

# CONGRESO LATINOAMERICANO DE CIRUGÍA HEPATOPANCREÁTICA Y BILIAR CHILE 2017



## MODIFIED SHRIKHANDE TECHNIQUE FOR PANCREATIC ANASTOMOSIS



**Orlando Jorge M. Torres MD, PhD**

Full Professor and Chairman

Department of Gastrointestinal Surgery

Hepatopancreatobiliary Unit

Federal University of Maranhão - Brazil

24 AL 27 DE SEPTIEMBRE 2017

# PANCREATIC FISTULA

- ❑ A frustrating complication.
- ❑ Major cause of morbidity and mortality.
- ❑ Technical aspects of the anastomosis.
- ❑ Various procedures have been described.



# PANCREATIC FISTULA

- ❑ The ideal pancreatoenteric anastomosis:
- ❑ Good blood supply to the pancreatic stump
- ❑ Pancreatic juice flow into the intestinal or gastric lumen,
- ❑ Suitable for all pancreatic stumps and all pancreatic ducts,
- ❑ Easy to perform and easy to learn



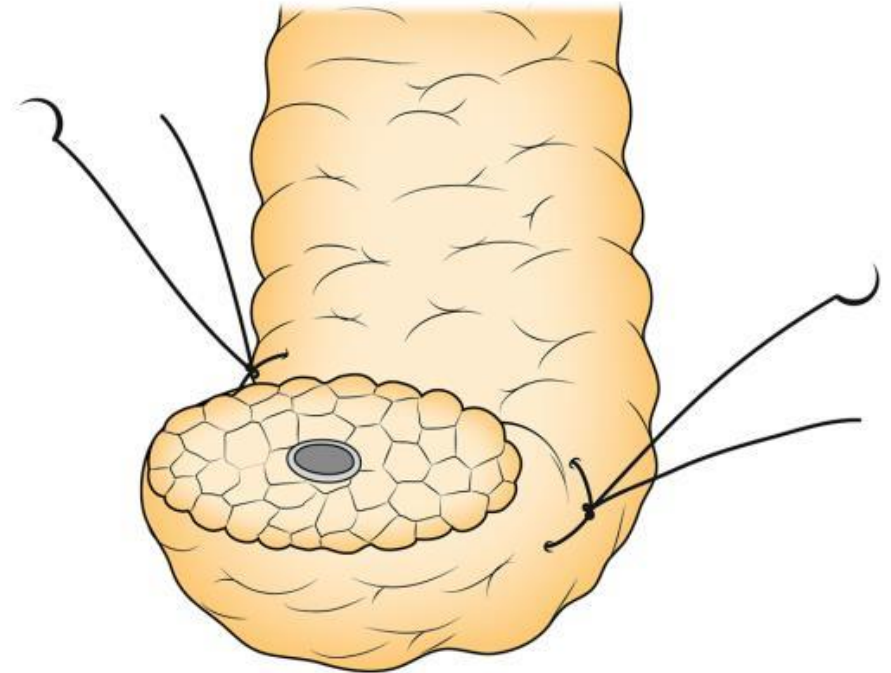
# AIM

- ☐ Introduced a new pancreatojejunostomy.
- ☐ Present initial results.



# Transection of the pancreas

Two stay sutures (Prolene 4-0, Ethicon®) are placed on both margins of the pancreatic remnant (hemostatic sutures).



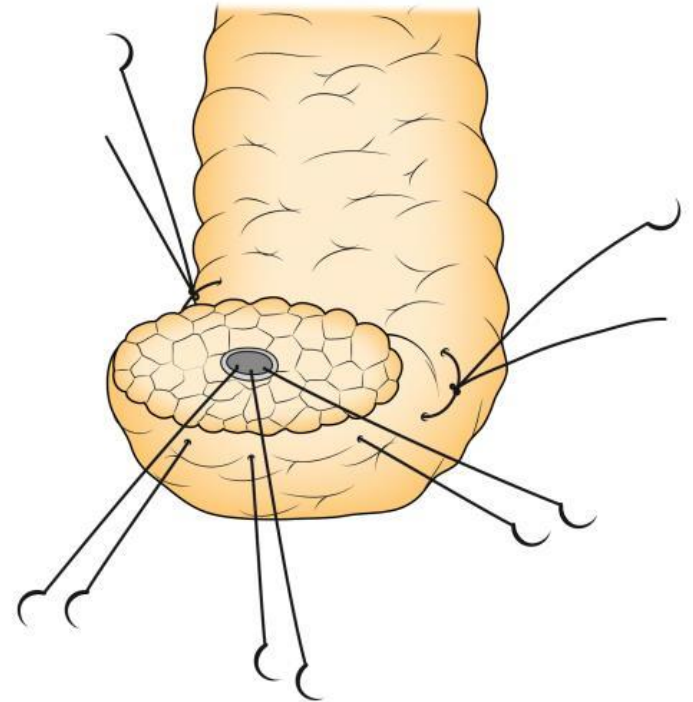
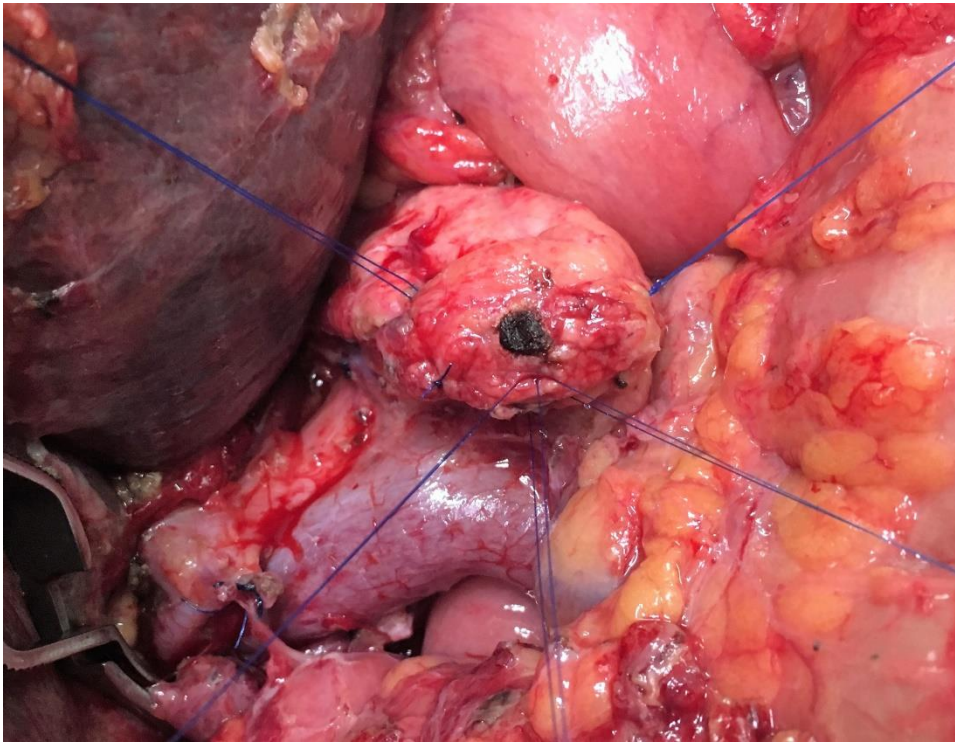
The pancreatic parenchyma is then transected with a sharp knife, and hemostasis is performed with electrocautery





