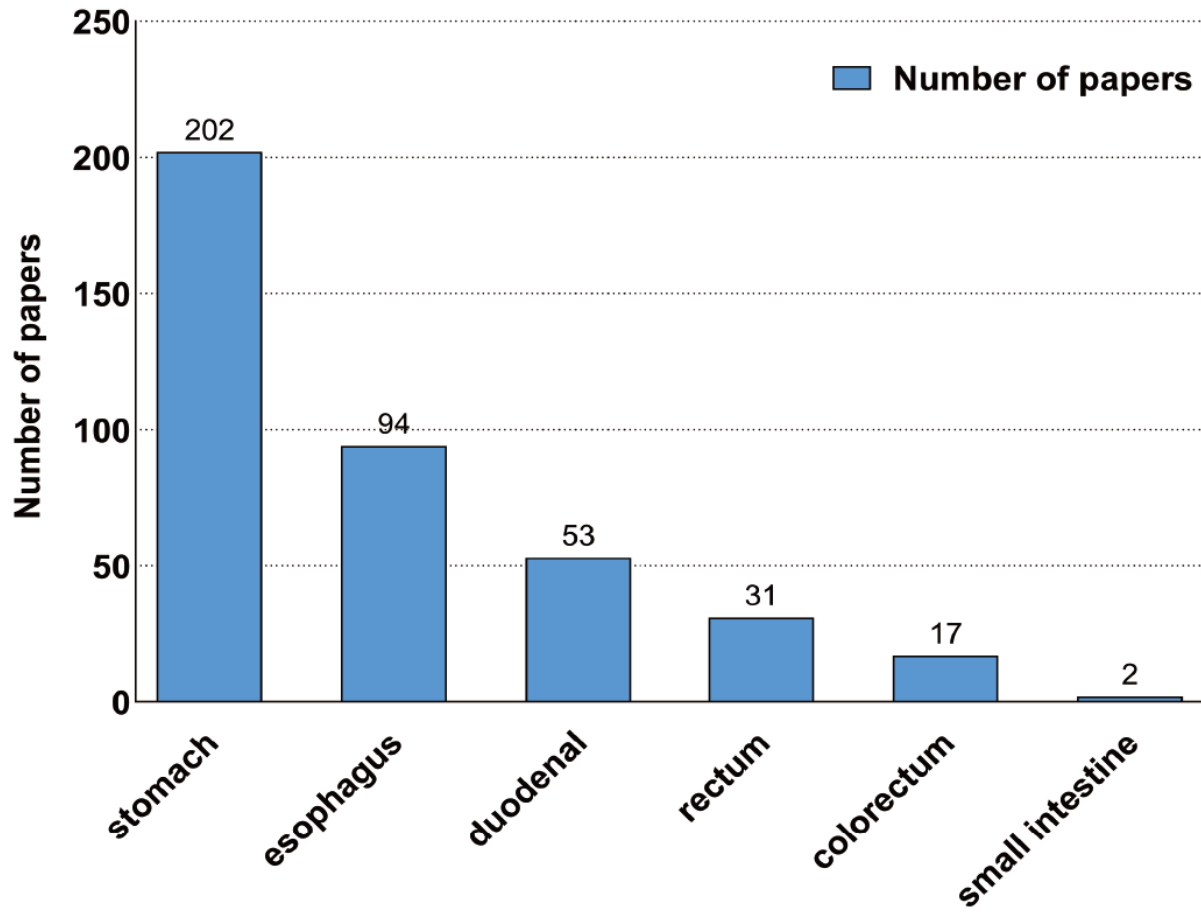
