DUODENOPANCREATECTOMIA: Padronização técnica

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Universidade Federal Maranhão - Brasil

rbm RELATO DE CASO

1995

Duodenopancreatectomia por adenocarcinoma de duodeno em paciente acima de 80 anos

Duodenopancreatectomy for adenocarcinoma of the duodenum in patient over 80 years of age

Unitermos: ressecção pancreática, tumores periampulares, cirurgia geriátrica.
Uniterms: pancreatic resection, periampullary carcinoma, geriatric surgery.

RESUMO

Este estudo tem por objetivo apresentar um caso de duodenopancreatectomia por adenocarcinoma de duodeno em paciente acima de 80 anos de idade. Os autores mostram que os baixos índices de mortalidade operatória justificam a ressecção pancreática, mesmo com a finalidade paliativa. Eles concluem que a idade não é um fator limitante para este procedimento. A ressecção pode ser realizada com um índice aceitável de sobrevida mesmo em pacientes acima de 80 anos, desde que os cuidados relacionados à seleção e preparo destes pacientes sejam obedecidos.

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Artur Serra Neto
Márcio Jorge de Carvalho Gonçalves
Wilson José de Sena Pedro

Residentes de Clínica Cirúrgica da Universidade Federal do Maranhão - Hospital Universitário (UFMA).

Torres OJ, et al. Rev Bras Med 1996;53:836-7

REVISTA-BRASILEIRA DE CIRURGIA

RBCHAN/3864

Duodenopancreatectomia por trauma

José Antônio Ferreira Bezerra[1], ACBC-MA
Orlando Jorge Martins Torres[2], TCBC-MA
Gutemberg Fernandes de Araújo[3], TCBC-MA
Orlando José dos Santos[3]
Márcio Jorge de Carvalho Gonçalves[4]
Alexandre Souza Neto[5]

RESUMO

BEZERRA JAF, TORRES OJM, ARAÚJO GF, SANTOS OJ, GONÇALVES MJC *à.* SOUZA NETO A - Duodenopancreateetomy due to trauma. **Rev bras Cir, 1996; 86(6): 291-292**

É apresentado um caso de duodenopancreatectomia em um paciente com lesão duoáenopancreâíica combinada. Os autores discutem as indica-

Torres OJ, et al. Rev Bras Cir 1996;86:291-2

❑ Neoplasia de cólon

Relato de Caso
Rev.Med.Res.
Vol. 5 - N°3:89-91, Out./Dez. 2003

DUODENOPANCREATECTOMIA POR CARCINOMA DE CÓLON INFILTRANDO O DUODENO

DUODENOPANCREATECTOMY FOR PRIMARY COLORECTAL CARCINOMA INVOLVING THE DUODENUM

***Orlando Jorge Martins Torres*[1]**
***Lia Raquel de Alcântara Caldas*[2]**
***Ricardo Lima Palácio*[2]**
***Rodrigo Palácio de Azevedo*[2]**

Introdução

O carcinoma de cólon localmente avançado permanece como um dos principais desafios da

réia muco-sanguinolenta, plenitude pós-prandial e dor na fossa ilíaca direita. Nega ou-

Torres OJ, et al. Rev Med Res 2003;5:89-91

ISSN 0100-6991

DUODENOPANCREATECTOMIAS: ANÁLISE DE 39 PACIENTES

PANCREATICODUODENECTOMIES: ANALYSIS OF 39 PATIENTS

Orlando Jorge Martins Torres, TCBC-MA[1]; Érica Sampaio Barbosa[2]; Noelia Dias Carneiro Barros[2]; Cristiany de Almeida Barros[2]; Edson Dener Zandonadi Ferreira[2]; Herquimas Costa Pereira, ACBC-MA[3]

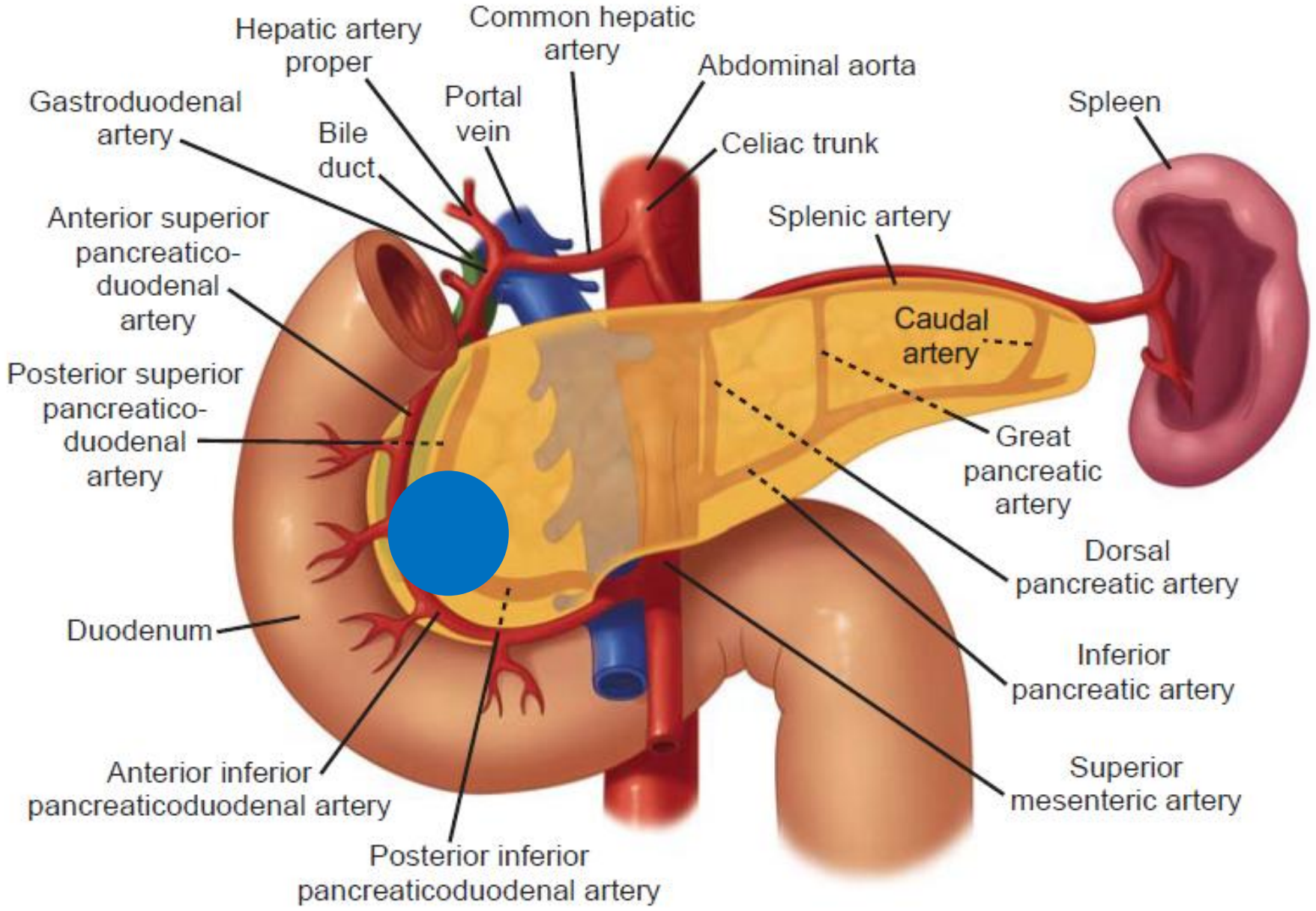
RESUMO: Objetivo: Pretendemos neste estudo analisar 39 pacientes submetidos à duodenopancreatectomia. **Método**: No período de julho de 1998 a março de 2004, trinta e nove pacientes foram submetidos a duodenopancreatectomia no Hospital Universitário da Universidade Federal do Maranhão. Foram analisados os dados epidemiológicos, o quadro clínico, os métodos radiológicos, as indicações da operação e as complicações encontradas. **Resultados:** Havia 22 pacientes do sexo masculino (56,4%) e 17 pacientes do sexo feminino (43,6%) com média de idade de 54,9 anos (variação de 21-82 anos). O exame radiológico mais utilizado foi a tomografia computadorizada. O diagnóstico histológico definitivo revelou adenocarcinoma periampolar em 35 pacientes (89,7%), pancreatite crônica (três pacientes – 7,7%) e adenocarcinoma colo-retal (um paciente – 2,6%). O adenocarcinoma periampolar mais freqüente foi o carcinoma ductal do pâncreas (27 pacientes – 69,2%), seguido por carcinoma de papila de Vater (cinco pacientes – 12,8%), adenocarcinoma duodenal (dois pacientes – 5,1%) e carcinoma de via biliar distal (um paciente – 2,6%). As complicações pulmonares foram as mais freqüentes sendo encontradas em cinco pacientes (12,8%), a sepse peritoneal em quatro pacientes (10,2%), fístula pancreática em três pacientes (7,6%) e a hemorragia intra-abdominal em três pacientes (7,6%). A mortalidade intra-hospitalar em 30 dias foi 10,2 % (quatro pacientes). **Conclusão:** A duodenopancreatectomia ainda está associada a morbidade considerável. Entretanto com uma seleção adequada destes pacientes este procedimento pode ser realizado de forma segura com melhores resultados (*Rev. Col. Bras. Cir. 2007; 34(1): 21-24*).

Descritores: Pancreaticoduodenectomia; Neoplasias do ducto biliar comum; Ampola hepatopancreática.

- 1998 – 2004
- 6,5/ano

Torres OJ, et al. Rev Col Bras Cir 2007;34:21-24

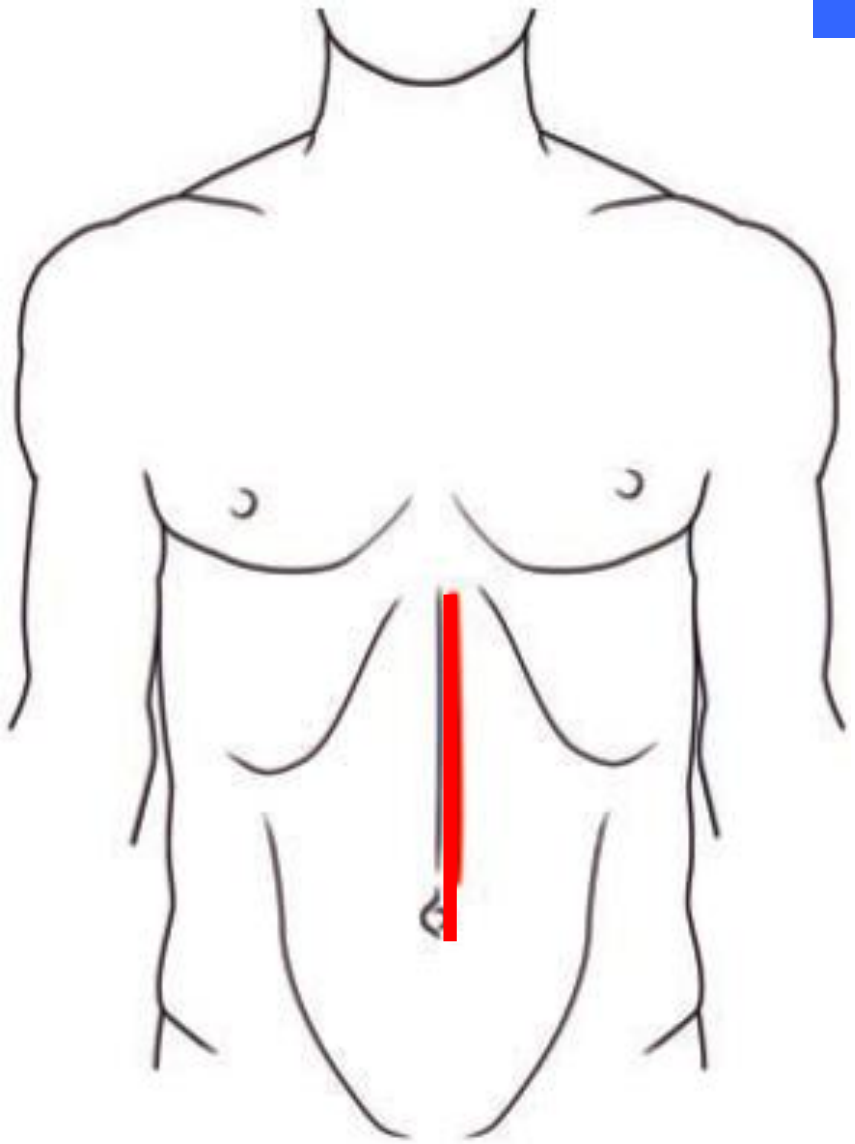
ANATOMIA


Hepatic artery proper
Common hepatic artery
Abdominal aorta
Gastroduodenal artery
Portal vein
Bile duct
Celiac trunk
Spleen
Anterior superior pancreatico-duodenal artery
Splenic artery
Caudal artery
Posterior superior pancreatico-duodenal artery
Great pancreatic artery
Dorsal pancreatic artery
Duodenum
Inferior pancreatic artery
Anterior inferior pancreaticoduodenal artery
Superior mesenteric artery
Posterior inferior pancreaticoduodenal artery

DUODENOPANCREATECTOMIA

- ❑ Sangramento
- ❑ Fístula pancreática
- ❑ Gastroparesia
- ❑ Padrão oncológico

INCISÃO



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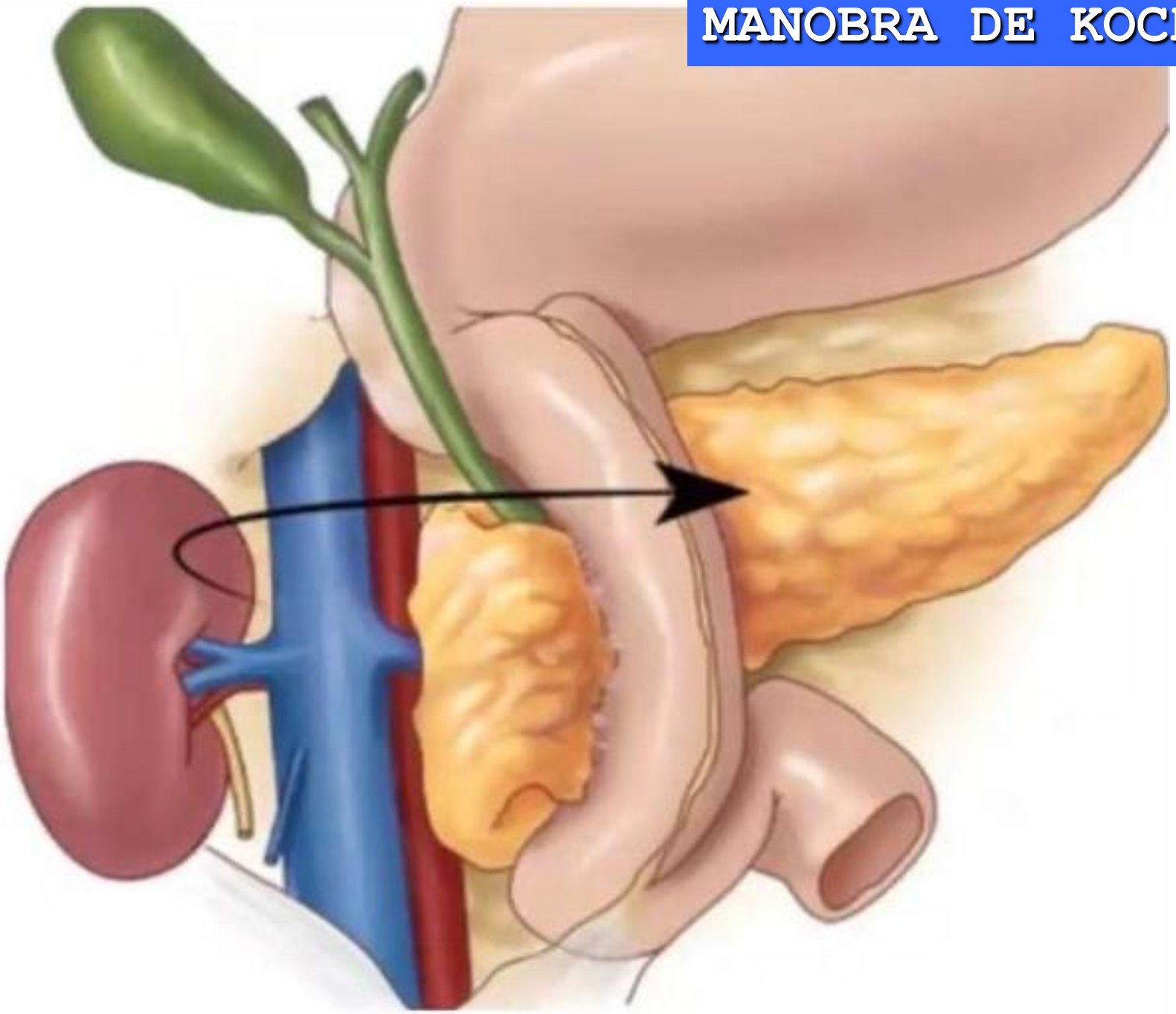

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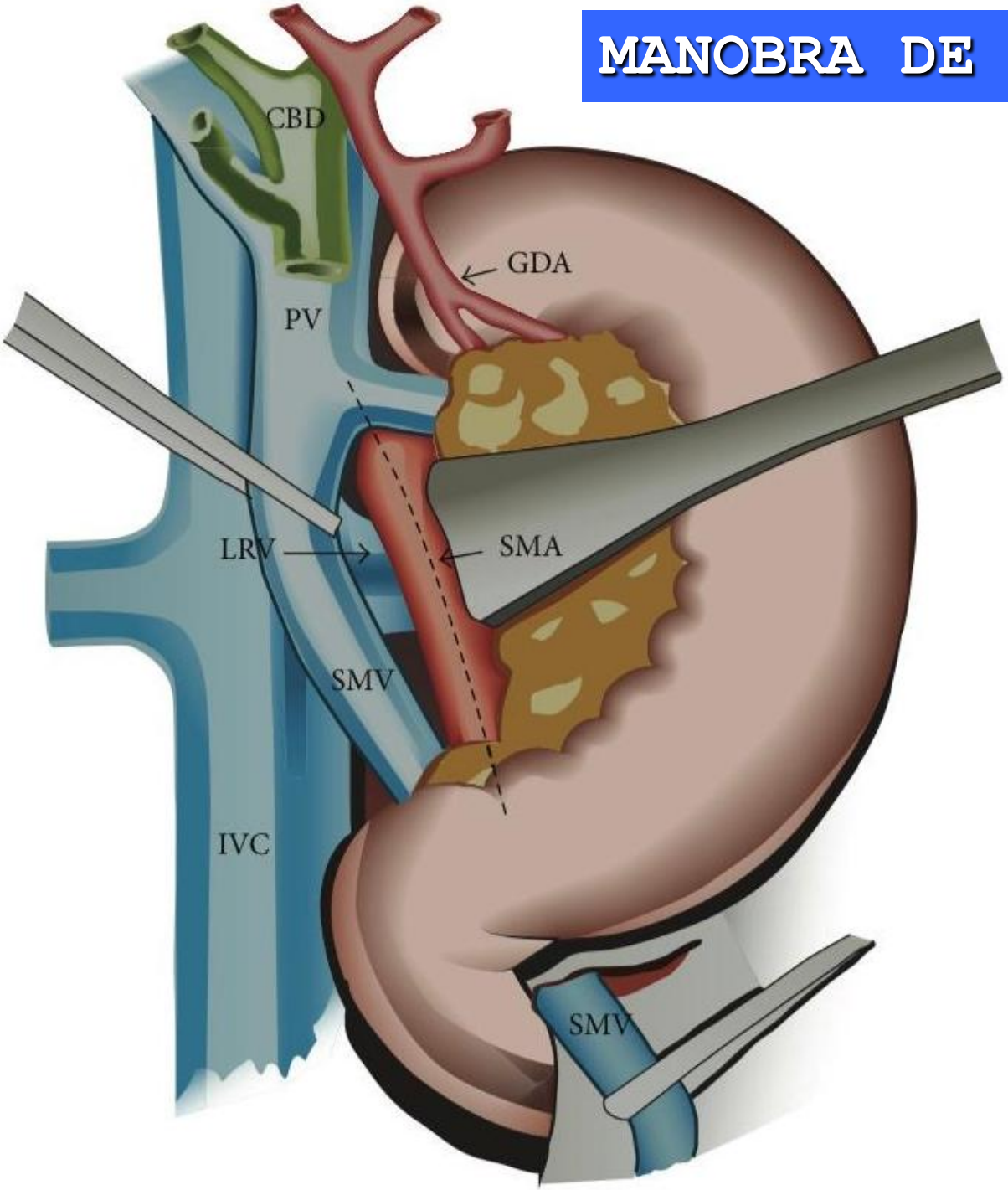
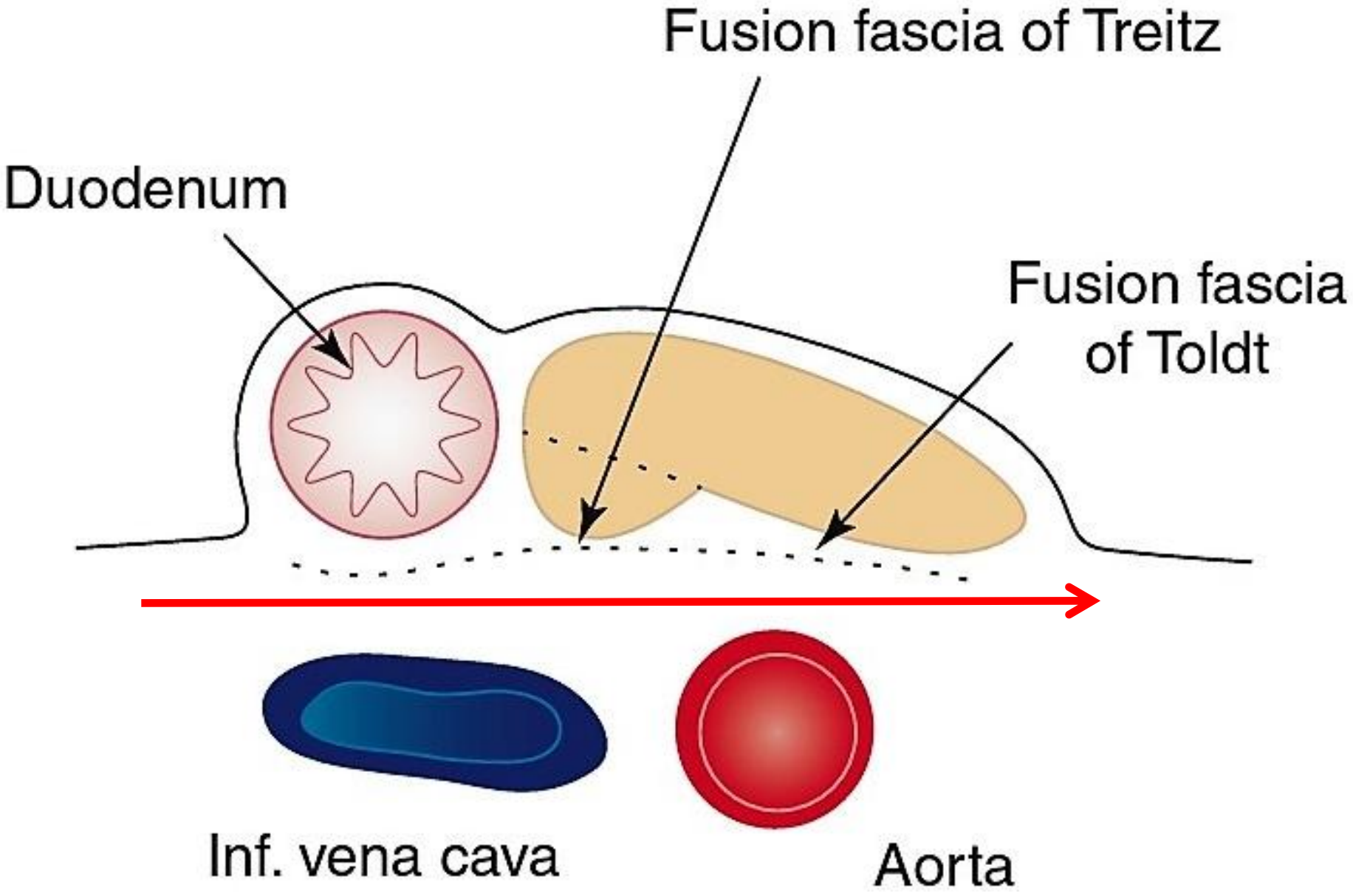
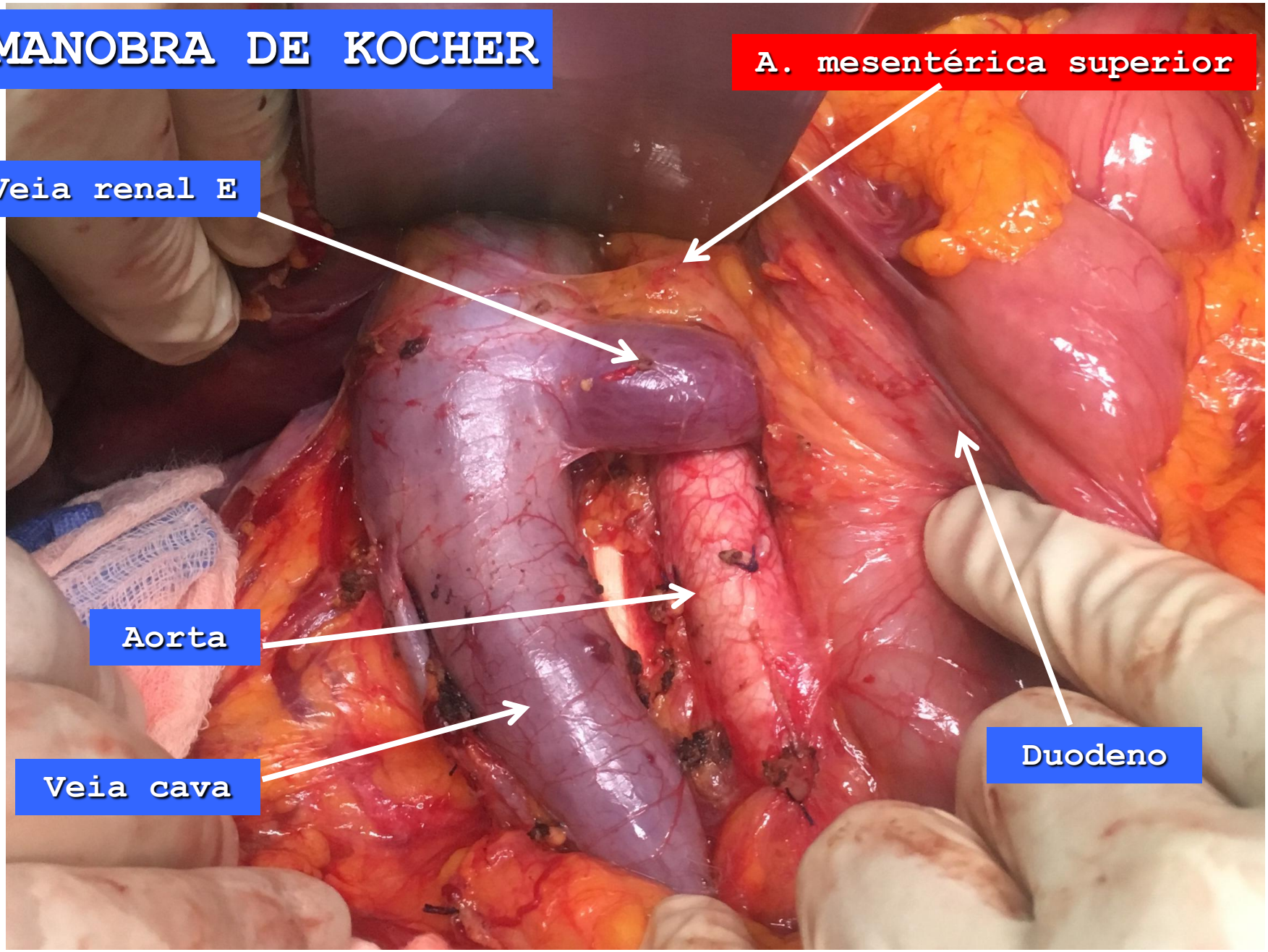



Fusion fascia of Treitz
Duodenum
Fusion fascia
of Toldt
Inf. vena cava
Aorta

MANOBRA DE KOCHER



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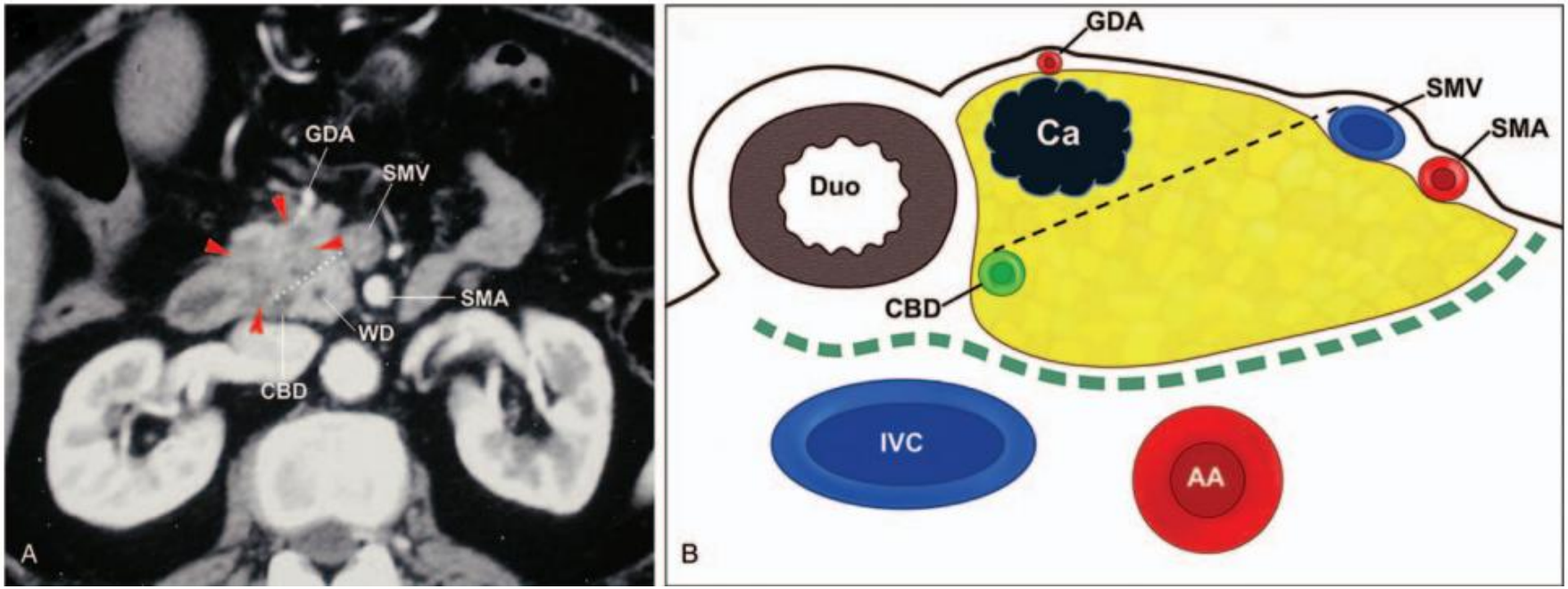
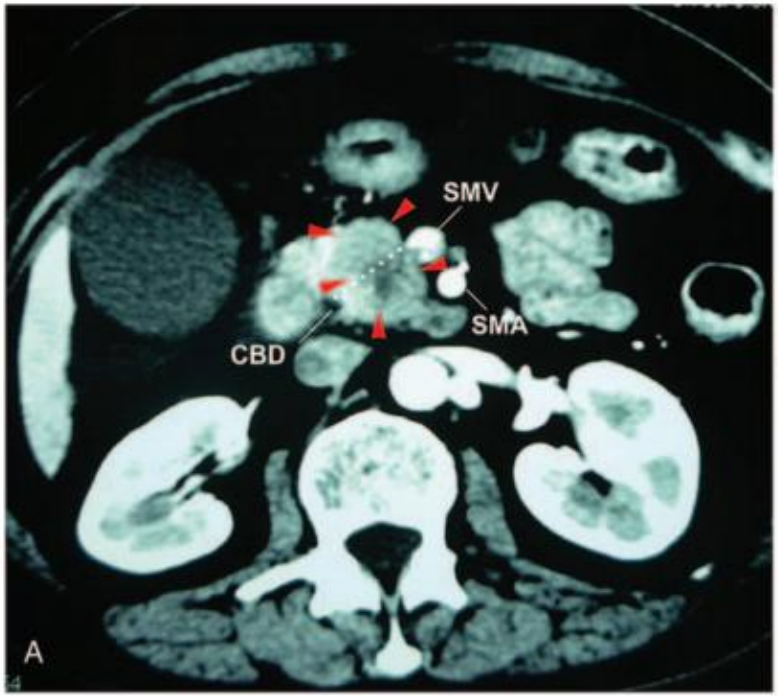
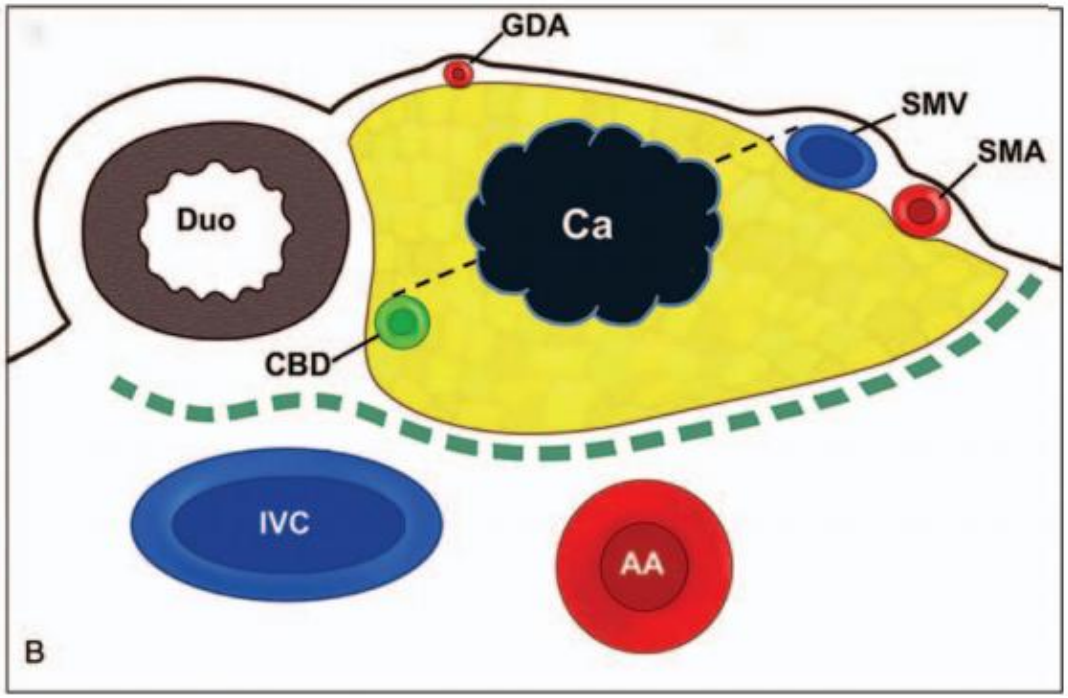


Localização do tumor: anterior

MANOBRA DE KOCHER





Localização do tumor: central

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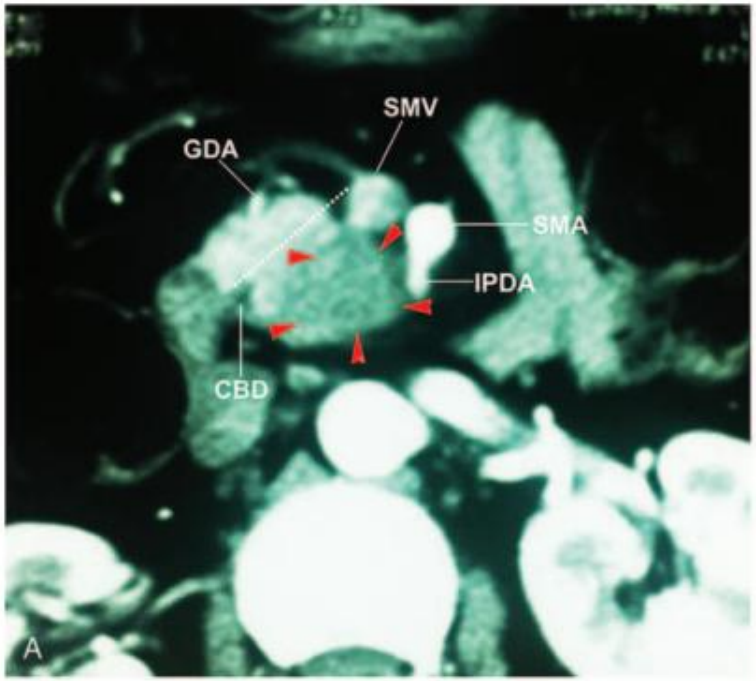
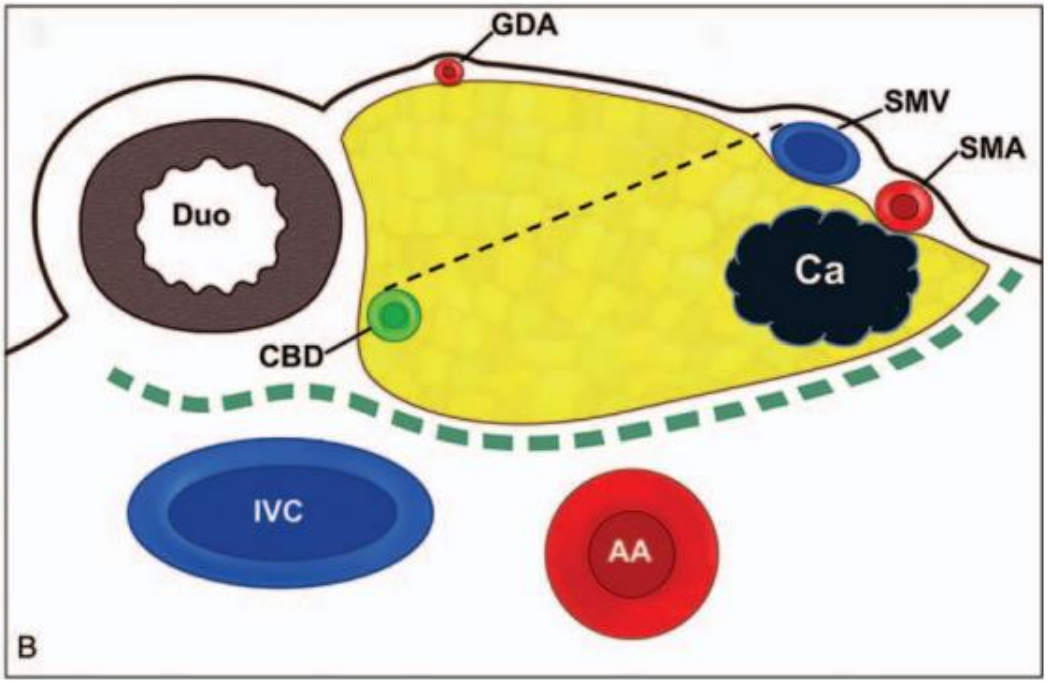
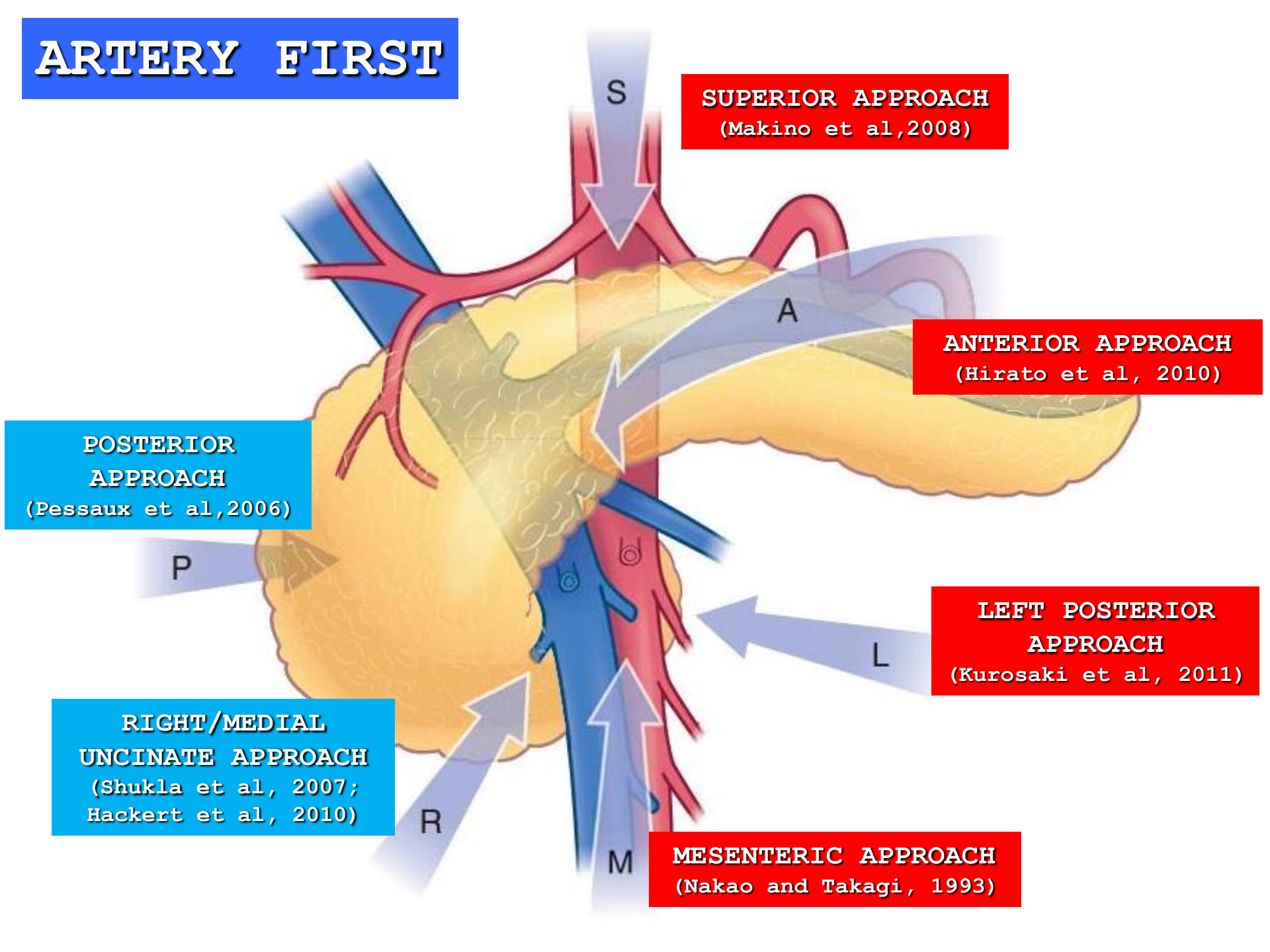




Localização do tumor: uncinado

ARTERY FIRST



SUPERIOR APPROACH
(Makino et al,2008)

ANTERIOR APPROACH
(Hirato et al, 2010)

POSTERIOR APPROACH
(Pessaux et al,2006)

LEFT POSTERIOR APPROACH
(Kurosaki et al, 2011)

RIGHT/MEDIAL UNCINATE APPROACH
(Shukla et al, 2007; Hackert et al, 2010)

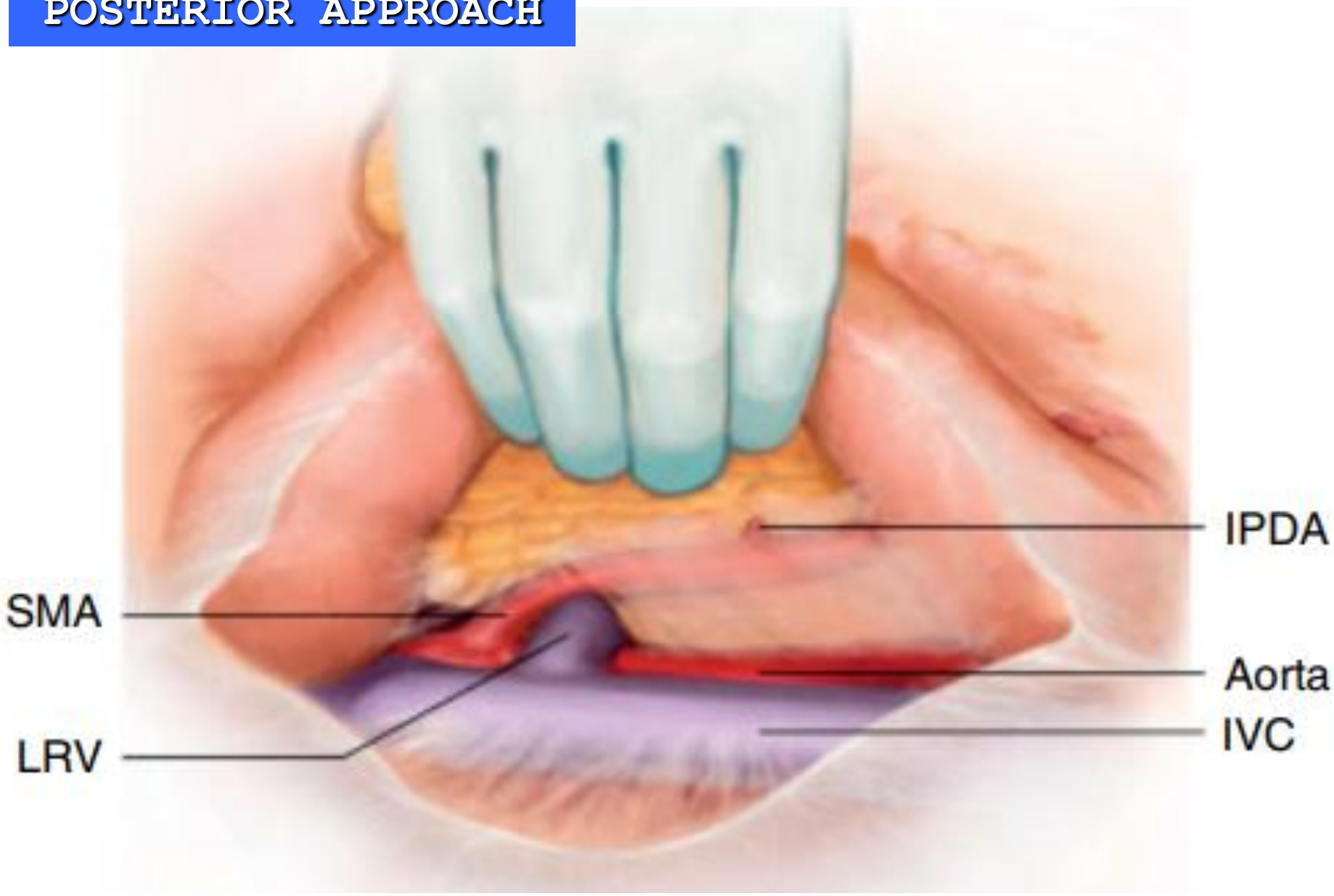
MESENTERIC APPROACH
(Nakao and Takagi, 1993)

POSTERIOR APPROACH

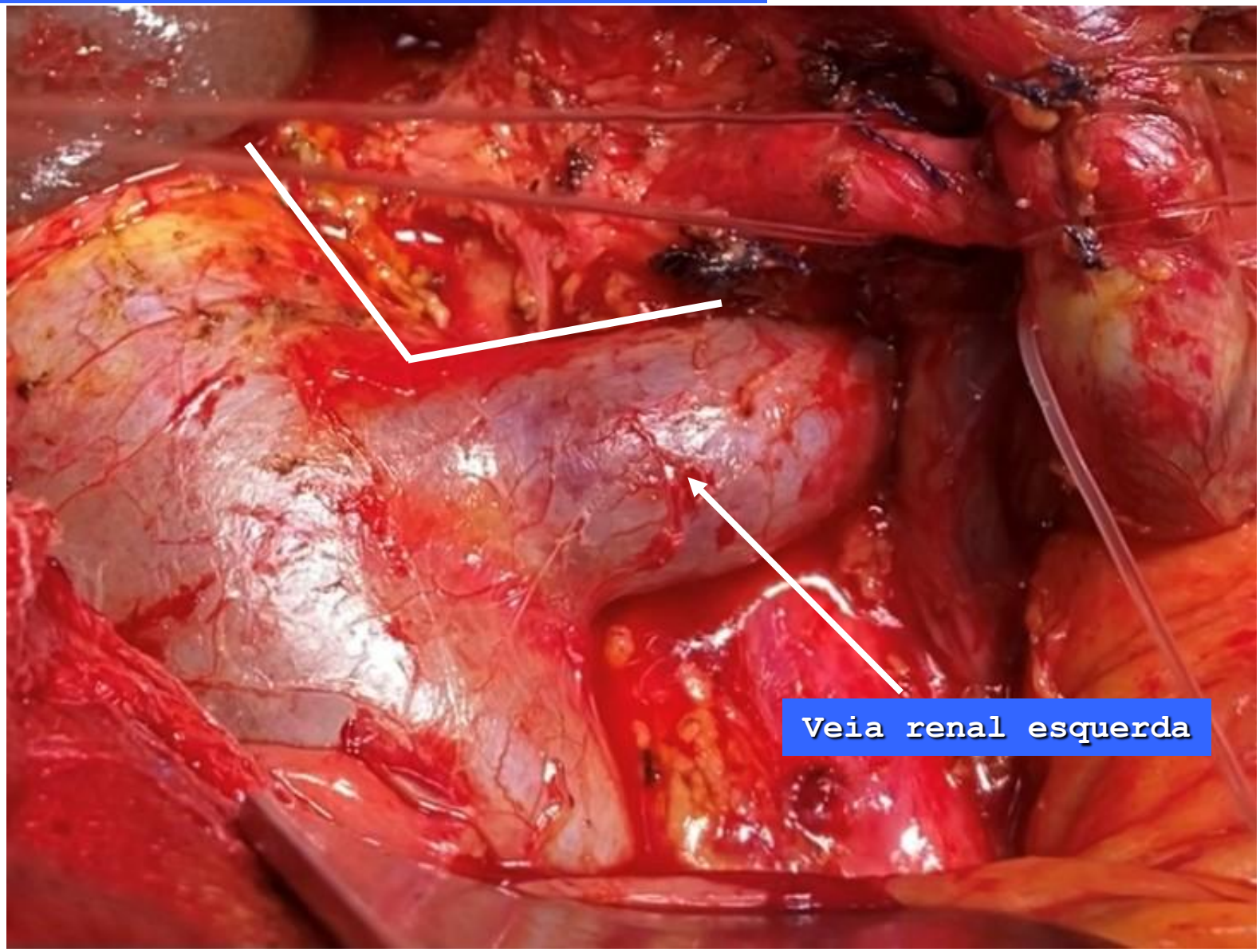
Table 18.1 Summary of indications, advantages and disadvantages of various 'artery-first approaches'