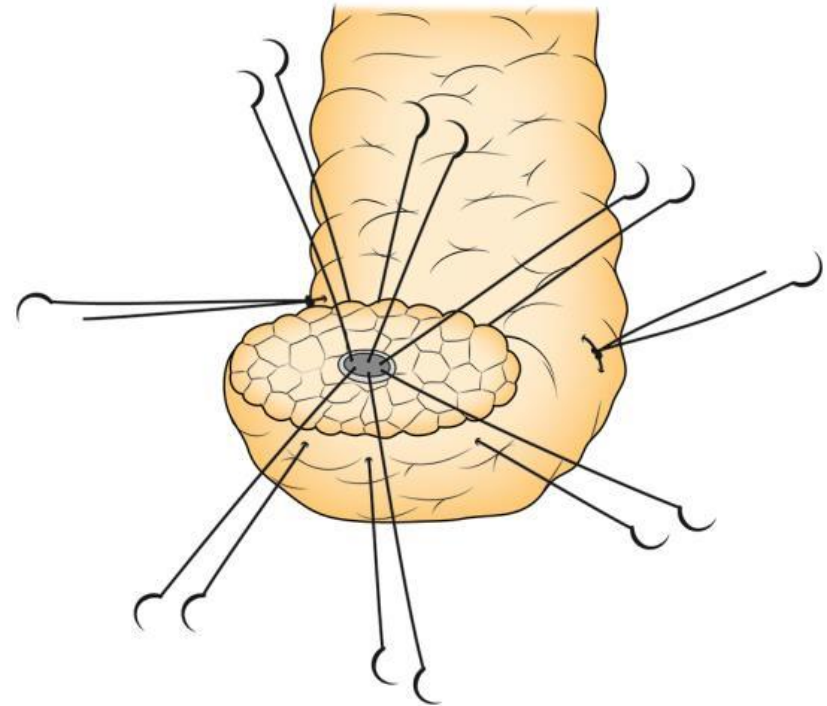
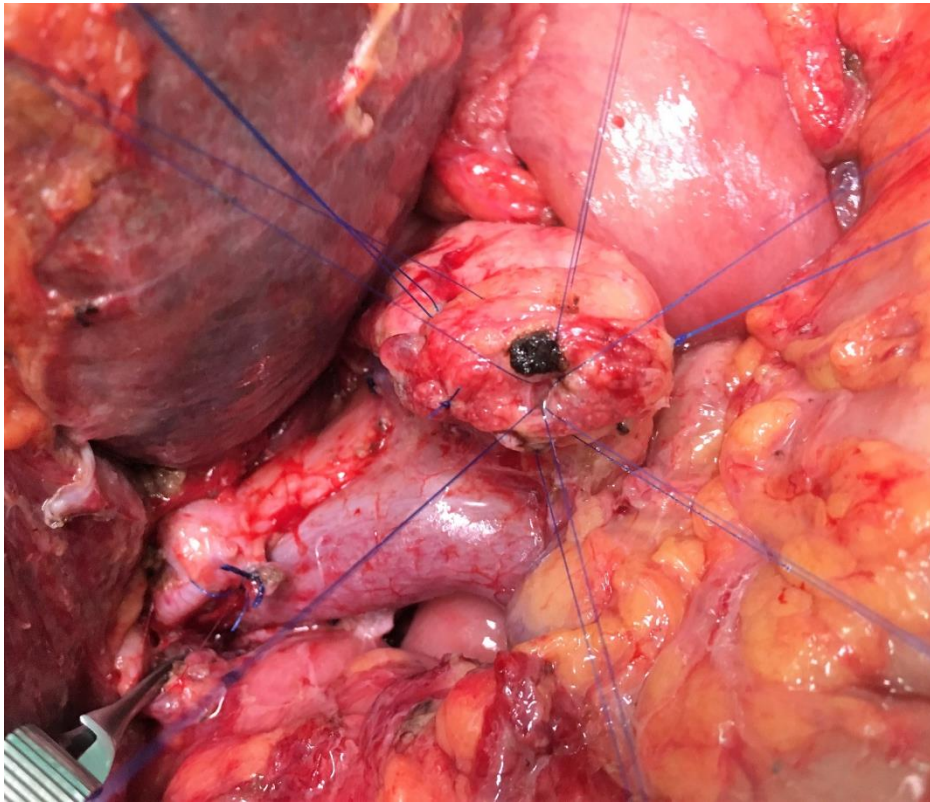
# Posterior duct-pancreatic suture

Three sutures are placed on the posterior wall of the pancreatic duct to the posterior pancreatic parenchyma. The stitches are performed with 5-0 double needle prolene at the 4 o'clock, 6 o'clock, and 8 o'clock positions.



