BOWEL MANAGEMENT FOR FECAL INCONTINENCE

Andrea Bischoff, MD

The 66th Workshop for the Surgical Treatment of Colorectal Problems in Children

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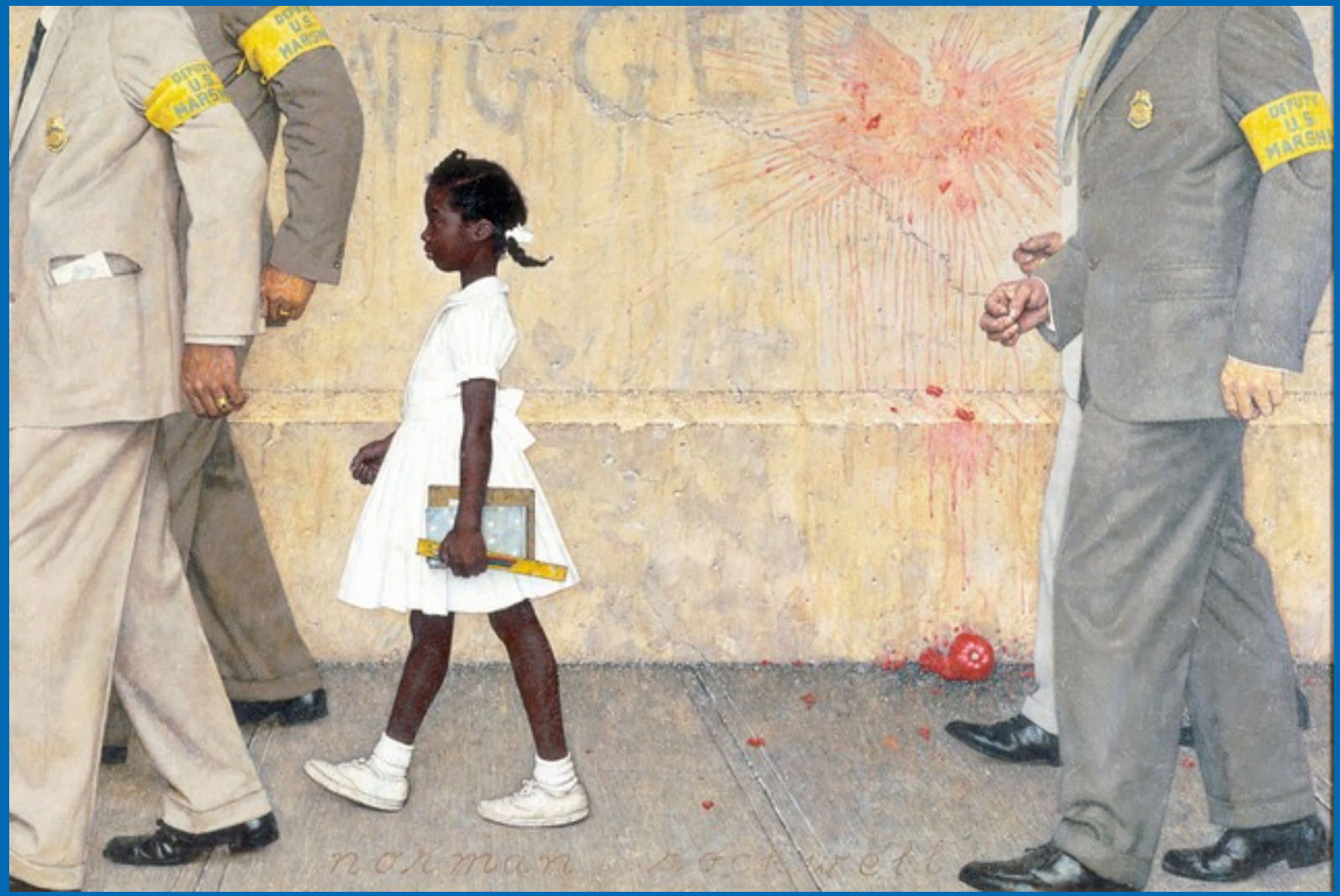
The problem we all live with



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Patients

- Anorectal malformation
- Hirschsprung's
- Myelomeningocele
- Sacrococcygeal teratoma
- Trauma

At what age do we recommend to start formal bowel management?

