

# GRAND ROUNDS CLINICI DEL MERCOLEDÌ con il Policlinico San Matteo

Sistema Socio Sanitario



Regione  
Lombardia



Fondazione IRCCS  
Policlinico San Matteo

ATS Pavia

Aula Magna "C. Golgi"  
& WEBINAR

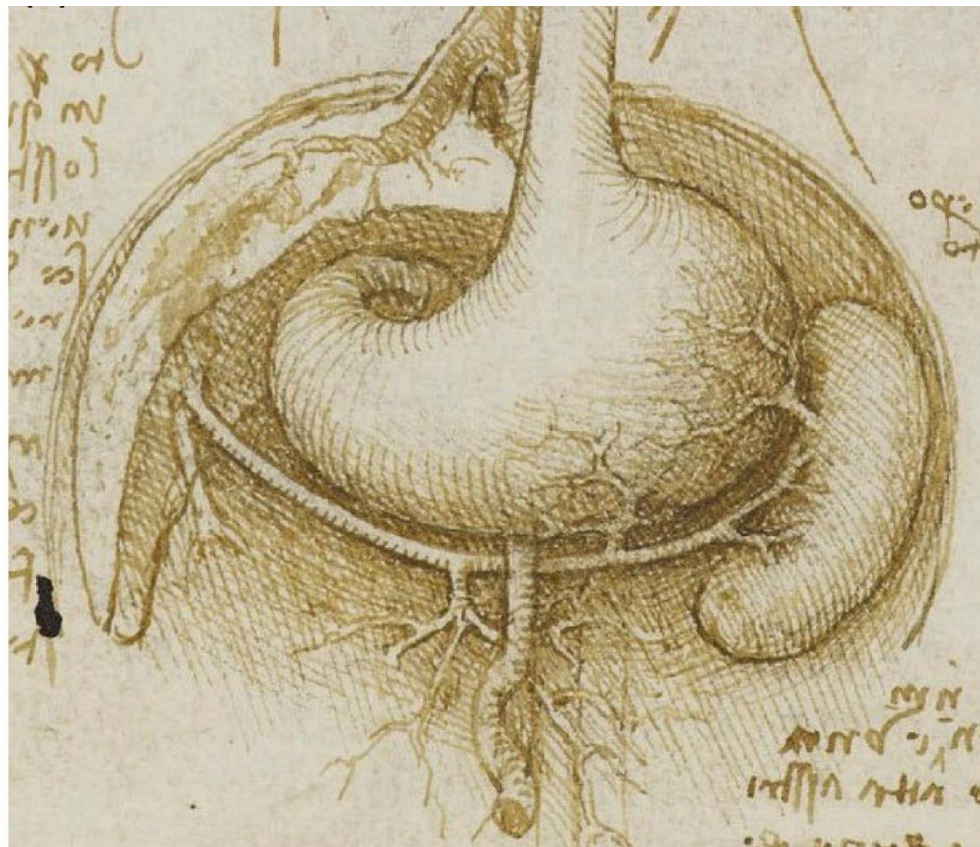
25 Maggio 2022

*Lorenzo Cobianchi*

***Pancreatite Acuta Necrotica Severa: when less is more.***



GRAND ROUNDS CLINICI DEL MERCOLEDÌ



The pancreas has been referred to as “no man's land,” which may explain why even the brightest thinkers in the East and West did not describe the pancreas in their anatomical diagrams



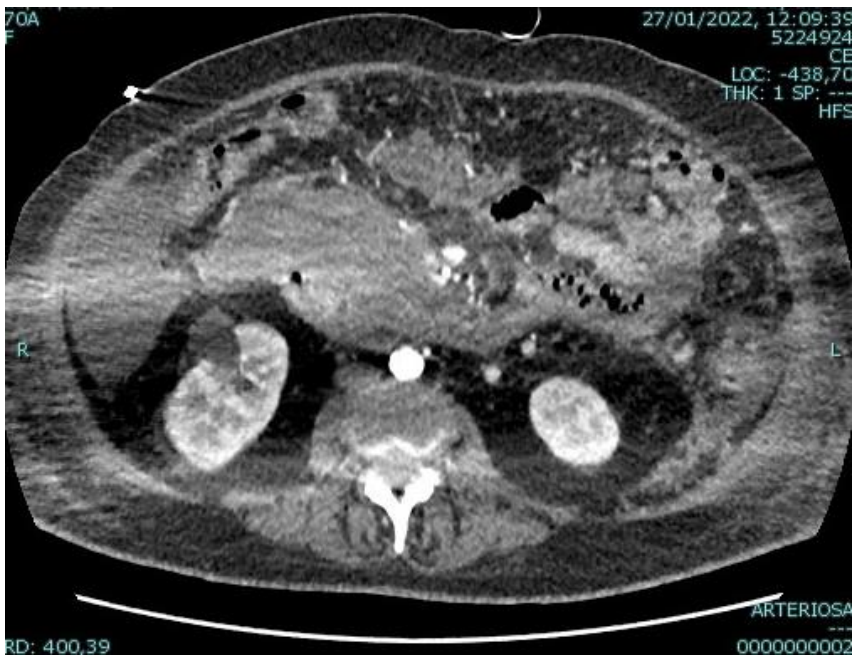
- Donna di 70 anni
- Diabete Mellito di tipo II in terapia insulinica
- Colelitiasi
- Istero-annessiectomia bilaterale per fibromatosi
- Obesità

Trasferita in data 11/01 presso la terapia intensiva da altro ospedale per pancreatite acuta severa

Quadro clinico d'ingresso caratterizzato da una insufficienza respiratoria senza altro impairment significativo