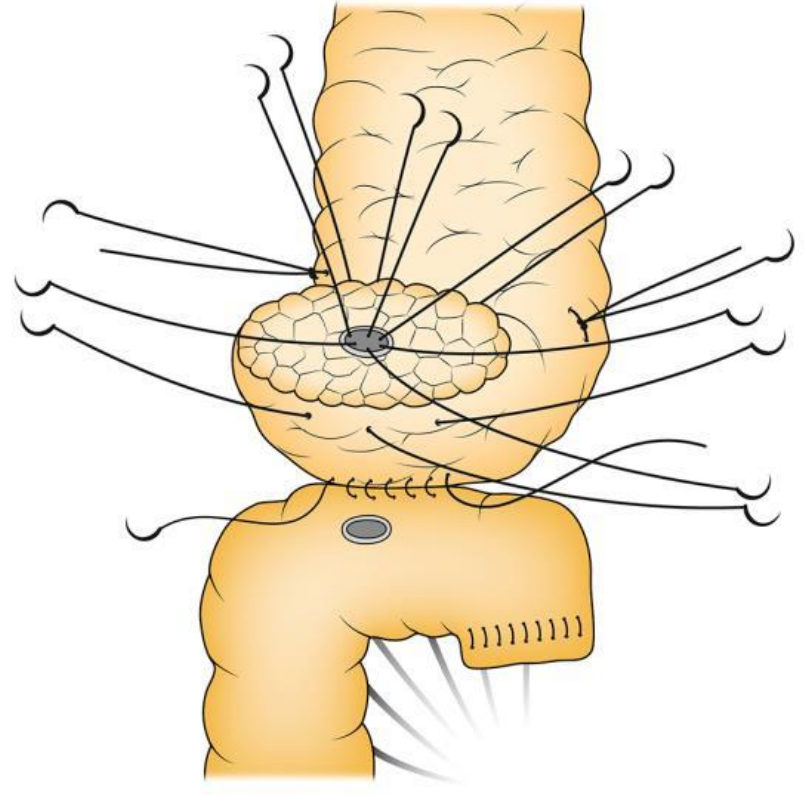
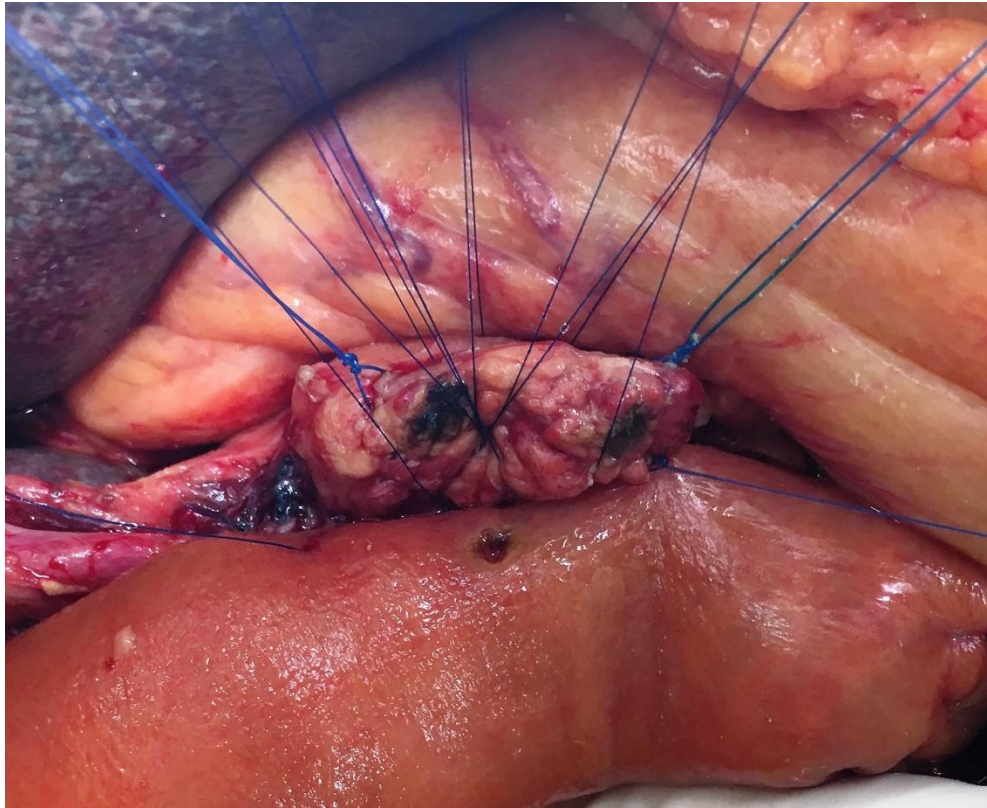
# Anterior duct-pancreatic suture

Three sutures are placed on the anterior wall of the pancreatic duct to the anterior pancreatic parenchyma. The stitches are performed with 5-0 double needle prolene at the 10 o'clock, 12 o'clock, and 2 o'clock positions.





