

Reappraisal of Clinical Indication Regarding Total Pancreatectomy

Can we do it for risky gland?

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There is no conflict of interest by all authors

Indication 1960 ~ 2000

- Indications can be

Size or localization of pancreatic tumor
Trouble, technical difficulty
Therapy-refractory pain in chronic pancreatitis

- Definitely indicated

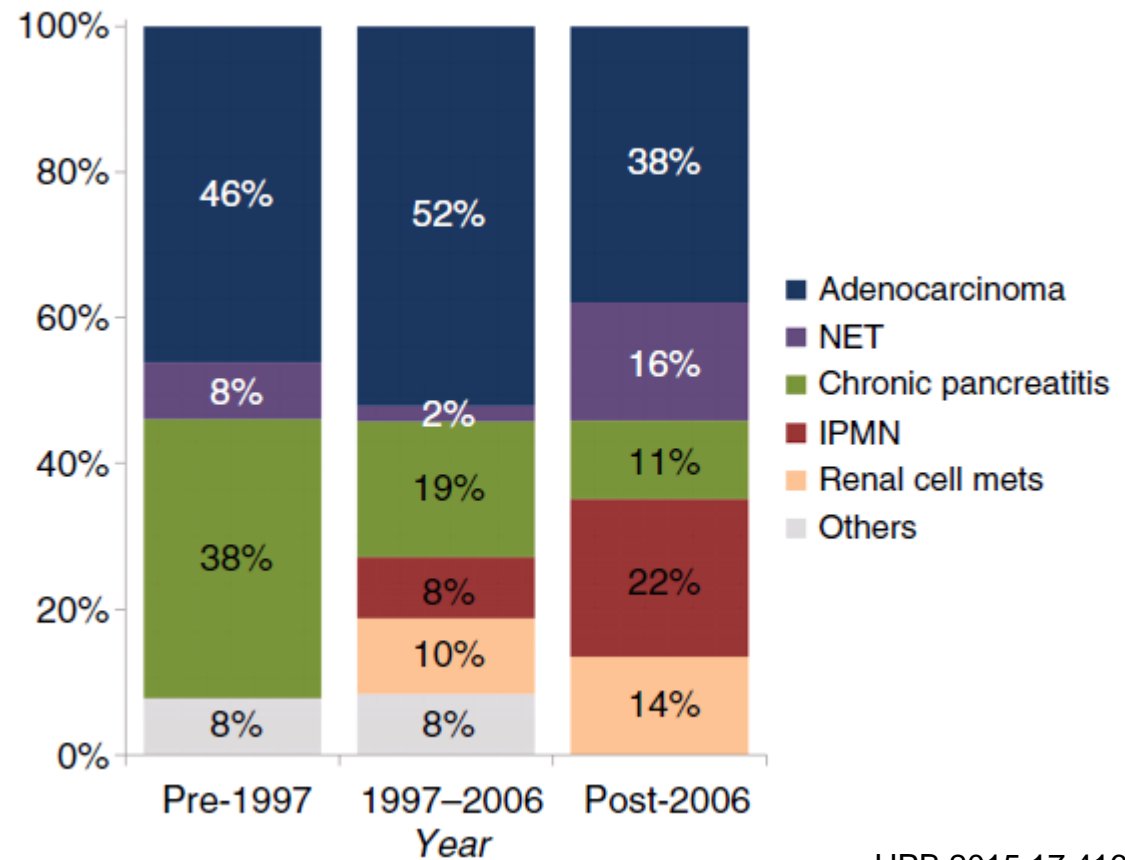
for a limited range of elective and emergency situations

