



**MYSTERY OF THE RECTUM : PREVALENCE OF DIMINUTIVE ADENOMAS IN THE RECTUM**  
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**Background & Objective**

**Background**  
 While cancerous lesions in the rectum are often found to be invasive, their precursor lesions remain rather mysterious. Again, while hyperplastic polyps (HPs) in the rectum, adenomas and sessile serrated lesions (SSLs), especially superficial depressed type (IIC) de novo cancer lesions or nongranular-type LSTs (LST-NGs), are rarely found in the rectum. These observations suggest that the characteristics of cancer precursor lesions in the rectum need to be clarified in detail.

**Objective**  
 To clarify the endoscopic features of diminutive adenomas in the rectum.

**Results**

Of all the lesions examined, 11,586 were diagnosed as adenomas, Tis and T1 respectively, with the proportion of malignant lesions by location being highest in the rectum (11.7%; 64/545), followed by the sigmoid colon (8.4%; 221/2,639), the descending colon (4.0%; 39/987), the cecum (2.5%; 23/927), the ascending colon (2.5%; 54/2,121), the transverse colon (2.5%; 107/4,367), suggesting that malignant lesions were more likely to be found in the rectum than in the colon ( $p=0.033$ ) [Table1]. Furthermore, of the 6,337 diminutive adenomas, those in the transverse colon accounted for the largest proportion (40.5%;  $n = 2,566$ ), while those in the rectum accounted for the smallest (3.6%;  $n = 231$ ) with the proportion of Tis lesions being 1.3% ( $n = 3$ ) compared to less than 0.5% at other locations [Table2]. Of all the lesions pathologically definitively diagnosed as diminutive adenomas, those endoscopically diagnosed as adenomas, HP-like, and D-to-D lesions in the rectum and in the colon accounted for 88.7% (205/231) (rectum)/ 98.5% (6,053/6,106) (colon), 4.3% (10/231) (rectum)/ 0.3% (20/6,106) (colon), and 5.2% (12/231) (rectum)/ 0.4% (27/6,106) (colon), respectively. The occurrences of D-to-D lesions were significantly higher in the rectum than in the colon ( $p<0.001$ ) [Table3].

**Table1 Malignant rate in each location - Endoscopic resection in TF clinic-**

Pathology	R	S	D	T	A	C	Total
adenoma	481	2418	948	4260	2067	904	11078
Tis	55	213	38	99	53	21	479
T1	9	8	1	8	1	2	29
Total	64/545 (11.7%)	221/2639 (8.4%)	39/987 (4.0%)	107/4367 (2.5%)	54/2121 (2.5%)	23/927 (2.5%)	508/11586 (4.4%)

**Table2 Malignant rate in diminutive neoplastic lesion - Rectum vs Other locations (Colon)-**

Pathology	R	S	D	T	A	C	Total
adenoma	231 (3.6%)	1144	491	2566 (40.5%)	1293	612	6337 (100%)
Tis	3 (9.7%)	3	1	15 (48.4%)	5	4	31 (100%)
Total	3/234 (1.3%)	3/1147 (0.3%)	1/492 (0.2%)	15/2581 (0.6%)	5/1298 (0.4%)	4/616 (0.6%)	31/6368 (0.5%)

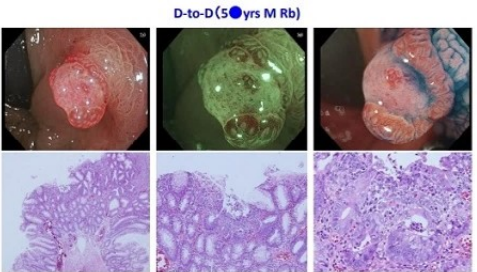
28/6134 (0.5%)

**Table3 Endoscopic diagnosis for diminutive adenoma**

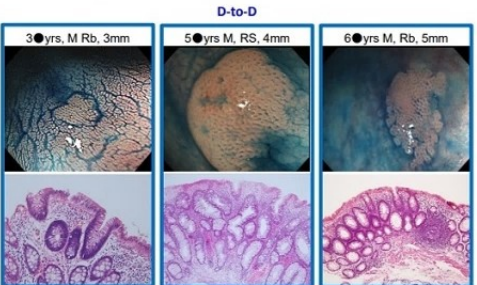
Location	Adenoma	HP-like	D-to-D	Others	Total
Rectum	205 (88.7%)	10 (4.3%)	12 (5.2%)	4 (1.7%)	231 (100%)
Colon	6053 (98.5%)	20 (0.3%)	27 (0.4%)	6 (0.1%)	6106 (100%)
S	1128 (98.6%)	8 (0.7%)	7	1	1144 (100%)
D	488 (95%)	1	2	0	491 (100%)
T	2552 (99.4%)	4	7 (0.3%)	3	2566 (100%)
A	1281 (99.1%)	6	5 (0.4%)	1	1293 (100%)
C	604 (98.7%)	1	6 (1.0%)	1	612 (100%)

**Design/Methods**

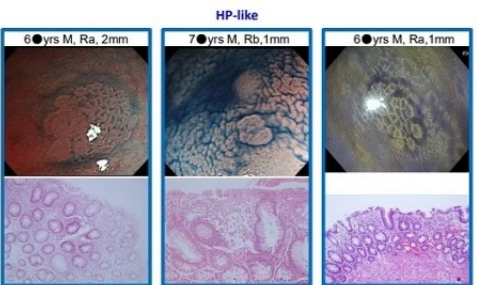
This study includes a total of 11,586 lesions endoscopically resected and pathologically diagnosed as adenomas, carcinoma in situ (Tis) or submucosal cancer (T1) at TF Clinic between July 2003 and October 2023. Of these, a total of 6,337 lesions pathologically definitively diagnosed as diminutive adenomas were classified according to their diagnosis, prior to endoscopic treatment. The categories include adenomas, HP-like, difficult-to-diagnose lesions (D-to-D) which were compared for their frequency of occurrence in the rectum versus colon. All lesions pathologically definitively diagnosed as HPs, SSLs and TSAs were excluded from analysis.



This lesion (Rb) was endoscopically suspected to be a non-neoplastic lesion, but pathologically it was revealed well-differentiated adenocarcinoma in the area with erosion.



These are three lesions that are difficult to diagnose endoscopically (D-to-D). Pathologically, these were diagnosed with tubular adenoma with low grade atypia.



These three lesions were endoscopically diagnosed to hyperplastic lesion. Pathologically, it was revealed tubular adenoma with low grade atypia.

**Conclusions**

It was suggested the rectum represents a unique part of the intestine quite distinct in its origin, growth and development from the colon.