# Posterior outer layer

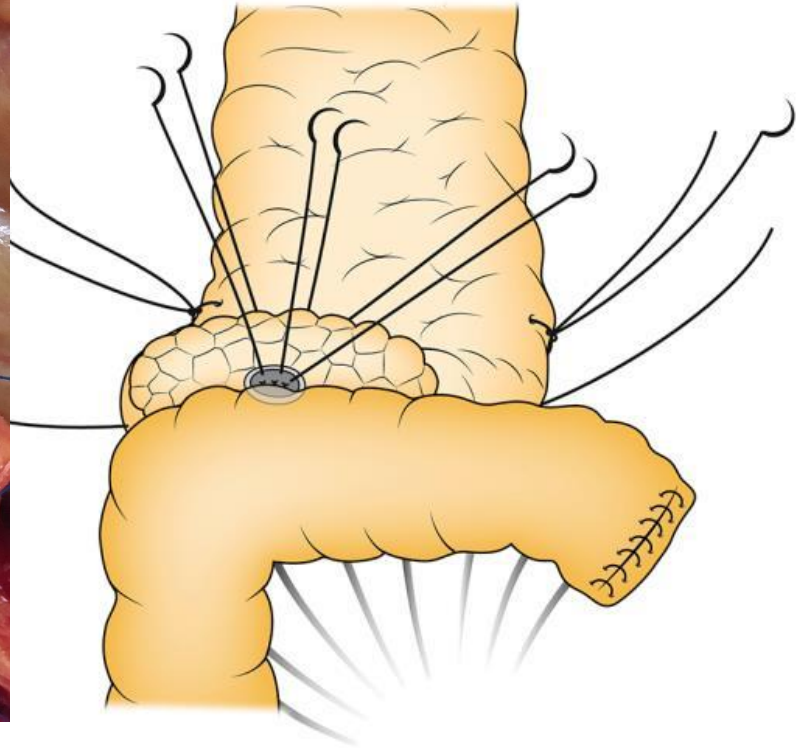
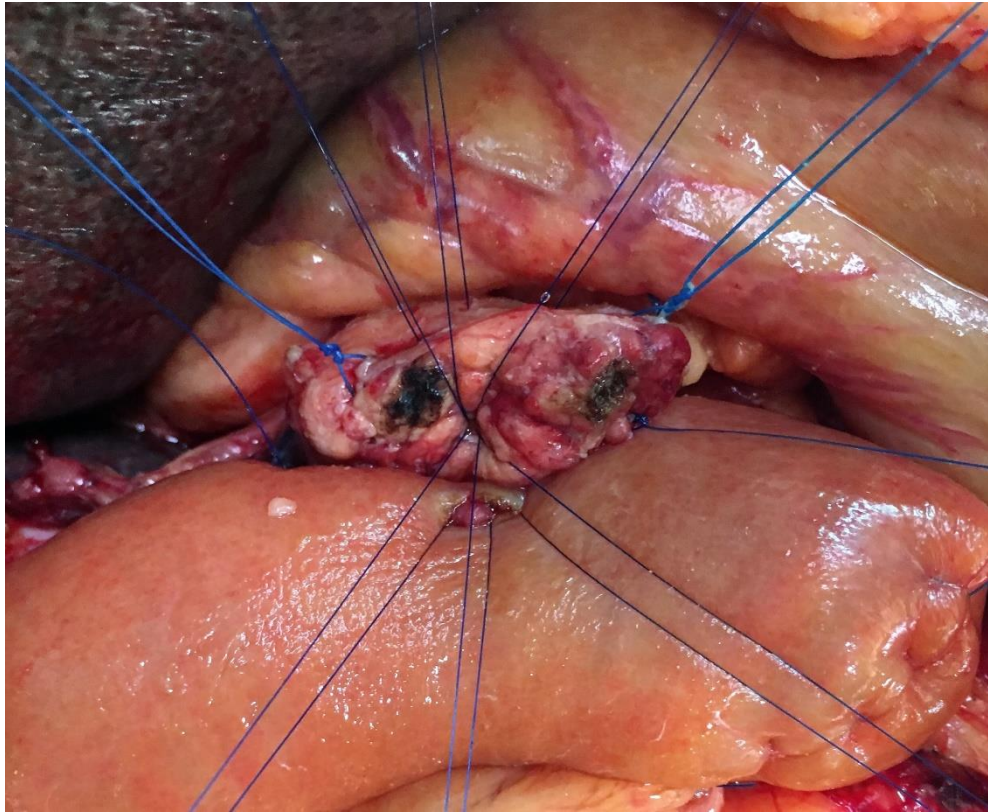


Running suture with 4-0 single needle prolene on the posterior aspect the pancreatic parenchyma with the jejunal seromuscular layer.





