Ruolo della Radiologia Interventistica nella gestione delle complicanze

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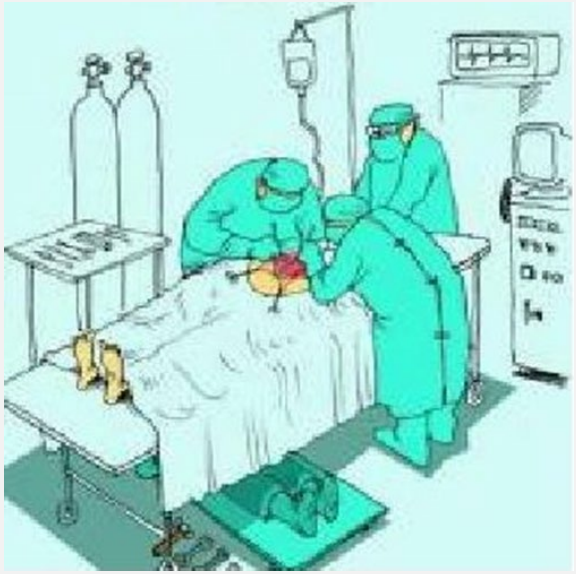
Gruppo San Donato

Ringraziamenti

Dott. Dario Poretti

CHIRURGIA GASTRICA
Complicanze e loro gestione

- Formazione di raccolte fluide in sede più o meno profonda, sia in prossimità del letto chirurgico, sia a distanza, con possibile evoluzione ascessuale o peritonitica.
- Sanguinamenti da rami del tronco celiaco
- Fistola del moncone duodenale
- Lesioni linfatiche



Degiuli M. Morbidity and mortality in the Italian Gastric Cancer Study Group randomized clinical trial of D1 versus D2 resection for gastric cancer. Br J Surg. 2010;97(5):643–649
Kodera Y. Identification of risk factors for the development of complications following extended and superextended lymphadenectomies for gastric cancer. Br J Surg. 2005;92(9):1103–1109

CHIRURGIA GASTRICA
Complicanze e loro gestione

- Formazione di raccolte fluide

- Appannaggio del RI è il posizionamento, sotto guida TC o ecografica, di cateteri di drenaggio. In prima istanza per raccolte addominali, più raramente per componenti reattive pleuriche.

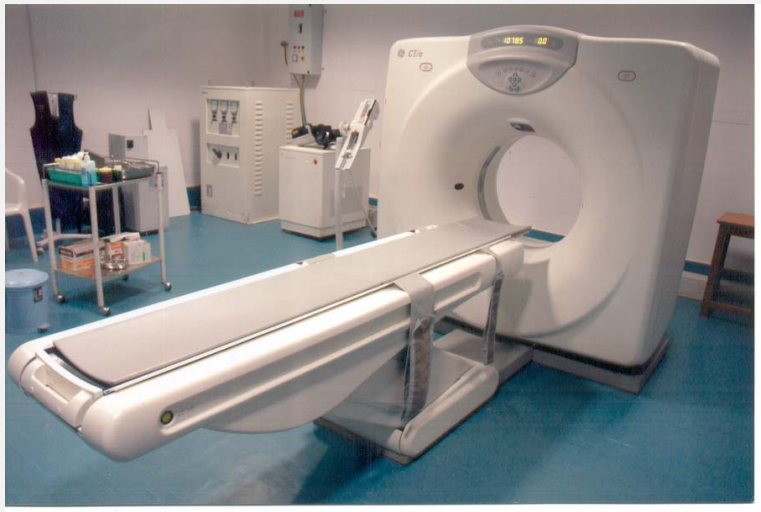
Laganà , Carrafiello, 2008. Image-guided percutaneous treatment of abdominal-pelvic abscesses: a 5-year experience. Radiol Med

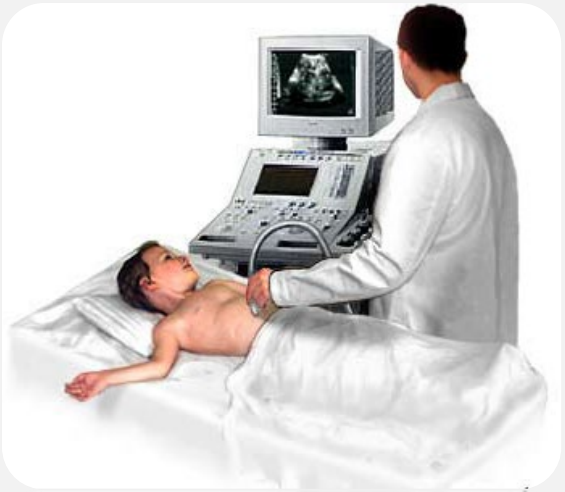
INDICAZIONI

- Rischio infettivo
- Possibilità di esame colturale
- Tutela delle anastomosi chirurgiche
- Sollievo dei sintomi

Golfieri, Cappelli Tech coloproctol (2007) 11:197–208

TC o US?





TC o US?

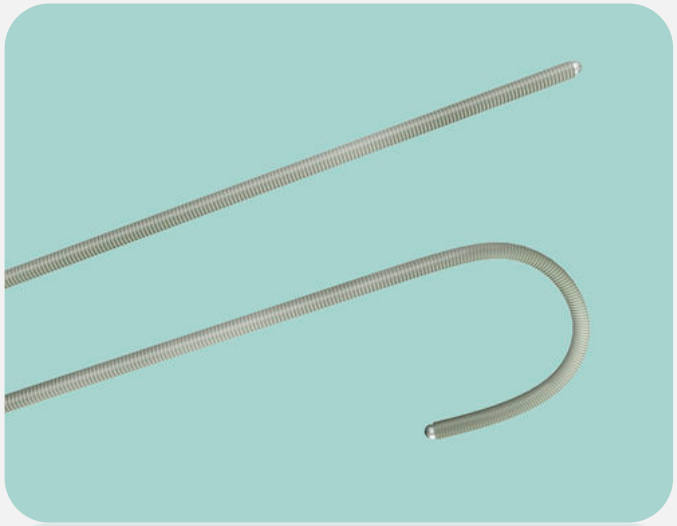
"The success rates in patients drained under ultrasound- and CT-guidance were 46.1% and 88.8%, respectively and drainage under CT-guidance was significantly higher (P = 0.0293)"

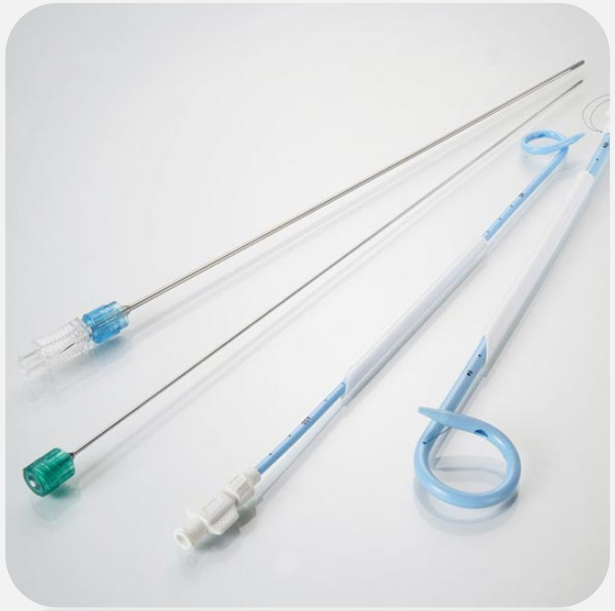
Donkol, R. H., Latif, N. A., & Moghazy, K. (2010). Percutaneous imaging-guided interventions for acute biliary disorders in high surgical risk patients. World journal of radiology, 2(9), 358–67.