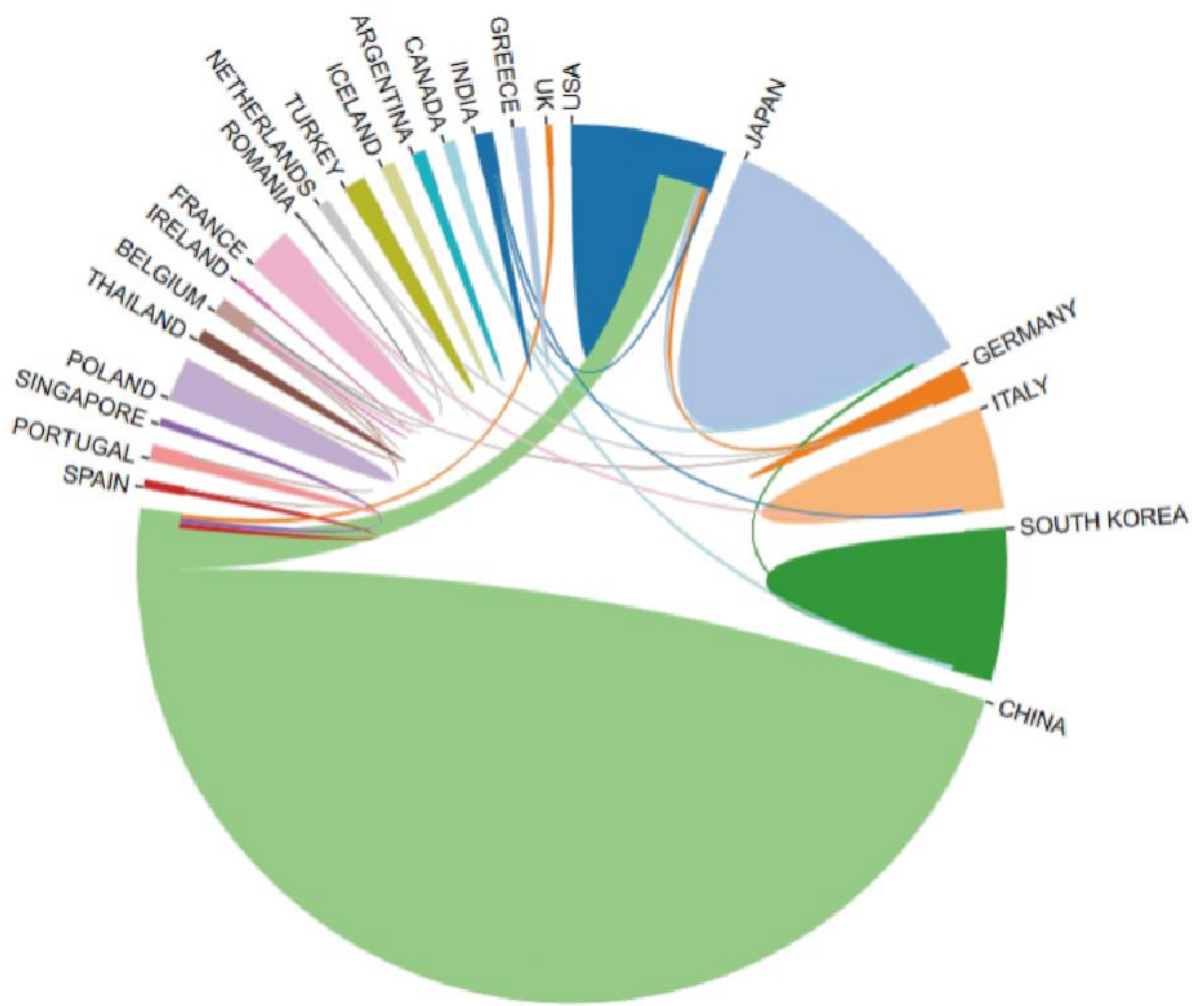


