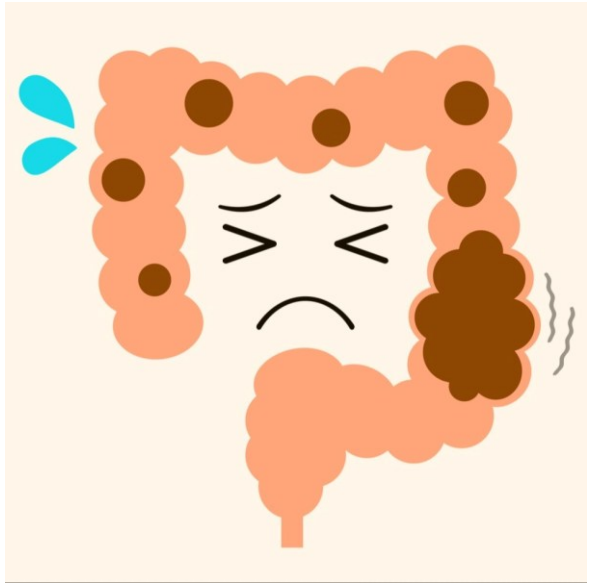
UNIVERSITÀ DEGLI STUDI DI TRIESTE

CLINICA CHIRURGICA
TRIESTE

# OCCLUSIONE INTESTINALE



# Occlusione dell'intestino tenue - SBO

Blocco completo del passaggio del contenuto intestinale → 80% delle OI meccaniche

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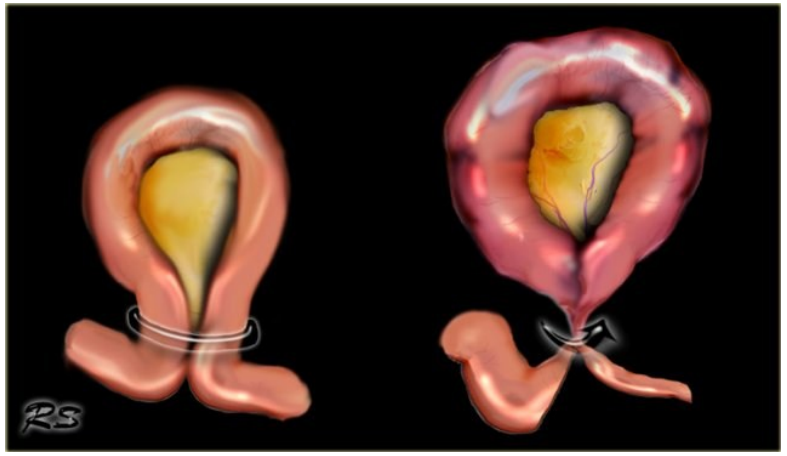
**Cause principali**

1. Aderenze
2. Ernie/laparoceli
3. Tumori
4. Altro (Crhon, calcoli, volvolo, intussuscezione)

**Incidenza**

- 2-3% dei pz visti in PS
- 15% dei pz che vengono ricoverati
- 20% dei pz operati in urgenza per dolore addominale



**ISCHEMIA INTESTINALE!!!**

Complicanza nel 7-42% dei casi→↑ mortalità

# Occlusione dell'intestino tenue - SBO

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**AAST grading criteria for small bowel obstruction**

| Grade | Description | Radiographic criteria | Operative criteria |
|---|---|---|---|
| I | Partial SBO | Minimal intestinal distension | Minimal intestinal distension with no evidence of obstruction |
| II | Complete SBO; bowel viable and not compromised | Intestinal distension with transition point without bowel compromise | Intestinal distension with transition point; no evidence of bowel compromise |
| III | Complete SBO with compromised but viable bowel | Intestinal distension with transition point, no distal contrast flow, evidence of complete obstruction or impending bowel compromise | Intestinal distention with impending bowel compromise |
| IV | Complete SBO with nonviable bowel or perforation with localized spillage | Evidence of localized perforation or free air; bowel distension with free air or free fluid | Intestinal distension with localized perforation or free fluid |
| V | SB perforation with diffuse peritoneal contamination | Bowel perforation with free air and free fluid | Intestinal distension with perforation, free fluid, and evidence of diffuse peritonitis |

AAST: American Association for the Surgery of Trauma; SBO: small bowel obstruction; SB: small bowel.

*From: Hernandez MC, Haddad NN, Cullinane DC, et al. The American Association for the Surgery of Trauma Severity Grade is valid and generalizable in adhesive small bowel obstruction. J Trauma Acute Care Surg 2018; 84:372. DOI: 10.1097/TA.0000000000001736.*


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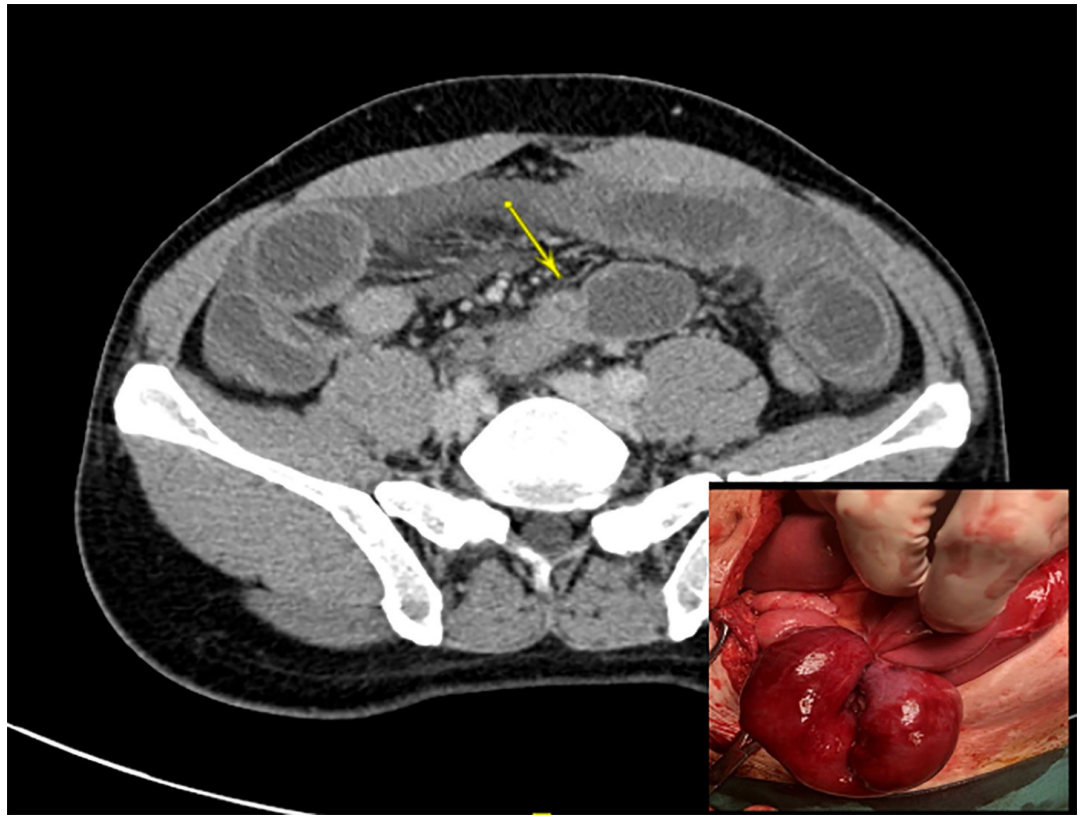
↑ grado→ ↑degenza, critical care, complicanze



Freccia gialla→ punto di transizione

https://doi.org/10.1002/ams2.587

# Occlusione dell'intestino tenue - SBO

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**Sintomi**

- **Nausea/vomito**→ soprattutto se duodeno o digiuno prossimale
- **Dolore addominale crampiforme**; se dolore costante→ irritazione peritoneale→ ischemia/necrosi→ dolore severo→ perforazione
- **Alvo chiuso a feci e gas**→ passaggio di feci/aria fino a 12-24 ore dall'insorgenza dei sintomi. Se ematochezia→ tumore/MICI/ischemia/ intussuscezione

# Occlusione dell'intestino tenue - SBO

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**ESAME OBIETTIVO**

- **Segni sistemici → (Disidratazione** → tachicardia, ipotensione ortostatica, ↓ output urinario, secchezza mucose); **Febbre** (se complicanze)
- Distensione addominale (soprattutto se occlusione distale)
- Valutare se pregresse cicatrici o ernie/laparoceli
- Ipertimpanico alla percussione
- Utile esplorazione rettale (massa rettale/tracce ematiche nelle feci)

# Occlusione dell'intestino tenue - SBO

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## ESAMI EMATOCHIMICI

- **Emocromo** → leucocistosi neutrofila (complicanza?); anemia
- **Elettroliti, urea, creatinina**→ ipovolemia/iponatremia/ipokaliemia

<u>Se segni sistemici</u>

- **EGA arteriosa** → alcalosi metabolica (vomito eccessivo); acidosi metabolica (se ischemia intestinale)
- **Lattati**
- **Emocolture**

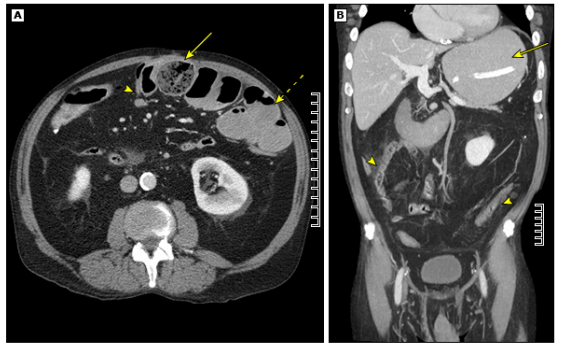
| *Esame* | *Esito* | | *U.M.* | *Intervalli di riferimento* |
|---|---|---|---|---|
| **Chimica Clinica** | | | | |
| Glucosio | **144** | > | mg/dL | 65 - 110 |
| Urea | **29** | | mg/dL | 15 - 50 |
| Creatinina (metodo enzimatico IFCC-IDMS) | **0.79** | | mg/dL | 0.50 - 1.30 |
| Sodio | **129** | < | mEq/L | 135 - 145 |
| Potassio | **3.10** | < | mEq/L | 3.50 - 5.10 |
| Bilirubina totale | **1.23** | > | mg/dL | 0.30 - 1.20 |
| Bilirubina diretta | **0.21** | | mg/dL | 0.10 - 0.30 |
| AST (GOT) | **25** | | U/L | <45 |
| ALT (GPT) | **20** | | U/L | <45 |
| Amilasi pancreatica | **13** | | U/L | 8 - 53 |
| Lipasi | **23** | | U/L | < 67 |
| Proteina C reattiva | **2.6** | | mg/L | < 5.0 |
| **Ematologia** | | | | |
| Emocromo | | | | |
| Globuli Bianchi | **22.18** | > | x 10^3 / µL | 4.00 - 11.00 |
| Globuli Rossi | **4.68** | | x 10^6 /µL | 4.60 - 5.60 |
| Emoglobina | **16.4** | | g/dL | 14.0 - 18.0 |
| Ematocrito | **44.5** | | % | 40.0 - 50.0 |
| MCV | **95.1** | > | fL | 80.0 - 94.0 |
| MCH | **35.0** | > | pg | 27.0 - 32.0 |
| MCHC | **36.9** | > | g/dL | 31.5 - 36.0 |
| RDW | **12.8** | < | % | 13.1 - 15.2 |
| Piastrine | **197** | | x 10^3 / µL | 150 - 450 |
| MPV | **9.1** | | fL | 8.1 - 10.2 |
| PDW | **8.7** | | % | |
| PCT | **0.18** | | % | |

# Occlusione intestinale del tenue - SBO

## IMAGING

- [**Rx addome** (supino+eretto)]
- **TC addome con mdc→** consente di individuare la causa e studiare eventuali complicanze (ischemia, pneumatosi di parete, feces-sign, liquido, aria nel sistema porto-mesenterico…)
- **POCUS →** anse dilatate >2.5 cm; liquido; «to-from», keyboard sign, intestino collassato dopo il punto di transizione, edema delle pareti

**Small bowel obstruction with small bowel feces sign on CT scan**




A CT scan of the abdomen (A) shows a zone of transition at the site of a small bowel obstruction (arrowhead). A small bowel feces sign is present in the small bowel adjacent to the obstruction (arrow), and the remaining upstream small bowel is dilated (dashed arrow).

(B) is a coronal reconstruction of the CT and shows a fluid-filled and distended stomach (arrow) despite the presence of a nasogastric tube. Both the ascending colon and descending colon are decompressed (arrowheads).

CT: computed tomography.

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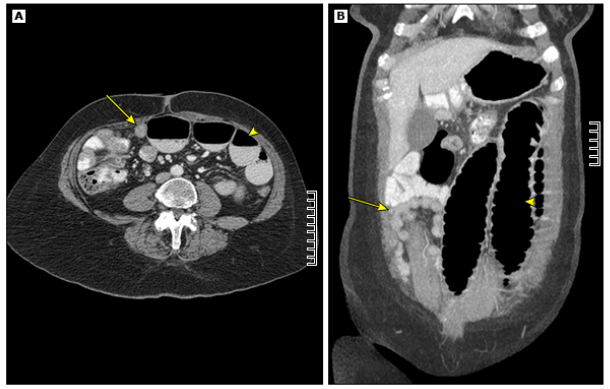
**Small bowel obstruction caused by metastatic ovarian carcinoma on CT scan**




A CT scan of the abdomen (A) shows dilated upstream small bowel (arrowhead). The downstream small bowel is decompressed (arrow). Image B is a coronal reconstruction of the CT and shows dilated upstream small bowel (arrowhead). The downstream small bowel is decompressed (arrow).

CT: computed tomography.