Approach	References	Indication(s)	Advantages and disadvantages
Posterior	Pessaux et al. (2006) [13]	Postero-medial tumour in the head/neck, especially involving the PV/SMV Periampullary tumour extending from the body to the head	Advantages Early identification of SMA involvement Identification of replaced RHA Enables adequate retropancreatic lymphadenectomy Early identification of SMV involvement and facilitates en bloc resection Disadvantages Difficult in cases of PD with peripancreatic inflammation and adhesions around the head of the pancreas

POSTERIOR APPROACH



Exposição da veia renal esquerda



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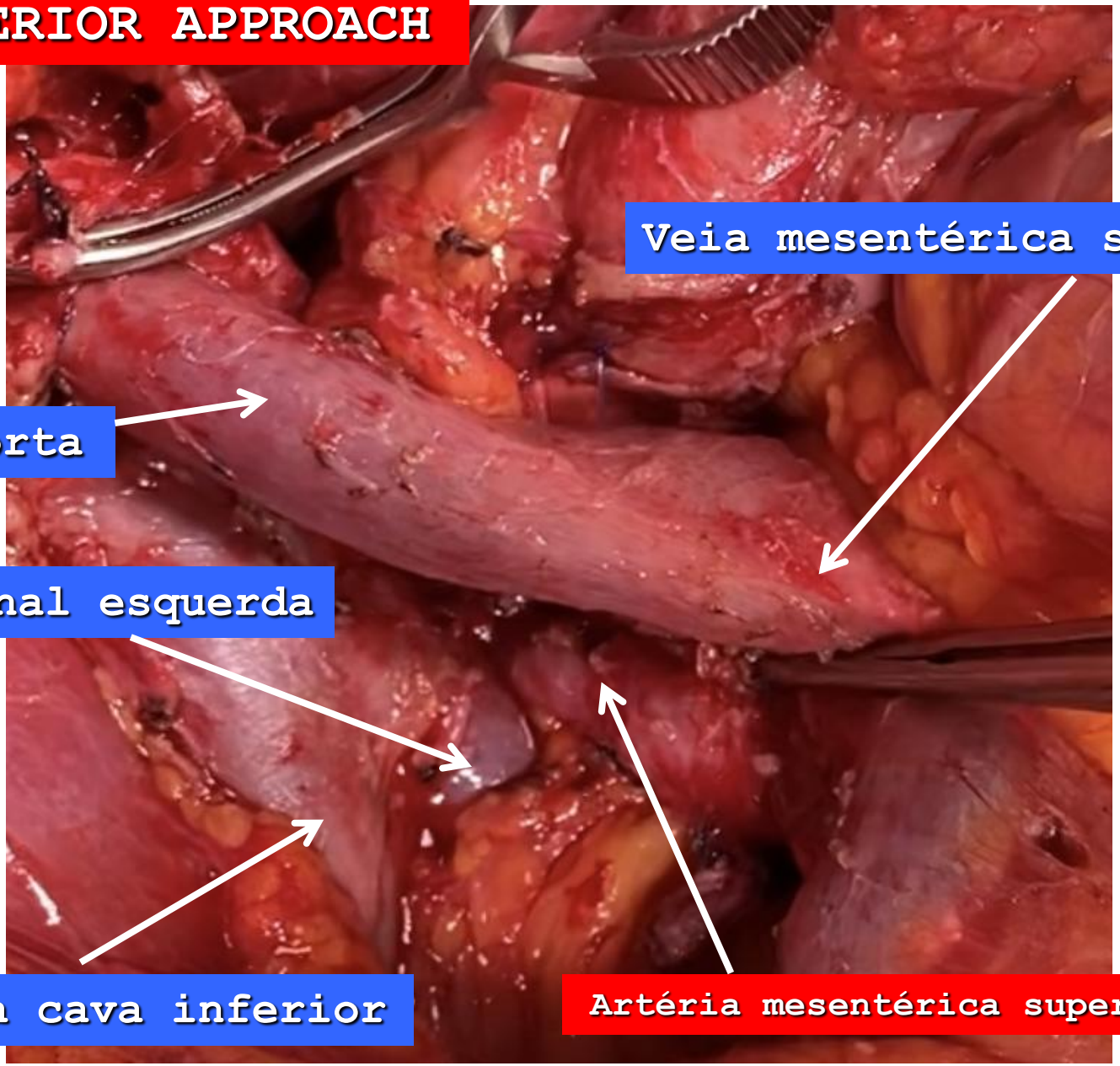
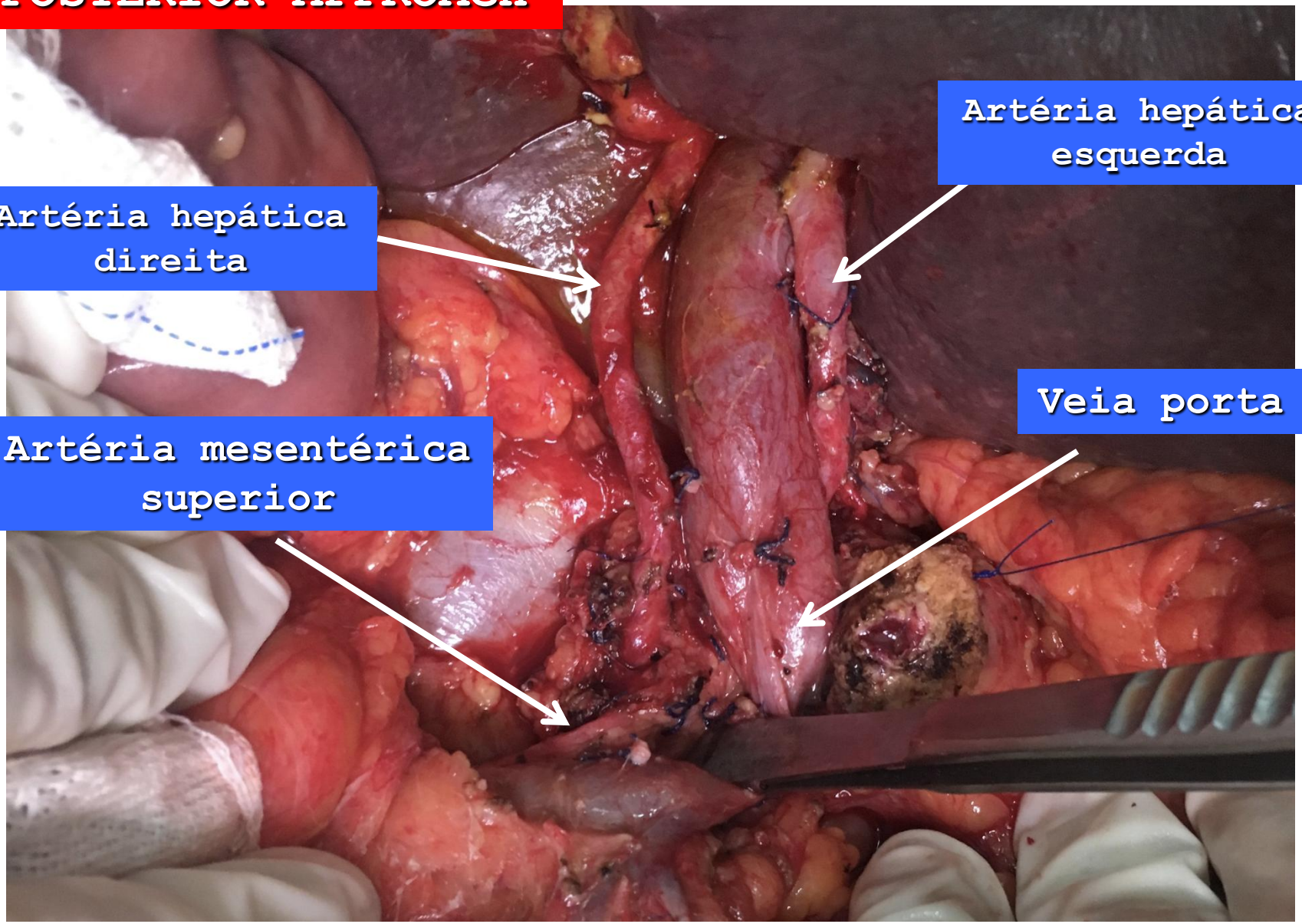


POSTERIOR APPROACH

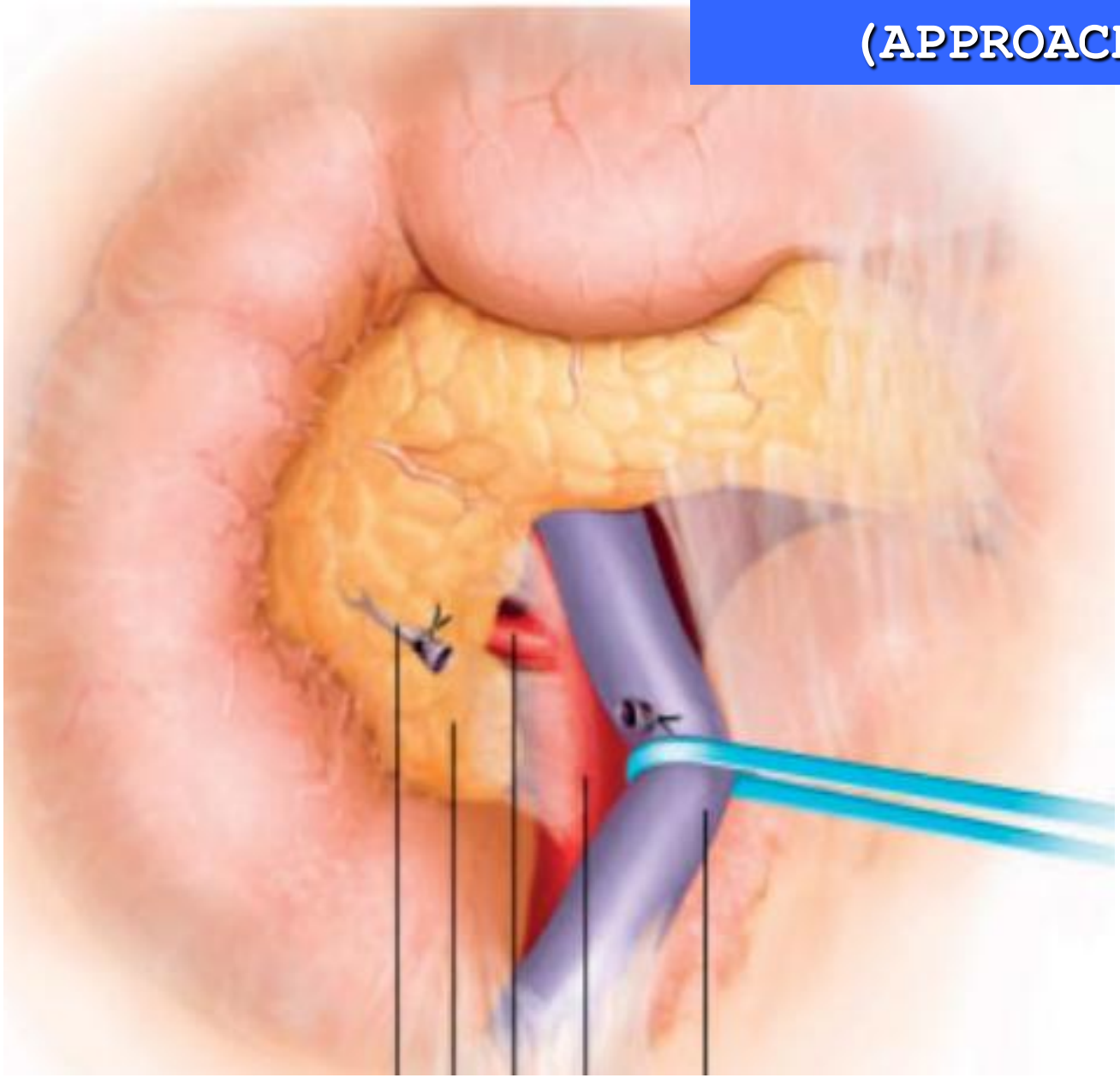


UNCINATE FIRST (APPROACH)

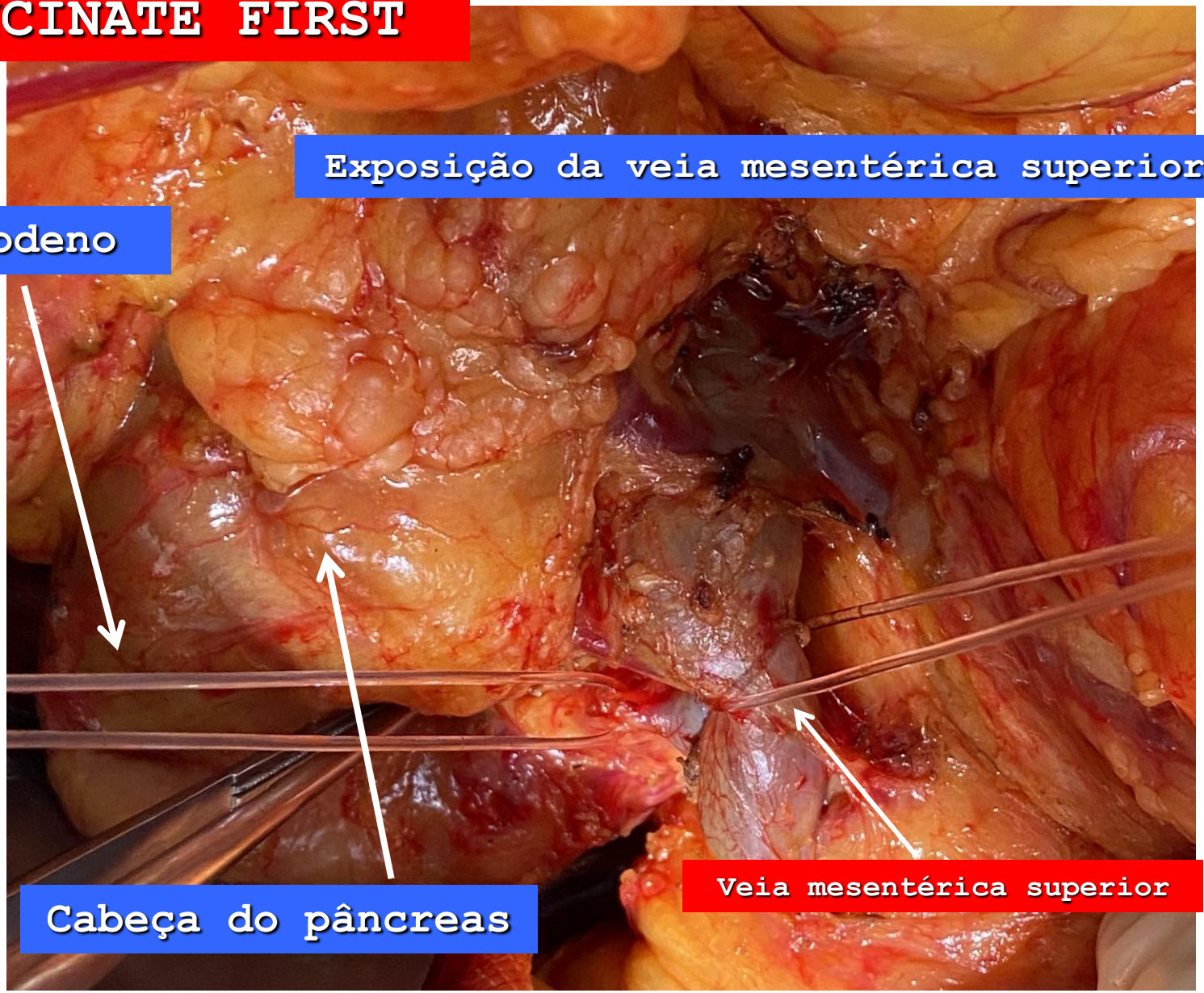
Table 18.1 Summary of indications, advantages and disadvantages of various 'artery-first approaches'

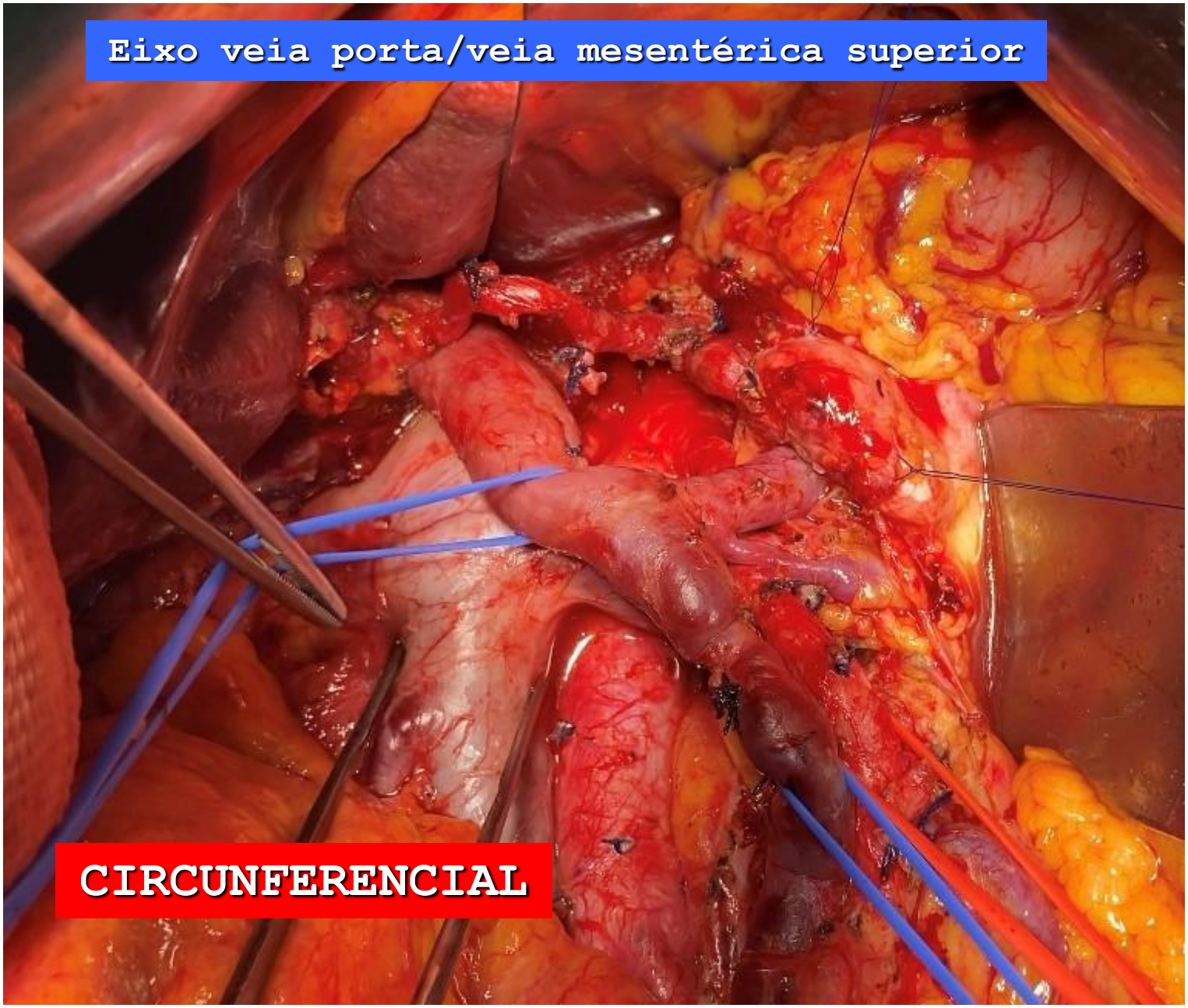
Approach	References	Indication(s)	Advantages and disadvantages
Medial uncinate	Hackert et al. (2010) [19] Shukla et al. (2007) [23]	Malignant tumours of the uncinate process	Advantages Early identification of SMA involvement at the uncinate Early ligation of IPDA arteries minimizing bleeding Useful approach in peripancreatic inflammation with difficulty tunnelling above the portal vein Useful approach for total pancreatectomy as mobilization can be achieved without transecting the gland Disadvantages Late identification of replaced RHA

UNCINATE FIRST (APPROACH)

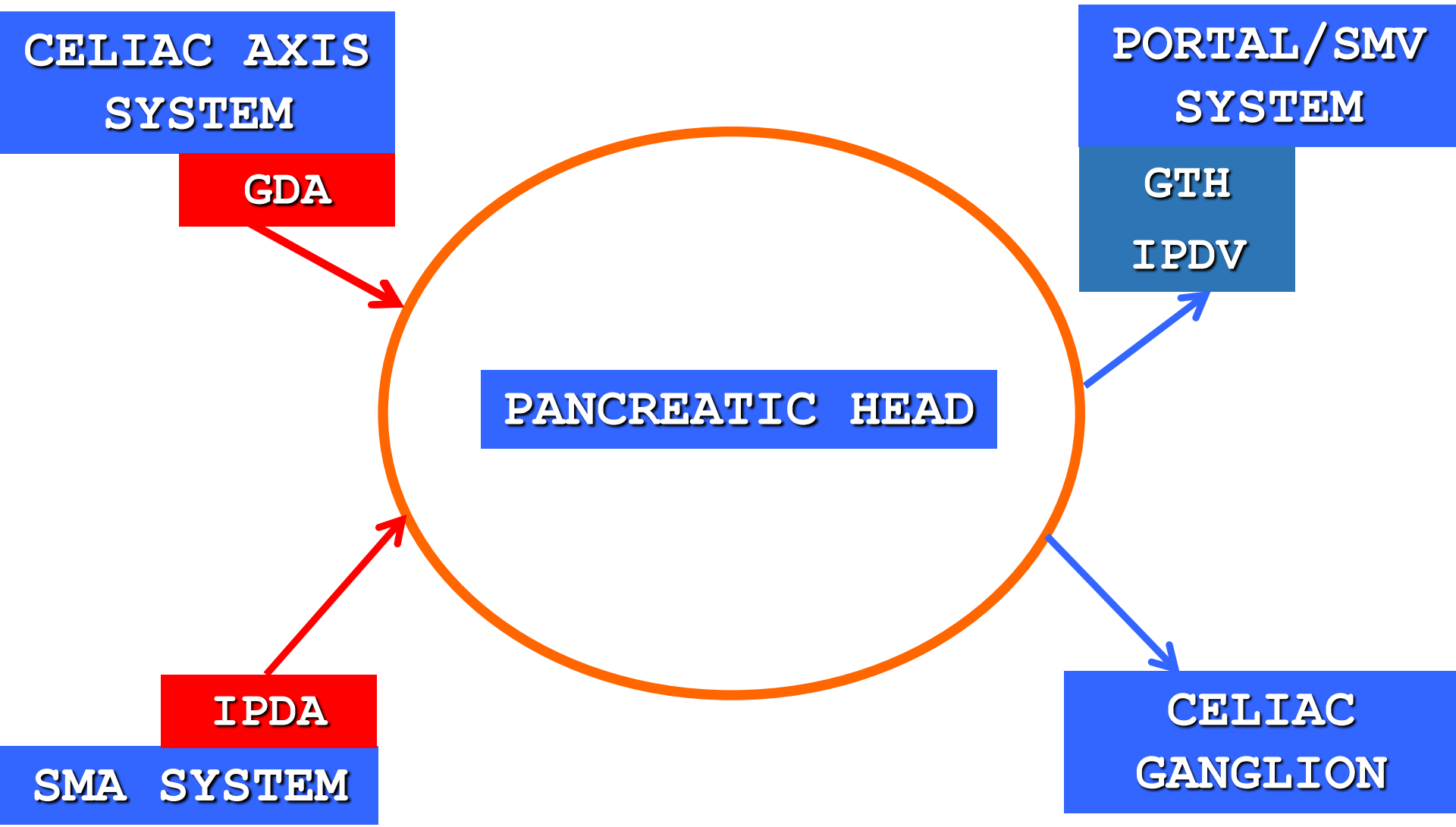


UNCINATE FIRST




Eixo veia porta/veia mesentérica superior
CIRCUNFERENCIAL

CONCEITO DE LIGADURA CENTRAL VASCULAR



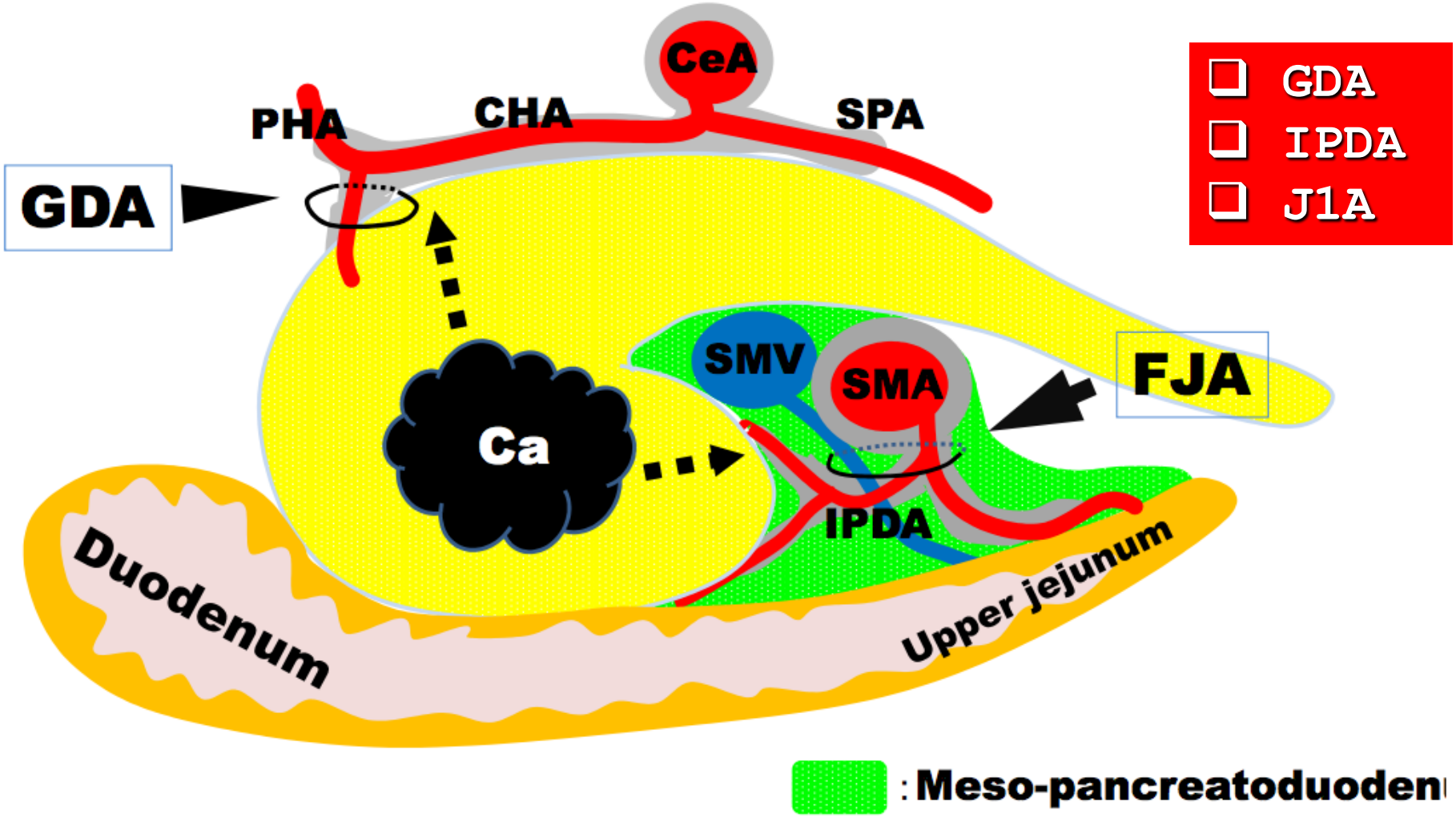
CONCEITO DE LIGADURA CENTRAL VASCULAR

- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

- ARTÉRIA GASTRODUODENAL
- ARTÉRIA PANCREATODUODENAL INFERIOR
- PRIMEIRA ARTÉRIA JEJUNAL

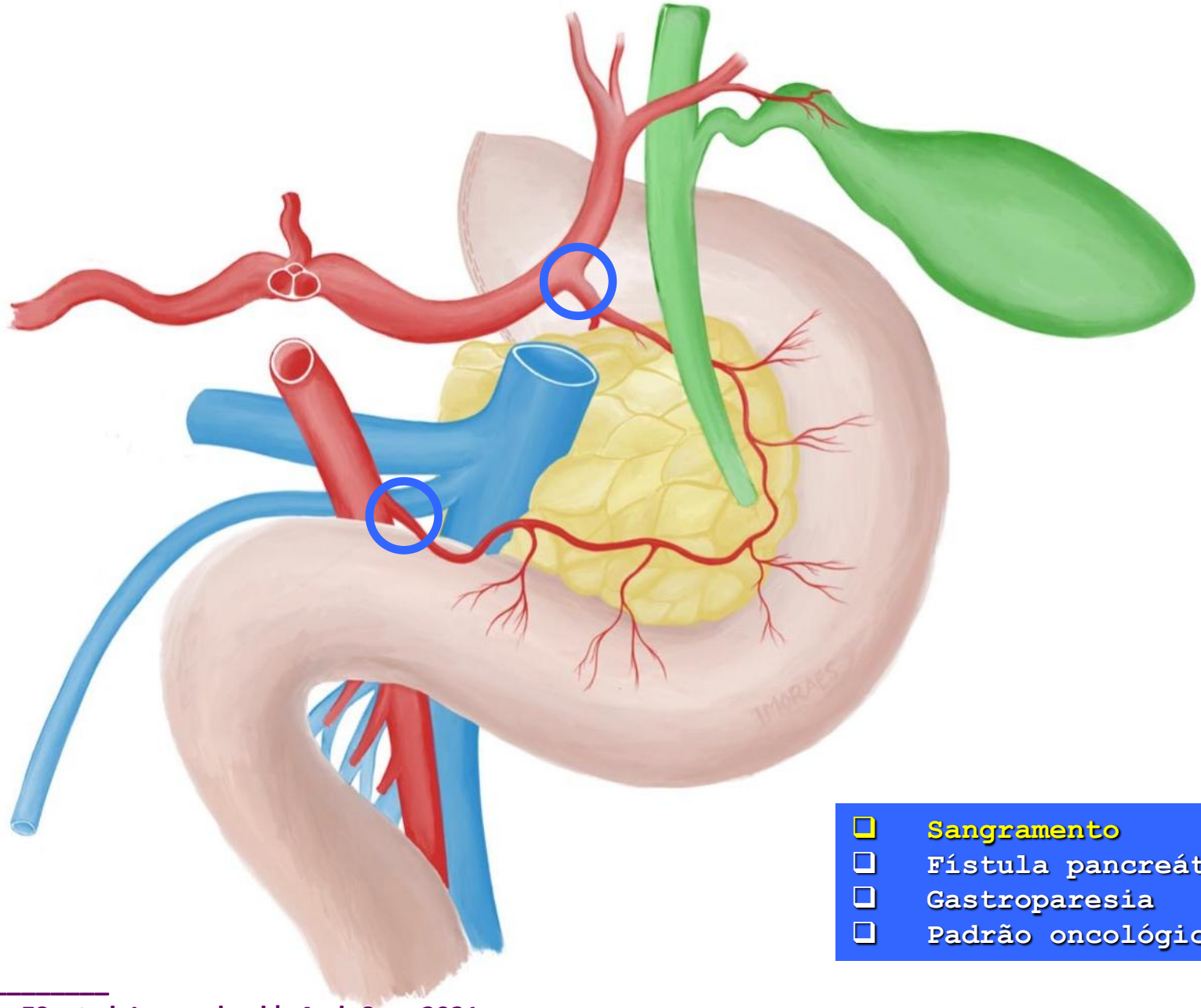
Kawabata Y, et al. Eur J Surg Oncol 2016

LIGADURA CENTRAL VASCULAR



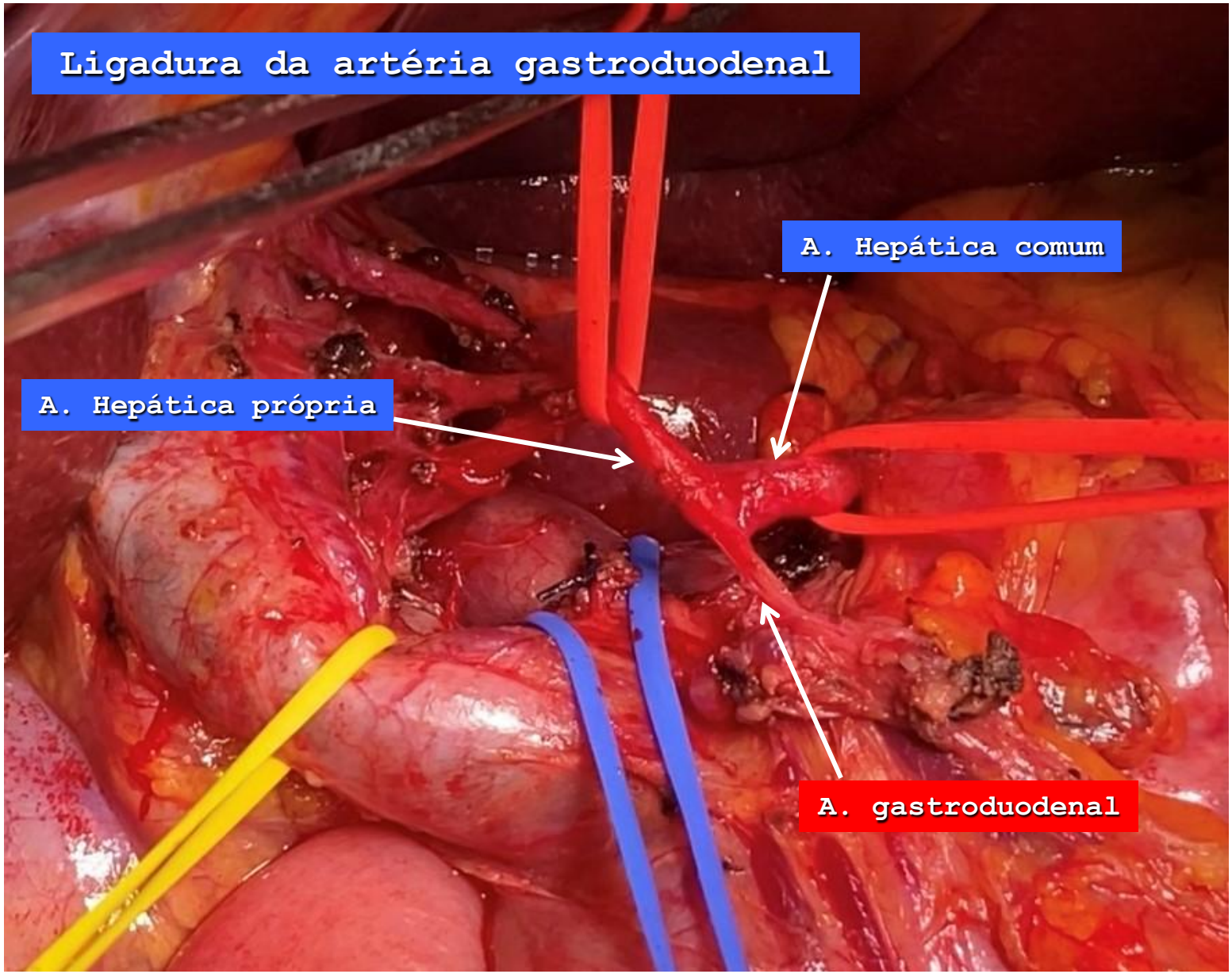
- ❑ GDA
- ❑ IPDA
- ❑ J1A

Kawabata Y, et al. Eur J Surg Oncol 2016

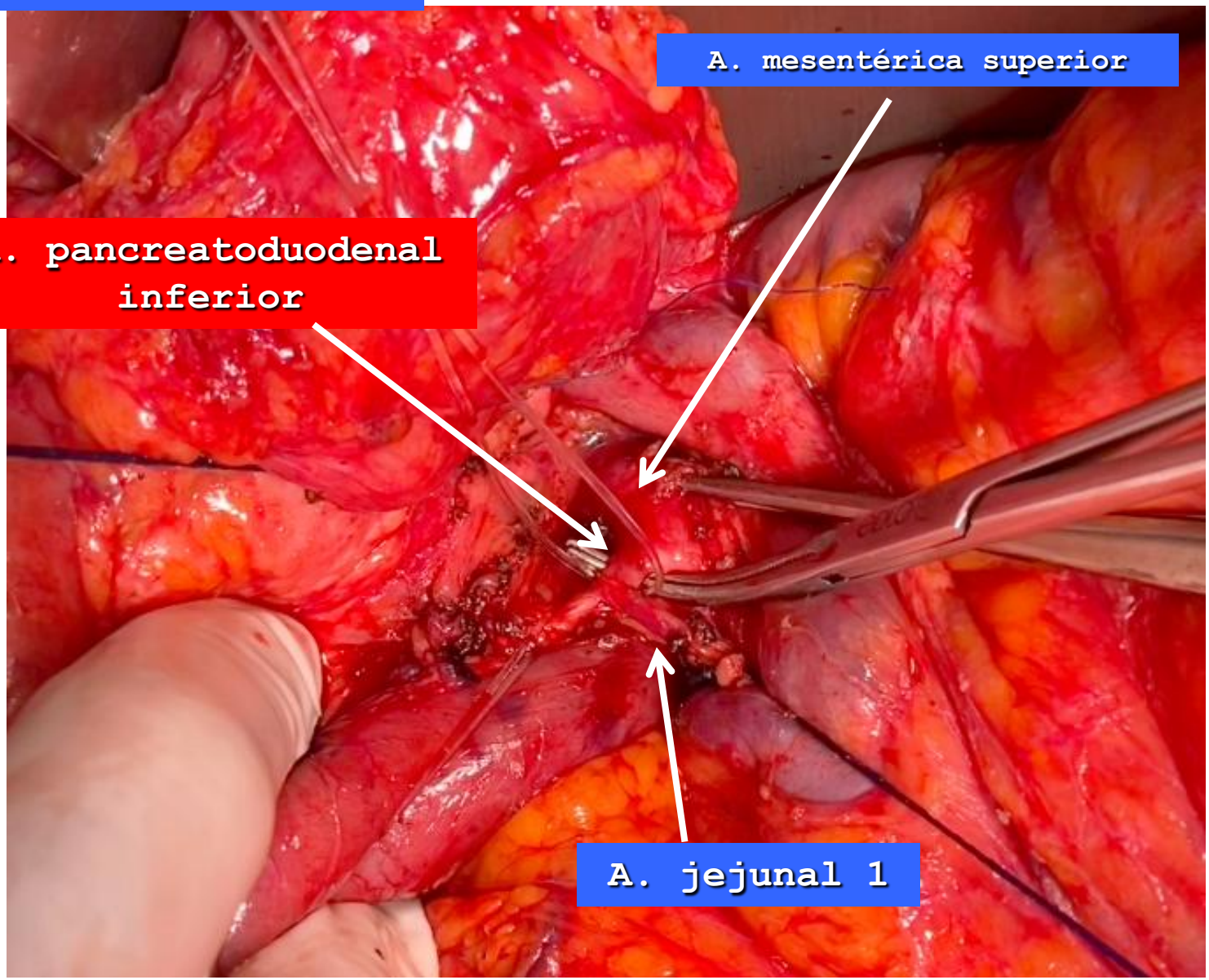


- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

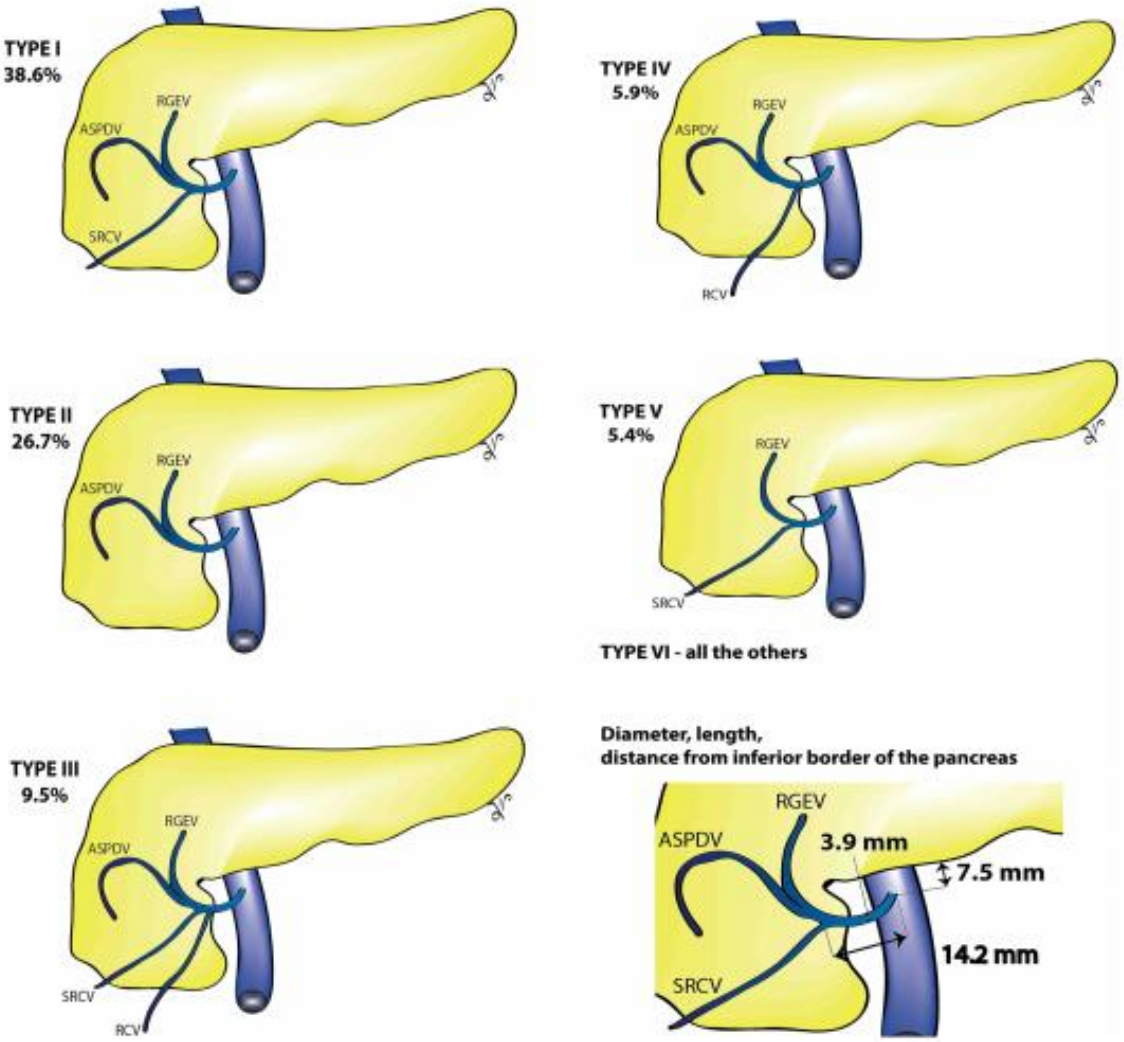
Fernandes ES, et al. Langenbeck's Arch Surg 2021


Ligadura da artéria gastroduodenal
A. Hepática comum
A. Hepática própria
A. gastroduodenal

UNCINATE FIRST

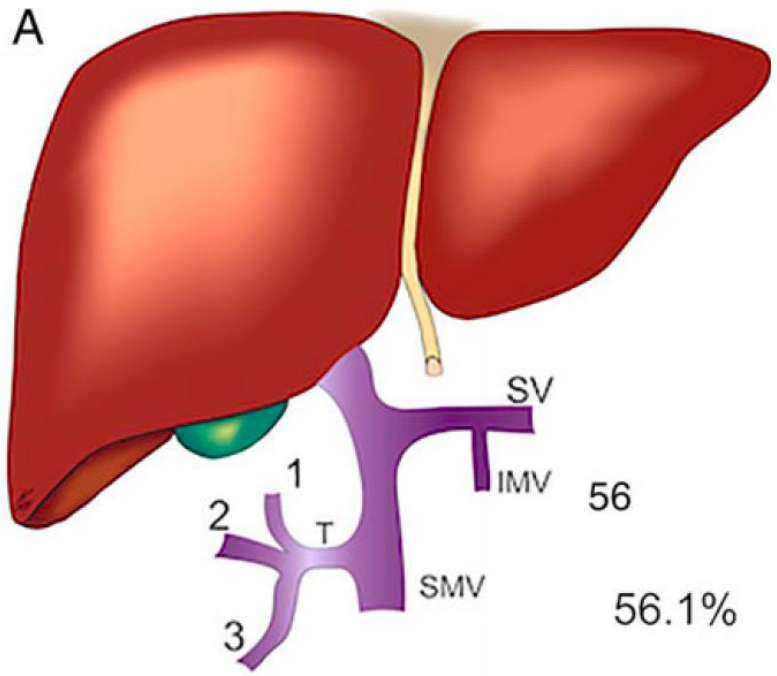


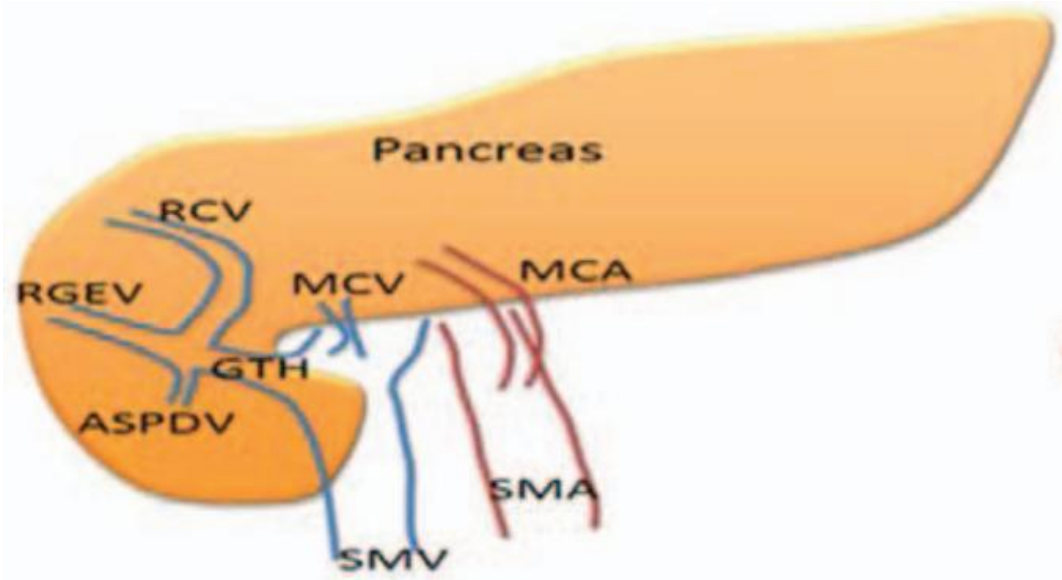
LIGADURA CENTRAL VENOSA



- ❑ TRONCO GASTROCÓLICO DE HENLE
- ❑ VEIA PANCREATODUODENAL INFERIOR

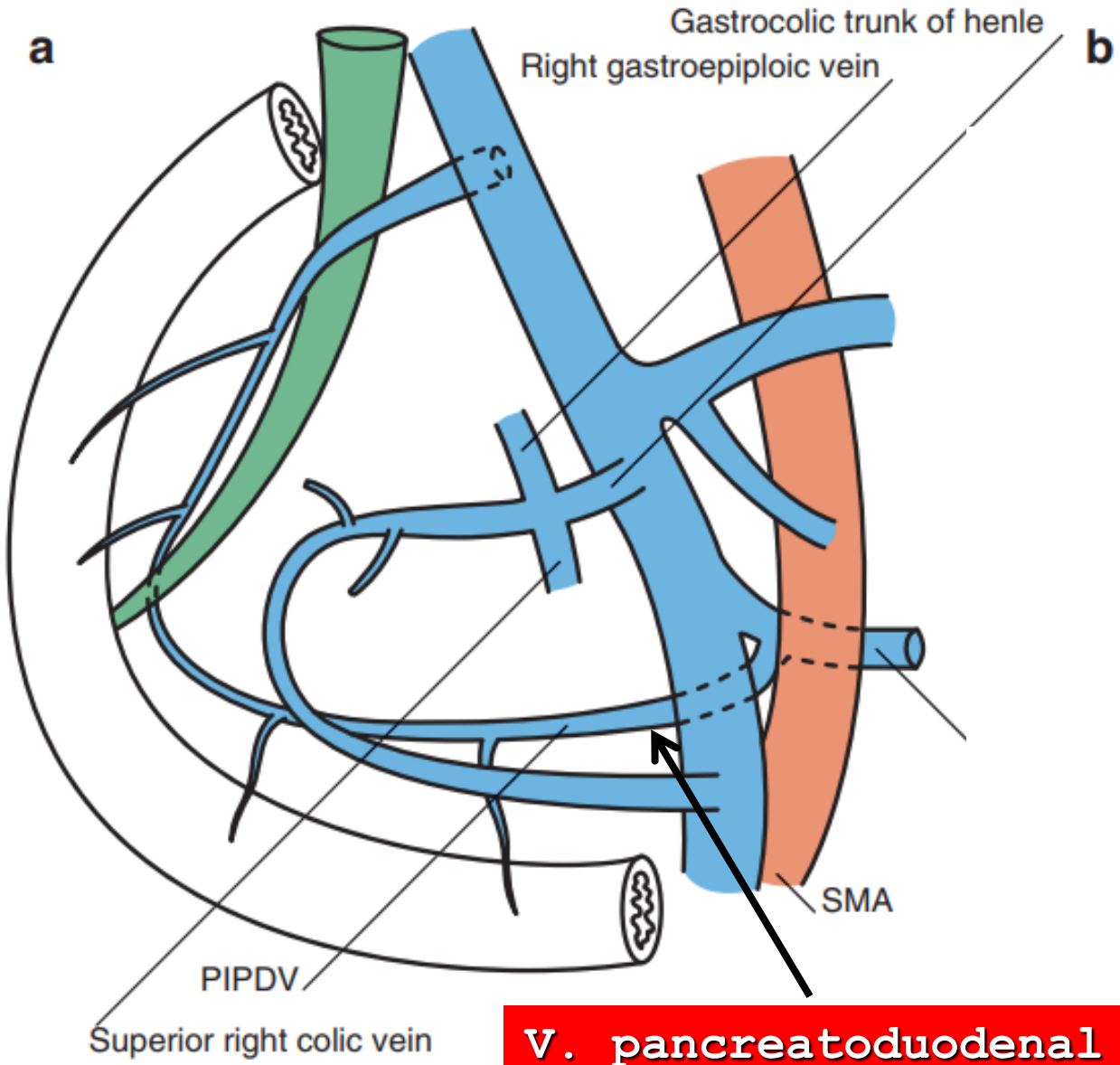
TRONCO GASTROCÓLICO DE HENLE





- VEIA GASTREPIPLÓICA DIREITA
- VEIA PANCREATODUODENAL ANTERO-SUPERIOR
- VEIA CÓLICA DIREITA SUPERIOR (Ligada de rotina)