A. 1 year of age
B. 2 years of age
C. 3 years of age
D. 4 years of age
E. 5 years of age

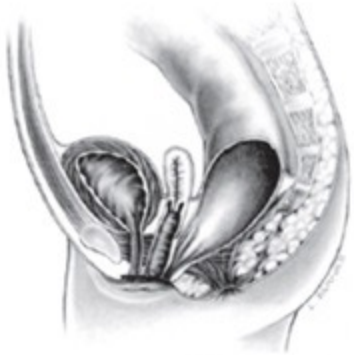
Fecal incontinence is normal at birth

What are our recommendations until the age of formal bowel management (before 3 yo)?

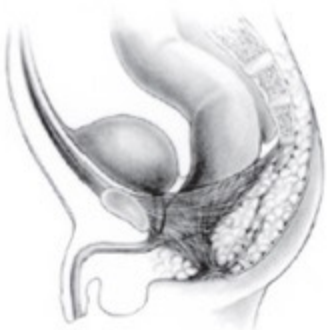
A. Give a suppository every night
B. Give an enema every night
C. Gibe baby lax every night
D. Avoid and treat constipation
E. Constipating diet

How do you decide if a patient with anorectal malformation needs laxatives or enemas?

1. Recto-perineal fistula: 100% chances of bowel control*~

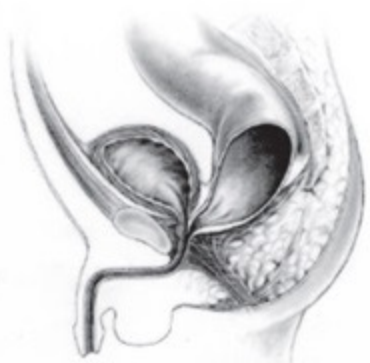


2. Recto-vestibular fistula: 95% chances of bowel control*~



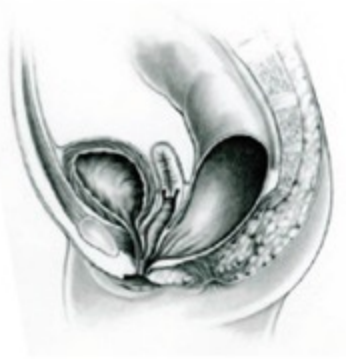
3. Recto-urethral bulbar fistula: 85% chances of bowel control*~

4. Imperforate anus without fistula: 80 – 90% chances of bowel control*~^



5. Recto-urethral prostatic fistula: 65% chances of bowel control*

6. Recto-bladderneck fistula: 15% chances of bowel control*



7. Cloaca with common channel length less than 3cm: 70% chance of bowel control*

*Provided patients have a normal sacrum (Sacral Ratio > 0.7), no tethered cord, and that they receive a technically correct operation

~Patients with good bowel functional prognosis are the ones who suffer from the most severe type of constipation

^High incidence of Trisomy 21.

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Concept Number 1:

- Differentiate :
  - pseudo-incontinence

    vs.
  - true fecal incontinence

Fecal pseudo-incontinence

- Malformations with good prognosis (perineal, vestibular, bulbar, cloaca with common channel **< 3cm**),
- Normal sacrum,
- No tethered cord.

CONSTIPATION AND OVERFLOW IS THE PROBLEM.

THE CLINICIAN MUST DETERMINE THE ADEQUATE LAXATIVE DOSAGE.