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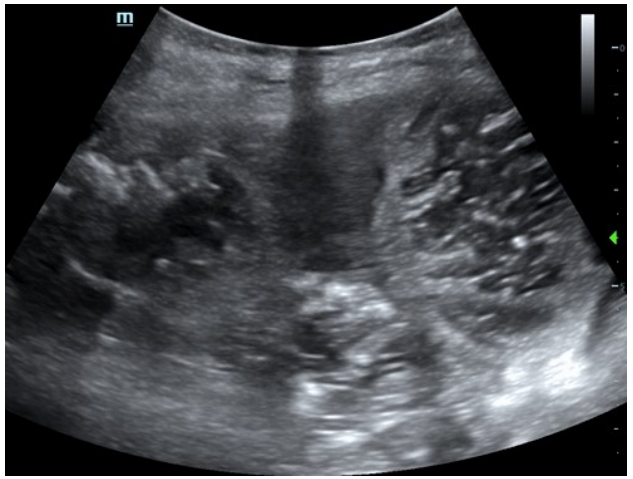

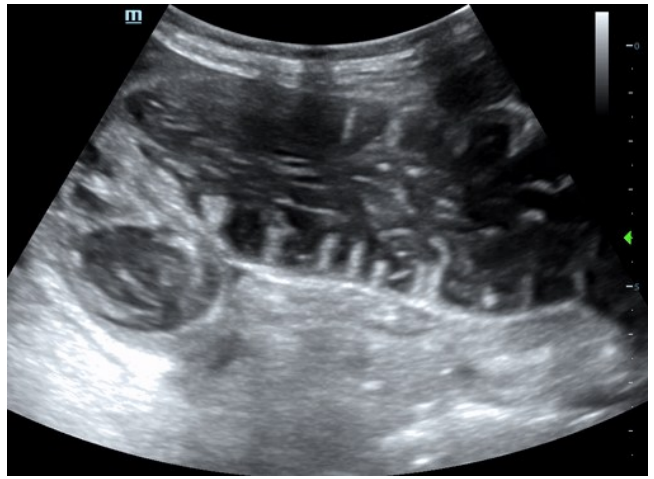

https://www.thelandofem.com/blog/2020/3/5/small-bowel-obstruction

# Occlusione dell’intestino tenue - SBO

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## DIAGNOSI DIFFERENZIALE→ Ileo dinamico

| Caratteristica | Ostruzione meccanica | Ileo dinamico |
|---|---|---|
| 🔒 **Ostruzione del lume** | ✔️ Sì | ❌ No |
| 🔄 **Motilità intestinale** | ⬆️ inizialmente → ⬇️ a valle dell’ostruzione | ⬇️ Ridotta |
| 🎈 **Dilatazione** | ✔️ Presente (a monte) | ❌ Assente |
| 📍 **Tratto GI coinvolto** | Segmento prossimale all’ostruzione | Principalmente intestino tenue |
| 📸 **Radiologia** | “Cut-off” tipico + livelli idro-aerei | A volte “cut-off”; livelli idro-aerei generalm. assenti |
| ⏱️ **Decorso clinico** | Acuto | Acuto |
| 📉 **Progressione** | Rapida, tendente alla completa ostruzione | Autolimitante, miglioramento spontaneo |
| 🛠️ **Trattamento** | 🏥 Chirurgia | 🤝 Misure di supporto |

# ASBO - Occlusione dell'intestino tenue da aderenze

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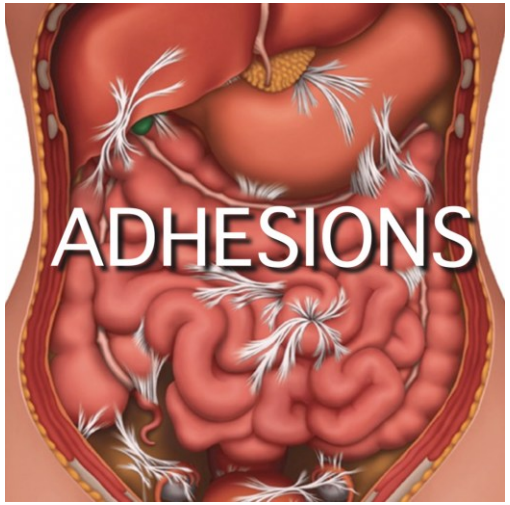
Causa + frequente (55-80%) → 80% ha pregressa chirurgia (open)




**MANAGEMENT**

- Fluidoterapia
- SNG
- Antibiotico → solo se perforazione/ischemia/necrosi

**NON-OPERATIVE MANAGEMENT (NOM)**

Successo nel 65/80%

Gastrografin challange → mdc idrosolubile trans-SNG → rx addome a 6-8 ore

**CHIRURGIA UPFRONT**

ten Broek *et al. World Journal of Emergency Surgery* (2018) 13:24
https://doi.org/10.1186/s13017-018-0185-2

World Journal of Emergency Surgery

REVIEW Open Access

Bologna guidelines for diagnosis and management of adhesive small bowel obstruction (ASBO): 2017 update of the evidence-based guidelines from the world society of emergency surgery ASBO working group

# ASBO - Occlusione dell’intestino tenue da aderenze

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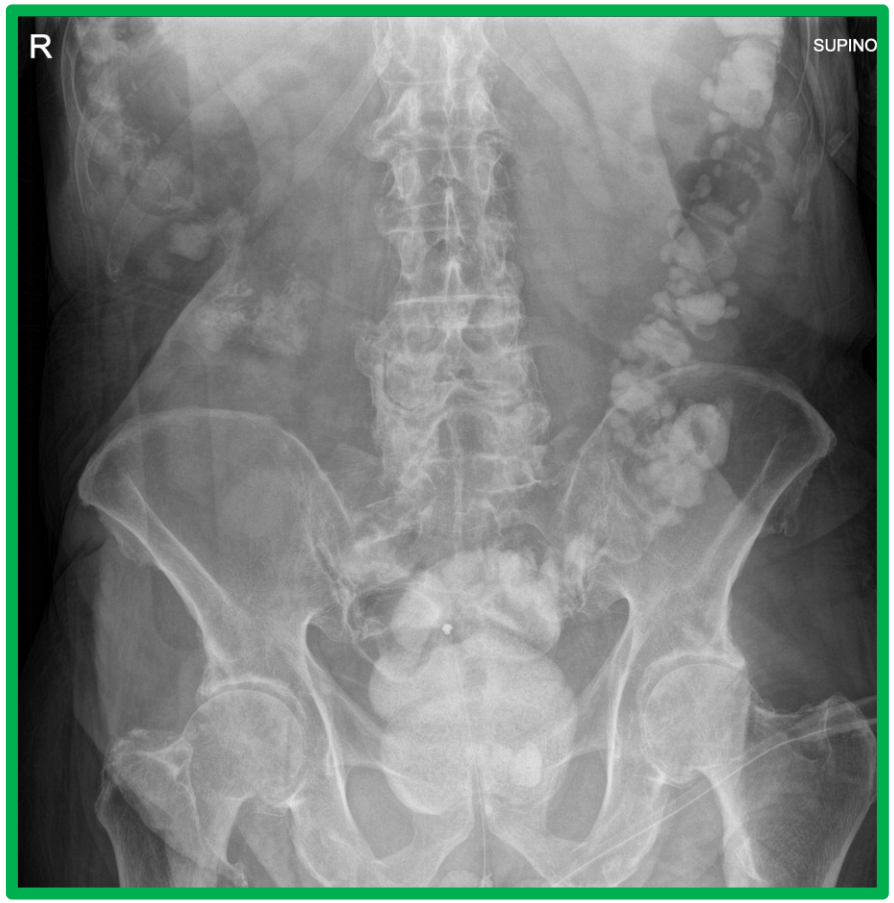
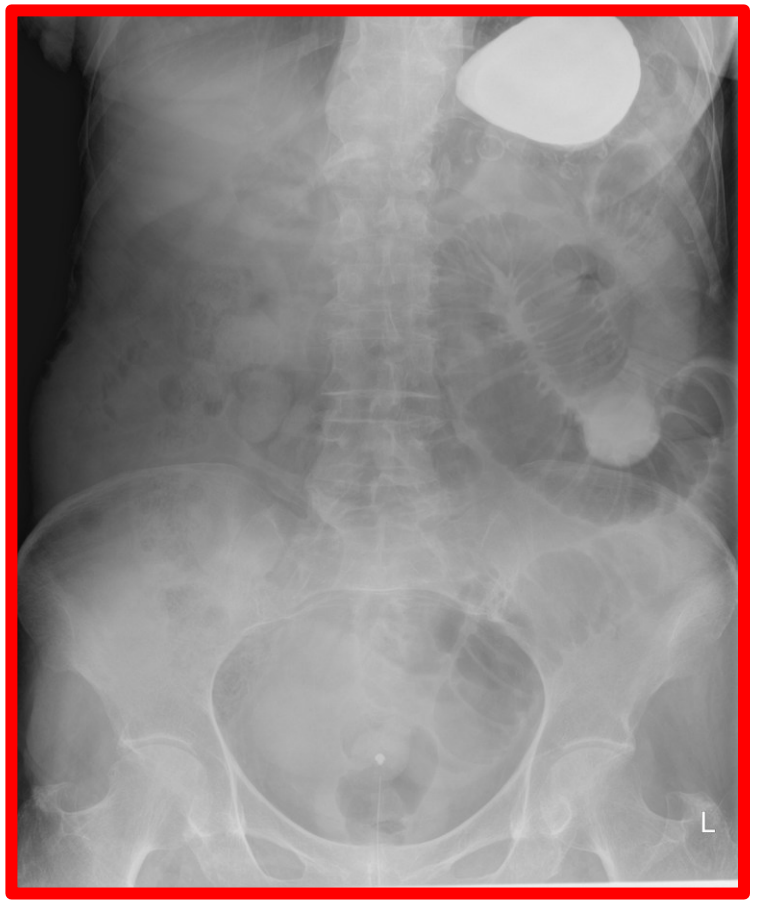
## NON-OPERATIVE MANAGEMENT (NOM)→ Gastrografin challenge





**100 ml NON DILUITI!!!**

# ASBO - Occlusione dell'intestino tenue da aderenze

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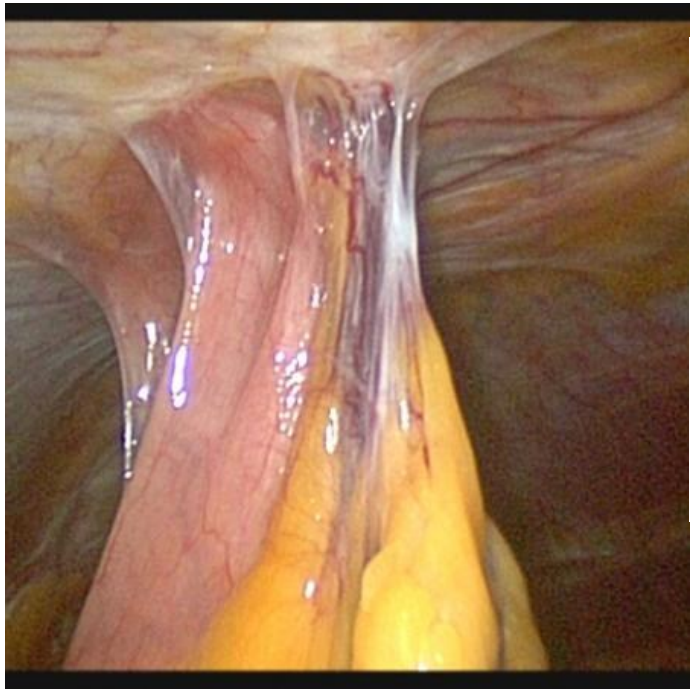
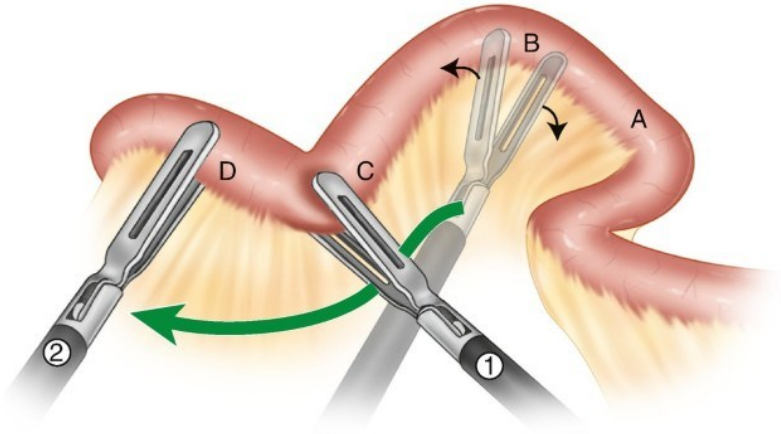
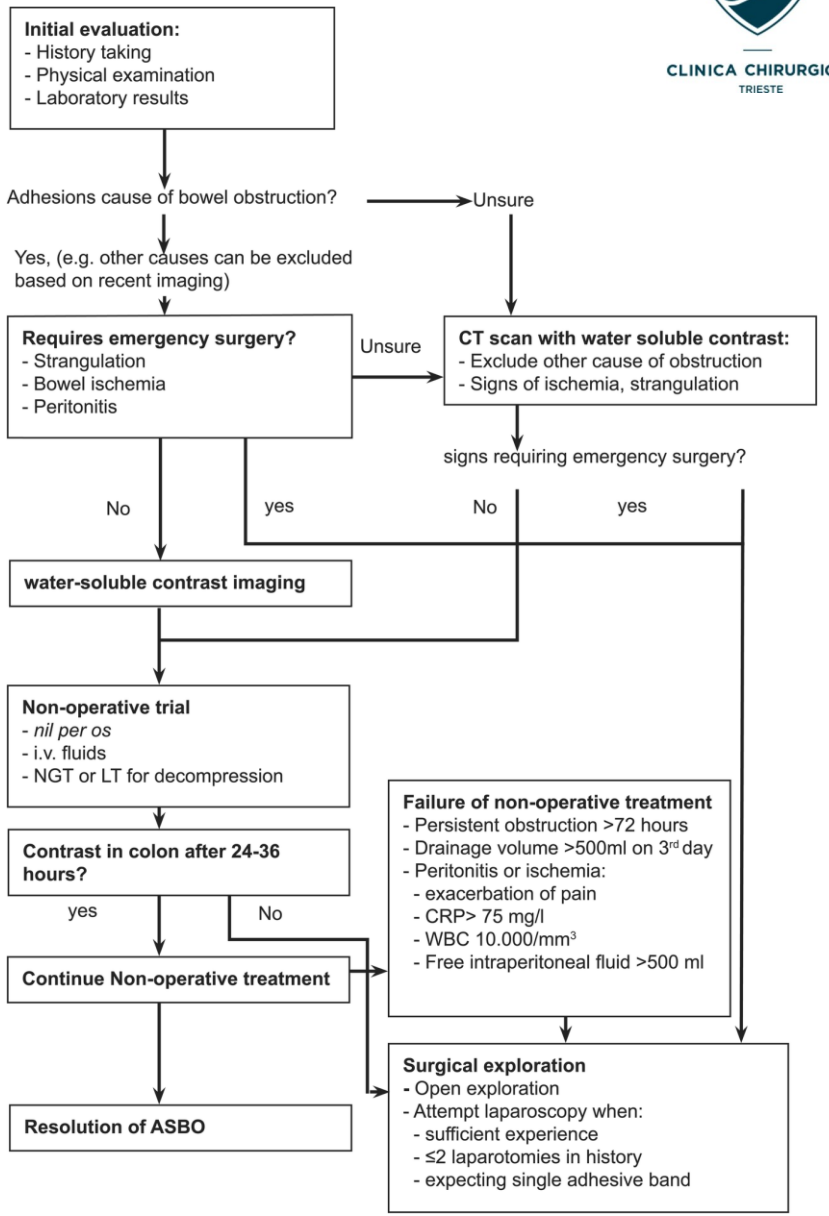
## TRATTAMENTO CHIRURGICO

Se:

- Complicanze
- Fallimento NOM






https://doi.org/10.1186/s13017-018-0185-2; https://www.laparoscopic.md/photos; https://doi.org/10.1007/978-3-030-39559-9_10

# ERNIE E LAPAROCELI IN URGENZA

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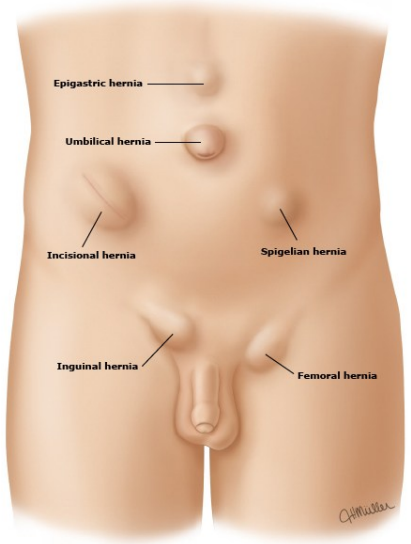
**ERNIA→** Protrusione di un viscere o tessuto attraverso un punto debole della parete addominale che normalmente lo contiene

**LAPAROCELE→** Ernia che insorge su una cicatrice chirurgica della parete addominale a causa di una guarigione incompleta o di una debolezza della sutura

**Abdominal wall hernias**




Abdominal wall hernias include incisional hernias, which occur along incisions from a prior surgery; umbilical hernias; epigastric hernias, which occur between the umbilicus and xiphoid; Spigelian hernias located near the semilunar line in the lower abdomen; lumbar hernias in the flank (not shown); and groin hernias (inguinal and femoral hernias).