VEIA PANCREATODUODENAL INFERIOR



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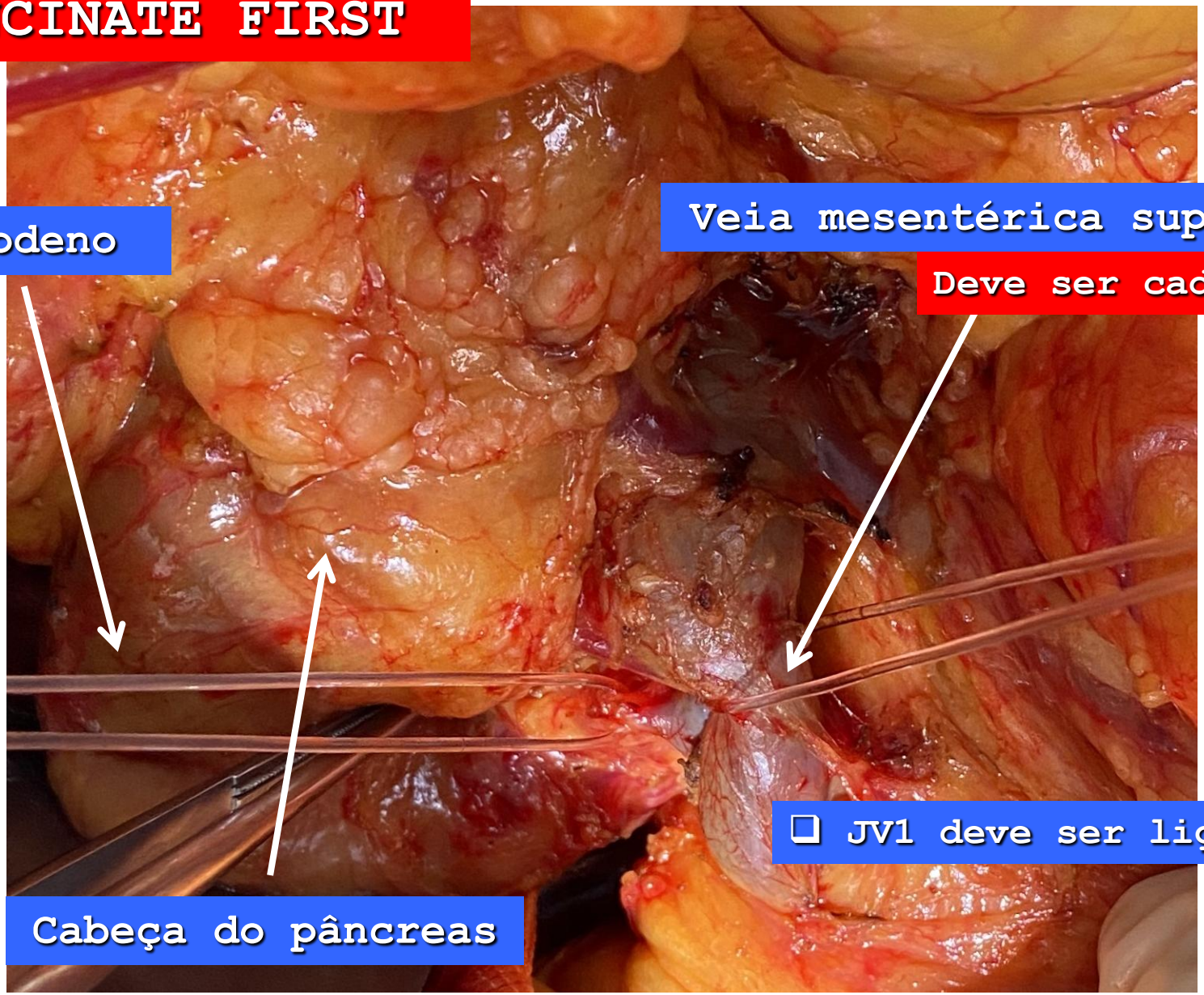


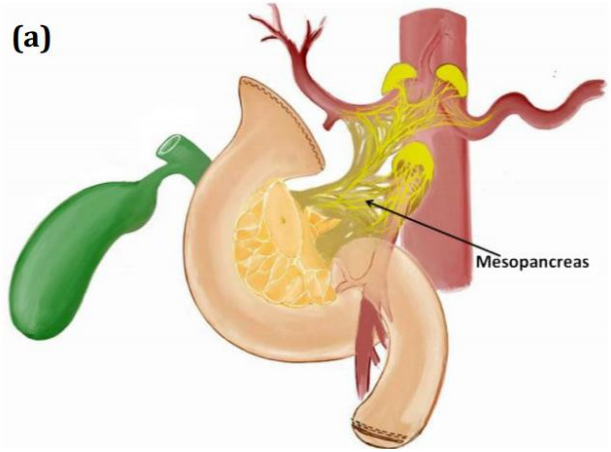
- JV1 deve ser ligada

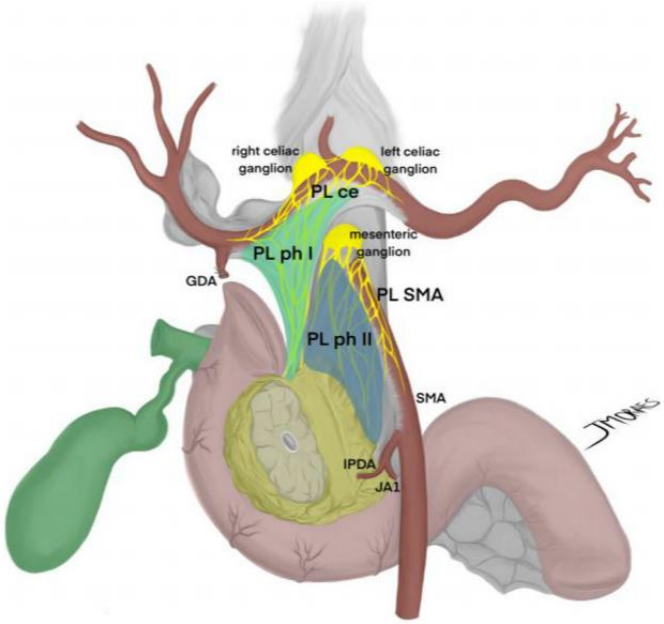
Langenbeck's Archives of Surgery
https://doi.org/10.1007/s00423-021-02211-y

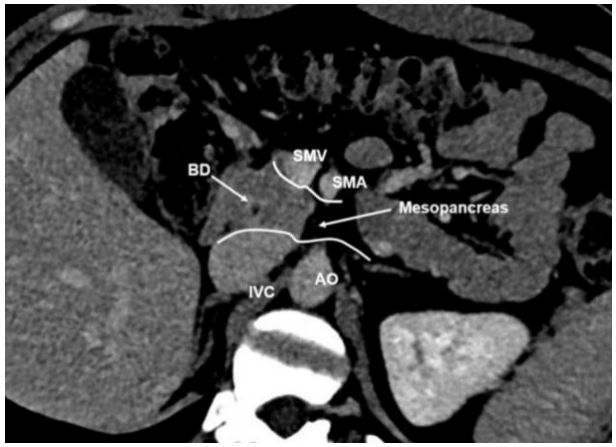
REVIEW ARTICLE

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]







Fernandes ES, et al. Langenbeck's Arch Surg 2021

EXCISÃO TOTAL DO MESOPÂNCREAS

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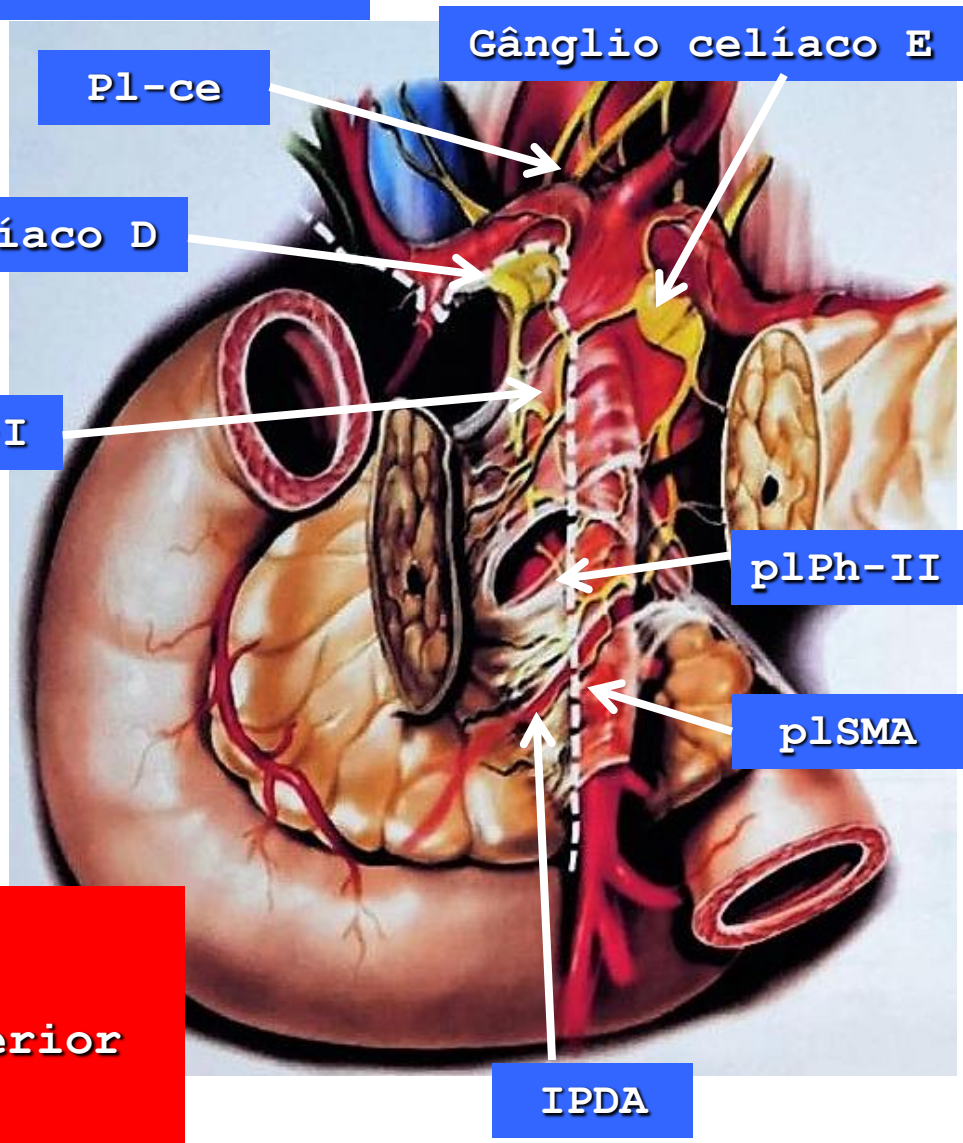
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

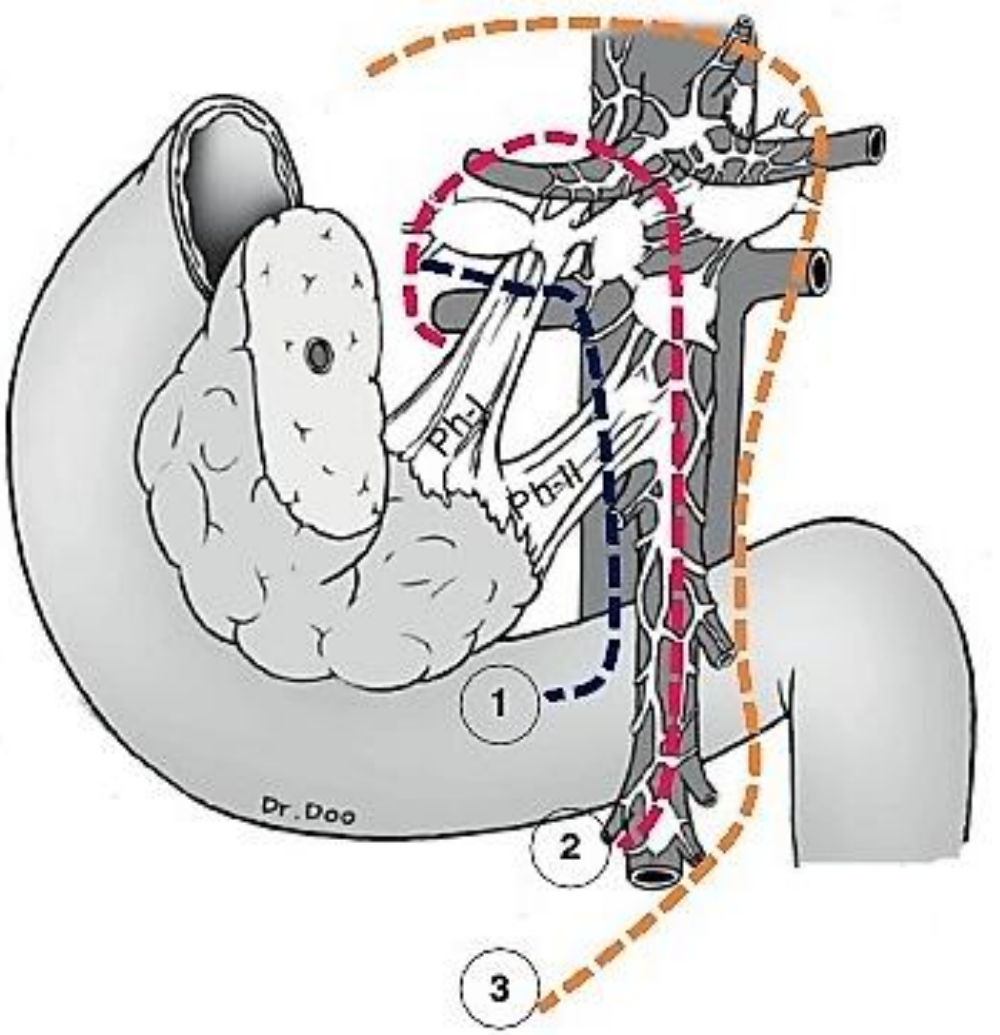


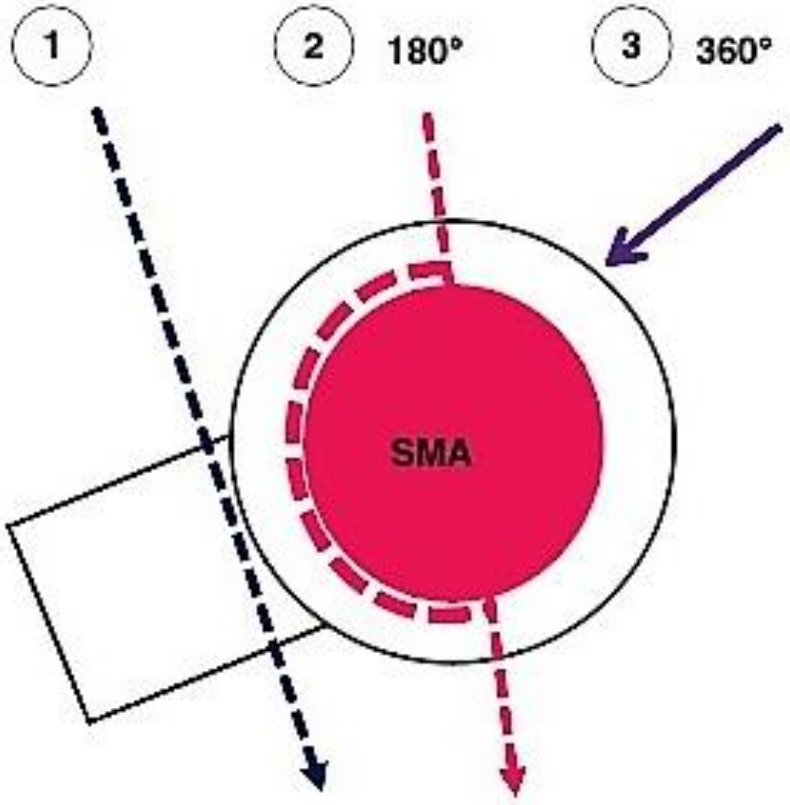
MESOPÂNCREAS

- plPh-I
- plPh-II
- Artéria pancreatoduodenal inferior
- Artérias jejunais
- Veias jejunais
- Linfonodos

Mesopâncreas

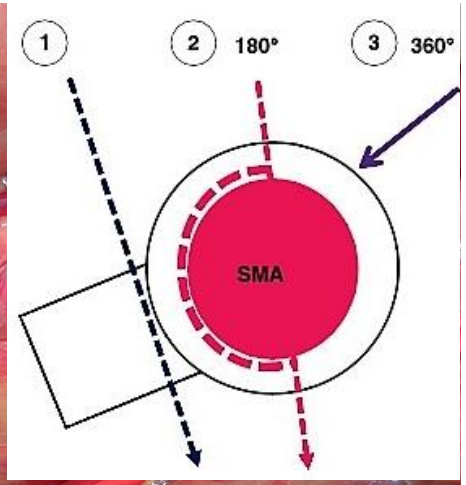
Nível 2





- Margem direita da art. mesentérica sup.

Artéria mesentérica superior



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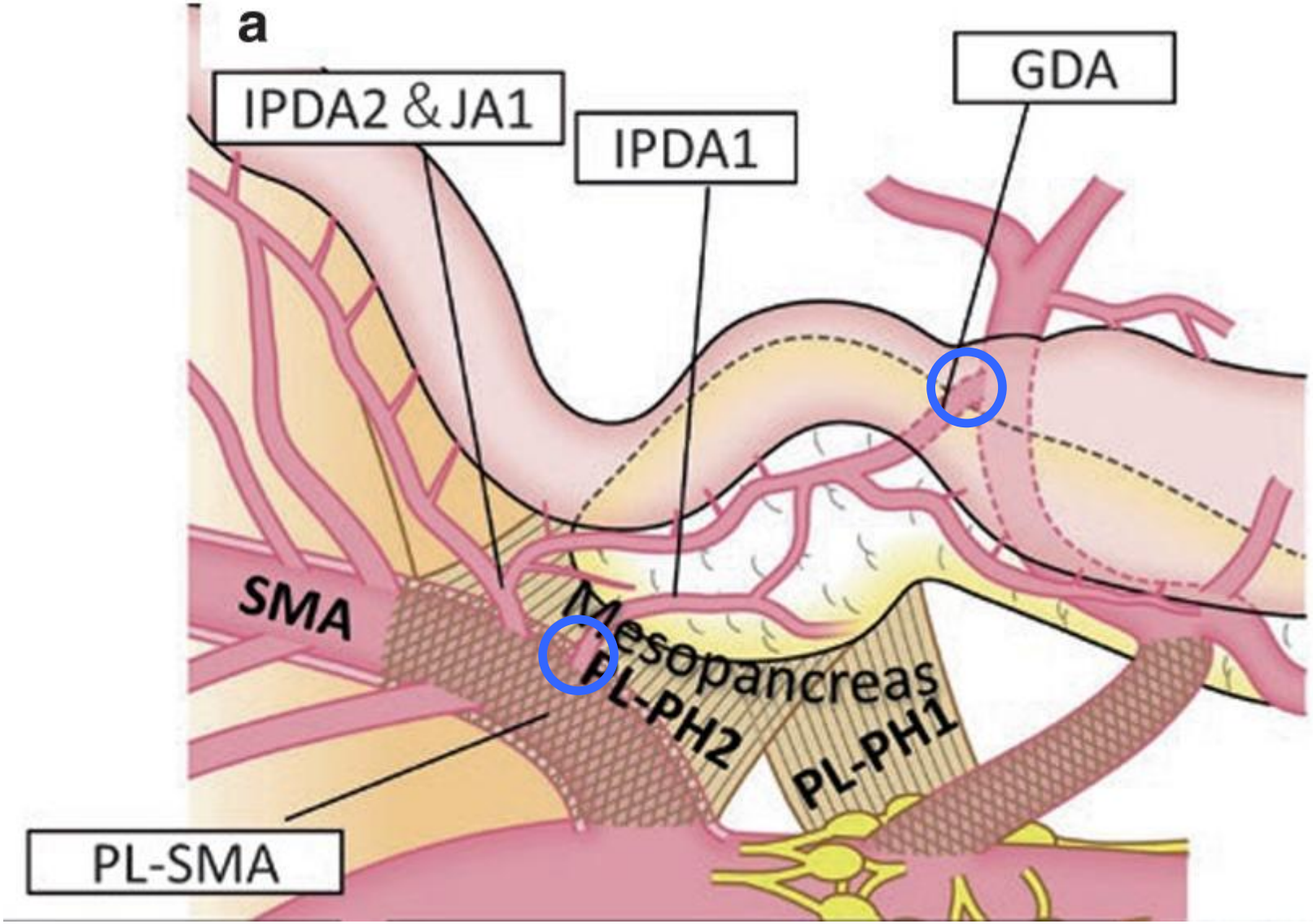
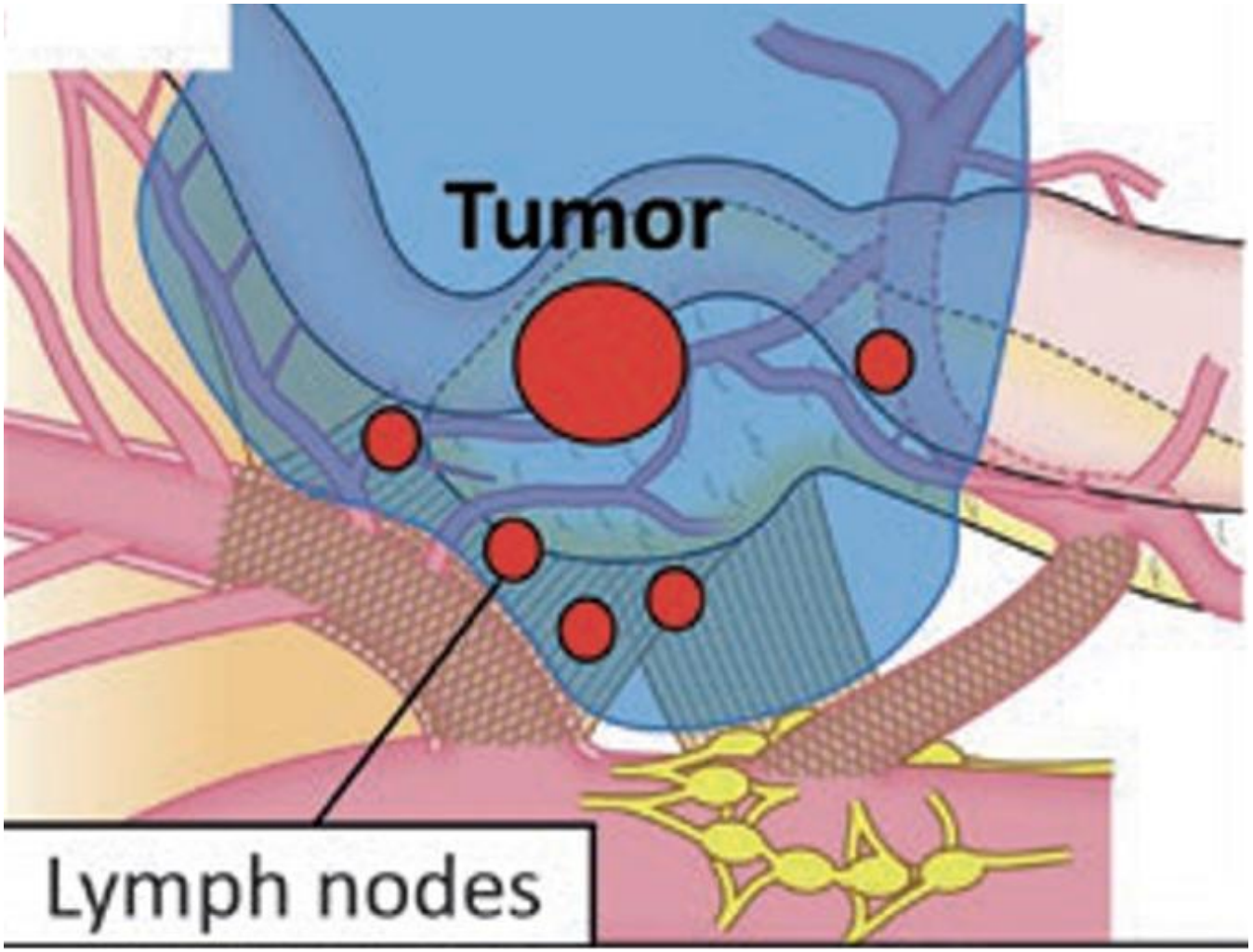
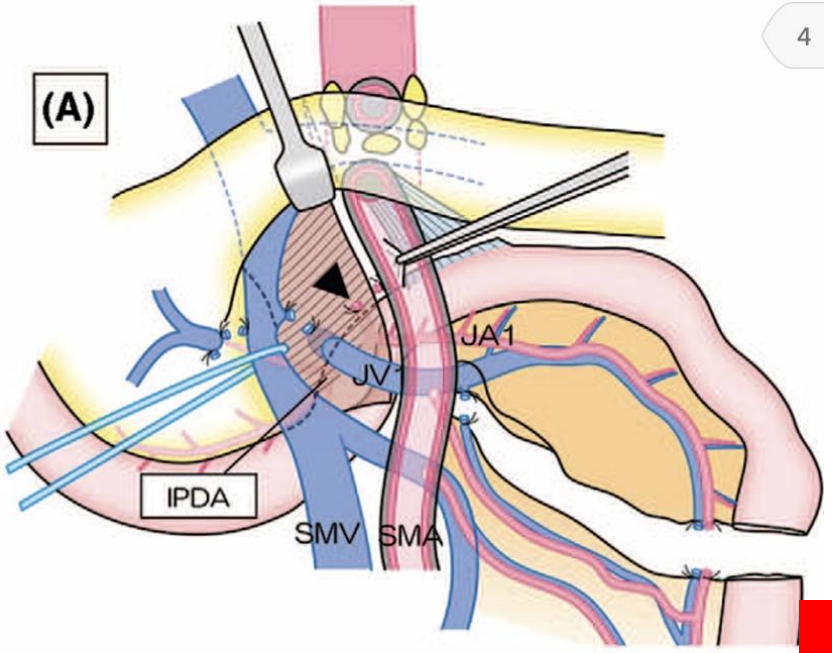
(05:00h – 11:00h)

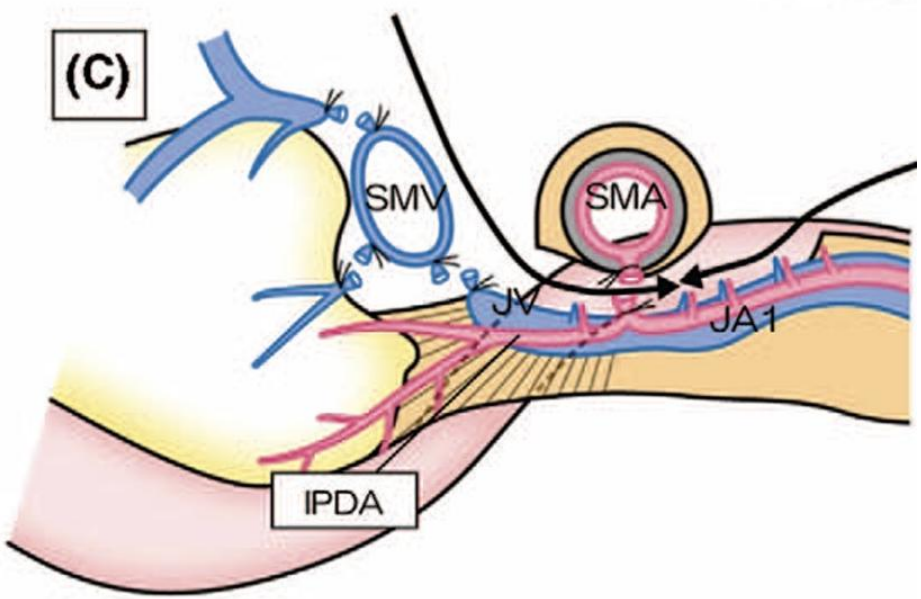


Inoue Y, et al. 2017



Inoue Y, et al. 2017





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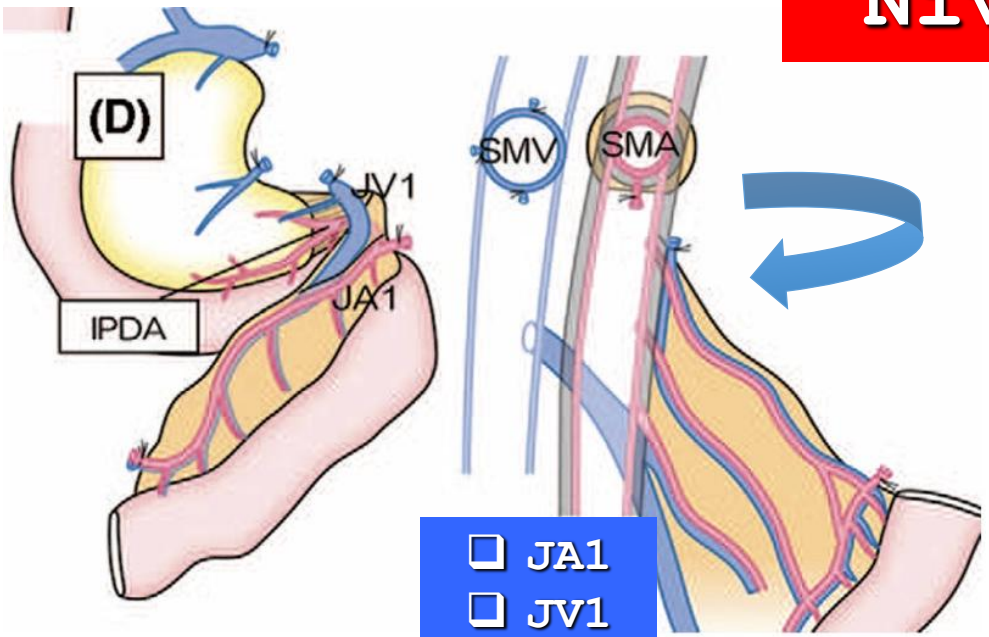
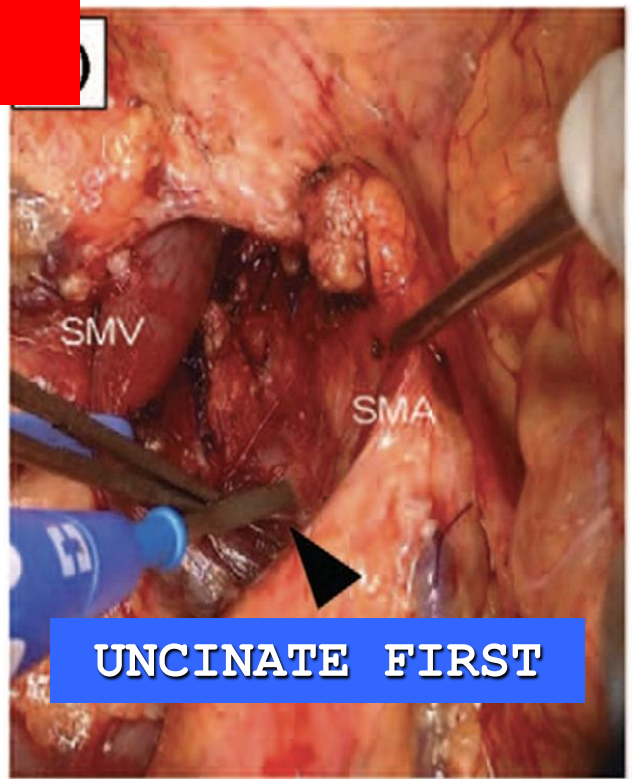


- ❑ JA1
- ❑ JV1

Inoue Y, et al. 2016



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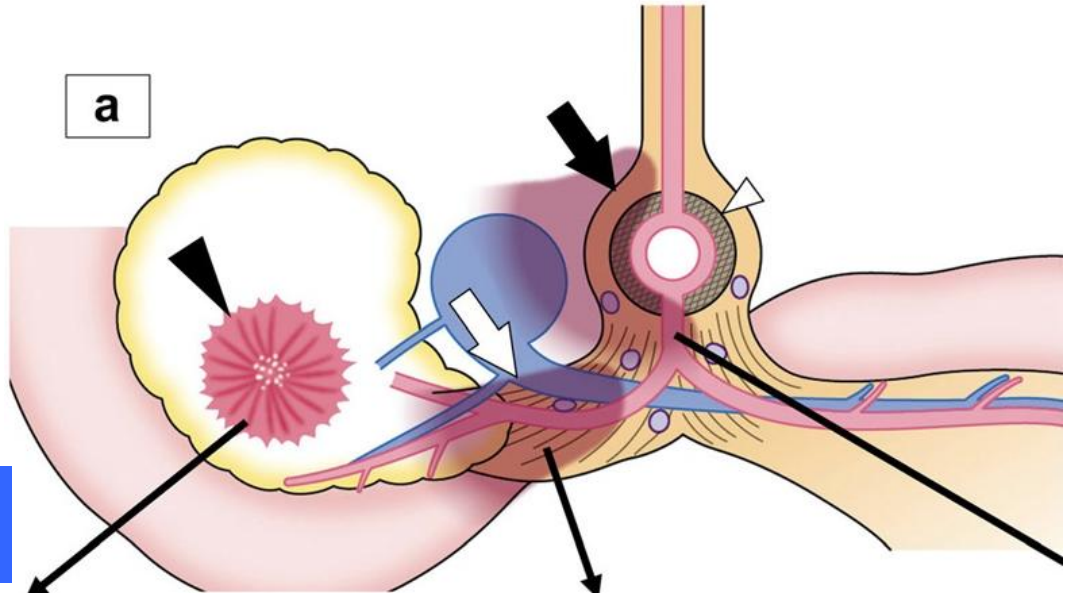
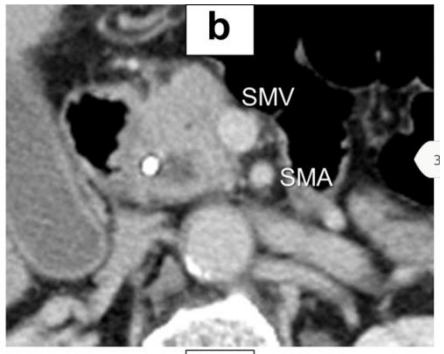
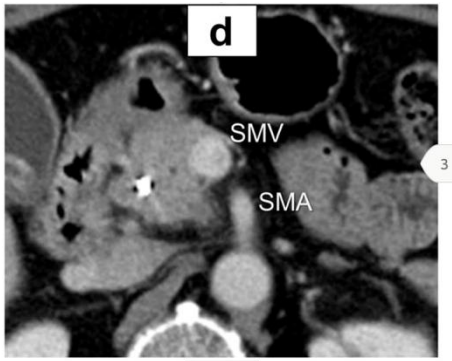
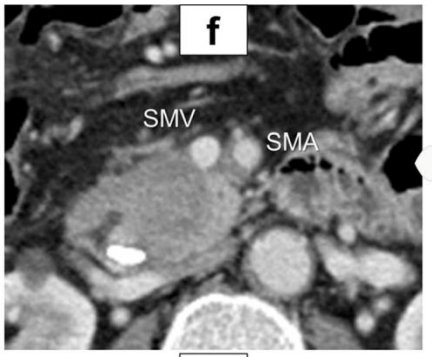
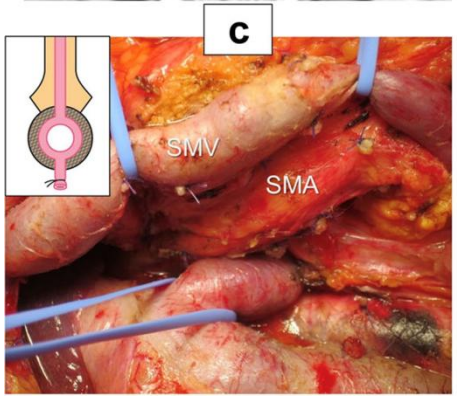
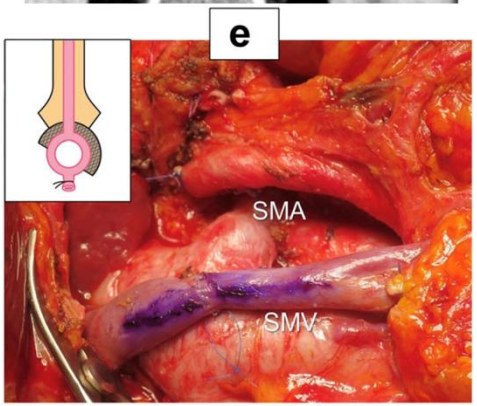


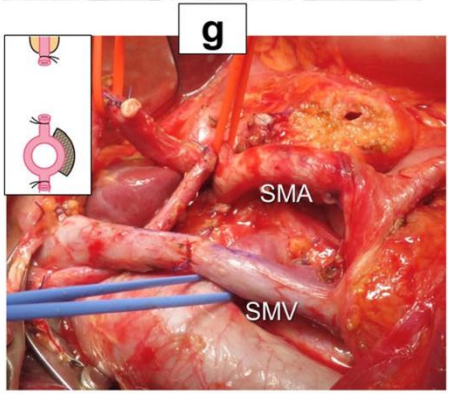




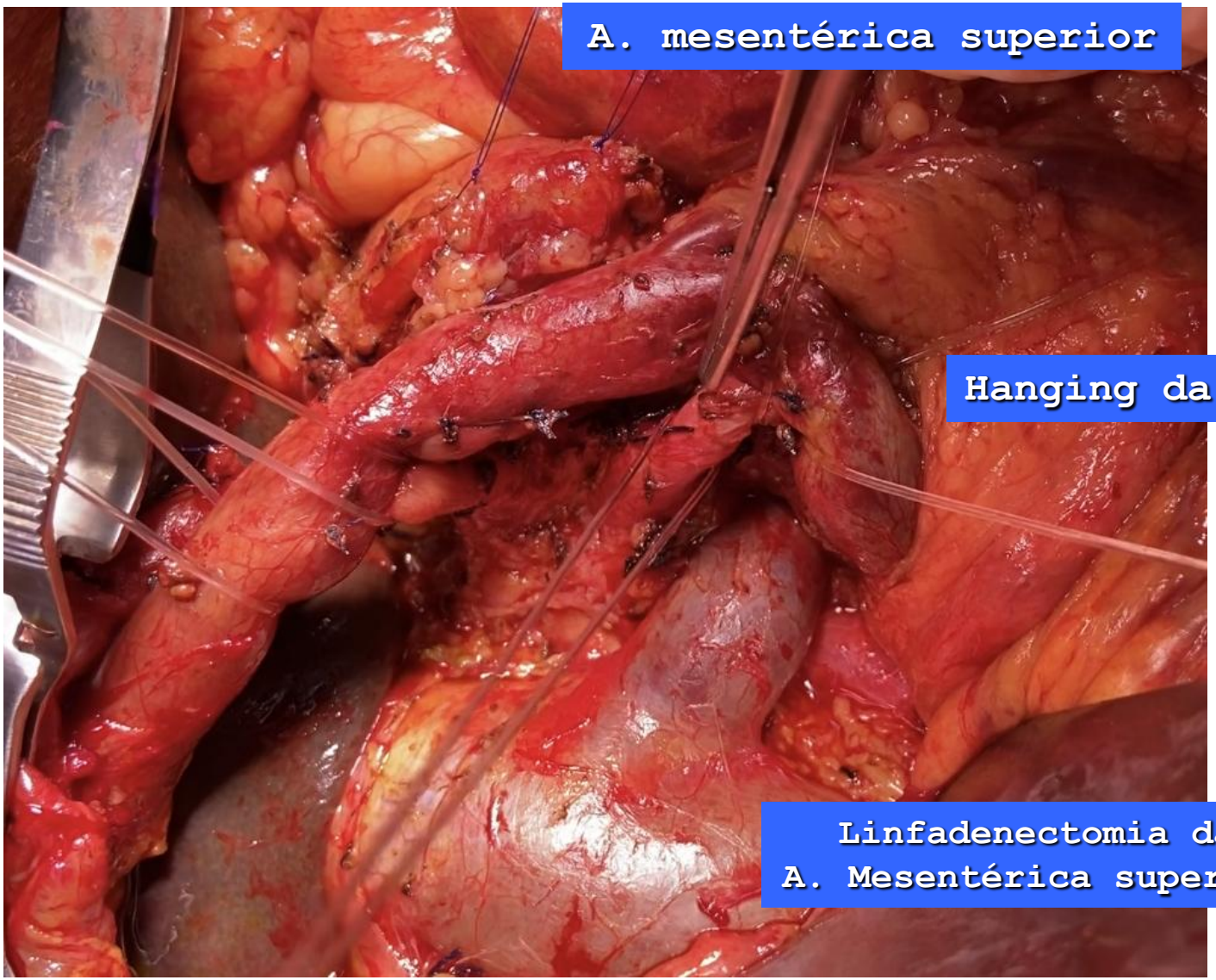








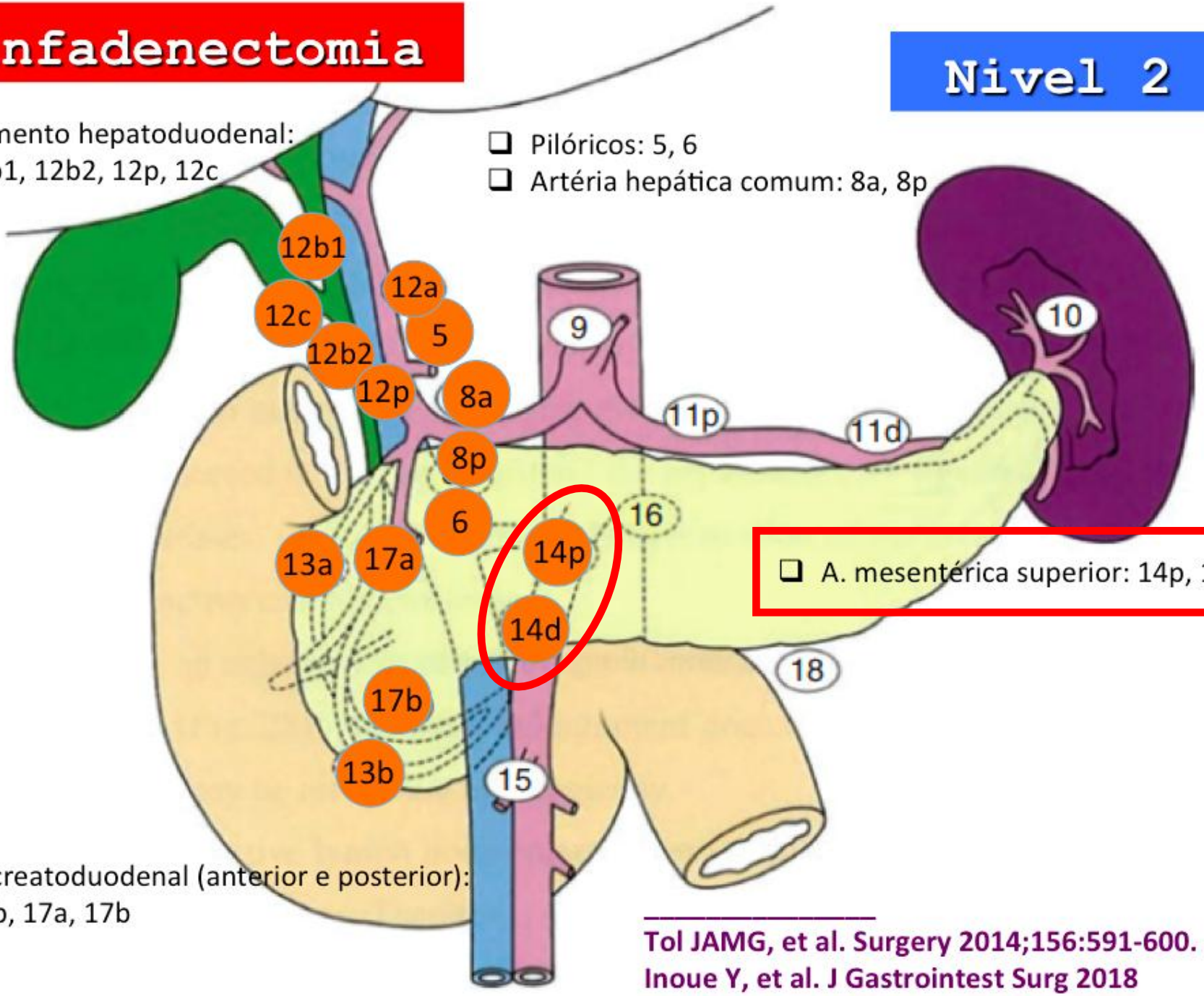
MESOPÂNCREAS



Linfadenectomia

Nivel 2

- Ligamento hepatoduodenal: 12a, 12b1, 12b2, 12p, 12c
- Pilóricos: 5, 6
- Artéria hepática comum: 8a, 8p



- A. mesentérica superior: 14p, 14d

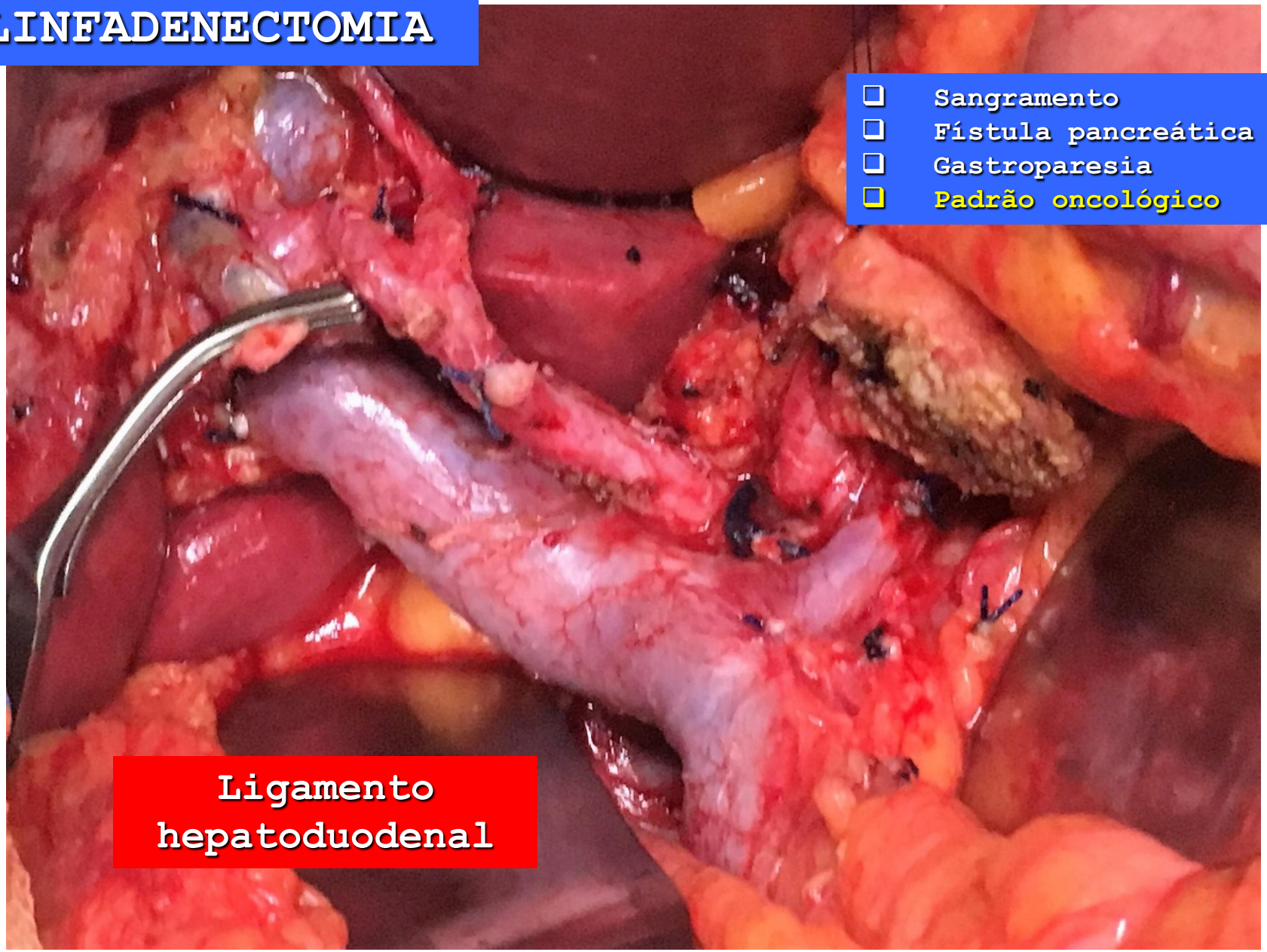
- Pancreatoduodenal (anterior e posterior): 13a, 13b, 17a, 17b

