DUODENOPANCREATECTOMIA COM RESSECÇÃO VASCULAR



III CONGRESSO BRASILEIRO DE CÂNCER DIGESTIVO

12 E 13 DE AGOSTO 2022

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Professor Titular e Chefe do Serviço de Cirurgia do Aparelho Digestivo Unidade Hepatopancreatobiliar Universidade Federal do Maranhão - Brazil







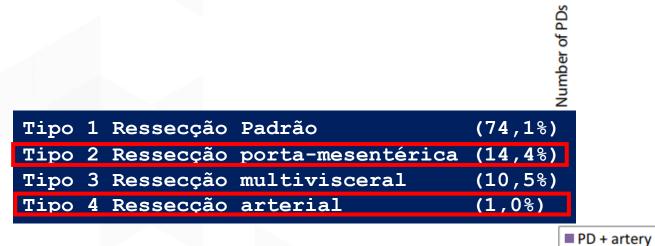
Contents lists available at ScienceDirect

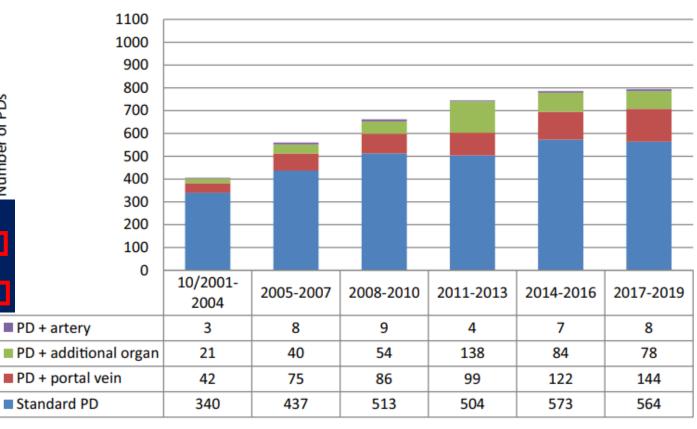
Surgery

journal homepage: www.elsevier.com/locate/surg

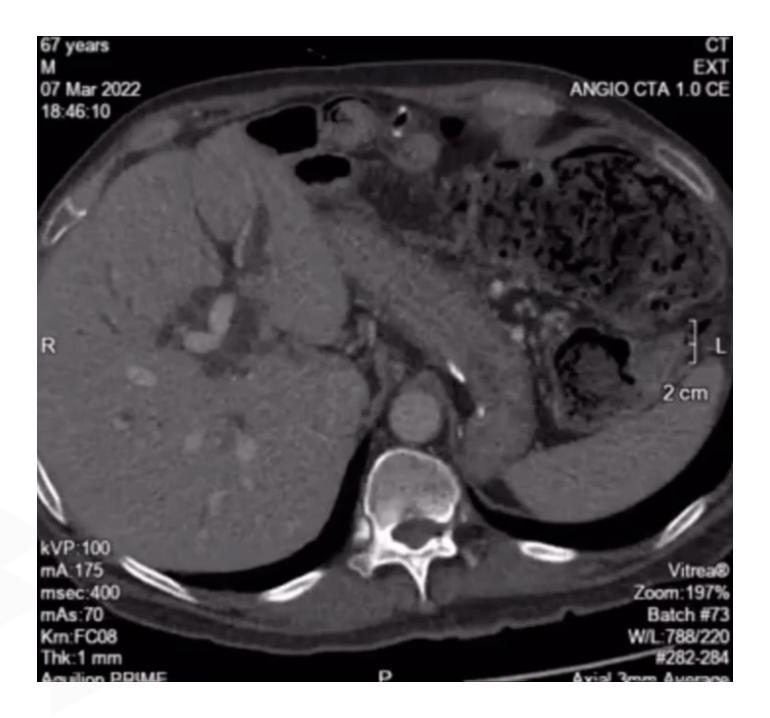


Not all Whipple procedures are equal: Proposal for a classification of pancreatoduodenectomies