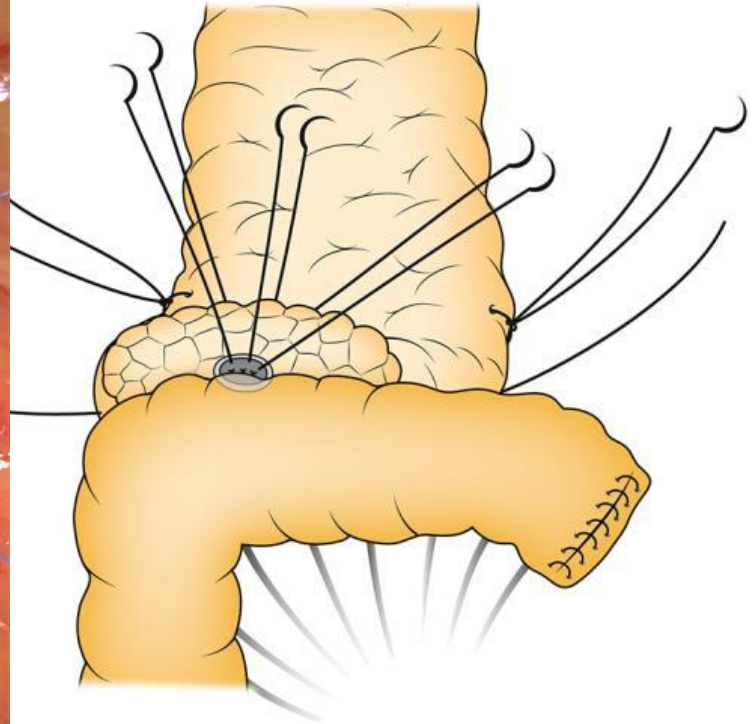
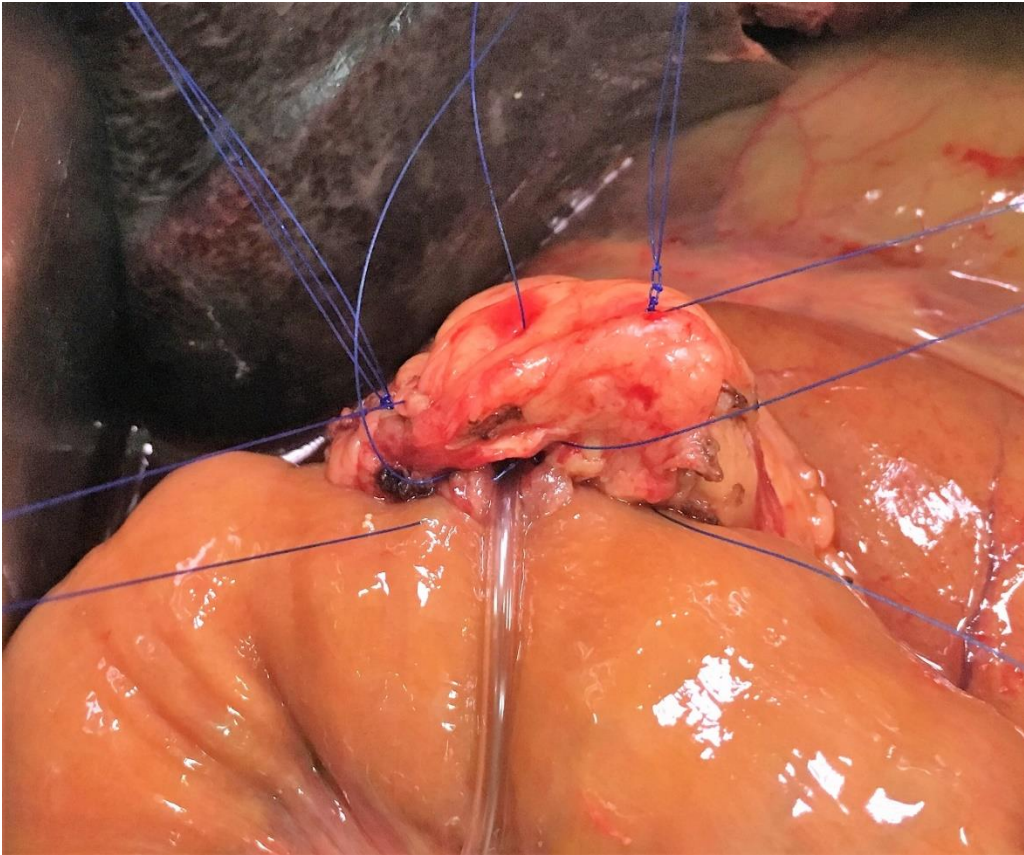
# Posterior inner layer



The sutures in the 4 o'clock, 6 o'clock, and 8 o'clock positions are passed from outside to inside in the inferior edge of the jejunum at the same positions.



# Posterior inner layer

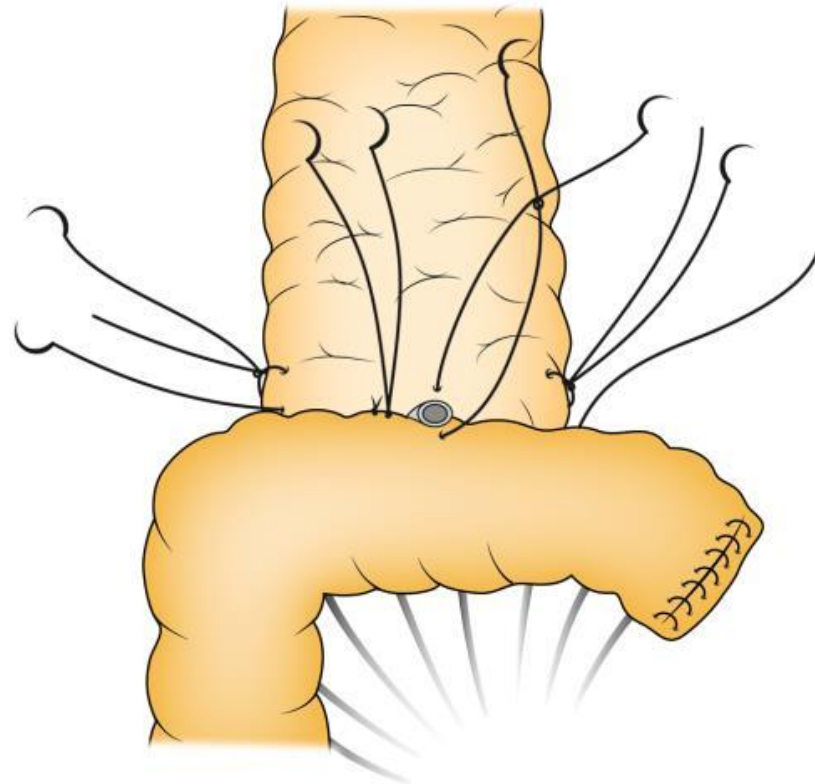
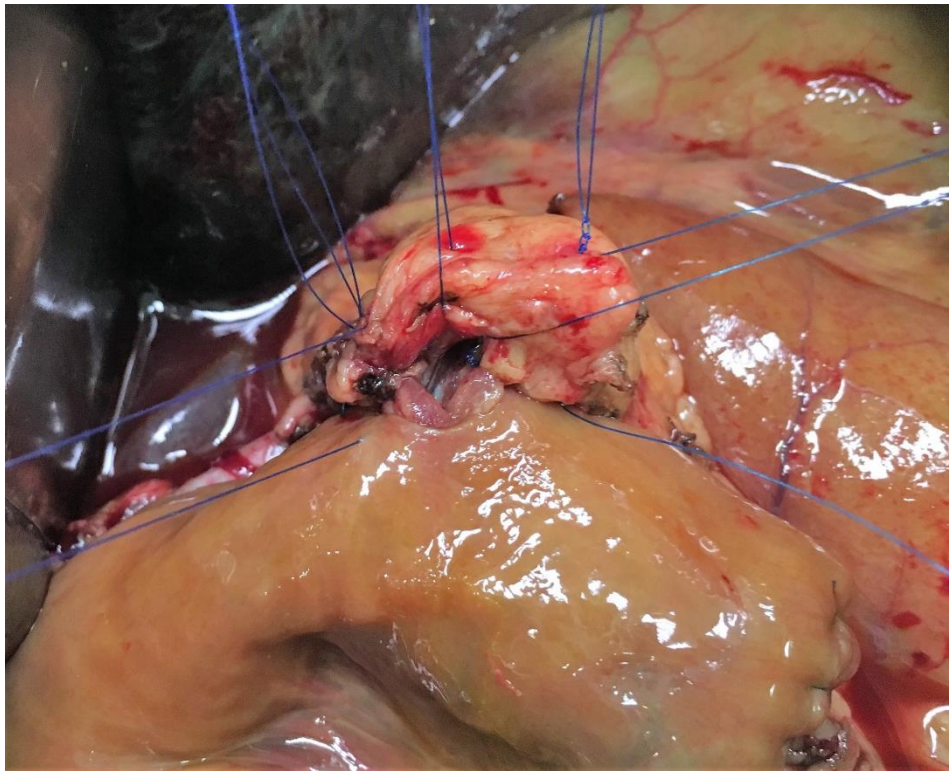