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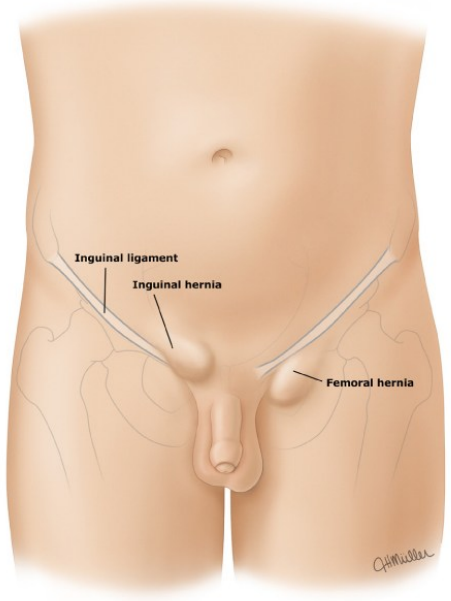
**Groin hernias**




Inguinal hernias typically present above the inguinal ligament and extend below it. Femoral hernias typically present below the inguinal ligament.

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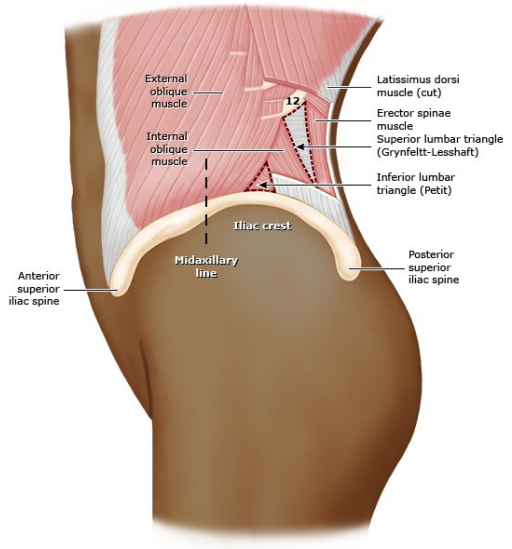
**Lumbar triangles**




The superior lumbar triangle (Grynfeltt) is an inverted triangle. The base is the twelfth rib, the posterior border is the erector spinae, the anterior border is the posterior margin of the external oblique, and the apex is the iliac crest inferiorly.

The inferior triangle (Petit) is located between the external oblique, the latissimus dorsi, and the iliac crest.

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# ERNIE E LAPAROCELI IN URGENZA

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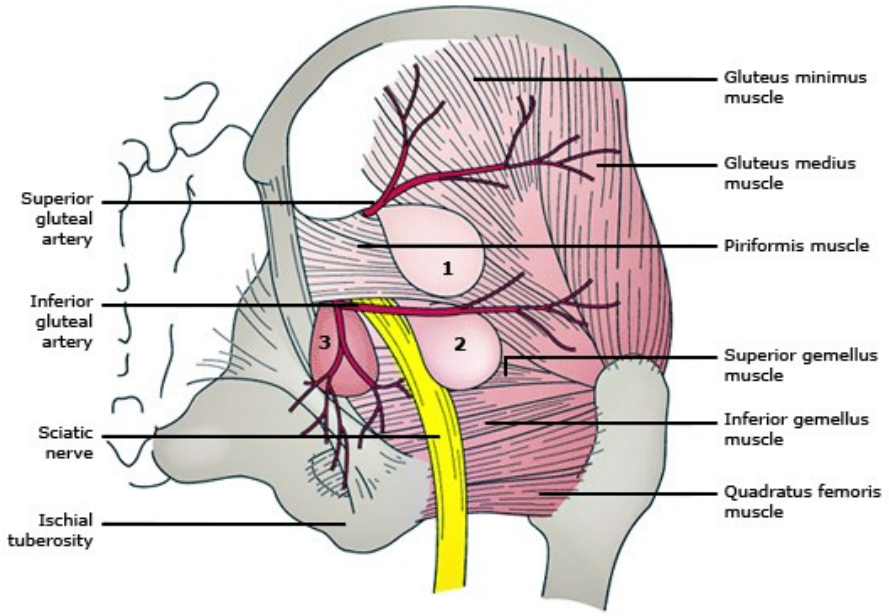
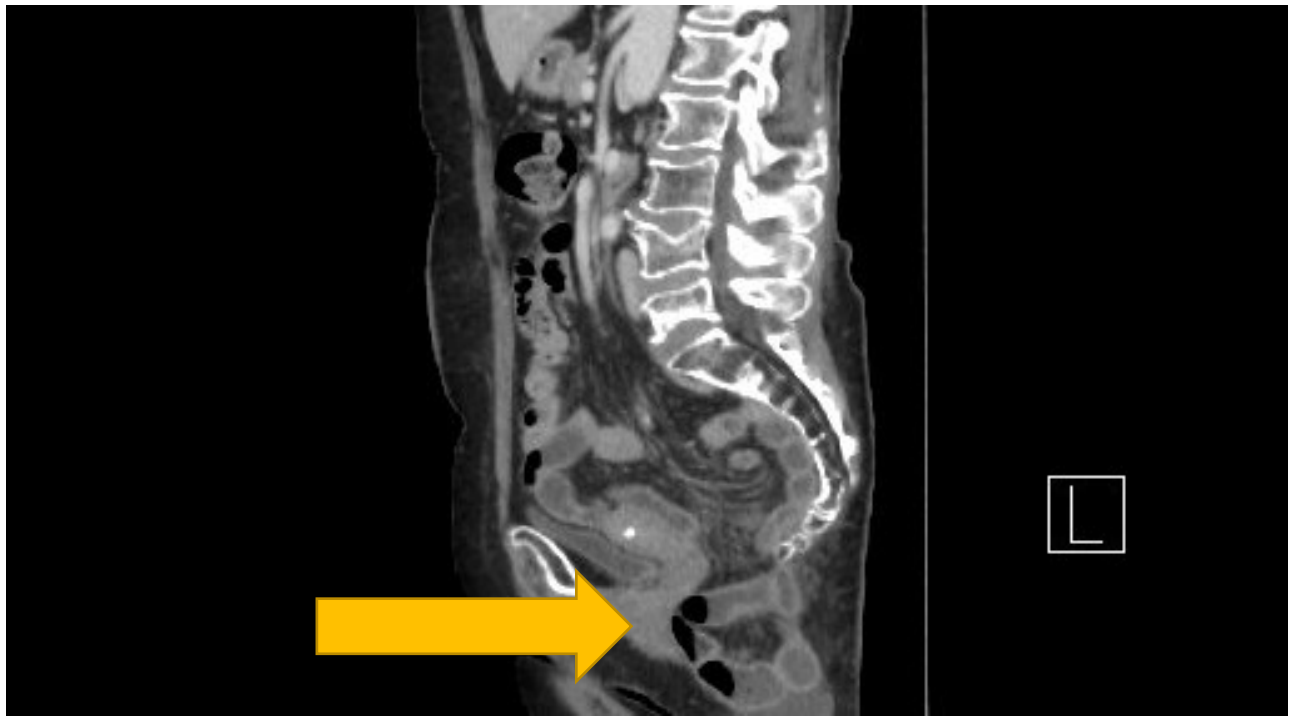
**Gluteal and sciatic hernias**




Sciatic hernias are rare. The hernia can pass through the greater sciatic foramen above (1) or below (2) the piriformis muscle or through the lesser sciatic foramen medial to the sciatic nerve (3).



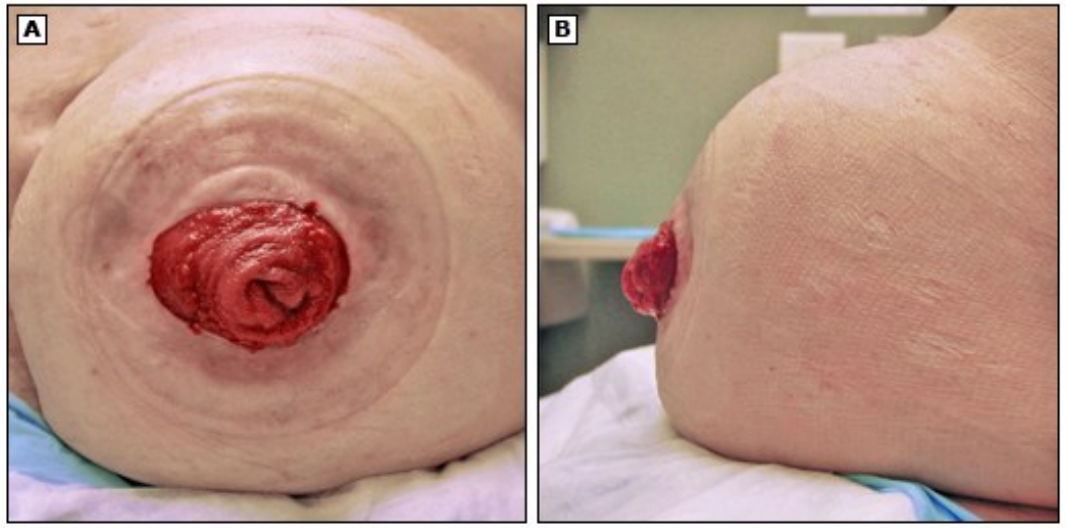



Laparocele perineale in esiti di amputazione addominoperineale sec Miles

# ERNIE E LAPAROCELI IN URGENZA

RGICA

## Parastomal hernia




(A) An anterior view of a large paracolostomy hernia. Note the skin breakdown in the peristomal area where the appliance would be placed. This commonly occurs due to the pressure required to maintain the appliance in place against a large parastomal hernia.

(B) A lateral view of a large paracolostomy hernia.

*Courtesy of Robert Cima, MD.*

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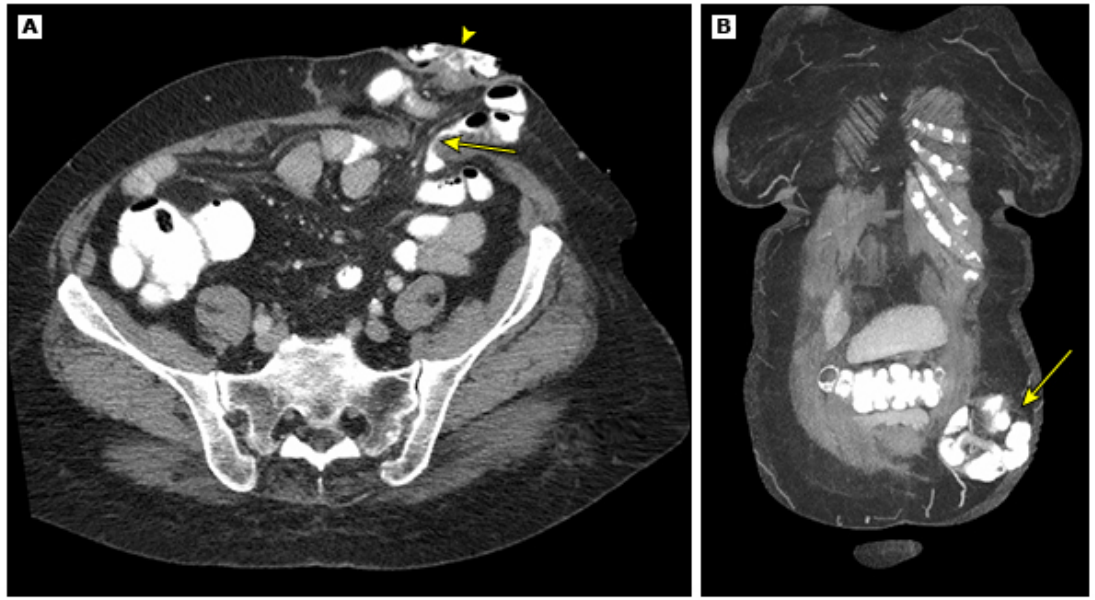
## Parastomal hernia on CT




An axial CT scan through the lower abdomen (A) shows a loop of small bowel herniating through a colostomy defect (arrow). Contrast is seen in the colostomy bag (arrowhead). Image B is a coronal reconstruction and shows the herniated small bowel in the subcutaneous tissues (arrow).

CT: computed tomography.

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# ERNIE E LAPAROCELI IN URGENZA

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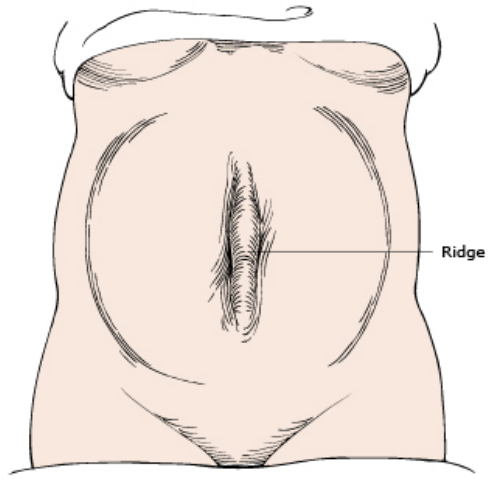
## Fattori di rischio

- Attività fisica intensa
- Tosse intensa (es BPCO)
- Obesità
- Fumo
- Uso di steroidi
- Diabete
- Età avanzata
- Sesso maschile
- Anomalie congenite/ predisposizione
- Ascite e gravidanza (ernia ombelicale)

## Diagnosi differenziale

**Diastasis recti**




Diastasis recti occurs when bowel protrudes through a separation between the two rectus abdominis muscles. It appears as a midline ridge. The bulge may appear only when client raises head or coughs. The condition is of little significance.