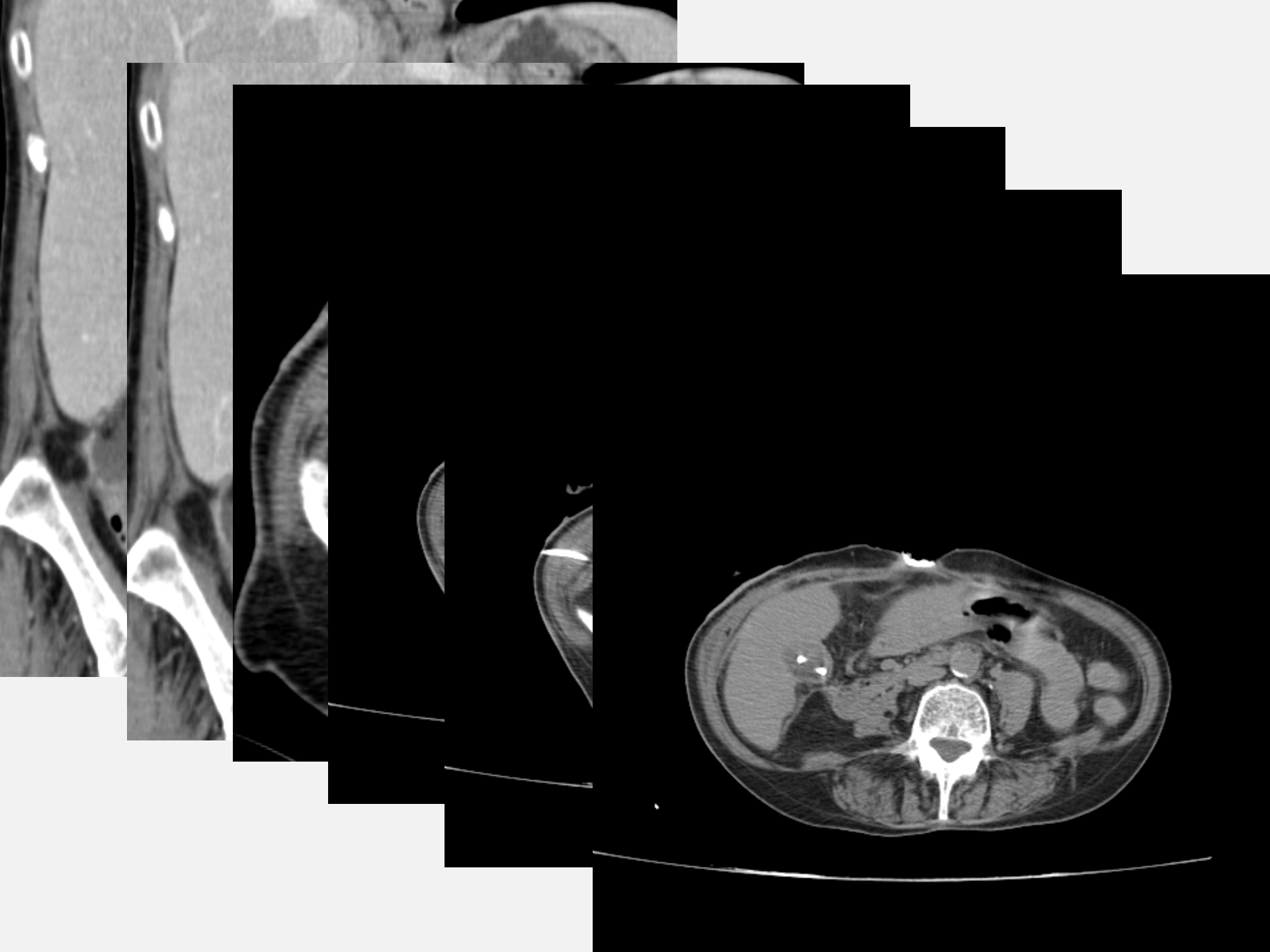
TECNICHE

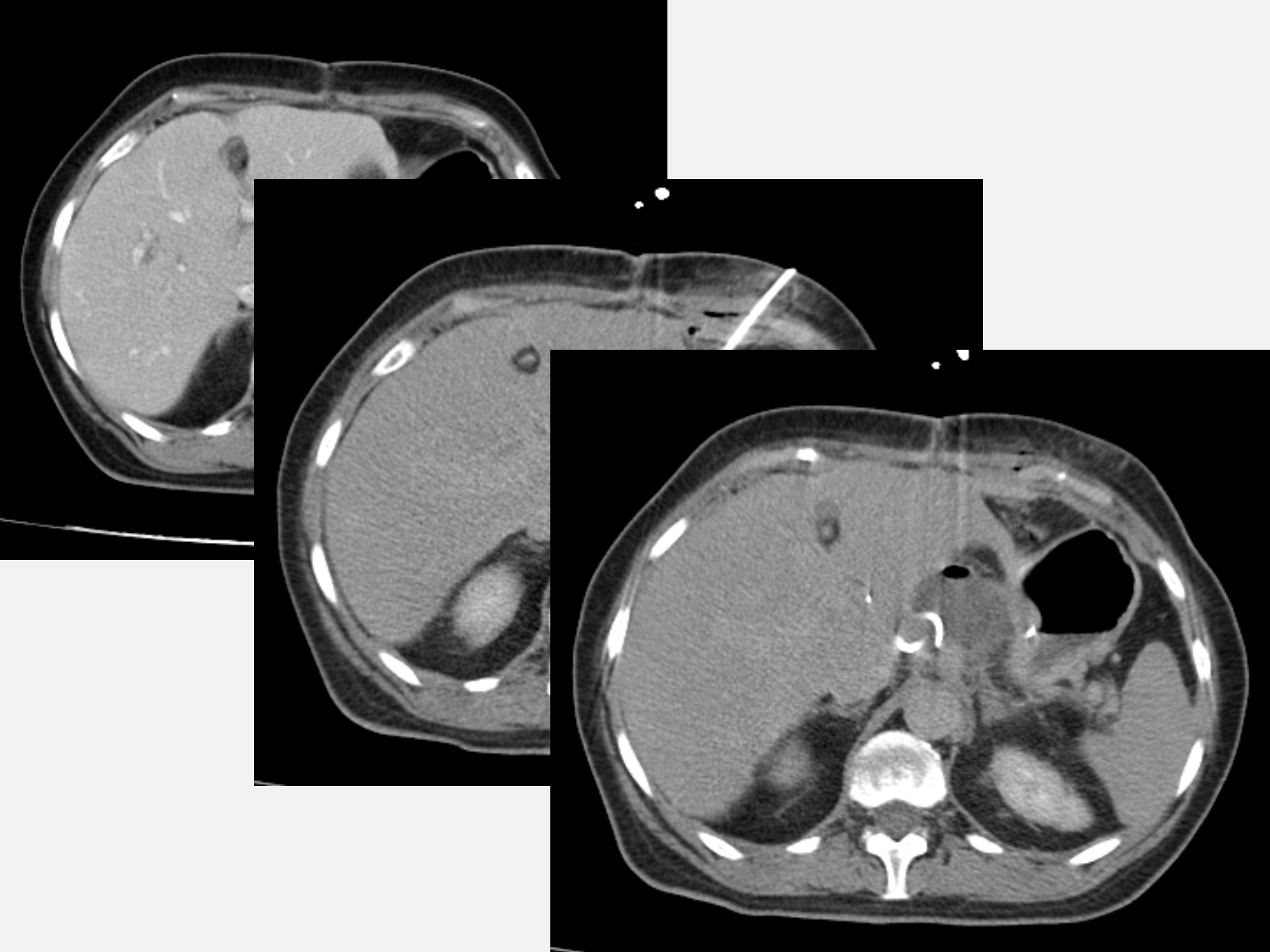
1. Diretta

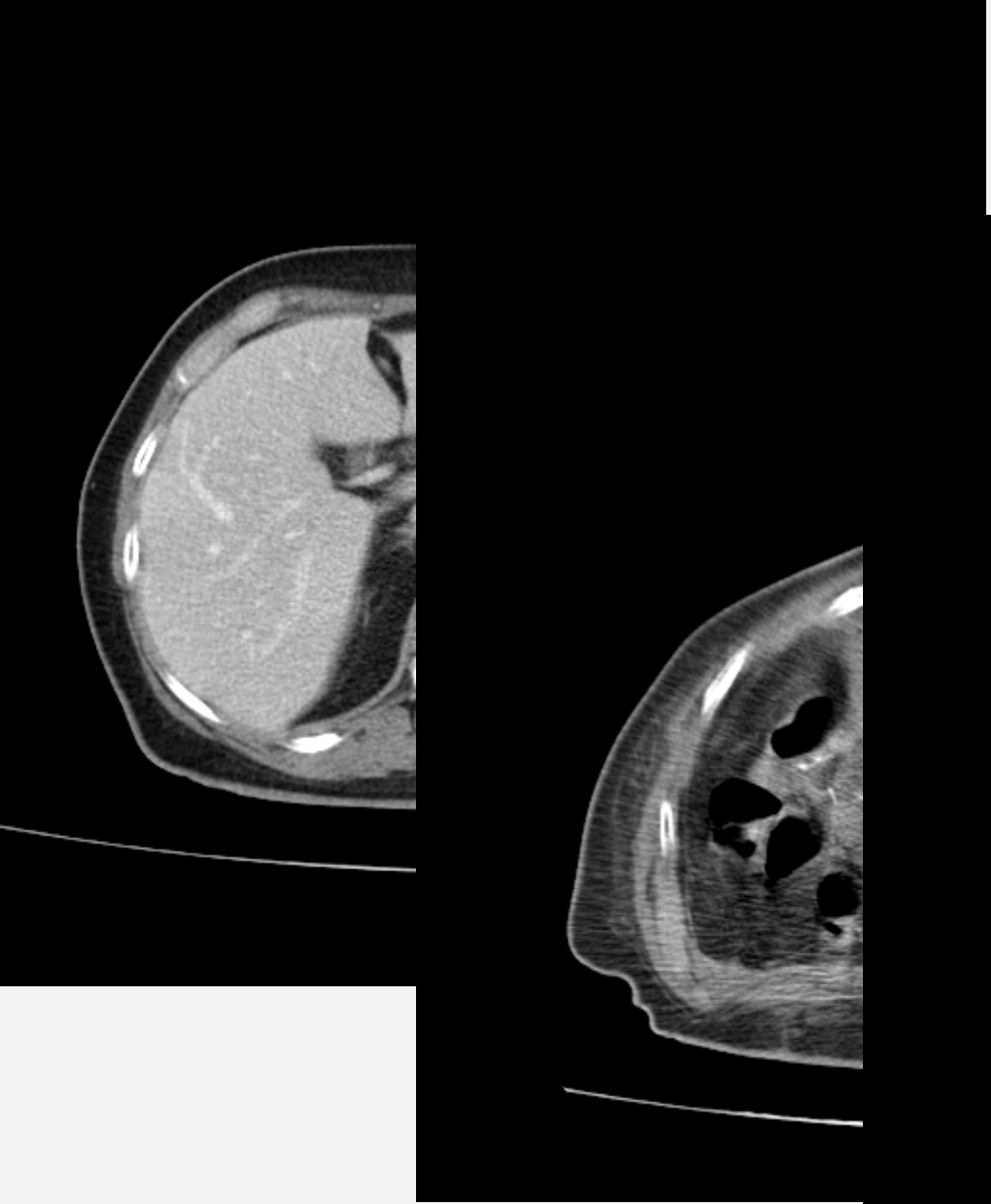
2. Coassiale con guida di supporto







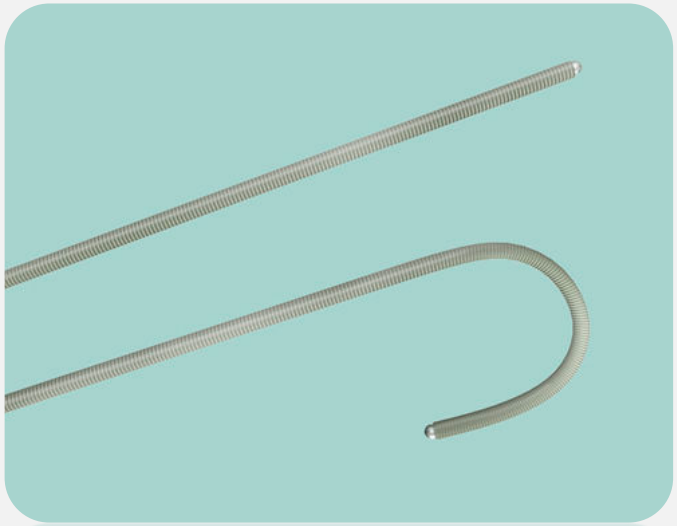


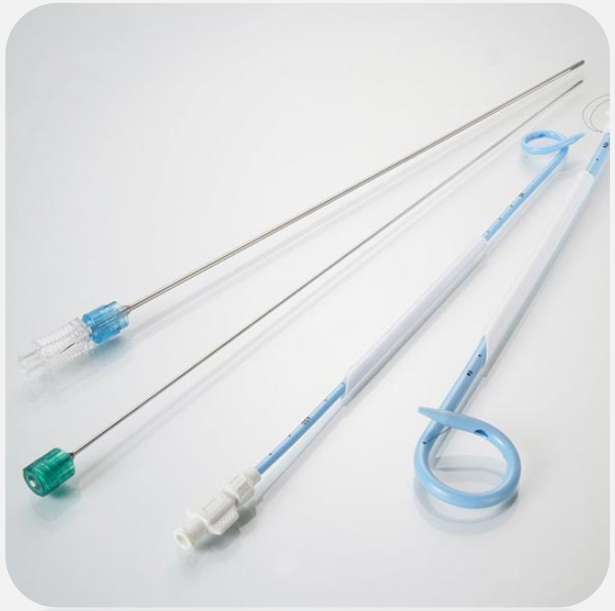


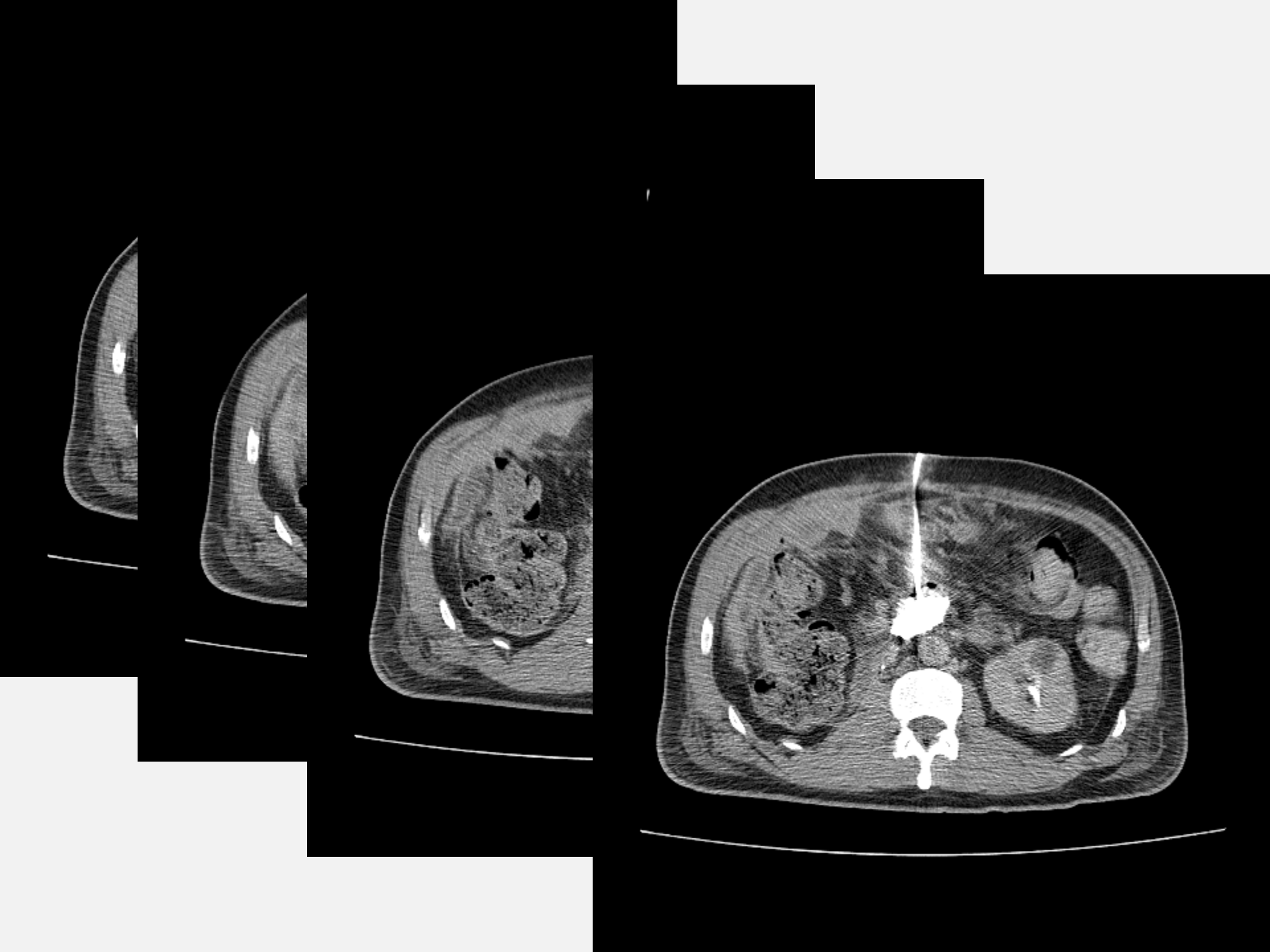
TECNICHE

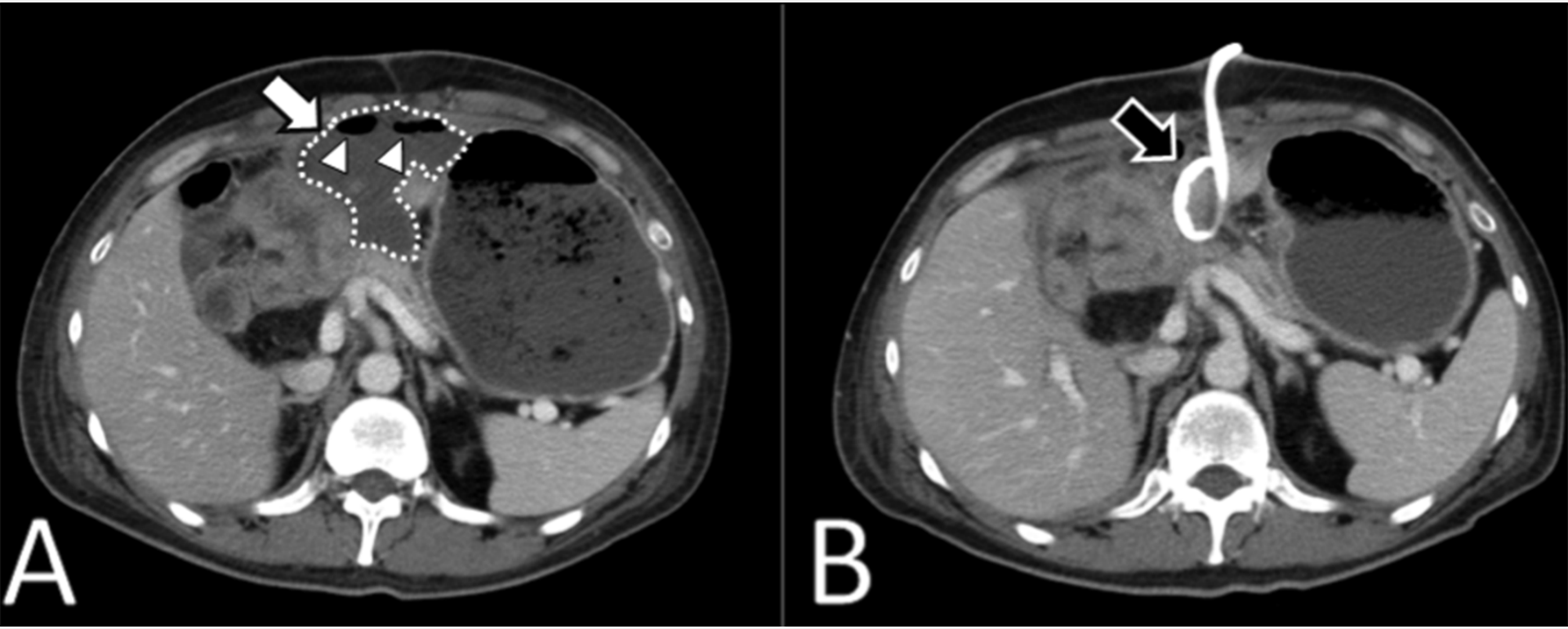
1. Diretta

2. Coassiale con guida di supporto





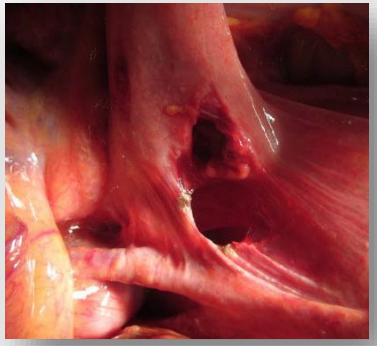




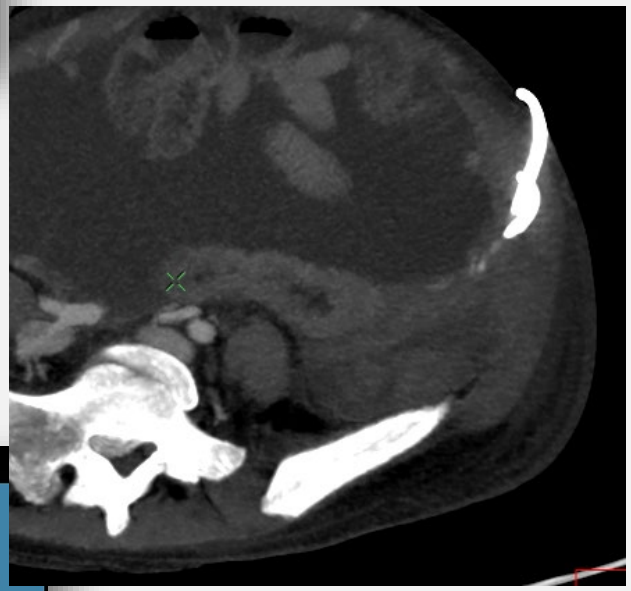
Risoluzione della raccolta in 8 giorni

COMPLICANZE

- Perforazione d'ansa



- Sanguinamento



- Batteriemia - Sepsi

CHIRURGIA GASTRICA
Complicanze : sanguinamento

- Sanguinamenti da rami del tronco celiaco, per erosione o per lesione diretta (tamponata)

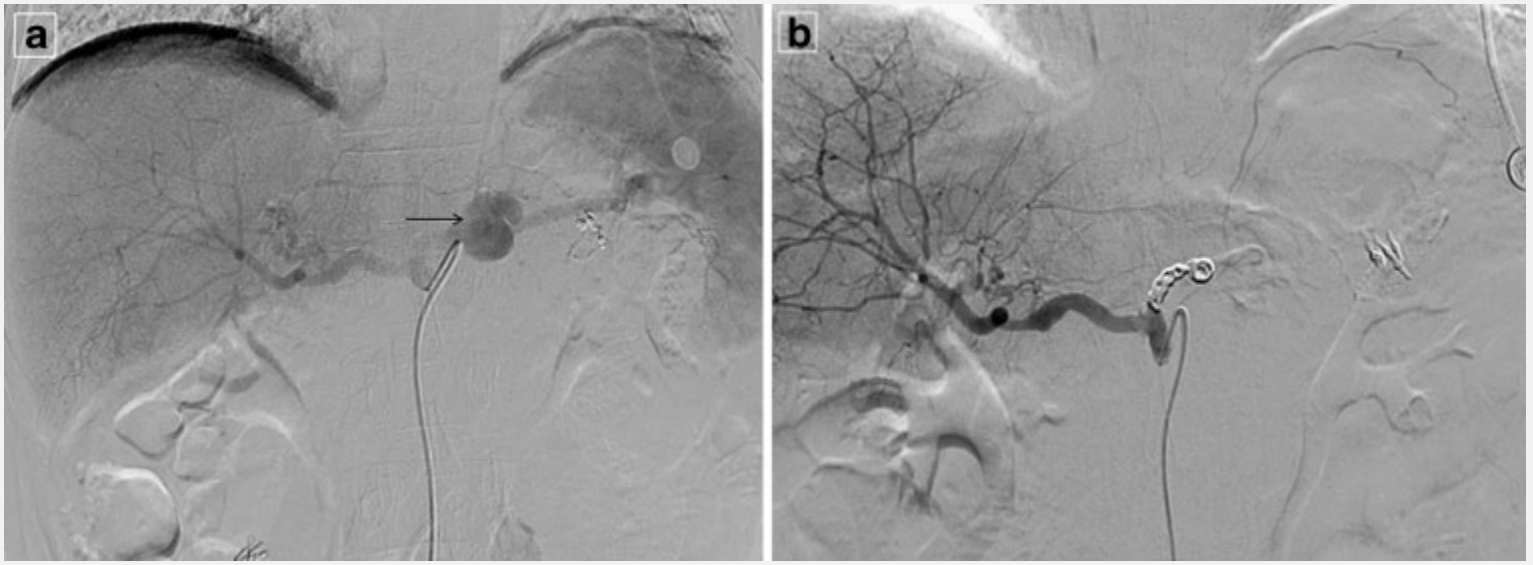
- Prevalenza 1-3%
- within 24 h following gastrectomy in 15 %
