

Supplemental Table 1. Comparison of maneuverability between the duodenoscope types

	Rating scale*	Single-use (n=48)	Reusable (n=50)	p-value	
Intubation into esophagus:	Mean (SD)	1.2 (0.6)	1.0 (0.2)	0.088	
	n (%)	1	42 (87.5)		48 (96.0)
		2	4 (8.3)		2 (4.0)
		3	1 (2.1)		0
		4	1 (2.1)		0
		5	0		0
Passage into stomach:	Mean (SD)	1.2 (0.6)	1.0 (0.1)	0.047	
	n (%)	1	42 (87.5)		49 (98.0)
		2	4 (8.3)		1 (2.0)
		3	1 (2.1)		0
		4	1 (2.1)		0
		5	0		0
Navigation across pylorus:	Mean (SD)	1.1 (0.5)	1.0 (0.2)	0.259	
	n (%)	1	44 (91.7)		48 (96.0)
		2	3 (6.3)		2 (4.0)
		3	0		0
		4	1 (2.1)		0
		5	0		0
Achieving short position of the scope:	Mean (SD)	1.2 (0.7)	1.1 (0.3)	0.106	
	n (%)	1	42 (87.5)		48 (96.0)
		2	2 (4.2)		1 (2.0)
		3	3 (6.3)		1 (2.0)
		4	1 (2.1)		0
		5	0		0
Achieving optimal papillary position:	Mean (SD)	1.3 (0.7)	1.1 (0.4)	0.255	
	n (%)	1	41 (85.4)		46 (92.0)
		2	3 (6.3)		2 (4.0)
		3	3 (6.3)		2 (4.0)
		4	1 (2.1)		0
		5	0		0

Abbreviations: SD, standard deviation

* Overall mean scores (SD) for duodenoscope maneuverability are 1.20 (0.50) for single-use duodenoscopes and 1.06 (0.16) for reusable duodenoscopes, p=0.065

Supplemental Table 2. Comparison of mechanical and imaging characteristics between the duodenoscope types

	Rating scale*	Single-use (n=48)	Reusable (n=50)	p-value	
Scope stiffness:	Mean (SD)	1.4 (0.7)	1.1 (0.2)	0.005	
	n (%)	1	36 (75.0)		47 (94.0)
		2	7 (14.6)		3 (6.0)
		3	4 (8.3)		0
		4	1 (2.1)		0
		5	0		0
Image quality:	Mean (SD)	1.5 (0.9)	1.0 (0)	<0.001	
	n (%)	1	33 (68.8)		50 (100)
		2	8 (16.7)		0
		3	5 (10.4)		0
		4	2 (4.2)		0
		5	0		0
Image stability:	Mean (SD)	1.5 (0.9)	1.0 (0)	<0.001	
	n (%)	1	34 (70.8)		50 (100)
		2	6 (12.5)		0
		3	6 (12.5)		0
		4	2 (4.2)		0
		5	0		0
Air-water button functionality:	Mean (SD)	1.8 (1.2)	1.0 (0.1)	<0.001	
	n (%)	1	30 (62.5)		49 (98.0)
		2	5 (10.4)		1 (2.0)
		3	5 (10.4)		0
		4	7 (14.6)		0
		5	1 (2.1)		0
Elevator efficiency:	Mean (SD)	1.4 (0.9)	1.1 (0.6)	0.055	
	n (%)	1	36 (75.0)		47 (94.0)
		2	8 (16.7)		2 (4.0)
		3	1 (2.1)		0
		4	2 (4.2)		0
		5	1 (2.1)		1 (2.0)
Hand strain:	Mean (SD)	1.2 (0.5)	1.1 (0.3)	0.450	
	n (%)	1	42 (87.5)		44 (88.0)
		2	3 (6.3)		6 (12.0)
		3	3 (6.3)		0
		4	0		0
		5	0		0

Abbreviations: SD, standard deviation

* Overall mean scores (SD) for duodenoscope mechanical and imaging characteristics are 1.47 (0.72) for single-use duodenoscopes and 1.05 (0.14) for reusable duodenoscopes, $p < 0.001$.