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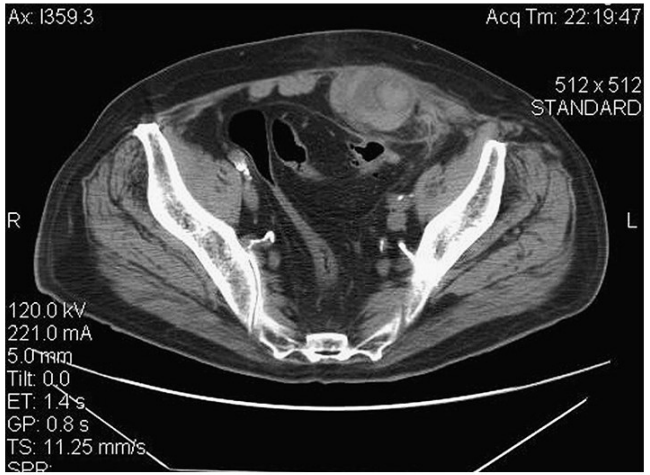
**CT image of type I rectus sheath hematoma**




CT scan of the pelvis demonstrating a left-sided type I RSH measuring 4.2 x 4.4 x 11 cm in a 78-year-old man under anticoagulation therapy.

CT: computed tomography; RSH: rectus sheath hematoma.

*Reproduced from: Salemis NS, Gourgiotis S, Karalis G. Diagnostic evaluation and management of patients with rectus sheath hematoma. Int J Surg 2010; 8:290. Illustration used with the permission of Elsevier Inc. All rights reserved.*

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Lipoma, ascesso, anomalie dell'uraco, neurofibroma, sieroma, varicocele, idrocele…

# ERNIE E LAPAROCELI IN URGENZA

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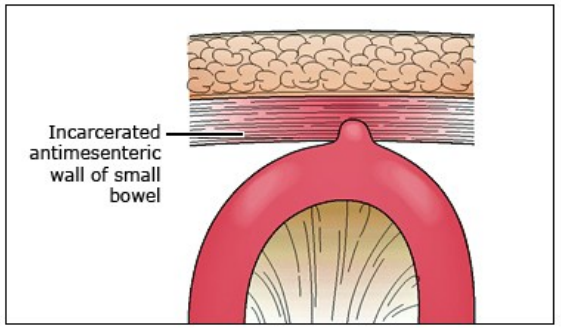
**Non complicate**→ riducibili

**Complicate**→ il contenuto erniato è **irriducibile** (non può essere reinserito nella cavità addominale) e/o **ostruisce il lume intestinale** e/o è sottoposta a compromissione della perfusione vascolare (**strozzamento**) → intervento chirurgico d'urgenza

**Richter hernia**




Schematic diagram showing a Richter hernia, in which the antimesenteric border, but not the whole wall, of the bowel is incarcerated.



**Cause dell'incarceramento**

- Aderenze tra viscere contenuto e sacco erniario
- Porta erniaria con piccolo diametro

Il persistere di questa condizione comporta uno stiramento e/o rotazione dei mesi/peduncoli vascolari→ riduzione apporto vascolare→ ischemia→ necrosi→ perforazione

# ERNIE E LAPAROCELI IN URGENZA

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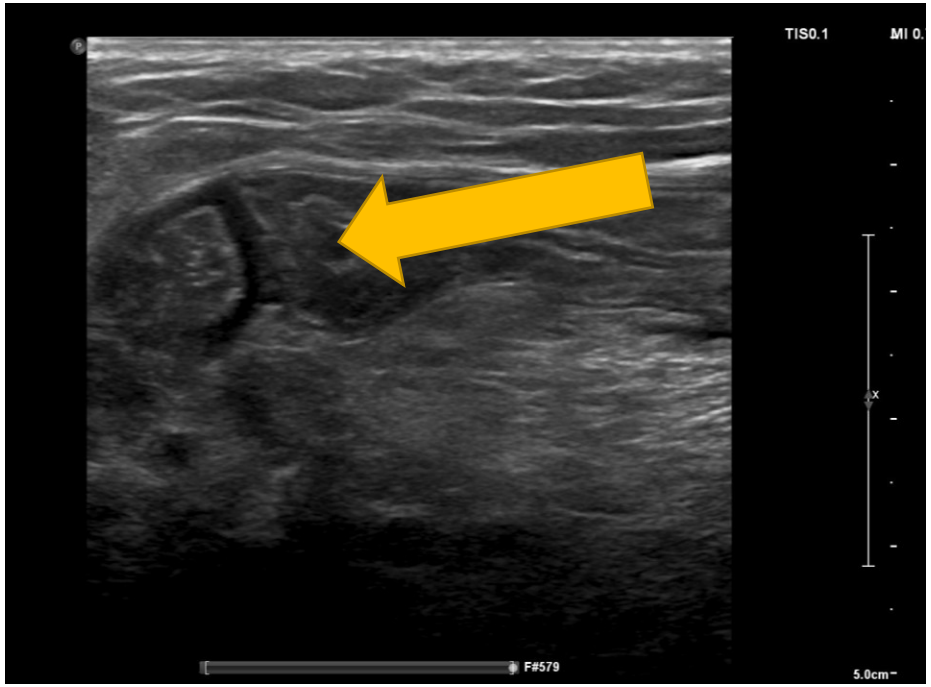
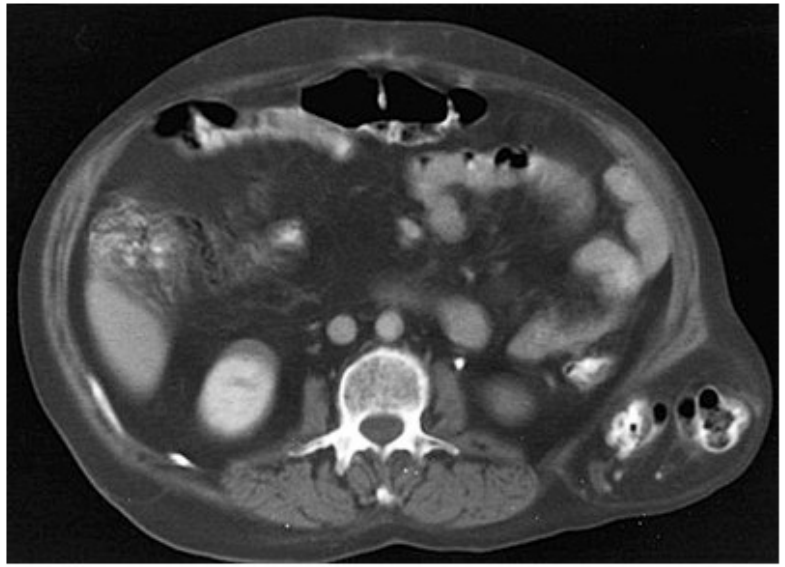
**IMAGING**

- Ecografia
- TC addome con mdc




**Lumbar hernia through the inferior triangle**



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# ERNIE E LAPAROCELI IN URGENZA

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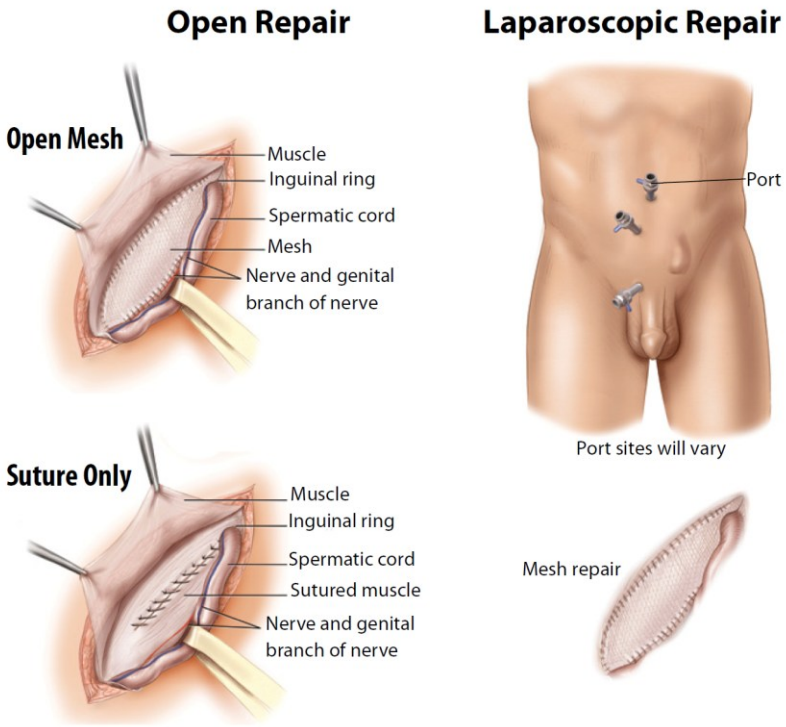
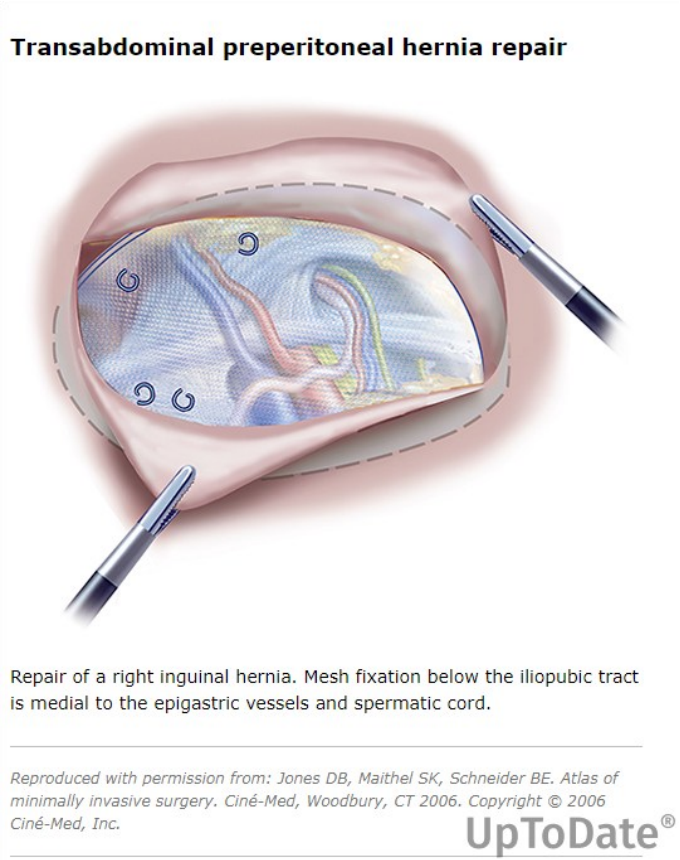
**TRATTAMENTO**

**Conservativo**→ riduzione manuale dell'ernia, assenza di ischemia/perforazione→ risoluzione OI

**Chirurgico**→ plastica con o senza protesi in laparoscopia o open



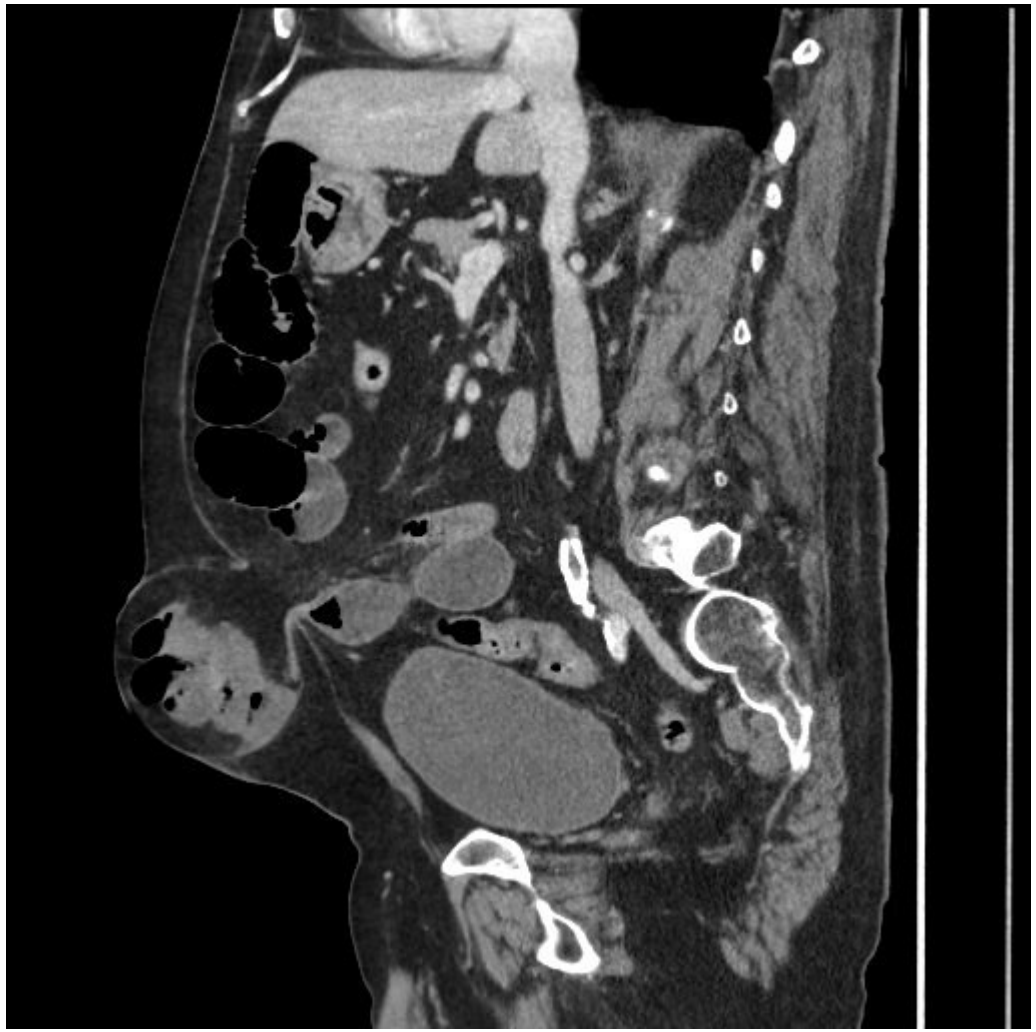




https://www.facs.org/for-patients/the-day-of-your-surgery/adult-inguinal-and-femoral-groin-hernia-repair/

# ERNIE E LAPAROCELI IN URGENZA

CLINICA CHIRURGICA
TRIESTE

**TRATTAMENTO**



Ischemia intestinale/necrosi/perforazione→
resezione intestinale + ernioplastica


Protesi biosintetica o biologica

# ERNIE E LAPAROCELI IN URGENZA

CLINICA CHIRURGICA
TRIESTE

**COMPLICANZE**

- Sieroma
- Ematoma
- SSI
- Mesh migration
- Recidiva
- Dolore cronico

| Hernia Complication | Expected Incidence |
|---|---|
| Mild Skin infection | 1:100-200 (<1.0%) |
| Deep mesh infection | 1:1000-2000 (<0.1%) |
| Recurrent hernia | 1:50-100 (1-2%) |
| Seroma | 1:100-200 (<1.0%) |
| Hematoma | 1:200-400 (<0.5%) |
| Chronic Pain | 1:50-100 (1-2%) |
| Loss of testicle (inguinal hernias) | 1:1000-2000 (<0.1%) |
| Anesthesia complication – heart attack, stroke | 1:5000 (<0.02%) |

EHS EUROPEAN HERNIA SOCIETY

# CASO CLINICO

CLINICA CHIRURGICA
TRIESTE

Pz di 93 anni con dolore addominale da stanotte, accompagnato da vomito e alvo chiuso

APR: appendicectomia open in infanzia, IA, ipotiroidismo

EO Addome trattabile, lievemente dolorabile maggiormente ai quadranti di dx.
Blumber negativo.

