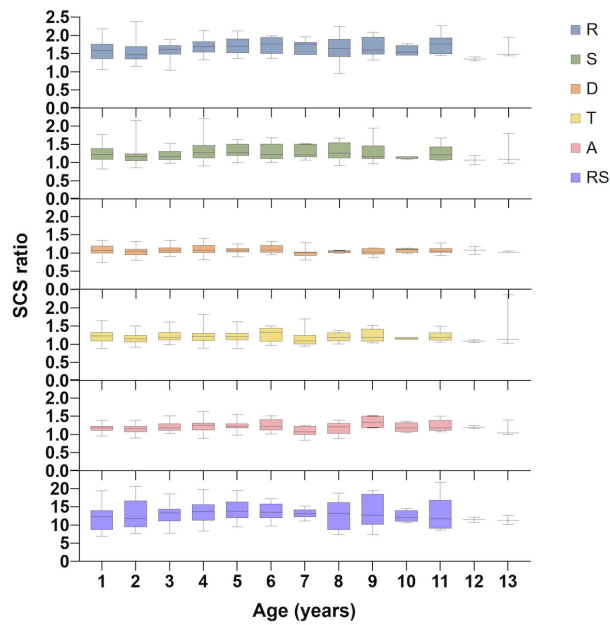
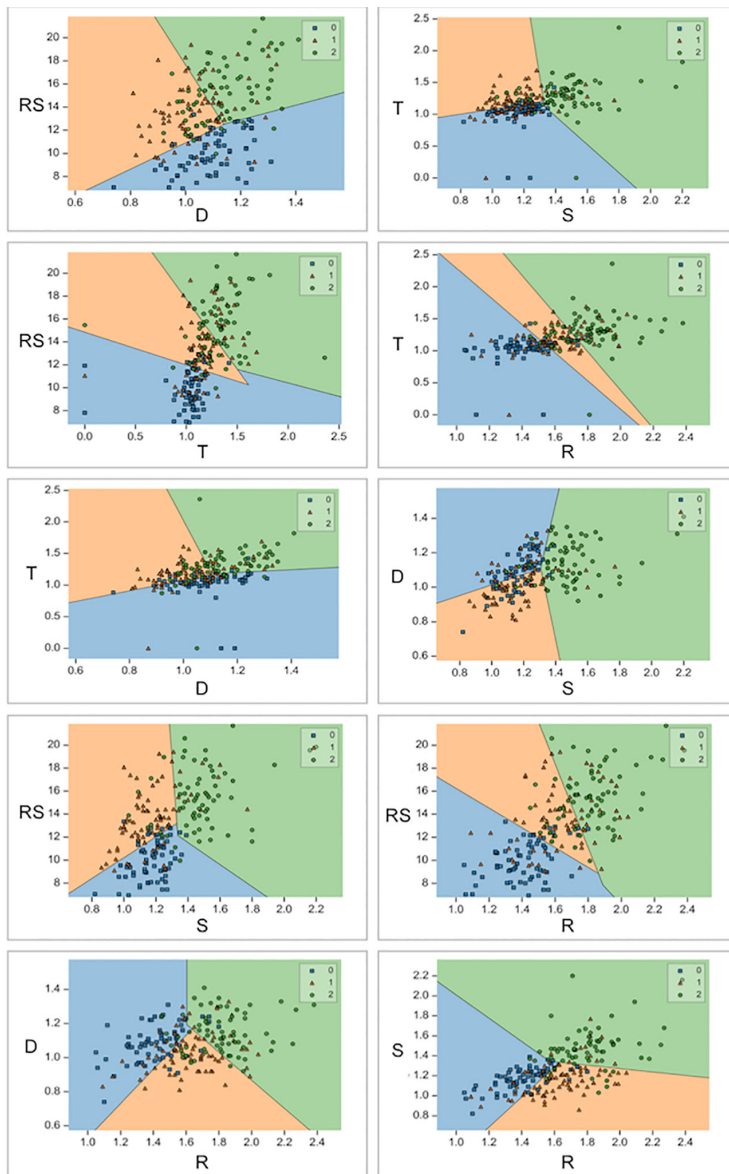


Figure S1 SCS ratios of colon segments in different ages. R, rectum; S, sigmoid colon; D, descending colon; T, transverse colon; A, ascending colon; RS, rectosigmoid; SCS, standardized colon size.



0: Control
 1: Functional constipation
 2: Refractory constipation

Figure S2 The decision boundaries of selected features. RS, rectosigmoid; T, transverse colon; D, descending colon; S, sigmoid colon.