  over 24 h in 85 % (median 19 days).
- Mortalità 8-30%

- Nella maggior parte dei casi l'evento è gestito chirurgicamente

Yang J. Diagnosis and Treatment of Abdominal Arterial Bleeding After Radical Gastrectomy: a Retrospective Analysis of 1875 Consecutive Resections for Gastric Cancer. J Gastrointest Surg. 2016 Mar;20(3):510-20.

CHIRURGIA GASTRICA
Complicanze : sanguinamento

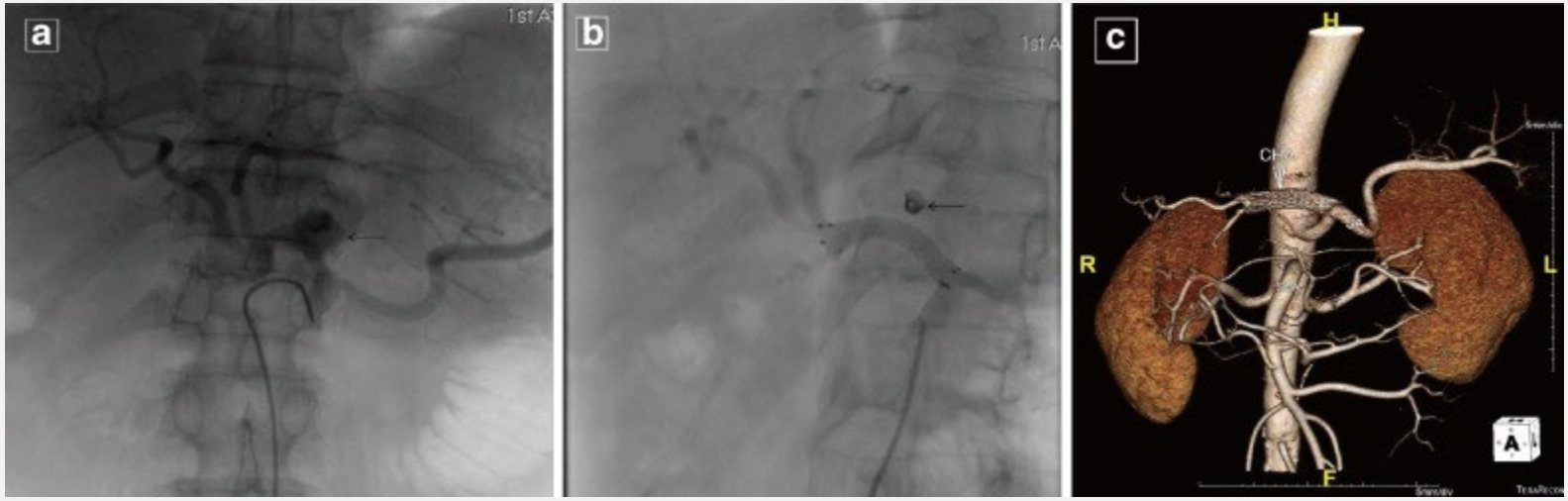
- Se disponibile Angiografia 24/7 la gestione può essere endovascolare, mediante embolizzazione dei rami di interesse – gastrica sin, gastroepiploica, epatica comune, splenica



Voluminoso pseudoaneurisma della art. splenica, trattato con coiling

Yang J. Diagnosis and Treatment of Abdominal Arterial Bleeding After Radical Gastrectomy: a Retrospective Analysis of 1875 Consecutive Resections for Gastric Cancer. J Gastrointest Surg. 2016 Mar;20(3):510-20.