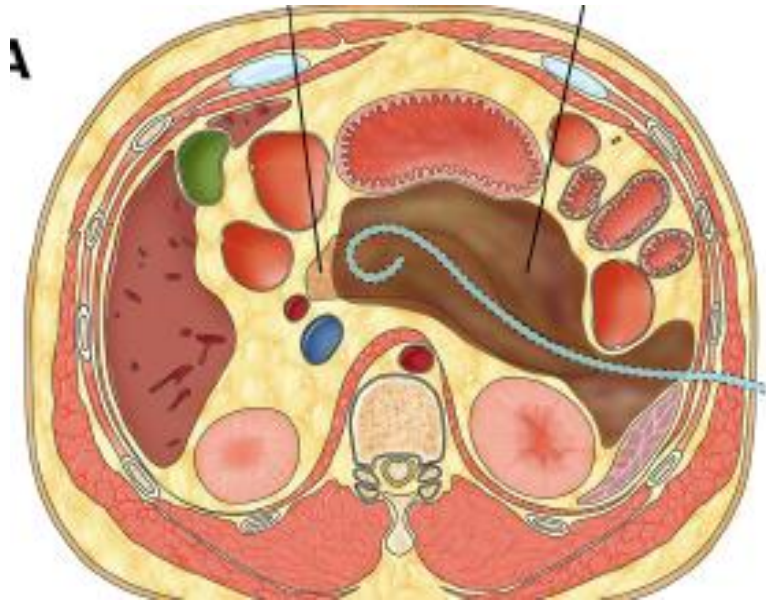




TC al trasferimento da altro ospedale

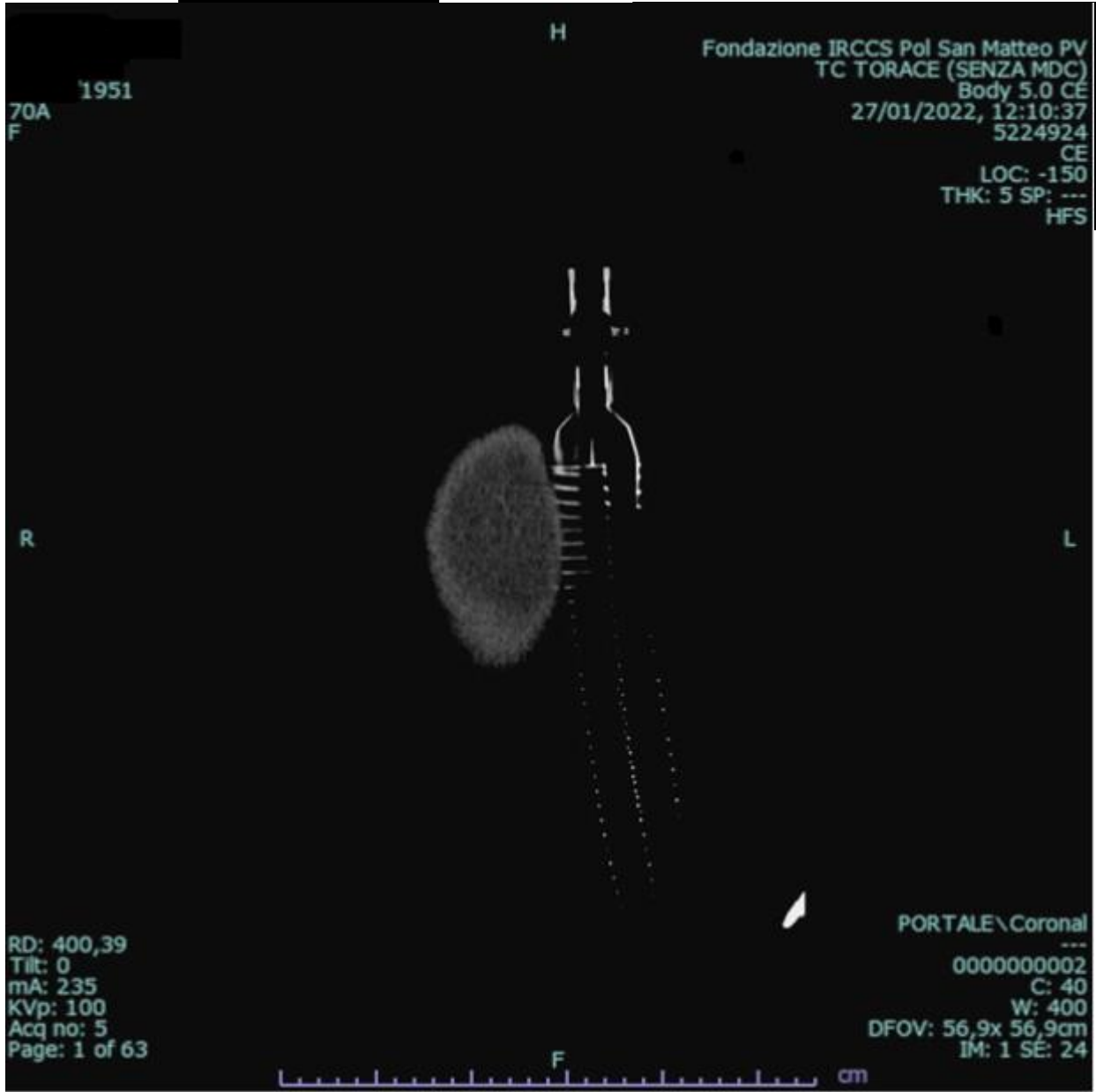


- 12/01 viene eseguito drenaggio percutaneo di una delle raccolte
- 17/01 viene eseguita tracheostomia



Nel corso di questa prima settimana la paziente  
NON sviluppa ipertensione addominale





27/01 (17 gg)  
Post posizionamento  
drenaggio percutaneo

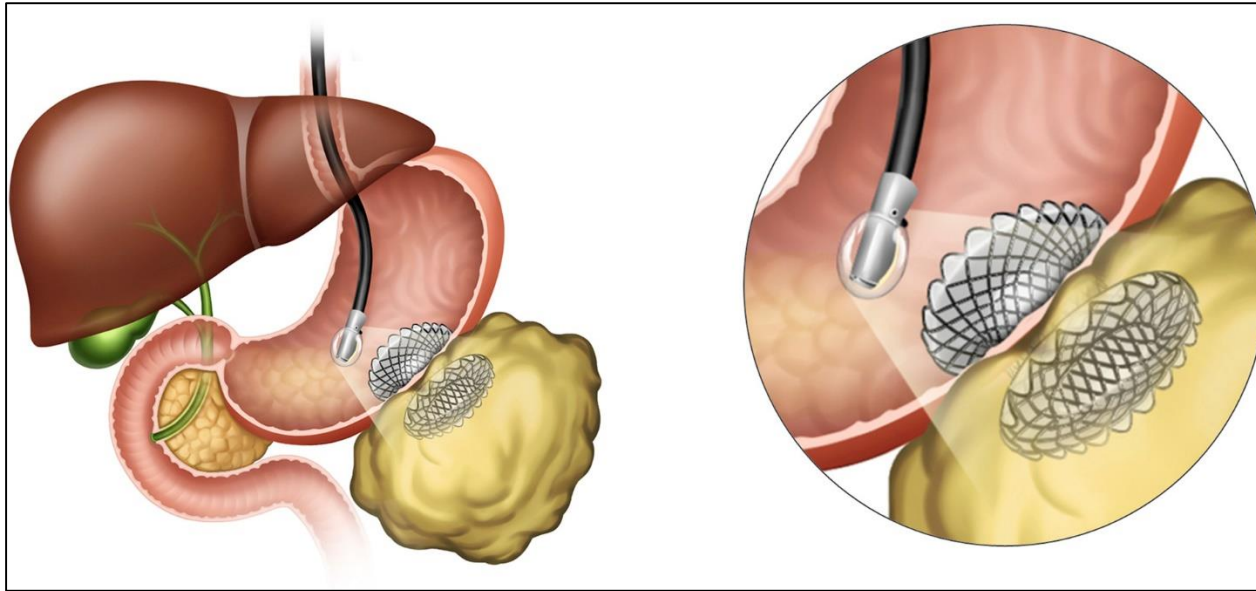


05/02 (25gg)



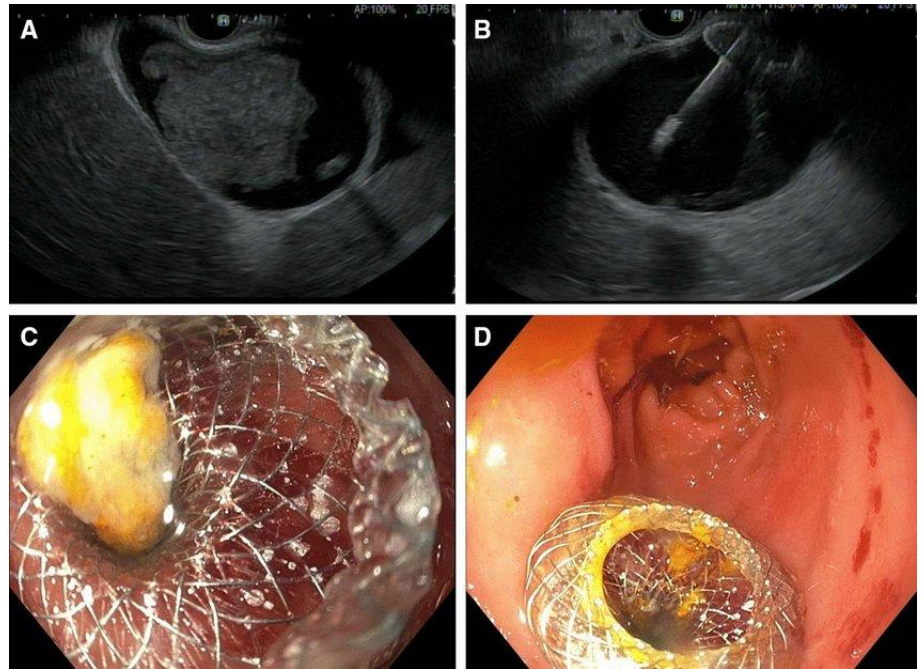
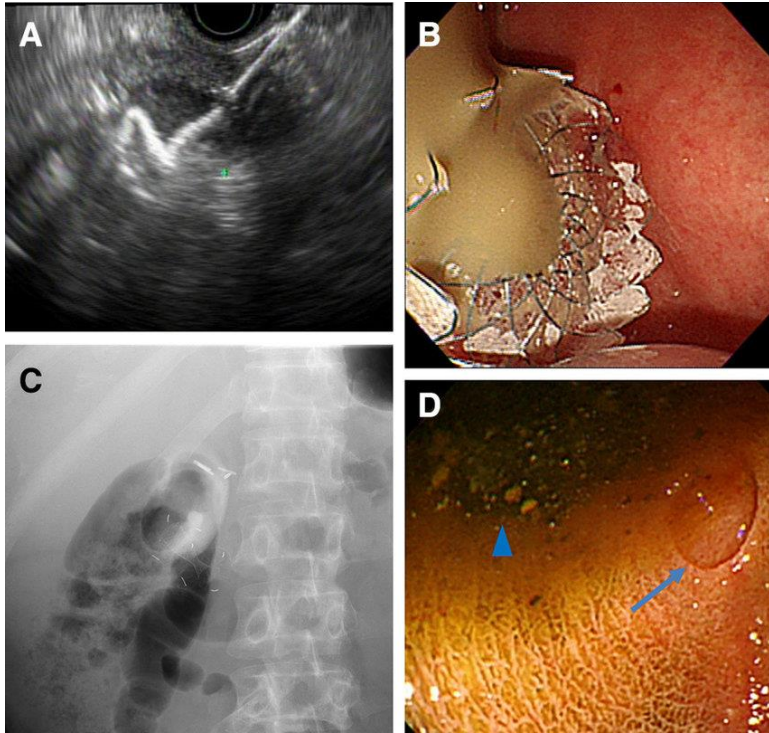


9/02 (28gg) Alla luce del quadro clinico, della TC. Si decide per drenaggio ecoendoscopico.