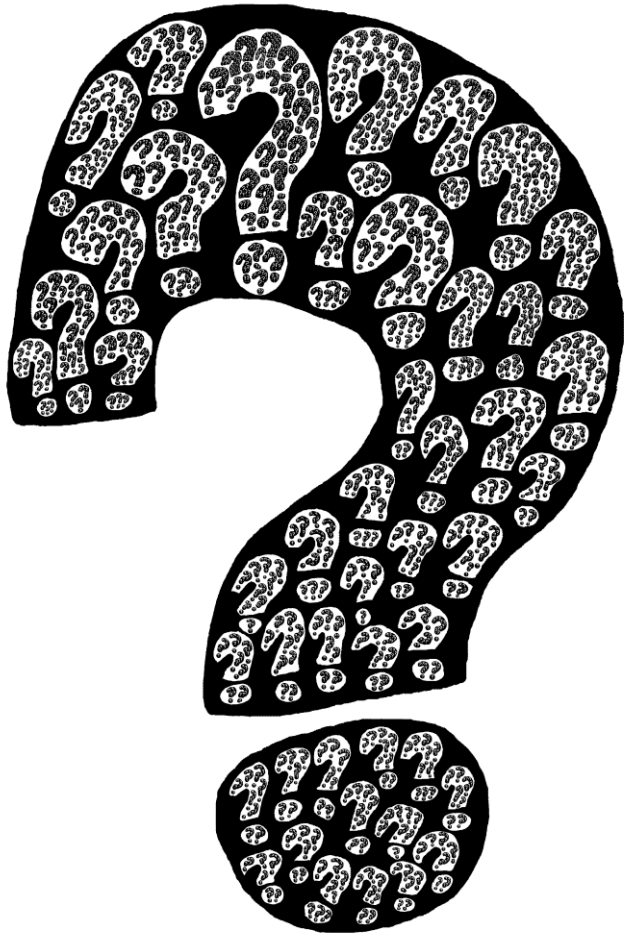
| *Esame* | *Esito* | | *U.M.* | *Intervalli di riferimento* |
|---|---|---|---|---|
| **Chimica Clinica** | | | | |
| Glucosio | **124** | > | mg/dL | 65 - 110 |
| Urea | **51** | > | mg/dL | 15 - 50 |
| Creatinina (metodo enzimatico IFCC-IDMS) | **1.06** | | mg/dL | 0.40 - 1.10 |
| Sodio | **136** | | mEq/L | 135 - 145 |
| Potassio | **4.56** | | mEq/L | 3.50 - 5.10 |
| Bilirubina totale | **0.62** | | mg/dL | 0.30 - 1.20 |
| AST (GOT) | **21** | | U/L | <35 |
| ALT (GPT) | **12** | | U/L | <35 |
| Proteina C reattiva | **15.4** | | mg/L | < 5.0 |
| **Ematologia** | | | | |
| Emocromo | | | | |
| Globuli Bianchi | **9.87** | | x 10 ^3 / µL | 4.00 - 11.00 |
| Globuli Rossi | **3.55** | < | x 10^6 /µL | 4.20 - 5.00 |
| Emoglobina | **11.4** | < | g/dL | 12.0 - 16.0 |
| Ematocrito | **33.9** | < | % | 37.0 - 50.0 |
| MCV | **95.5** | > | fL | 80.0 - 94.0 |
| MCH | **32.1** | > | pg | 27.0 - 32.0 |
| MCHC | **33.6** | | g/dL | 31.5 - 36.0 |
| RDW | **12.7** | < | % | 13.0 - 14.7 |
| Piastrine | **300** | | x 10 ^3 / µL | 150 - 450 |
| MPV | **10.0** | | fL | 8.1 - 10.2 |
| PDW | **10.6** | | % | |
| PCT | **0.30** | | % | |

# CASO CLINICO

CLINICA CHIRURGICA
TRIESTE

## Qual è l'ipotesi diagnostica?

- ASBO
- Tumore non noto
- Occlusione con ischemia intestinale
- Ileo dinamico
- Ernia crurale strozzata

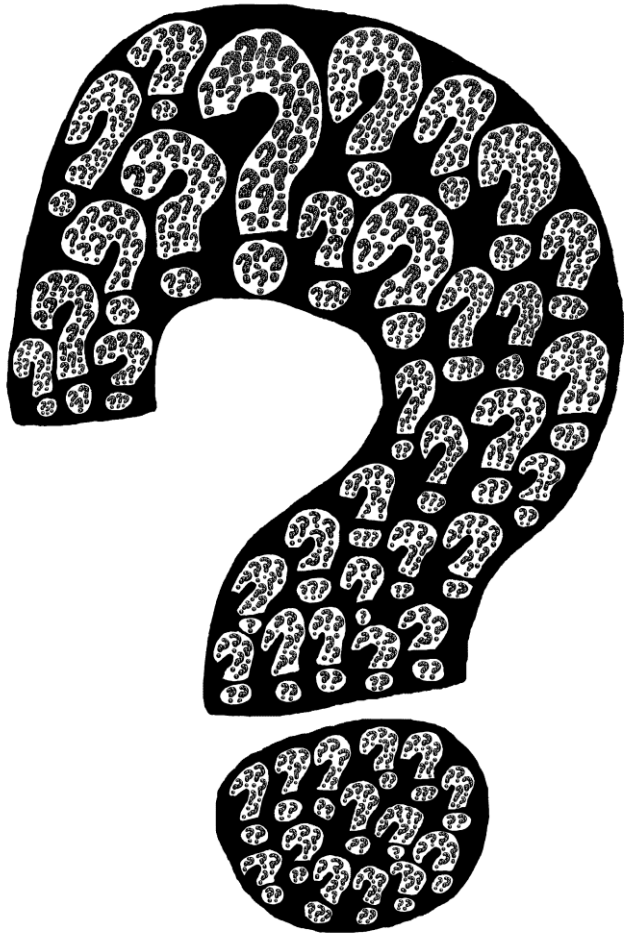


# CASO CLINICO

CLINICA CHIRURGICA
TRIESTE

## Come preparo la paziente?

- SNG
- CV
- Fluidoterapia
- Terapia antalgica
- Antiemetici

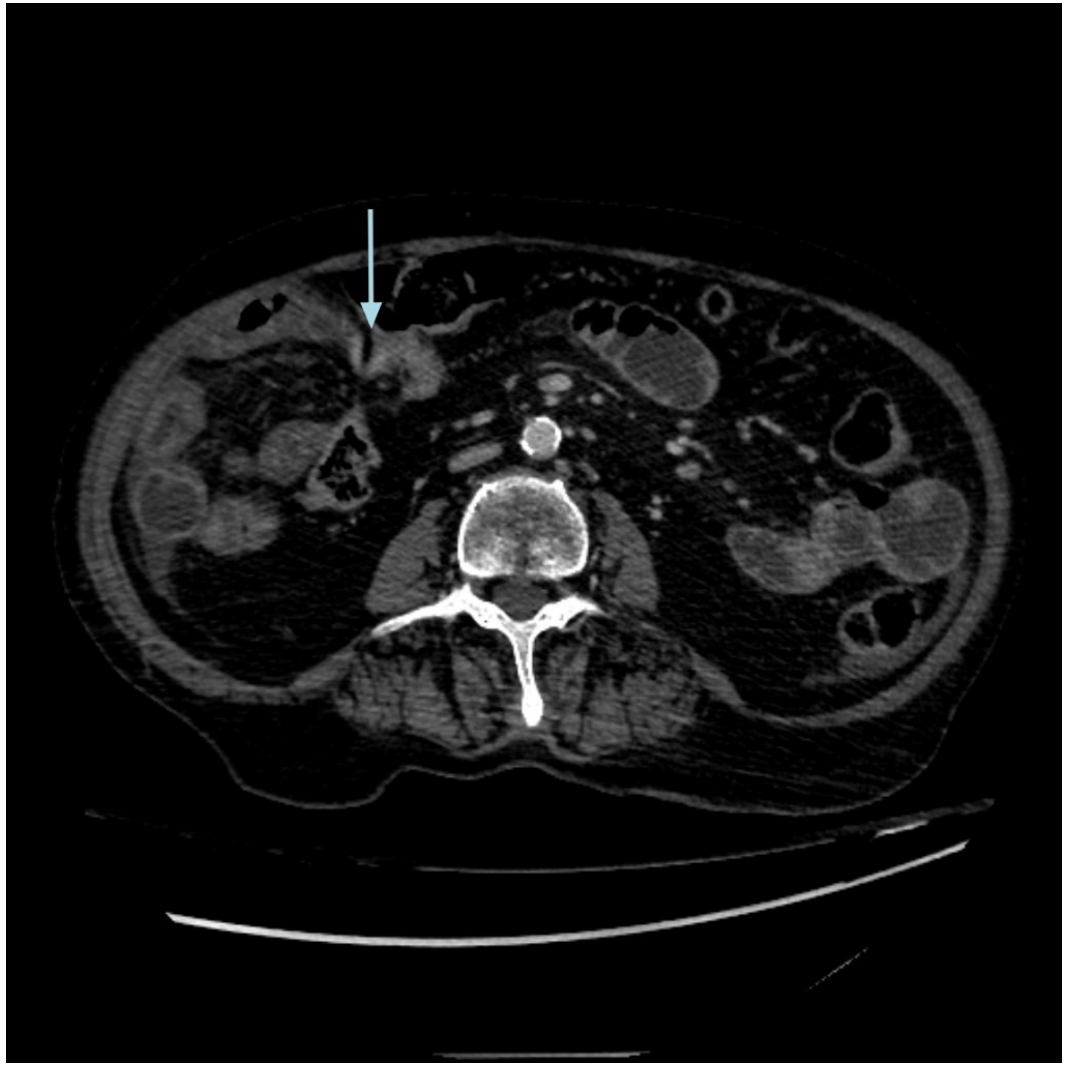


# CASO CLINICO

CLINICA CHIRURGICA
TRIESTE

**TC addome con mdc**

Modesta sovradistensione di anse digiuno-ileali, conpresenza di numerosi livelli idroaerei intraluminali. Le anse risultano dilatate fino al passaggio tra mesogastrio e fianco destro, ove siosserva un brusco salto di calibro, con evidenza dei segni di ostruzione (“beak sign” e “fat notchsign”), compatibili con occlusione meccanica del tenue

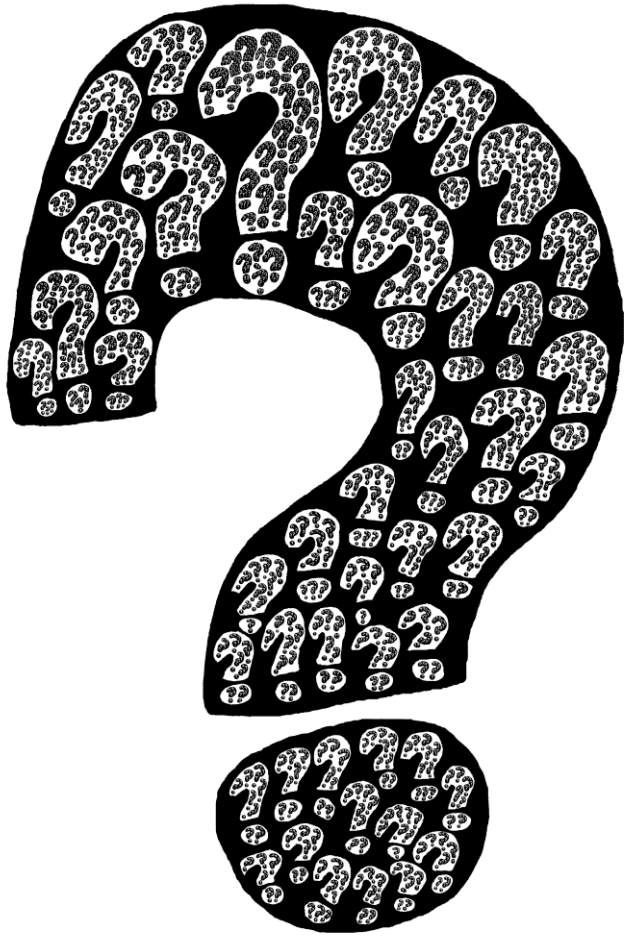


# CASO CLINICO

CLINICA CHIRURGICA
TRIESTE

**Cosa facciamo?**

- NOM
- Upfront surgery



# CASO CLINICO

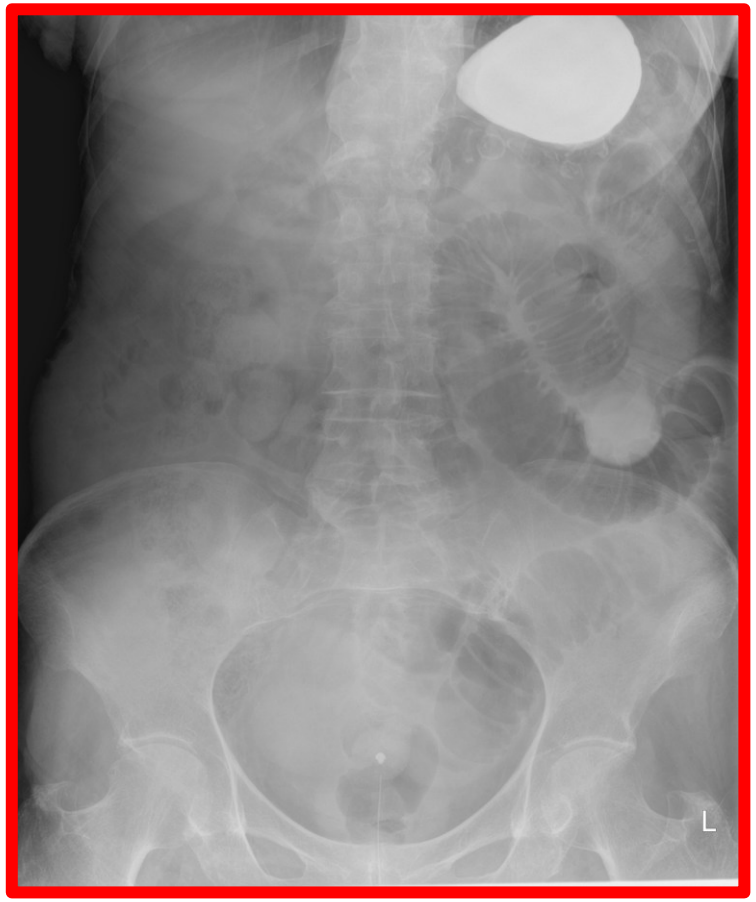
CLINICA CHIRURGICA
TRIESTE

**NOM**

- Idratazione
- Gastrografin challange

**Rx addome**

Gastrografin opacizza quasi esclusivamente la bolla gastrica e solo in minima parte alcune anse dipiccolo intestino in fianco sinistro