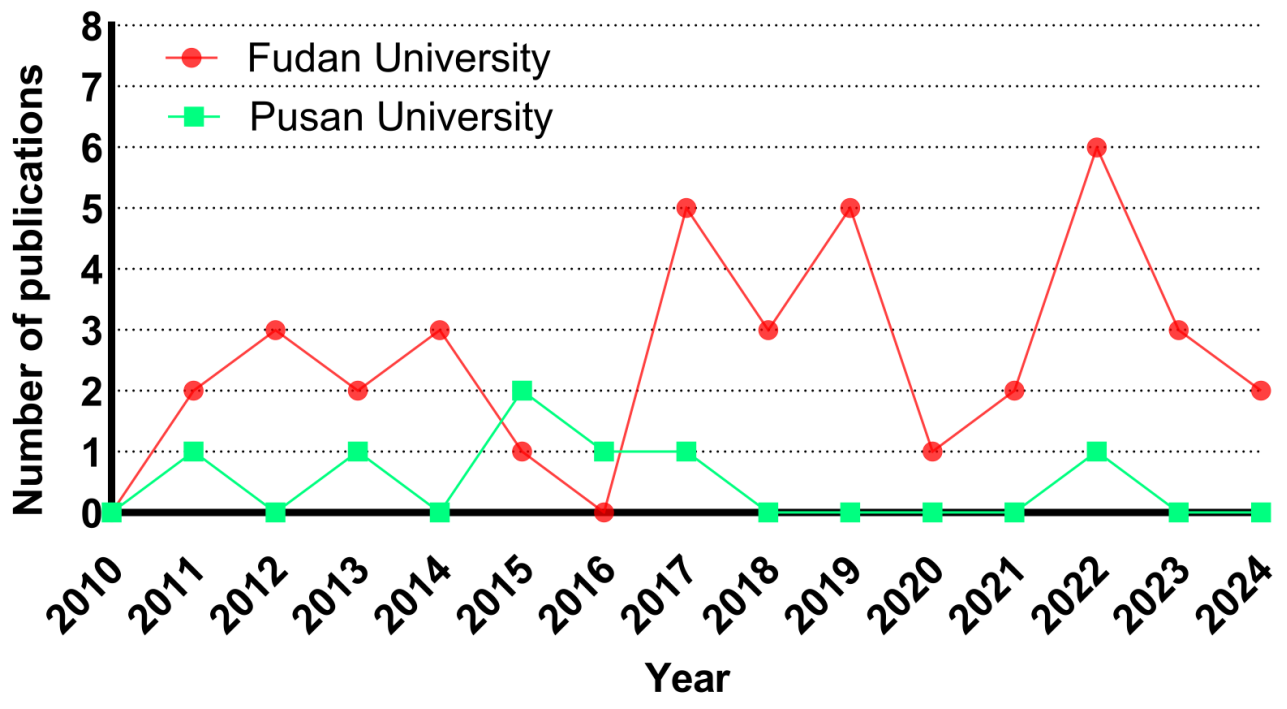
Supplementary materials



Supplementary Figure 1 Publications on different parts of the gastrointestinal tract.

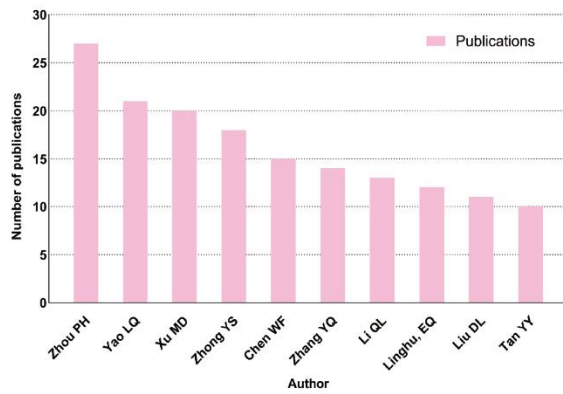


Supplementary Figure 2 Charticulator's map of worldwide countries/regions. The thickness of links between countries/regions symbolizes collaboration, whereas the ring surface area denotes publications.

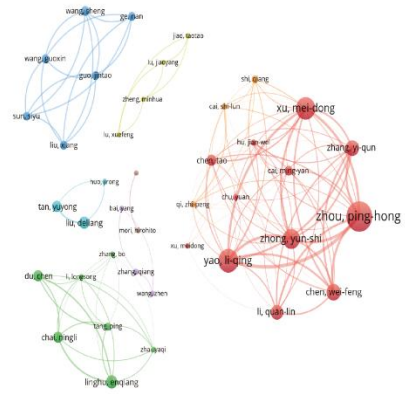


Supplementary Figure 3 Number of publications in Fudan University and Pusan University per year from 2010 to 2024.

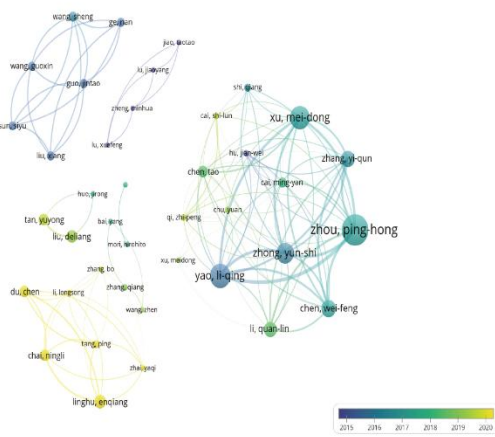
A



B



C



D



Supplementary Figure 4 Contribution of authors to global publication. A: Different author's number of publications and average citation. B-D: VOSviewer's network map, overlay map and density map, respectively, showing authors with more than 5 publications. The size of nodes and thickness of linkages indicate publishing quantity and connection strength.