Tol JAMG, et al. Surgery 2014;156:591-600.
Inoue Y, et al. J Gastrointest Surg 2018

HEIDELBERG

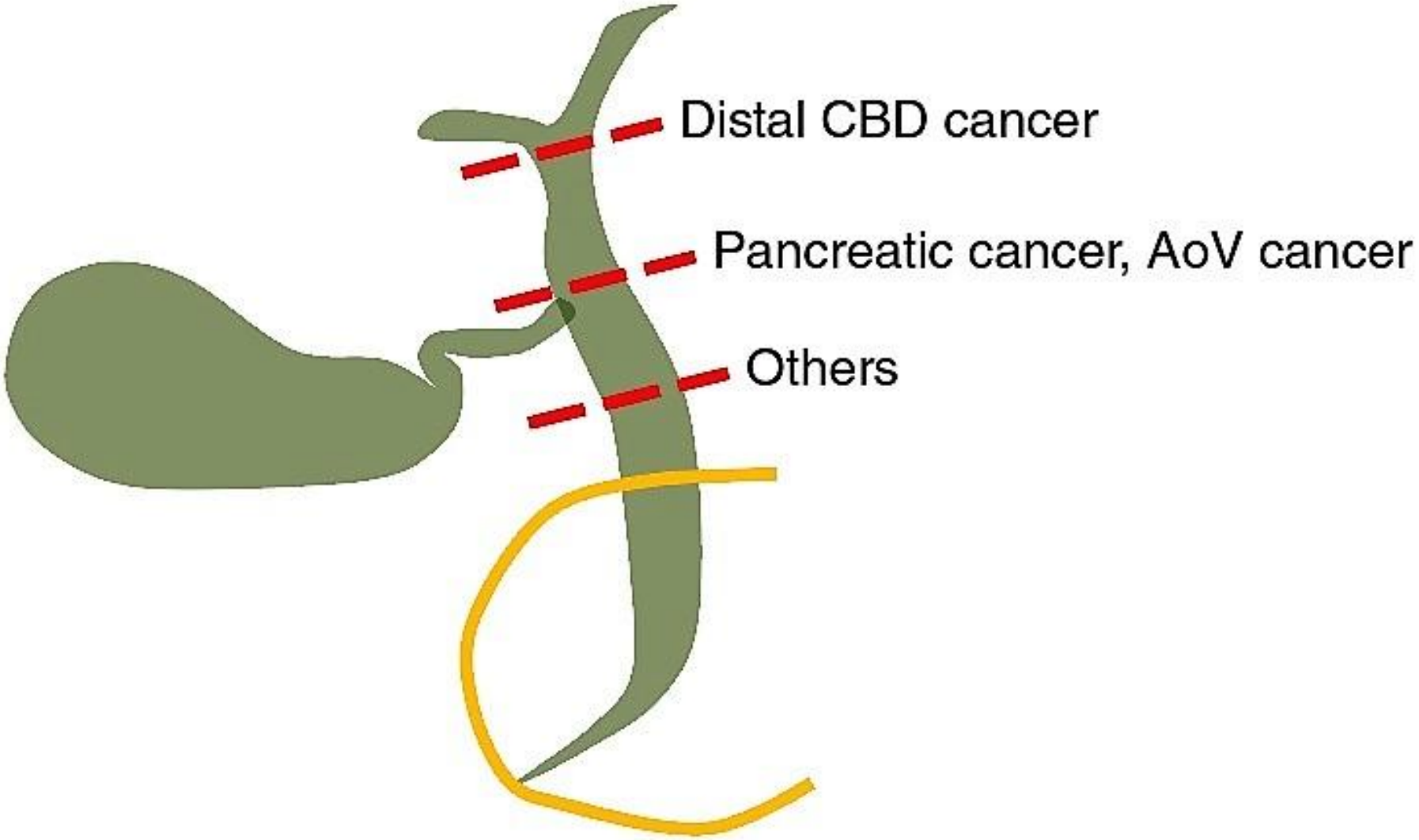
Markus Buchler

LINFADENECTOMIA



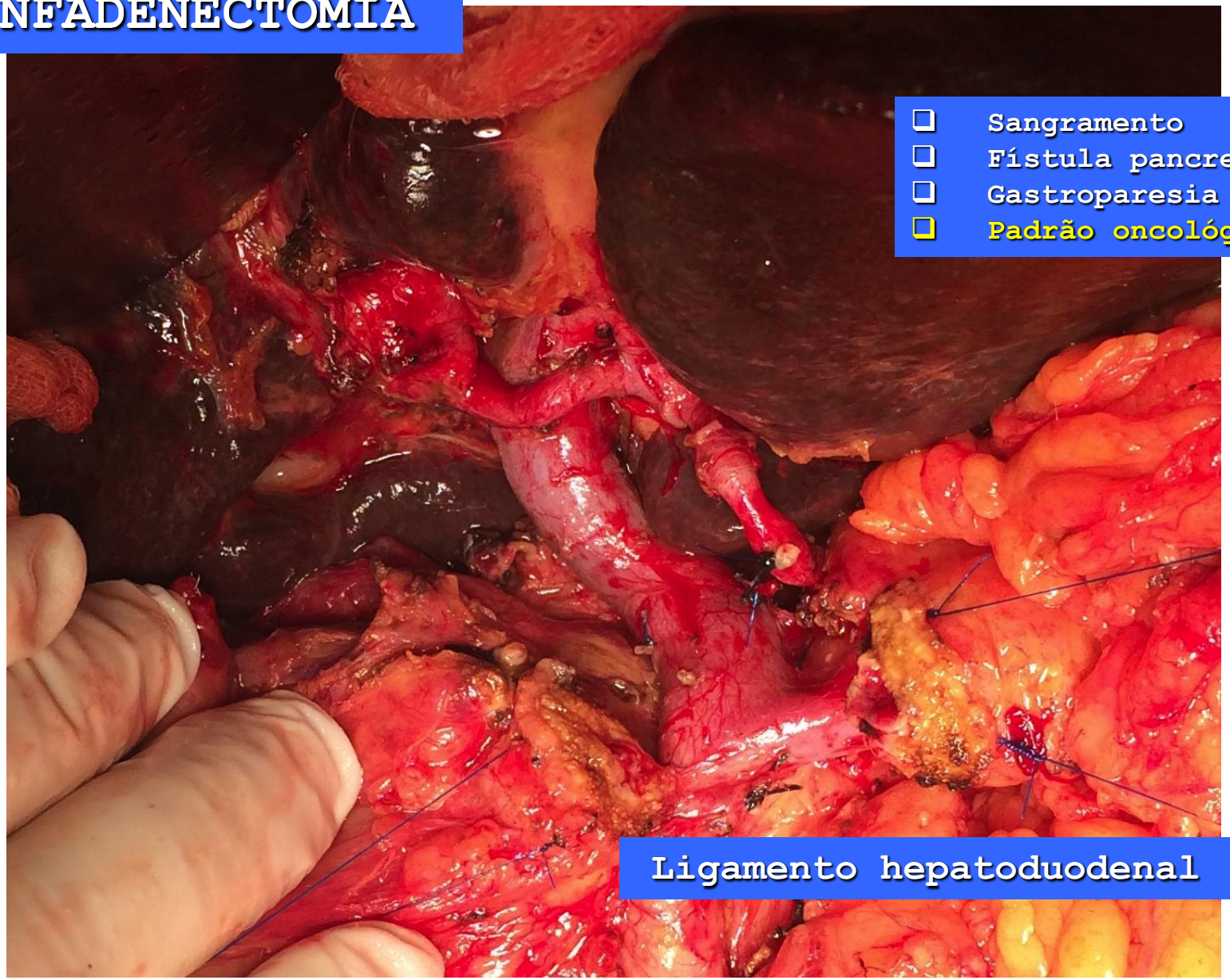
- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

Ressecção da via biliar



- Acima da saída do ducto cístico
- < 2cm da bifurcação

LINFADENECTOMIA



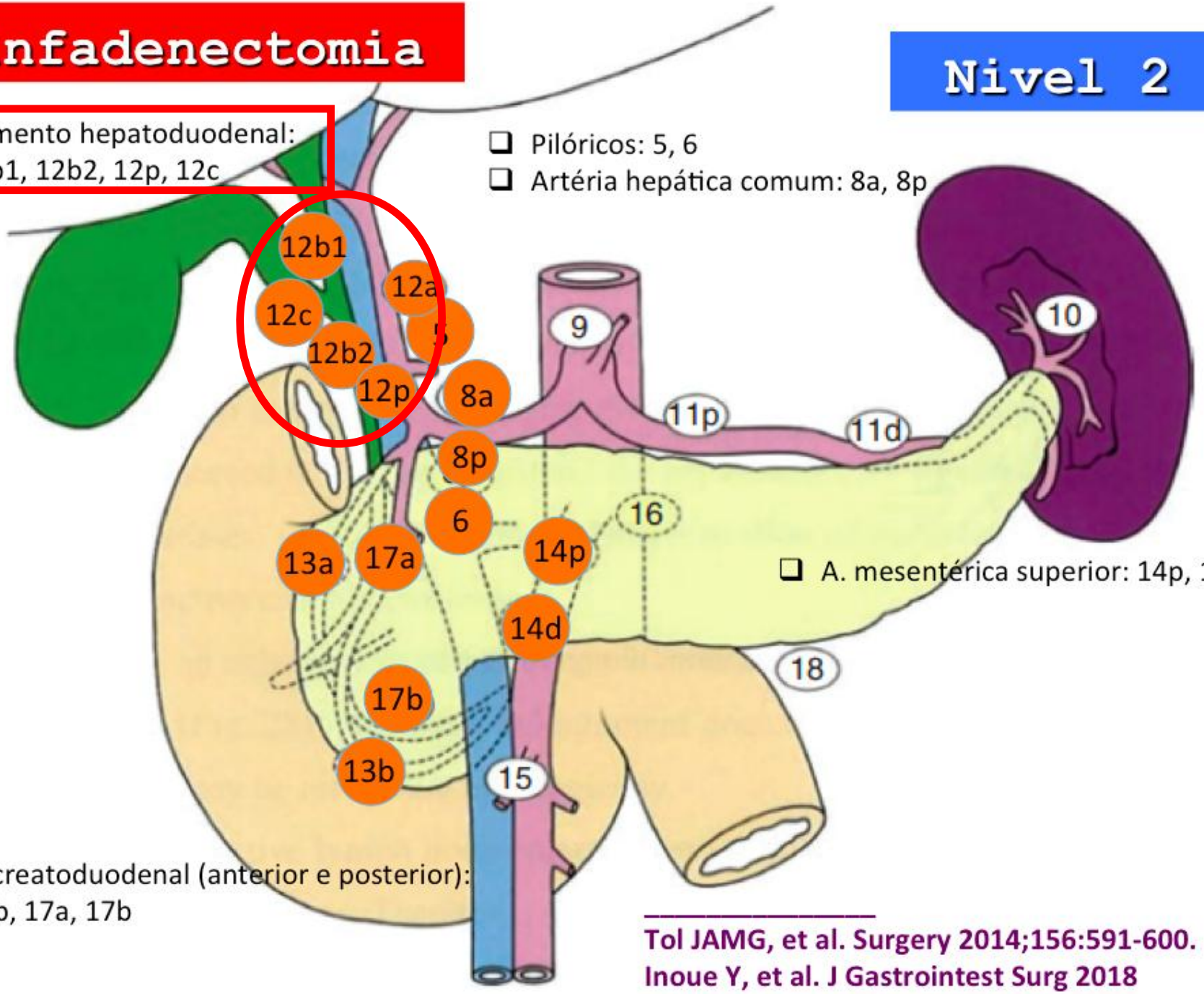
- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

Ligamento hepatoduodenal

Linfadenectomia

Nivel 2

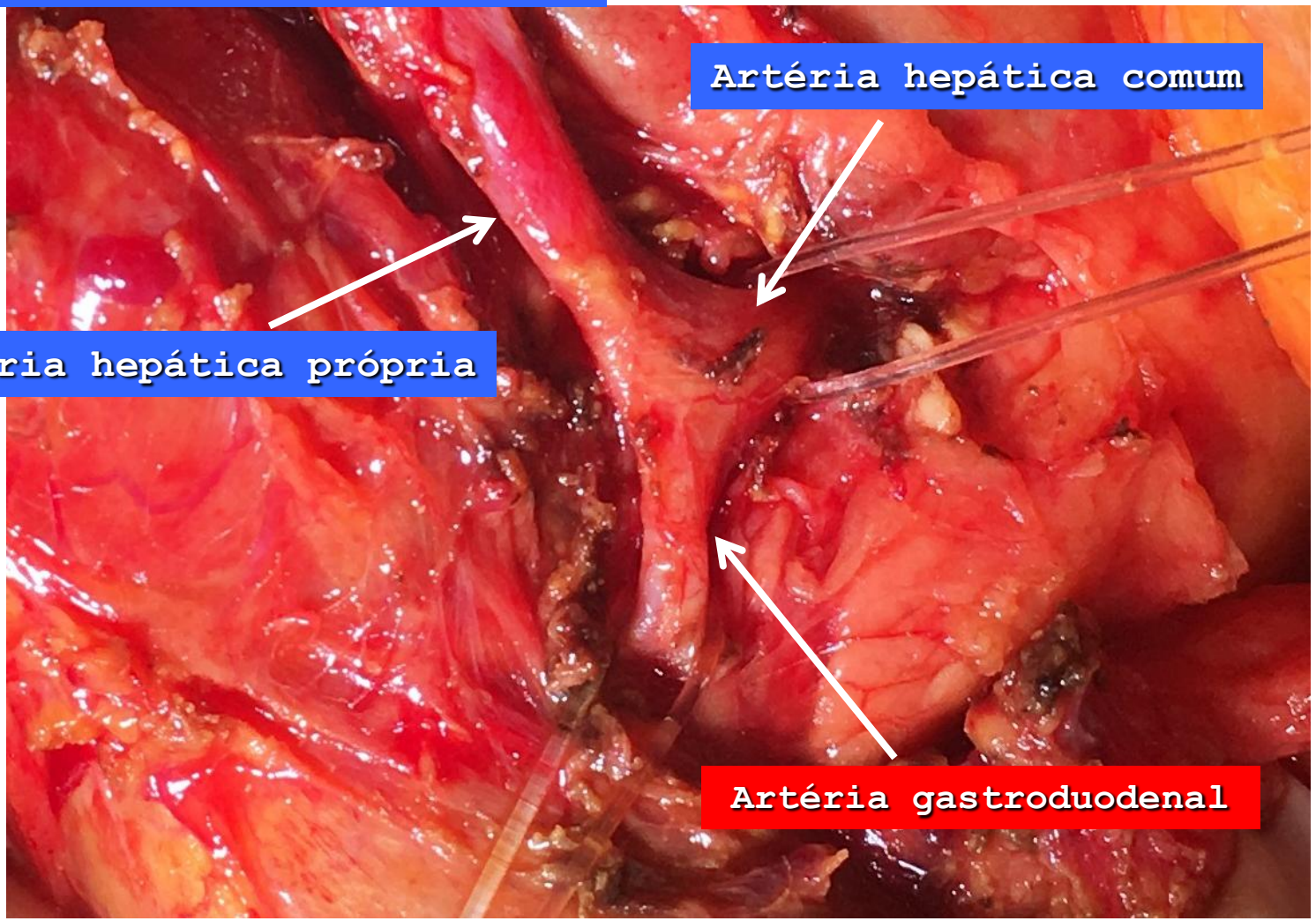
- Ligamento hepatoduodenal: 12a, 12b1, 12b2, 12p, 12c
- Pilóricos: 5, 6
- Artéria hepática comum: 8a, 8p



- A. mesentérica superior: 14p, 14d
- Pancreatoduodenal (anterior e posterior): 13a, 13b, 17a, 17b

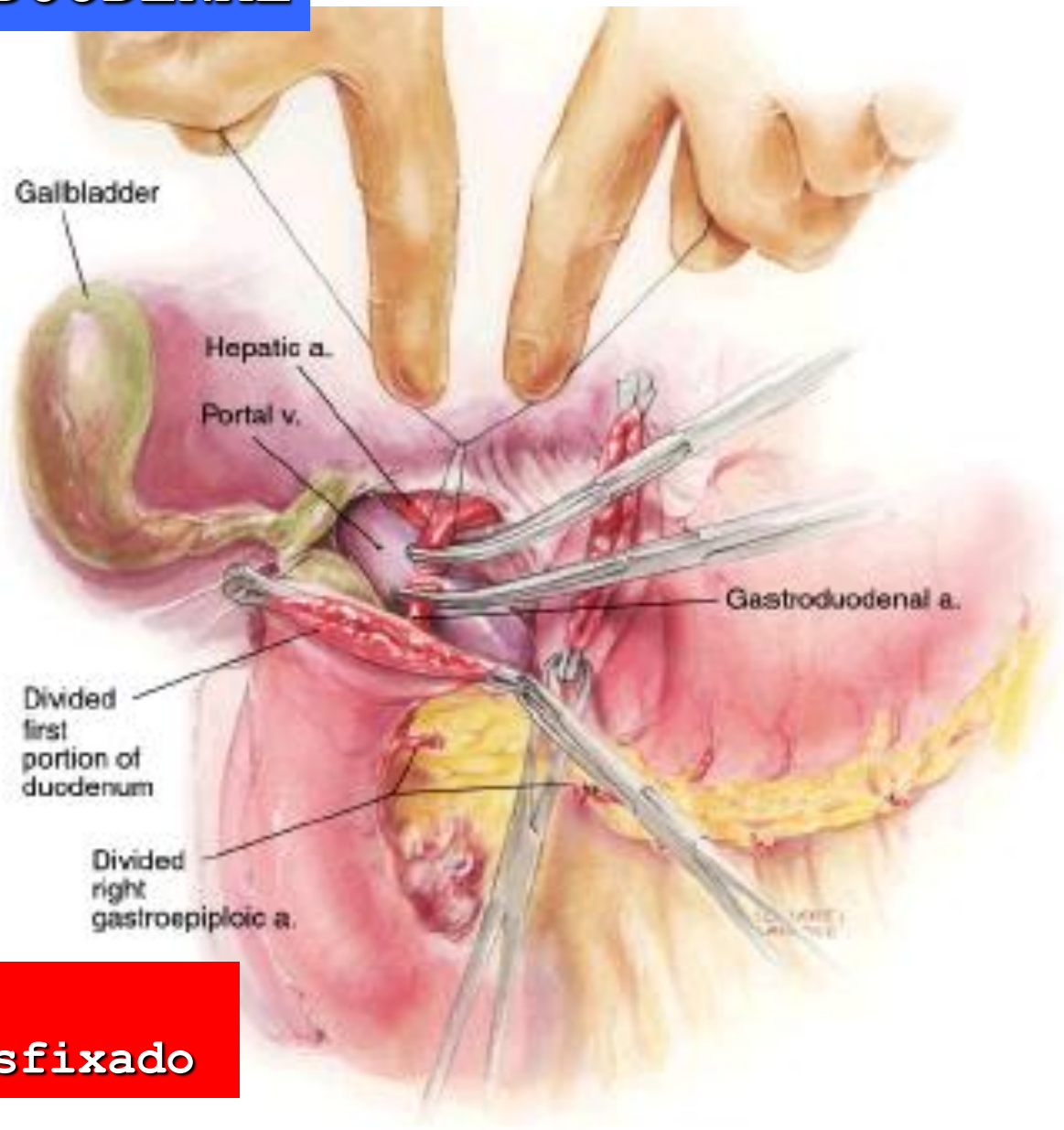
Tol JAMG, et al. Surgery 2014;156:591-600.
Inoue Y, et al. J Gastrointest Surg 2018

LIGADURA DA ARTÉRIA GASTRODUODENAL

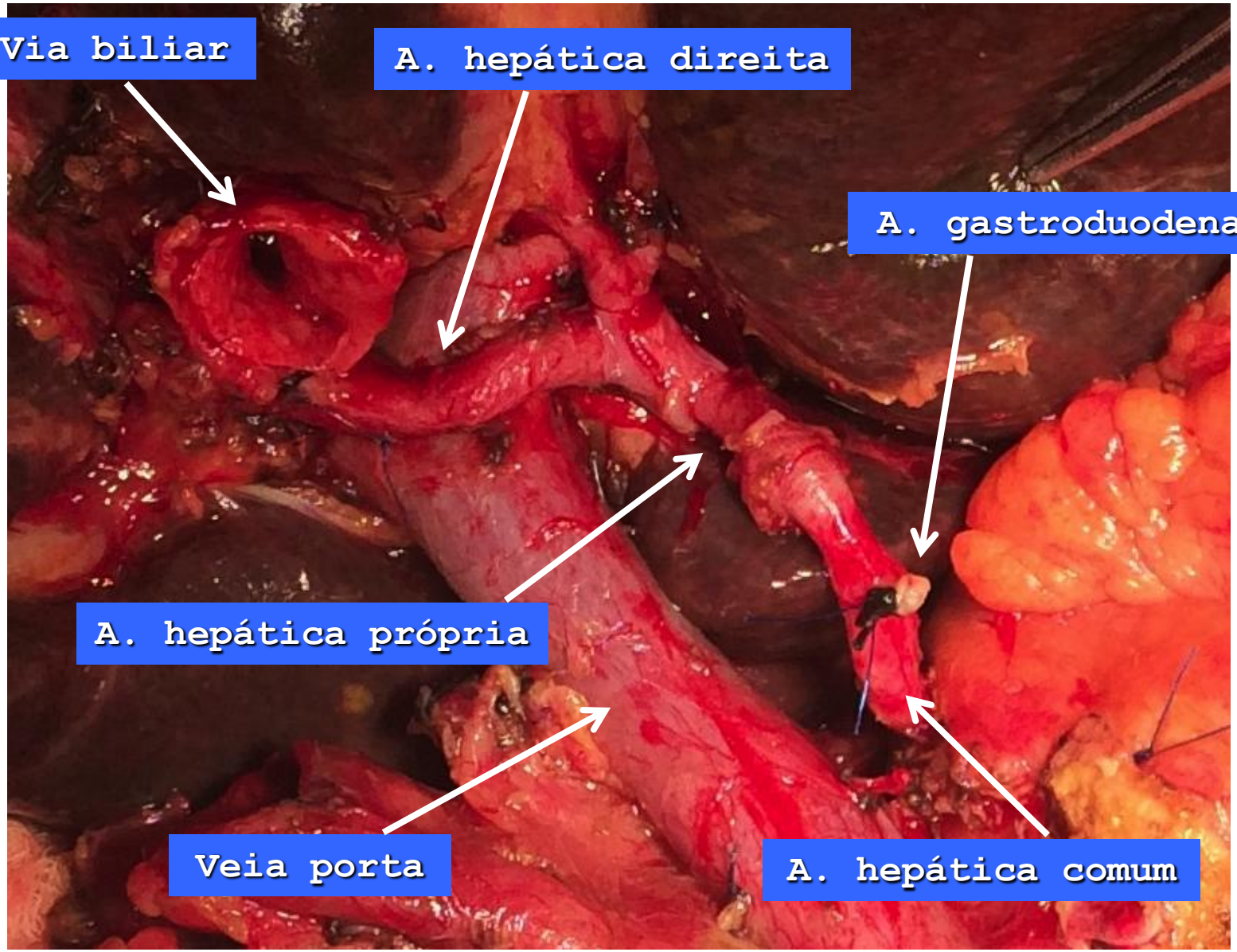


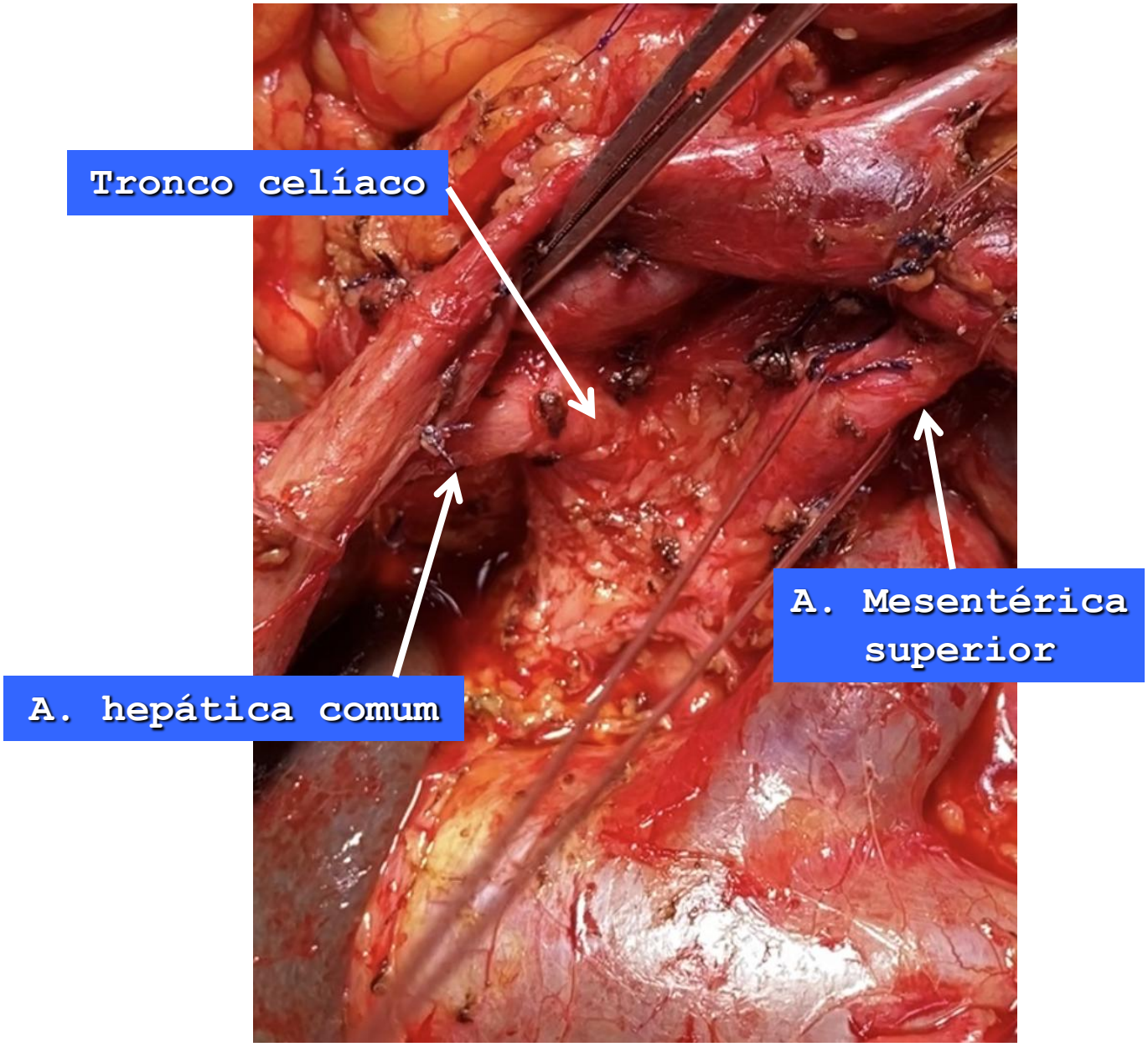
ARTÉRIA GASTRODUODENAL

- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico



- Dupla
- Prolene 4.0 transfixado

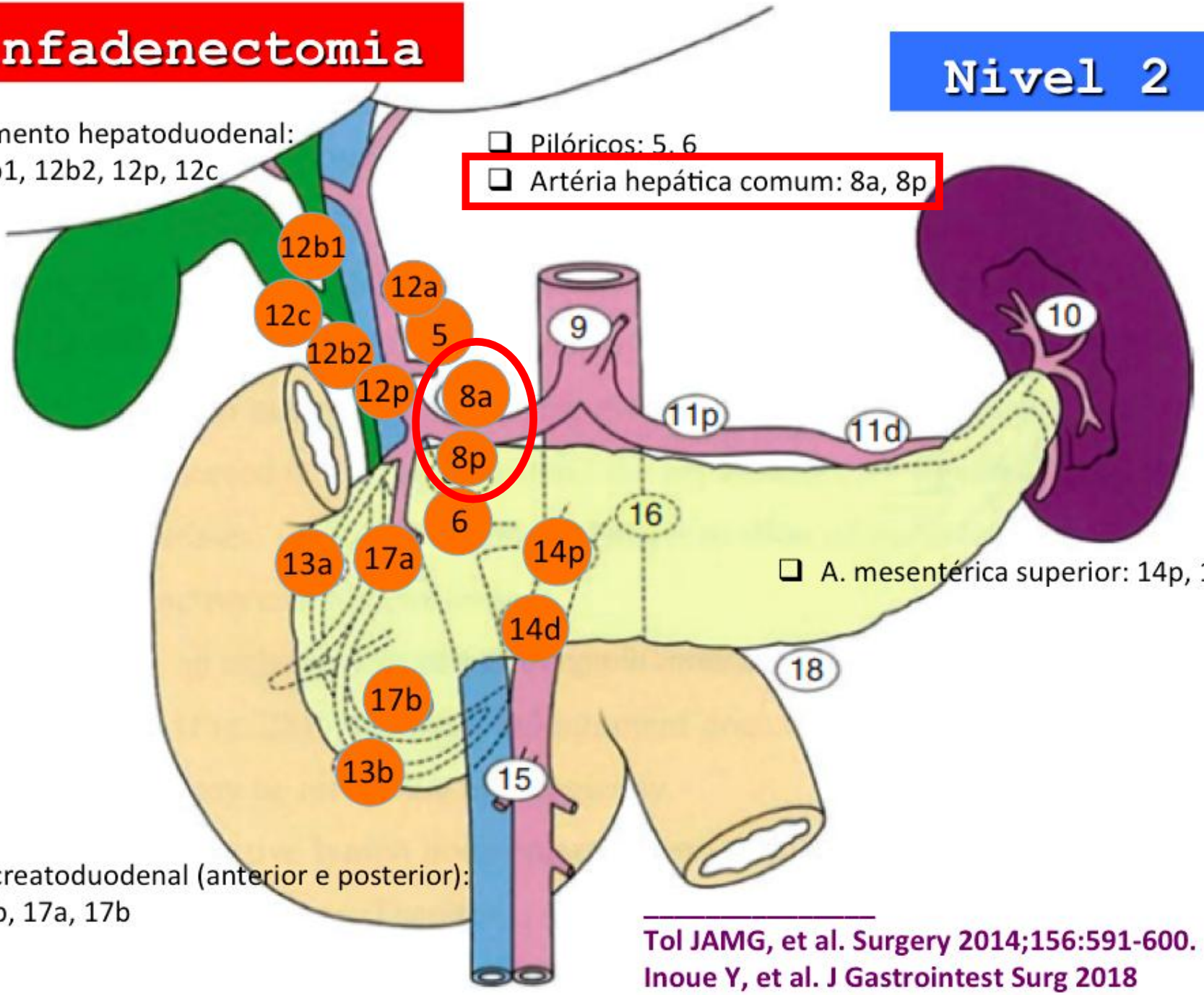

Via biliar
A. hepática direita
A. gastroduodenal
A. hepática própria
Veia porta
A. hepática comum


Tronco celíaco
A. hepática comum
A. Mesentérica superior

Linfadenectomia

Nivel 2

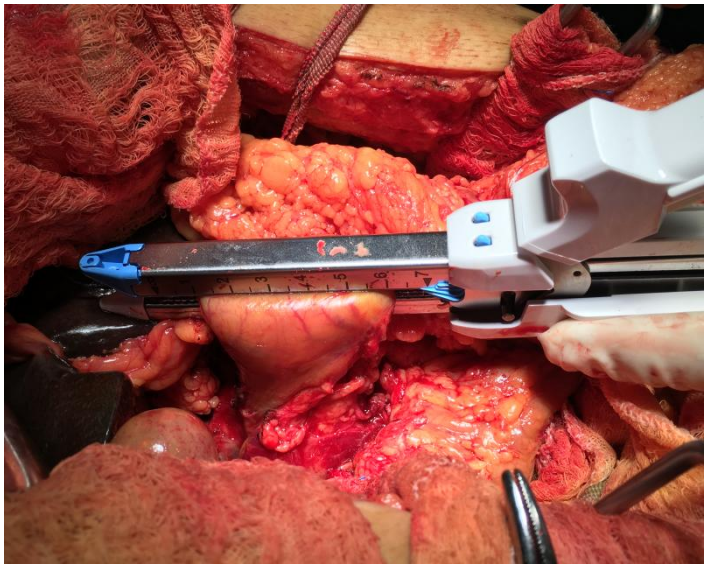
- Ligamento hepatoduodenal: 12a, 12b1, 12b2, 12p, 12c
- Pilóricos: 5, 6
- Artéria hepática comum: 8a, 8p

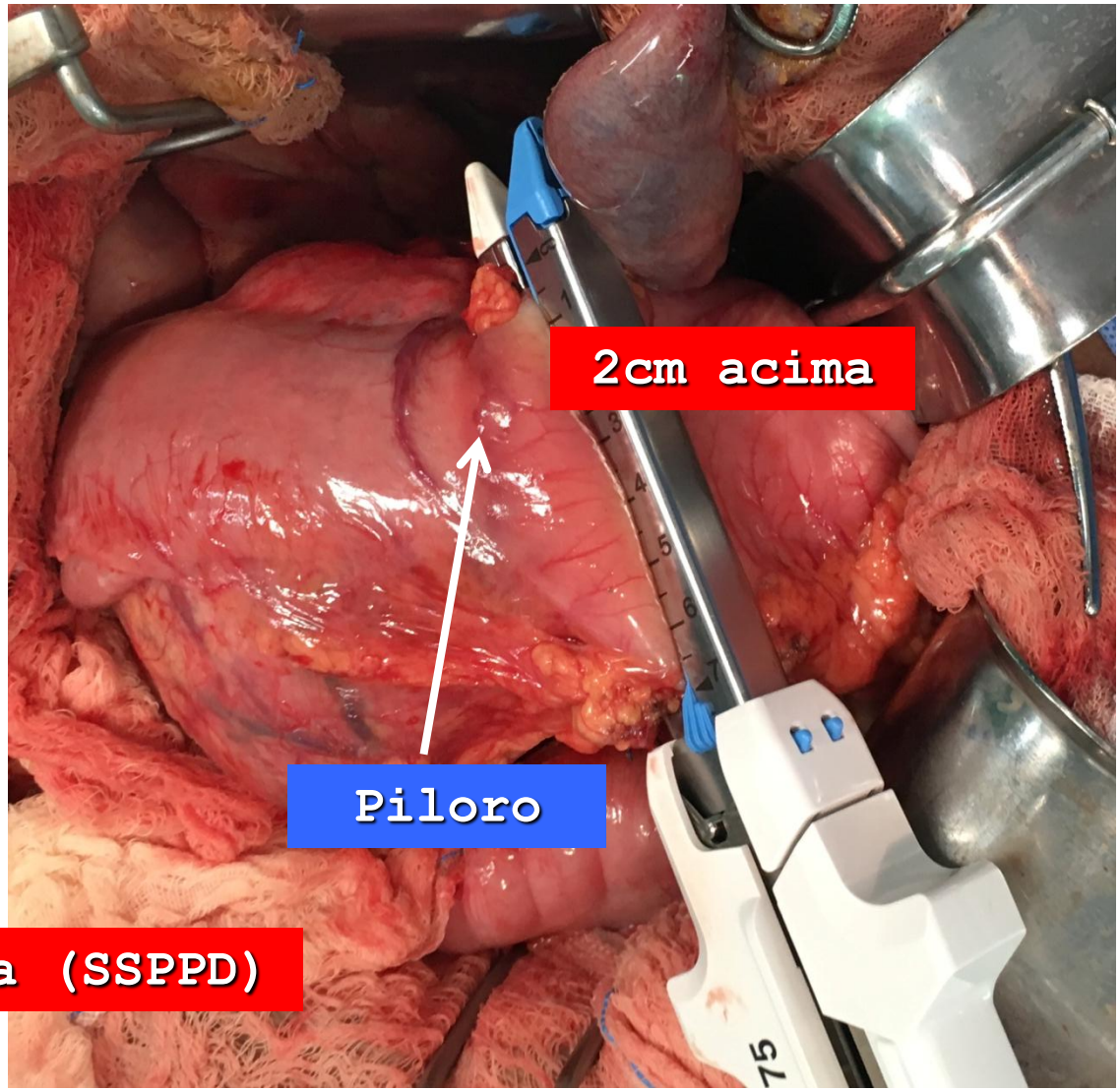


- A. mesentérica superior: 14p, 14d
- Pancreatoduodenal (anterior e posterior): 13a, 13b, 17a, 17b

Tol JAMG, et al. Surgery 2014;156:591-600.
Inoue Y, et al. J Gastrointest Surg 2018

Transecção do estômago

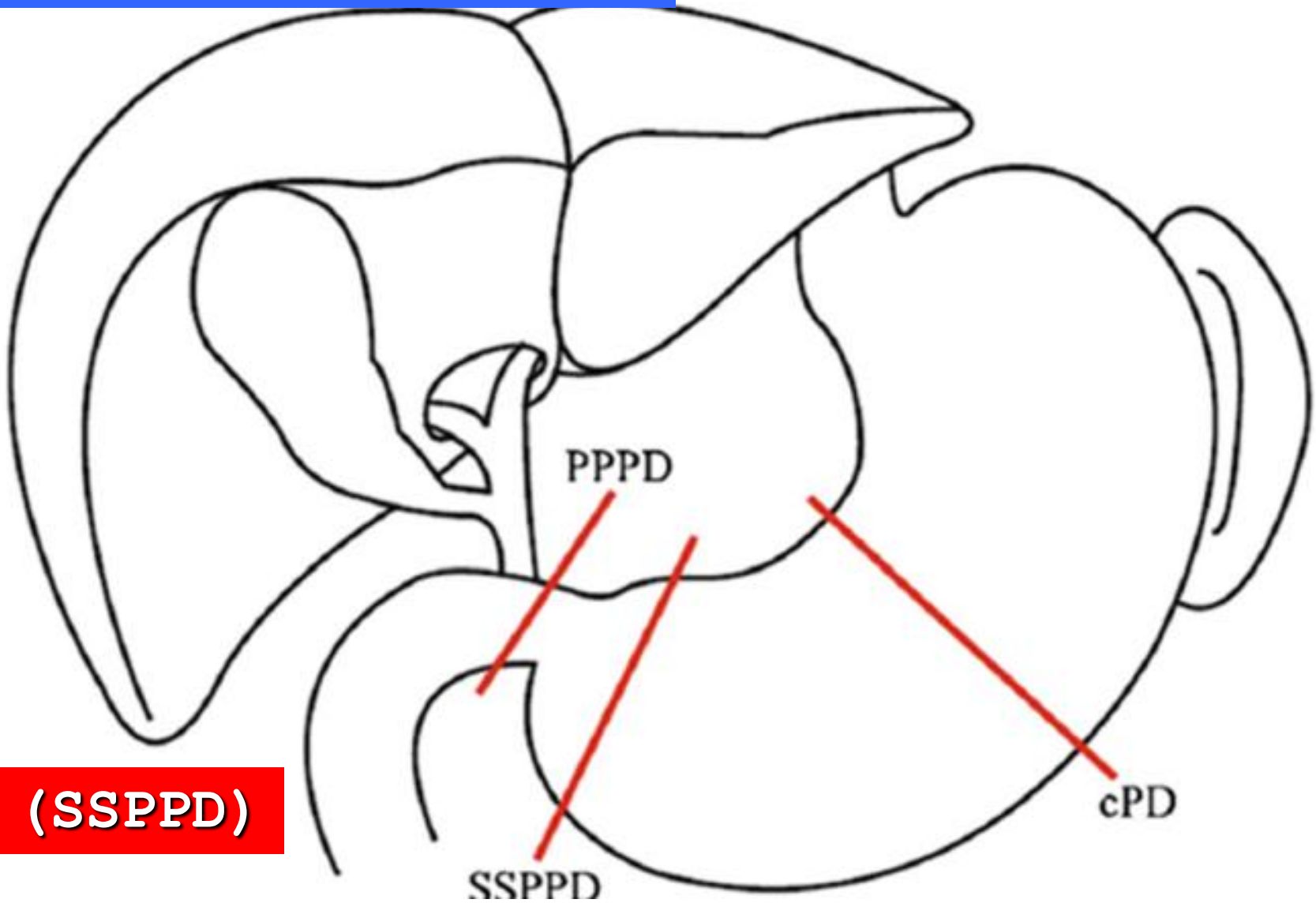




- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

- Preservação gástrica (SSPPD)

Transecção do estômago



- (SSPPD)

ABCD Arq Bras Cir Dig
2017;30(3):190-196
DOI: /10.1590/0102-6720201700030007

Original Article

PANCREATODUODENECTOMY: BRAZILIAN PRACTICE PATTERNS*

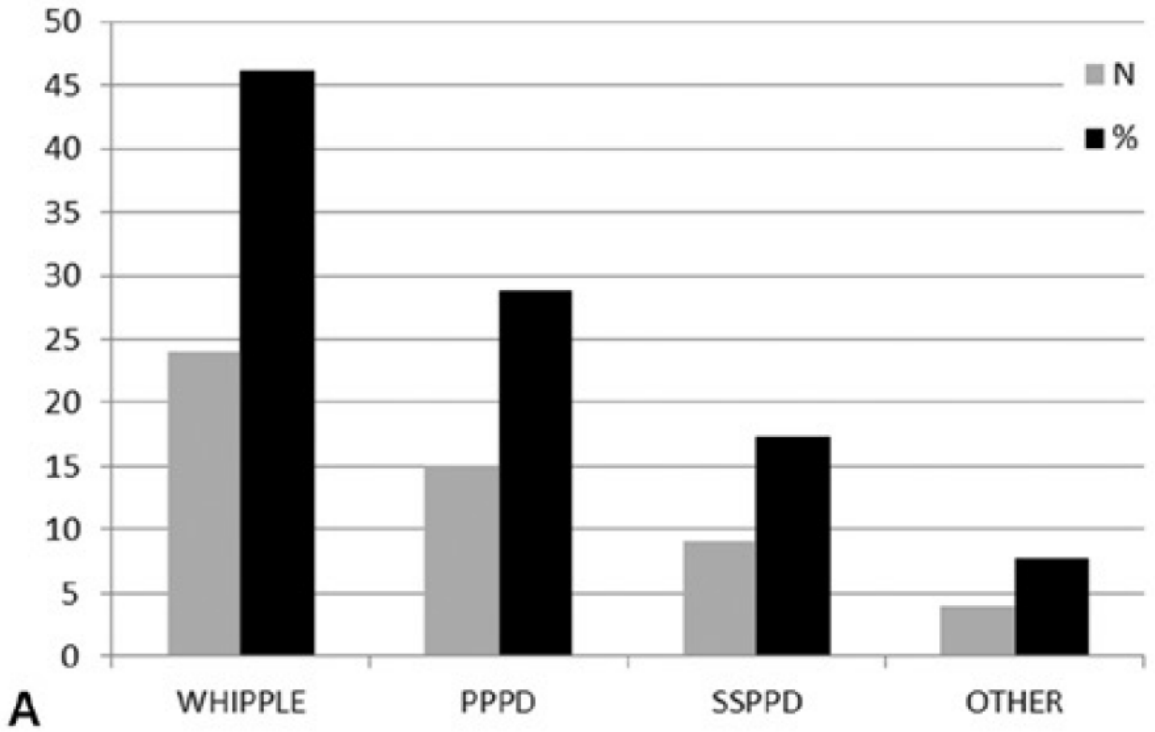
*Duodenopancreatectomia: prática padrão do Brasil**

Orlando Jorge M **TORRES**[1], Eduardo de Souza M **FERNANDES**[2], Rodrigo Rodrigues **VASQUES**[1], Fabio Luís **WAECHTER**[3], Paulo Cezar G. **AMARAL**[4], Marcelo Bruno de **REZENDE**[5], Roland Montenegro **COSTA**[6], André Luís **MONTAGNINI**[7]

From the [1]Departamento de Cirurgia, Universidade Federal do Maranhão, São Luís, MA; [2]Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ; [3]Santa Casa de Misericórdia de Porto Alegre, Porto Alegre, RS; [4]Hospital São Rafael, Salvador, BA; [5]Hospital Santa Marcelina, São Paulo,SP; [6]Hospital Santa Lucia,

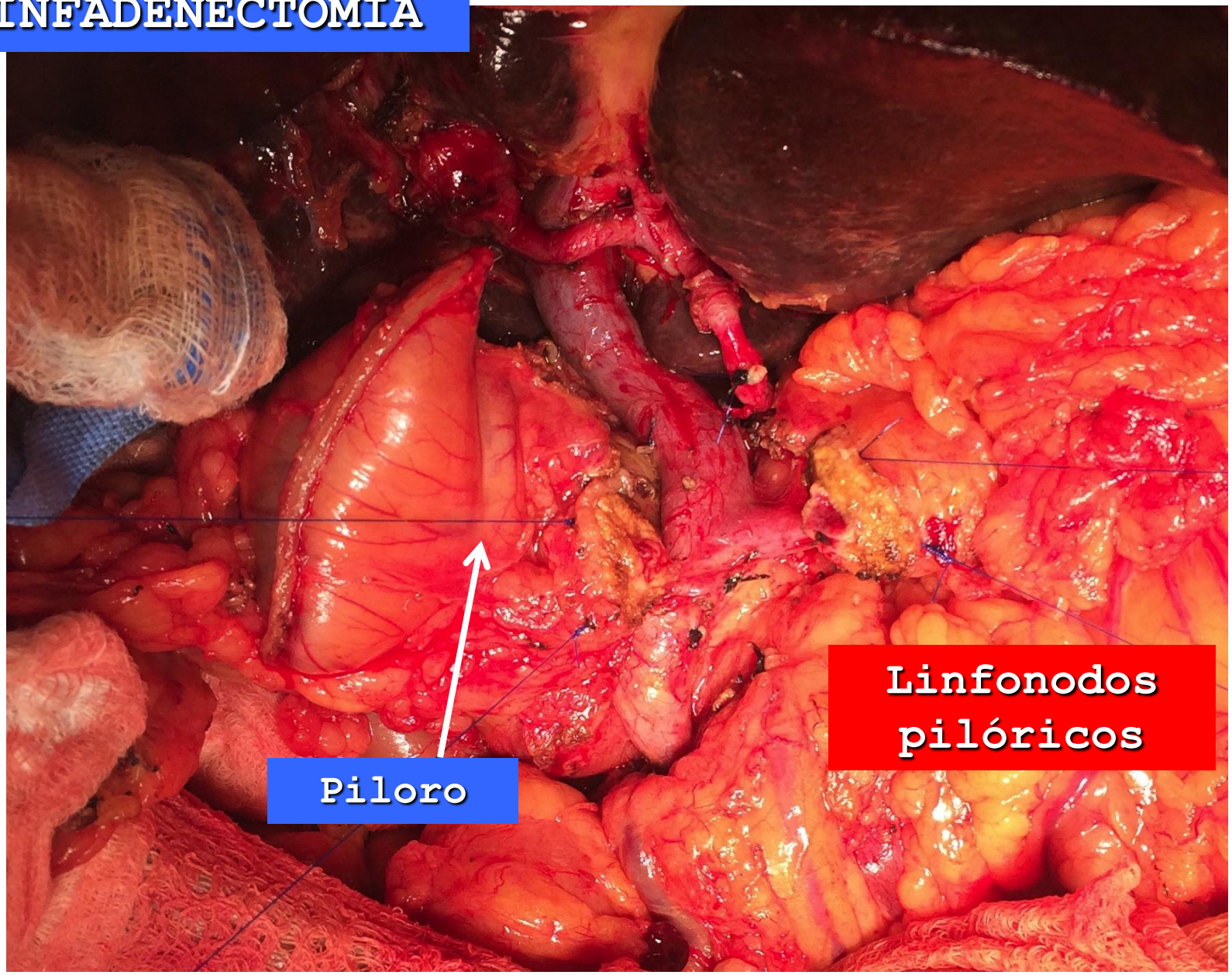
ABSTRACT - ***Background***: Pancreatoduodenectomy is a technically challenging surgical procedure with an incidence of postoperative complications ranging from 30% to 61%. The procedure requires a high level of experience, and to minimize surgery-related complications and mortality, a high-quality standard surgery is imperative. ***Aim***: To understand the Brazilian practice patterns for pancreatoduodenectomy. ***Method***: A questionnaire was designed