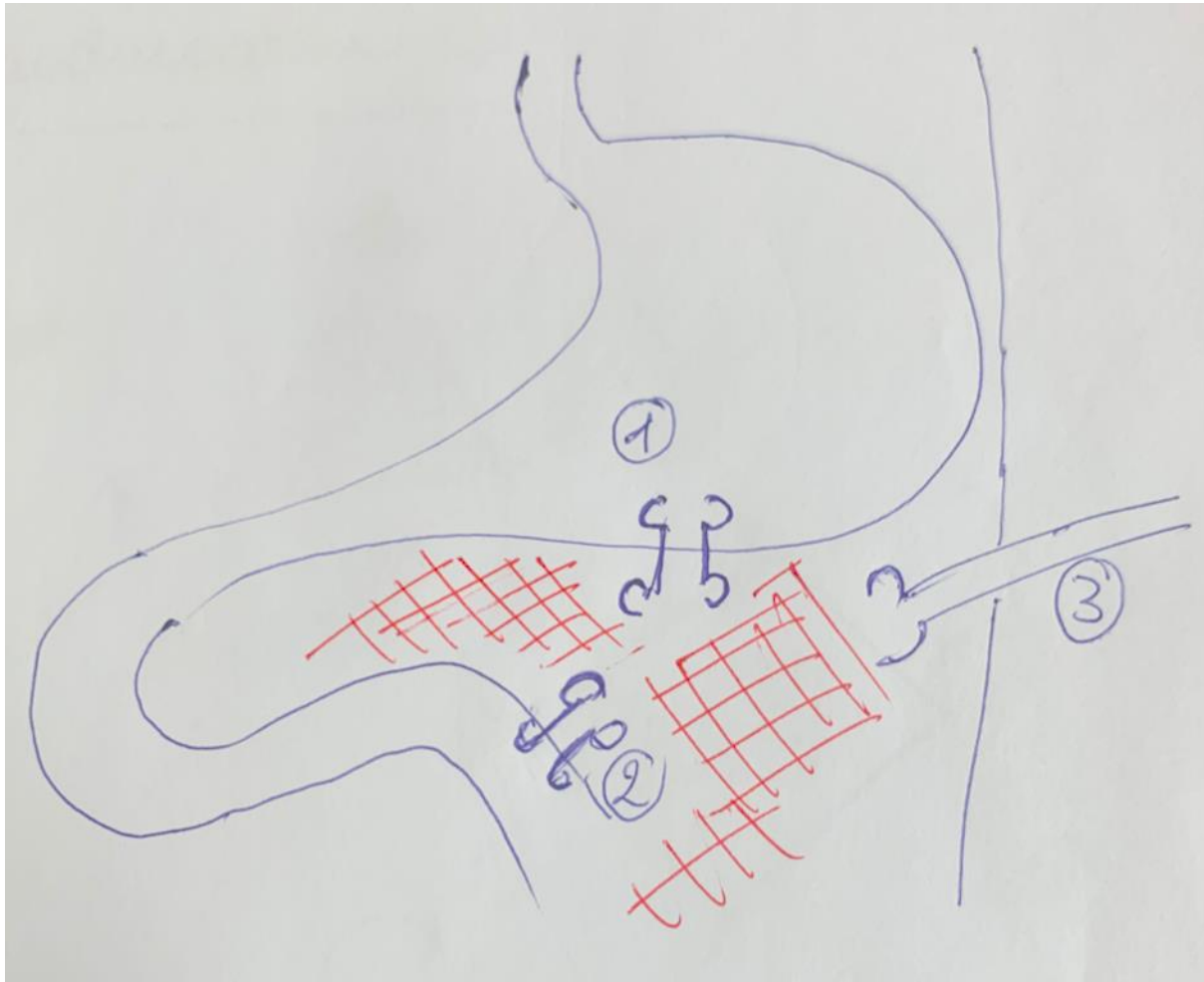
- drenaggio ecoendoscopico transgastrico e transduodenale (**multi-gate**) di raccolta necrotica infetta peripancreatica mediante protesi LAMS con successiva necrosectomia. Drenaggio percutaneo della raccolta con tubo da 20 Fr per eseguire multipli lavaggi. Posizionamento di sondino naso digiunale per nutrizione enterale.





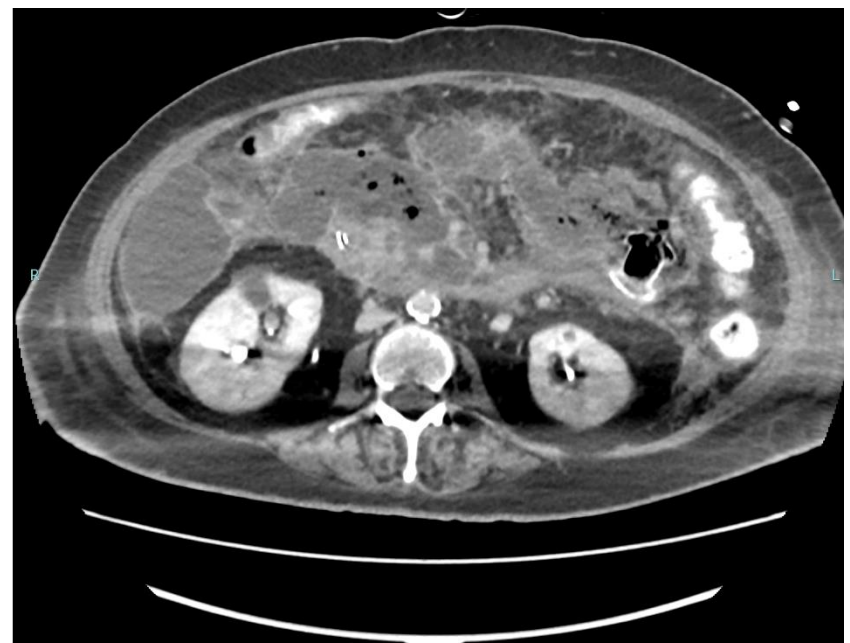
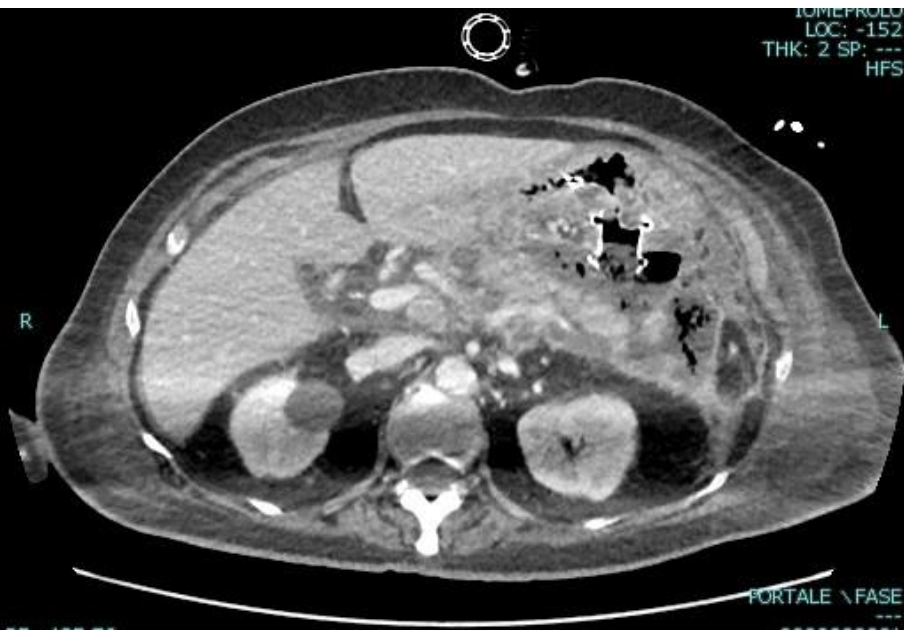