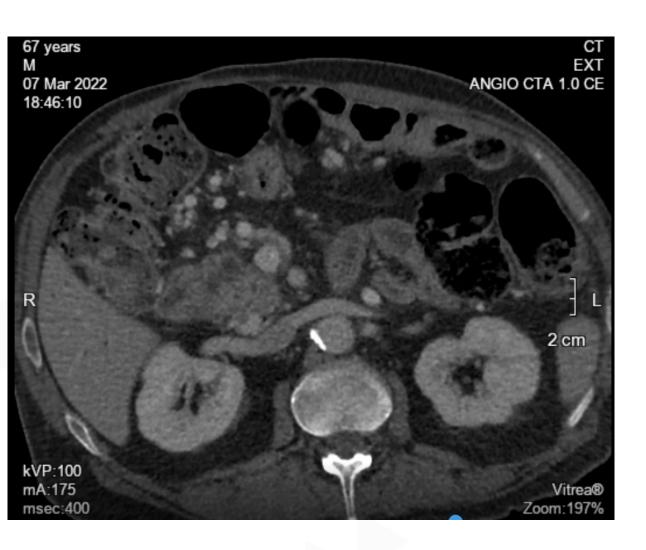


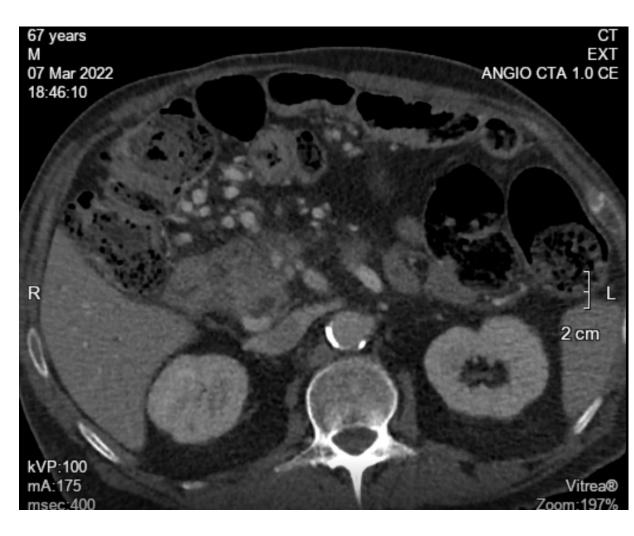




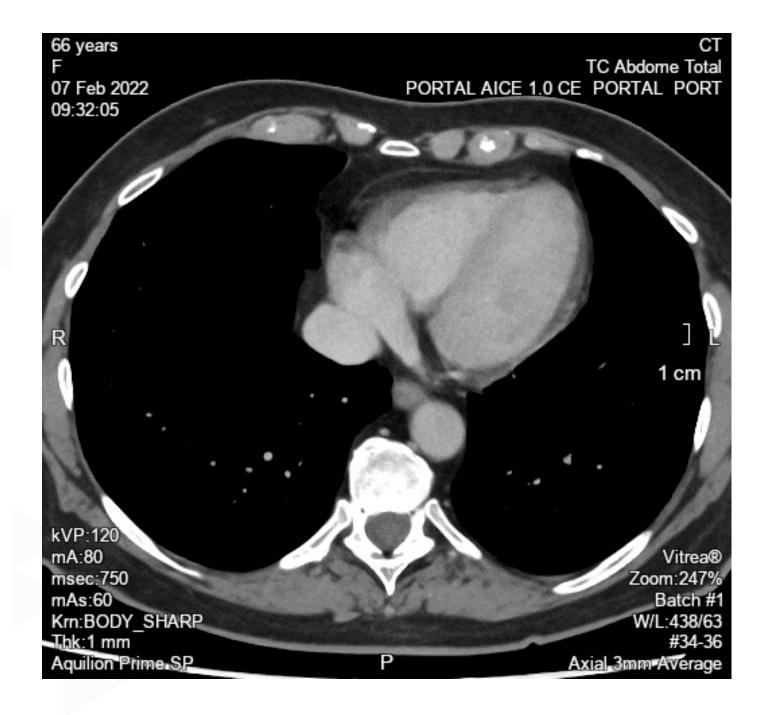




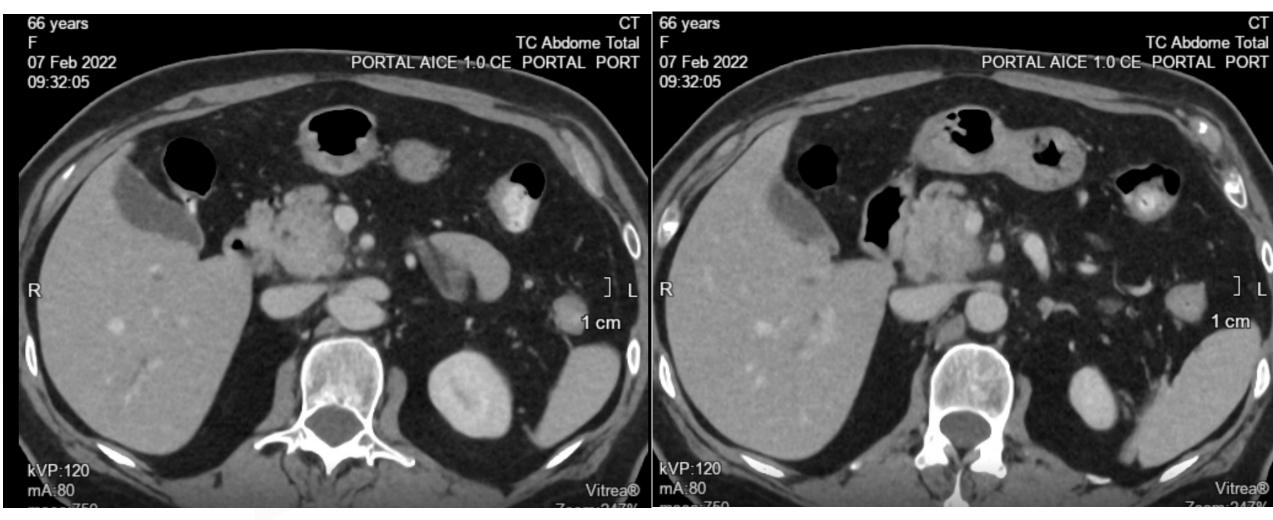














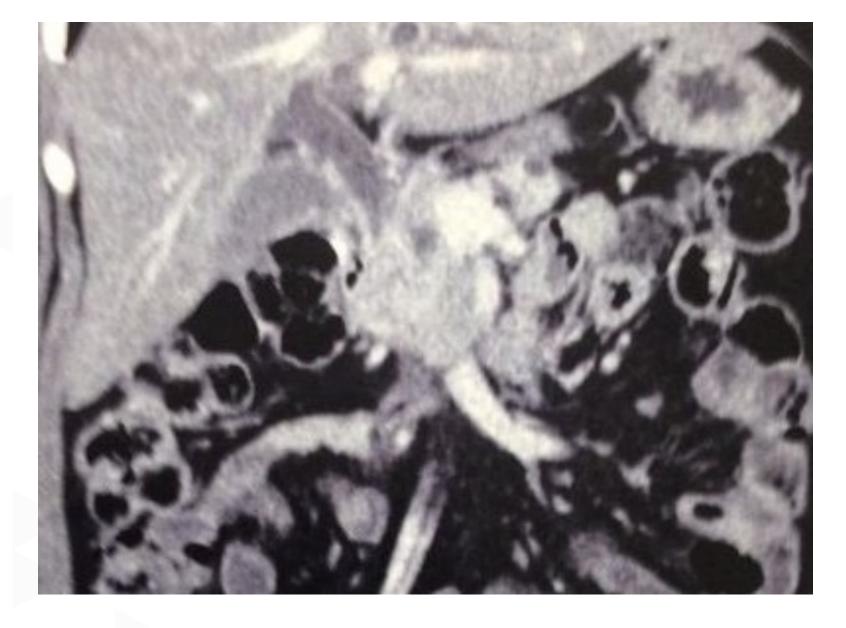
1 cm

CT

TC Abdome Total













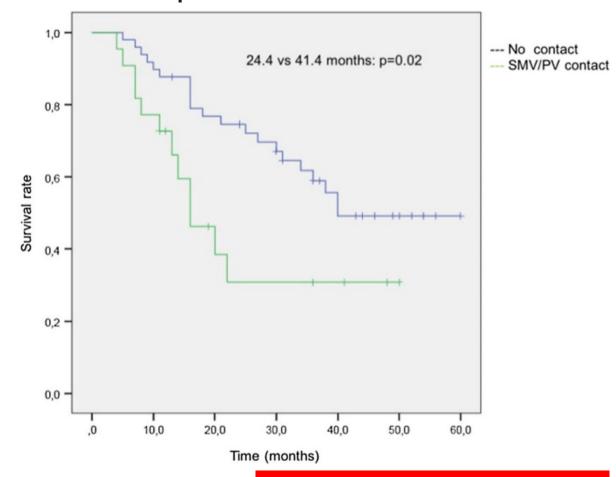
ORIGINAL ARTICLE



Clinical impact of preoperative tumour contact with superior mesenteric-portal vein in patients with resectable pancreatic