RESSECÇÃO



Torres OJ, et al. Arq Bras Cir Dig 2017;30:190-6

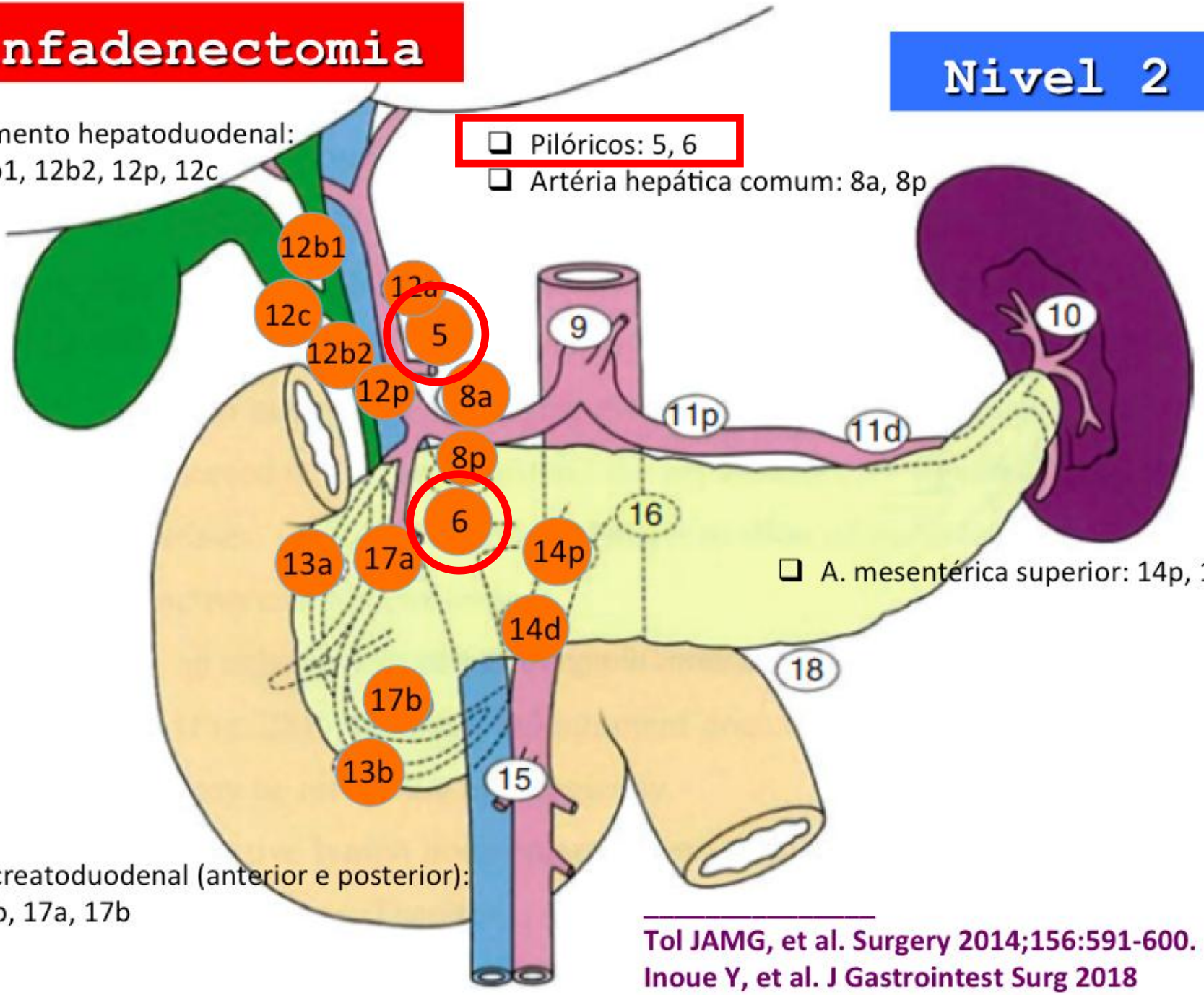
LINFADENECTOMIA



Linfadenectomia

Nivel 2

- Ligamento hepatoduodenal: 12a, 12b1, 12b2, 12p, 12c
- Pilóricos: 5, 6
- Artéria hepática comum: 8a, 8p



- A. mesentérica superior: 14p, 14d
- Pancreatoduodenal (anterior e posterior): 13a, 13b, 17a, 17b

Tol JAMG, et al. Surgery 2014;156:591-600.
Inoue Y, et al. J Gastrointest Surg 2018

ABCDDV/1175

ABCD Arq Bras Cir Dig
2016;29(2):71-72
DOI: /10.1590/0102-6720201600020001

Editorial

THE OBITUARY OF THE PYLORUS-PRESERVING PANCREATODUODENECTOMY

O obituário da duodenopancreatectomia com preservação pilórica

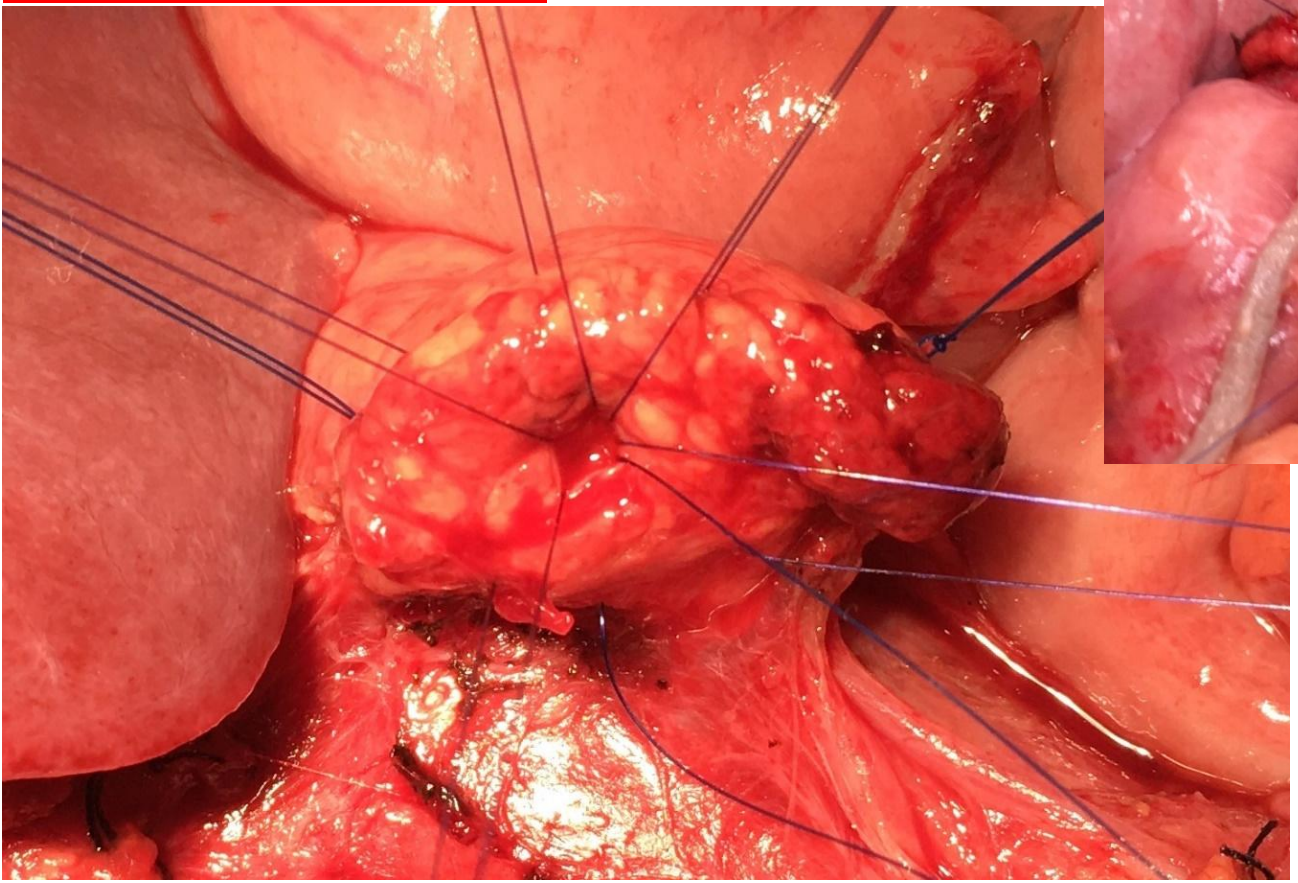
Orlando Jorge Martins **TORRES**, Rodrigo Rodrigues **VASQUES**, Camila Cristina S. **TORRES**
From the Department of Surgery, Federal University of Maranhão, São Luiz, MA, Brazil

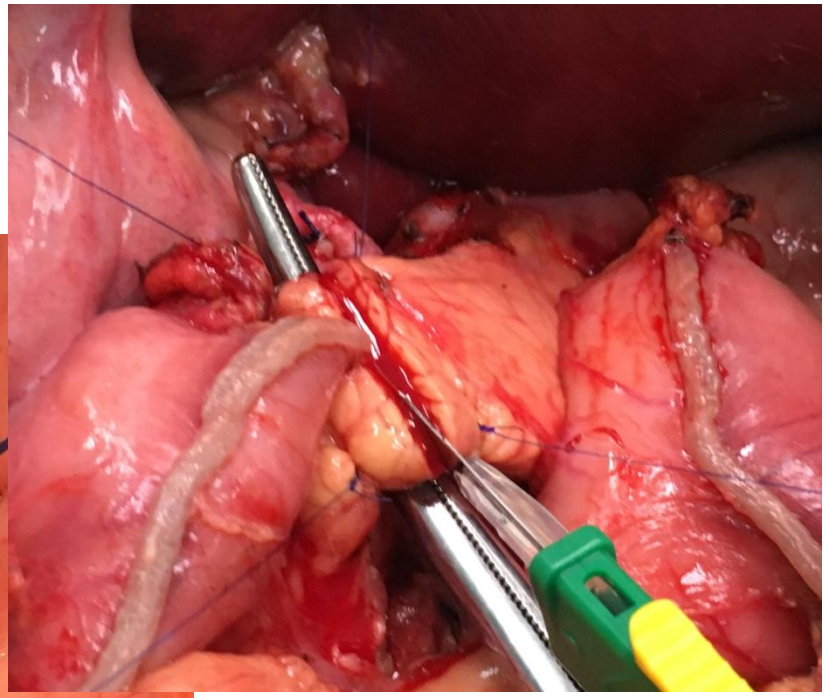
Pancreatoduodenectomy is the treatment of choice for patients with benign and malignant disease of pancreatic head. Classic pancreatoduodenectomy was described by Whipple originally and included distal hemigastrectomy. Pylorus-preserving pancreatoduodenectomy (pylorus-preserving) was popularized in the late 1970s for benign disease and it included full preservation of the pylorus. However, delayed gastric emptying after pylorus-preserving is a frustrating complication. Its incidence varying from 19% to 61% in previous series and it results in discomfort, prolonged length of stay and increases the risk of respiratory complications. Delayed gastric emptying contributes to increased hospital costs and decreased quality of life. There has been no evidence from prospective studies and meta-analyses to indicate the superiority of pylorus preserving in terms of quality of life or delayed gastric emptying[2,4,5,7].

More recently, and mostly in Japan since the late 1990s, subtotal stomach-preserving pancreatoduodenectomy (stomach-

TRANSECÇÃO DO PÂNCREAS

❑ Lâmina fria



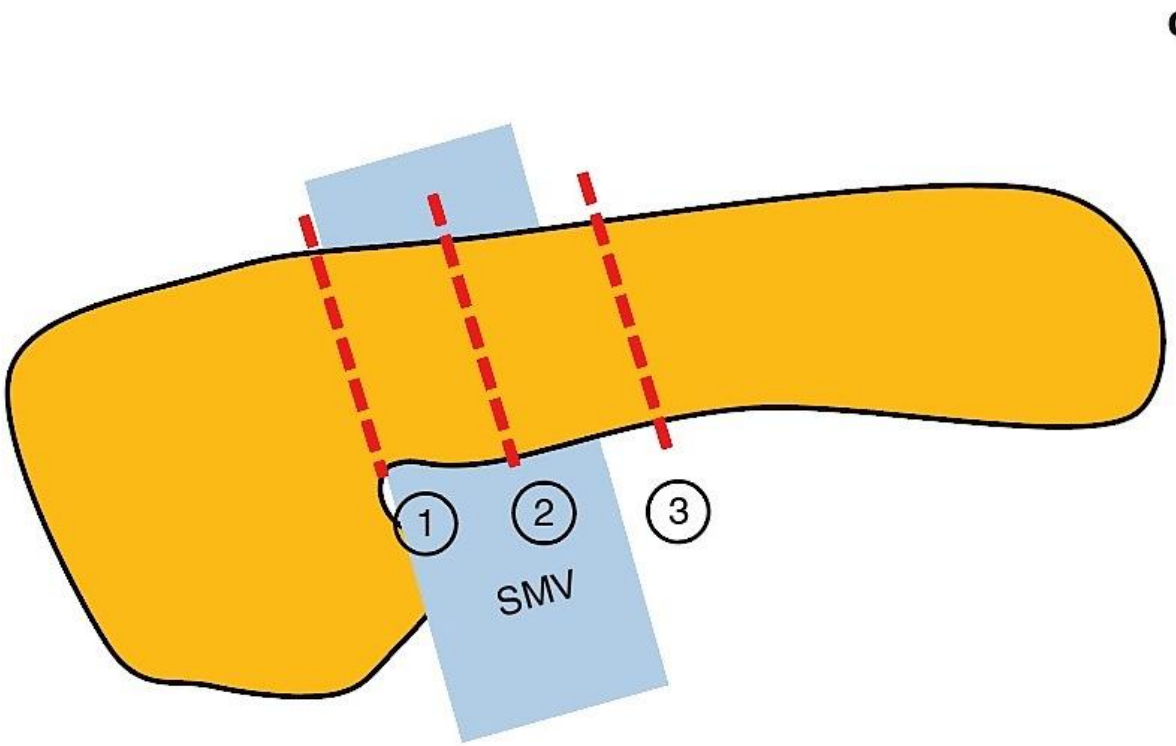


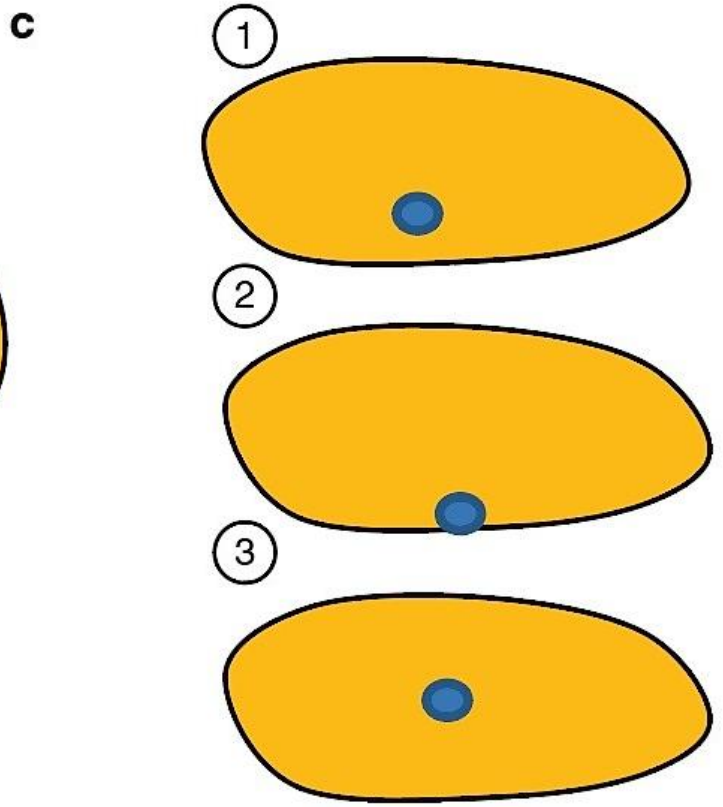
- ❑ Sangramento
- ❑ **Fístula pancreática**
- ❑ Gastroparesia
- ❑ Padrão oncológico

- ❑ Incisão do pâncreas com lâmina fria
- ❑ Promover bom suprimento sanguíneo do pâncreas e intestino

TRANSECÇÃO DO PÂNCREAS

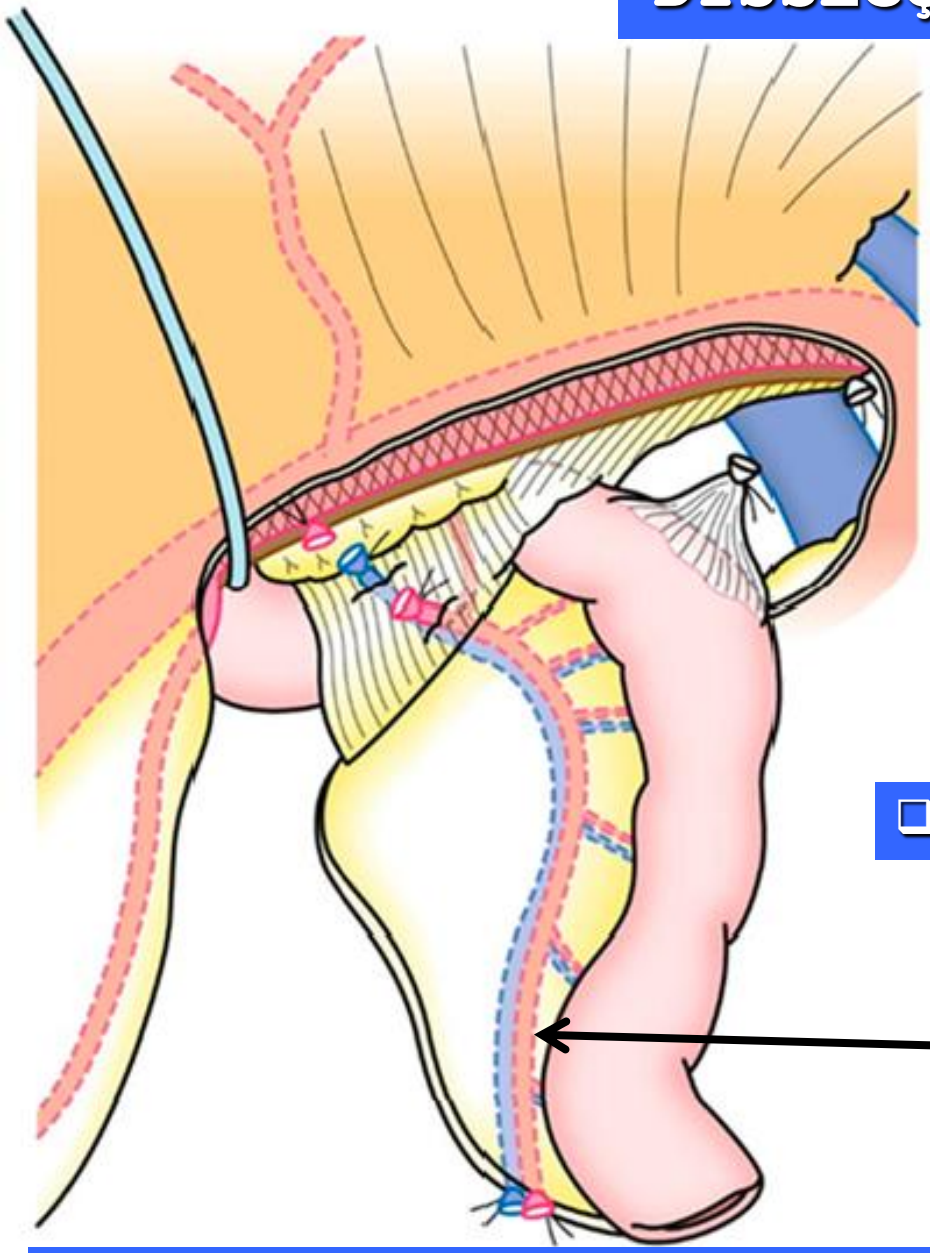
- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico





- À esquerda da margem da veia porta

DISSECÇÃO DA ESQUERDA DA SMA



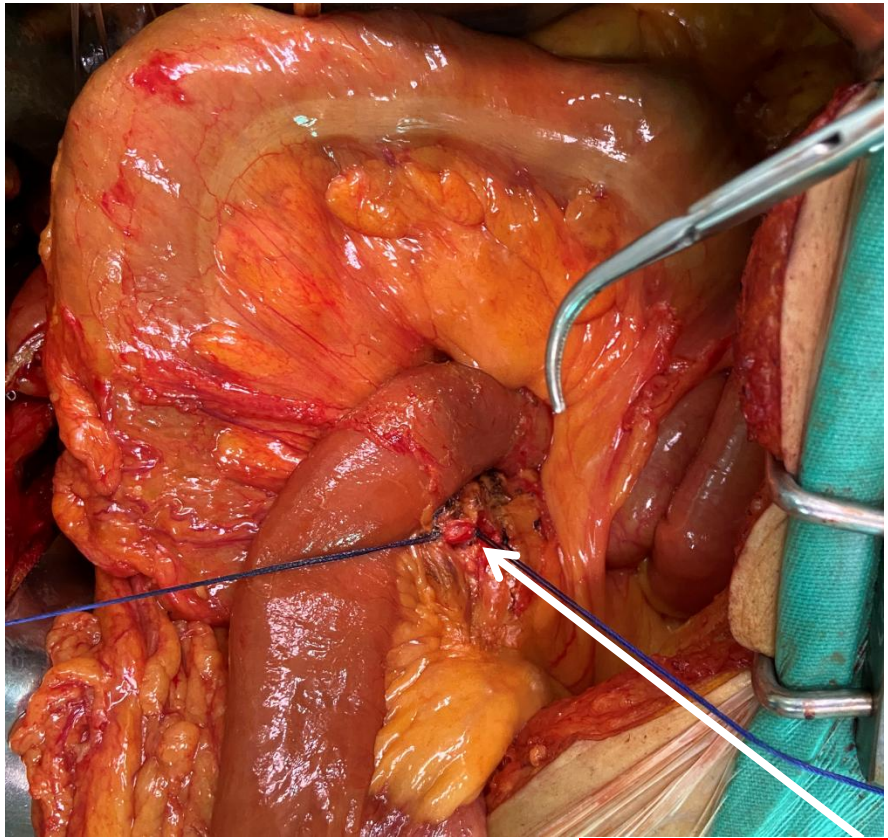
- 15-25 cm do ângulo de Treitz

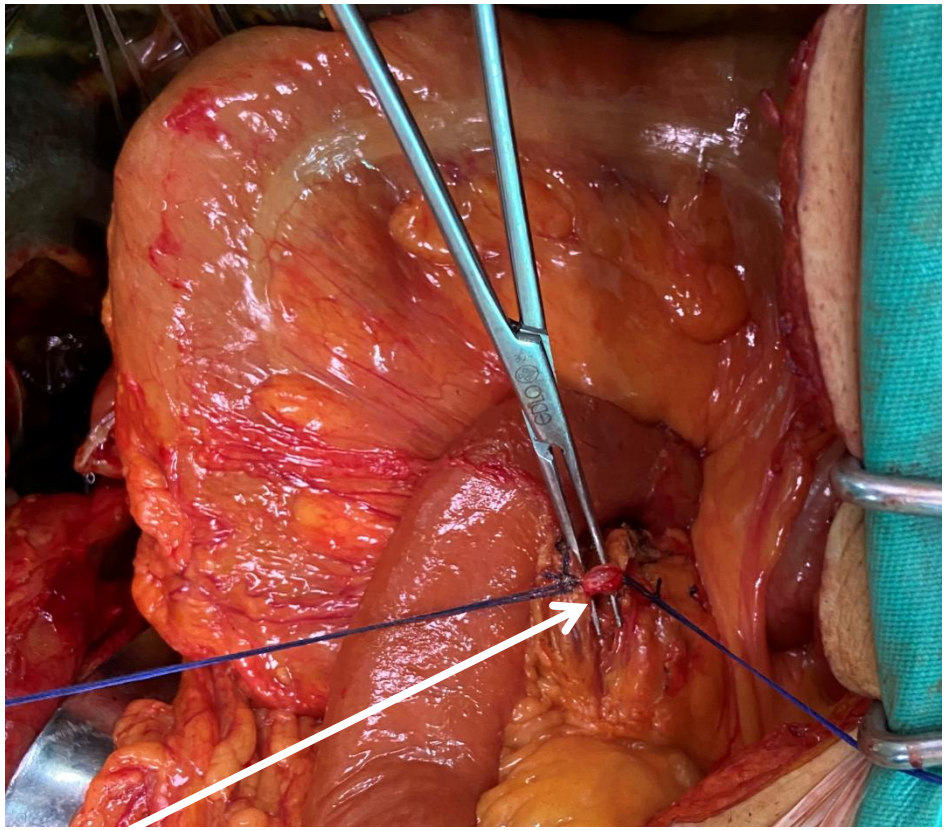
Artéria jejunal JA1

Transecção do jejuno e ligamento de Treitz

DISSECÇÃO DA ESQUERDA DA SMA

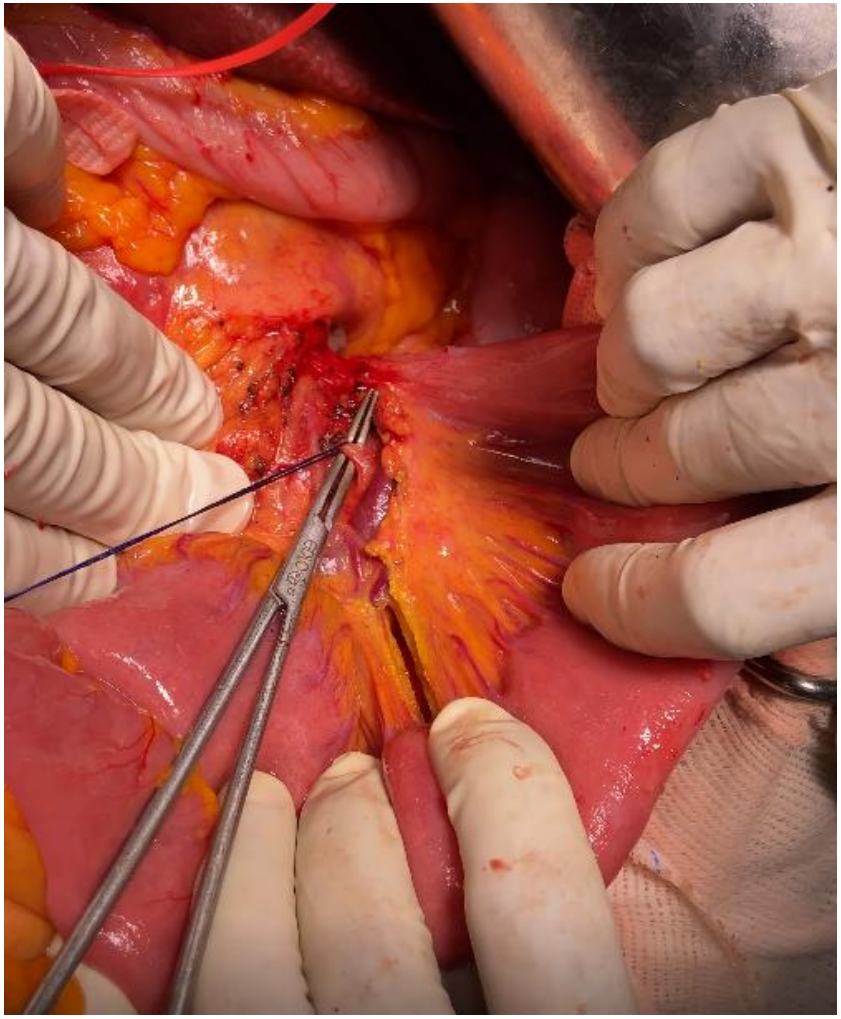
- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico

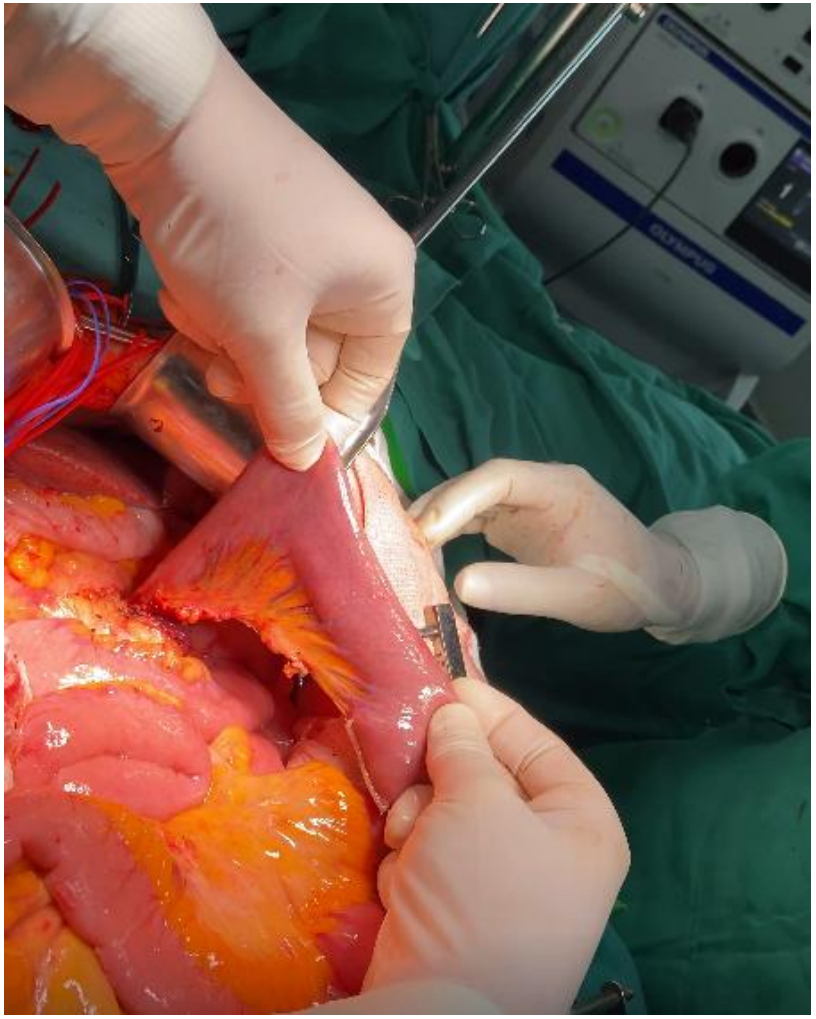




Artéria jejunal J1A

Nível 2





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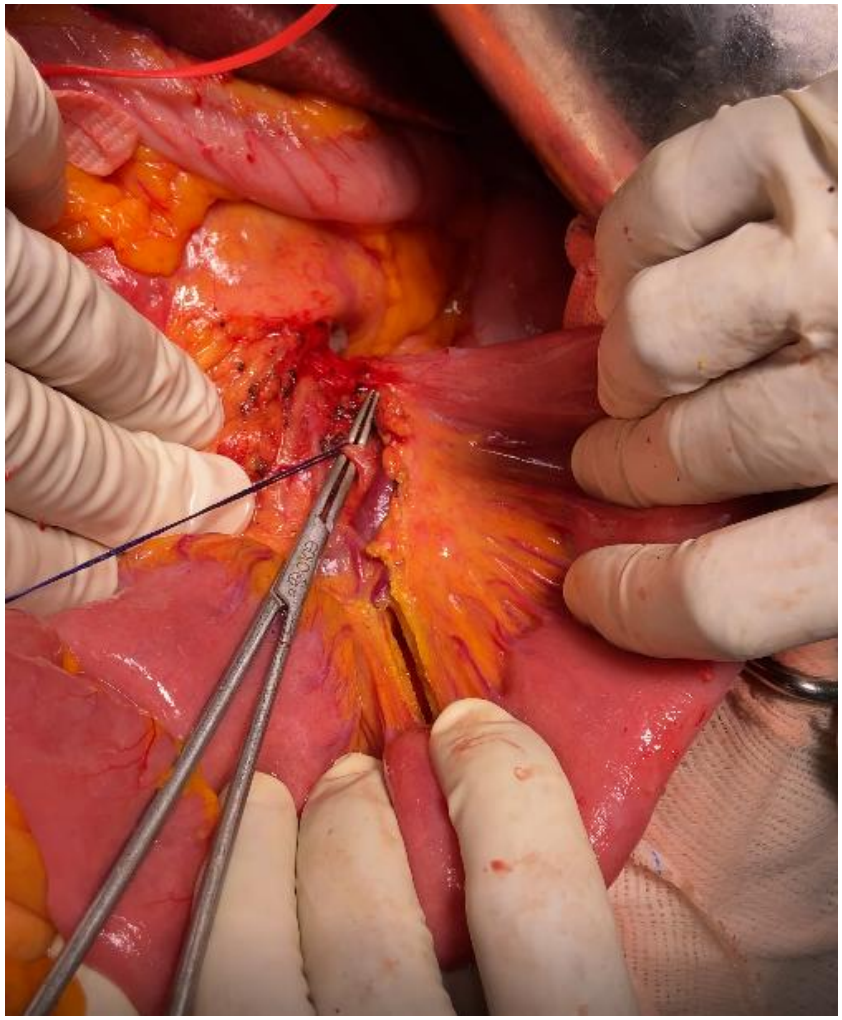
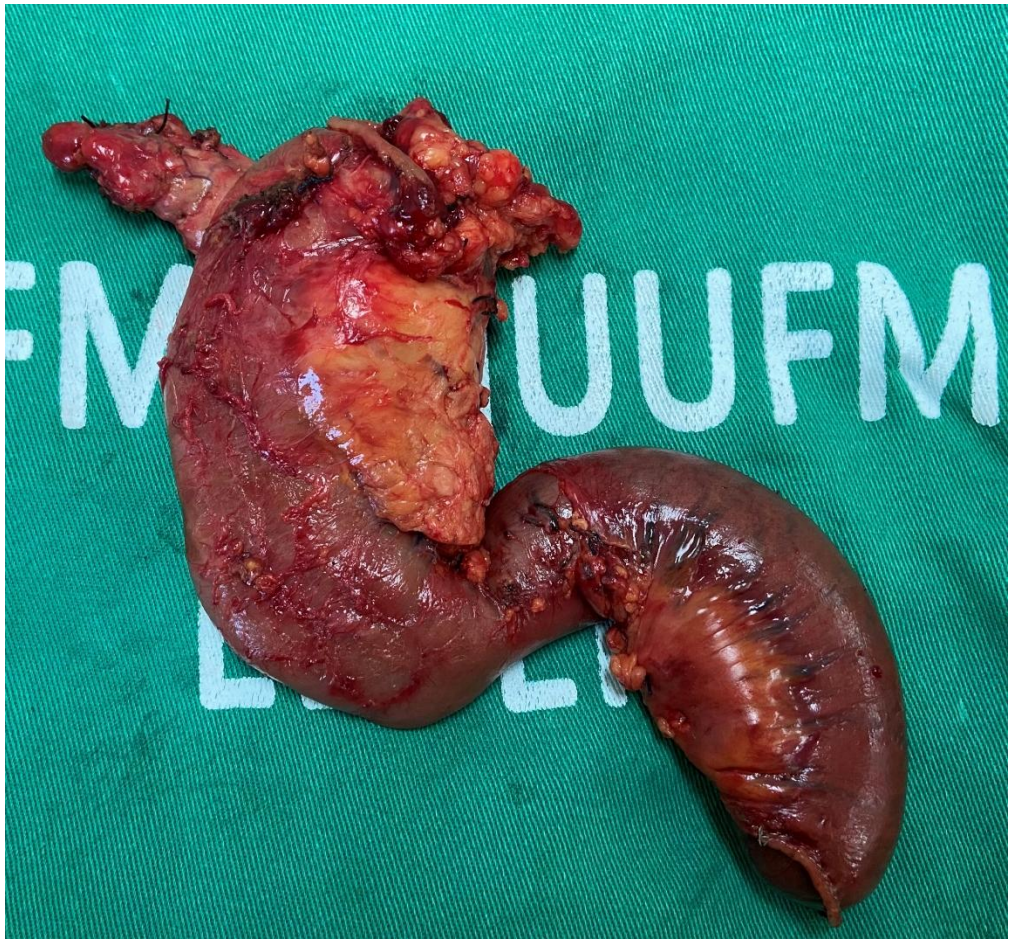
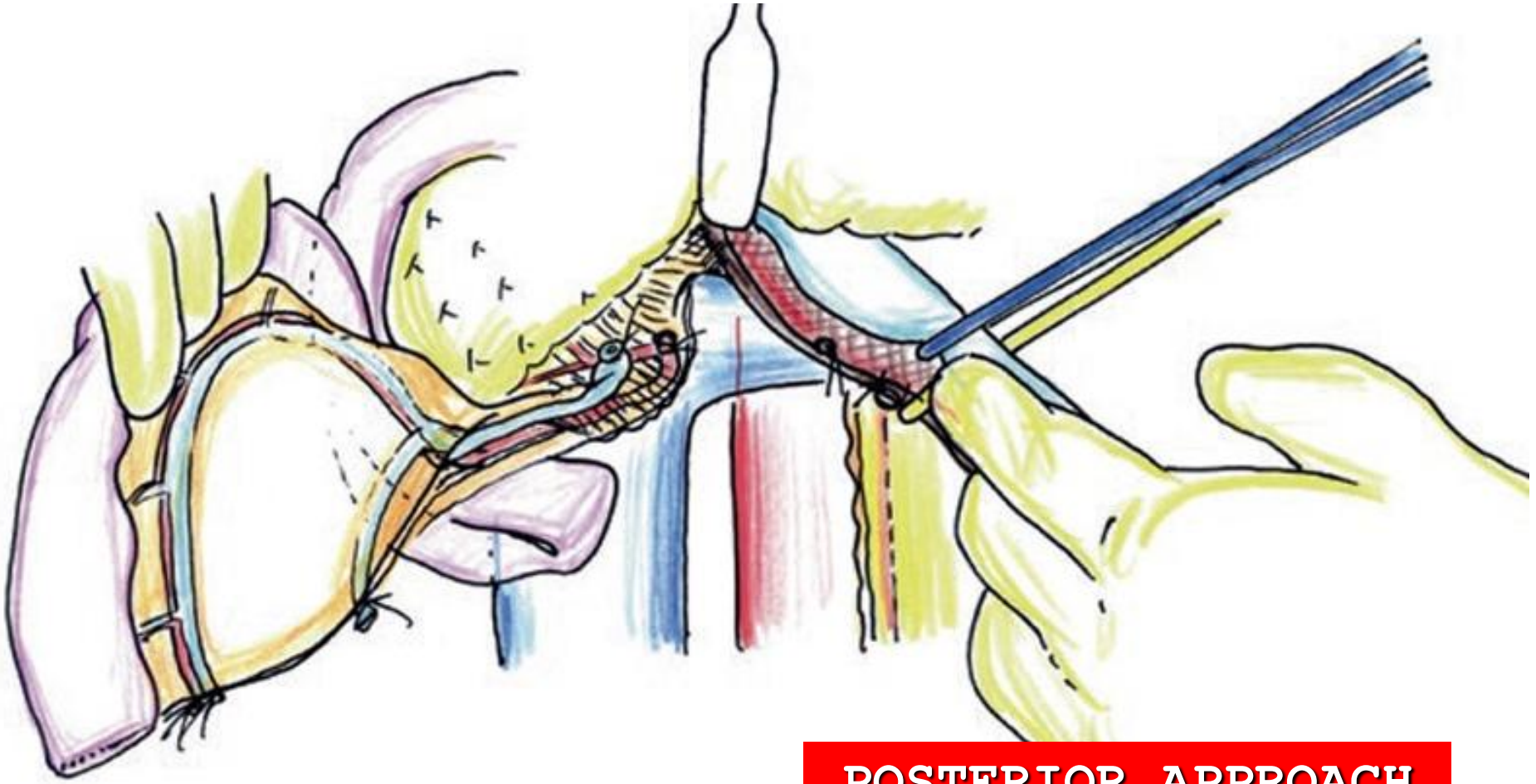




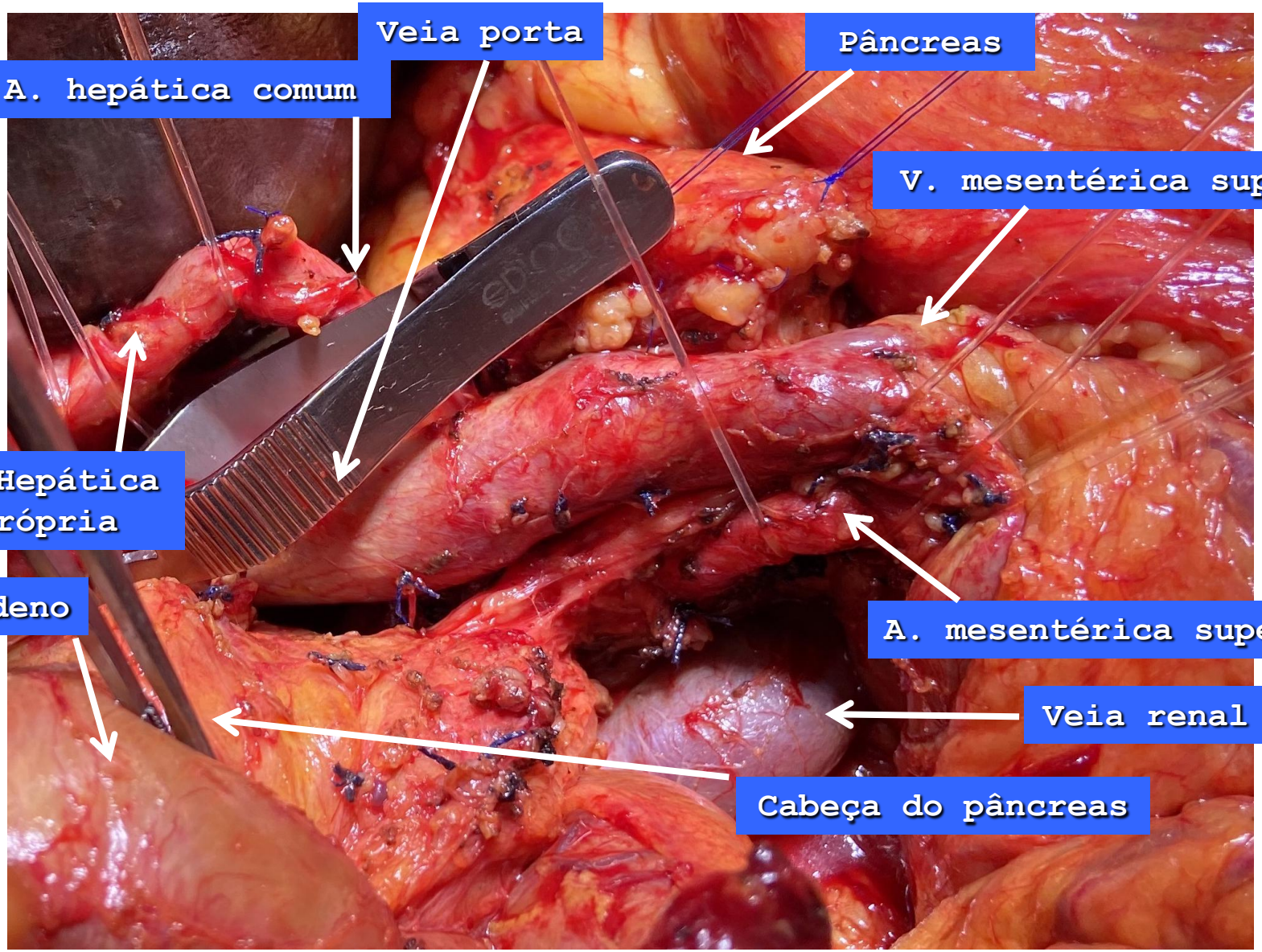
TRANSPORTAR PARA DIREITA



POSTERIOR APPROACH

Inoue Y, et al. 2017

FINALIZAÇÃO DA RESSECÇÃO



Linfadenectomia

Nivel 2

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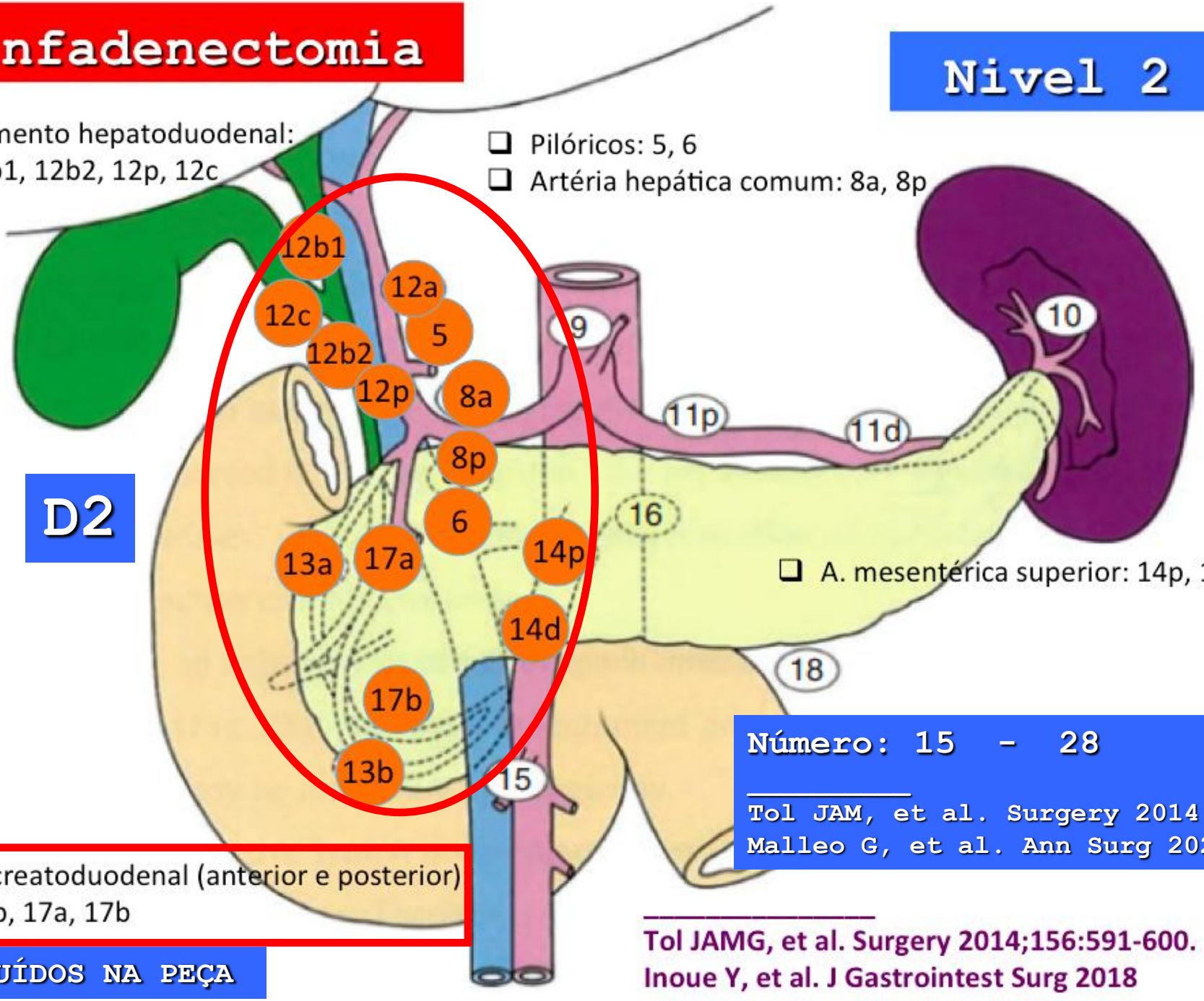


D2

- A. mesentérica superior: 14p, 14d

Número: 15 - 28

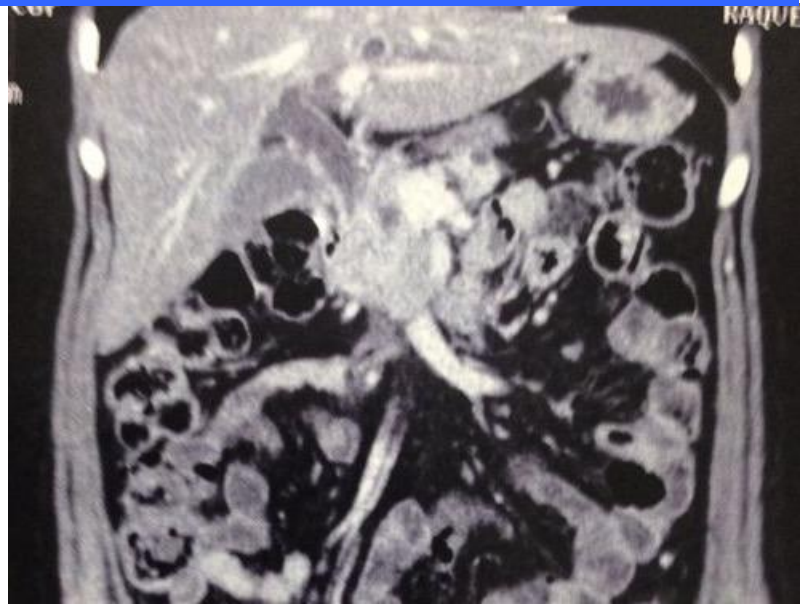
Tol JAM, et al. Surgery 2014
Malleo G, et al. Ann Surg 2020

