

Supplementary Tables

Supplementary Table 1 Distribution of cases and images in the standard database

Dataset	Total cases (images)	polyps (images)	rNETs (images)	other submucosal tumors (images)	healthy (images)
Trainin g set	8709 (110865)	7401 (33737)	305 (1829)	806 (3417)	259 (71930)
Validat ion set	2178 (25305)	1889 (8558)	52 (296)	166 (807)	84(15655)
Test set	150 (1578)	50 (268)	16 (107)	31 (205)	67 (1008)

Supplementary Table 2 Comparison of artificial intelligence and endoscopist performance in lesions detection based on the lesion as the unit

Group	Precision	Recall	F1
Expert ¹	0.970 (0.013) ²	0.930 (0.004)	0.950 (0.008)
Senior ¹	0.885 (0.037)	0.968 (0.012)	0.925 (0.015)
Novice ¹	0.863 (0.004) ³	0.980 (0.002) ³	0.917 (0.001) ³
mean-doctor	0.906 (0.054)	0.959 (0.024)	0.931 (0.017) ³
AI	0.975	0.940	0.957

1: Value is the mean of the values of the two endoscopy physicians. 2: Variance is in brackets. 3: The results are statistically significant ($P < 0.05$).

Supplementary Table 3 Comparison of artificial intelligence and endoscopist performance in the detection of submucosal lesions from the detected lesions based on the lesion as the unit

Group	Precision	Recall	F1
Expert ¹	0.939 (0.060) ²	0.848 (0.057)	0.889 (0.004)
Senior ¹	0.862 (0.033)	0.883 (0.030)	0.871 (0.002) ³
Novice ¹	0.809 (0.040)	0.742 (0.048)	0.772 (0.008) ³
mean-doctor	0.870 (0.068) ³	0.824 (0.075)	0.844 (0.056)
Ai	0.981	0.846	0.909

1: Value is the mean of the values of the two endoscopy physicians. 2: Variance is in brackets. 3: The results are statistically significant (P <0.05).

Supplementary Table 4 Comparison of artificial intelligence and endoscopist performance in the identification of rectal neuroendocrine tumors from the detected submucosal lesions based on the lesion as the unit

Group	Precision	Recall	F1
Expert ¹	0.854 (0.044) ²	0.775 (0.049)	0.810 (0.008)
Senior ¹	0.673 (0.001) ³	0.692 (0.070)	0.650 (0.052)
Novice ¹	0.625 (0.065)	0.565 (0.016) ³	0.588 (0.016) ³
mean-doctor	0.717 (0.113) ³	0.677 (0.102)	0.683 (0.106) ³
Ai	0.940	0.801	0.864

1: Value is the mean of the values of the two endoscopy physicians. 2: Variance is in brackets. 3: The results are statistically significant (P <0.05).

Supplementary Table 5 Comparison of performance in the identification of rectal neuroendocrine tumors from all the images based on the lesion as the unit

Group	Precision	Recall	F1
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Expert ¹	0.809 (0.004) ^{2,3}	0.752 (0.033)	0.779 (0.016)
Senior ¹	0.470 (0.047) ³	0.771 (0.033)	0.584 (0.045) ³
Novice ¹	0.468 (0.089) ³	0.379 (0.086) ³	0.410 (0.017) ³
mean-doctor	0.582 (0.181) ³	0.634 (0.203)	0.591 (0.167) ³
AI	0.940	0.729	0.821

1: Value is the mean of the values of the two endoscopy physicians. 2: Variance is in brackets. 3: The results are statistically significant (P <0.05).