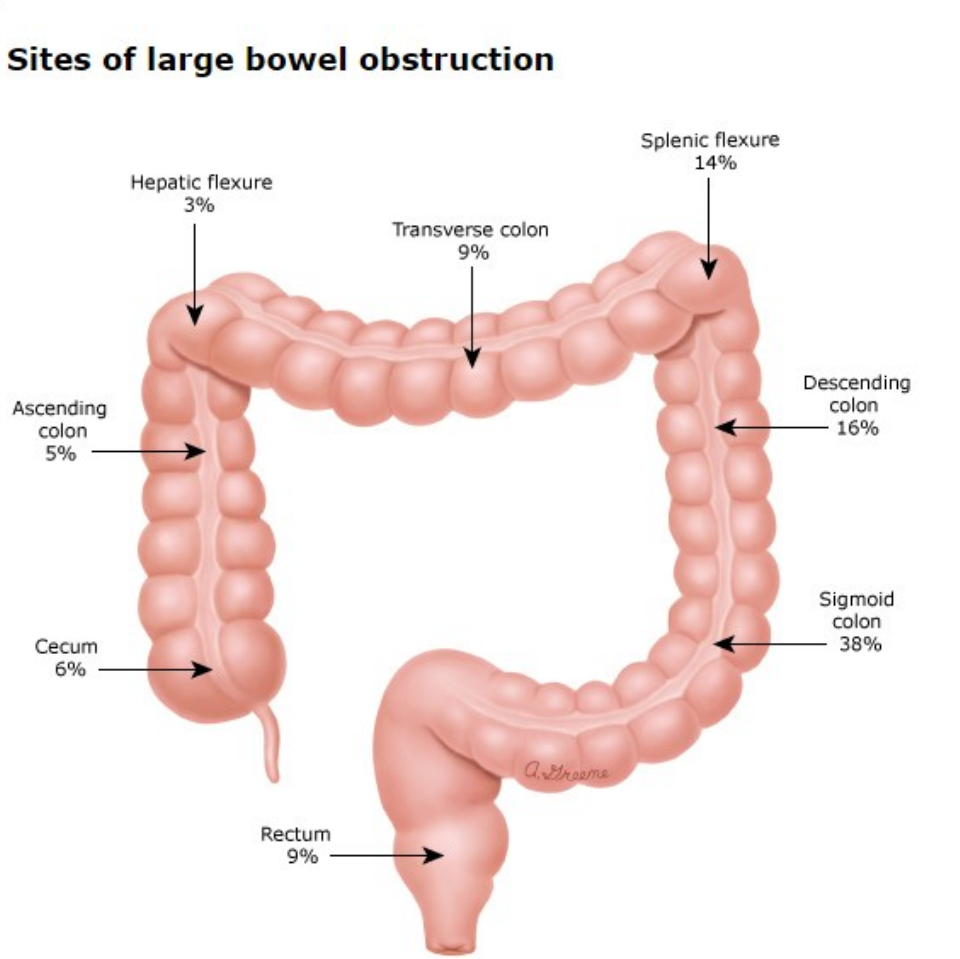

**LPS, conversione laparotomica, lisi della briglia**

# OSTRUZIONE DEL COLON

CLINICA CHIRURGICA
TRIESTE

## CAUSE PRINCIPALI

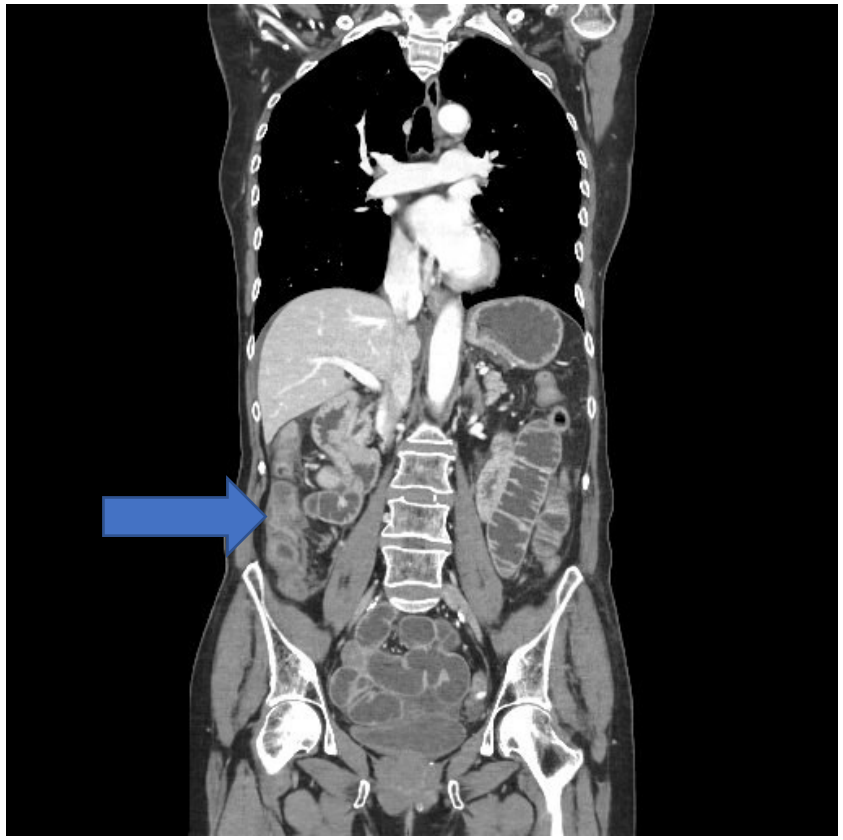
- Tumore 60%
- Volvolo 15-20%
- Ernia 2.5%
- Aderenze
- Stenosi da processi infiammatori 1.7-10%

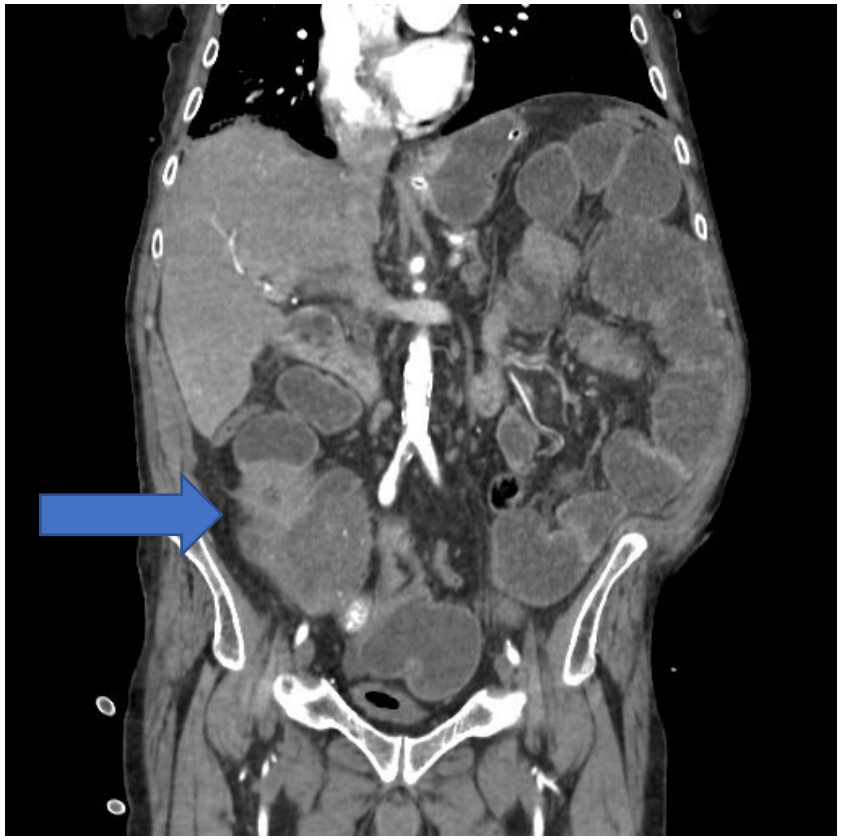


# TUMORE DEL COLON

- 25% delle OI
- Esordio nel 30% dei casi di tumore
- Età media 73 anni

**IMAGING → TC addome con mdc**

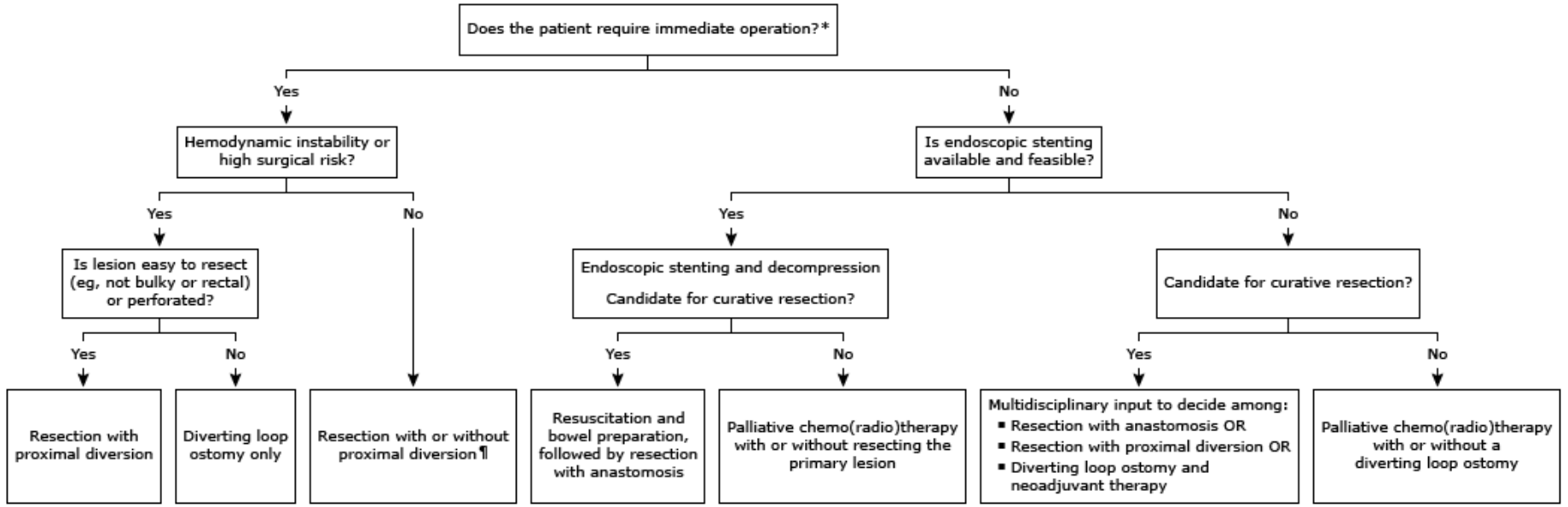




# TUMORE DEL COLON

CLINICA CHIRURGICA
TRIESTE

## Malignant large bowel obstruction

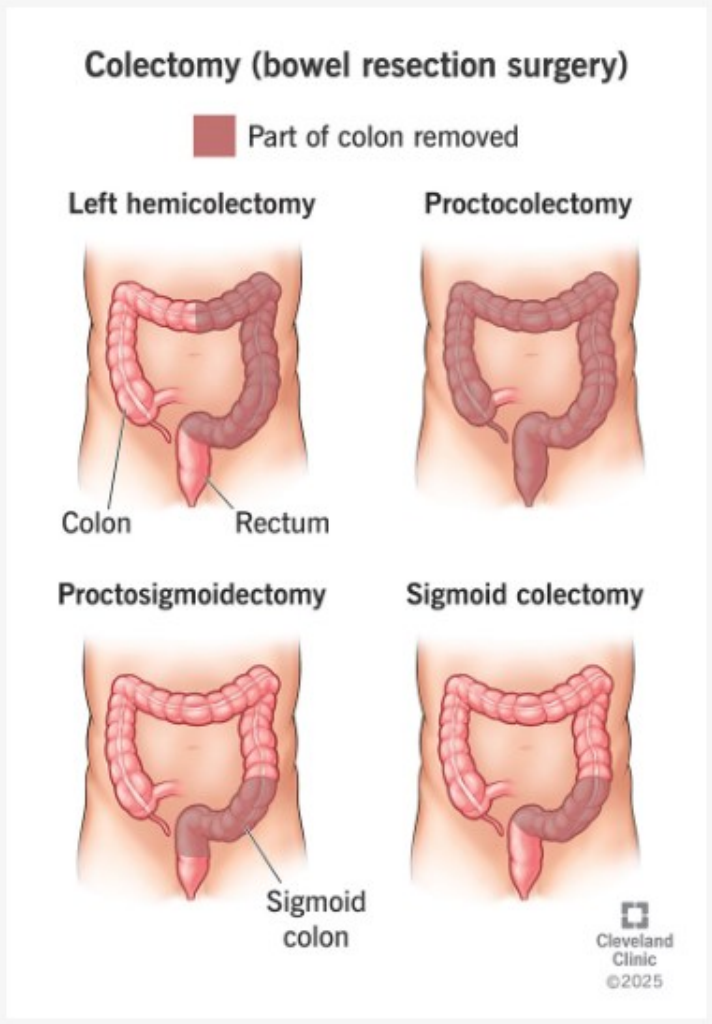



* Perforation or pending perforation (eg, pneumatosis coli), clinically unstable (tachycardic, hypotensive, or with lactic acidotic), severe symptoms.

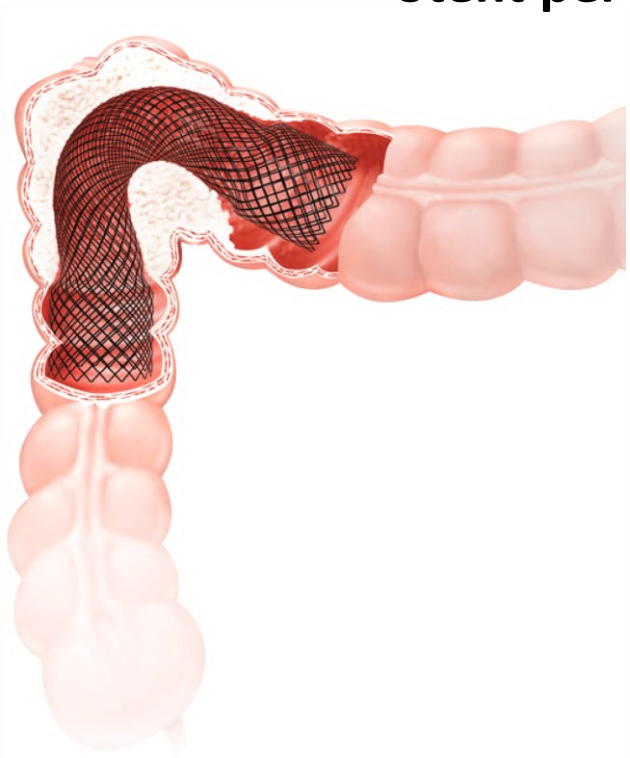
¶ The need for proximal diversion depends upon the location of the obstructing lesion, condition of the proximal colon, and medical comorbidities of the patient.