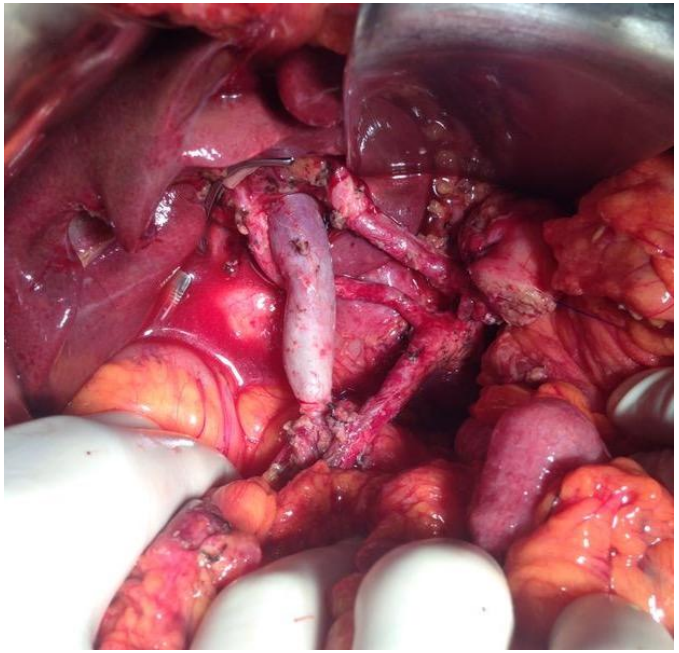
- Pancreatoduodenal (anterior e posterior) 13a, 13b, 17a, 17b

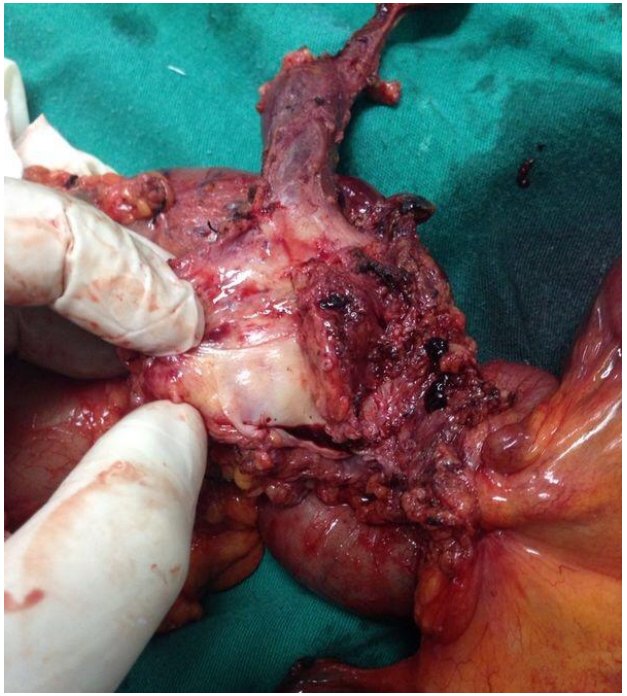
INCLUÍDOS NA PEÇA

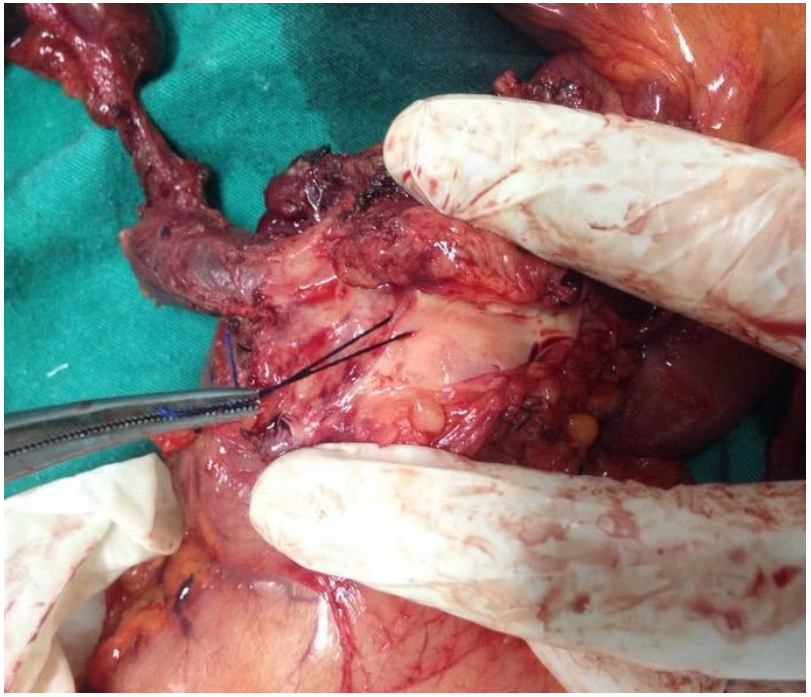
Tol JAMG, et al. Surgery 2014;156:591-600.
Inoue Y, et al. J Gastrointest Surg 2018

RESSECÇÃO VASCULAR









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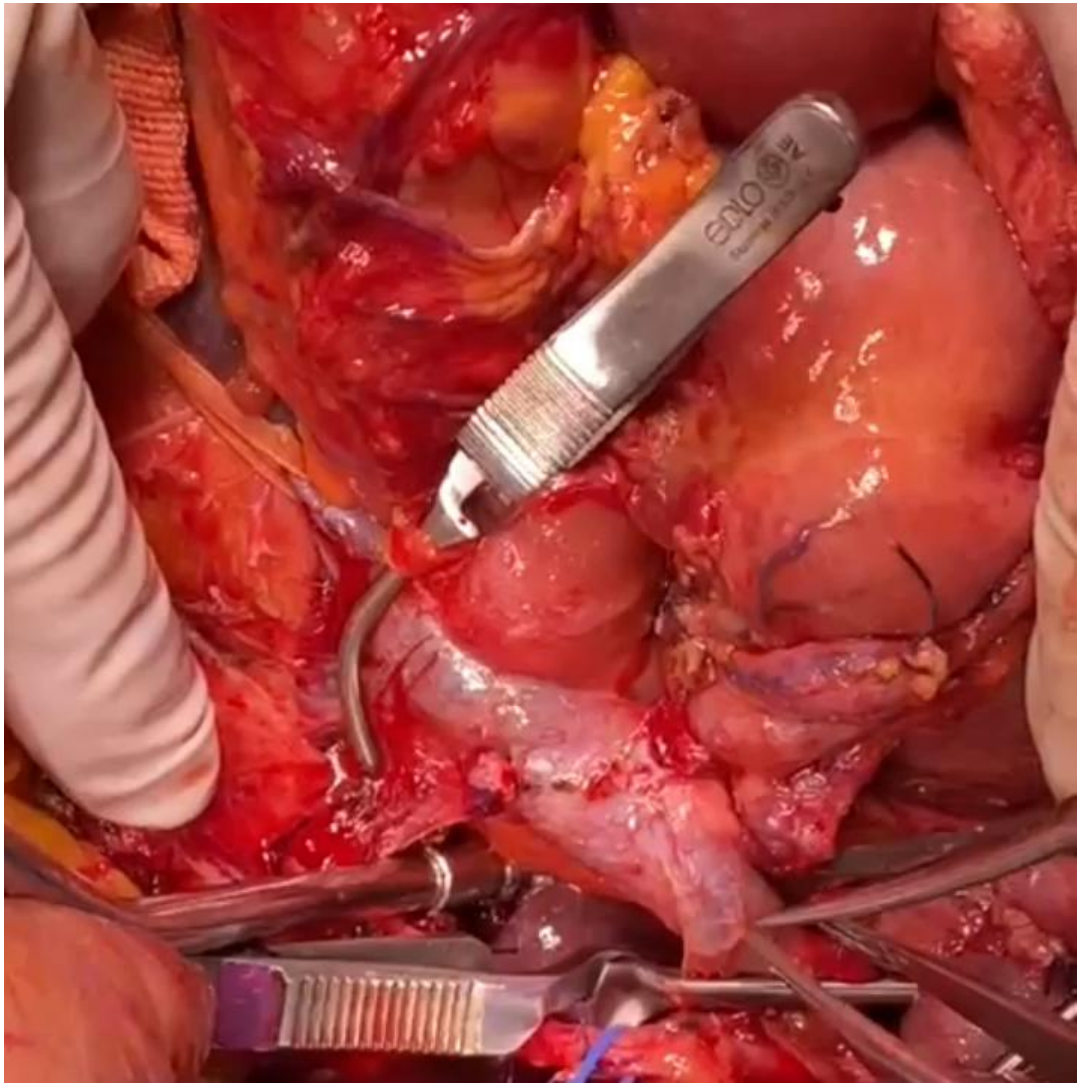

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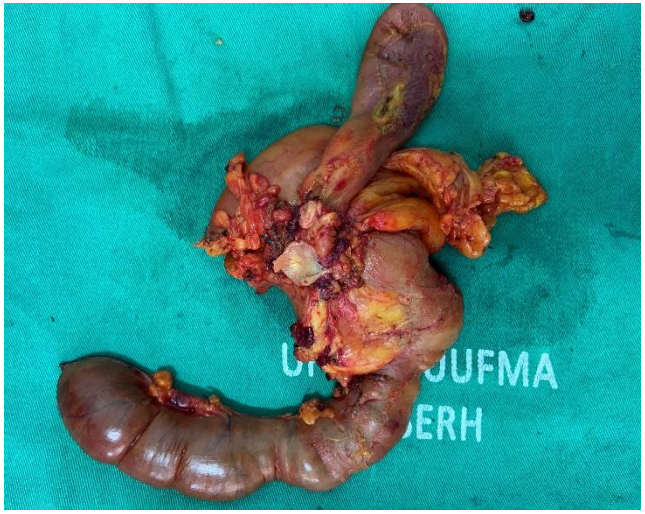
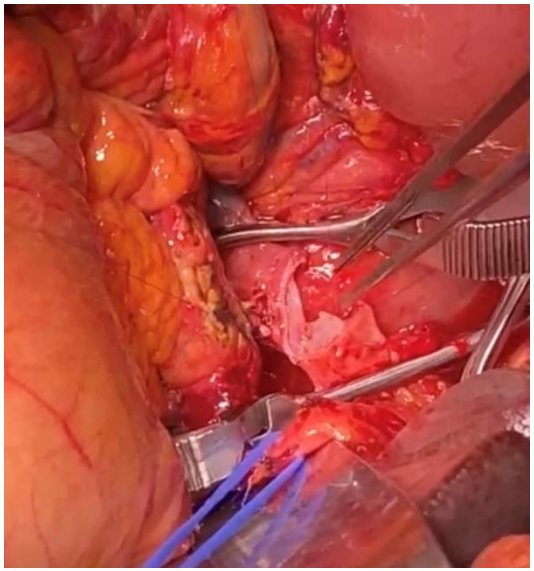
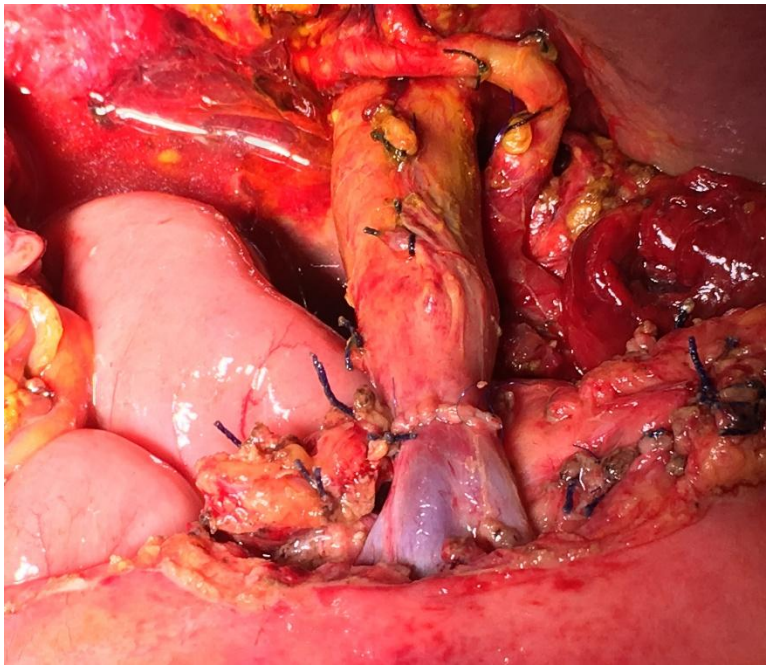
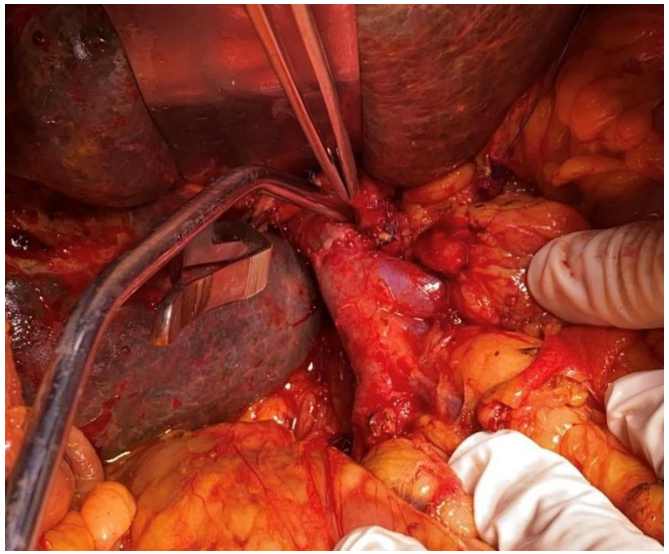








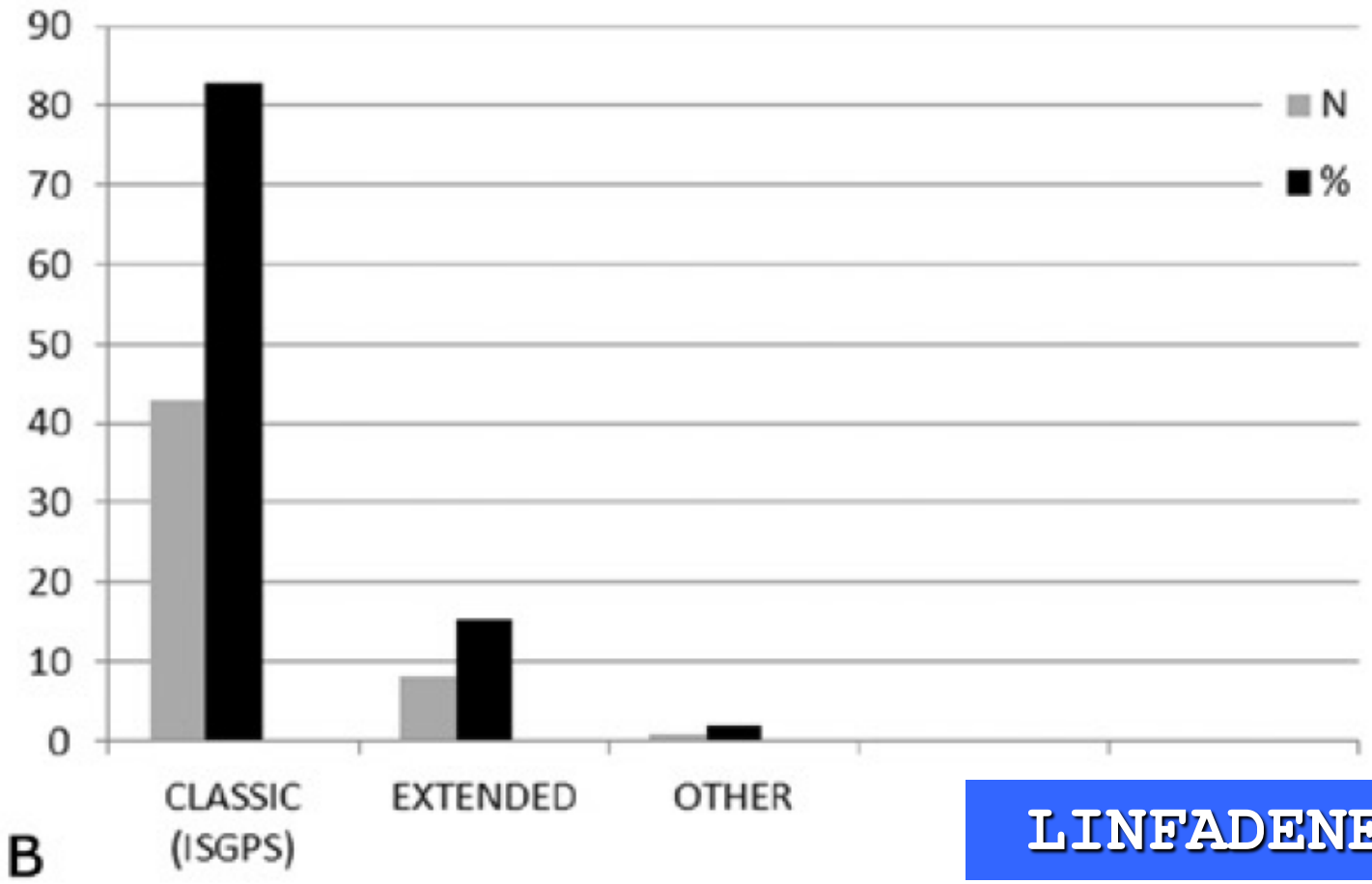
ABCD Arq Bras Cir Dig
2017;30(3):190-196
DOI: /10.1590/0102-6720201700030007

Original Article

PANCREATODUODENECTOMY: BRAZILIAN PRACTICE PATTERNS*

*Duodenopancreatectomia: prática padrão do Brasil**

Orlando Jorge M **TORRES**[1], Eduardo de Souza M **FERNANDES**[2], Rodrigo Rodrigues **VASQUES**[1], Fabio Luís **WAECHTER**[3], Paulo Cezar G. **AMARAL**[4], Marcelo Bruno de **REZENDE**[5], Roland Montenegro **COSTA**[6], André Luís **MONTAGNINI**[7]

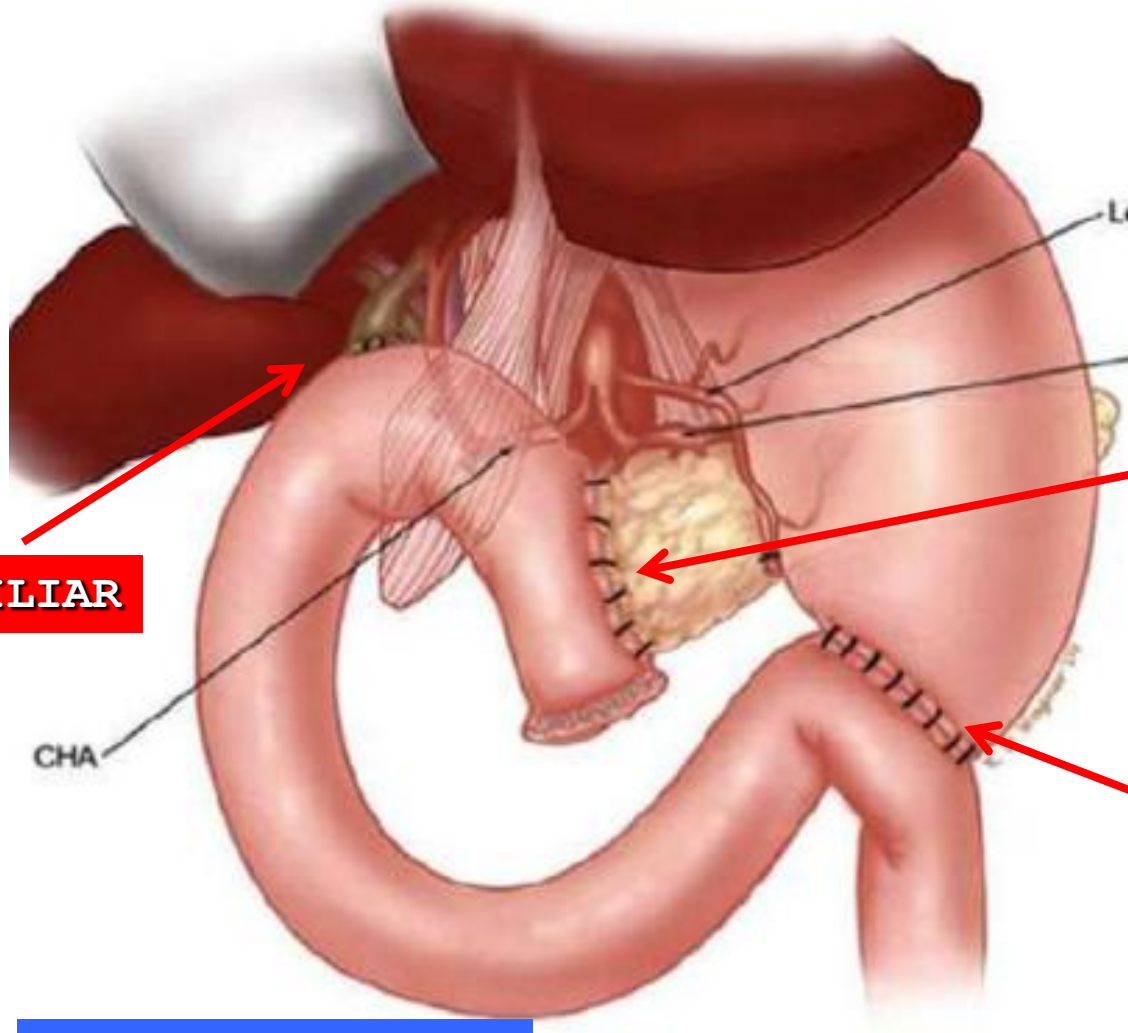


LINFADENECTOMIA

Torres OJ, et al. Arq Bras Cir Dig 2017;30:190-6

RECONSTRUÇÃO

- ❑ Alça única



2. VIA BILIAR

1. PÂNCREAS

3. ESTÔMAGO

ANASTOMOSES

RECONSTRUÇÃO

ABCD Arq Bras Cir Dig
2017;30(3):190-196
DOI: /10.1590/0102-6720201700030007

Original Article

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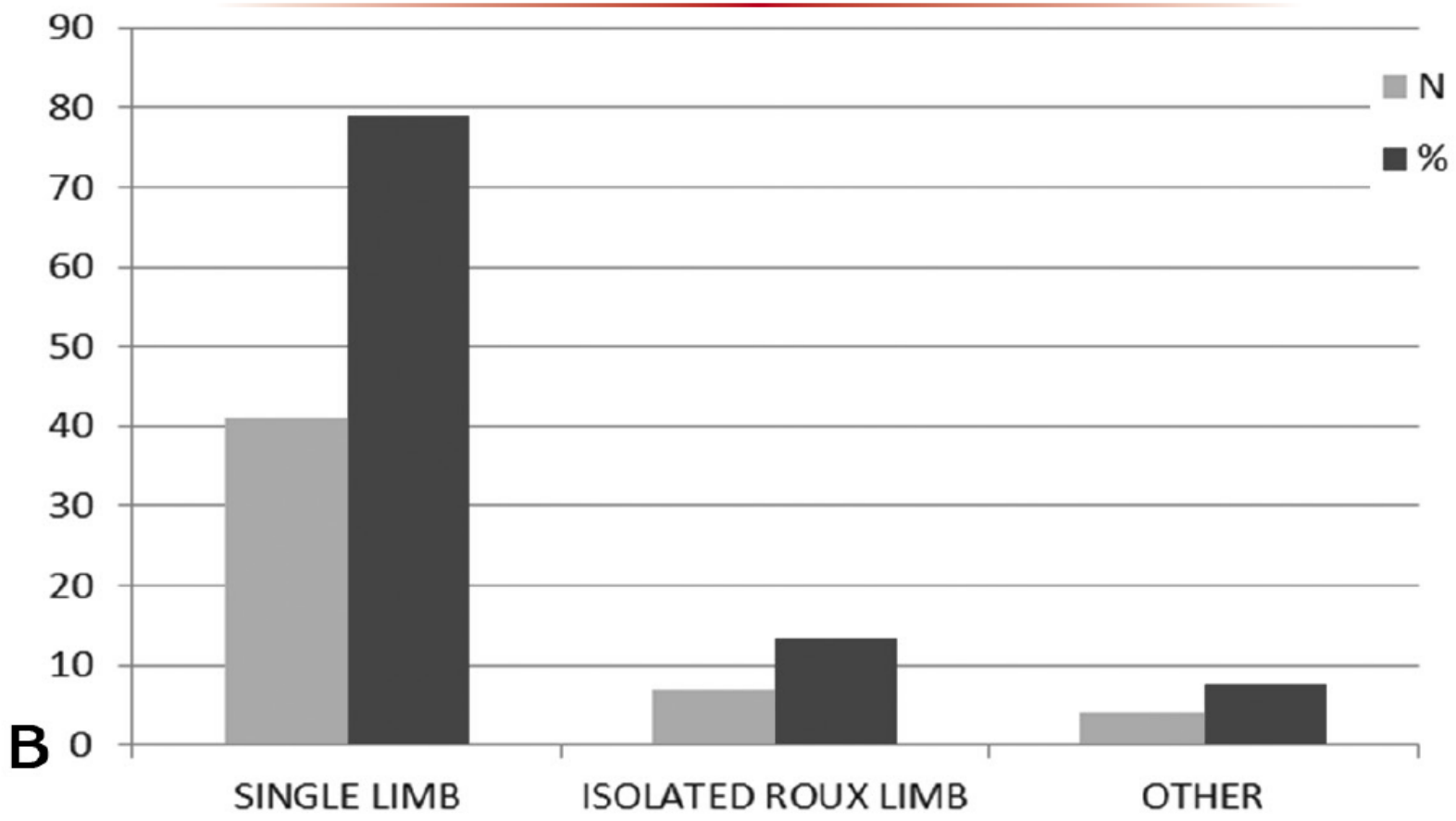

B

Torres OJ, et al. Arq Bras Cir Dig 2017;30:190-6

ANASTOMOSE PANCREÁTICA

- Telescopagem (Hunt)(1995-1999)
- Ducto-mucosa (2000-2016)
- Peng (2013)
- Heidelberg modificada (2016)

ABCD Arq Bras Cir Dig
2017;30(3):190-196
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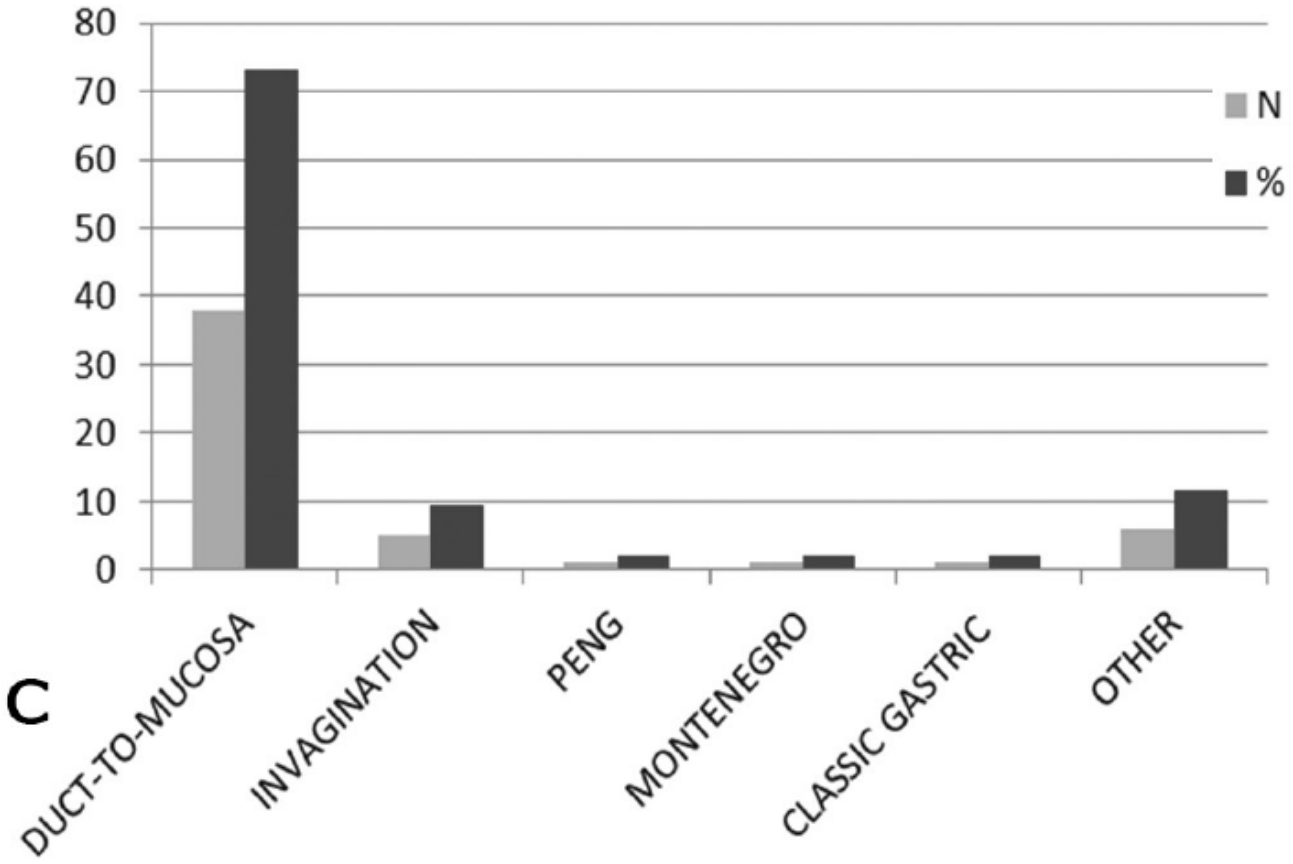

Torres OJ, et al. Arq Bras Cir Dig 2017;30:190-6

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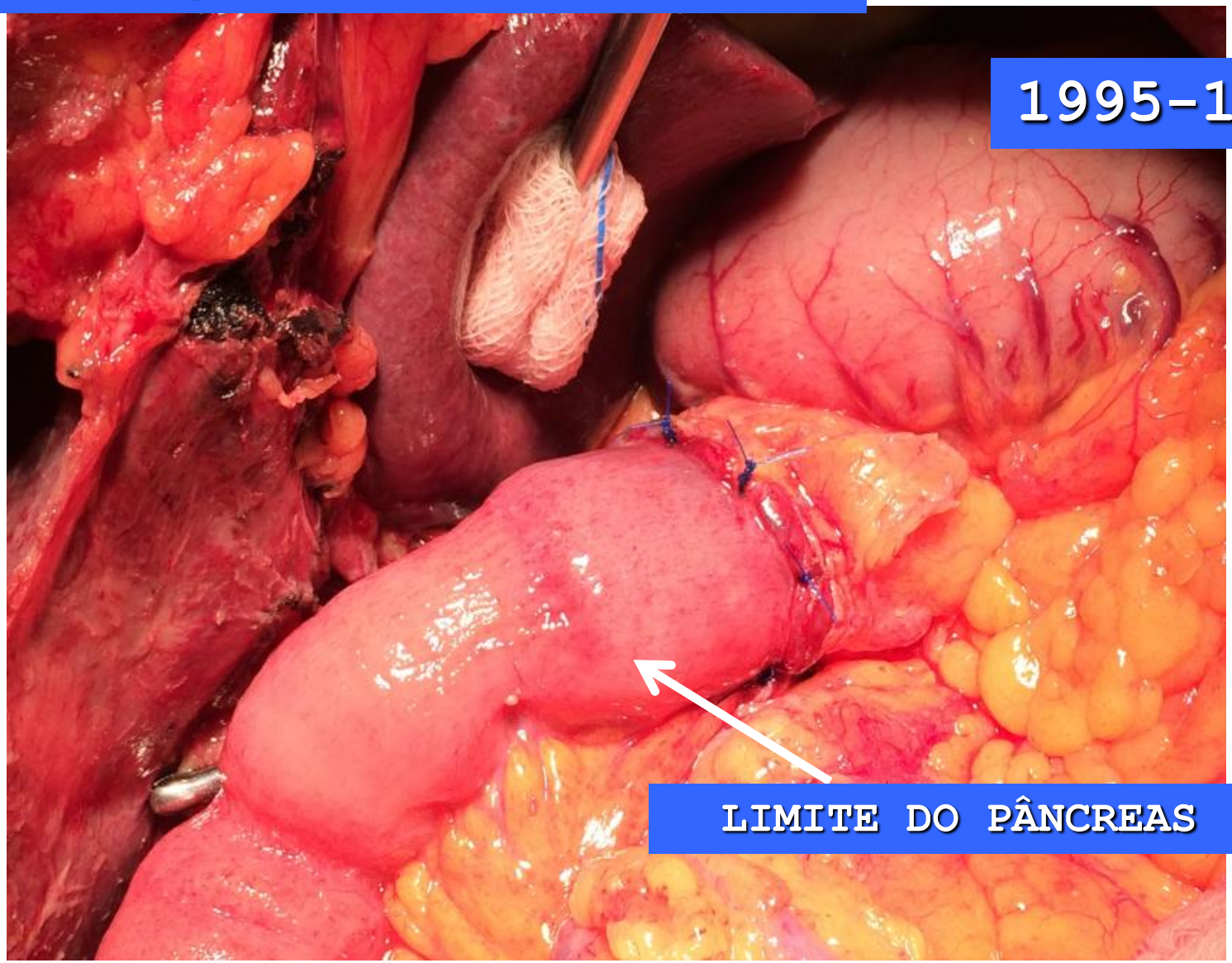
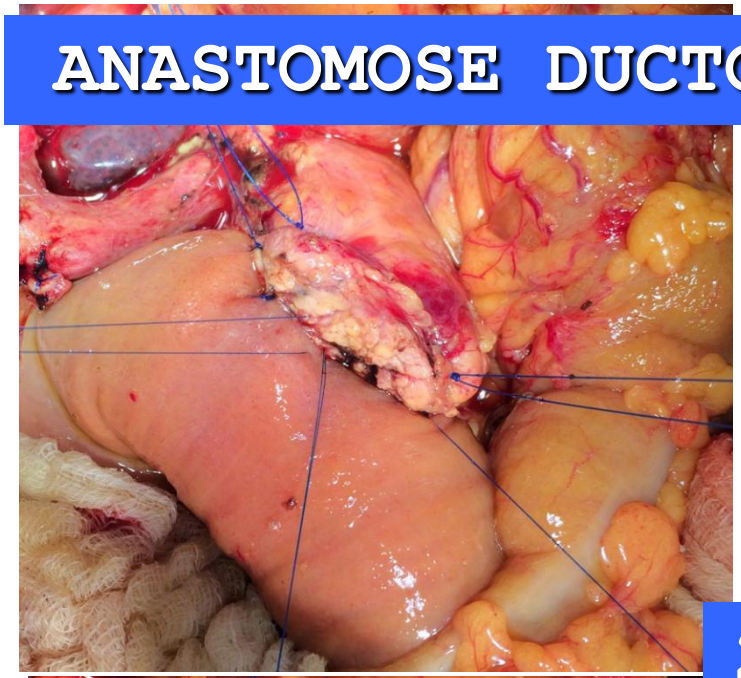
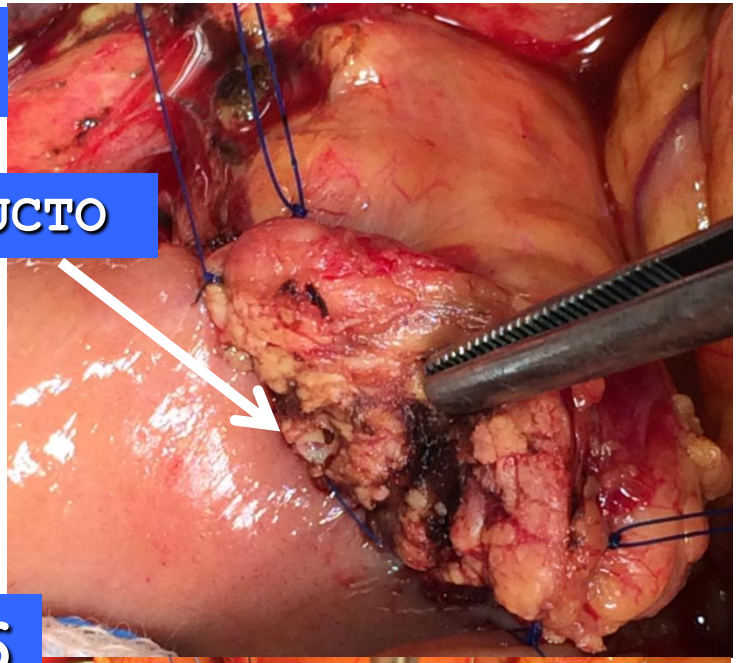
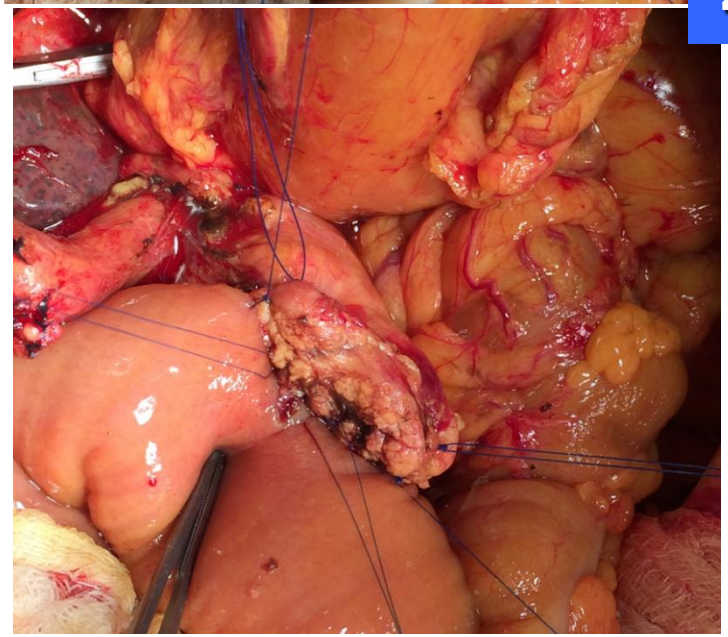


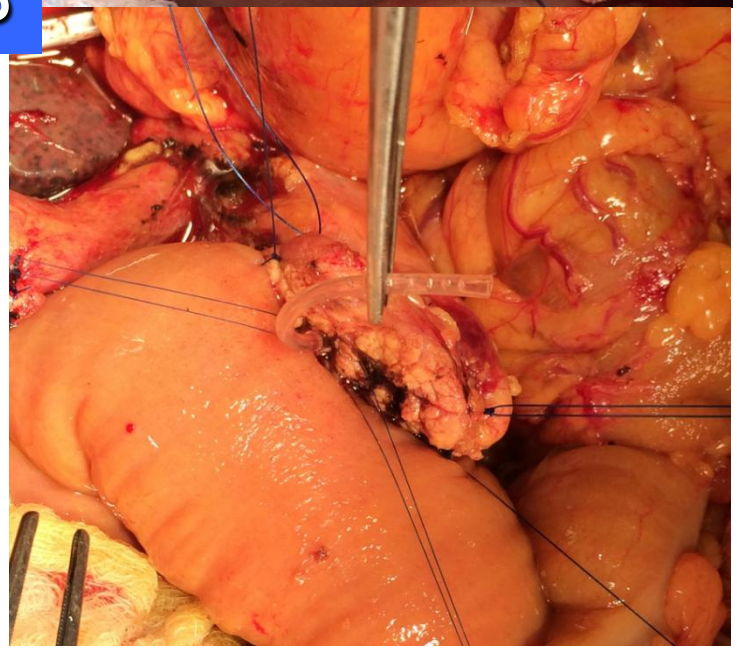
ANASTOMOSE DUCTO-MUCOSA





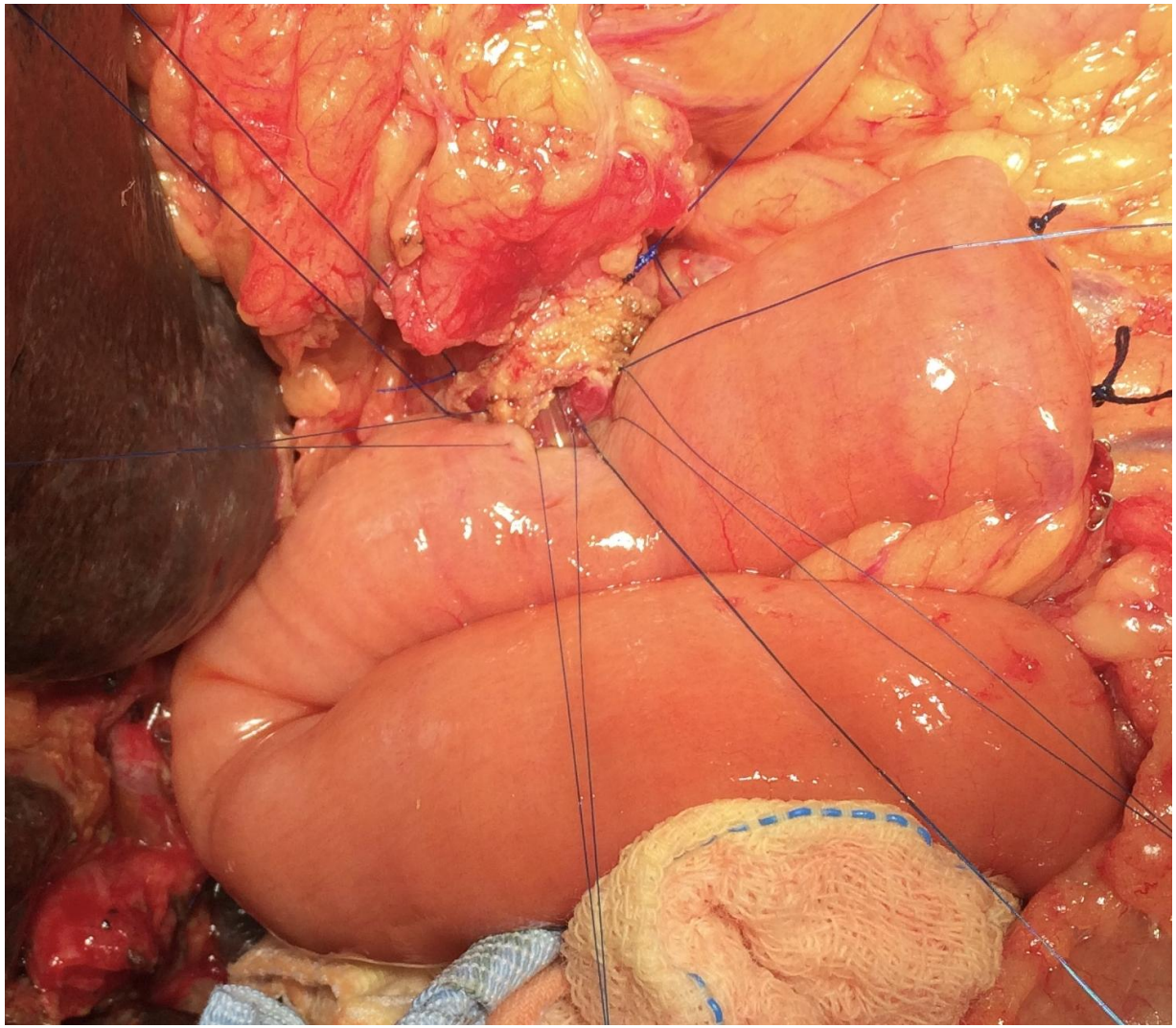
2000-2016





ANASTOMOSE DUCTO-MUCOSA

2000-2016



DUCTO

Hangzhou, China - 2017

Pancreatoduodenectomy, Brazilian practice patterns

Orlando Jorge Martins Torres
Universidade Federal do Maranhão, Centro de Ciências da Saúde, Departamento de Medicina II
São Luís, Maranhão, Brazil

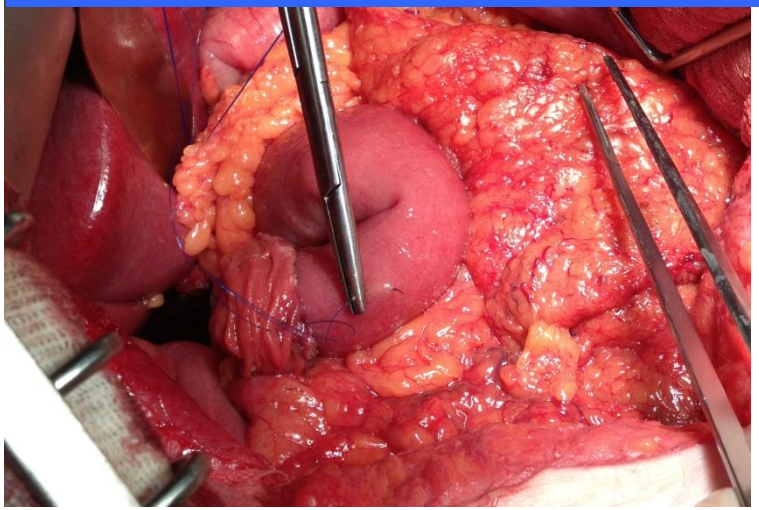
Shu-You Peng

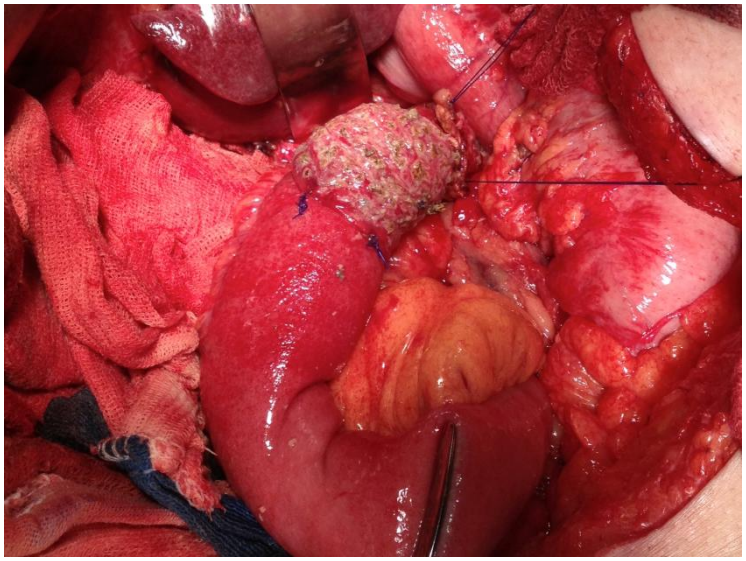
Torres教授来自巴西的马拉尼昂州联邦大学医学院，担任消化道手术部中心主任，致力于消化道肿瘤外科以及肝胆胰外科。

曾在多个国际医学中心进修和培训，如Shouldice疝研究所（加拿大，1999年）、斯隆凯特林癌症中心（纽约，2000年）、匹兹堡大学医学中心（美国，2005年）、MD安德森癌症中心（休斯敦，2010）、伦敦帝国学院（伦敦，2012年）、挪威奥斯陆大学医院（2015年）、孟买的塔塔纪念医院（2016年，印度）等。

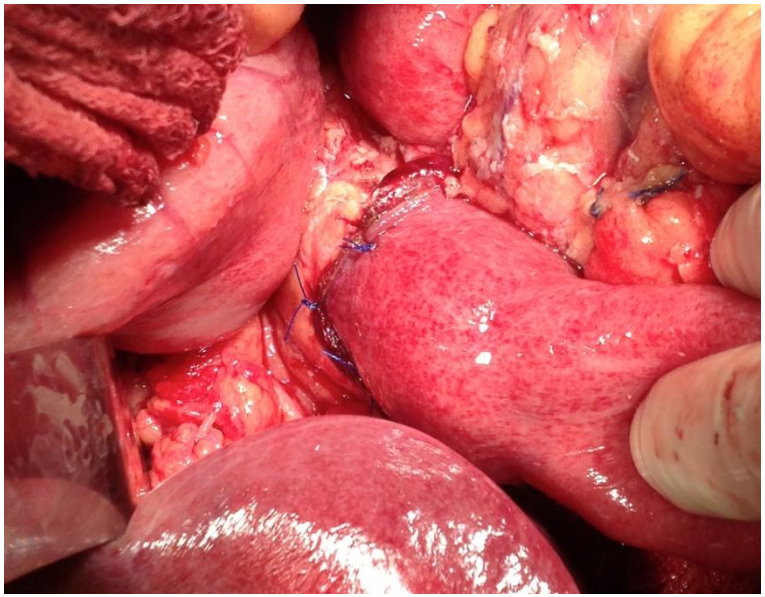
讲座时间：2017-5-31 上午 7点30分
地点：浙二医院滨江院区中心楼20楼西示教室 （视屏会议转播）