The sutures in the 4 o'clock, 6 o'clock, and 8 o'clock positions are passed from outside to inside in the inferior edge of the jejunum at the same positions.





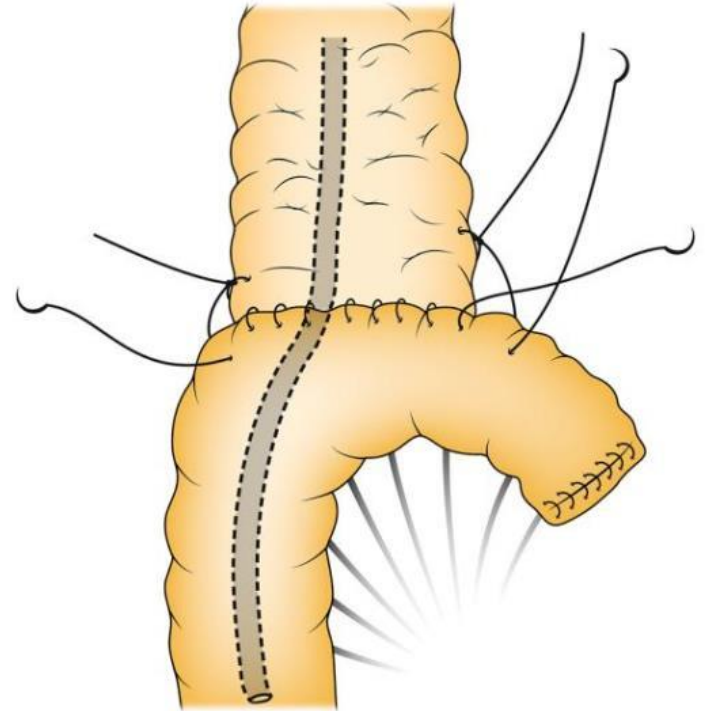
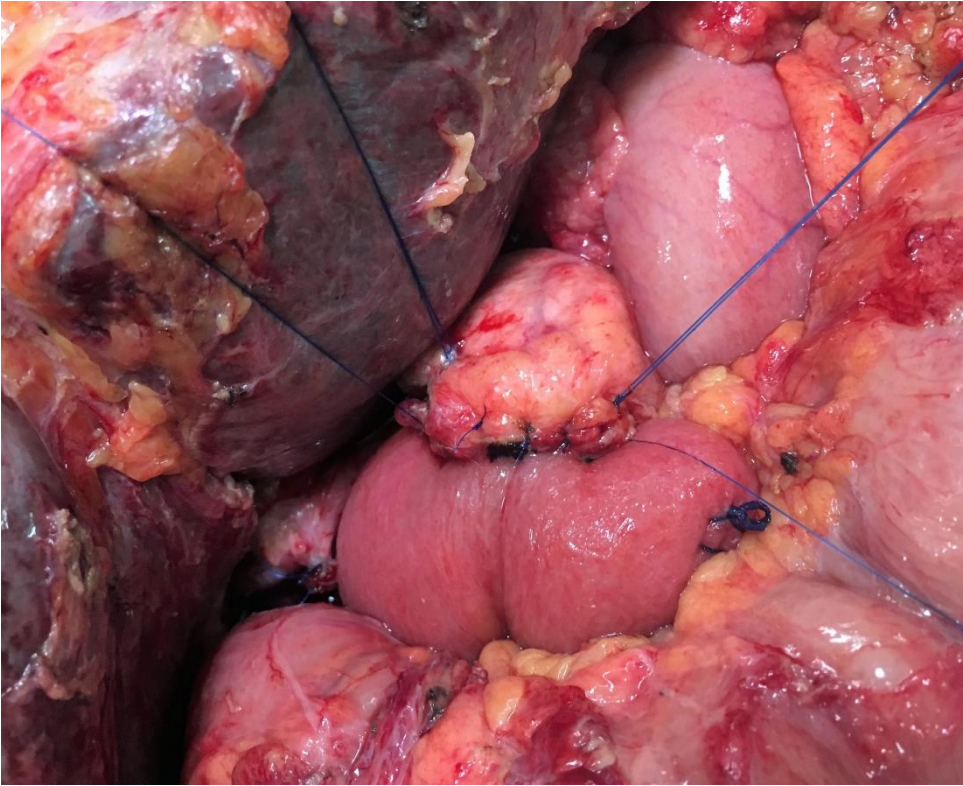
# Anterior inner layer



The sutures in the 10 o'clock, 12 o'clock, and 2 o'clock positions are passed from inside to outside in the superior edge of the jejunum and are knotted with the plastic stent into the jejunal lumen.