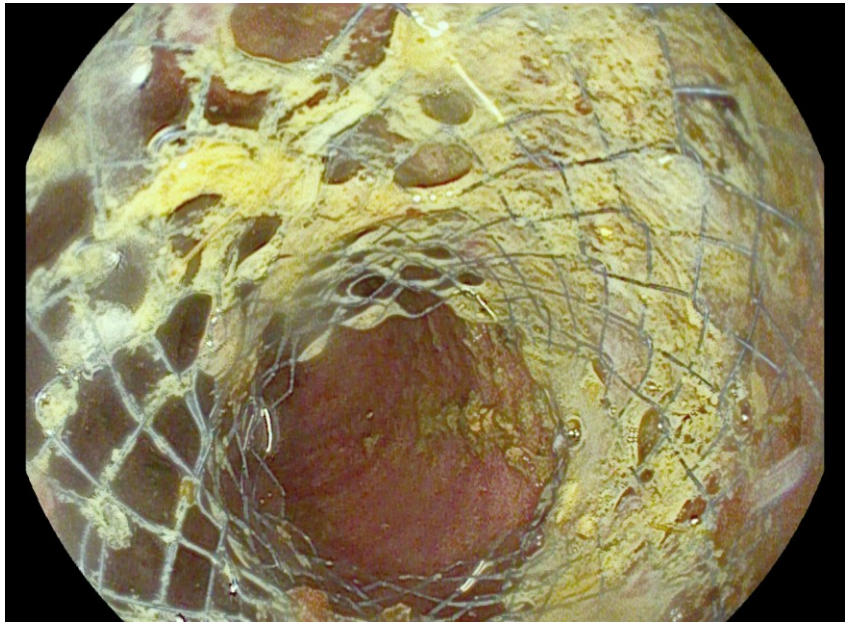
UpToDate®

# TUMORE DEL COLON



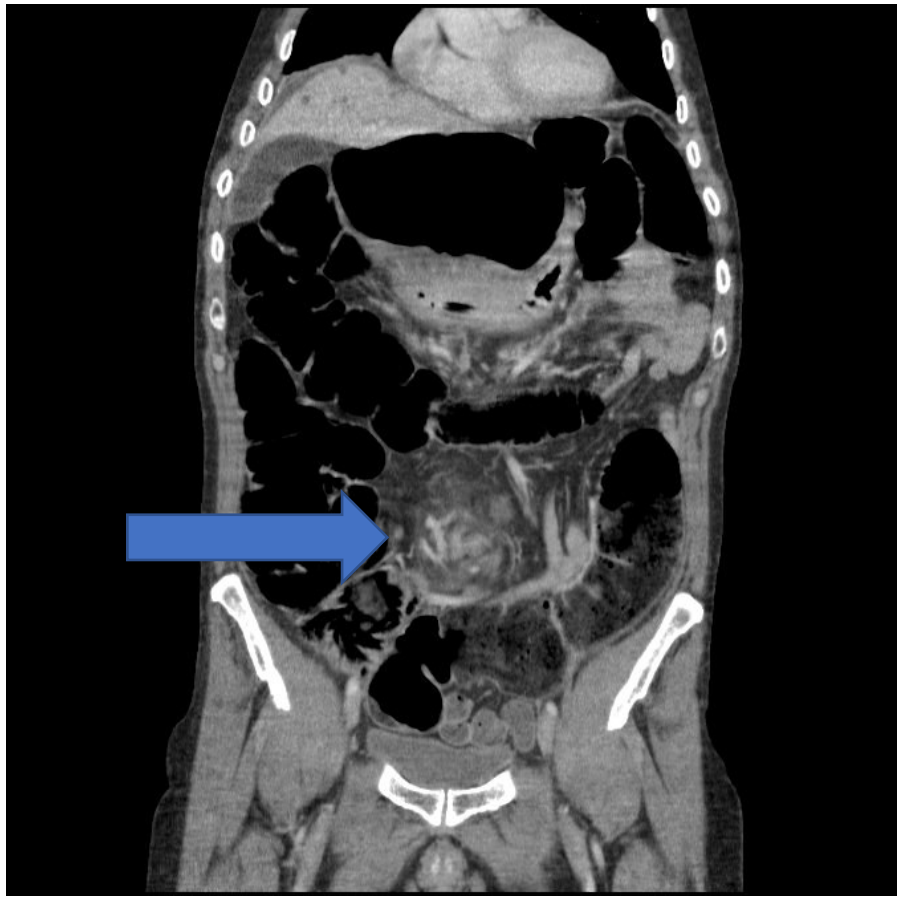

## Stent per via endoscopica



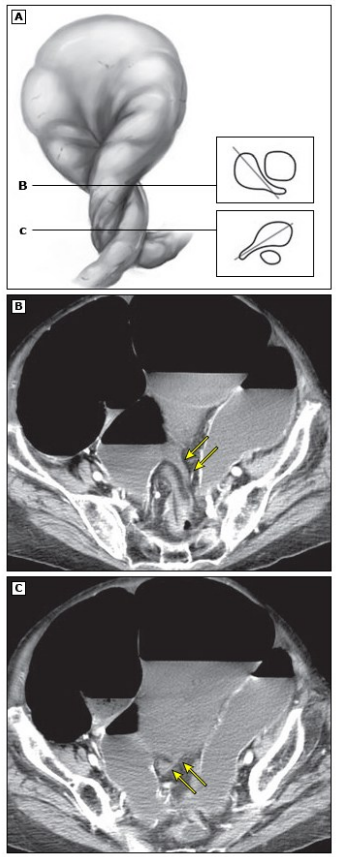


# VOLVOLO DLE SIGMA

## IMAGING → TC addome con mdc



**Sigmoid volvulus**




A 90-year-old woman with sigmoid volvulus.

(A) Drawing shows X-marks-the-spot sign caused by crossing transition points. Horizontal lines and schematic axial insets indicate levels of B and C. Oblique lines in insets indicate two transition zones oriented in opposite directions, producing an X shape.

(B) Contrast-enhanced axial computed tomography (CT) image through proximal-superior transition (arrows).

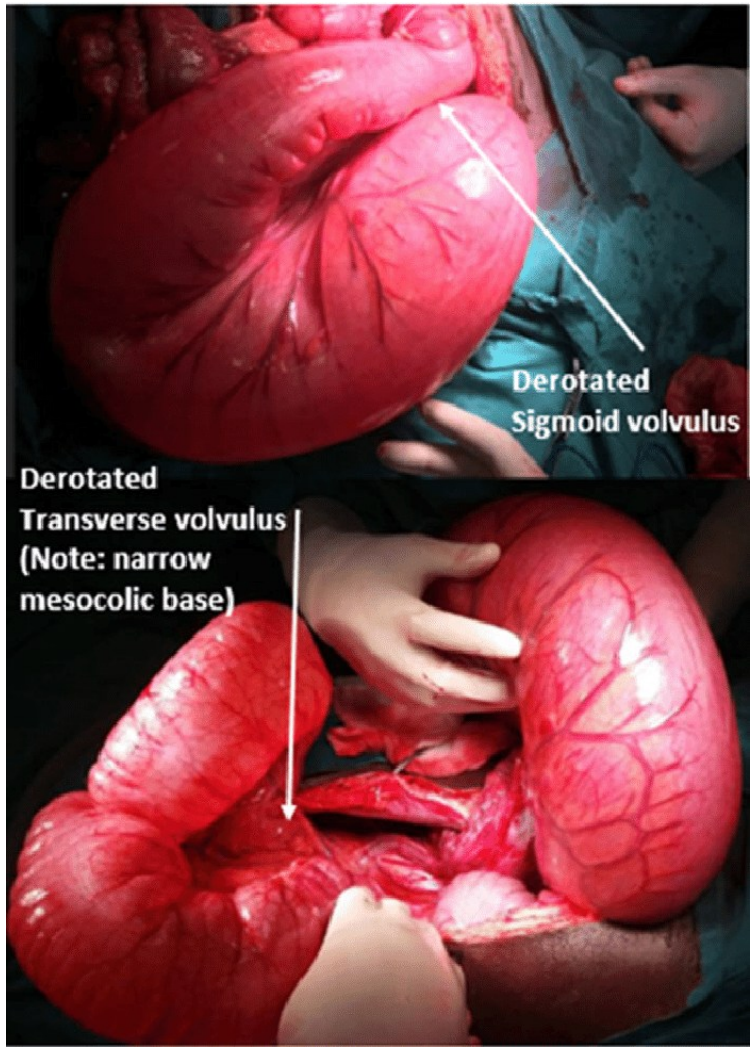
(C) Axial CT image 15 mm caudal to B through distal-inferior sigmoid transition (arrows), which is oriented in the direction opposite to the proximal transition.

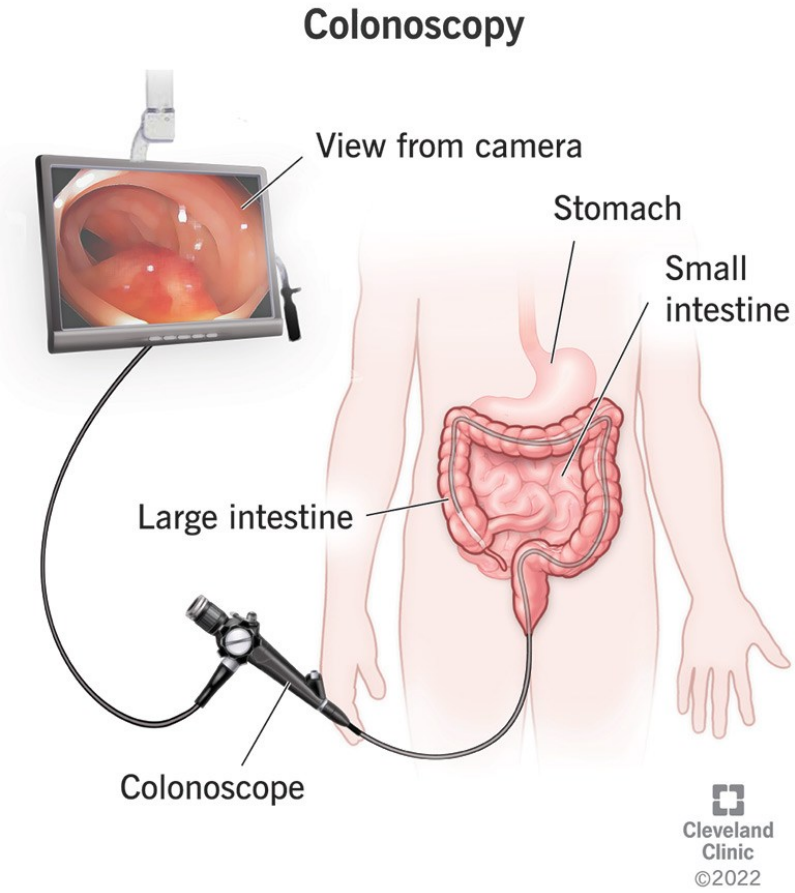


Si verifica quando un'ansa del colon sigmoideo ruota attorno al proprio mesentere

L'ostruzione e la compromissione perfusione vascolare si verificano quando il grado di torsione supera rispettivamente i **180°** e i **360°**

# VOLVOLO DEL SIGMA




https://doi.org/10.1093/jscr/rjy295

UNIVERSITÀ DEGLI STUDI DI TRIESTE

CLINICA CHIRURGICA
TRIESTE

# PERFORAZIONE INTESTINALE

# Perforazione Intestinale

CLINICA CHIRURGICA
TRIESTE

Presenza di gas o liquido “libero” extraluminale, oppure di una raccolta fluida all’imaging diagnostico eseguito per valutare dolore addominale

La perforazione intestinale può presentarsi in modo **acuto** o con un decorso più **subdolo** (con formazione di ascesso o fistola intestinale)

**Cause principali**

1. Lesione (iatrogena/traumatica) del tratto interessato
2. OI
3. Altro (MICI, tumori, malattie del connettivo, ischemia intestinale)

# Lesione del tratto intestinale

CLINICA CHIRURGICA
TRIESTE

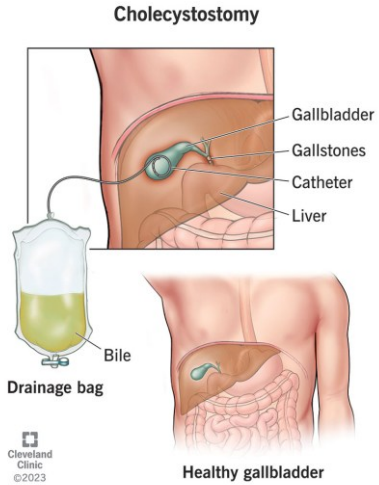
Lesione **a tutto spessore** della parete intestinale

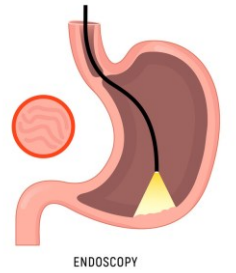
💡 **Attenzione:**

Le lesioni intestinali **a spessore parziale** (es. elettrocauterio, trauma contusivo) possono **progredire** nel tempo diventando lesioni **a tutto spessore** → rischio di **perforazione** e fuoriuscita di contenuto enterico

**Cause principali**

1. Procedure endoscopiche
2. Procedure percutanee
3. Chirurgia (danno intraoperatorio, leak anastomotico)
4. Trauma (penetrante o contusivo)
5. Ingestione di caustici/corpi estranei




# Perforazione intestinale

CLINICA CHIRURGICA
TRIESTE

**CLINICA**

- Sede del dolore
- Anamnesi (trauma, recente procedura…)
- Possibile presenza di corpi estranei
- Terapia domiciliare (FANS, glucocorticoidi…)

**PRESENTAZIONE DEL PAZIENTE → quadro eterogeneo**

Gravità e sede del dolore → perforazione in cavità libera o contenuta e sua localizzazione