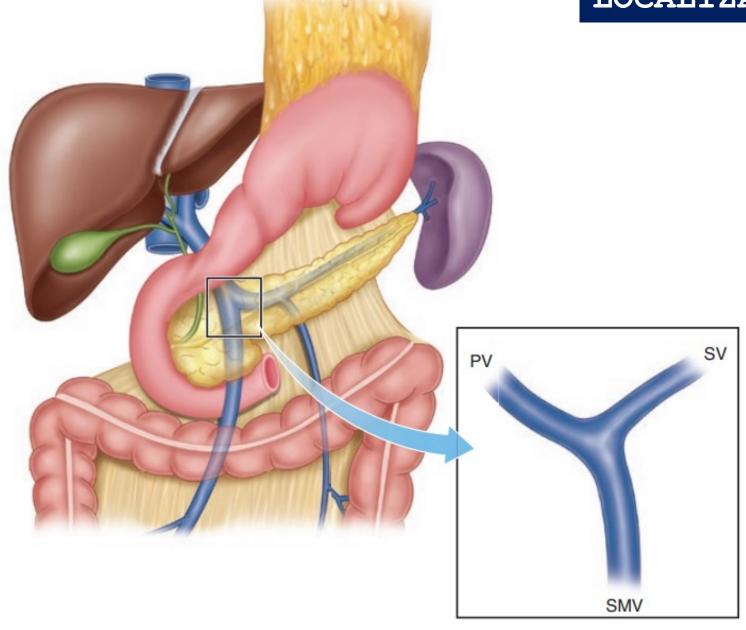
head cancer





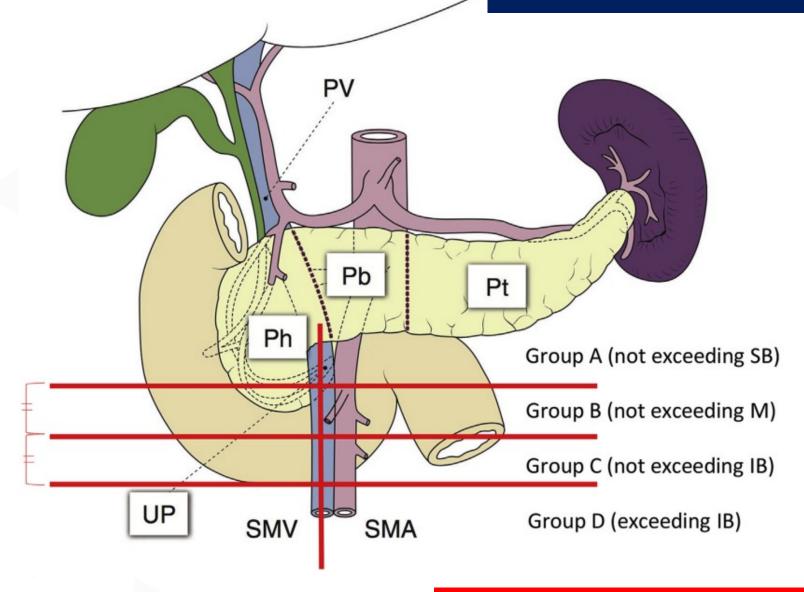


LOCALIZAÇÃO DA LESÃO





EXTENSÃO DO ENVOLVIMENTO



ENVOLVIMENTO DE RAMOS JEJUNAIS



QUIMIOTERAPIA NEOADJUVANTE

Table 2International consensus of classification of BR PDAC based on anatomical definition using CT imagings including coronal and sagittal sections.

Resectable: R	SMV/PV: no tumor contact or unilateral narrowing
	SMA, CA, CHA: no tumor contact
Borderline resectable: BR	Subclassified according to SMV/PV involvement alone or arterial invasion.
BR-PV (SMV/PV involvement alone)	• SMV/PV: tumor contact 180° or greater or bilateral narrowing/occlusion, not exceeding the inferior border of the duodenum.
	SMA, CA, CHA: no tumor contact/invasion
BR-A (arterial involvement)	• SMA, CA: tumor contact of less than 180° without showing deformity/stenosis.
	CHA: tumor contact without showing tumor contact of the PHA and/or CA.
	(The involvement of the aorta is categorized as unresectable.
	Presence of variant arterial anatomy is not taken into consideration)
Unresectable: UR	Subclassified according to the status of distant metastasis
Locally advanced: LA	SMV/PV: bilateral narrowing/occlusion, exceeding the inferior border of the duodenum.
	• SMA, CA: tumor contact/invasion of 180 or more degree [#] .
	CHA: tumor contact/invasion showing tumor contact/invasion of the PHA and/or CA.
	AO: tumor contact or invasion
Metastatic: M	Distant metastasis \$.

SMV: superior mesenteric vein, PV: portal vein, SMA: superior mesenteric artery, CA: celiac artery, CHA: common hepatic artery, PHA: proper hepatic artery, #: In the cases with CA invasion of 180° or more without involvement of the aorta and with intact and uninvolved gastroduodenal artery thereby permitting a distal pancreatectomy with enbloc celiac axis resection (DP-CAR) [21], some members prefer this criteria to be in the BR-A category. \$: including macroscopic para aortic and extra abdominal lymph node metastasis.





ORIGINAL ARTICLE - PANCREATIC TUMORS

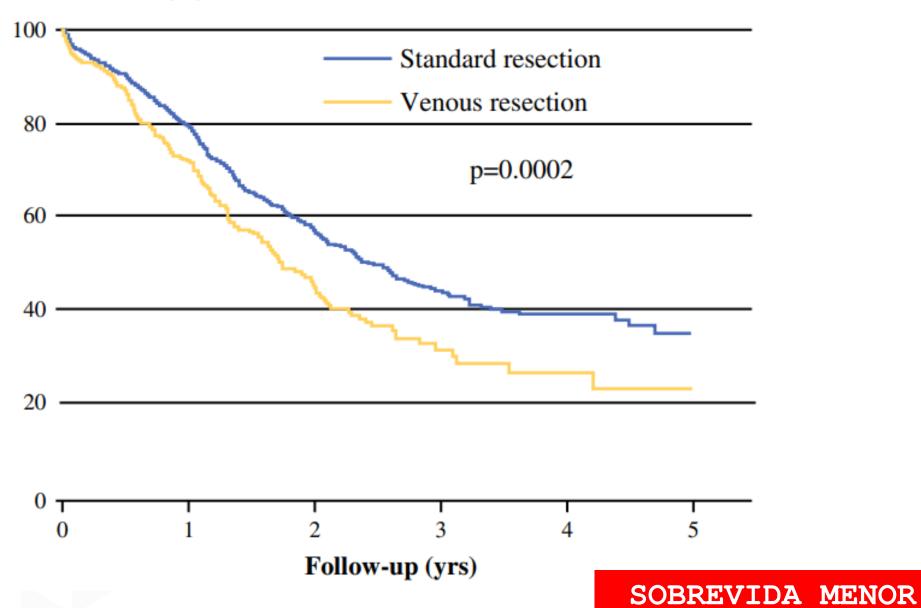
Pancreatic Adenocarcinoma with Venous Involvement: Is Up-Front Synchronous Portal-Superior Mesenteric Vein Resection Still Justified? A Survey of the Association Française de Chirurgie

□ Morbidade e mortalidade igual p= 0,16
 □ Sobrevida média: 21 meses (VR) e 29 meses (RP)
 □ Sobrevida em 3 anos: 31% (VR) e 44% (RP)
 □ Tumores maiores, menos diferenciados
 □ Mais linfonodos positivos, mais margem positiva
 □ Quimioterapia esteve associada com melhor sobrevida a longo prazo

QUIMIOTERAPIA NEOADJUVANTE



Survival Rate (%)









Review

The Impact on Survival and Morbidity of Portal–Mesenteric Resection During Pancreaticoduodenectomy for Pancreatic Head Adenocarcinoma: A Systematic Review and Meta-Analysis of Comparative Studies

Table 2. Comparisons of postoperative outcomes and survival outcomes. LLCI: Lower Level Confidence Interval; ULCI: Upper Level Confidence Interval.

Variables	No. of Pooled Studies	Mean PD+VR	Mean PD	Difference or Odds Ratio	95% LLCI	95% ULCI
Blood loss (ml)	9	977.8	743.31	209.22	-84.18	502.62
Operative time (min)	9	421.1	361.4	58.16	38.3	77.9
Positive margin status	9	0.27	0.22	1.69	1.23	2.31
R0 resection	17	0.58	0.68	0.6	0.47	0.75
Delayed gastric emptying	13	0.17	0.09	1.56	1.19	2.05
Mortality	17	0.03	0.02	1.93	1.28	2.91
Overall complications	8	0.4	0.4	1.07	0.81	1.41
Pancreatic fistula	14	0.2	0.2	0.74	0.57	0.95
Postoperative Hemorrage	4	0.1	0.04	1.44	0.84	2.47
Reoperations	7	0.1	0.1	1.21	0.78	1.87
1-yr OS	13	0.6	0.7	0.79	0.67	0.92
3-yr OS	11	0.2	0.2	0.72	0.59	0.87
5-yr OS	8	0.1	0.2	0.57	0.39	0.83



🗆 Os diâmetros dos cotos da veia (após a	ressecção) são
apropriados para a anastomose, permitino	lo fluxo do
intestino para o fígado?	
□ A veia esplênica pode ser preservada?	
🗆 Existe possibilidade da veia esplênic	a não ser
reconstruída?	
☐ Há necessidade de interposição de enxerto (o	u patch),ou é
possível fazer término-terminal sem interposi	ção?
🗆 Qual enxerto (ou patch), se necessário,	é o mais
apropriado nessa situação individual?	