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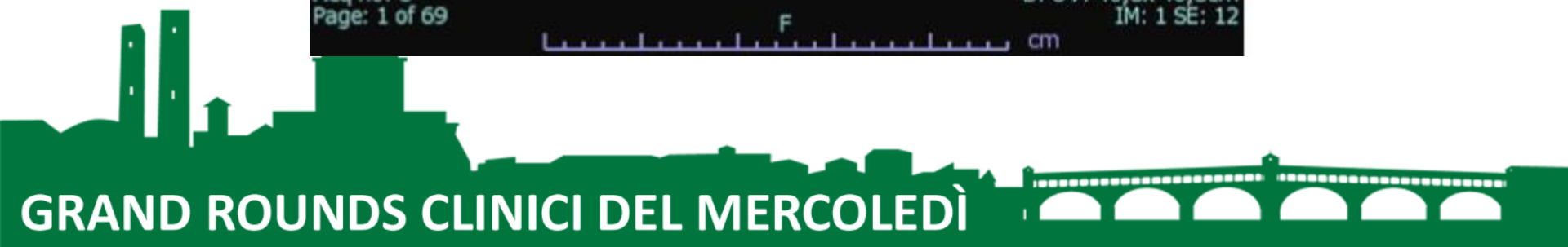
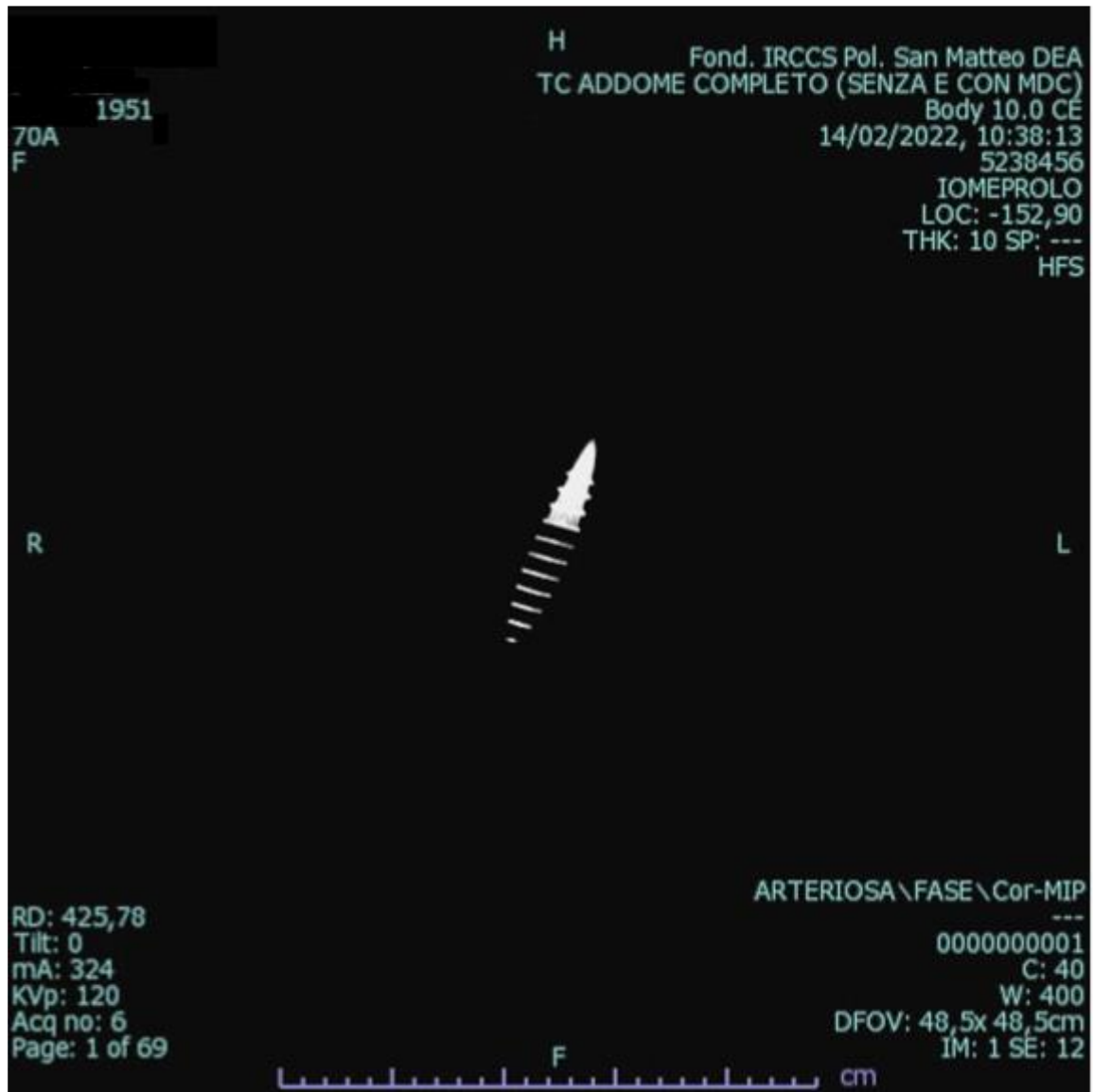