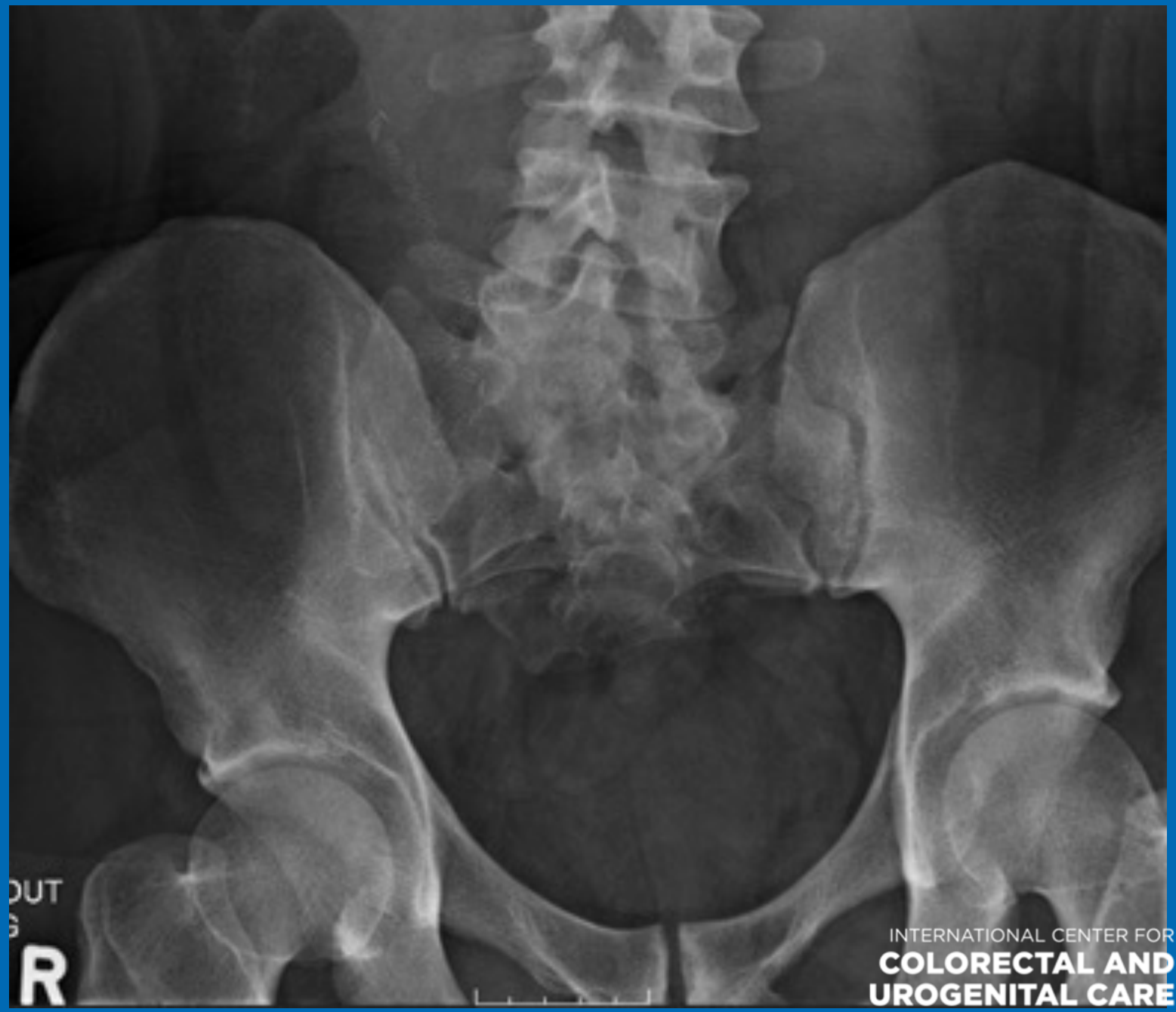
True Fecal Incontinence

- Malformations with bad prognosis (bladderneck fistula, cloaca with common channel **> 3cm**),
- Sacral ratio **< 0.4**,
- Tethered cord, myelomeningocele.

PATIENT HAS NO POTENTIAL FOR BOWEL CONTROL.

NEEDS BOWEL MANAGEMENT WITH ENEMAS.

30 yo, male patient, born and operated due to recto-bladderneck fistula, complaining of fecal incontinence.