Supplementary Table 1. Top 10 productive countries/regions related to endoscopy application in submucosal tumor.

Rank	Countries	Count	Percentage (% of 339)	Year	Centrality
1	Mainland China	212	62.54%	2011	0.37
2	Japan	47	13.86%	2010	0.11
3	USA	28	8.26%	2011	0.34
4	South Korea	24	7.08%	2011	0.00
5	Italy	12	3.54%	2013	0.06
6	Germany	9	2.65%	2011	0.47
7	France	4	1.18%	2016	0.13
8	Poland	4	1.18%	2020	0.00
9	Spain	4	1.18%	2015	0.09
10	Taiwan	4	1.18%	2021	0.00

Supplementary Table 2. Top 12 institutes in the publications on endoscopy applications in submucosal tumor.

Rank	Institution	Country	Document	Total citation	Average citation	TLS	Centrality	Year
1	Fudan University	China	38	1348	35.47	7	0.04	2011
2	Central South University	China	17	280	16.47	1	0.00	2015
3	China Medical University	China	13	224	17.23	0	0.00	2015
4	Chinese People's Liberation Army General Hospital	China	11	184	16.73	1	0.01	2017
5	Nanjing Medical University	China	11	157	14.27	6	0.02	2014
6	Qingdao University	China	9	85	9.44	1	0.00	2019
7	Shanghai Jiao Tong University	China	9	199	22.11	13	0.00	2014
8	Harvard Medical School	USA	8	197	24.63	5	0.01	2016
9	Shandong University	China	8	175	21.88	11	0.00	2014
10	Southern Medical University	China	8	60	7.50	0	0.00	2012
11	Tongji University	China	8	74	9.25	5	0.00	2019
12	Pusan National University	South Korea	7	93	13.29	0	0.00	2011

TLS, Total Link Strength.

Supplementary Table 3. Top 10 most productive authors and co-cited authors with the highest citations.

Rank	Author	Institution	Documents	Total Citations
1	Zhou PH	Fudan University	27	1167
2	Yao LQ	Fudan University	21	1083
3	Xu MD	Fudan University	20	1006
4	Zhong YS	Fudan University	18	950
5	Chen WF	Fudan University	15	887
6	Zhang YQ	Fudan University	14	887
7	Li QL	Fudan University	13	320
8	Linghu EQ	Chinese Peoples Liberate Army Gen Hospital	12	147
9	Liu DL	Central South University	11	198
10	Chai NL	Chinese Peoples Liberate Army Gen Hospital	10	117

Supplementary Table 4. Top 10 most cited articles in the field of endoscopy and submucosal tumor from 2010 to 2024[1-10]

Rank	Journal	Title	Citation	Author	Affiliations
1	SURGICAL ENDOSCOPY AND OTHER INTERVENTIO NAL TECHNIQUES	Endoscopic full-thickness resection without laparoscopic assistance for gastric submucosal tumors originated from the muscularis propria	291	Zhou PH, et al.	Fudan Univ, Zhongshan Hosp, Endoscopy Ctr, 180 Fenglin Rd, Shanghai 200032, Peoples R China
2	GASTROINTE STINAL ENDOSCOPY	Submucosal tunneling endoscopic resection: a new technique for treating upper GI submucosal tumors originating from the muscularis propria layer	278	Xu MD, et al.	Fudan Univ, Zhongshan Hosp, Endoscopy Ctr, 180 Fenglin Rd, Shanghai 200032, Peoples R China Klinikum
3	ENDOSCOPY	Endoscopic full-thickness resection in the colorectum with a novel over-the-scope device: first experience	150	Schmidt, A, et al.	Ludwigsburg, Med Klin 1, Posilipo Str 1-4, D-71640 Ludwigsburg, Germany
4	SURGICAL ENDOSCOPY AND OTHER INTERVENTIO NAL TECHNIQUES	Endoscopic submucosal dissection for colorectal tumors-1,000 colorectal ESD cases: one specialized institute's experiences	150	Lee, EJ, et al.	Daehang Hosp, Dept Surg, 481-10 Bangbae Seocho, Seoul 137820, South Korea
5	ENDOSCOPY	Complete closure of large gastric defects after endoscopic full-thickness resection, using endoloop and metallic clip interrupted suture	134	Shi Q, et al.	Fudan Univ, Zhongshan Hosp, Endoscopy Ctr, 180 FengLin Rd, Shanghai 200032, Peoples R China
6	CANCER	Diagnostic and Treatment Strategy for Small Gastrointestinal Stromal Tumors	129	Nishida, T., et al.	Natl Canc Ctr, Dept Surg, Chuo Ku, 5-5-1 Tsukiji, Tokyo 1040045, Japan
7	ENDOSCOPY	Endoscopic management of subepithelial lesions including neuroendocrine neoplasms: European Society of Gastrointestinal Endoscopy (ESGE) Guideline	115	Deprez P. H., et al.	Catholic Univ Louvain, Hepatogastroenterol Dept, Clin Univ St Luc, Ave Hippocrate 10, B-1200 Brussels,