# Anterior outer layer



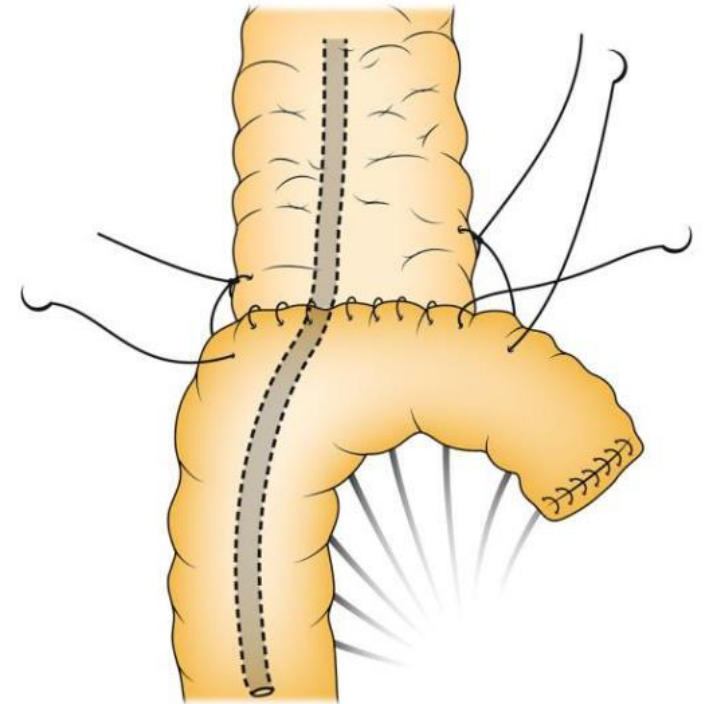
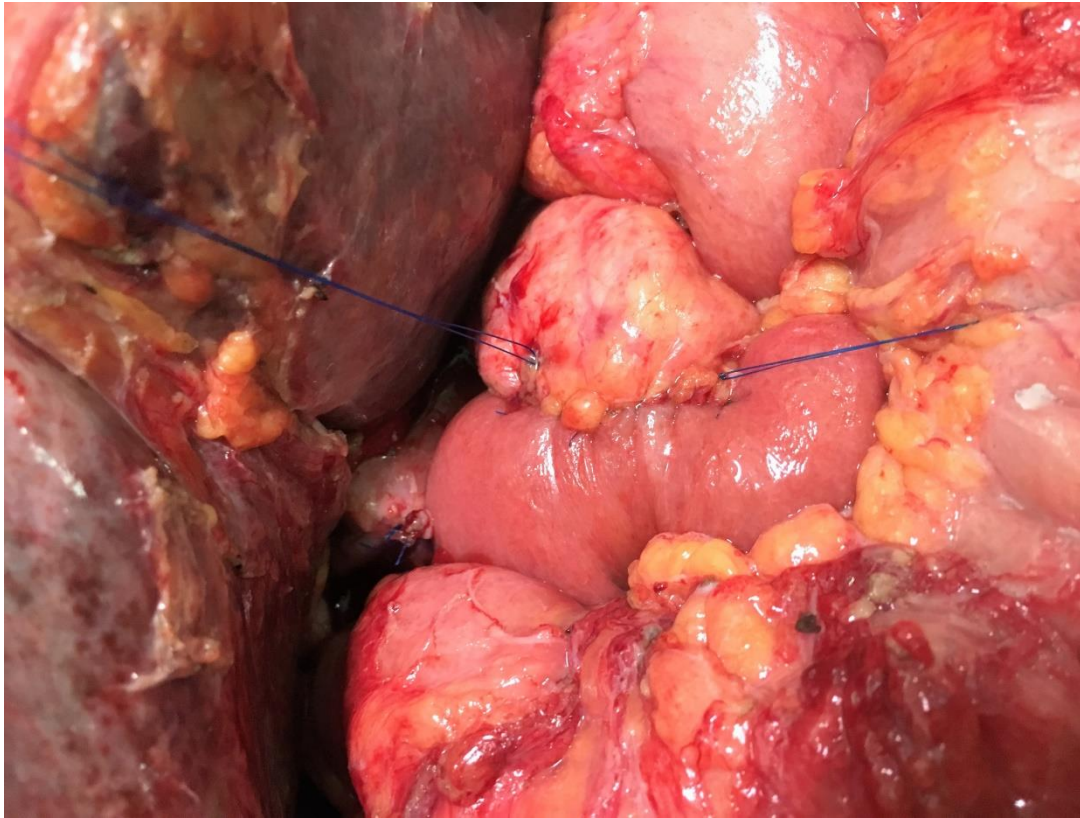
A running suture is performed with 4-0 single needle prolene, on the anterior aspect of the pancreatic parenchyma with jejunal seromuscular layer.