QUESTÕES





Submit a Manuscript: http://www.wjgnet.com/esps/ Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx DOI: 10.3748/wjg.v21.i24.7604 World J Gastroenterol 2015 June 28; 21(24): 7604-7607 ISSN 1007-9327 (print) ISSN 2219-2840 (online) © 2015 Baishideng Publishing Group Inc. All rights reserved.

CASE REPORT

Resection of the main trunk of the superior mesenteric vein without reconstruction during surgery for giant pancreatic mucinous cystadenoma: A case report

Chen YT, et al. World J Gastroenterol 2015



Submit a Manuscript: http://www.f6publishing.com

g.com World J Clin Cases 2018 August 16; 6(8): 214-218

DOI: 10.12998/wjcc.v6.i8.214

ISSN 2307-8960 (online)

CASE REPORT

Pancreaticoduodenectomy with combined superior mesenteric vein resection without reconstruction is possible: A case report and review of the literature

Jouffret L, et al. World J Clin Cases 2018



RESSECÇÃO SEM RECONSTRUÇÃO DA VMS

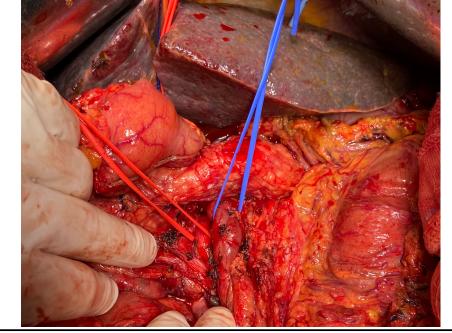






Extensão da mobilização acima e abaixo da lesão













REVIEW ARTICLE



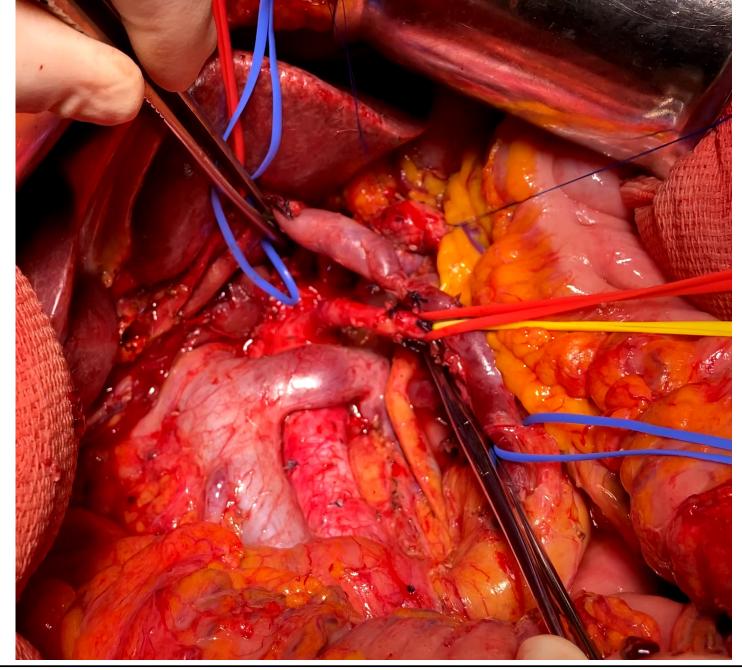
What do surgeons need to know about the mesopancreas

Eduardo de Souza M. Fernandes ^{1,2} · Oliver Strobel ^{3,4} · Camila Girão ^{1,2} · Jose Maria A. Moraes-Junior ^{5,6} · Orlando Jorge M. Torres ^{5,6} ©

Table 3 Advantages of the artery-first approach (SHARMA) [35]

- Resection without breaching the tumor extension plane, thereby minimizing cell spillage
- Increases curative (R0) resection, decreases local recurrence
- Complete resection of peripancreatic retroperitoneal tissue around the plexuses
- 4. Increased lymph nodal clearance
- 5. Early assessment of non-resectability (SMA involvement), avoiding useless R2 resections
- Better delineation of SMA and identification of RHA anomalies
- Easier en bloc resection and reconstruction of SMV-PV by "no touch" technique
- 8. Reduced need for graft substitutions
- Reduced operative time and blood loss (early ligation of IPDA/JA1)

ARTERY FIRST APPROACH









REDUZIR A NECESSIDADE DE ENXERTO

Received: 29 July 2020

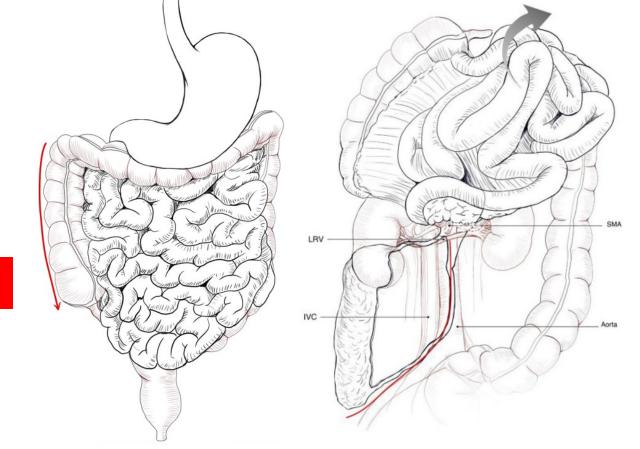
Accepted: 10 August 2020

DOI: 10.1002/jso.26180

HOW I DO IT



Cattell-Braasch maneuver in pancreatic surgery. No need of venous graft for vascular resection