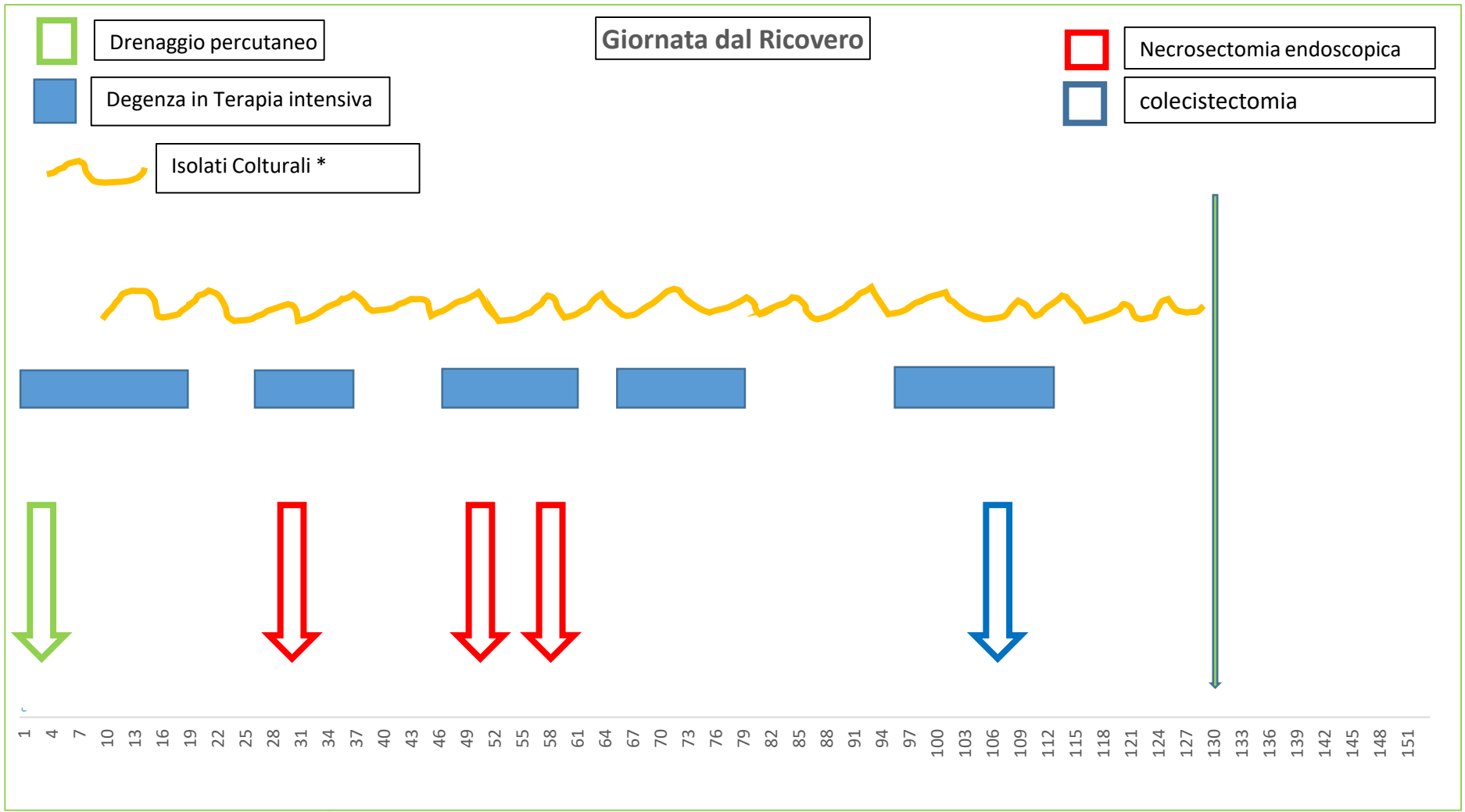
GRAND ROUNDS CLINICI DEL MERCOLEDÌ







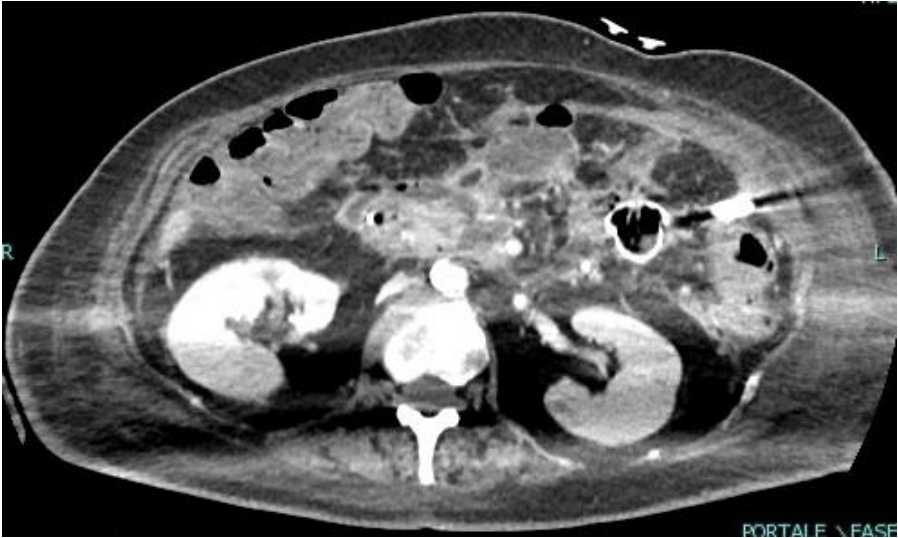




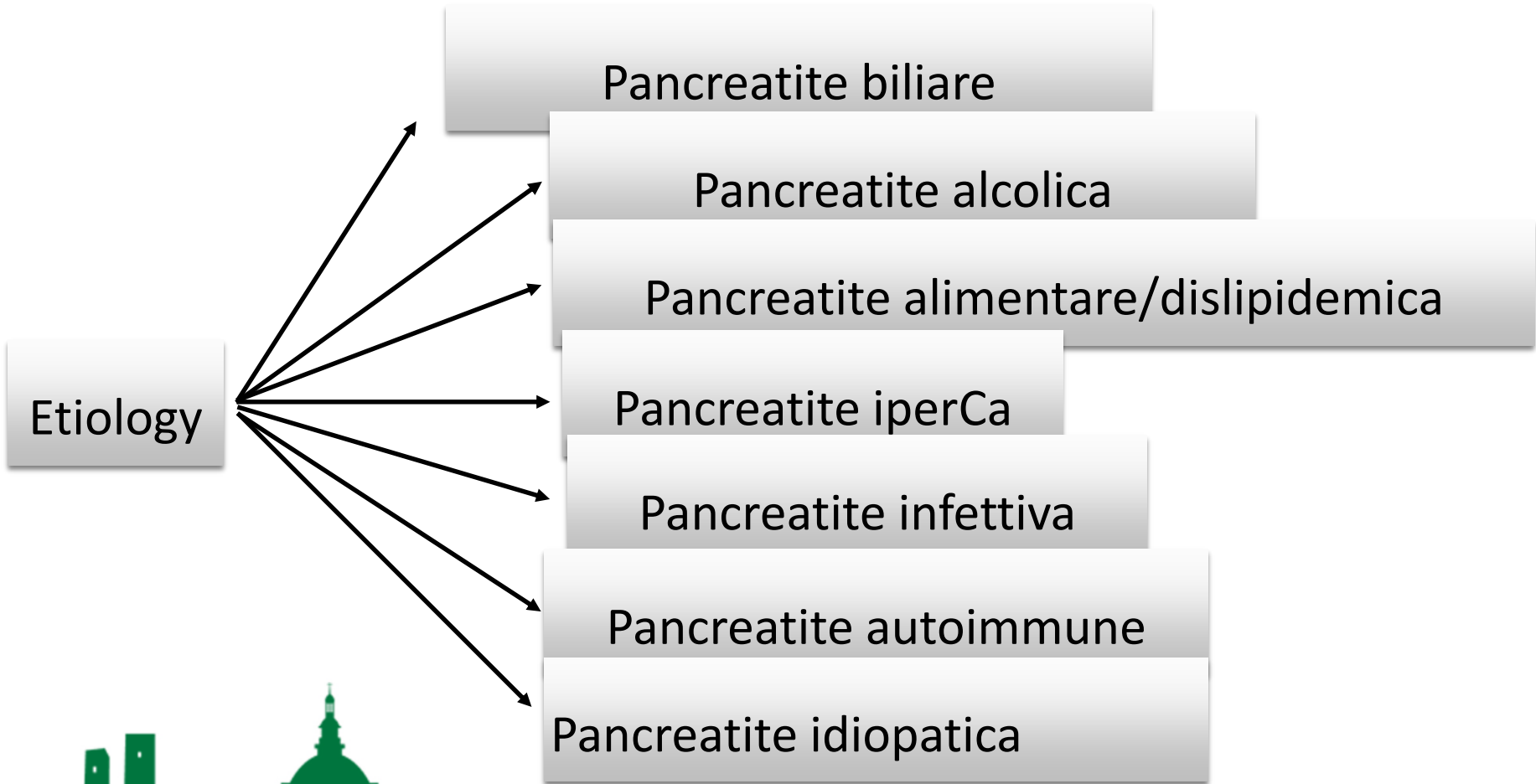
\* Enterococcus Faecium; Klebsiella pneumonie; pseudomonas; Candida parapsilosis...



Ultima TC 4/4 (83 gg)



# Diagnosis of acute pancreatitis and etiology





# Organ failure

organi bersaglio:

**1 Cuore**

**2 Polmone**

**3 Rene**



# Organ failure

Three organ systems should be assessed to define organ failure: respiratory, cardiovascular and renal. Organ failure is defined as a score of 2 or more for one of these three organ systems using the modified Marshall scoring system<sup>2</sup>

Organ system	Score				
	0	1	2	3	4
Respiratory (PaO <sub>2</sub> /FiO <sub>2</sub> )	>400	301–400	201–300	101–200	≤101
Renal*					
(serum creatinine, μmol/l)	≤134	134–169	170–310	311–439	>439
(serum creatinine, mg/dl)	<1.4	1.4–1.8	1.9–3.6	3.6–4.9	>4.9
Cardiovascular (systolic blood pressure, mm Hg)†	>90	<90, fluid responsive	<90, not fluid responsive	<90, pH<7.3	<90, pH<7.2

# Principi di terapia

**Idratare**

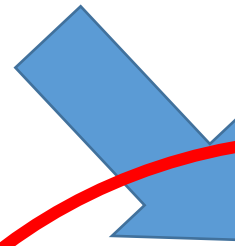
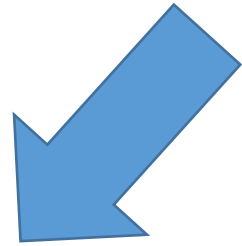
**Nutrire**

**Non fare cose inutili**

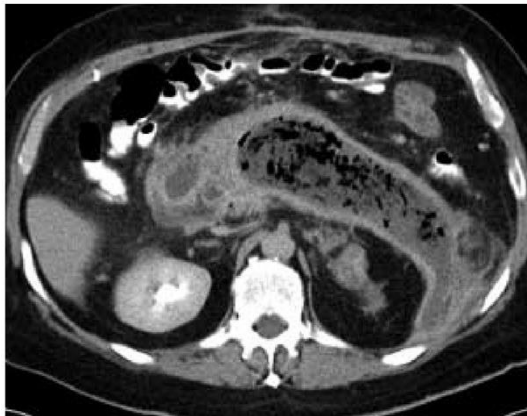
**Trattare la causa eziologica**



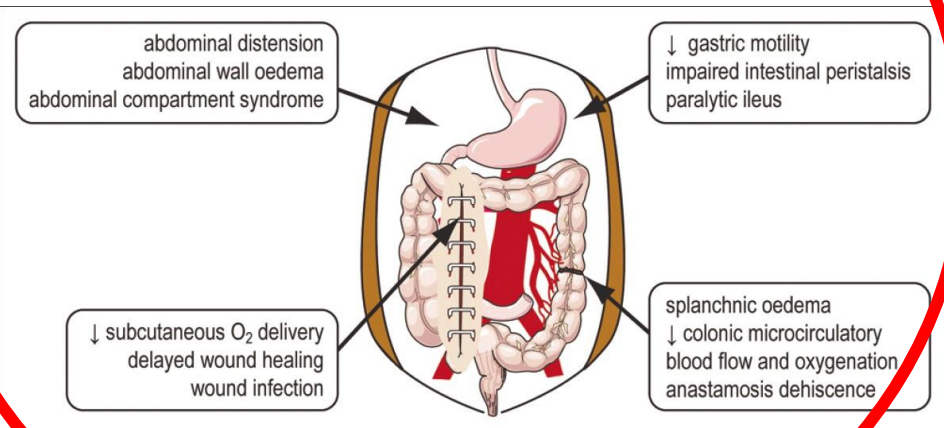
# Come evolve dal punto di vista addomnale una pancreatite acuta necrotica