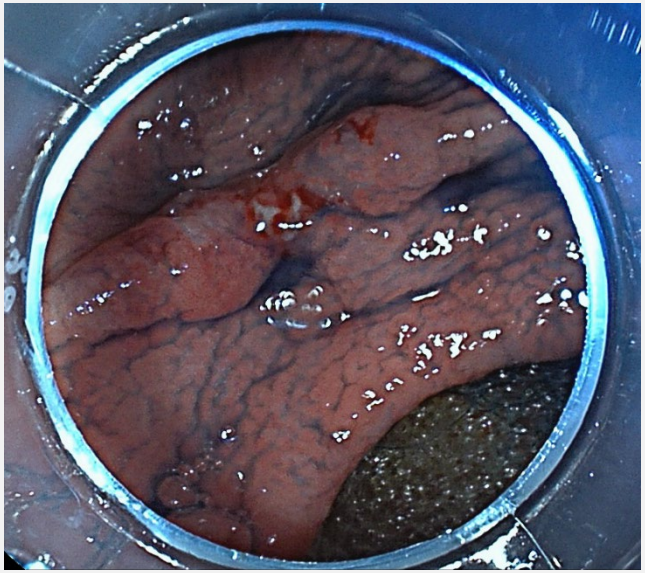
CHIRURGIA GASTRICA
Complicanze : sanguinamento



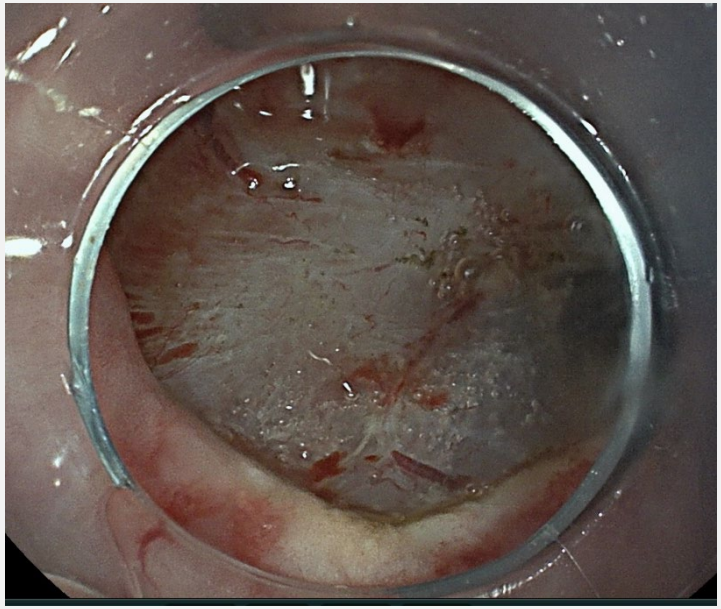
Pseudoaneurisma della art. epatica comune, trattato con stenting

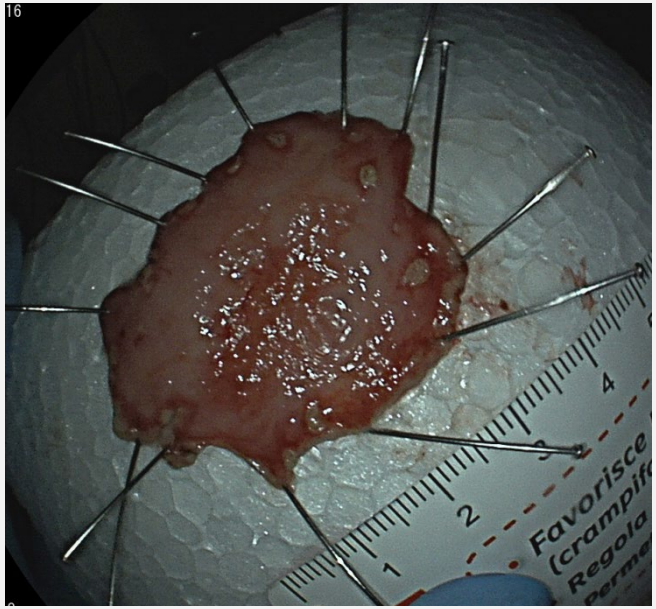
Yang J. Diagnosis and Treatment of Abdominal Arterial Bleeding After Radical Gastrectomy: a Retrospective Analysis of 1875 Consecutive Resections for Gastric Cancer. J Gastrointest Surg. 2016 Mar;20(3):510-20.

Casi clinici

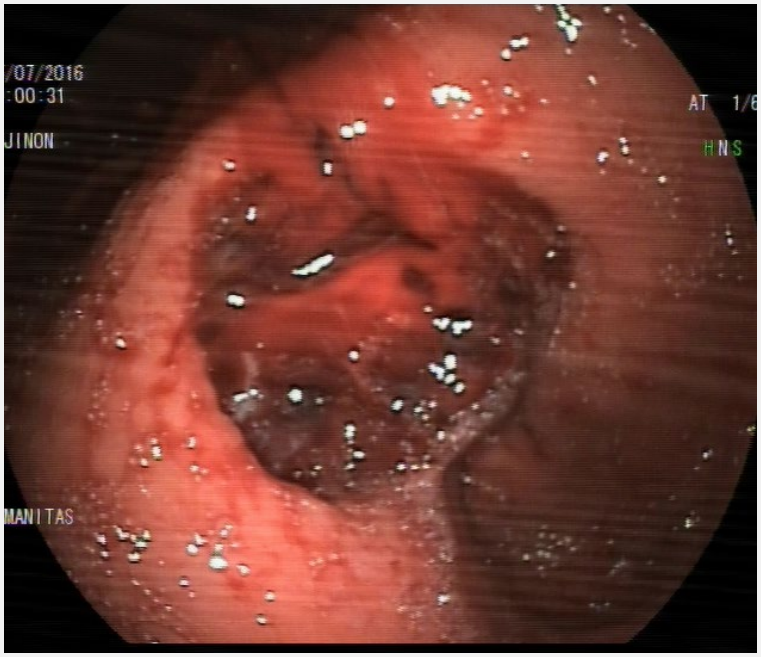


ESD di lesione antrale.

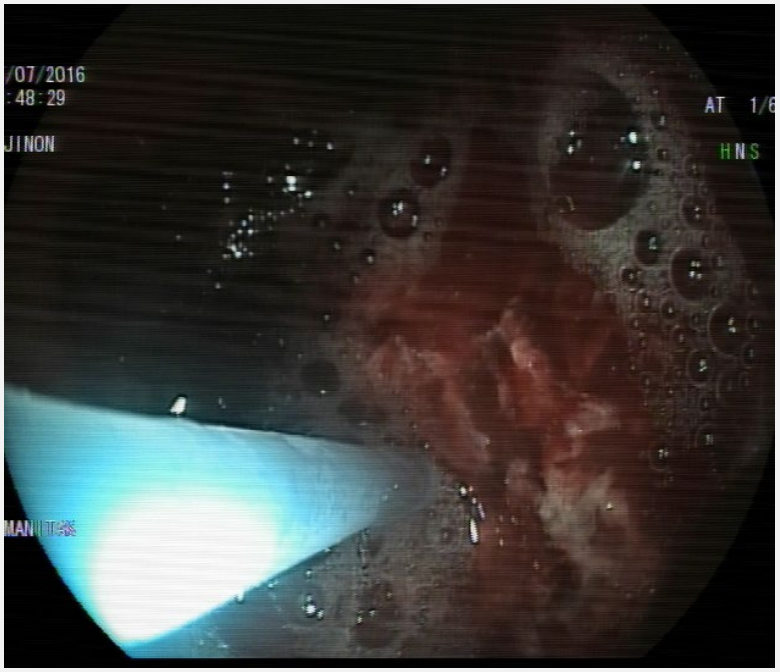




Casi clinici

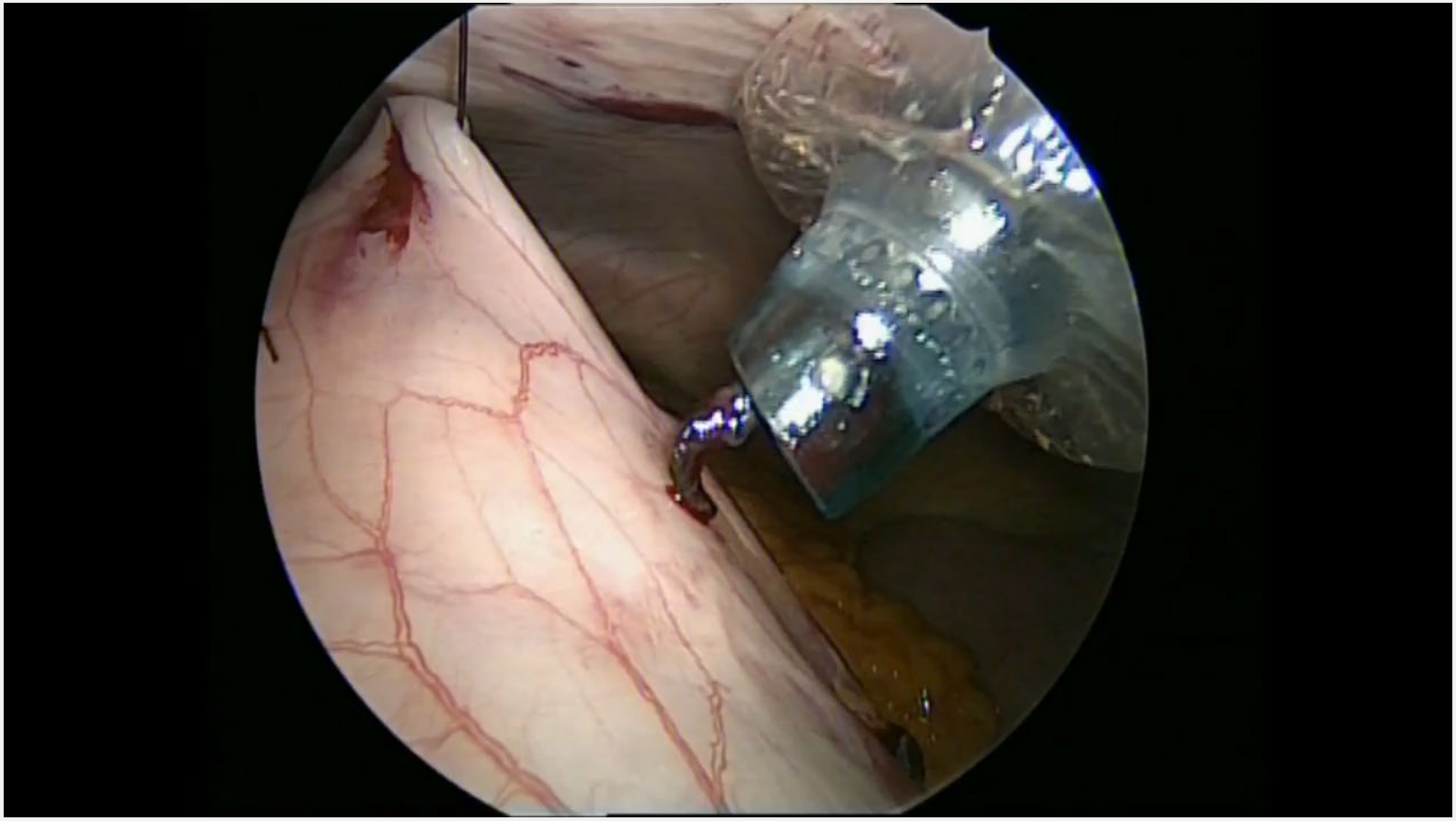


Sanguinamento acuto dal SNG a 12 ore dalla manovra. Tentativo di emostasi endoscopico.
Non efficace.