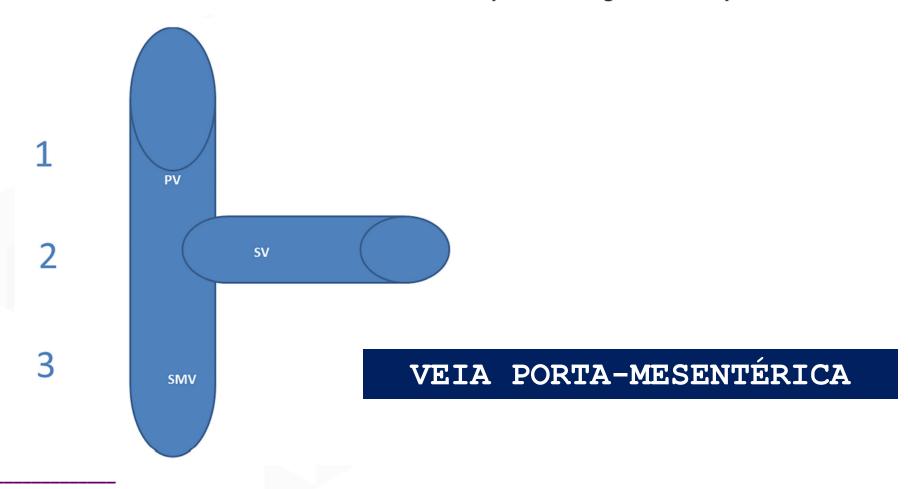
CATTELL-BRAASCH MANEUVER



HOW I DO IT



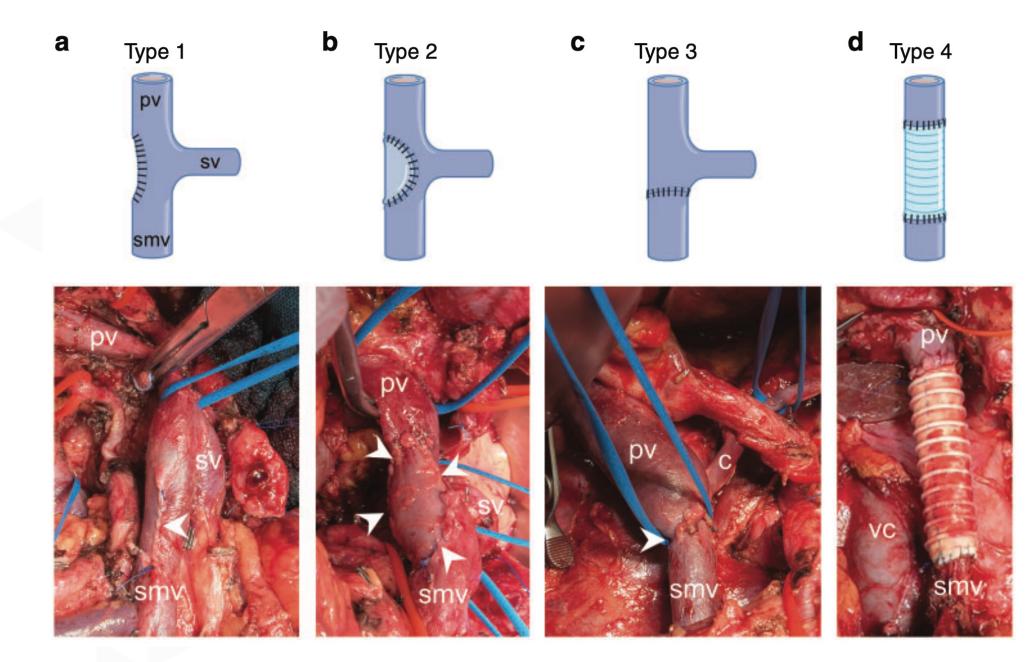
Pancreaticoduodenectomy with Segmental Venous Resection: a Standardized Technique Avoiding Graft Interposition















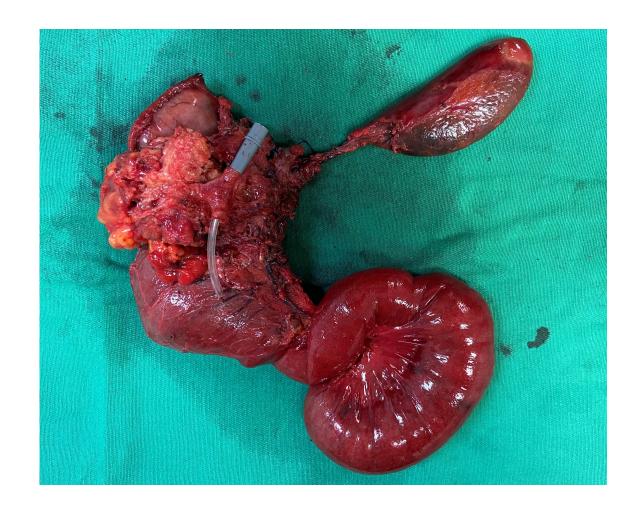






- ☐ Ressecção como último procedimento
- ☐ Sempre a peça toda













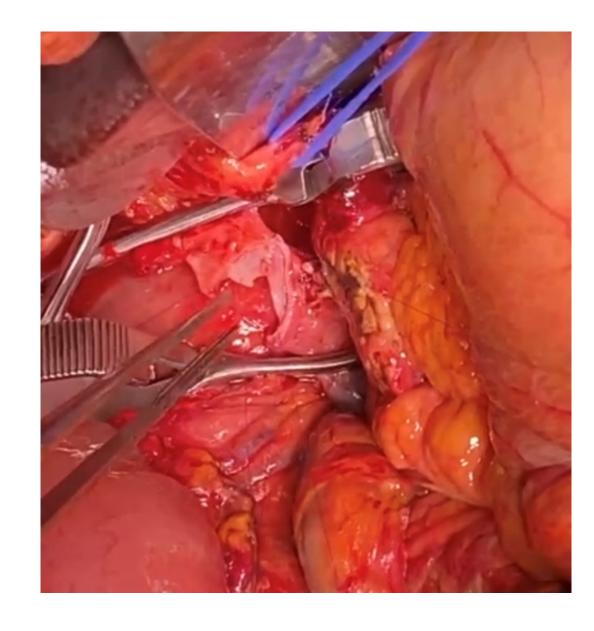






ASPECTOS TÉCNICOS

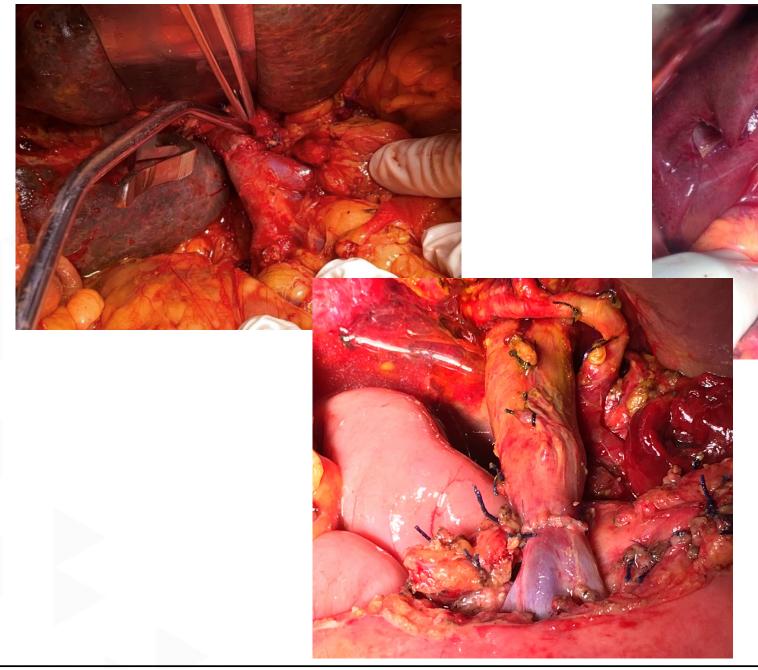
- ☐ Ressecção como último procedimento
- ☐ Prolene 6.0 2Unidades (duas agulhas)
- ☐ Colocar compressas no subfrênico D
- ☐ Realizar flushing
- ☐ Heparina dentro do vaso
- ☐ Fazer "Growth fator"











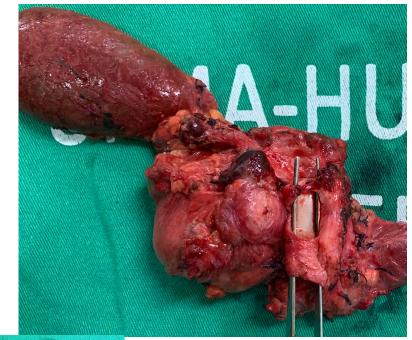


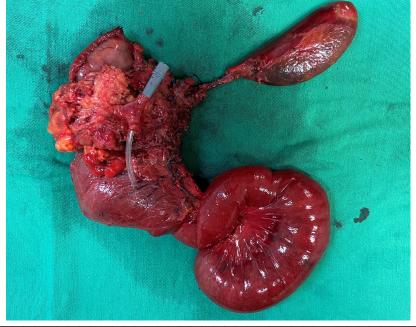


















RESSECÇÃO VENOSA PORTO-MESENTÉRICA

Tipo	1	Ressecção	Padrão	(74,1%)
Tipo	2	Ressecção	porta-mesentérica	(14,4%)
Tipo	3	Ressecção	multivisceral	(10,5%)
Tipo	4	Ressecção	arterial	(1,0%)