					Belgium
					Fudan Univ,
					Zhongshan Hosp,
					Endoscopy Ctr,
					Endoscopy Res Inst,
					180 Fenglin Rd,
					Shanghai 200032,
					Peoples R China
					So Med Univ, Dept
					Gastroenterol,
					Nanfang Hosp,
					Guangzhou 510515,
					Guangdong, Peoples
					R China
					Fudan Univ,
					Endoscopy Ctr,
					Zhongshan Hosp,
					180 FengLin Rd,
					Shanghai 200032,
					Peoples R China
8	JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS	Long-term Outcomes of Submucosal Tunneling Endoscopic Resection for Upper Gastrointestinal Submucosal Tumors	114	Chen T, et al.,	
9	ENDOSCOPY	Preliminary experience of endoscopic submucosal tunnel dissection for upper gastrointestinal submucosaltumors	113	Gong W, et al.	
10	GASTROINTE STINAL ENDOSCOPY	Submucosal tumors of the esophagogastric junction originating from the muscularis propria layer: a large study of endoscopic submucosal dissection layer	110	Li QL, et al.	

Supplementary Table 5. Top 10 keywords with the highest co-occurrence frequency.

Rank	Keyword	Occurrences	TLS	Centrality
1	Management	91	683	0.16
2	Diagnosis	83	611	0.34
3	Endoscopic submucosal dissection	71	388	0.26
4	Full-thickness resection	52	454	0.15
5	Submucosal tunneling endoscopic resection	39	281	0.23
6	Closure	24	173	0.26
7	EUS	18	172	0.08
8	Fine needle aspiration	17	139	0.19
9	GIST	10	155	0.02
10	Long-term outcome	9	110	0.04

EUS, Endoscopic Ultrasound; GIST, Gastrointestinal Stromal Tumors; TLS, Total Link Strength.

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5. Shi Q, Chen T, Zhong YS, Zhou PH, Ren Z, Xu MD, Yao LQ (2013) Complete closure of large gastric defects after endoscopic full-thickness resection, using endoloop and metallic clip interrupted suture. *Endoscopy* 45:329-334
6. Nishida T, Goto O, Raut CP, Yahagi N (2016) Diagnostic and Treatment Strategy for Small Gastrointestinal Stromal Tumors. *Cancer* 122:3110-3118
7. Deprez PH, Moons LMG, O'Toole D, Gincul R, Seicean A, Pimentel-Nunes P, Fernandez-Esparrach G, Polkowski M, Vieth M, Borbath I, Moreels TG, van Dijkum EN, Blay J-Y, van Hooft JE (2022) Endoscopic management of subepithelial lesions including neuroendocrine neoplasms: European Society of Gastrointestinal Endoscopy (ESGE) Guideline. *Endoscopy* 54:412-429
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9. Gong W, Xiong Y, Zhi F, Liu S, Wang A, Jiang B (2012) Preliminary experience of endoscopic submucosal tunnel dissection for upper gastrointestinal submucosal tumors. *Endoscopy* 44:231-235
10. Li Q-L, Yao L-Q, Zhou P-H, Xu M-D, Chen S-Y, Zhong Y-S, Zhang Y-Q, Chen W-F, Ma L-L, Qin W-Z (2012) Submucosal tumors of the esophagogastric junction originating from the muscularis propria layer: a large study of endoscopic submucosal dissection. *Gastrointestinal Endoscopy* 75:1153-1158