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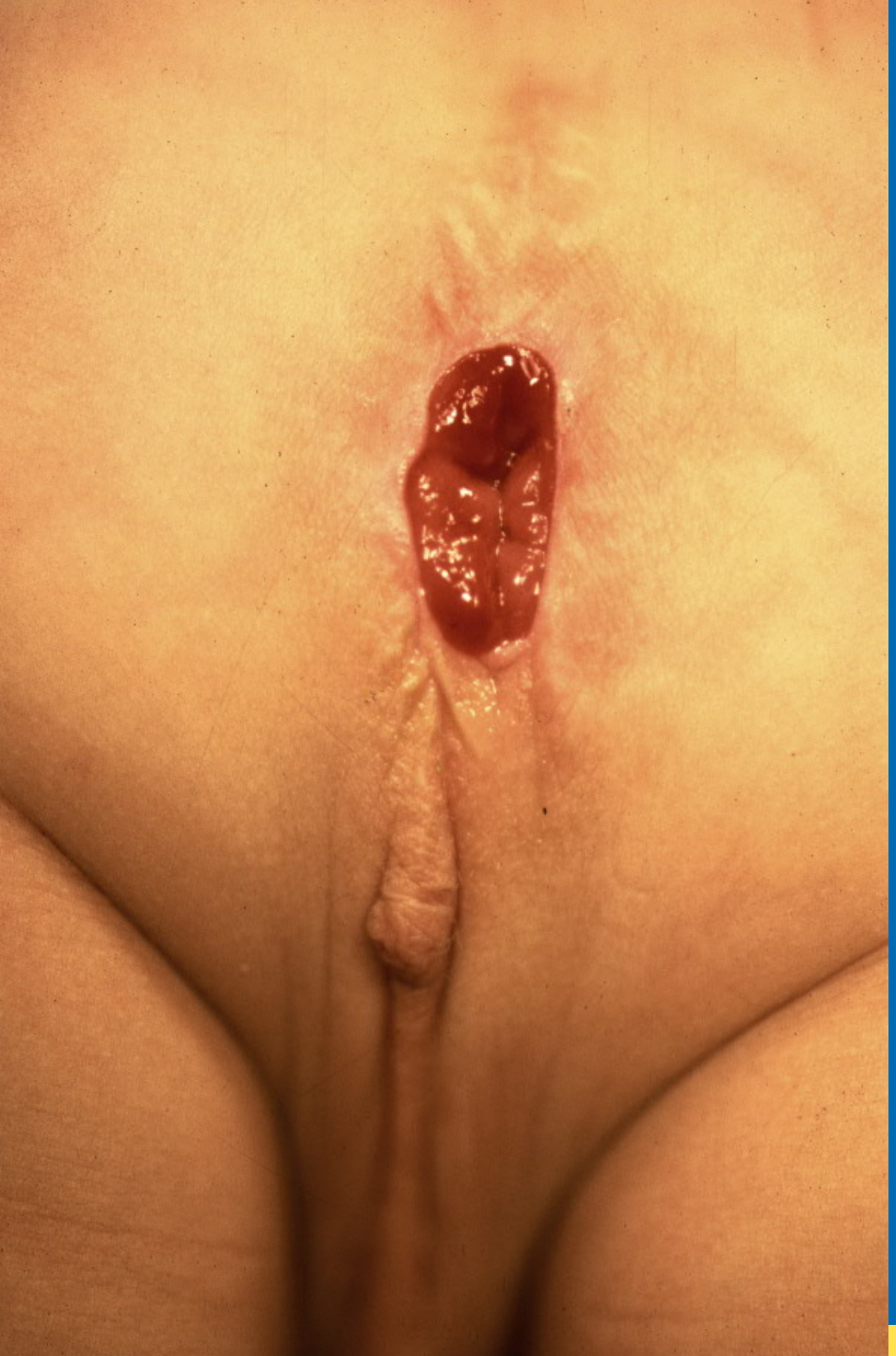
What does he suffer from?