Infezione delle raccolte



Sindrome compartimentale addominale





## Gestione sindrome compartimentale: definizioni

$$\text{APP} = \text{MAP} - \text{IAP}$$

APP, Pressione di perfusione addominale

MAP, Pressione arteriosa media

IAP, Pressione intra-addominale

$$\text{FG} = \text{GFP} - \text{PTP} = \text{MAP} - 2 \times \text{IAP}$$

FG, Gradente di filtrazione

GFP, Pressione di filtrazione glomerulare

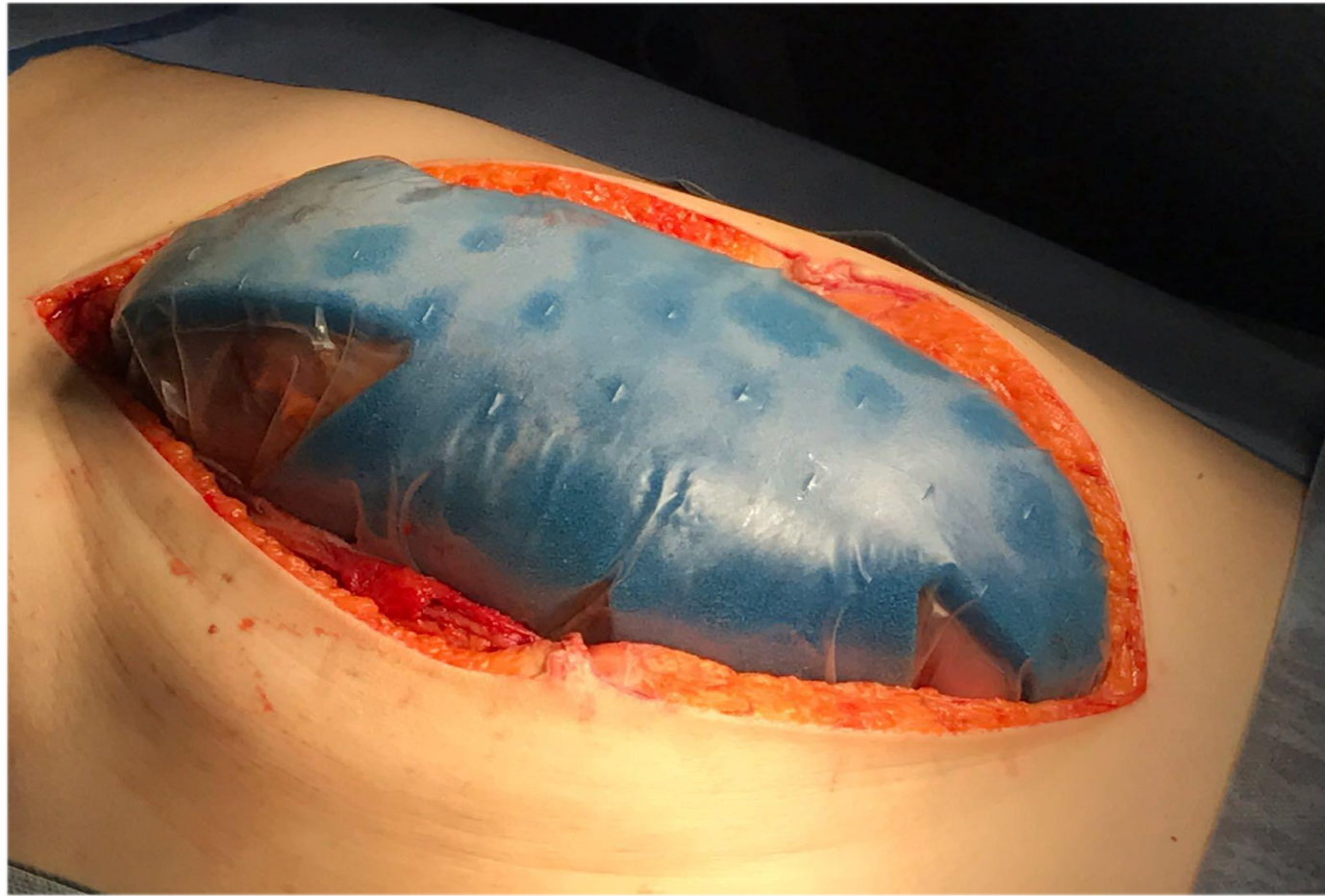
PTP, Pressione tubulo prossimale

**La Pressione intraddominale (IAP)** è correlata in maniera inversamente proporzionale a:

- Perfusione splancnica
- Funzionalità renale
- Meccanica respiratoria
- Pressione intracranica

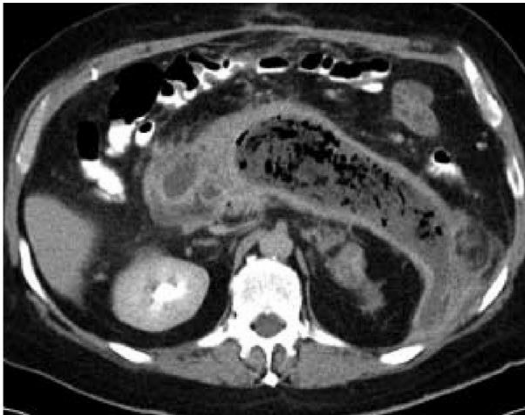


## Gestione sindrome compartimentale nella pancreatica severa



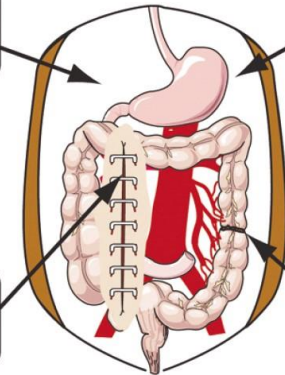
# Come evolve dal punto di vista addomnale una pancreatite acuta necrotica

## Infezione delle raccolte



## Sindrome compartimentale addominale

abdominal distension  
abdominal wall oedema  
abdominal compartment syndrome



↓ gastric motility  
impaired intestinal peristalsis  
paralytic ileus

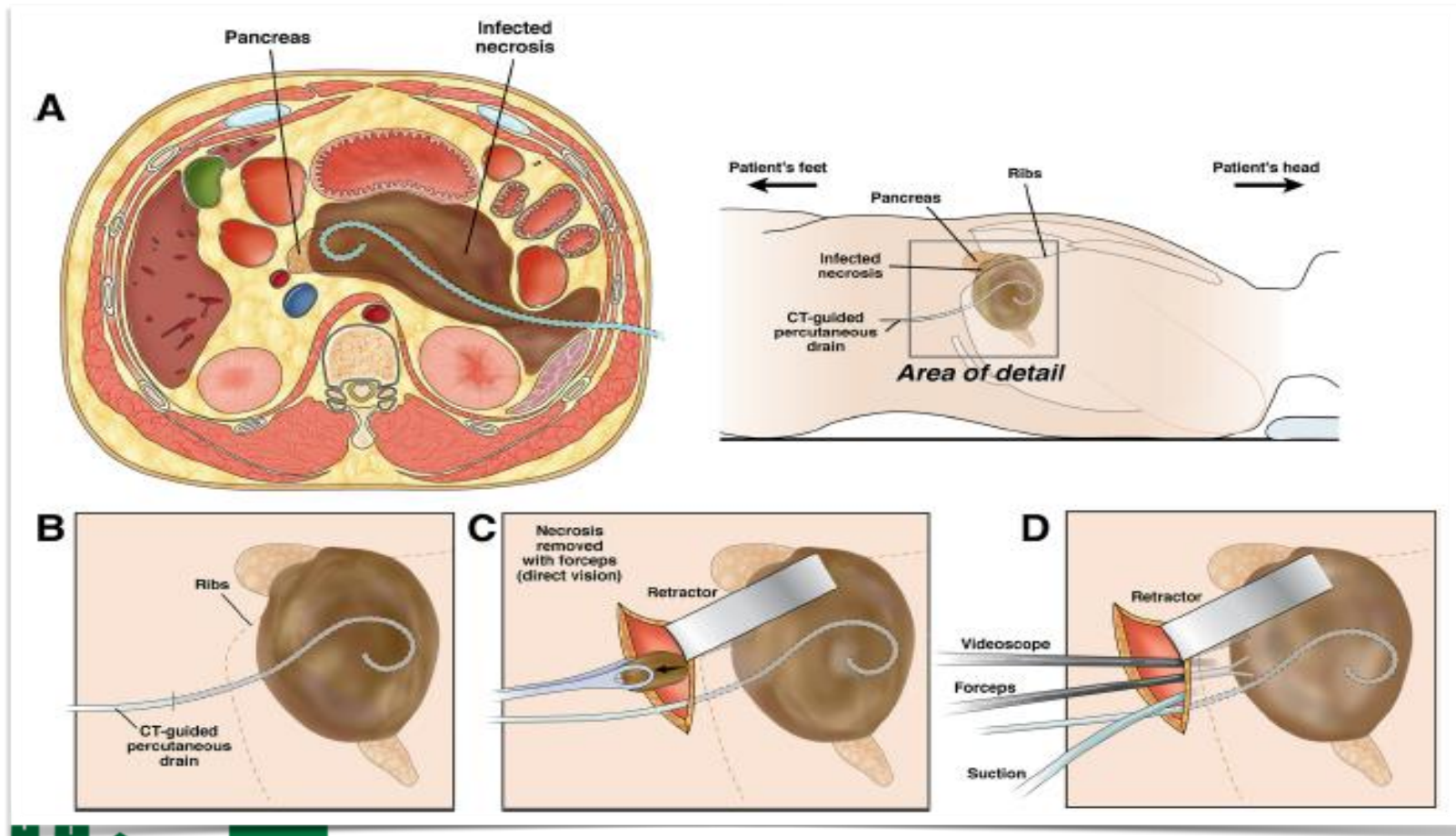
↓ subcutaneous O<sub>2</sub> delivery  
delayed wound healing  
wound infection