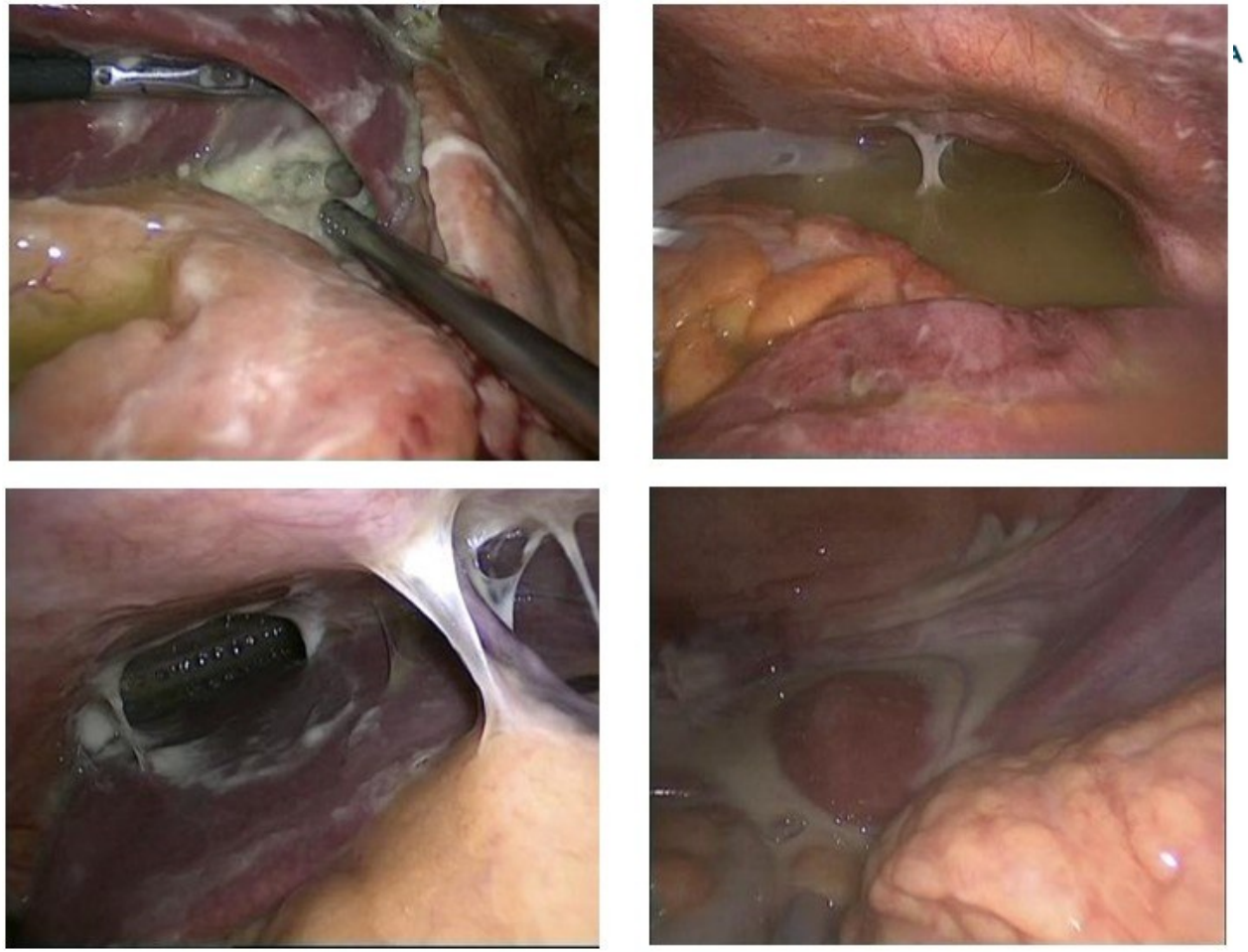
Possibile associazione con **alterazioni dello stato mentale**, **instabilità emodinamica** e/o **shock**

# Perforazione in cavità libera

Spesso il pz è in grado di indicare con precisione il momento d'esordio

→**improvviso peggioramento del dolore**, seguito da una **temporanea scomparsa** dello stesso, poiché la perforazione decomprime l'organo infiammato→ sollievo **transitorio**

→il contenuto gastrointestinale fuoriuscito irrita il peritoneo viscerale→ **dolore continuo** → **peritonite** → **addome acuto**



https://www.researchgate.net/publication/232226728_Laparoscopic_surgery_complications_Postoperative_peritonitis

# Perforazione contenuta

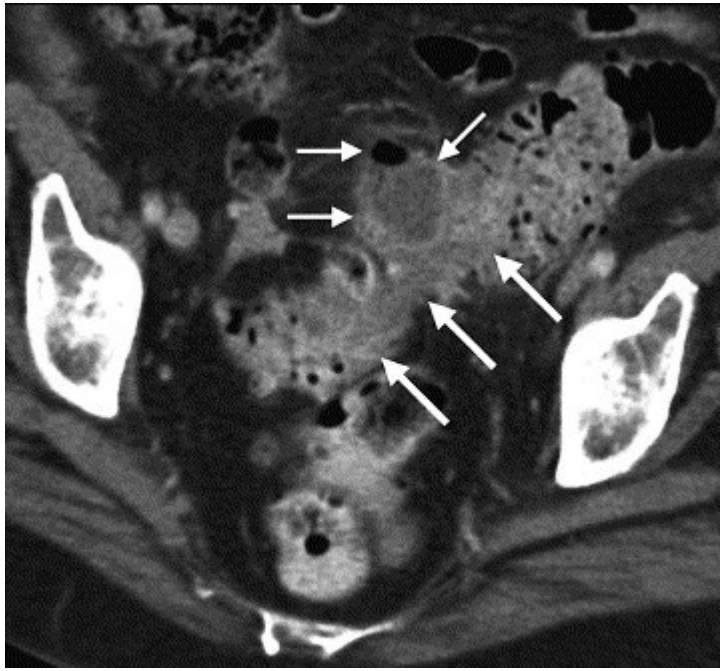
Presentazione più tardiva

→ Massa addominale→ ascesso

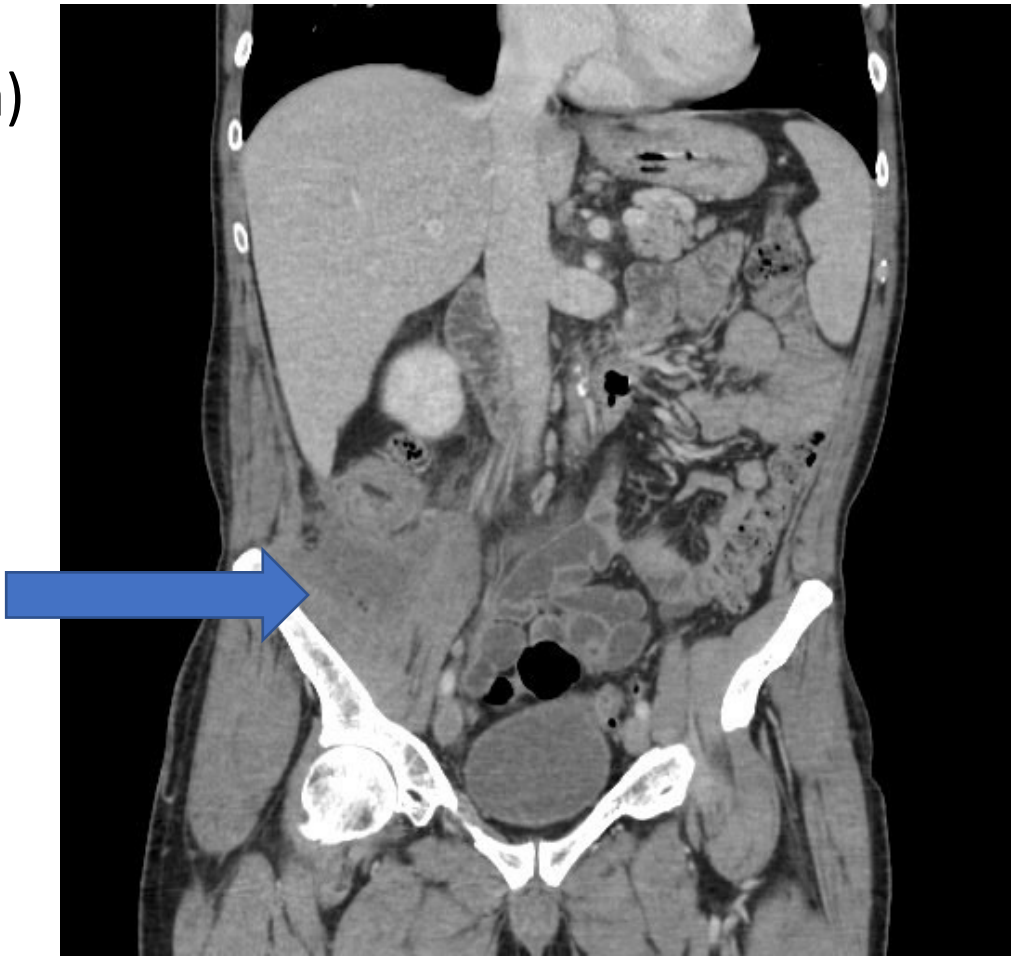
→ Fistola (Crohn/diverticolite/tumore/post-chirurgia)

→ Dolore lombare se perforazione retroperitoneale

→ Sepsi



https://doi.org/10.1016/j.ejrad.2005.03.003



# Perforazione intestinale

CLINICA CHIRURGICA
TRIESTE

## ESAME OBIETTIVO

- PV → shock, TC, diuresi
- Addome: trattabile, dolente e dolorabile diffusamente/ a tavola/ reazione di difesa (Blumberg +)/ distensione addominale

## LABORATORIO

- ↑ GB e PCR
- ↑ lattati
- Acidosi metabolica
- Indici di funzionalità epatica e renale
- Elettroliti

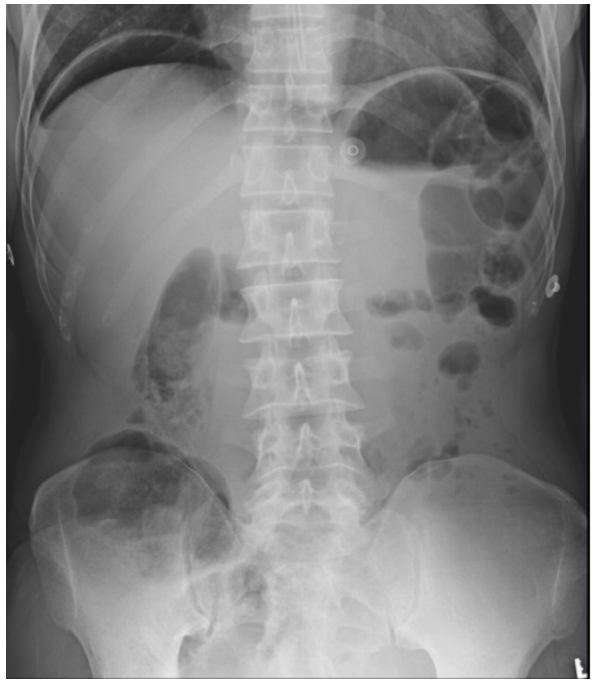
| *Esame* | *Esito* | | *U.M.* | *Intervalli di riferimento* |
|---|---|---|---|---|
| **Chimica Clinica** | | | | |
| Glucosio | **54** | < | mg/dL | 65 - 110 |
| Urea | **44** | | mg/dL | 15 - 50 |
| Creatinina (metodo enzimatico IFCC-IDMS) | **0.95** | | mg/dL | 0.40 - 1.10 |
| Sodio | **141** | | mEq/L | 135 - 145 |
| Potassio | **4.39** | | mEq/L | 3.50 - 5.10 |
| Proteina C reattiva | **258.5** | | mg/L | < 5.0 |
| **Ematologia** | | | | |
| Emocromo | | | | |
| Globuli Bianchi | **16.13** | > | x 10 ^3 / µL | 4.00 - 11.00 |
| Globuli Rossi | **4.42** | | x 10^6 /µL | 4.20 - 5.00 |
| Emoglobina | **13.5** | | g/dL | 12.0 - 16.0 |
| Ematocrito | **41.4** | | % | 37.0 - 50.0 |
| MCV | **93.7** | | fL | 80.0 - 94.0 |
| MCH | **30.5** | | pg | 27.0 - 32.0 |
| MCHC | **32.6** | | g/dL | 31.5 - 36.0 |
| RDW | **14.9** | > | % | 13.0 - 14.7 |
| Piastrine | **214** | | x 10 ^3 / µL | 150 - 450 |
| MPV | **10.1** | | fL | 8.1 - 10.2 |
| PDW | **11.6** | | % | |
| PCT | **0.22** | | % | |

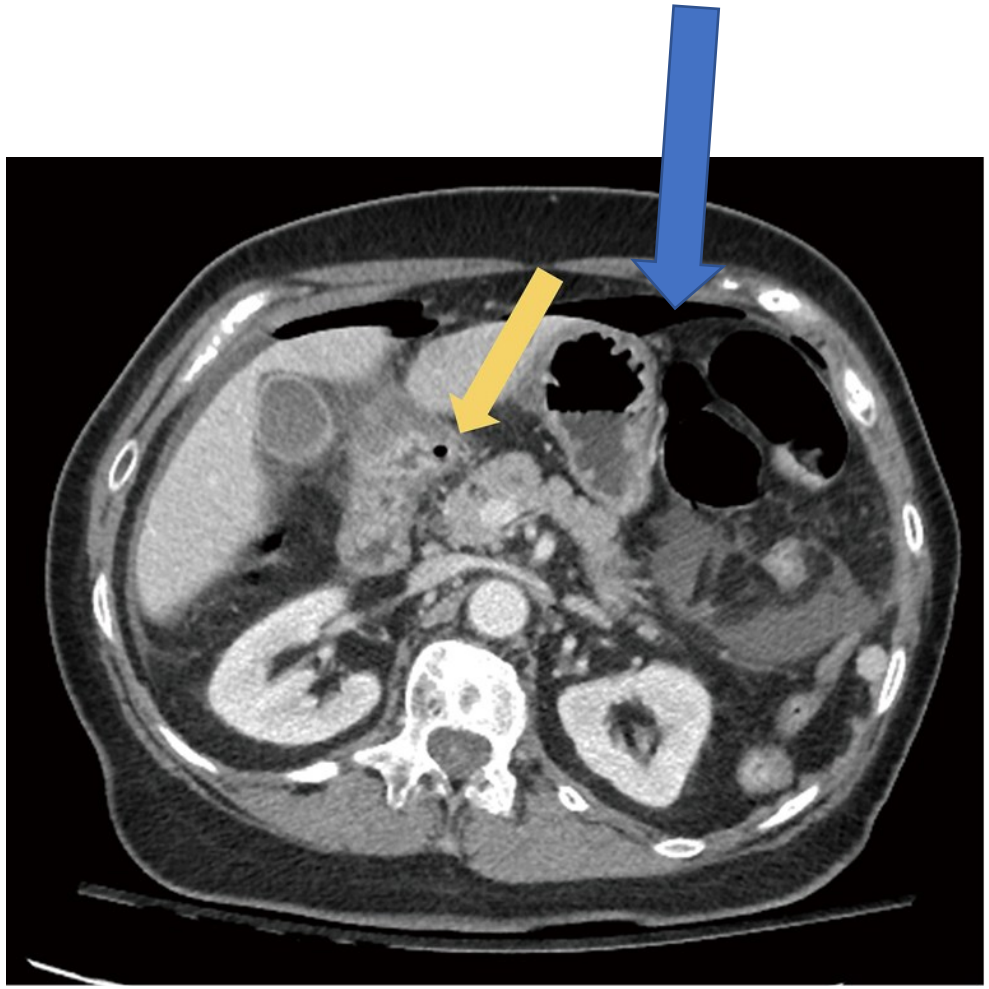
# Perforazione intestinale

CLINICA CHIRURGICA
TRIESTE

## IMAGING

- Rx addome
- TC addome con mdc





https://radiopaedia.org/cases/bowel-perforation-subdiaphragmatic-free-gas

doi: 10.21037/ales-23-17

# Perforazione intestinale

CLINICA CHIRURGICA
TRIESTE

## MANAGEMENT

- Fluidoterapia
- Emocolture
- Antibioticoterapia ad ampio spettro + ev antifungino
- Correzione ev disionie

**Management specifico a seconda della causa e dallo stato del pz**

**NOM**

**Chirurgico**

**Drenaggio radiologico**