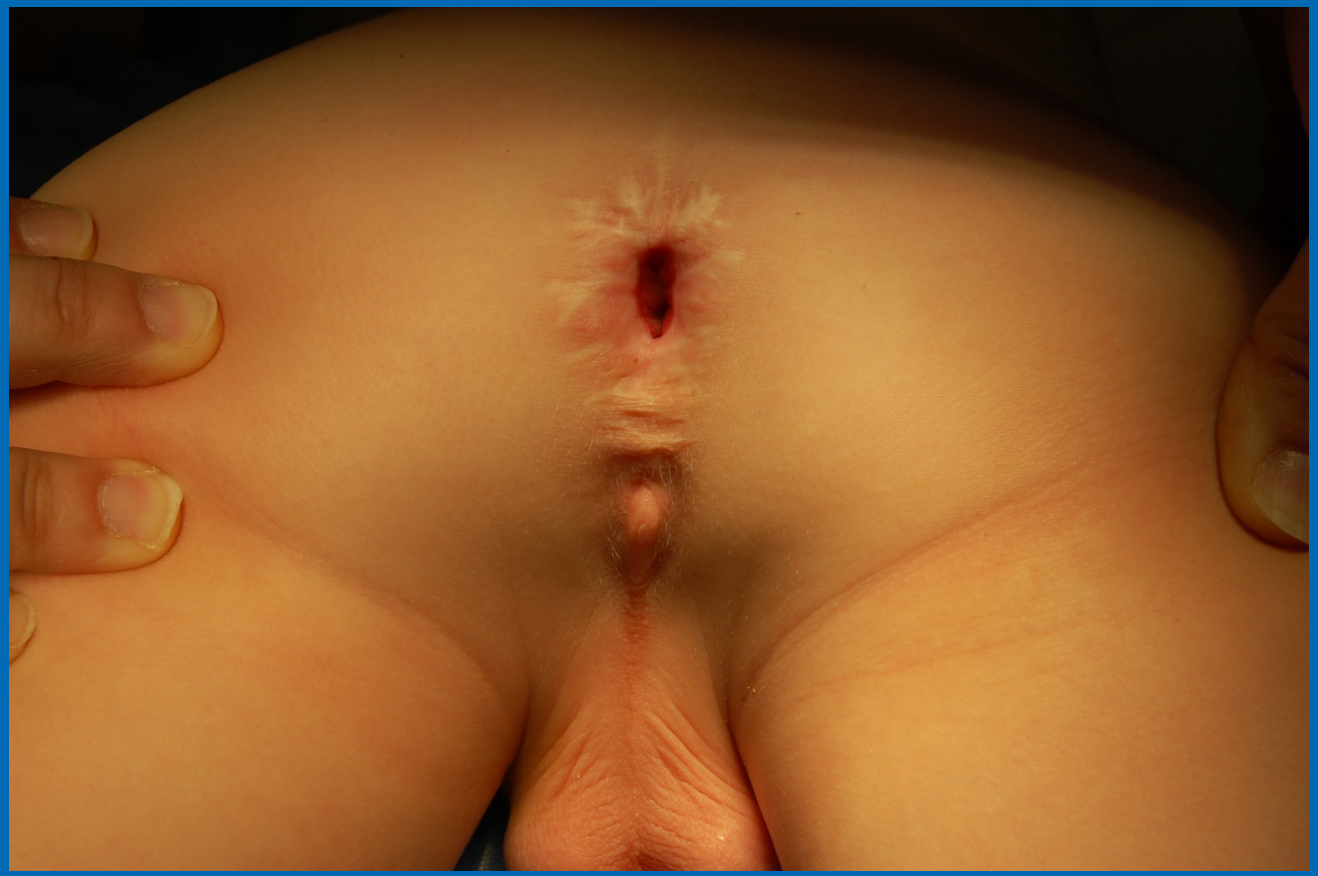
1. True fecal incontinence
2. Fecal pseudo-incontinence



What treatment does this patient need?