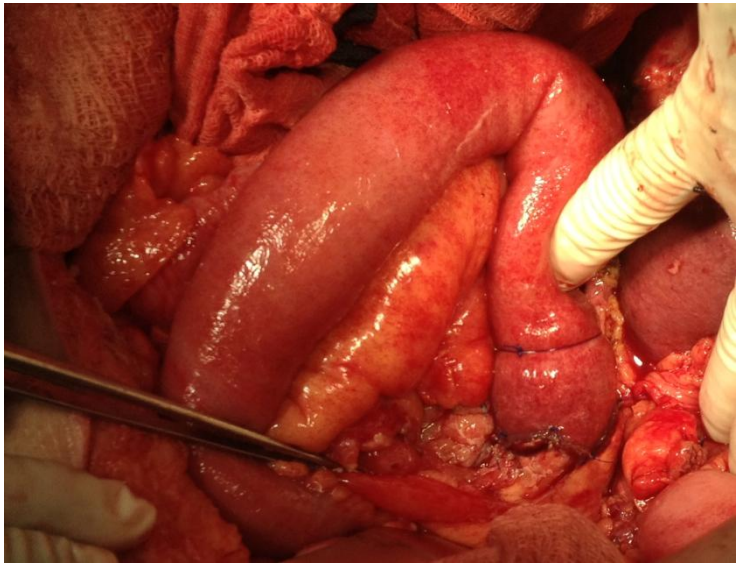
ANASTOMOSE TIPO PENG





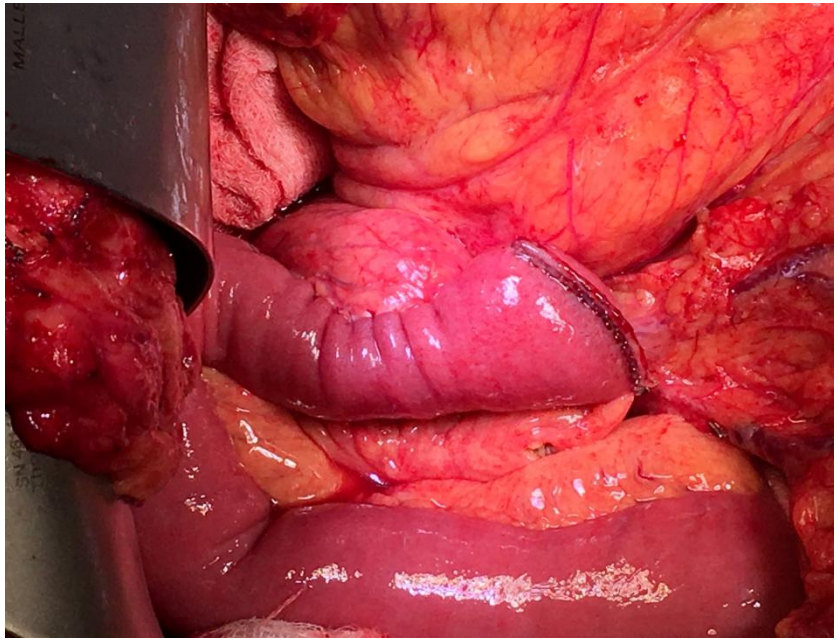
2013





Mumbai 2016

Shailesh Shrikhande



ABCDDV/1330

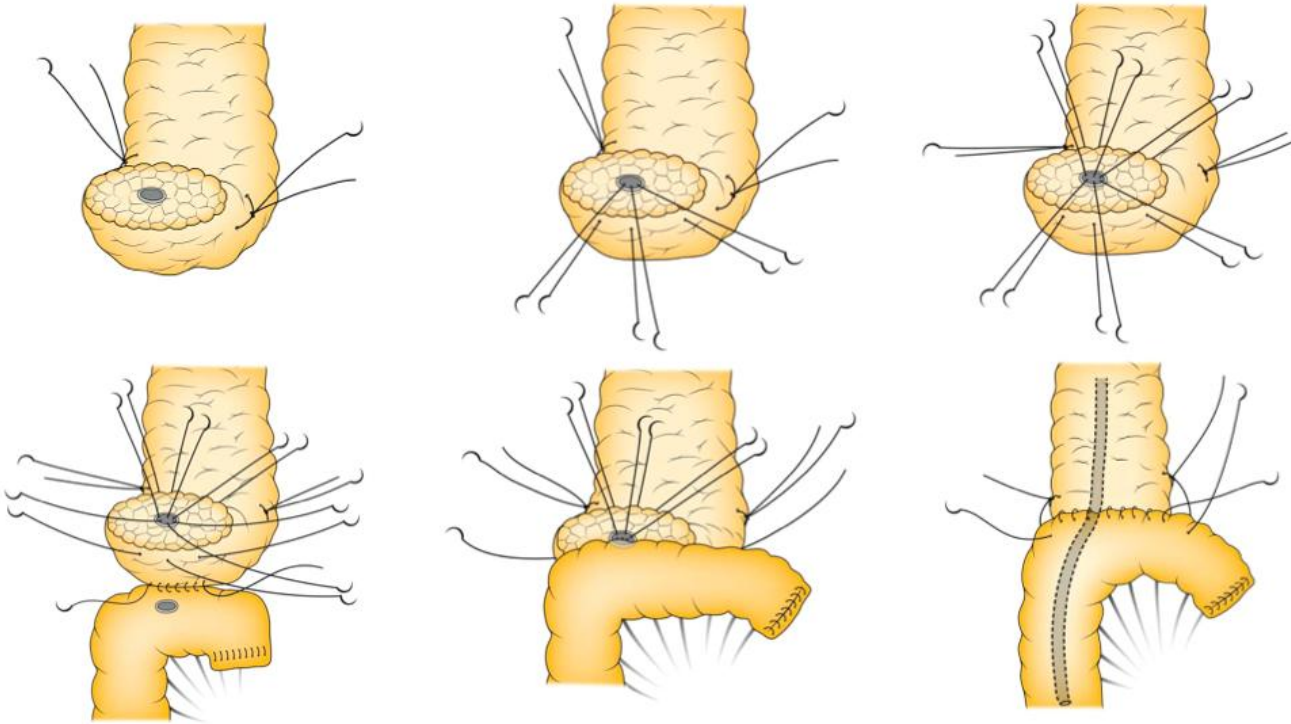
ABCD Arq Bras Cir Dig
2017;30(4):260-263
DOI: /10.1590/0102-6720201700040008

Original Article - Technique

MODIFIED HEIDELBERG TECHNIQUE FOR PANCREATIC ANASTOMOSIS

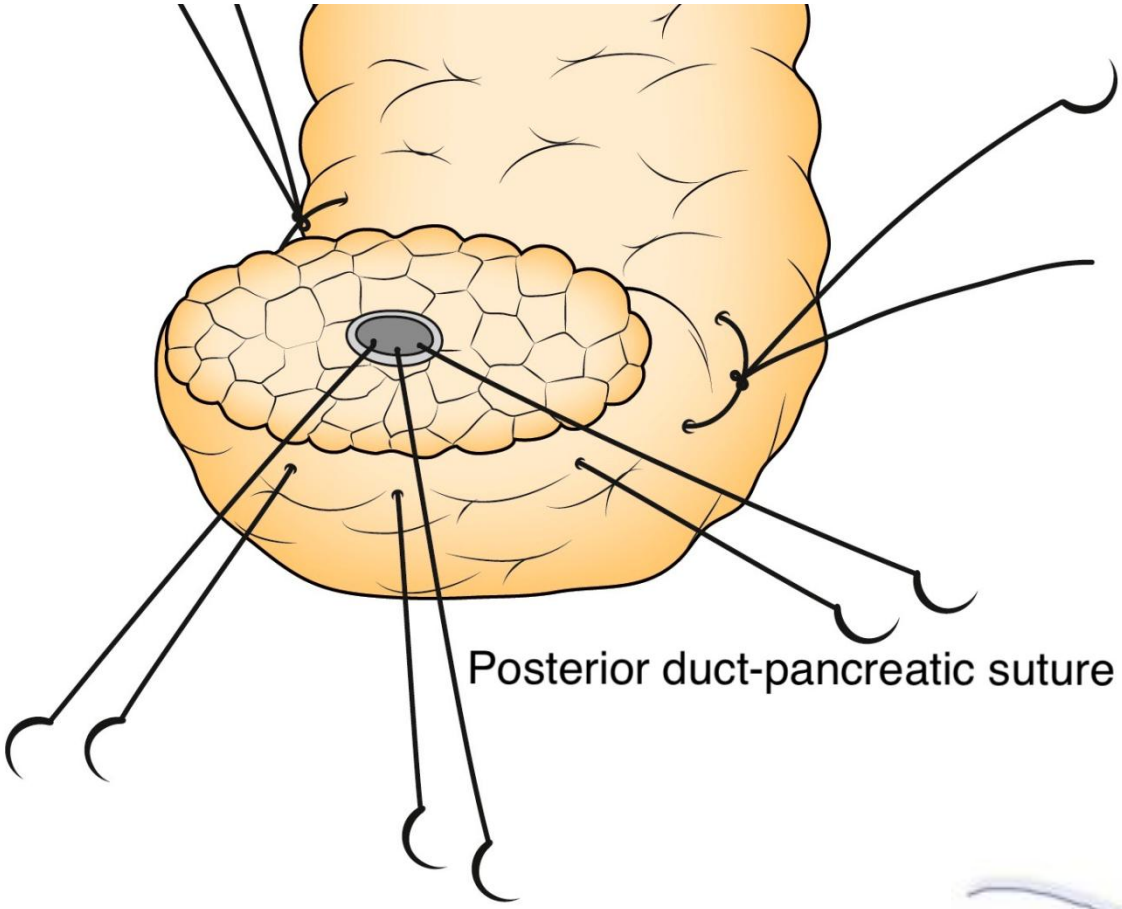
Anastomose pancreática pela técnica de Heidelberg modificada

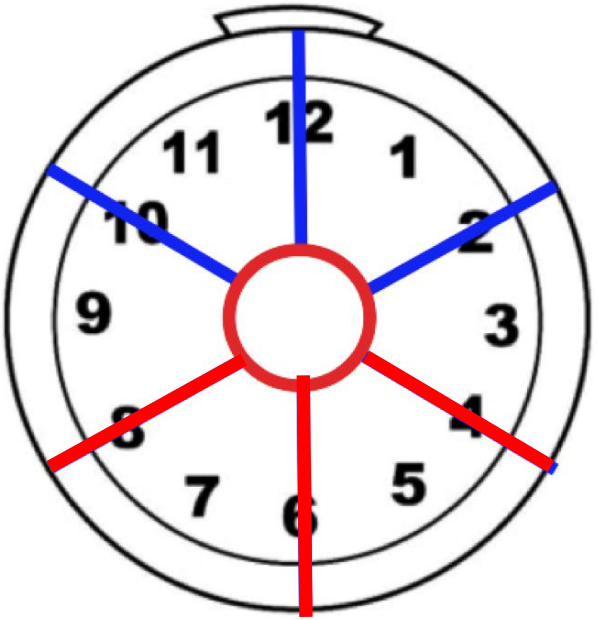
Orlando Jorge M **TORRES**[1], Roberto C N da Cunha **COSTA**[1], Felipe F Macatrão **COSTA**[1], Romerito Fonseca **NEIVA**[1], Tarik Soares **SULEIMAN**[1], Yglésio L Moyses S **SOUZA**[1], Shailesh V **SHRIKHANDE**[2]



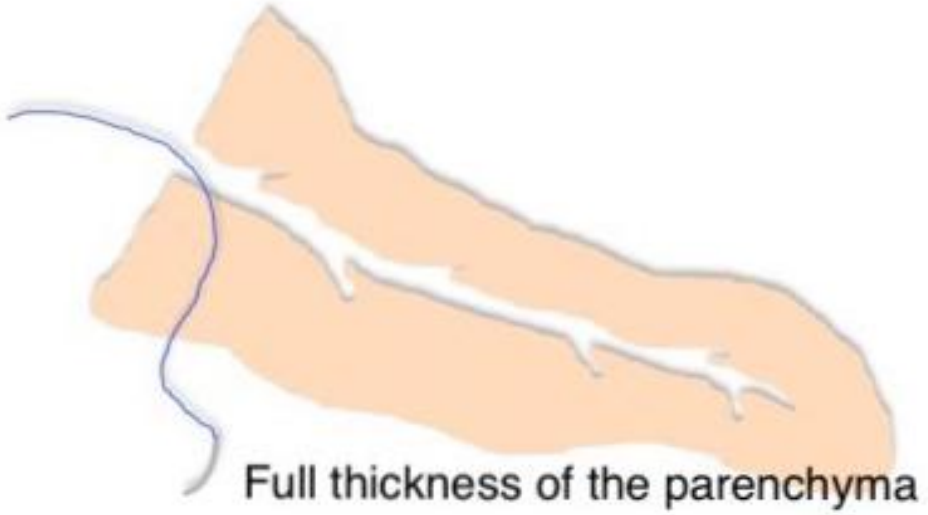
- ❑ Sangramento
- ❑ Fístula pancreática
- ❑ Gastroparesia
- ❑ Padrão oncológico

Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

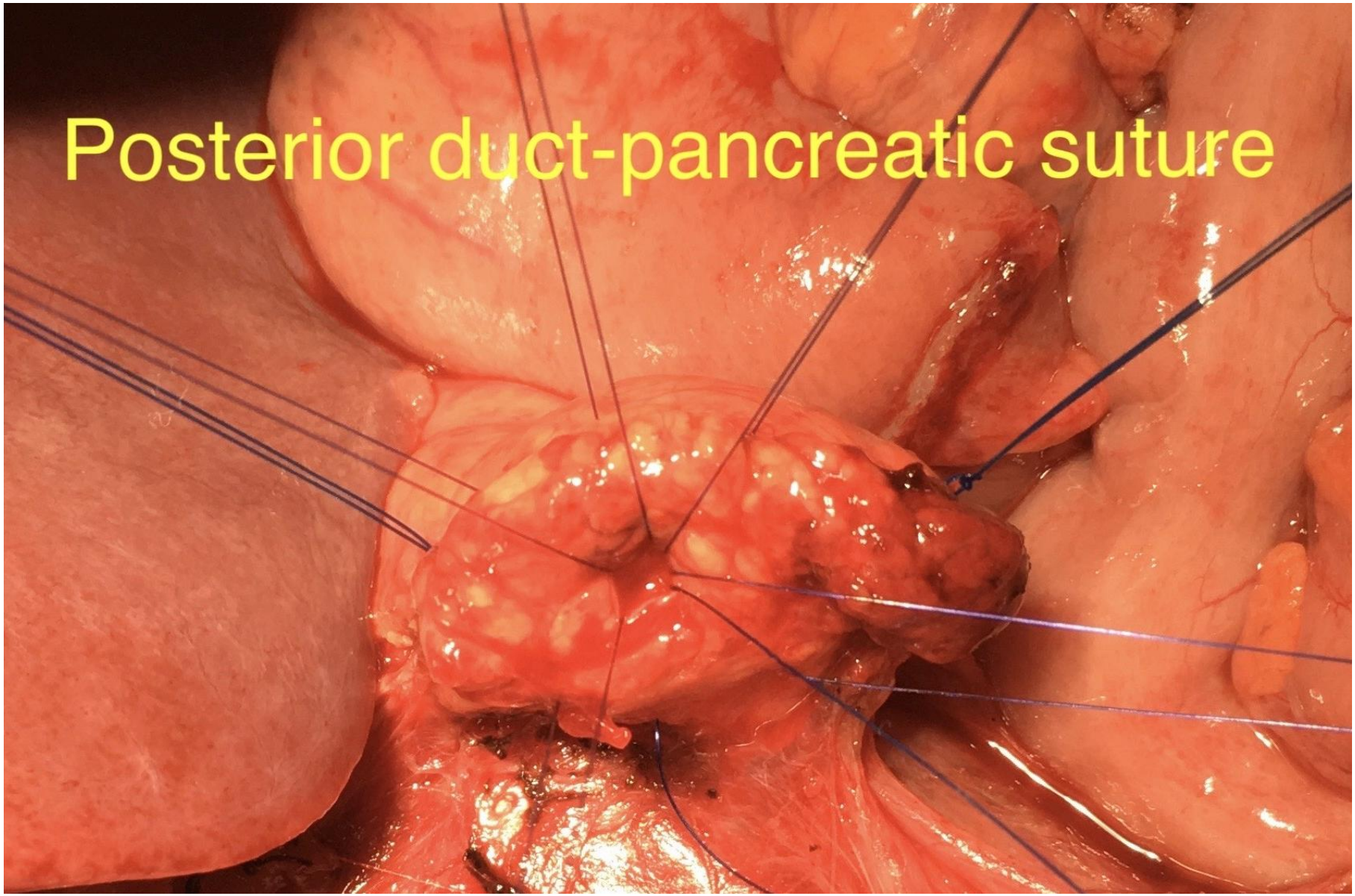


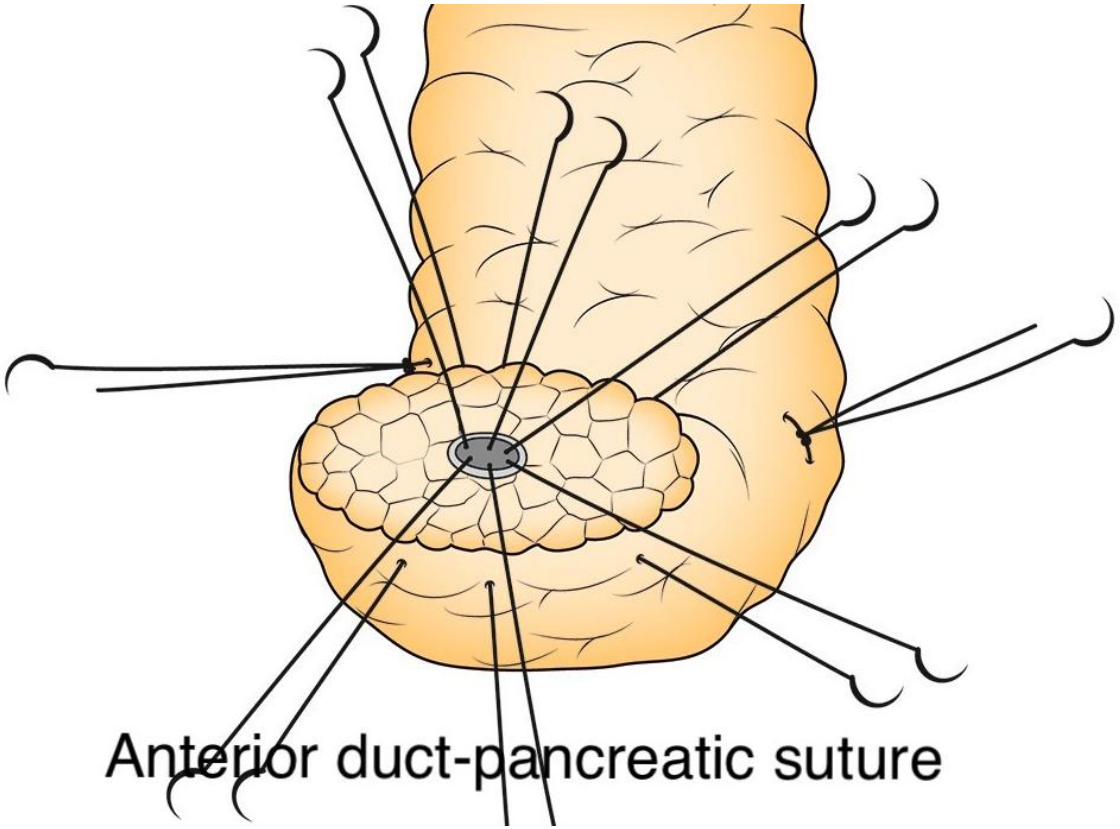


Técnica

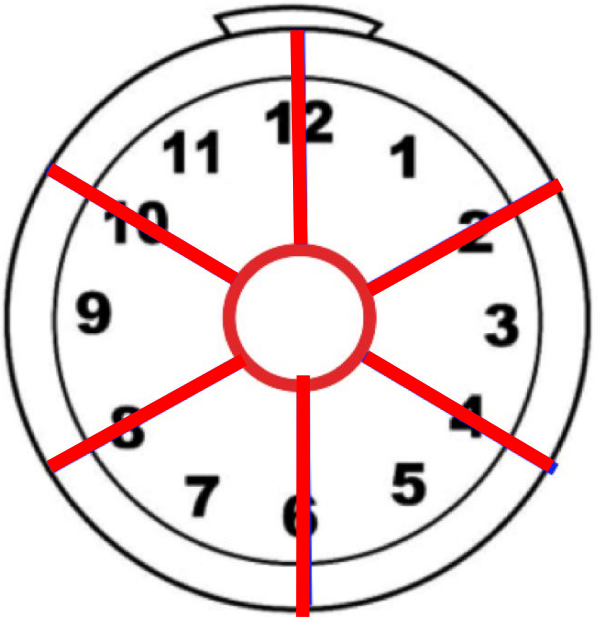


Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

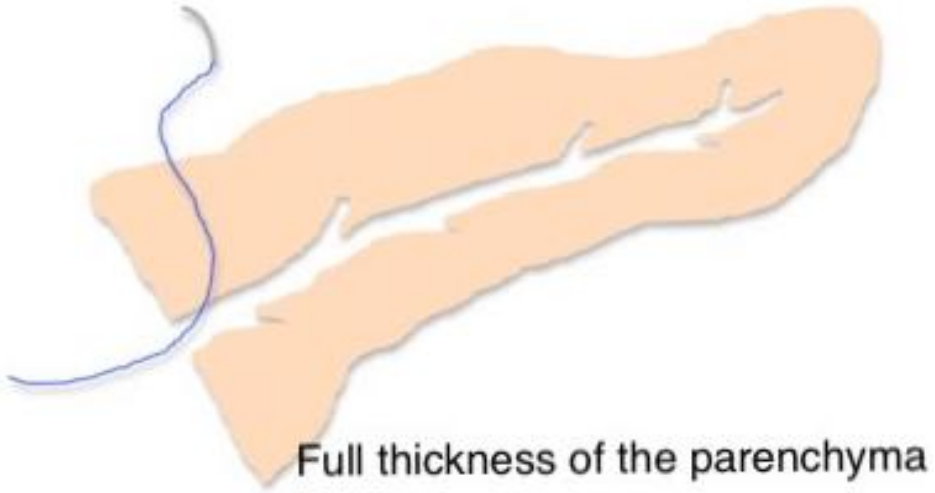

Posterior duct-pancreatic suture



Anterior duct-pancreatic suture

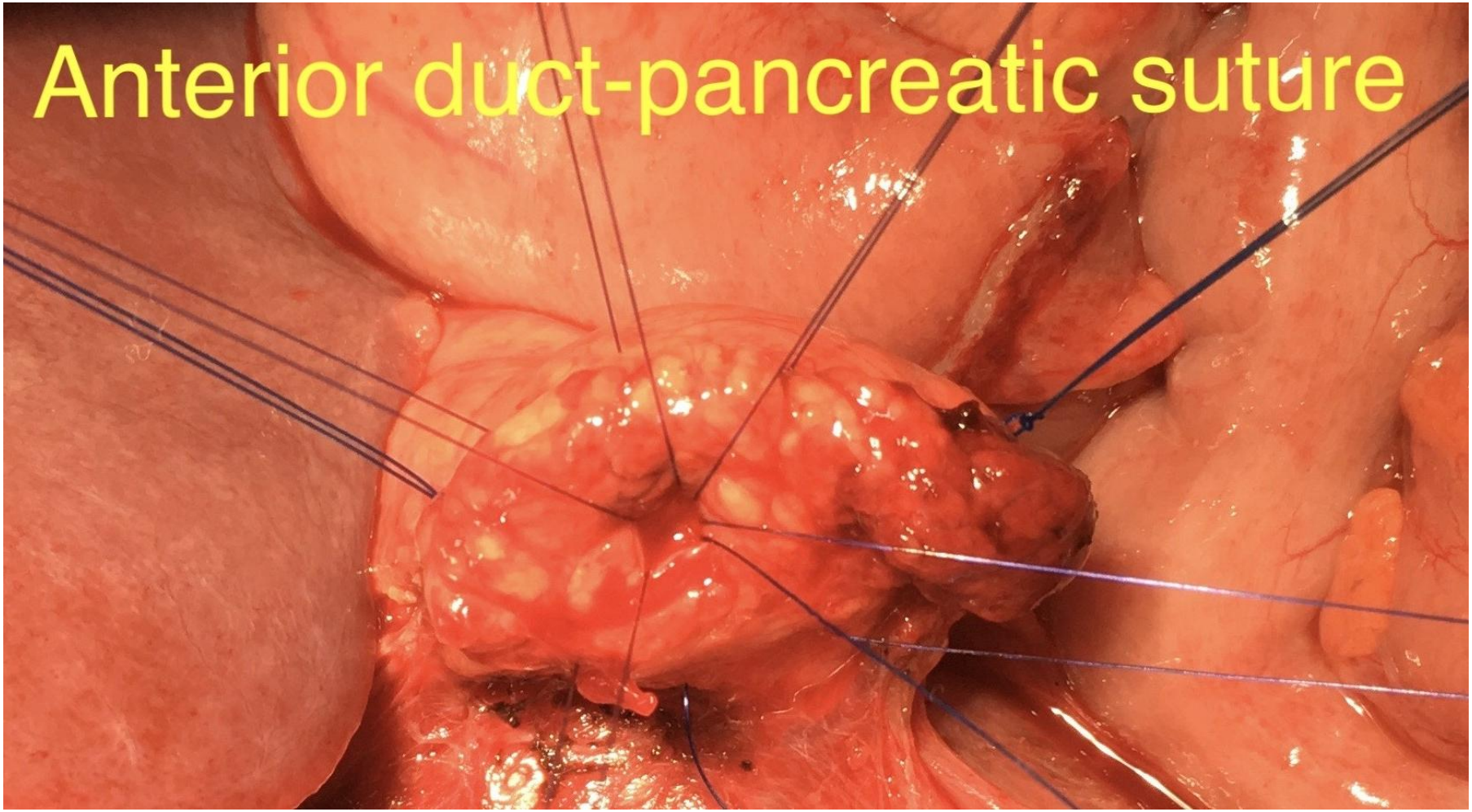


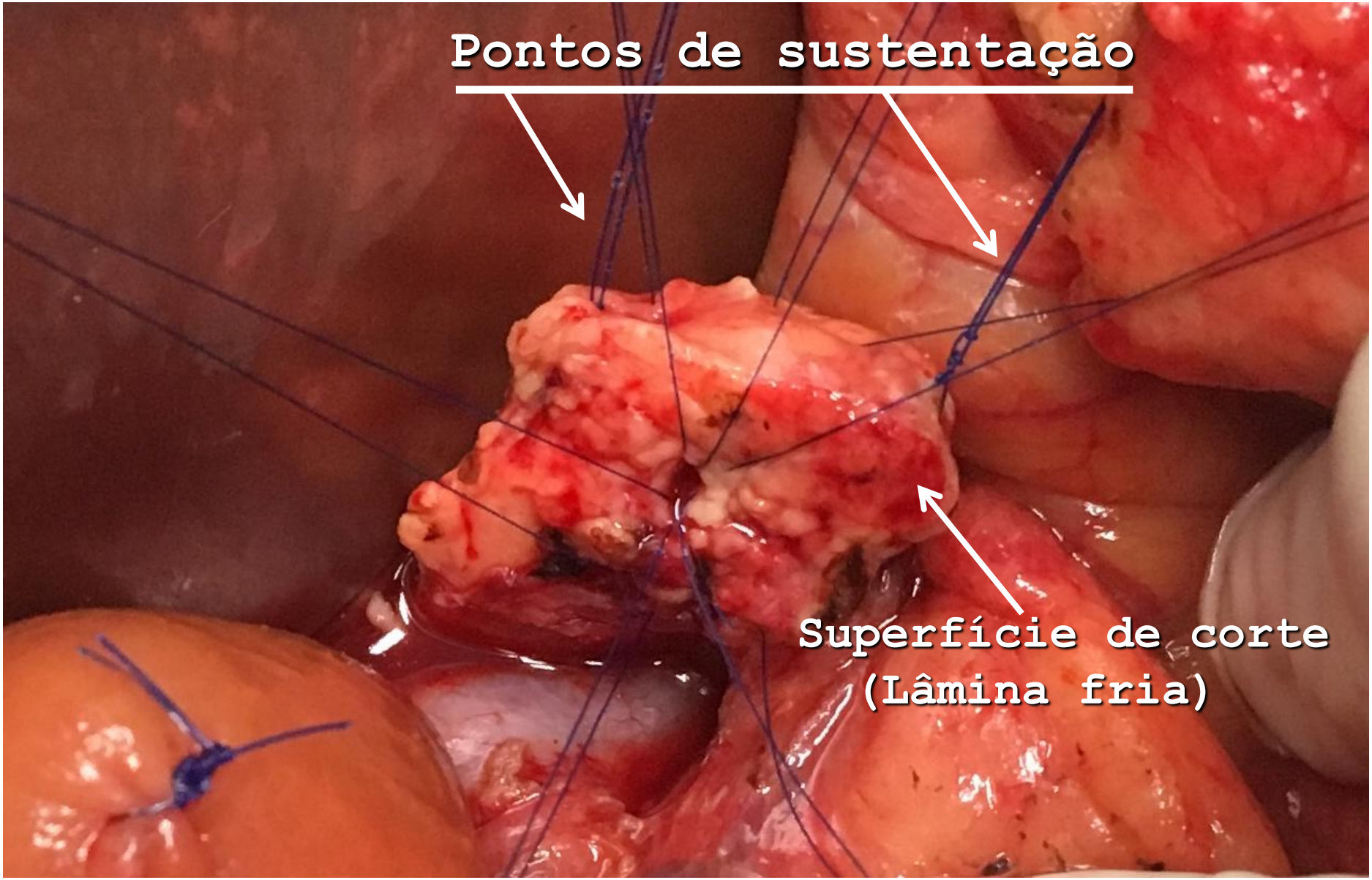
Técnica

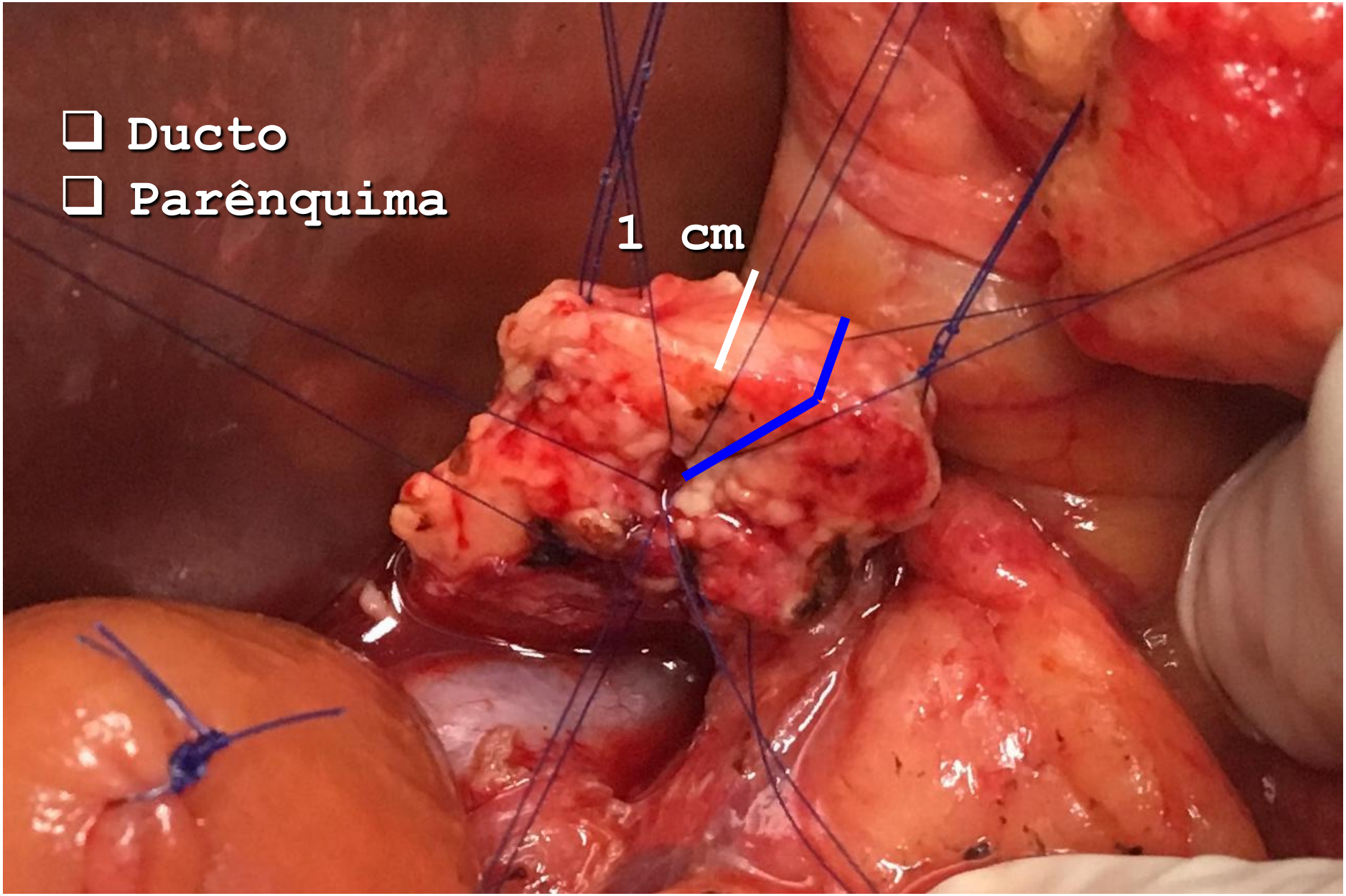


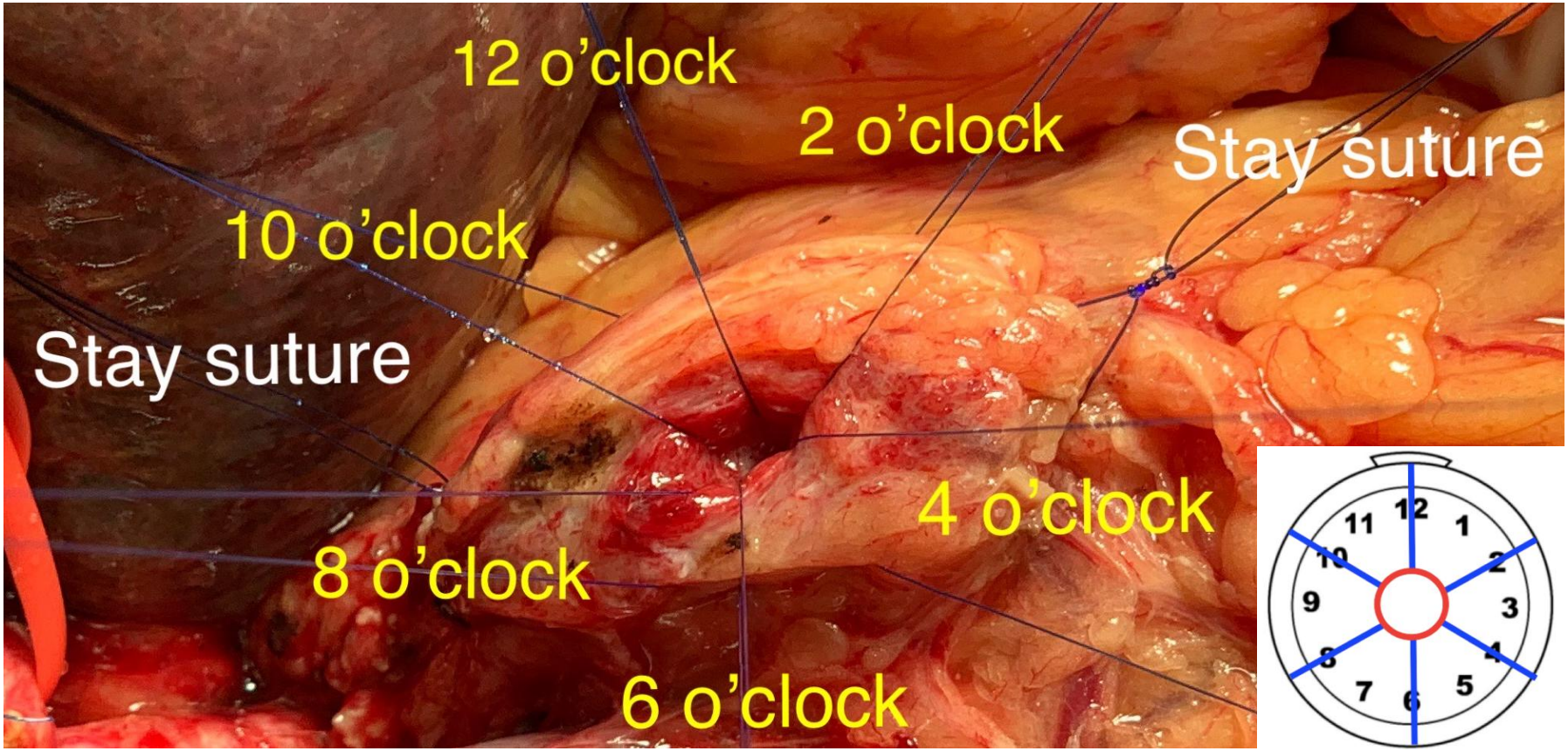
Full thickness of the parenchyma

Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

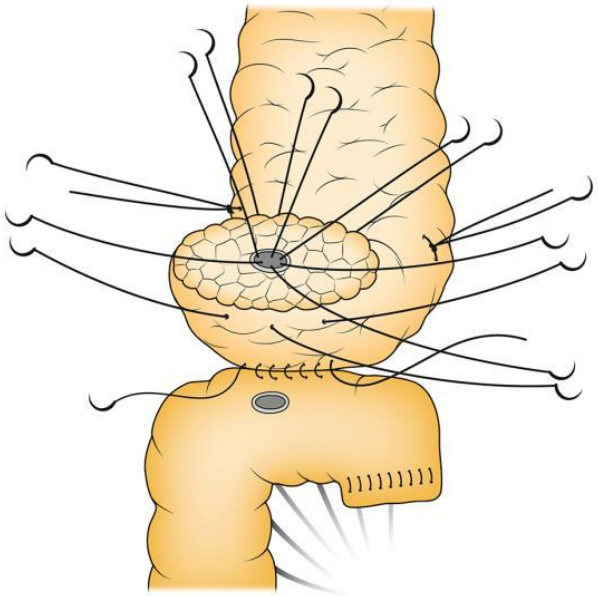

Anterior duct-pancreatic suture

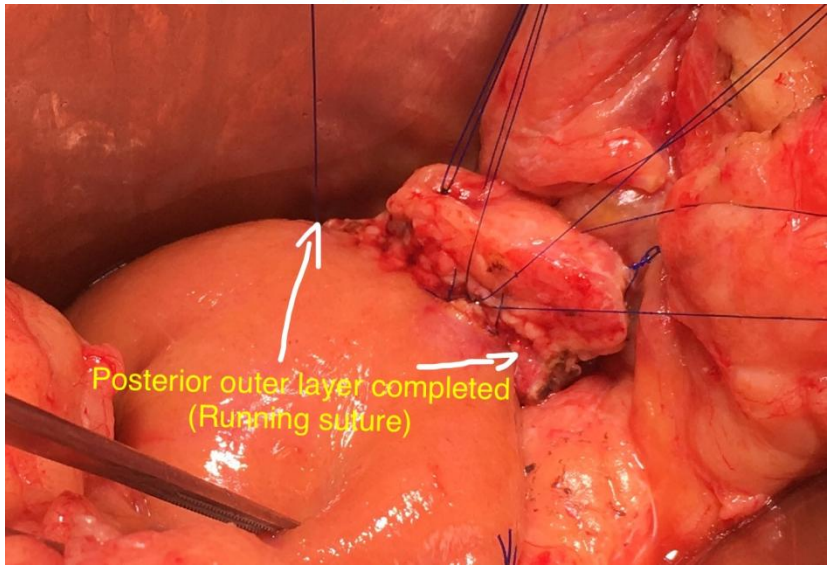

Pontos de sustentação
Superfície de corte
(Lâmina fria)

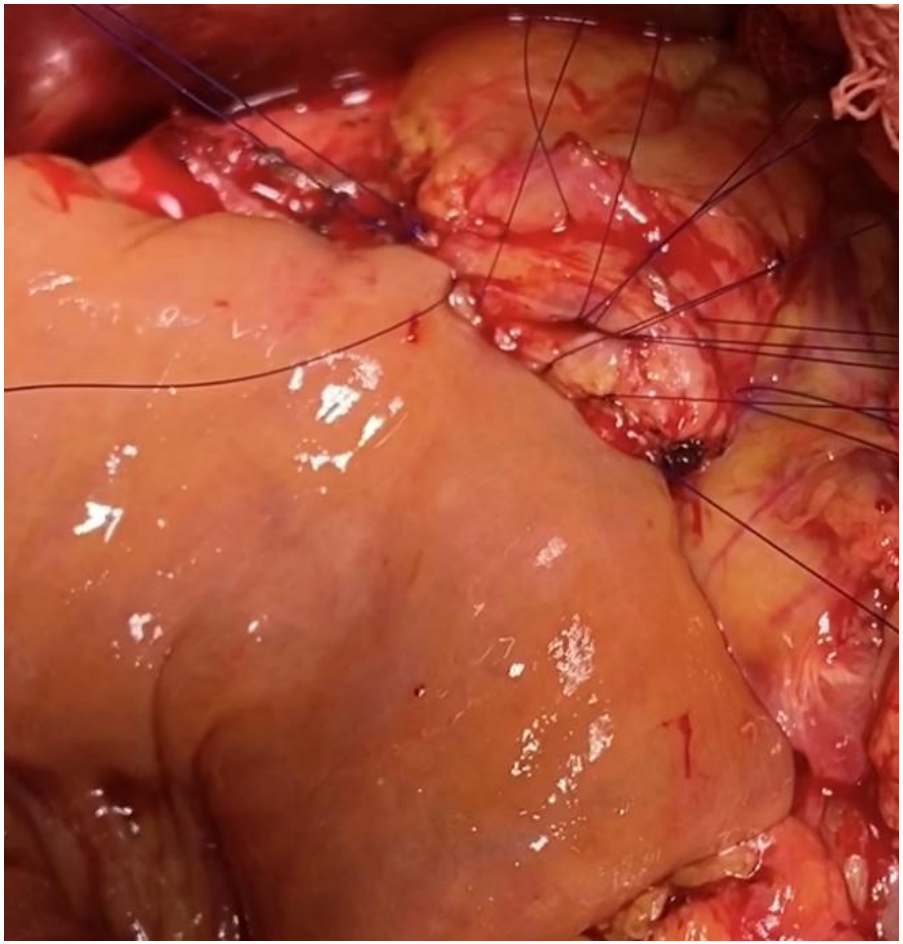

Ducto
Parênquima
1 cm


12 o'clock
2 o'clock
Stay suture
10 o'clock
Stay suture
4 o'clock
8 o'clock
6 o'clock
12
1
2
3
4
5
6
7
8
9
10
11

