

Table S1 The concordance between preoperative image measurements and intraoperative measurements

Variables	Preoperative imaging assessments	Intraoperative measurements	ICC	P
The distance between the center of the pancreatic duct and the posterior margin of the pancreas	5.94 (2.4)	5.78 (2.28)	0.988	<0.001
The distance between the center of the pancreatic duct and the anterior margin of the pancreas	8.21 (2.51)	8.18 (2.43)	0.995	<0.001
Rs/R	42.36 (7.22)	41.24 (6.86)	0.986	<0.001

Data are presented as mean (standard deviation). ICC, intra-class correlation coefficient; Rs, short distance from the center of the pancreatic duct to the edge of the pancreas; R, total thickness of the pancreas.

Table S2 Baseline characteristics and perioperative outcomes of patients with central and eccentric pancreatic duct

Variables	Eccentric pancreatic duct (n=39)	Central pancreatic duct (n=92)	P value
Age (years)	57 [49–67]	57.5 [51–65]	0.67
Male, n (%)	26 (66.7)	54 (58.7)	0.39
BMI (kg/m ²)	22.5 (3.7)	22.3 (3.2)	0.75
Hypertension, n (%)	4 (10.3)	21 (22.8)	0.09
Diabetes, n (%)	4 (10.3)	15 (16.3)	0.20
Jaundice, n (%)	20 (51.3)	36 (39.1)	0.20
Extended resection, n (%)	6 (15.4)	7 (7.6)	0.17
ASA score, n (%)			0.51
1, 2	28 (71.8)	71 (77.2)	
3, 4	11 (28.2)	21 (22.8)	
Operative time (≥300 min), n (%)	25 (64.1)	37 (40.2)	0.01
Estimated blood loss (≥400 mL), n (%)	11 (28.2)	32 (34.8)	0.46
Pancreatic texture, n (%)			0.32
Hard	21 (53.8)	58 (63)	
Soft	18 (46.2)	34 (37)	
Dilated pancreatic duct (≥3 mm), n (%)	25 (64.1)	70 (76.1)	0.16
Pathological outcomes, n (%)			0.04
Pancreatic ductal adenocarcinoma	15 (38.4)	49 (53.3)	
Chronic pancreatitis	1 (2.6)	7 (7.6)	
Others	23 (59)	36 (39.1)	
The main pancreatic duct located near the anterior wall of the pancreas, n (%)	6 (15.4)	23 (25.0)	0.23
Rs/R (%)	31.0 [24.9–35.5]	45.7 [43.4–47.7]	<0.001
Morbidity, n (%)	15 (38.5)	25 (27.2)	0.20
CD <3	10	16	
CD ≥3	5 (12.8)	9 (9.8)	0.87
Clinical related pancreatic fistula, n (%)	7 (17.9)	11 (11.9)	0.36
Grade B	4 (10.2)	10 (10.8)	
Grade C	3 (7.7)	1 (1.1)	
Delayed gastric emptying, n (%)	6 (15.4)	8 (8.7)	0.26
Grade B	5 (12.8)	6 (6.5)	
Grade C	1 (2.6)	2 (2.2)	
Postpancreatectomy hemorrhage, n (%)	4 (10.3)	3 (3.3)	0.23
Intra-abdominal hemorrhage	3 (7.7)	2 (2.2)	
Gastrointestinal bleeding	1 (2.6)	1 (1.1)	
Abdominal infection, n (%)	9 (23.1)	9 (9.8)	0.04
Bile leakage, n (%)	1 (2.6)	0 (0)	0.12
Chylous fistula, n (%)	1 (2.6)	2 (2.2)	0.89
Pulmonary infection, n (%)	3 (7.7)	3 (3.3)	0.27
Wound infection	3 (7.7)	0 (0)	0.007
Reoperation, n (%)	3 (7.7)	4 (4.3)	0.44
30-day mortality, n (%)	2 (5.1)	0 (0.0)	0.16

Data are presented as median [Q1–Q3], mean (standard deviation) or n (%). BMI, body mass index; CD, Clavien-Dindo classification; ASA, American Society of Anesthesiologists; the main pancreatic duct is located near the anterior wall of the pancreas, which means that the ratio of the distance from the center of the main pancreatic duct to the posterior wall of the pancreas to the total thickness of the pancreas is greater than or equal to 0.5; Rs, short distance from the center of the pancreatic duct to the edge of the pancreas; R, total thickness of the pancreas.