A. Laxatives

B. Enemas



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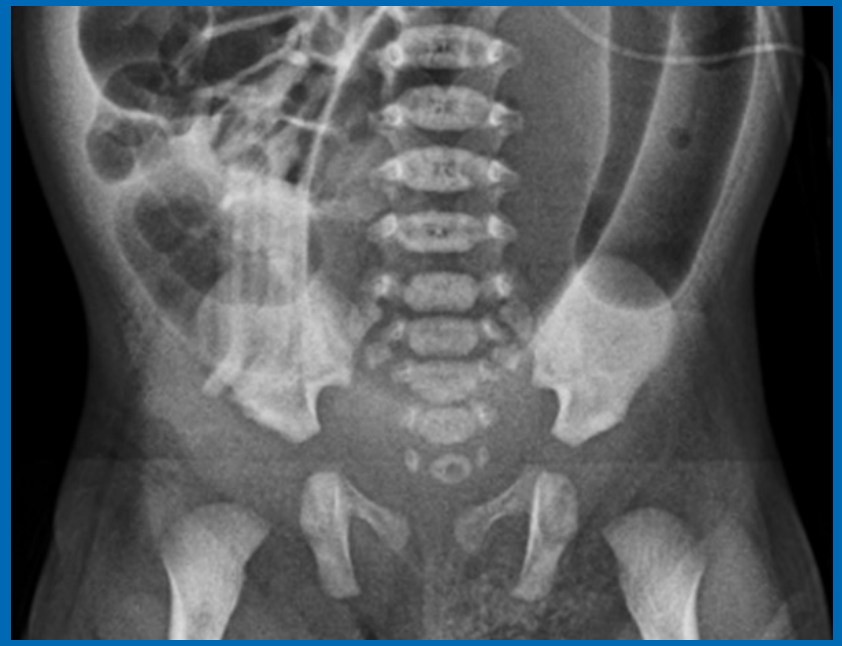
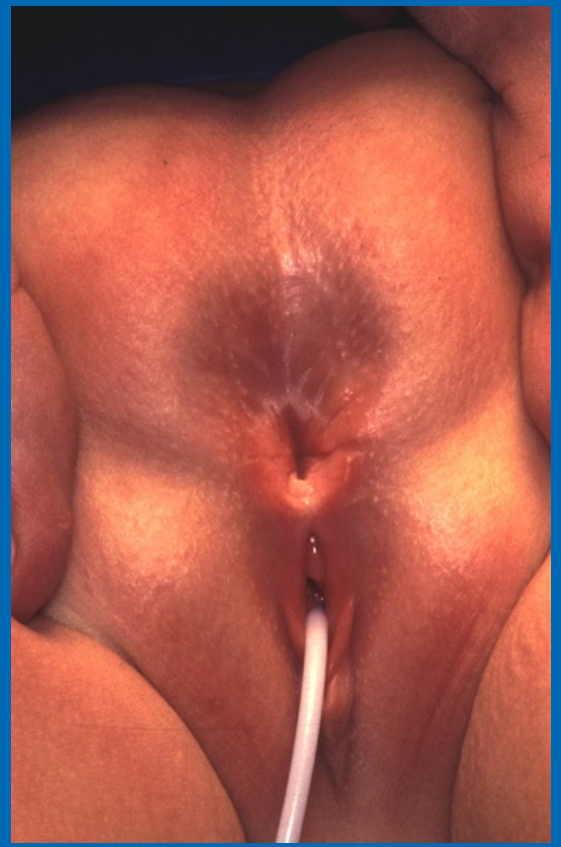


