



Supplementary Figure 1

**Supplementary Table 1.** Demographic information, lesion characteristics, and procedural outcomes of duodenal SMTs

	<b>SMTs in duodenu, (<i>n</i> = 137)</b>
<b>Demographic information</b>	
Male, n (%)	70 (51.1)
Age (years), mean $\pm$ SD	53.1 $\pm$ 11.6
History of gastric endoscopic or surgical treatment, n (%)	0 (0.0)
Hypertension, n (%)	34 (24.8)
Diabetes mellitus, n (%)	5 (3.6)
<b>Lesion characteristics</b>	
Growth pattern, n (%)	
Intraluminal growth	120 (87.6)
Extraluminal growth	17 (12.4)
Morphology, n (%)	
Regular	126 (92.0)
Irregular	11 (8.0)
Mucosa, n (%)	
Smooth	118 (86.1)
Anabrotic or ulcerative	19 (13.9)
Location, n (%)	
Duodenal bulb	68 (49.6)
Descending part (Near the papilla)	19 (13.9)
Descending part (Not near the papilla)	49 (35.8)
Horizontal part	1 (0.7)
Infiltration depth, n (%)	
Submucosa	86 (62.8)
Muscularis propria	51 (37.2)

Max diameter (mm), mean  $\pm$  SD 13.2  $\pm$  7.0

**Procedural outcomes**

Endoscopic methods, n (%)

Electric cutting	3 (2.2)
EMR	28 (20.4)
ESD	65 (47.4)
EFTR	37 (27.0)
EPMR	4 (2.9)

Intraoperative endoscopic instruments, n (%)

Hook Knife	39 (28.5)
Dual Knife	10 (7.3)
IT Knife	49 (35.8)
Snare	61 (44.5)

Suturing technique, n (%)

Metal clip	107 (78.1)
Purse-string suturing	30 (21.9)

Histopathologic evaluation, n (%)

Ectopic pancreas	29 (21.2)
Lipoma	14 (10.2)
NET	17 (12.4)
GIST	29 (21.2)
Brunner gland adenoma	37 (27.0)
Others	11 (8.0)

Submucosal fibrosis, n (%) 12 (8.8)

En-bloc resection, n (%) 107 (78.1)

Complete resection, n (%) 107 (78.1)

Stomach tube, n (%)	93 (67.9)
Surgery time (min), mean $\pm$ SD	36.7 $\pm$ 29.8
Hospital stay (day), mean $\pm$ SD	6.0 $\pm$ 9.7
Complications, n (%)	8 (5.8)
Recurrence, n (%)	0 (0.0)

SD, Standard deviation; EMR, Endoscopic mucosal resection; ESD, Endoscopic submucosal dissection; EFTR, Endoscopic full-thickness resection; EPMR, Endoscopic piecemeal mucosal resection; NET, Neuroendocrine tumor; GIST, Gastrointestinal Stromal Tumor.

**Supplementary Table 2.** Demographic information, lesion characteristics and procedural outcomes of the training and validation cohorts

	Training cohort (n=95)	Validation cohort (n=42)	P value
<b>Demographic information</b>			
Male, n (%)	47 (49.5)	23 (54.8)	0.568
Age (years), mean $\pm$ SD	53.2 $\pm$ 12.1	52.9 $\pm$ 10.5	0.912
Hypertension, n (%)	22 (23.2)	12 (28.6)	0.499
Diabetes mellitus, n (%)	3 (3.2)	2 (4.8)	1.000
<b>Lesion characteristics</b>			
Growth pattern, n (%)			0.496
Intraluminal growth	82 (86.3)	38 (90.5)	
Extraluminal growth	13 (13.7)	4 (9.5)	
Morphology, n (%)			1.000
Regular	87 (91.6)	39 (92.9)	
Irregular	8 (8.4)	3 (7.1)	
Mucosa, n (%)			0.925

Smooth	82 (86.3)	36 (85.7)	
Anabrotic or ulcerative	13 (13.7)	6 (14.3)	
Location, n (%)			0.185
Duodenal bulb	43 (45.3)	25 (59.5)	
Descending part (Near the papilla)	12 (12.6)	7 (16.7)	
Descending part (Not near the papilla)	39 (41.1)	10 (23.8)	
Horizontal part	1 (1.1)	0 (0.0)	
Infiltration depth, n (%)			0.531
Submucosa	58 (61.1)	28 (66.7)	
Muscularis propria	37 (38.9)	14 (33.3)	
Max diameter (mm), mean $\pm$ SD	13.4 $\pm$ 6.5	12.8 $\pm$ 7.9	0.612
<b>Procedural outcomes</b>			
Endoscopic methods, n (%)			
Electric cutting	3 (3.2)	0 (0.0)	0.136
EMR	21 (22.1)	7 (16.7)	0.467
ESD	40 (42.1)	25 (59.5)	0.060
EFTR	28 (29.5)	9 (21.4)	0.328
EPMR	3 (3.2)	1 (2.4)	1.000
Intraoperative endoscopic instruments, n (%)			
Hook Knife	27 (28.4)	12 (28.6)	0.986
Dual Knife	7 (7.4)	3 (7.1)	1.000
IT Knife	34 (35.8)	15 (35.7)	0.993
Snare	43 (45.3)	18 (42.9)	0.794
Suturing technique, n (%)			0.719
Metal clip	75 (78.9)	32 (76.2)	
Purse-string suturing	20 (21.1)	10 (23.8)	

Histopathologic evaluation, n (%)			
Ectopic pancreas	21 (22.1)	8 (19.0)	0.686
Lipoma	12 (12.6)	2 (4.8)	0.273
NET	10 (10.5)	7 (16.7)	0.315
GIST	21 (22.1)	8 (19.0)	0.686
Brunner gland adenoma	24 (25.3)	13 (31.0)	0.489
Others	7 (7.4)	4 (9.5)	0.931
Submucosal fibrosis, n (%)	8 (8.4)	4 (9.5)	1.000
En-bloc resection, n (%)	74 (77.9)	33 (78.6)	0.930
Complete resection, n (%)	74 (77.9)	33 (78.6)	0.930
Stomach tube, n (%)	66 (69.5)	27 (64.3)	0.549
Surgery time (min), mean $\pm$ SD	35.8 $\pm$ 29.7	39.0 $\pm$ 30.1	0.572
Hospital stay (day), mean $\pm$ SD	6.0 $\pm$ 10.1	6.0 $\pm$ 9.1	0.966
Complications, n (%)	5 (5.3)	3 (7.1)	0.970

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