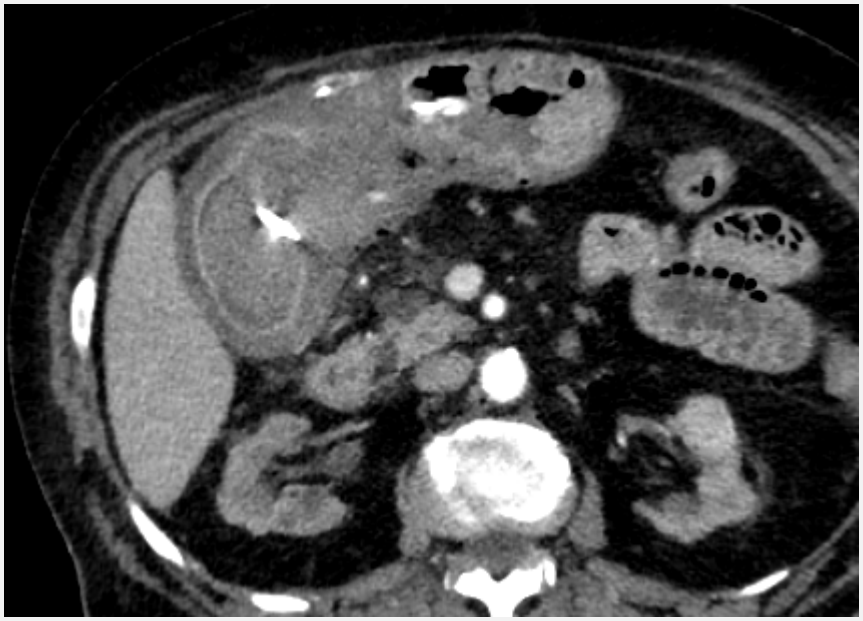


Casi clinici

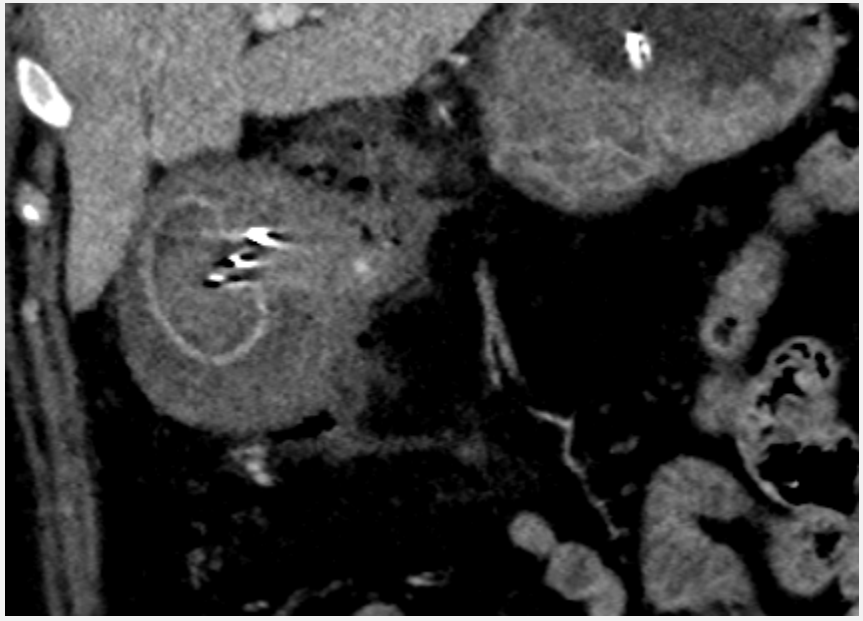
Intervento VLS transgastrico.

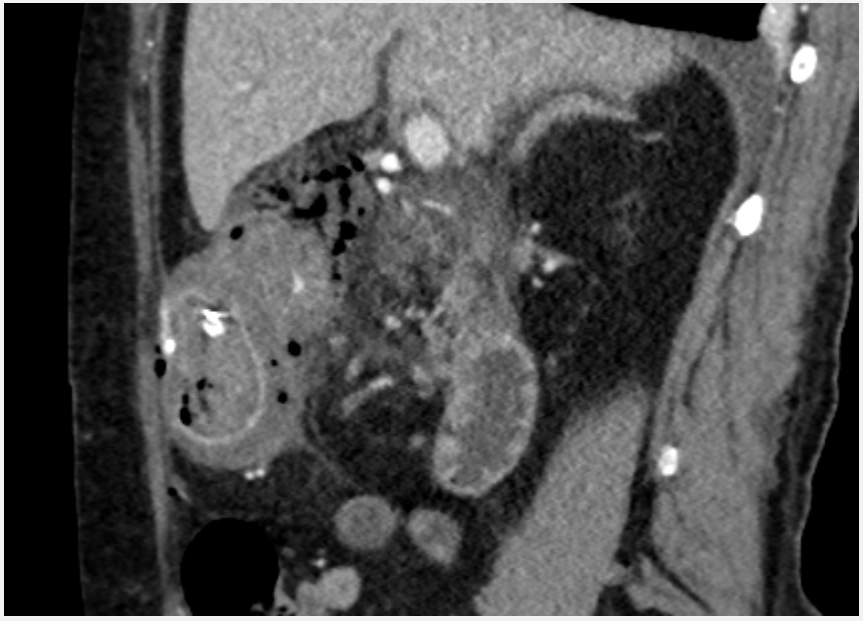


Casi clinici

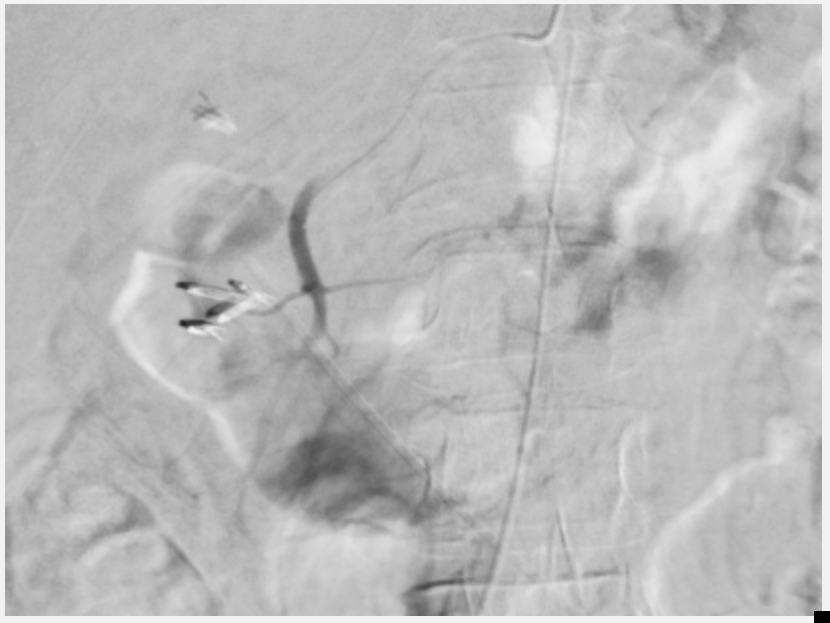


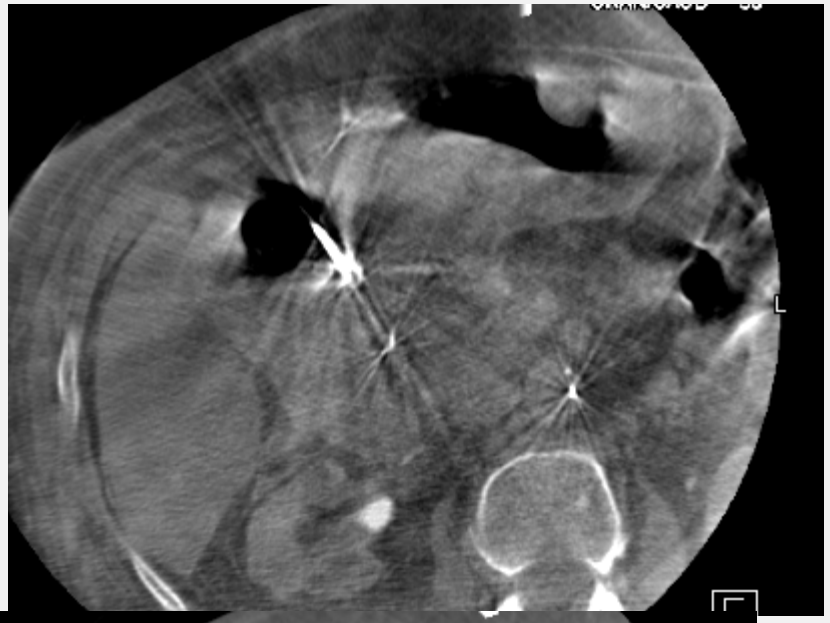
Al persistere dei fenomeni emorragici si esegue TC e successivamente angiografia con embolizzazione.