1. SUTURA CONTÍNUA POSTERIOR EXTERNA

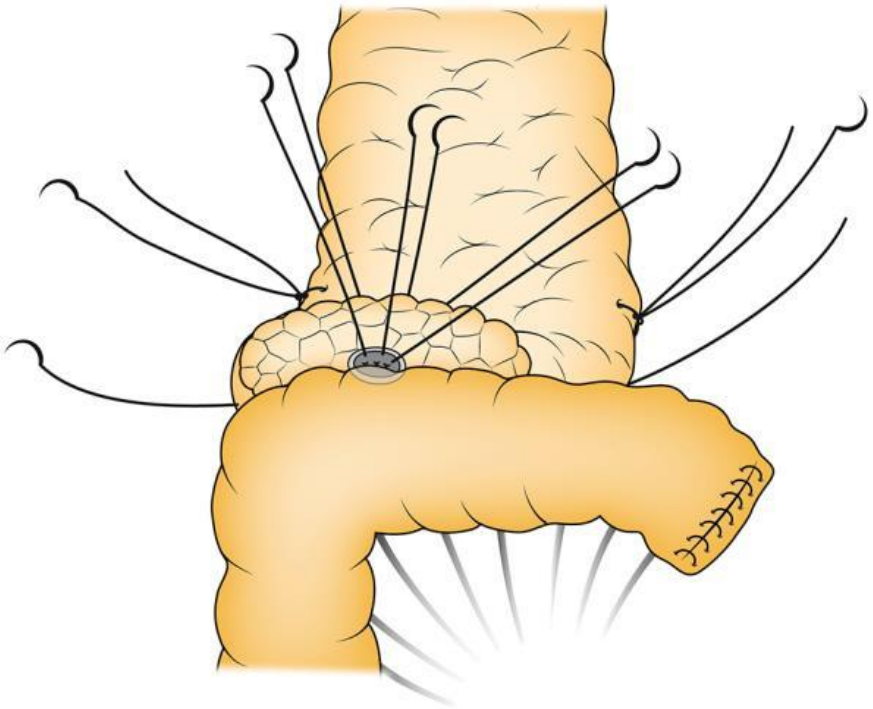


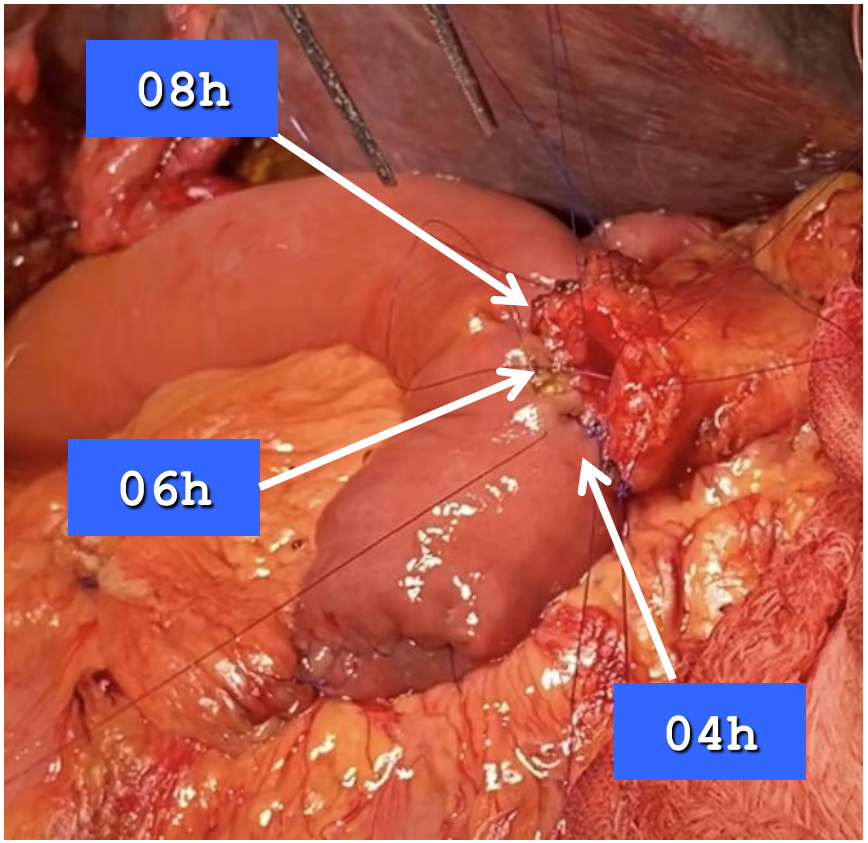




Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

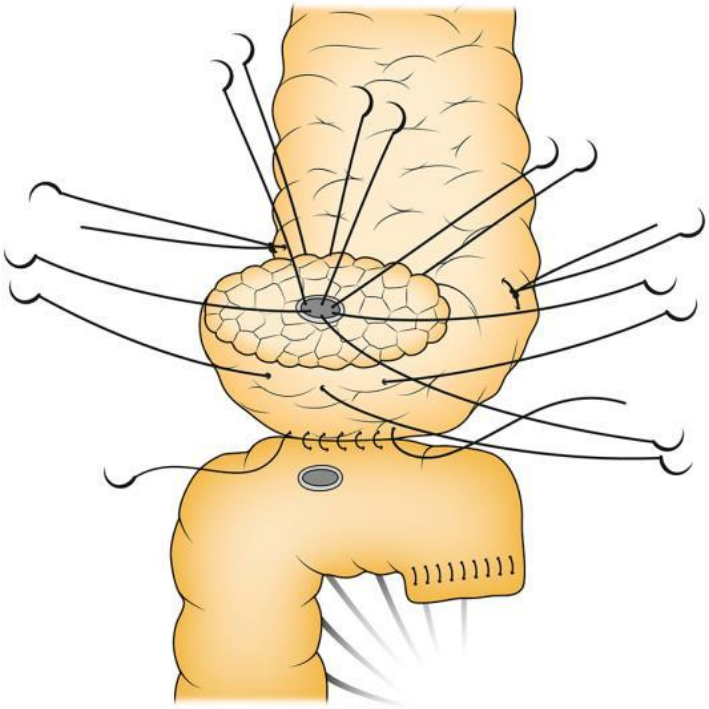
2. SUTURA SEPARADA POSTERIOR INTERNA

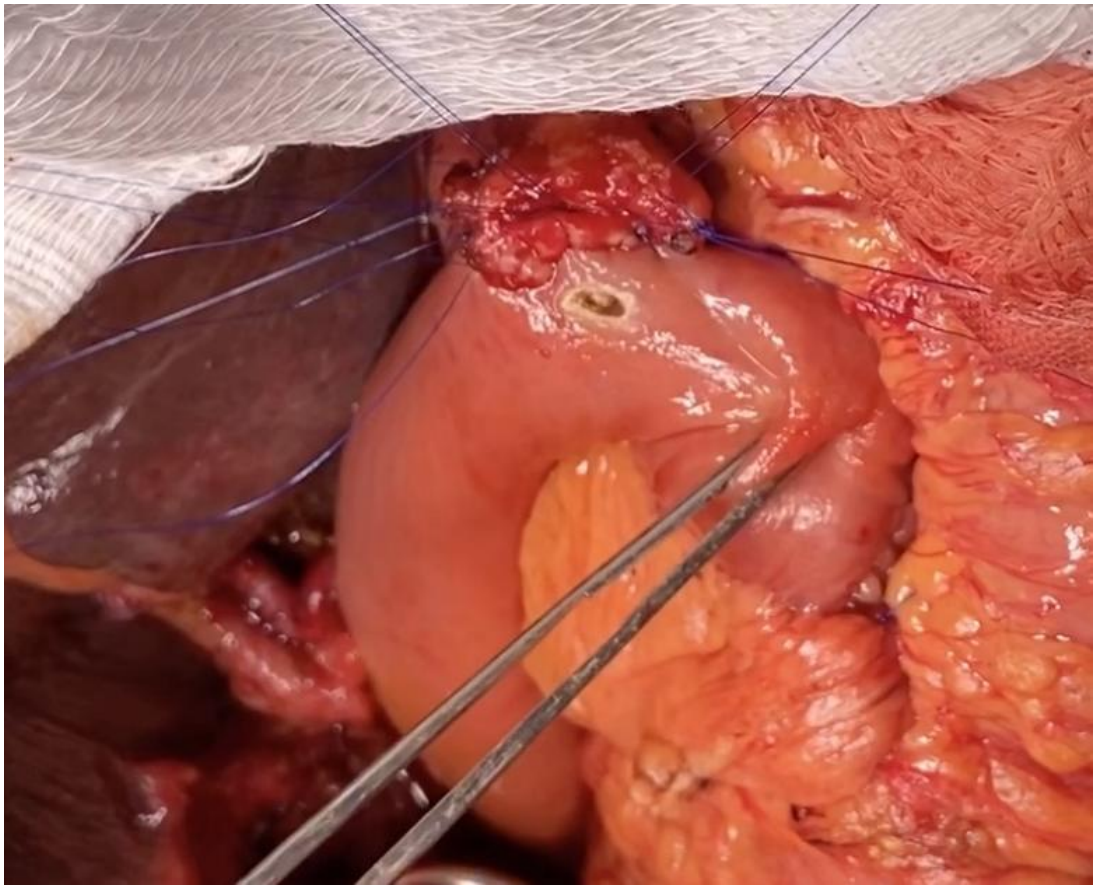




Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

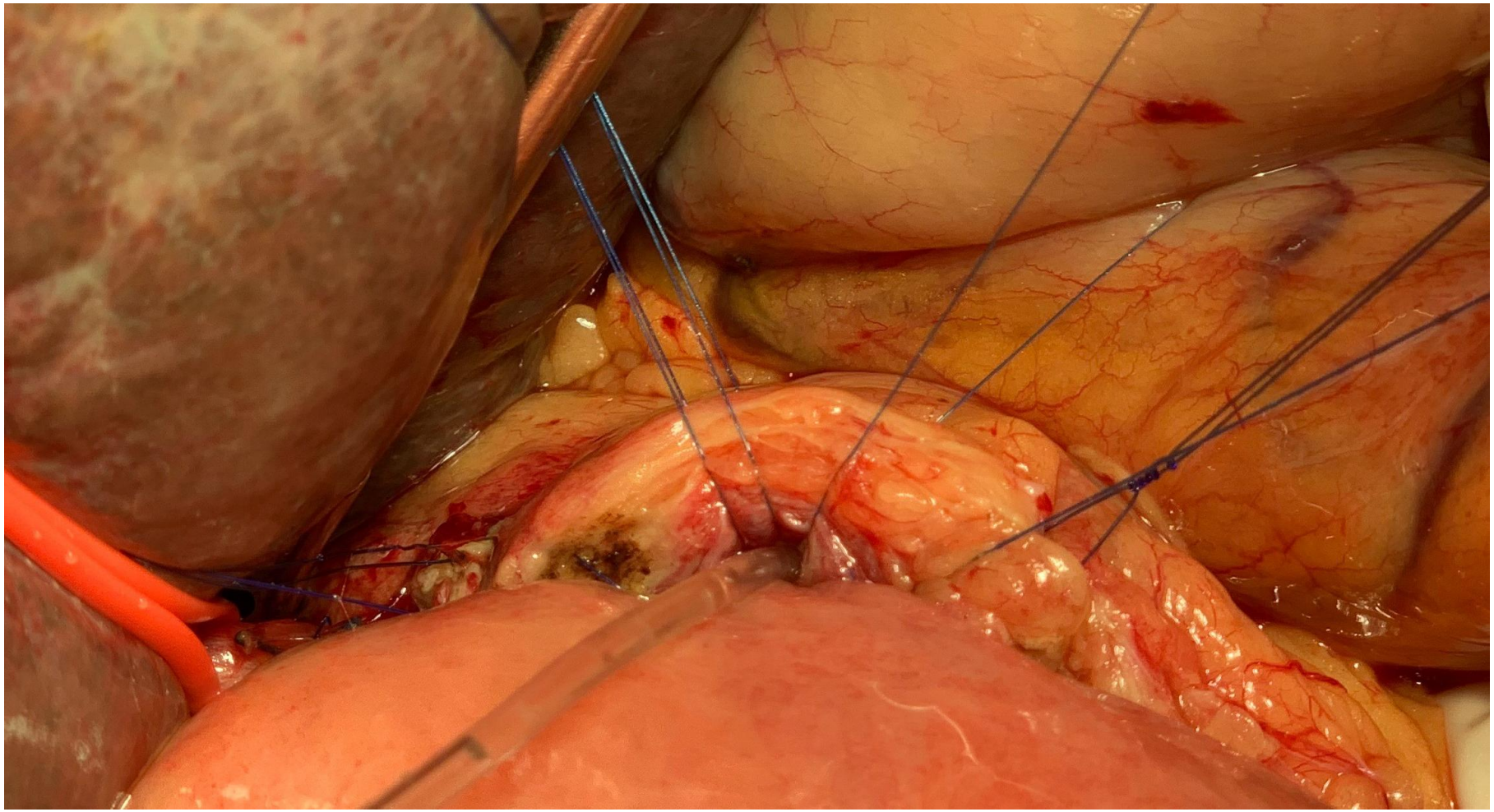
ABERTURA DO INTESTINO





Torres OJM, et al. Arq Bras Cir Dig 2017;30:260-3

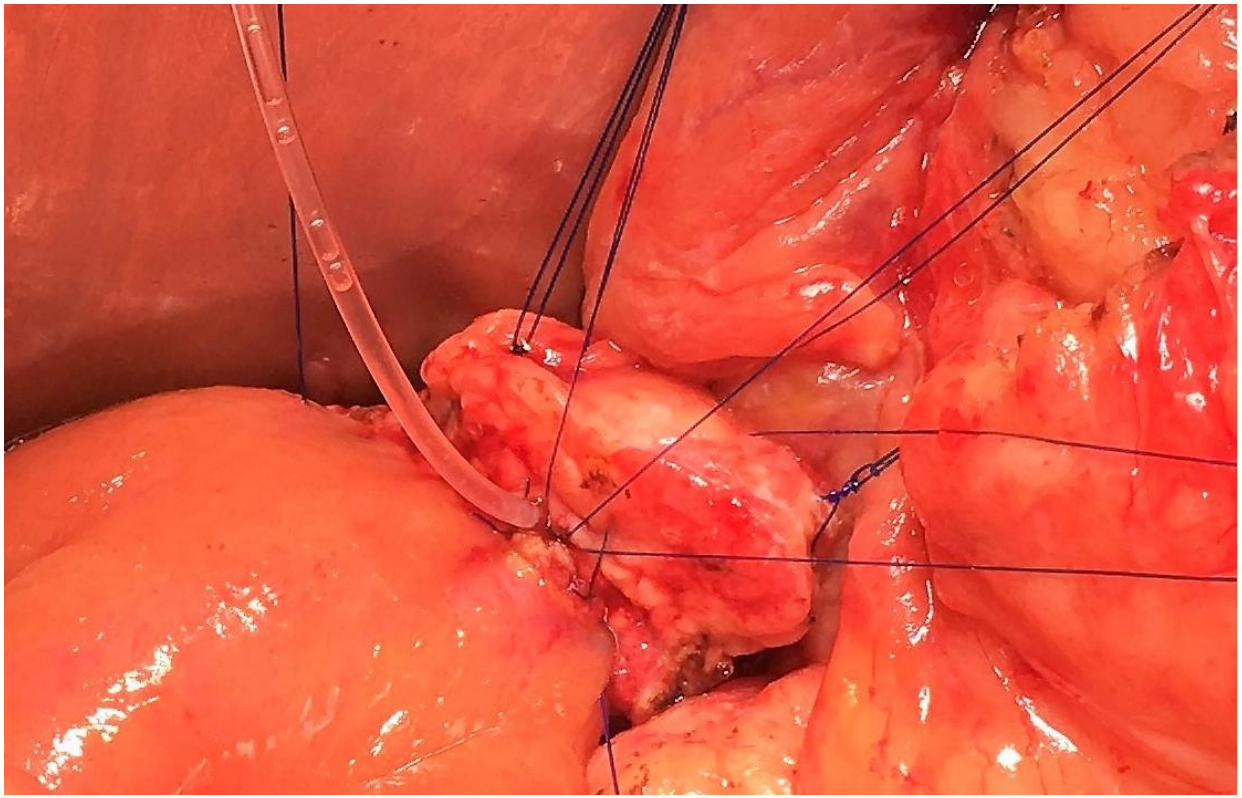
STENT NO DUCTO PANCREÁTICO



SECÇÃO DO INTESTINO DELGADO

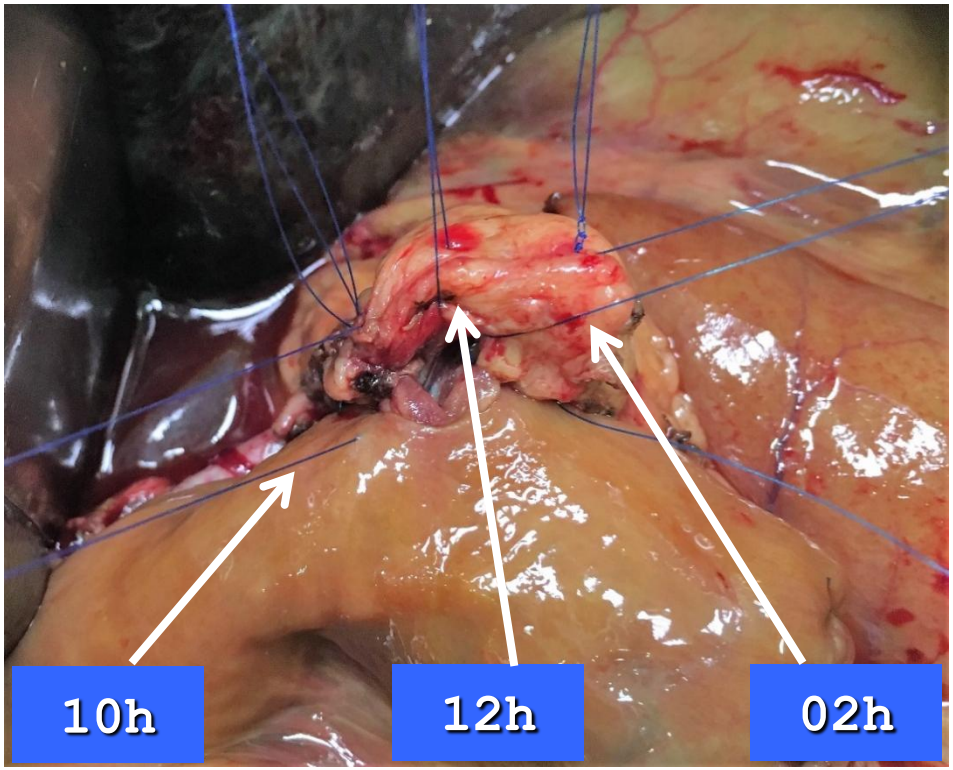
- Desorganização da transmissão nervosa
- Manipulação excessiva da alça
- Maior paresia nas primeiras 24-48 horas
- Estase subsequente

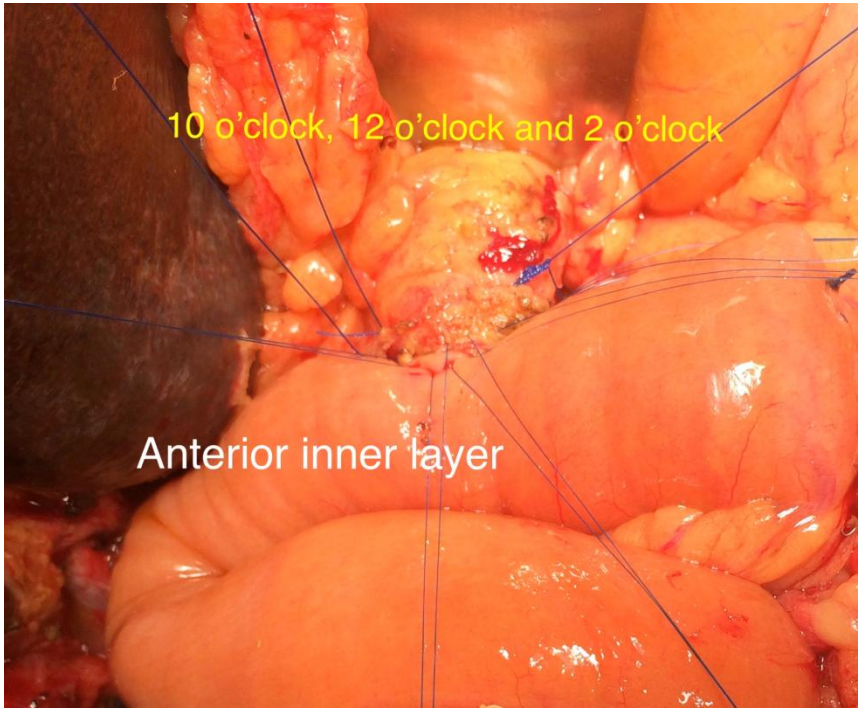
STENT

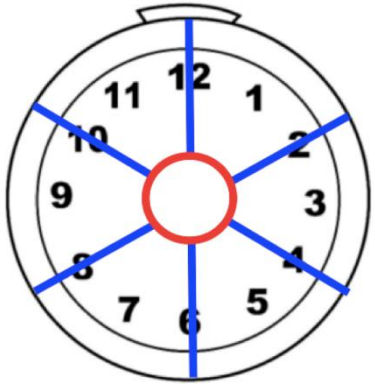


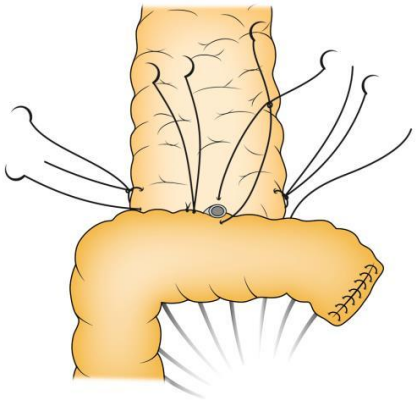
- Facilita a colocação precisa da sutura
- Deriva o suco pancreático longe do local da anastomose.
- Evita ou reduz a retenção de secreção pancreática no segmento inicial do jejuno enquanto a peristalse não está restaurada.
- Diminui o risco de oclusão inadvertida do ducto pancreático.
- Melhora a integridade da anastomose, reduzindo o risco de formação de estenose do ducto.
- Melhora a drenagem do pâncreas para a luz intestinal

3. SUTURA SEPARADA ANTERIOR INTERNA

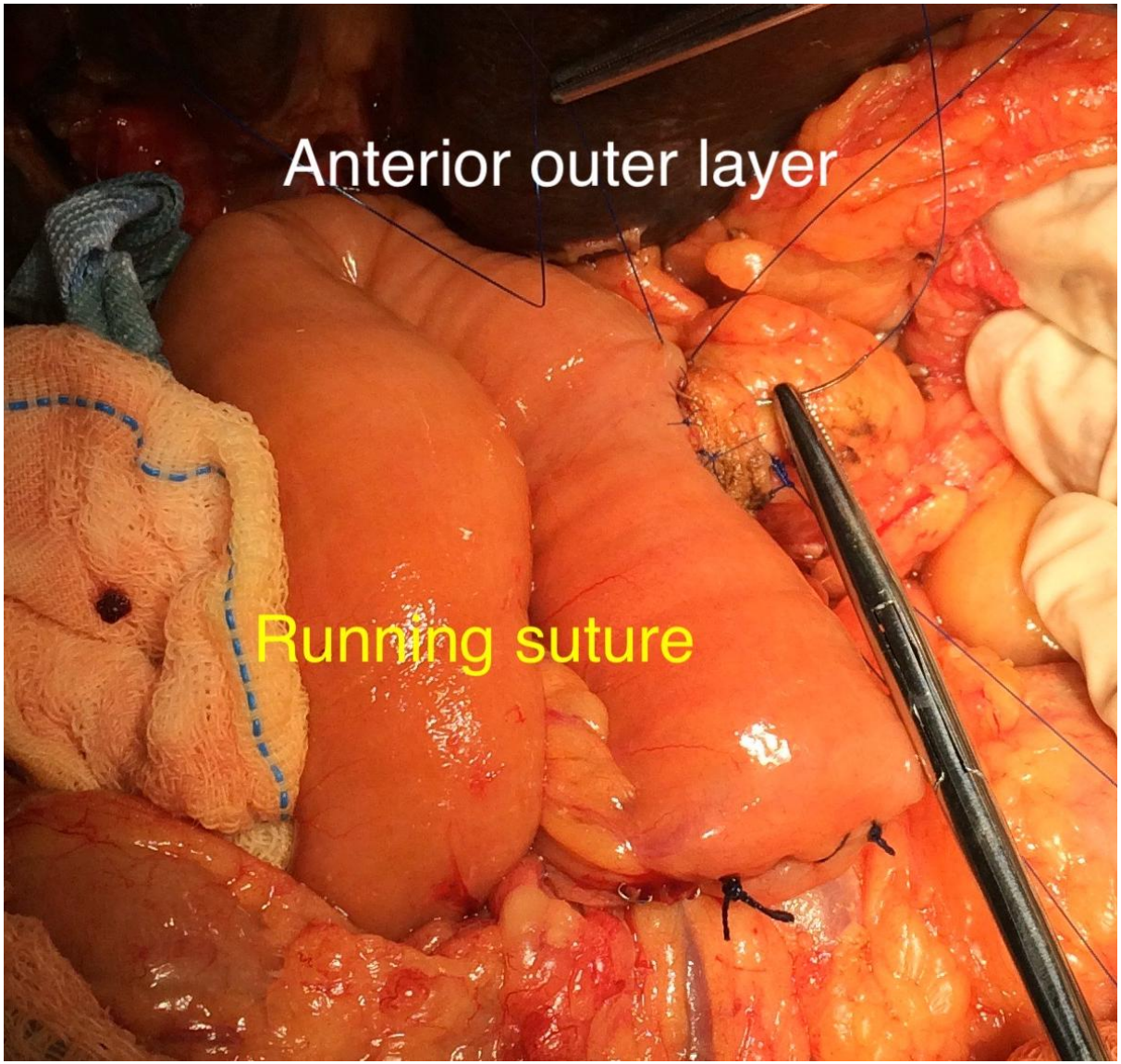




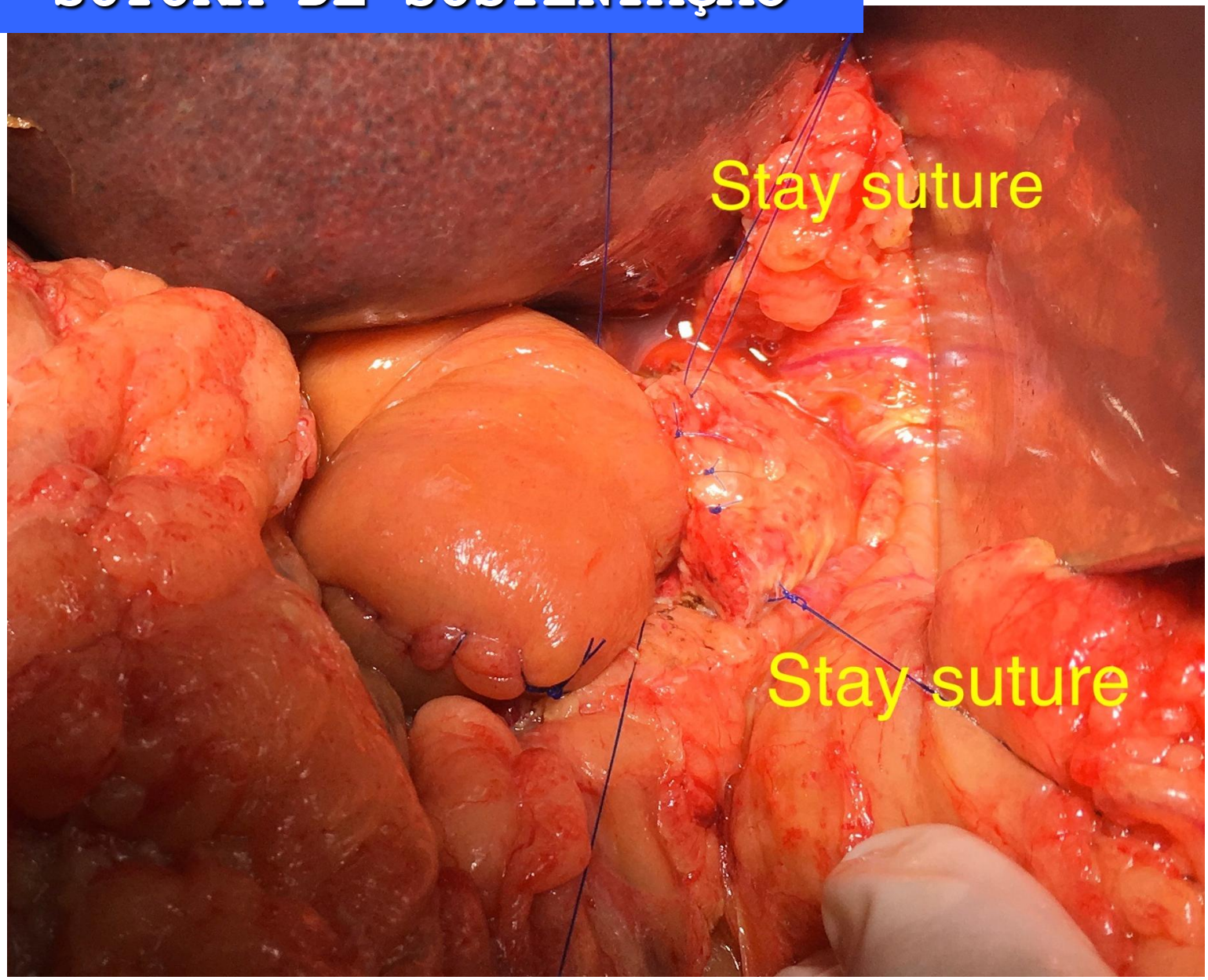




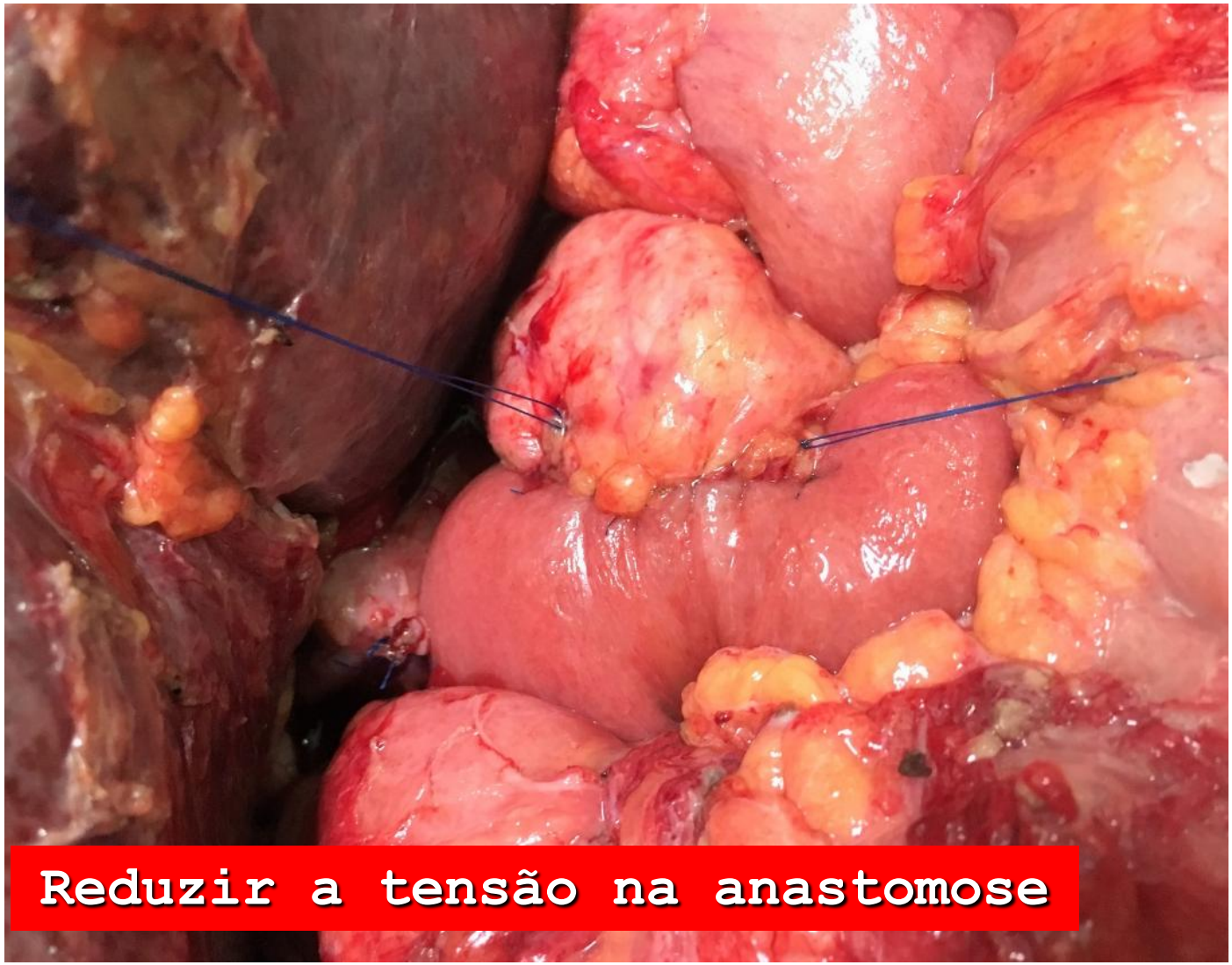
4. SUTURA CONTÍNUA ANTERIOR EXTERNA



SUTURA DE SUSTENTAÇÃO

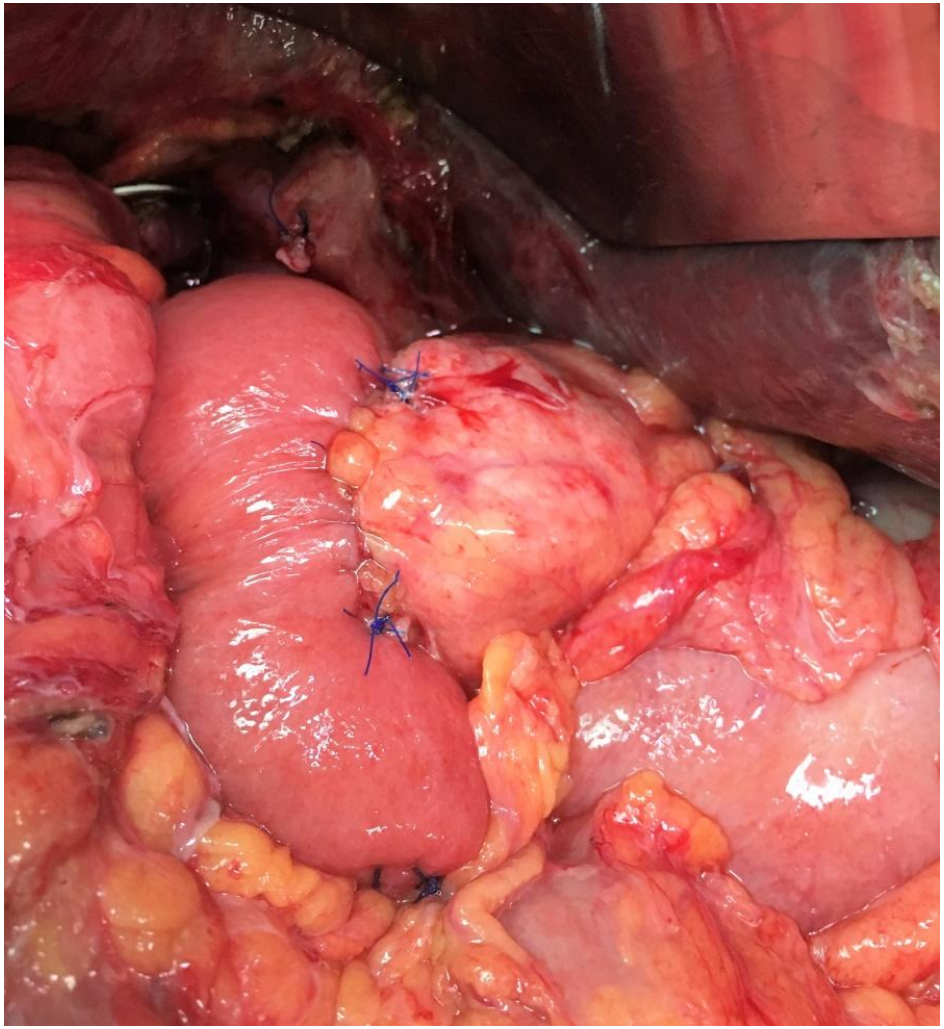


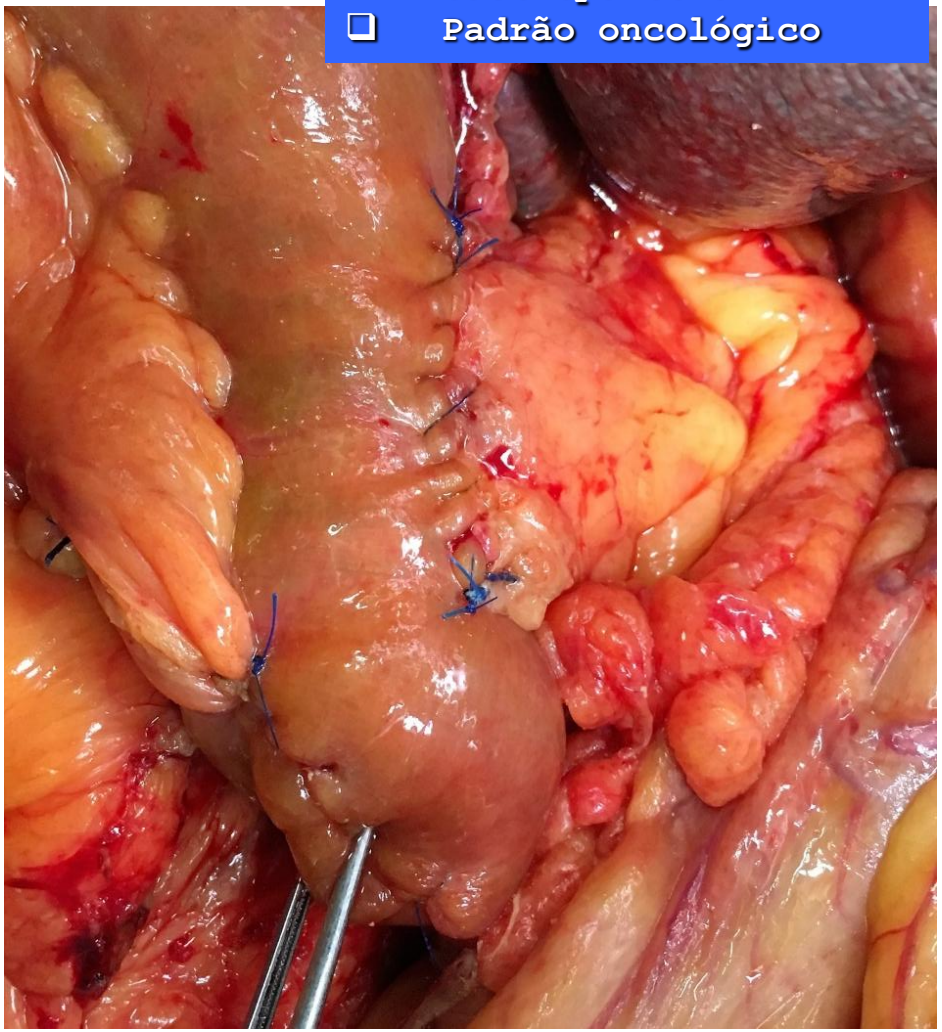
SUTURA DE SUSTENTAÇÃO



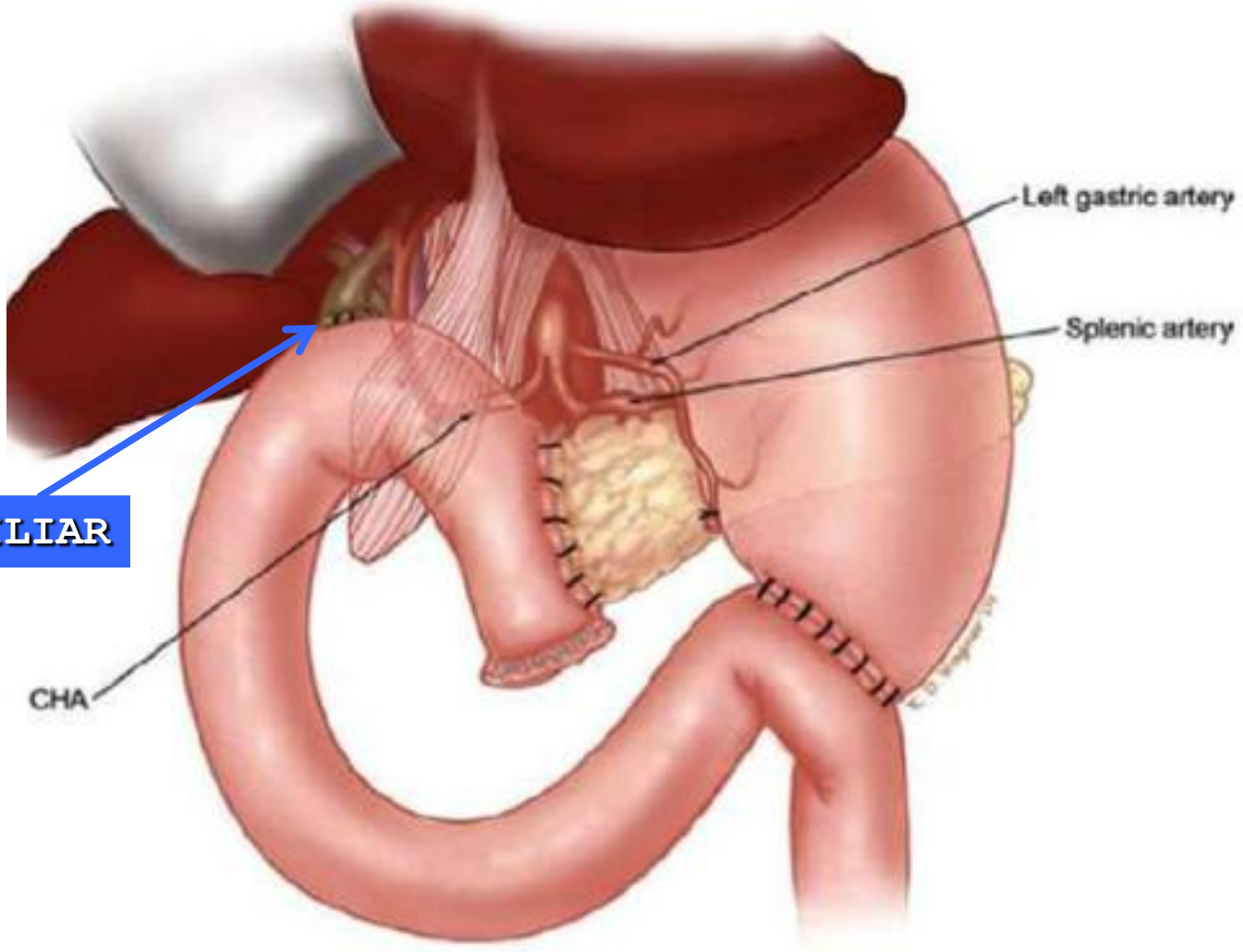
ASPECTO FINAL

- ❑ Sangramento
- ❑ Fístula pancreática
- ❑ Gastroparesia
- ❑ Padrão oncológico



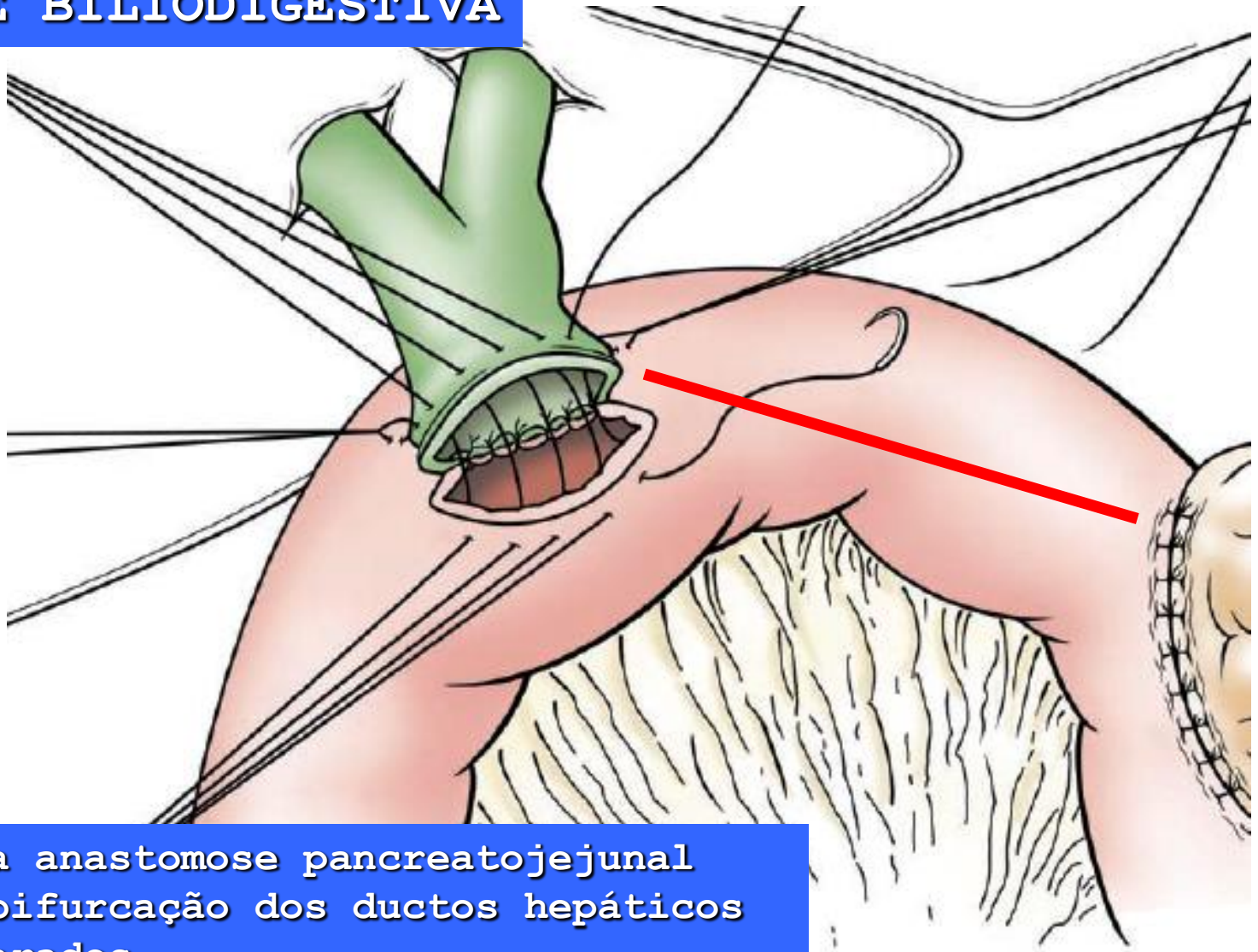


ANASTOMOSE BILIODIGESTIVA



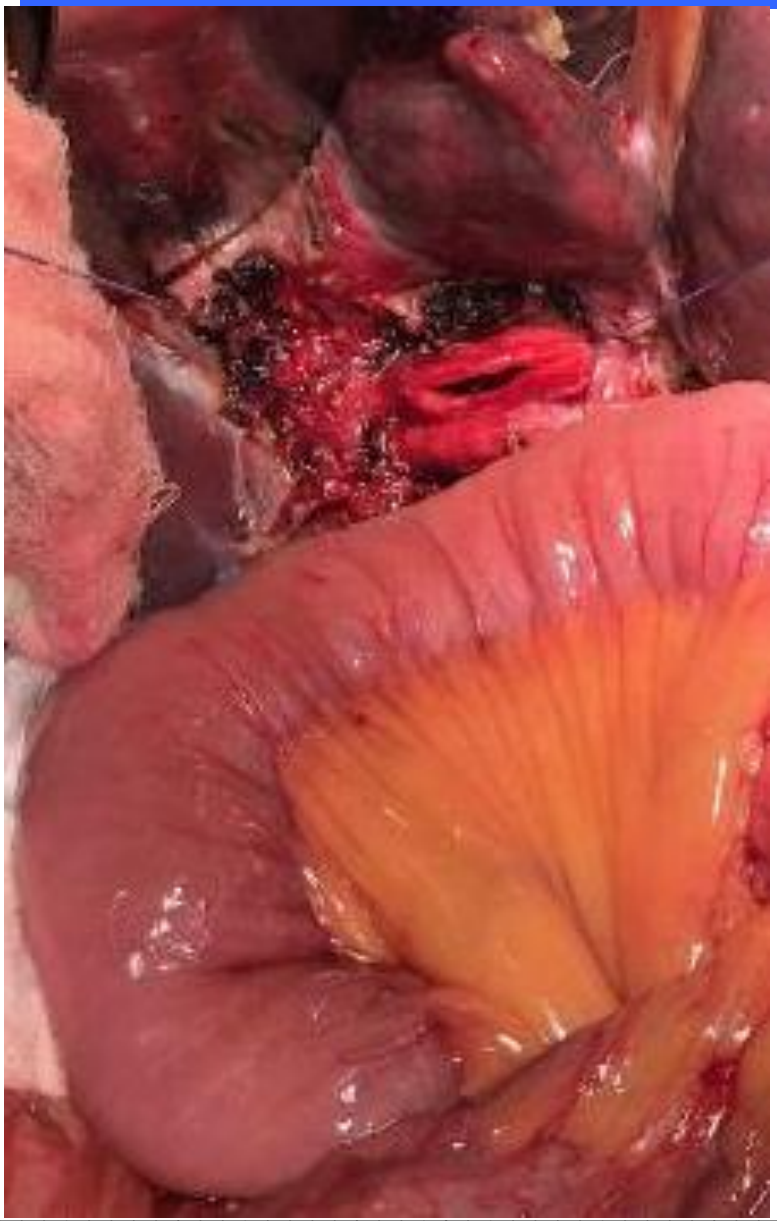
2. VIA BILIAR

ANASTOMOSE BILIODIGESTIVA



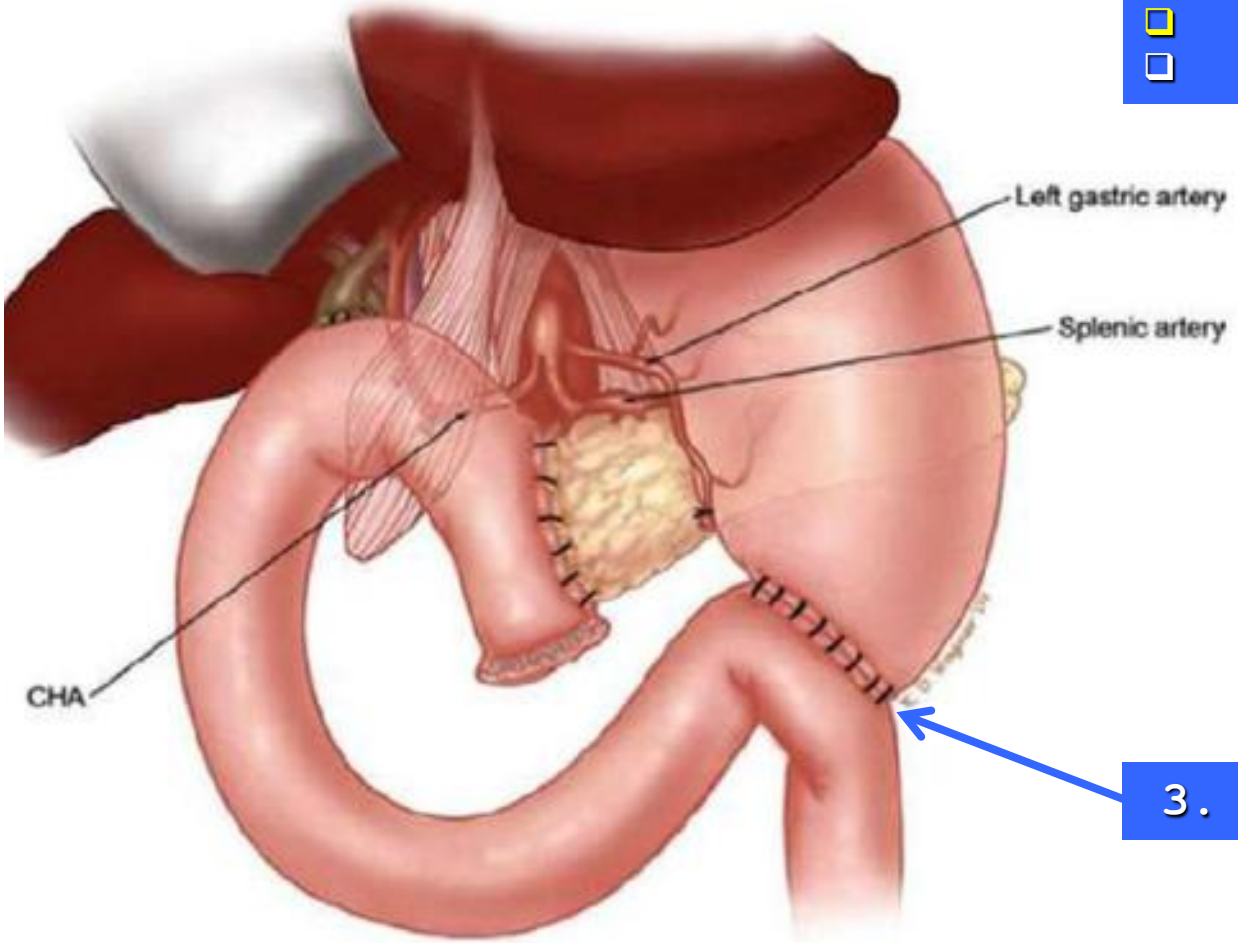
- 10-15 cm da anastomose pancreatojejunal
- < 2 cm da bifurcação dos ductos hepáticos
- Pontos separados
  Via biliar ≤ 20 mm
- Pontos contínuos/separados
  Via biliar > 20 mm

ANASTOMOSE BILIODIGESTIVA



GASTROENTEROANASTOMOSE

- Sangramento
- Fístula pancreática
- Gastroparesia
- Padrão oncológico



3. ESTÔMAGO

- Posição antecólica
- 50-60 cm da anastomose biliodigestiva
- Alça eferente acompanha a grande curvatura

ABCD Arq Bras Cir Dig
2017;30(3):190-196
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Original Article

PANCREATODUODENECTOMY: BRAZILIAN PRACTICE PATTERNS*

*Duodenopancreatectomia: prática padrão do Brasil**

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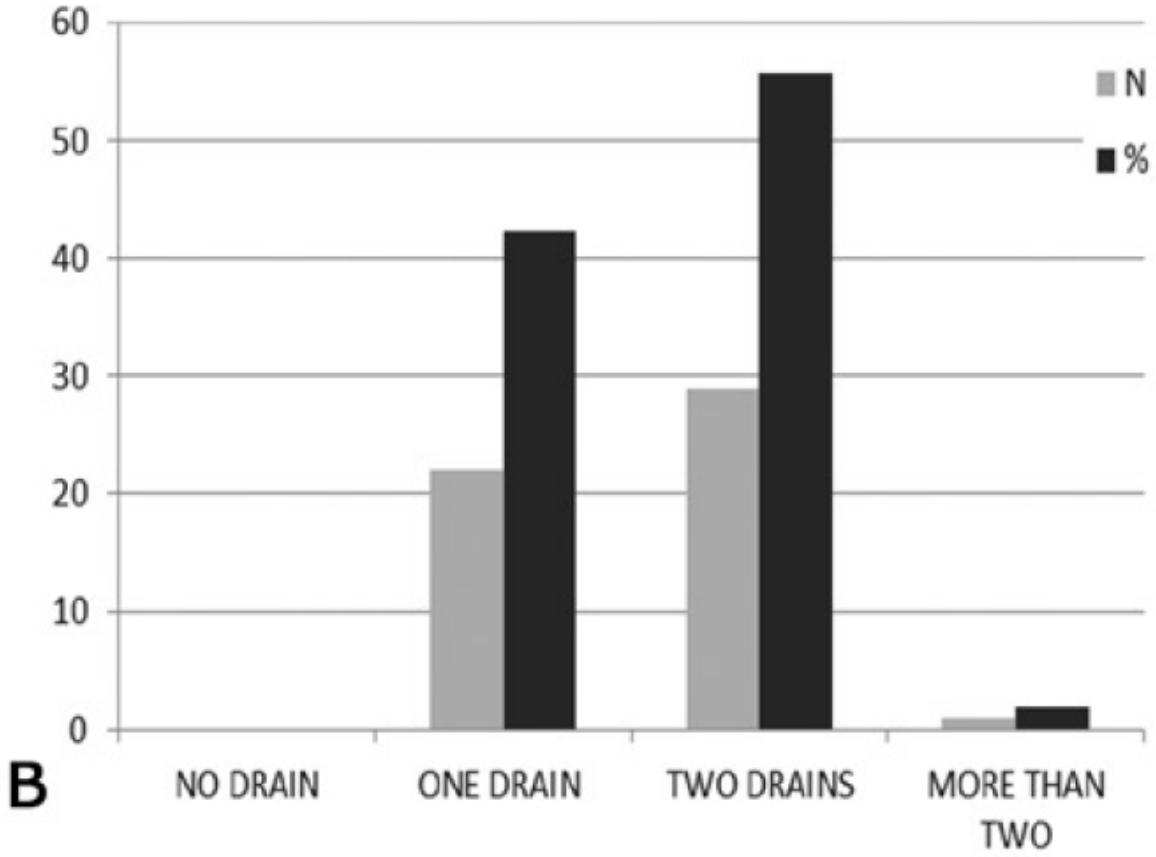

Obrigado!

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