Before the operation



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A. Laxatives
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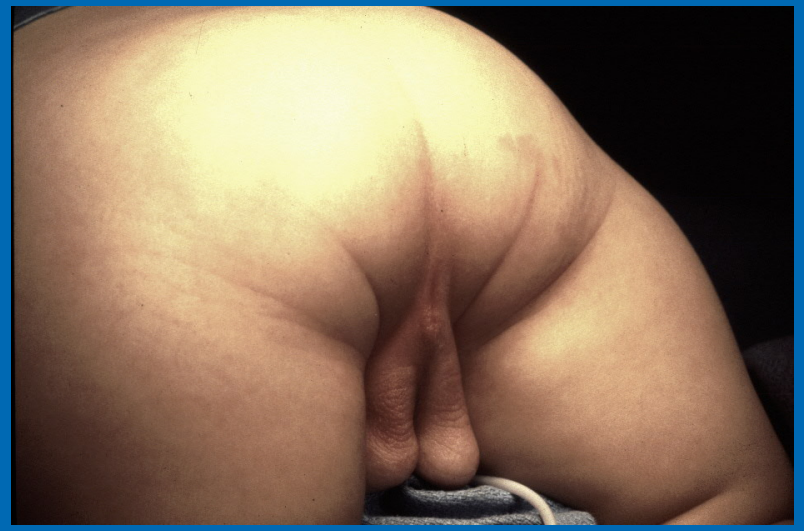
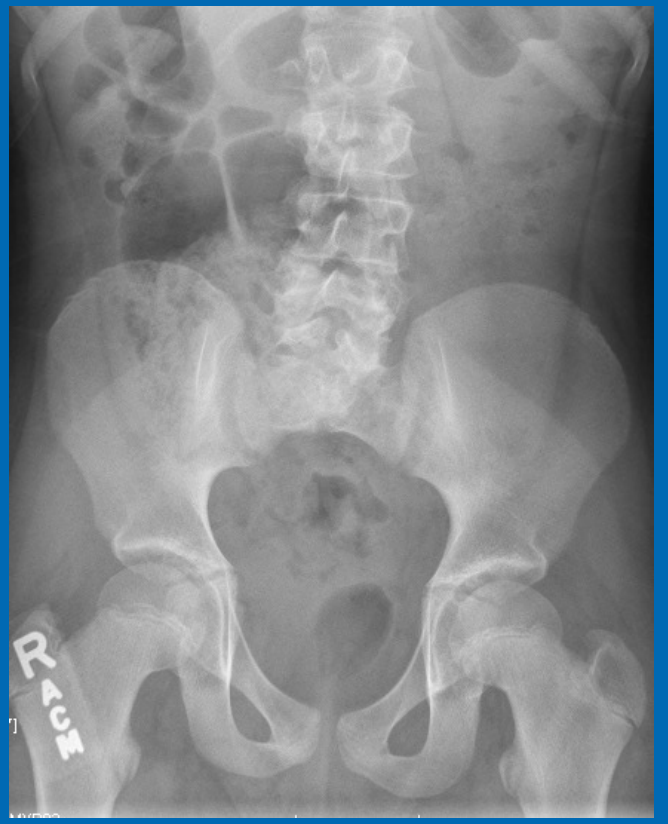
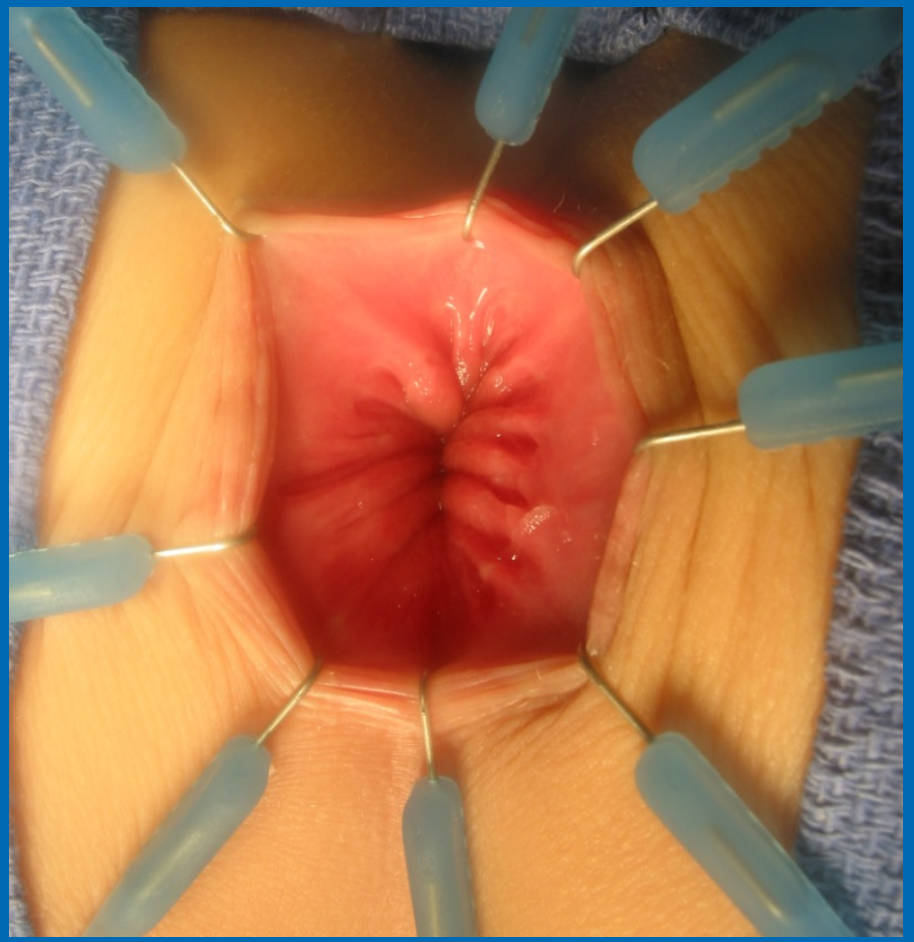