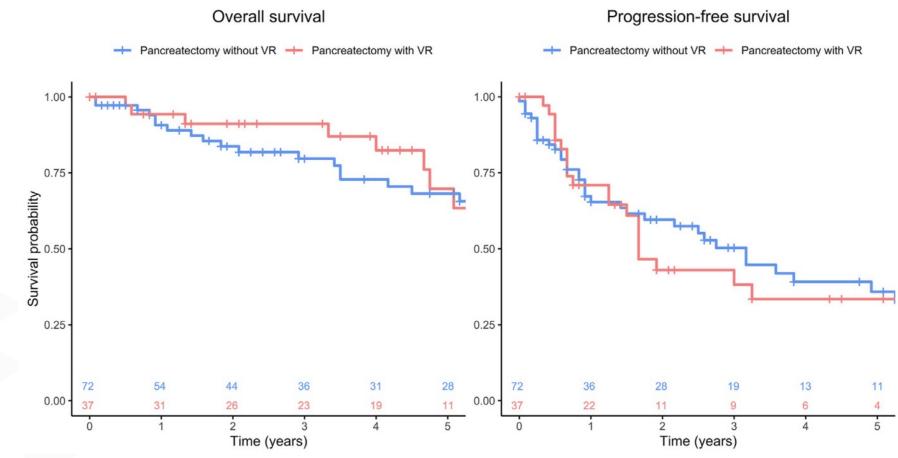


https://doi.org/10.1016/j.hpb.2021.12.016

HPB

ORIGINAL ARTICLE

Outcomes of pancreatectomy with portomesenteric venous resection and reconstruction for locally advanced pancreatic neuroendocrine neoplasms





Qual a melhor reconstrução

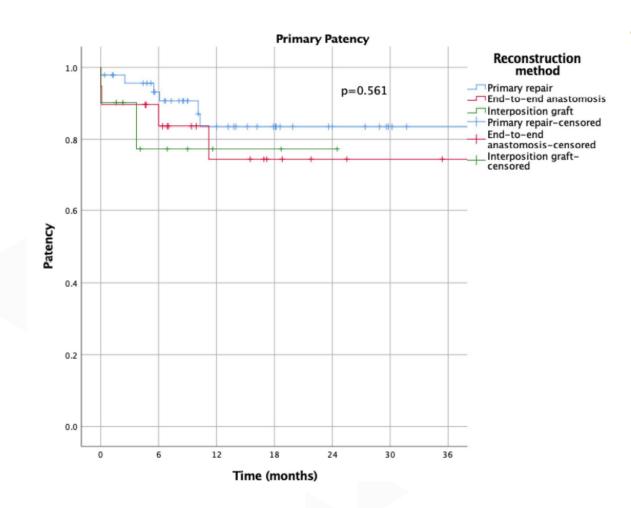
Table 4. Postoperative complications according to vein reconstruction techniques in all patients with venous resection and reconstruction

	All (%)	Spiral graft (%)	End-to-end (%)	Tang/patch (%)	<i>p</i> -value
PV/SMV thrombosis	8 (4)	2 (3)	4 (5)	2 (4)	.781
PPH					
None	102 (52)	32 (46)	45 (48)	25 (50)	
A	49 (25)	20 (29)	13 (17)	16 (31)	
В	43 (22)	16 (23)	16 (21)	11 (21)	
C	4 (2)	1(1)	3 (4)	0	.341
Re-operation*	14 (7)	5 (7)	8 (10)	1 (2)	.176

^{*}See detailed information in the results section. Tang = tangential; PV = portal vein; SMV = superior mesenteric vein; PPH = postpancreatectomy haemorrhage.



PLOS ONE



RESEARCH ARTICLE

Comparison between long and short-term venous patencies after pancreateduodenectomy or total pancreatectomy with portal/superior mesenteric vein resection stratified by reconstruction type

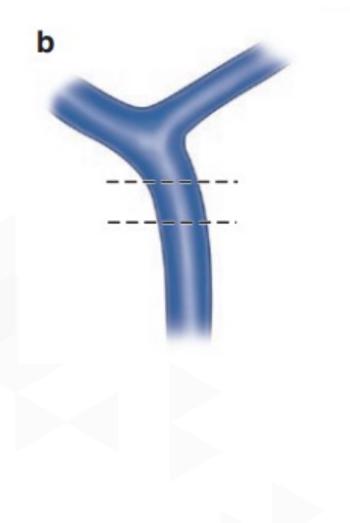


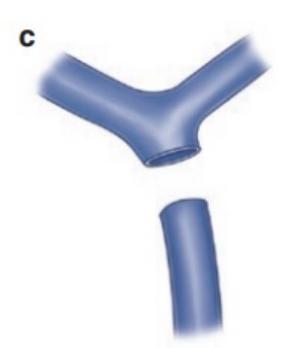
ENXERTOS

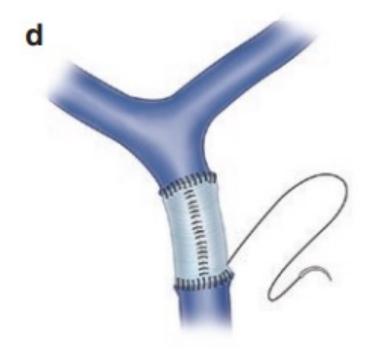
Veia	safena			
Veia	jugular interna	esquerda		
Veia	renal esquerda	(próximo d	a veia	cava)
Veia	ilíaca externa			
Veia	gonadal			
Veia	femoral			
Veia	de cadáver			
Patch	peritoneal			
Peric	ardio bovino			
Enxer	to de PTFE			