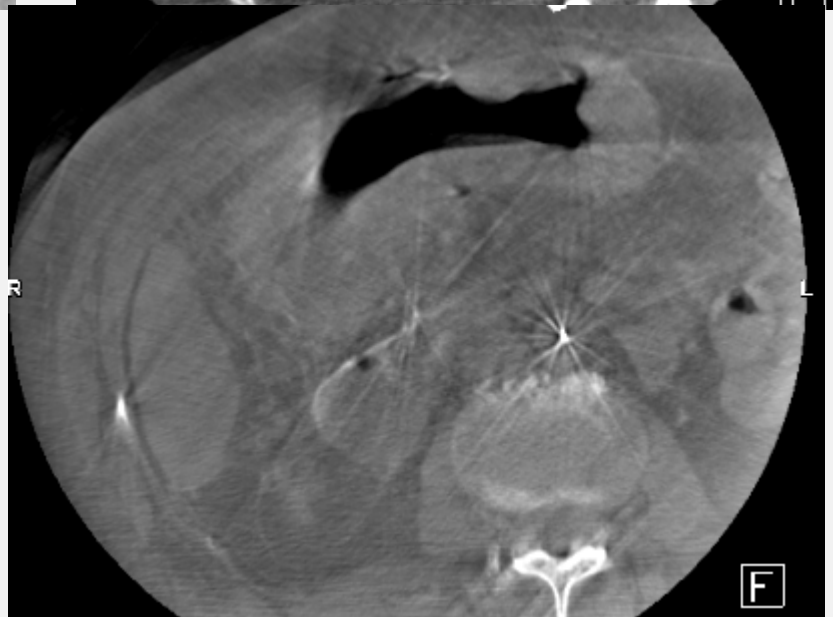




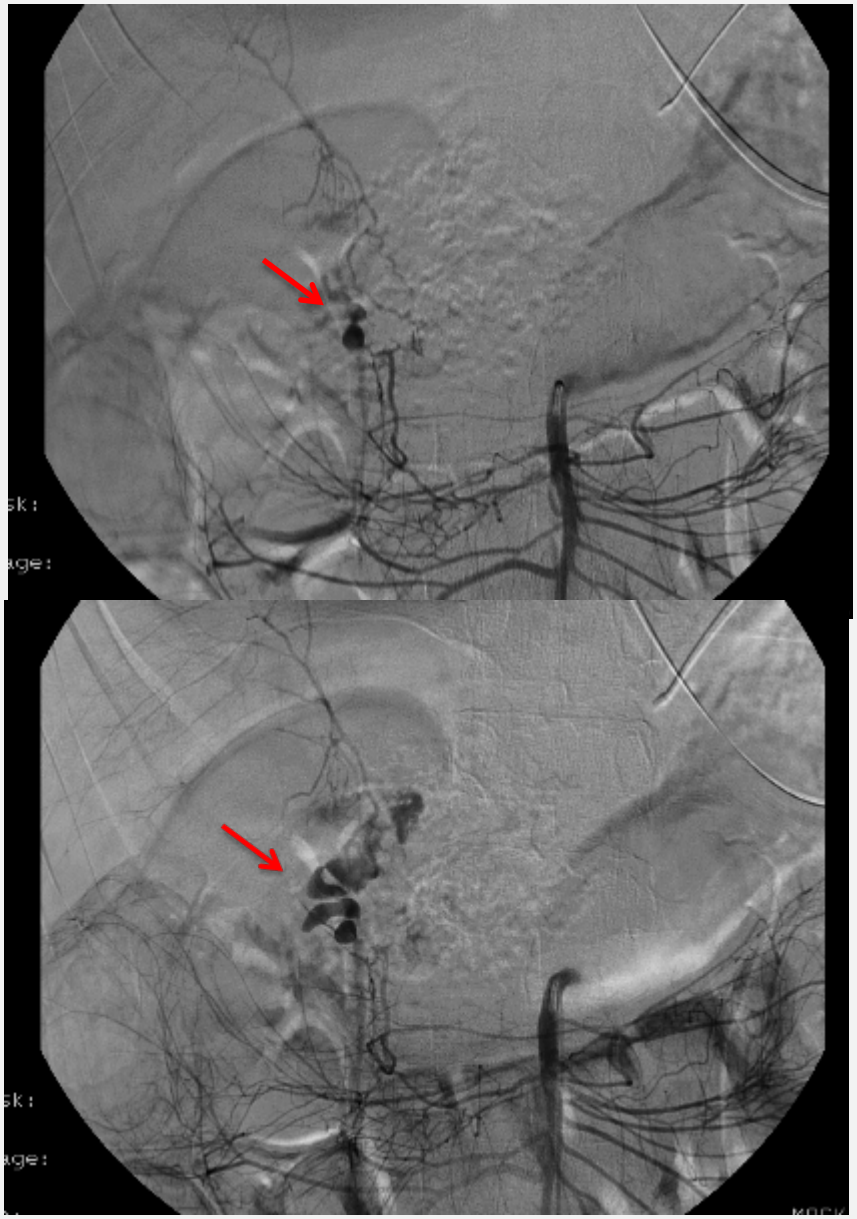
Casi clinici





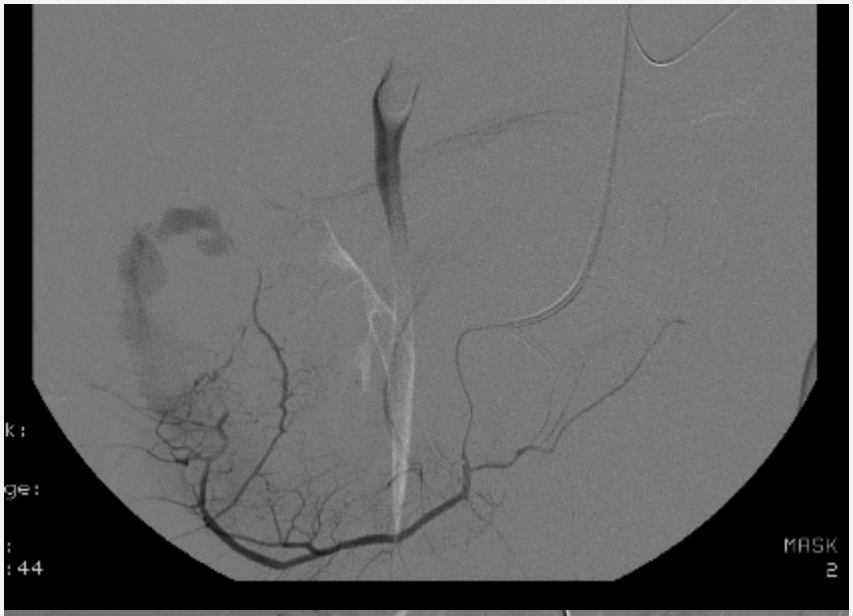


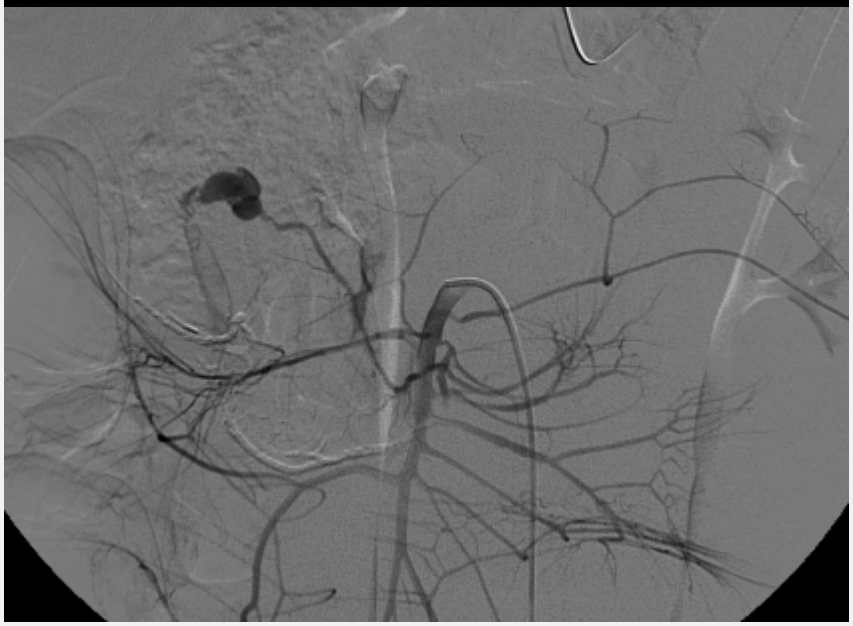
Casi clinici



Sanguinamento massivo da un ramo dell'arcata pancreatico duodenale, con origine dalla MS.

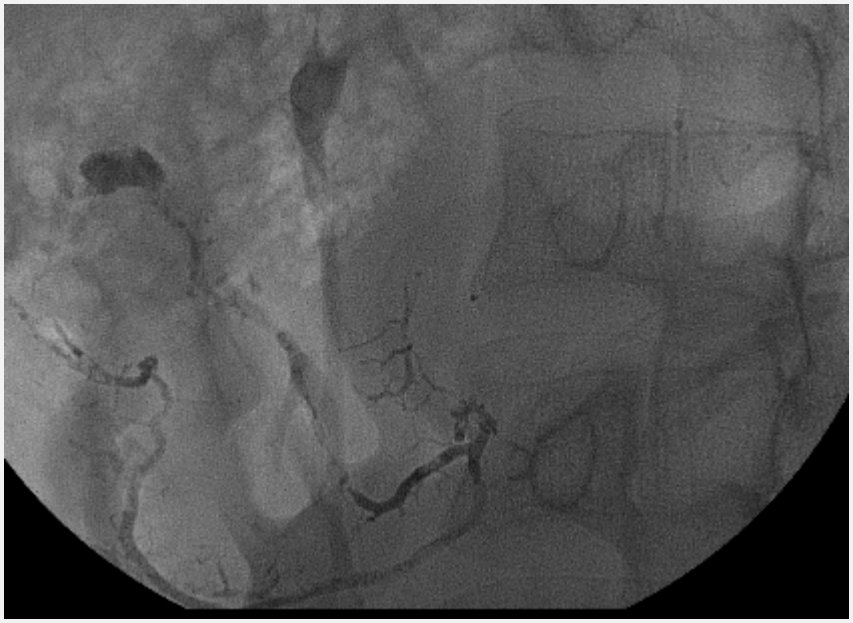
Casi clinici





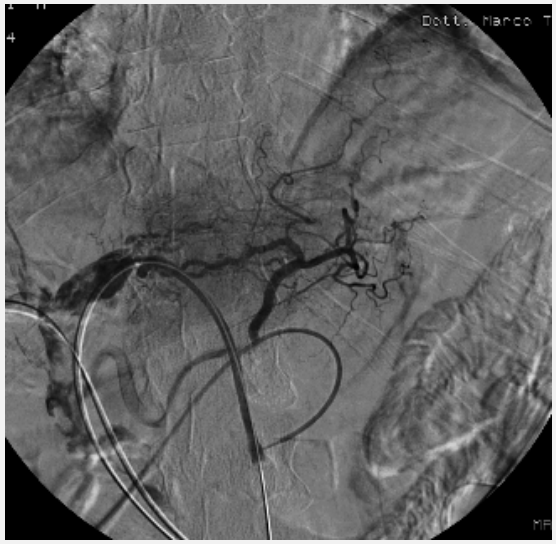
Nell'impossibilità di incannulamento da accesso fem , si esegue accesso omerale.

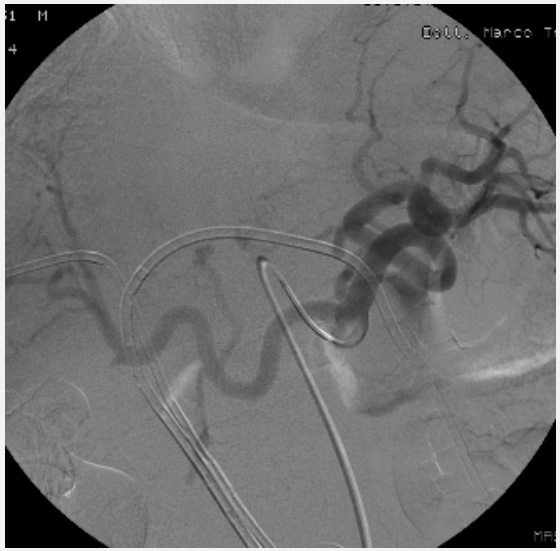
Embolizzati separatamente due rami dell'arcata duodenale

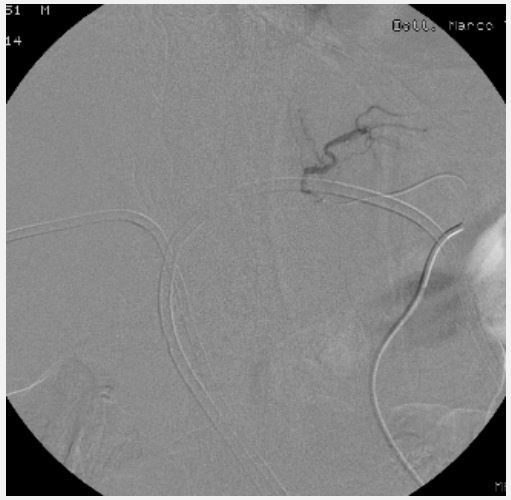


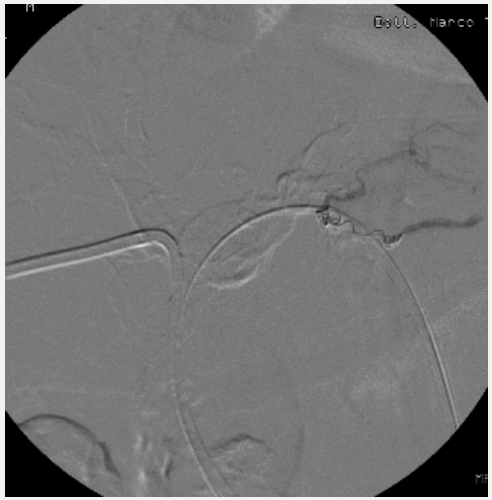
CHIRURGIA GASTRICA
Complicanze : sanguinamento

Lesione arteriosa dopo posizionamento di PTBD (fistola del moncone duodenale)



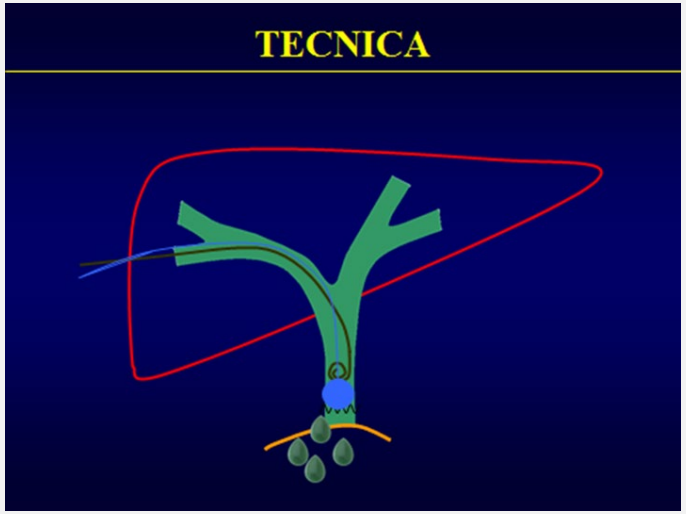






CHIRURGIA GASTRICA
Complicanze : leak duodenale

- Leak bilio enterico per deiescenza del moncone duodenale
- Trattamento non chirurgico prevede :
  - drenaggio raccolte
  - diversione biliare mediante posizionamento di PTBD, eventualmente associato a pallone da occlusione.



Pedicini, Poretti 2010, Management of post-surgical biliary leakage with percutaneous transhepatic biliary drainage (PTBD) and occlusion balloon (OB) in patients without dilatation of the biliary tree: preliminary results. Eur Radiol

J Gastrointest Surg. 2010 May;14(5):805-11. doi: 10.1007/s11605-010-1166-2. Epub 2010 Feb 9.

Duodenal fistula after elective gastrectomy for malignant disease : an italian retrospective multicenter study.

Cozzaglio L, Coladonato M, Biffi R, Coniglio A, Corso V, Dionigi P, Gianotti L, Mazzaferro V, Morgagni P, Rosa F, Rosati R, Roviello F, Doci R.