- Extremely high morbidity and mortality **should be avoided**

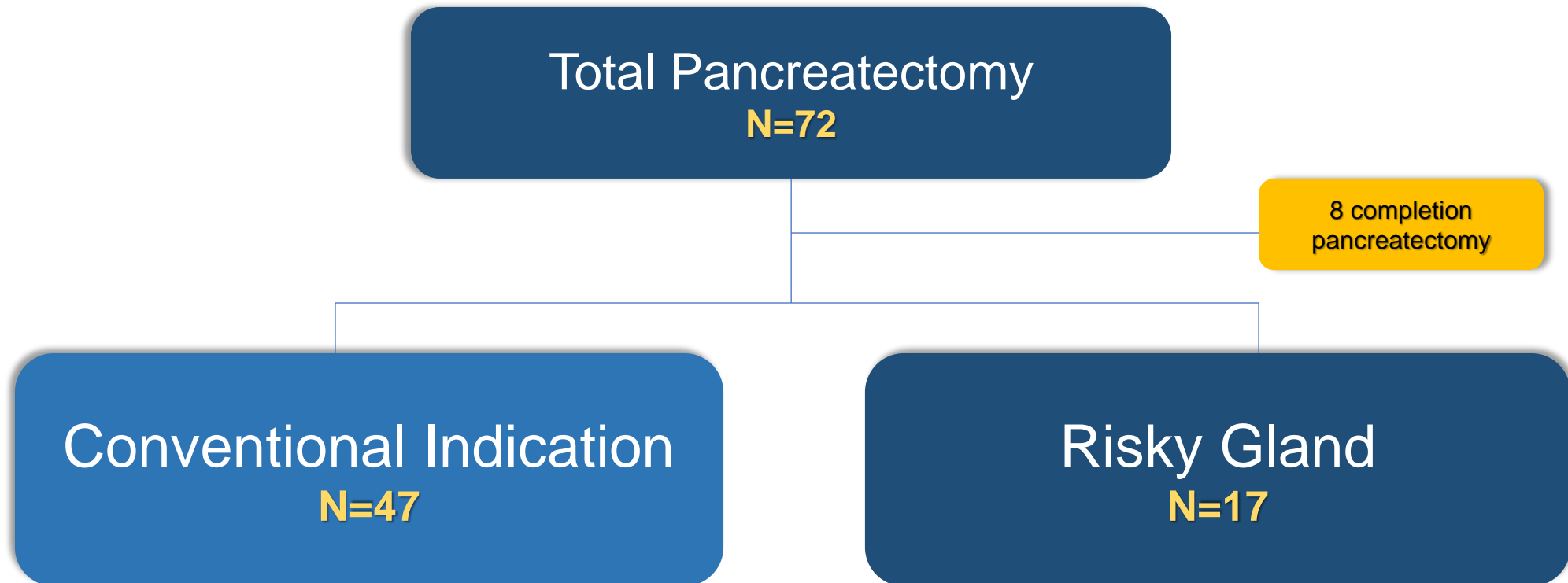
Changing indications, recent

The underlying pathology amongst patients undergoing TP changed significantly

across the study period
($P = 0.025$)
with an increase in eI-TP



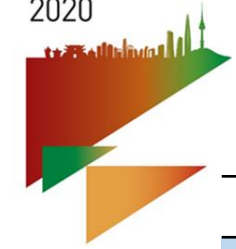
Methods



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N=64, 2007.1 ~ 2019.8

Risky Glands in this Study

Reason	n=17 (%)
Atrophic pancreatic tail	5 (29.4)
Fatty pancreas	5 (29.4)
Severe pancreatitis on tail	4 (23.6)
Very soft and small pancreatic duct (<1mm)	3 (17.6)



Results

	All patients (n=64)	Conventional (n=47)	Risky (n=17)	p-value
Age	67.1±9.34	57.7±9.8	65.6±8.0	0.446
BMI	23.5±3.7	23.0±3.9	24.8±2.8	0.091
ASA score (A/B/C)	11(17.2%)/43(67.2%)/10(15.6%)	9(19.1%)/29(61.8%)/9(19.1%)	2(11.8%)/14(82.4%)/1(5.8%)	0.299
Albumin	3.7±0.5	3.7±0.5	3.8±0.5	0.283
CA 19-9	238.5±583.2	282.0±67.0	198.7±380.1	0.651
Total Bilirubin	1.6±1.5	0.8±1.0	1.9±2.1	0.011
Previous operation	20(31.3%)	16(34%)	4(23.5%)	0.316
Preop PBD	27(42.2%)	17(36.2%)	10(58.8%)	0.092
Preop DM	30(46.9%)	21 (44.7%)	9(53.0%)	0.690
Tumor location (H/B/M)	44(68.8%)/10(15.6%)/10(15.6%)	31(66.0%)/ 8(17.0%)/8(17.0%)	13(76.4%)/2(11.8%)/2(11.8%)	0.507
Tumor size	30.7±16.2	31.6±15.9	27.8±17.0	0.427
Vessel invasion	11(17.2%)	10(21.3%)	1(5.9%)	0.397
Planned operation	29(45.3%)	22(46.8%)	7(41.2%)	0.177