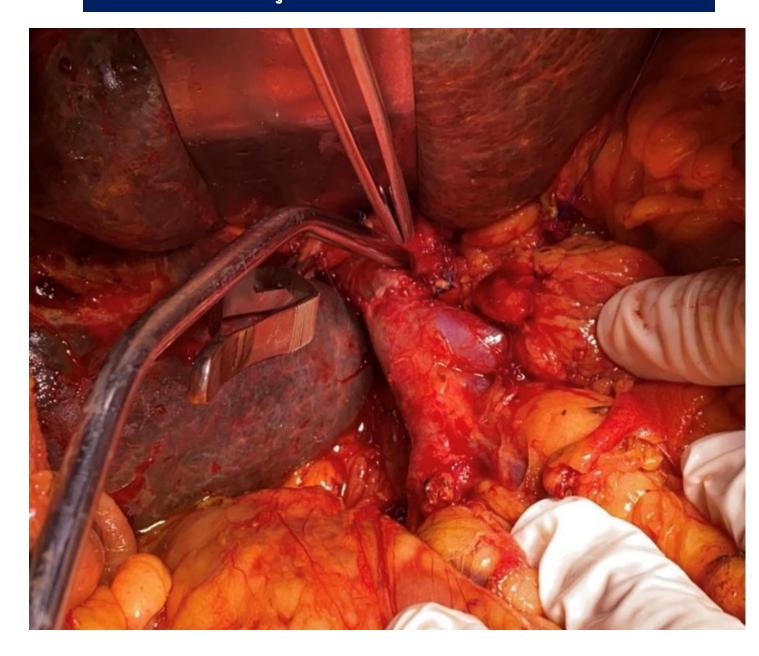






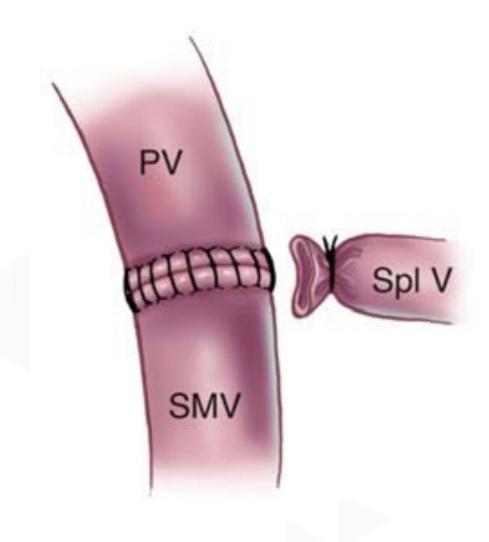


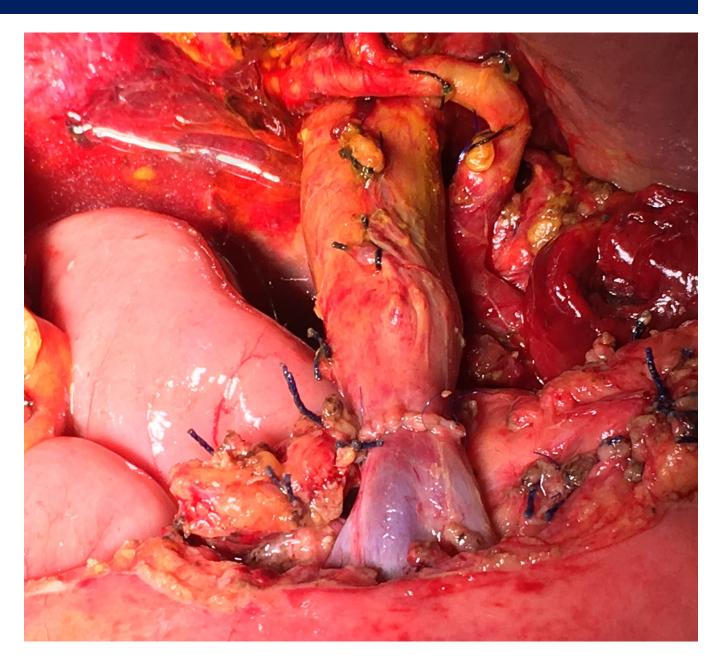
PRESERVAÇÃO DA VEIA ESPLÊNICA





LIGADURA PERDIDA DA VEIA ESPLÊNICA







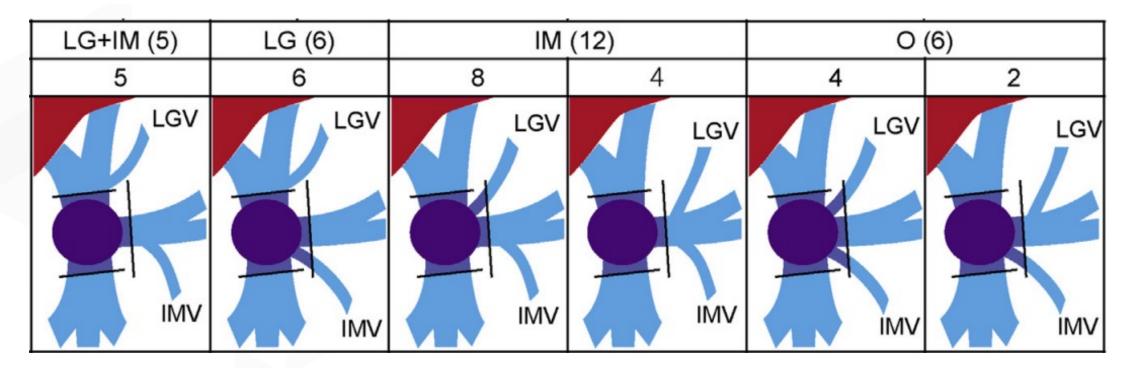
REMANESCENTE DA VEIA ESPLÊNICA

http://dx.doi.org/10.1016/j.hpb.2017.02.438

HPB

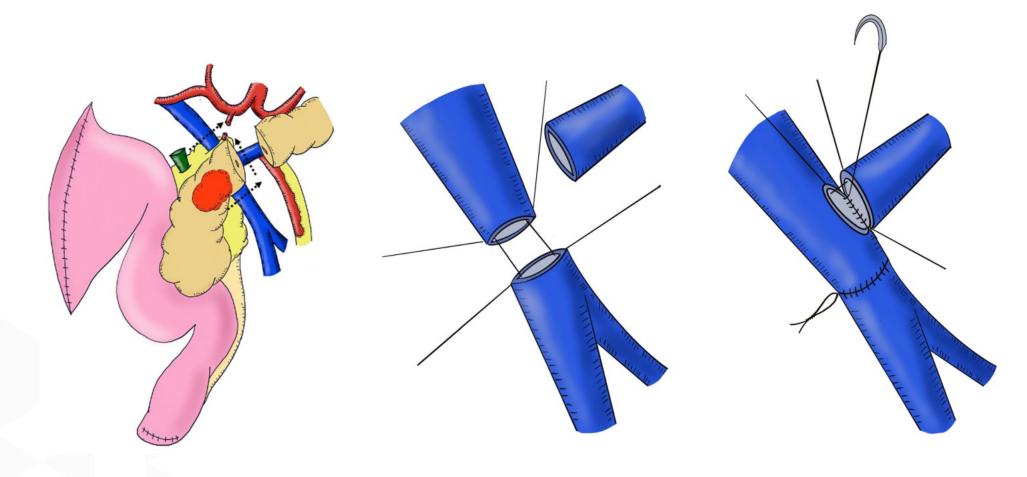
ORIGINAL ARTICLE

Splenic vein reconstruction is unnecessary in pancreatoduodenectomy combined with resection of the superior mesenteric vein-portal vein confluence according to short-term outcomes





REIMPLANTE DA VEIA ESPLÊNICA







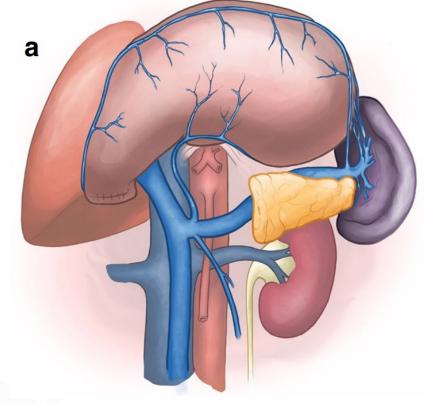
Langenbeck's Archives of Surgery https://doi.org/10.1007/s00423-021-02318-2