Ann Ital Chir. 2010 Jul-Aug;81(4):285-94.

Current role of surgery in the treatment of digestive fistulas.

Cozzaglio L, Farinella E, Coladonato M, Sciannameo F, Gennari L, Doci R.

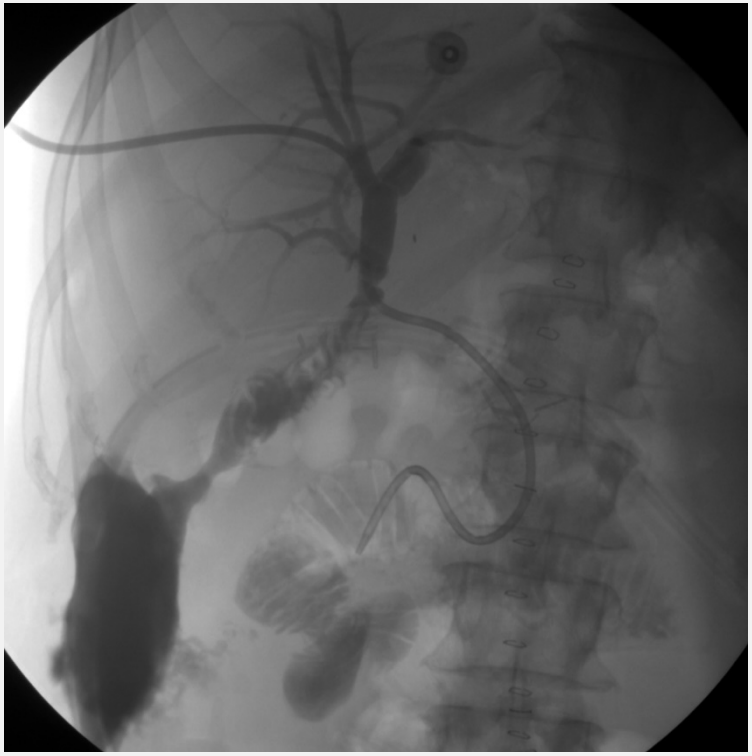
Department of Surgical Oncology, IRCCS Istituto Clinico Humanitas, Rozzano, Milano, Italy. luca.cozzaglio@humanitas.it

Percutaneous Transhepatic Biliary Drainage and Occlusion Balloon in the Management of Duodenal Stump Fistula

Luca Cozzaglio · Matteo Cimino · Giovanni Mauri · Antonella Ardito · Vittorio Pedicini · Dario Poretti · Giorgio Brambilla · Matteo Sacchi · Alessandra Melis · Roberto Doci

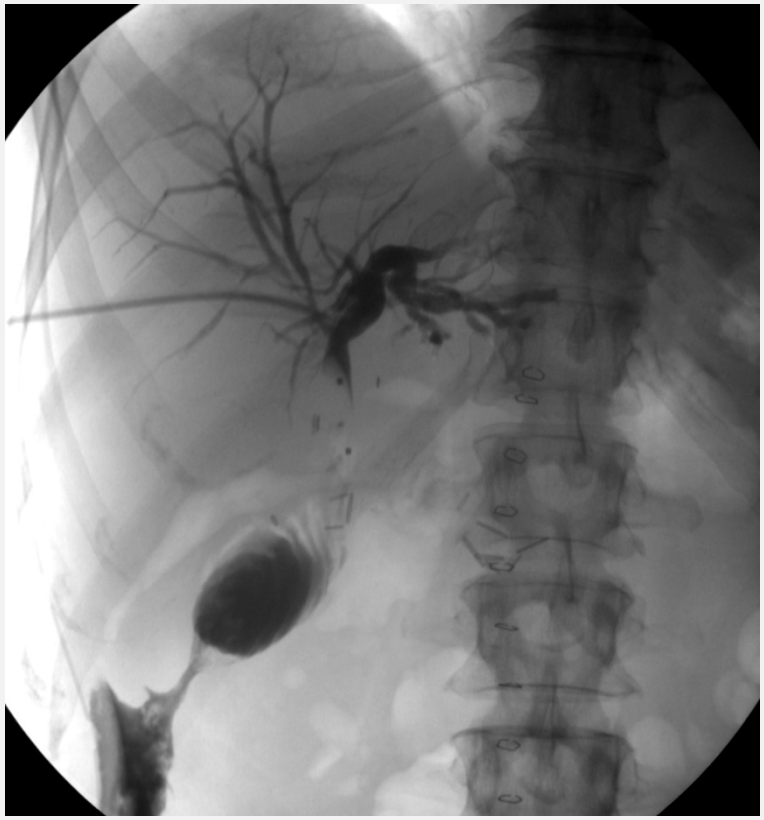
J Gastrointest Surg
DOI 10.1007/s11605-011-1668-6

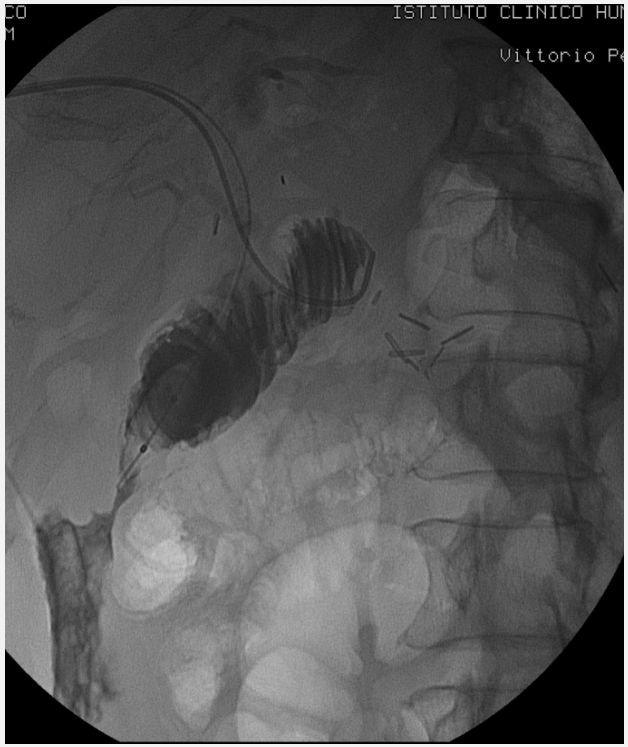
Caso II: leak biliare



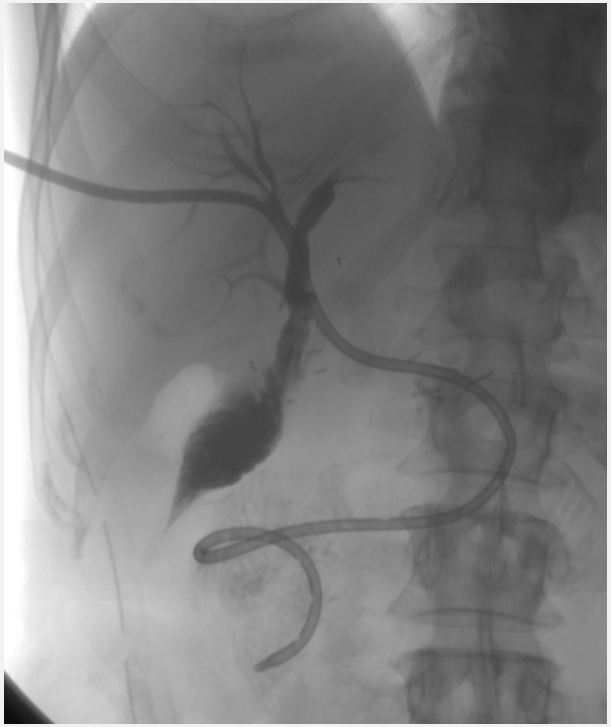
Posizionamento di OB

Leak a livello del moncone dell'ansa





Dislocazione OB

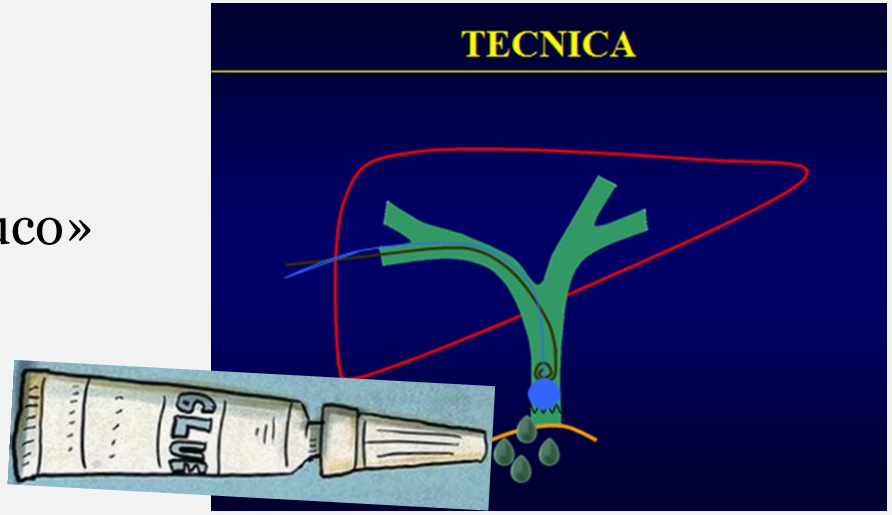


Completa risoluzione del leak

CHIRURGIA GASTRICA
Complicanze : leak duodenale

- Leak bilio enterico per deiescenza del moncone duodenale
- Trattamento non chirurgico prevede :
  - drenaggio raccolte
  - diversione biliare mediante posizionamento di PTBD, eventualmente associato a pallone da occlusione.

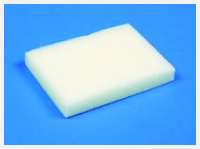
- In aggiunta: tentare di «chiudere il buco»



Mauri G . Clin Radiol. 2013 Jan;68(1):59-63. Post-surgical enteric fistula treatment with image-guided percutaneous injection of cyanoacrylic glue.

MATERIALS

- Embolizing materials



Dis Colon Rectum. 2007 Feb;50(2):251-6.

Percutaneous gelfoam embolization of chronic enterocutaneous fistulas: report of three cases.

Lisle DA, Hunter JC, Pollard CW, Borrowdale RC.

Redcliffe District Hospital, Redcliffe, Australia. dlisle@bigpond.net.au

Rofo. 2013 Jul 16. [Epub ahead of print]

Percutaneous Management of Postoperative Bile Leaks with an Ethylene Vinyl Alcohol Copolymer (Onyx).

Uller W, Müller-Wille R, Loss M, Hammer S, Schleder S, Goessmann H, Wiggermann P, Stroszczynski C, Wohlgemuth WA.

Department of Radiology, University Medical Center Regensburg.