Supplemental Table 3. Comparison of the ability to perform biliary interventions between the duodenoscope types*

	Rating scale†	Single-use duodenoscope	Reusable duodenoscope	p-value	
Sphincterotomy:	Mean (SD)	1.1 (0.4)	1.1 (0.4)	0.968	
	n (%)	1	38 (88.4)		36 (85.7)
		2	4 (9.3)		6 (14.3)
		3	1 (2.3)		0
		4	0		0
		5	0		0
Sphincteroplasty:	n (%)	1	3 (100)	1 (100)	0.999
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.1 (0.4)		
Balloon sweep:	n (%)	1	23 (92.0)	24 (96.0)	0.999
		2	2 (8.0)	0	
		3	0	1 (4.0)	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.1 (0.4)		
Use of basket:	n (%)	1	0	1 (100)	0.157
		2	1 (100)	0	
		3	0	0	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.2 (0.5)		
Mechanical lithotripsy:	n (%)	1	1 (100)	0	-
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.2 (0.5)		
Stone clearance:	n (%)	1	19 (90.5)	19 (86.4)	0.499
		2	2 (9.5)	2 (9.1)	
		3	0	1 (4.5)	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.2 (0.5)		
Stricture dilation using balloon:	n (%)	1	3 (100)	2 (100)	0.999
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.2 (0.5)		
Stricture dilation using catheter:	n (%)	1	1 (100)	0	-
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
	Mean (SD)	1.1 (0.3)	1.2 (0.5)		

Stent insertion:	Mean (SD)	1.4 (0.5)	1.3 (0.7)	0.793
	n (%)	1	13 (81.3)	
		2	1 (6.3)	
		3	2 (12.5)	
		4	0	
		5	0	
Single operator cholangioscopy:	n (%)	1	1 (100)	0.999
		2	0	
		3	0	
		4	0	
		5	0	
		5	0	
Biopsies:	n (%)	1	1 (100)	0.999
		2	0	
		3	0	
		4	0	
		5	0	
		5	0	

Abbreviations: SD, standard deviation

* Overall mean scores (SD) for the ability to perform interventions are 1.14 (0.31) for single-use duodenoscopes and 1.20 (0.40) for reusable duodenoscopes, $p=0.427$.

† Given the small number of subjects and absence of variation in the data, mean scores (SD) were not calculated for the following items: Sphincteroplasty, use of basket, mechanical lithotripsy, stricture dilation using balloon/catheter, single operator cholangioscopy, biopsies.

Supplemental Table 4. Comparison of the ability to perform pancreatic/other interventions between the duodenoscope types

	Rating scale*	Pancreatic/other interventions			
		Single-use duodenoscope	Reusable duodenoscope	p-value	
Sphincterotomy:	n (%)	1	2 (100)	6 (100)	0.999
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
Stricture dilation using balloon:	n (%)	1	0	1 (50)	-
		2	0	0	
		3	0	1 (50)	
		4	0	0	
		5	0	0	
Stricture dilation using catheter:	n (%)	1	0	0	-
		2	0	0	
		3	0	1 (100)	
		4	0	0	
		5	0	0	
Stent insertion:	Mean (SD)		1.4 (0.5)	1.1 (0.3)	0.128
	n (%)	1	5 (55.6)	8 (88.9)	
		2	4 (44.4)	1 (11.1)	
		3	0	0	
		4	0	0	
		5	0	0	
Single operator pancreatoscopy:	n (%)	1	1 (100)	0	-
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
Biopsies:	n (%)	1	1 (100)	0	-
		2	0	0	
		3	0	0	
		4	0	0	
		5	0	0	
Ampullectomy:	n (%)	1	1 (100)	0	0.157
		2	0	0	
		3	0	1 (100)	
		4	0	0	
		5	0	0	

Abbreviations: SD, standard deviation

* Given the small number of subjects and absence of variation in the data, mean scores (SD) were not calculated for the following items: Sphincterotomy, stricture dilation using balloon/catheter, single operator pancreatoscopy, biopsies, ampullectomy.

Supplemental Table 5. Comparison adverse events between the duodenoscope types

		Single-use duodenoscope (n=48)	Reusable duodenoscope (n=50)	p-value
Adverse events: n (%)	Overall:	2 (4.2)	4 (8.0)	0.429
	Type:			
	Acute pancreatitis	1 (2.1)	2 (4.0)	
	Cholangitis	1 (2.1)*	0	
	Cardiovascular	0	1 (2.0)†	
Bleeding	0	1 (2.0)		

* This patient had cholangitis, *Escherichia coli* bacteremia and sepsis from bile duct stones and decompensated despite undergoing ERCP for bile duct stone removal and died two days post-procedure from an endogenous infection (not duodenoscope-related exogenous infection).

† This patient developed atrial fibrillation with rapid ventricular response and cardiogenic shock following ERCP and subsequently died.