splanchnic oedema  
↓ colonic microcirculatory  
blood flow and oxygenation  
anastomosis dehiscence

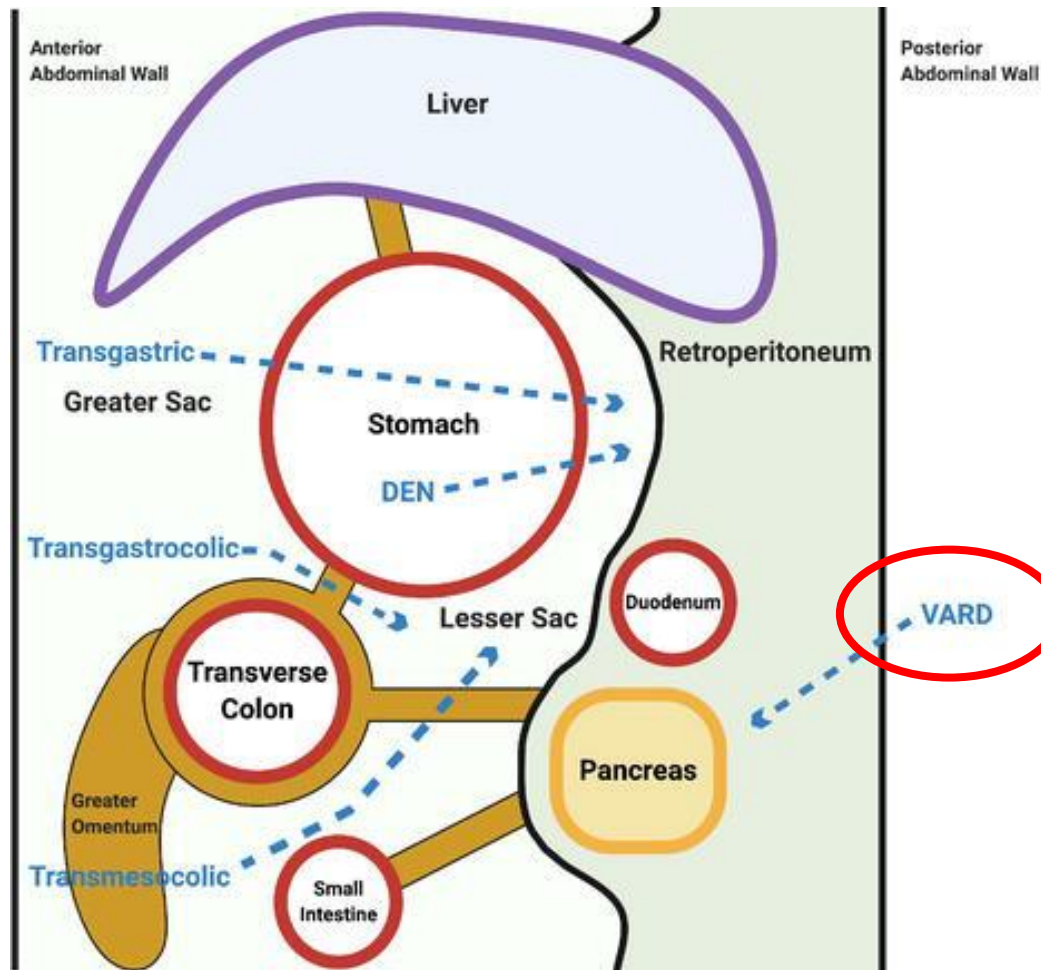
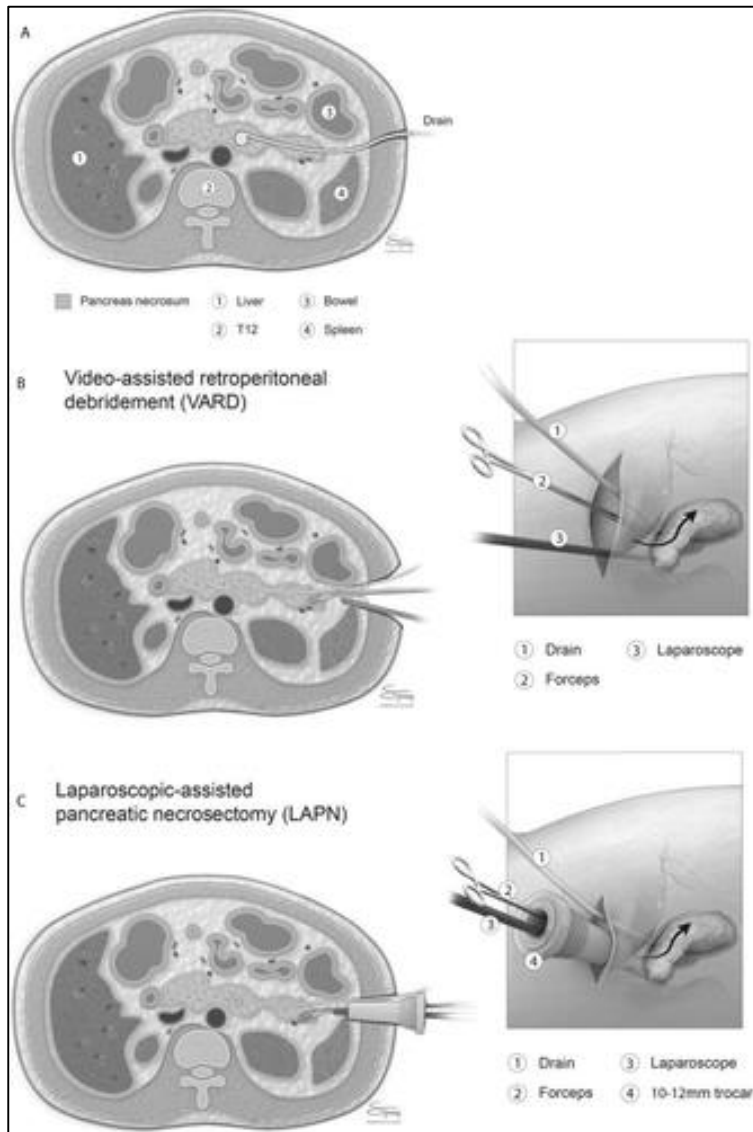