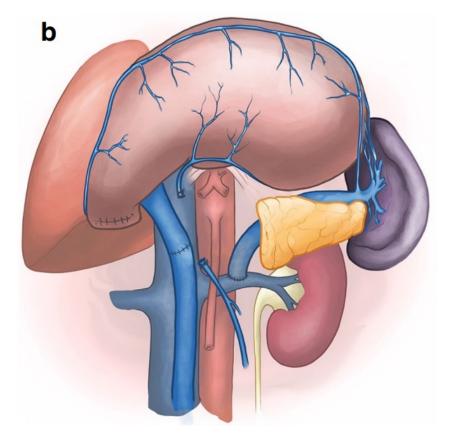
HOW-I-DO-IT ARTICLES



Splenorenal shunt for reconstruction of the gastric and splenic venous drainage during pancreatoduodenectomy with resection of the portal

venous confluence



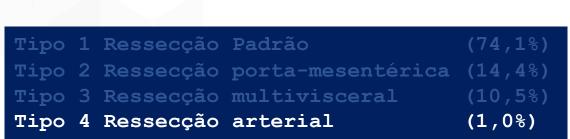


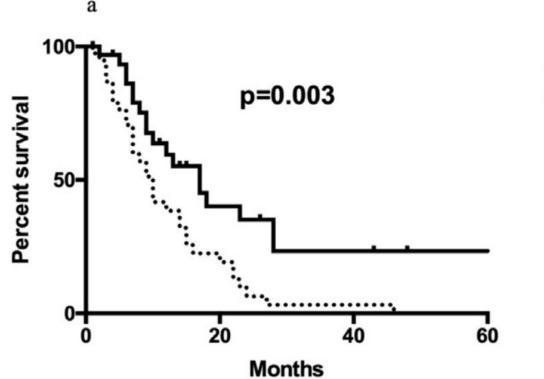


HPB

ORIGINAL ARTICLE

Pancreatectomy with arterial resection is superior to palliation in patients with borderline resectable or locally advanced pancreatic cancer





- resection

· palliation

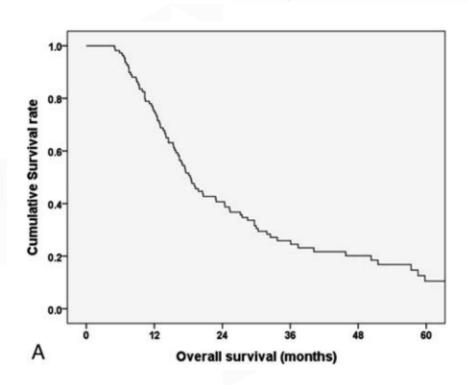
18,4 meses

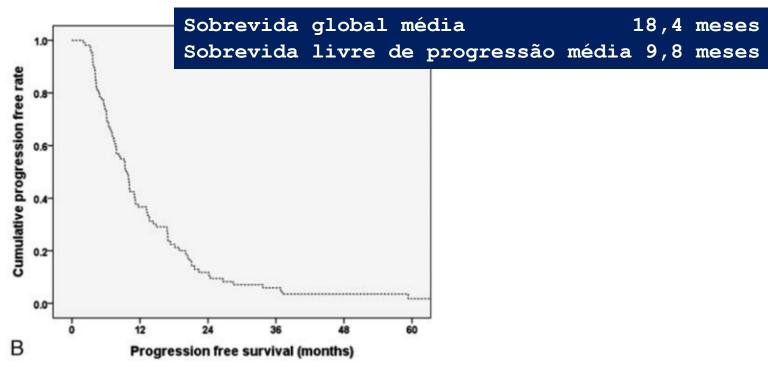




Arterial resection during pancreatectomy for pancreatic ductal adenocarcinoma with arterial invasion

A single-center experience with 109 patients









Contents lists available at ScienceDirect

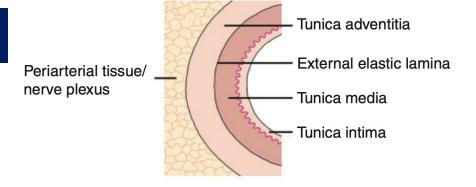
Surgery

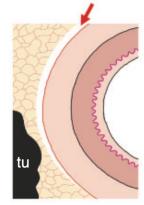
journal homepage: www.elsevier.com/locate/surg

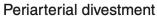


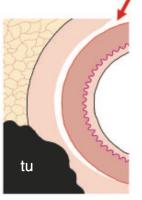
Periarterial divestment in pancreatic cancer surgery

RESSECÇÃO ARTERIAL







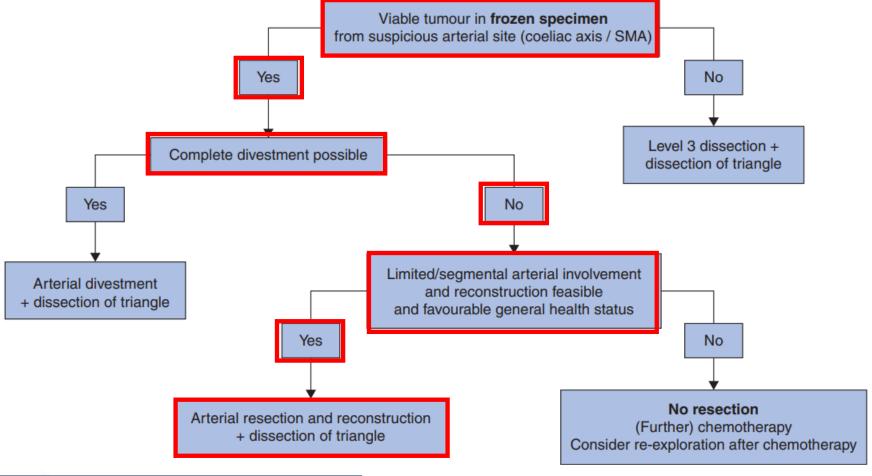


Subadventitial divestment

DIVESTMENT

RESSECÇÃO ARTERIAL

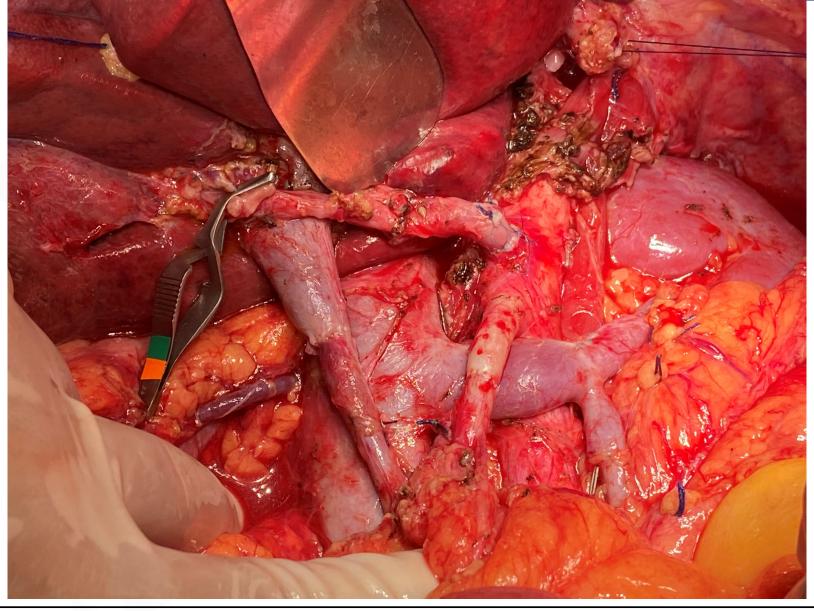




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Tipo 1 Ressecção Padrão (74,1%)
Tipo 2 Ressecção porta-mesentérica (14,4%)
Tipo 3 Ressecção multivisceral (10,5%)
Tipo 4 Ressecção arterial (1,0%)
```



RESSECÇÃO ARTERIAL





Obrigado!



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