- Glue

Post-surgical enteric fistula treatment with image-guided percutaneous injection of cyanoacrylic glue

G. Mauri [a,*], L.M. Sconfienza [b], B. Fiore [a], G. Brambilla [c], V. Pedicini [c], D. Poretti [c], R.F. Lutman [c], M. Montorsi [d], F. Sardanelli [e]

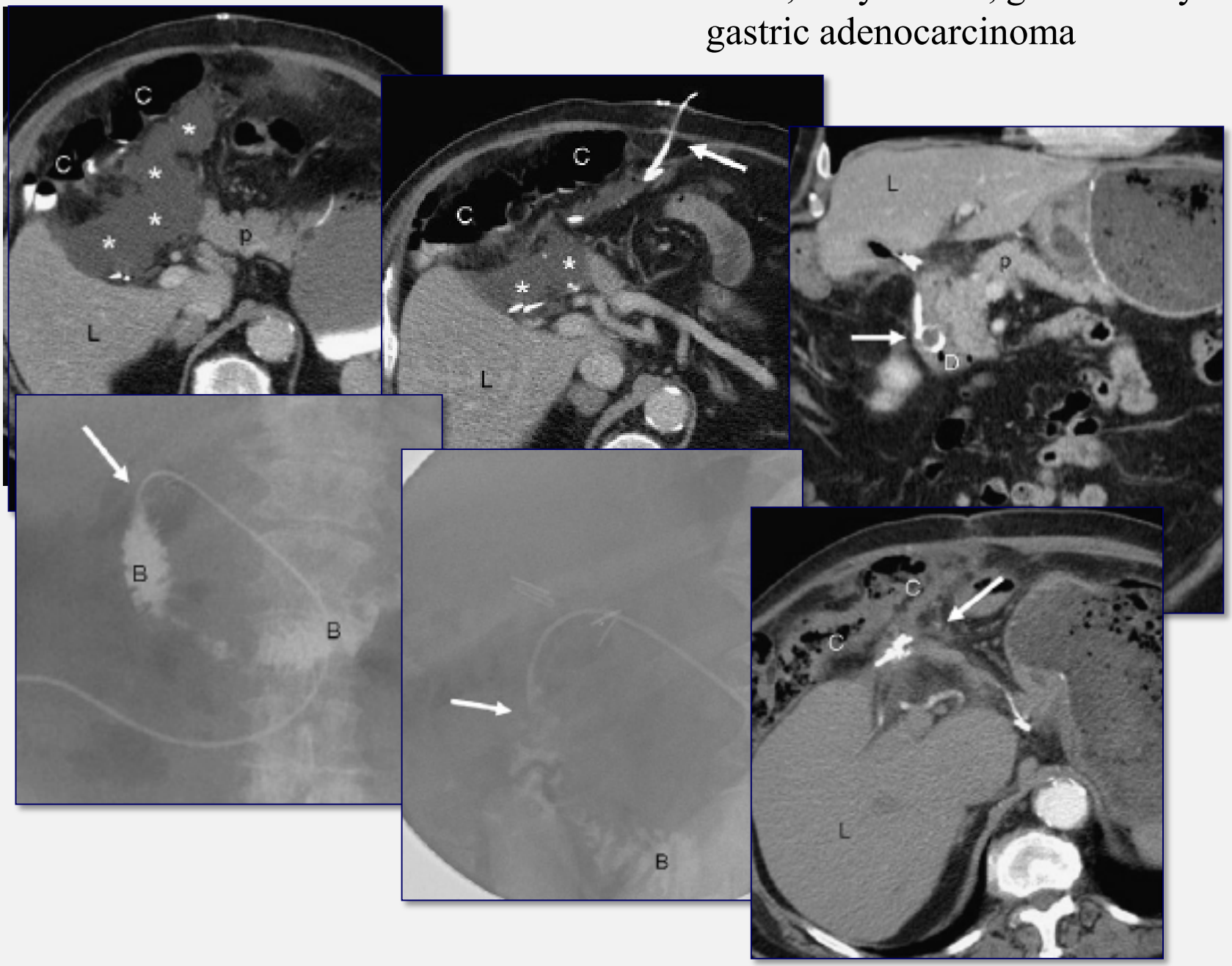
G. Mauri et al. / Clinical Radiology 68 (2013) 59–63

Clinical studies on management of G.I fistulas with cyanoacrylates.

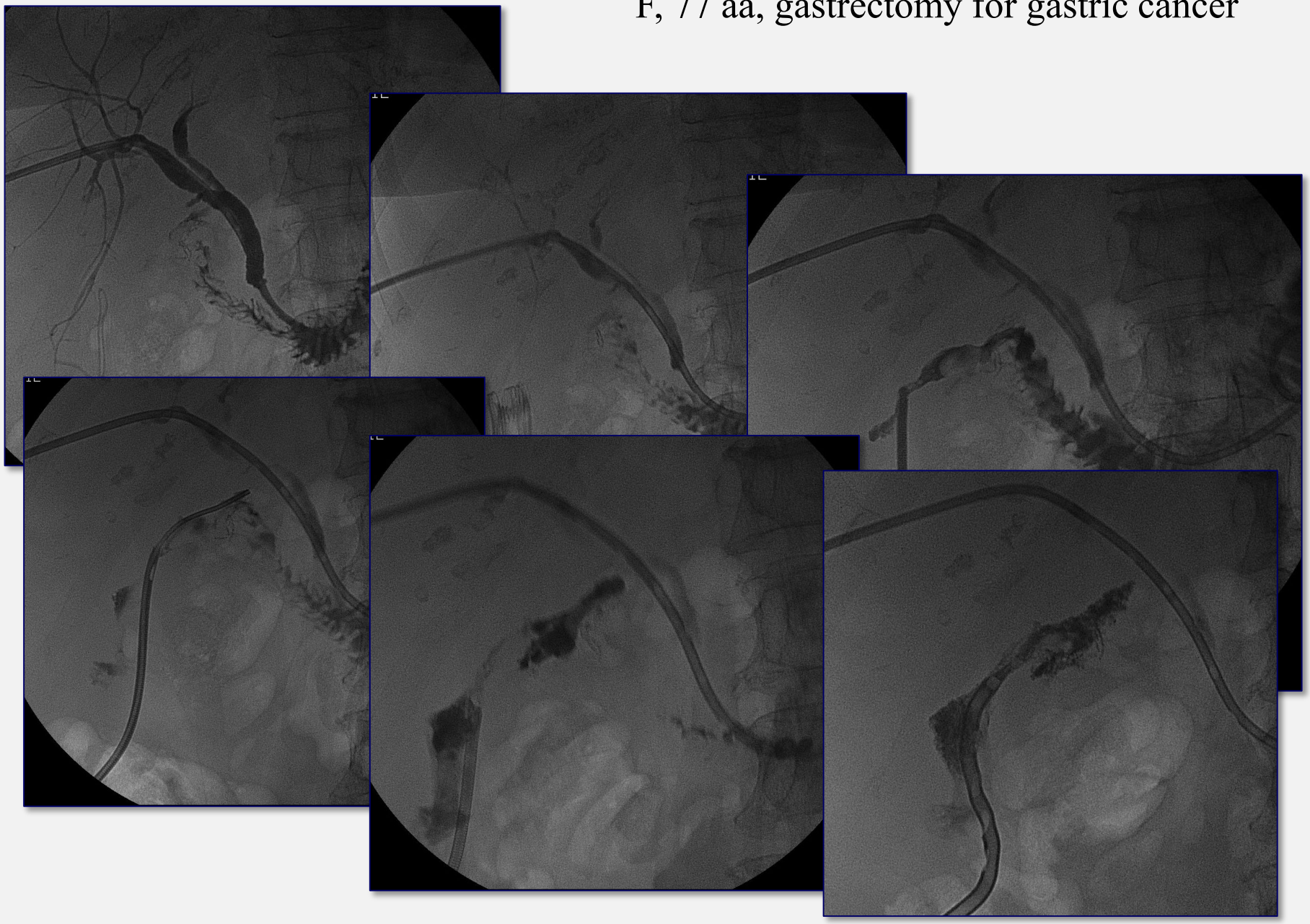
Author	Year	n	Type	Approach	Material (n)	Success n (%)	No. of sessions (mean)
Drury	1995	2	Oesophageal-pleural	Percutaneous	NB2CA + Lipiodol NB2CA + Spongostan + Lipiodol	1 (100%) n/a	1 1
Willets	1998	11	Tracheo-oesophageal	Endoscopic	NB2CA alone (8) NB2CA + Sclerosant (2) NB2CA + FG (1)	3 (38%) 2 (100%) 0	2.5 1 2
Tzifa	2006	10	Tracheo-oesophageal	Endoscopic	Diathermy + NB2CA + Lipiodol (10)	9 (90%)	1.1
Hosseini	2011	5	Tracheo-oesophageal	Endoscopic	NB2CA/MS	5 (100%)	n/a
Lukish	2010	7	Gastro-cutaneous	Percutaneous	2OC alone	4 (57%)	3
Bège	2011	15	Gastro-peritoneal	Endoscopic	NB2CA/MS + Lipiodol (3) NB2CA/MS + Lipiodol + Clips (12)	3 (100%) 12 (100%)	n/a n/a
Seewald	2002	9	Biliary	Endoscopic (ERCP)	NB2CA + Lipiodol	7 (78%)	1.2
Vu	2006	6	Biliary	Endoscopic (ERCP)	NB2CA + Ethiodol + tantalum (4) NB2CA + Ethiodol + tantalum + microcoil	6 (100%)	1.3
Yagci	2007	5	Biliary	Percutaneous	NB2CA alone (2) NB2CA + Microcoils (2) NB2CA + Stent (1)	2 (100%) 2 (100%) 1 (100%)	1
Seewald	2004	12	Pancreatic	Endoscopic (ERCP)	NB2CA + Lipiodol	8 (67%)	1.1
Mutignani	2004	4	Pancreatic	Endoscopic (ERCP)	NB2CA/MS + Lipiodol	3 (75%)	1
Labori	2009	4	Pancreatic	Endoscopic (ERCP)	NB2CA + Lipiodol	4 (100%)	1.3
Dalton	2000	2	Gastro-duodenal	Percutaneous	NB2CA alone	2 (100%)	n/a
Mauri	2013	3	Duodenal (1) Yeyunal (1) Ileal (1)	Percutaneous	NB2CA/MS + Lipiodol (2) Gelfoam + NB2CA/MS + Lipiodol (1)	2 (100%) 1 (100%)	1

Courtesy of Julio López Monclova, Dept of Surgery, Mexican Institute for Social Security

Male, 82-year-old, gastrectomy for gastric adenocarcinoma

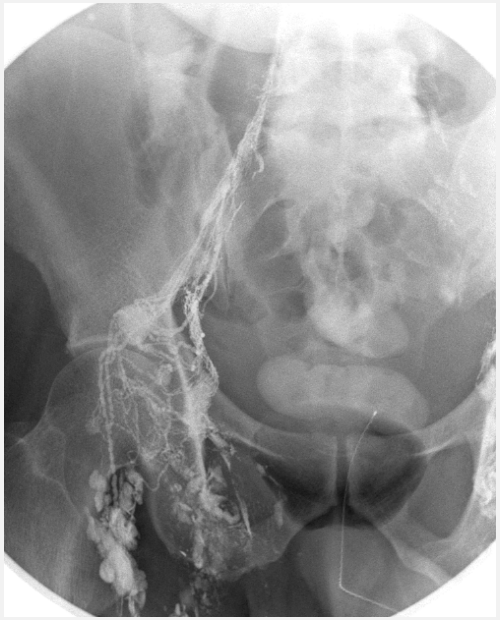


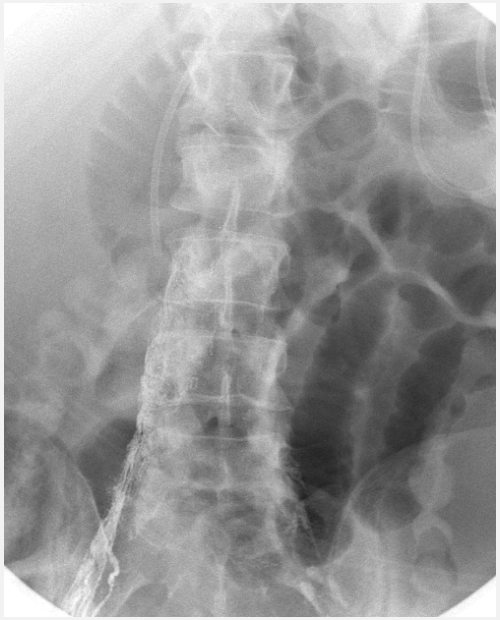
F, 77 aa, gastrectomy for gastric cancer

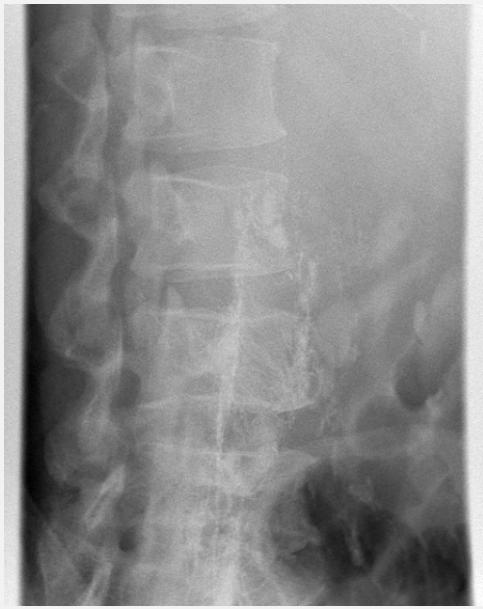


CHIRURGIA GASTRICA
Complicanze: lesioni linfatiche

- Lesioni linfatiche
  - Intranodal lymphangiography







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Massima comprensione per il paziente complicato

Grazie!

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Grazie