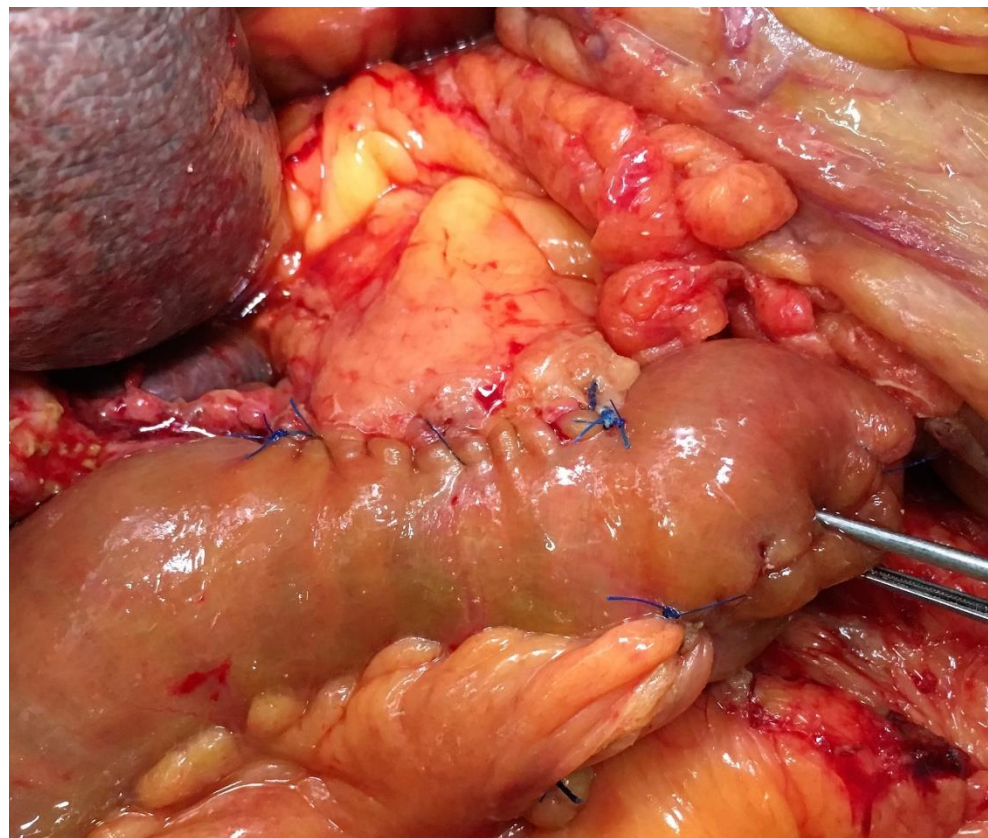
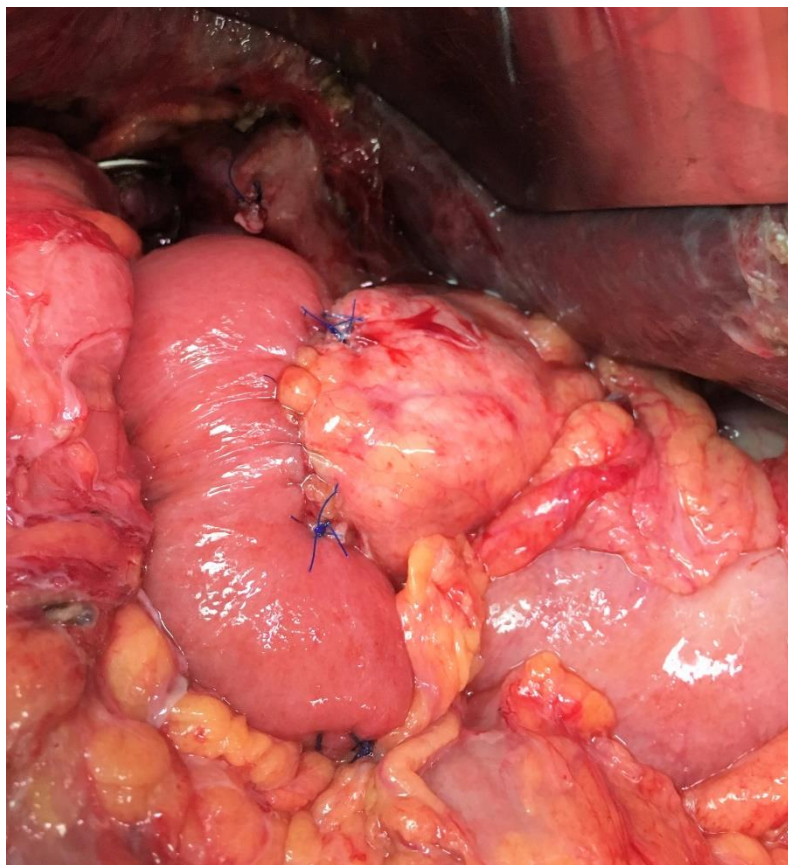


# Anterior outer layer

The two previously placed hemostatic sutures on the superior and inferior edges of the remnant pancreatic stump are passed in the jejunal seromuscular layer and tied.



# Final aspect



## RESULTS

- July 2016 to June 2017
- 17 patients
- Soft texture of the pancreas – 6 (35.2%)
- Duct size  $\leq$  3mm – 8 (47.1%)
- Fistula grade – A 4 (23.5%) B and C (0)
- No mortality





# RESULTS

Characteristics	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Age	61	47	28	40	70	20	59	60	70	60	56	36	76	38	70	64	52
Sex	M	M	F	F	M	M	F	F	F	F	F	F	F	F	F	F	F
Diagnosis	AV	AD	FT	AD	AD	NE	AD	IP	AD	AD	AD	AV	NE	AD	CC	AD	NE
Pancreas text	S	F	S	F	F	S	F	F	F	F	F	S	S	F	F	F	S
Duct size (mm)	≤3	≤3	≤3	>3	>3	≤3	>3	>3	≤3	≤3	>3	≤3	>3	>3	>3	>3	≤3
Op. time (min)	315	484	310	499	393	590	485	343	395	400	355	406	475	340	380	350	365
Transfusion	Y	N	Y	Y	N	N	N	N	Y	Y	N	N	Y	N	N	N	N
UCI time (d)	19	2	8	4	3	4	6	4	4	5	5	4	10	4	5	2	3
Fistula grade	A	-	A	-	-	A	A	-	-	-	-	-	-	-	-	-	-
LoS (d)	37	10	13	11	9	13	12	8	16	12	19	14	20	13	14	7	8
Mortality	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N





# CONCLUSIONS

- This technique is simple, reliable, easy to perform, and easy to learn.
- Useful to reduce the incidence of pancreatic fistula.

## São Luís



**Thanks !**