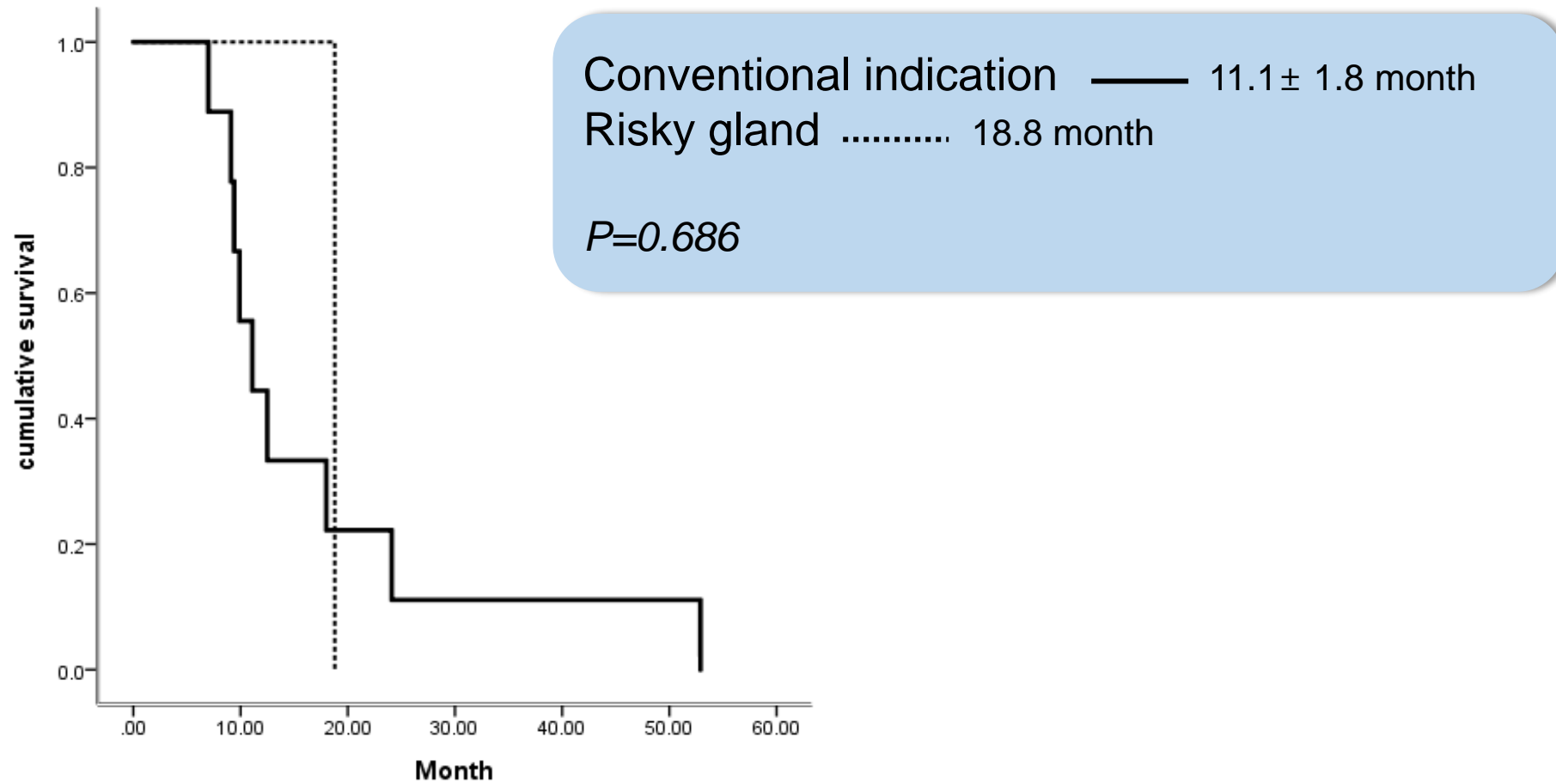
Results

	All patients (n=64)	Conventional (n=47)	Risky (n=17)	p-value
Operation time	395.2±123.7	398.9±135.6	384.8±84.9	0.692
Transfusion	30(46.9%)	22(46.8%)	8(47.1%)	0.603
Neck margin +	7(10.9%)	7(14.9%)	0(0)	0.101
Resection margin	5(7.8%)	5(10.6%)	0(0)	0.201
Pathology (IPMN/PDAC/other)	20(31.2%)/ 41(64.1%)/ 3(4.7%)	16(34.0%)/ 30(63.8%)/ 1(2.1%)	4(23.5%)/ 11(64.7%)/ 2(11.8%)	0.233
Vessel resection	6(9.4%)	5(10.6%)	1(5.9%)	0.605
Organ resection	14(21.9%)	10(22.7%)	4(23.5%)	0.597
Morbidity	6(9.4%)	5(10.6%)	1(5.9%)	0.491
In hospitalization (day)	23.0±10.2	24.1±11.2	20.3±6.6	0.200
Mortality	0(0)	0(0)	0(0)	-
30day Reoperation	3(4.7%)	3(6.4%)	0(0)	0.389
30day Readmission	4(6.3%)	2(4.3%)	2(11.8%)	0.285
Post operative HbA1c	7.5±1.6	7.54±1.49	7.32±1.9	0.728
Adjuvant therapy	35(54.7%)	25(53.2%)	10(58.8)	0.456

Surgical complication

	Clavien Complication Grade					
	I	II	IIIa	IIIb	IV	V
Surgical site infection		2				
Multi system organ failure						
Glycemic control		1				
Bleeding						
Delayed gastric emptying			1			
Renal insufficiency						
Cardiac problem						
Pulmonary problem				1		
Deep vein thrombosis						
others				2		

Survival





Summary and Conclusion

- Total pancreatectomy appears to be
 - an appropriate option for selected patients with conventional indication
 - a viable option for risky glands in terms of surgical safety