# Gestione raccolte infette

## 1. VIDEOSCOPIC ASSISTED RETROPERITONEAL DEBRIDEMENT (VARD)



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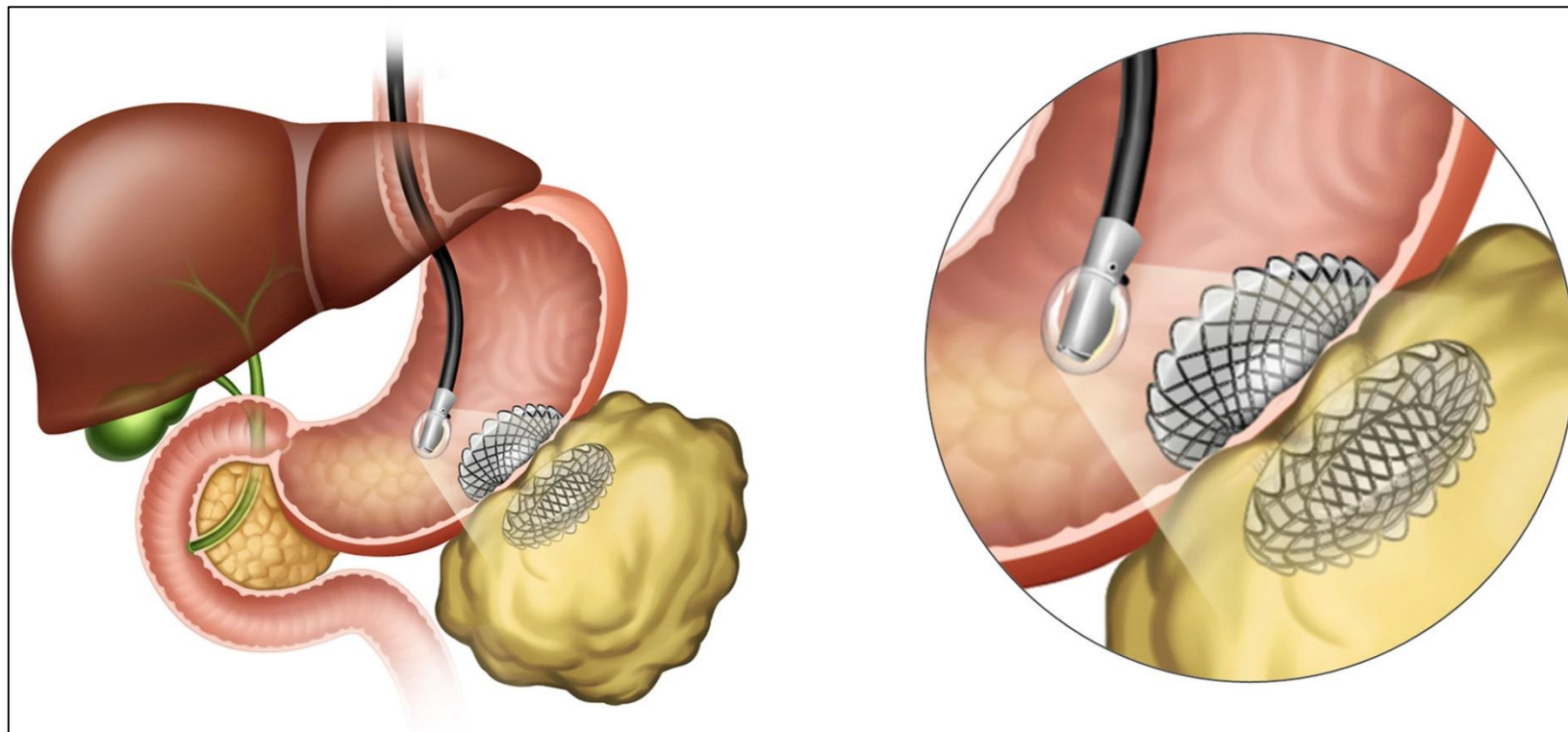
# 1. VIDEOSCOPIC ASSISTED RETROPERITONEAL DEBRIDEMENT (VARD)





# Gestione raccolte infette

## 2. Necrosectomia endoscopica



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Surgical Endoscopy (2021) 35:1741–1748  
<https://doi.org/10.1007/s00464-020-07567-8>

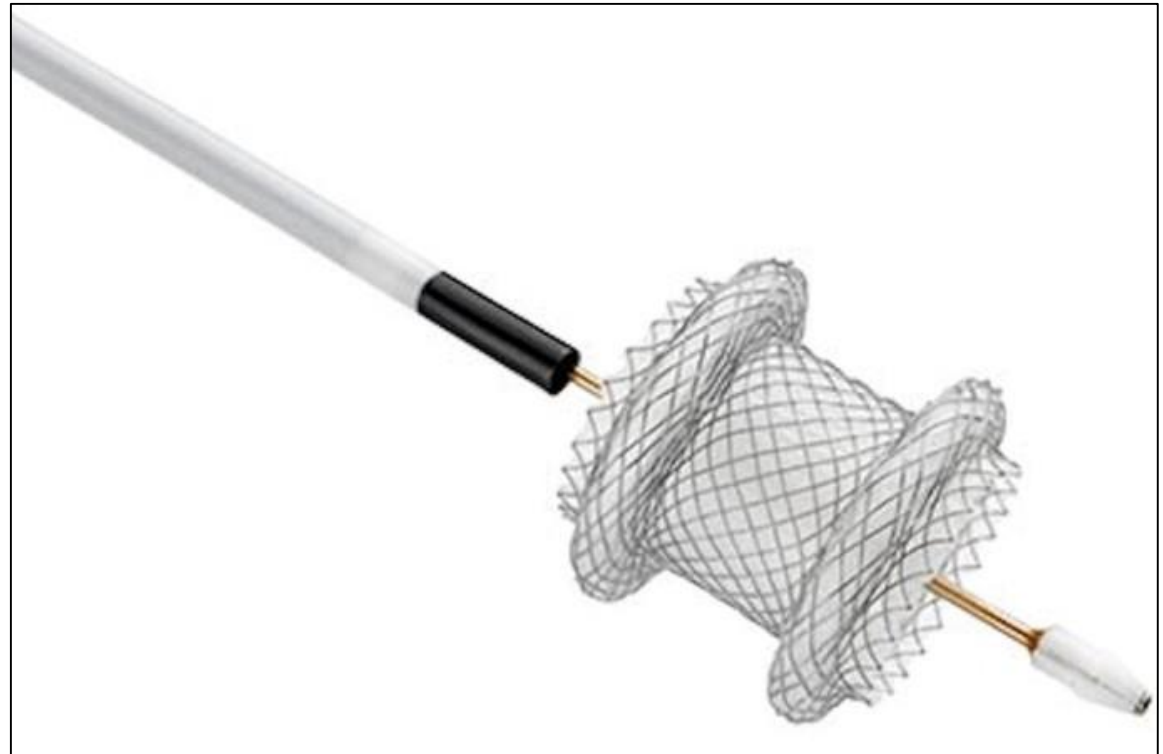


### The safety and efficacy of a new 20-mm lumen apposing metal stent (lams) for the endoscopic treatment of pancreatic and peripancreatic fluid collections: a large international, multicenter study

Andrea Anderloni<sup>1</sup> · Carlo Fabbri<sup>2</sup> · Jose Nieto<sup>3</sup> · Will Uwe<sup>4</sup> · Markus Dollhopf<sup>5</sup> · José Ramón Aparicio<sup>6</sup> · Manuel Perez-Miranda<sup>7</sup> · Ilaria Tarantino<sup>8</sup> · Alexander Arlt<sup>9</sup> · Frank Vleggaar<sup>10</sup> · Geoffrey Vanbiervliet<sup>11</sup> · Jochen Hampe<sup>12</sup> · Michel Kahaleh<sup>13</sup> · Juan J. Vila<sup>14</sup> · Barham K. Abu Dayyeh<sup>15</sup> · Andrew C. Storm<sup>15</sup> · Alessandro Fugazza<sup>1</sup> · Cecilia Binda<sup>2</sup> · Antoine Charachon<sup>16</sup> · Sergio Sevilla-Ribota<sup>7</sup> · Amy Tyberg<sup>13</sup> · Moran Robert<sup>17</sup> · Sachin Wani<sup>18</sup> · Alessandro Repici<sup>1,19</sup> · Amrita Sethi<sup>20</sup> · Mouen A. Khashab<sup>17</sup> · Rastislav Kunda<sup>21,22</sup>

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The Hot-AXIOS™ stent, preloaded in an electrocautery-enhanced delivery device and catheter, made up of braided nitinol and fully covered with silicone, with wide flanges on both ends



**REVIEW**

**Open Access**

## 2019 WSES guidelines for the management of severe acute pancreatitis



Ari Leppäniemi<sup>1\*</sup>, Matti Tolonen<sup>1</sup>, Antonio Tarasconi<sup>2</sup>, Helmut Segovia-Lohse<sup>3</sup>, Emiliano Gamberini<sup>4</sup>, Andrew W. Kirkpatrick<sup>5</sup>, Chad G. Ball<sup>5</sup>, Neil Parry<sup>6</sup>, Massimo Sartelli<sup>7</sup>, Daan Wolbrink<sup>8</sup>, Harry van Goor<sup>8</sup>, Gianluca Baiocchi<sup>9</sup>, Luca Ansaloni<sup>10</sup>, Walter Biffi<sup>11</sup>, Federico Coccolini<sup>10</sup>, Salomone Di Saverio<sup>12</sup>, Yoram Kluger<sup>13</sup>, Ernest Moore<sup>14</sup> and Fausto Catena<sup>2</sup>





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Il percorso terapeutico DEVE essere

**INTEGRATO**

Chirurgo

Radiologo

Rianimatore

Fisiatra

Endoscopista

Nutrizionista

Infettivologo



**Questioni da affrontare**

- **Aspetti organizzativi Gestionali**
- **Destini Riabilitativi**



**Grazie**

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