Table S3 Baseline characteristics and perioperative outcomes of patients with eccentric pancreatic duct

Variables	1 ² mode (n=39)	1 mode (n=41)	P value
Age (years)	57 [49–67]	60 [52.5–63.5]	0.86
Male, n (%)	26 (66.7)	21 (51.2)	0.16
BMI (kg/m ²)	22.5 (3.7)	22.4 (2.8)	0.95
Hypertension, n (%)	4 (10.3)	6 (14.6)	0.80
Diabetes, n (%)	4 (10.3)	5 (12.2)	>0.99
Jaundice, n (%)	20 (51.3)	23 (56.1)	0.67
Extended resection, n (%)	6 (15.4)	8 (19.5)	0.63
ASA score, n (%)			0.52
1, 2	28 (71.8)	32 (78)	
3, 4	11 (28.2)	9 (22)	
Operative time (≥300 min), n (%)	25 (64.1)	23 (56.1)	0.47
Estimated blood loss (≥400 mL), n (%)	11 (28.2)	12 (29.3)	0.92
Pancreatic texture, n (%)			0.67
Hard	21 (53.8)	24 (58.5)	
Soft	18 (46.2)	17 (41.5)	
Dilated pancreatic duct (≥3 mm), n (%)	25 (64.1)	32 (78)	0.17
Pathological outcomes, n (%)			0.63
Pancreatic ductal adenocarcinoma	15 (38.4)	17 (41.5)	
Chronic pancreatitis	1 (2.6)	2 (4.9)	
Others	23 (59)	22 (53.6)	
The main pancreatic duct located near the anterior wall of the pancreas, n (%)	6 (15.4)	13 (31.7)	0.09
Rs/R (%)	29.3 [24.9–35.5]	28.5 [24.5–32.1]	0.13
Clinical related pancreatic fistula, n (%)	7 (17.9)	17 (41.5)	0.02
Grade B	4 (10.3)	13 (31.7)	
Grade C	3 (7.7)	4 (9.8)	
Delayed gastric emptying, n (%)	6 (15.4)	6 (14.6)	0.93
Grade B	5 (12.8)	5 (12.2)	
Grade C	1 (2.6)	1 (2.4)	
Postpancreatectomy hemorrhage, n (%)	4 (10.3)	3 (7.3)	0.95
Intra-abdominal hemorrhage	3 (7.7)	2 (4.9)	
Gastrointestinal bleeding	1 (2.6)	1 (2.4)	
Abdominal infection, n (%)	14 (35.9)	18 (43.9)	0.47
Bile leakage, n (%)	1 (2.6)	1 (2.4)	>0.99
Chylous fistula, n (%)	1 (2.6)	2 (4.9)	>0.99
Pulmonary infection, n (%)	3 (7.7)	5 (12.2)	0.77
Wound infection	3 (7.7)	4 (9.8)	>0.99
Reoperation, n (%)	3 (7.7)	4 (9.8)	>0.99
30-day mortality, n (%)	2 (5.1)	3 (7.3)	>0.99

Data are presented as median [Q1–Q3], mean (standard deviation) or n (%). 1² mode, single-layer pancreaticojejunostomy with reinforcement of the anterior or posterior wall; 1 mode, single-layer pancreaticojejunostomy. The main pancreatic duct is located near the anterior wall of the pancreas, which means that the ratio of the distance from the center of the main pancreatic duct to the posterior wall of the pancreas to the total thickness of the pancreas is greater than or equal to 0.5. BMI, body mass index; ASA, American Society of Anesthesiologists; Rs, short distance from the center of the pancreatic duct to the edge of the pancreas; R, total thickness of the pancreas.

Table S4 Univariate and multivariate analysis of clinically relevant postoperative pancreatic fistula

Variables	Univariate analysis			Multivariate analysis		
	Odds ratio	95% CI	P	Odds ratio	95% CI	P
Age (years)	1.009	0.992–1.025	0.30	–	–	–
Male	0.832	0.571–1.210	0.34	–	–	–
BMI (kg/m ²)	1.024	0.987–1.062	0.21	–	–	–
Hypertension	1.064	0.686–1.648	0.78	–	–	–
Diabetes	0.822	0.481–1.403	0.47	–	–	–
Jaundice	1.140	0.790–1.644	0.49	–	–	–
Extended resection	1.260	0.704–2.253	0.44	–	–	–
ASA score >2	1.416	0.914–2.193	0.12	–	–	–
Operative time (<300 min)	0.678	0.468–0.982	0.04	0.655	0.444–0.967	0.03
Estimated blood loss (≥400 mL)	1.273	0.881–1.838	0.20	–	–	–
Pancreatic texture (soft)	2.312	1.597–3.347	<0.001	1.712	1.066–2.749	0.03
Pancreatic duct (<3 mm)	2.018	1.365–2.983	<0.001	1.318	0.839–2.071	0.23
Pathological outcomes (other)	2.100	1.449–3.044	<0.001	1.434	0.910–2.259	0.12
The main pancreatic duct located near the anterior wall of the pancreas	0.856	0.540–1.354	0.51	–	–	–
Rs/R	0.938	0.918–0.959	<0.001	0.941	0.920–0.963	<0.001
Anastomosis mode (control group)	1.89	1.104–3.217	0.02	2.170	1.230–3.826	0.007

CI, confidence interval; BMI, body mass index; ASA, American Society of Anesthesiologists; the main pancreatic duct is located near the anterior wall of the pancreas, which means that the ratio of the distance from the center of the main pancreatic duct to the posterior wall of the pancreas to the total thickness of the pancreas is greater than or equal to 0.5; Rs/R, short distance from the center of the pancreatic duct to the edge of the pancreas/total thickness of the pancreas.