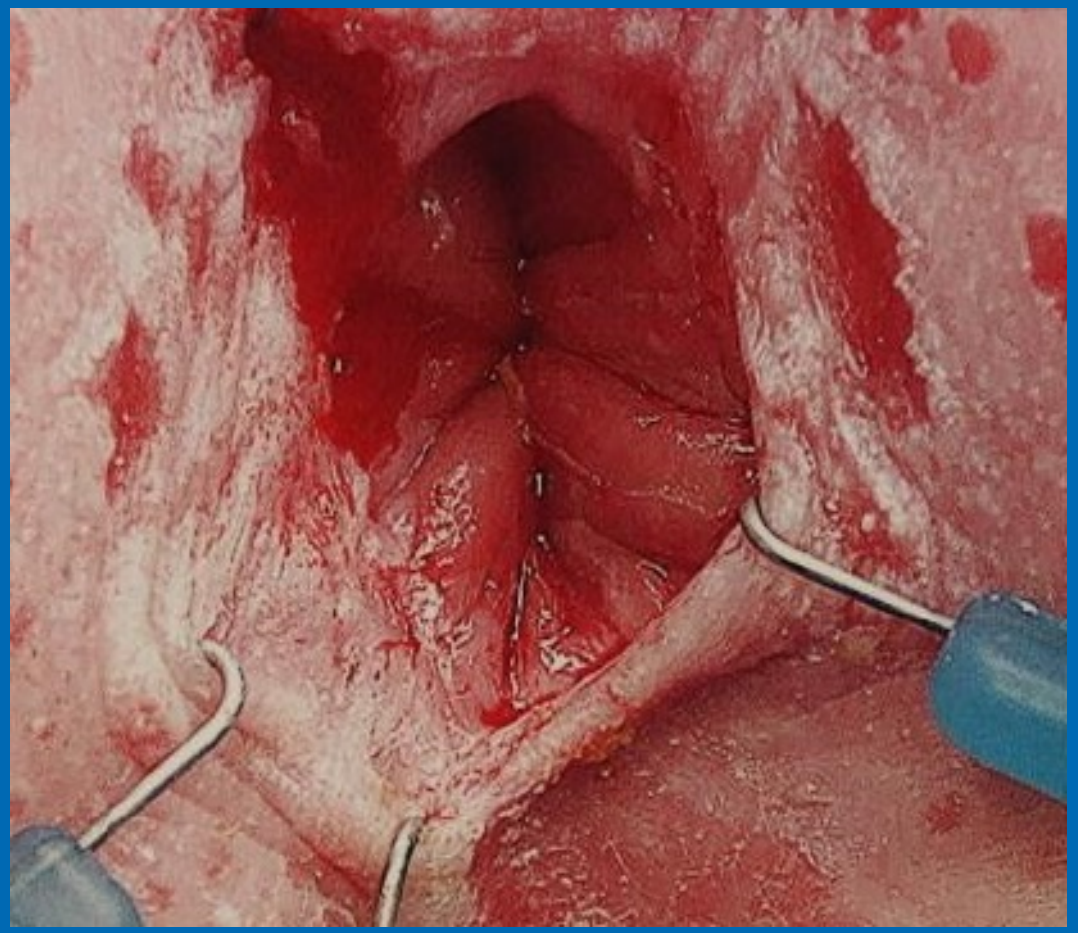
How do you decide if a patient with Hirschsprung needs laxatives or enemas?

A. Based on the integrity of the anal canal examined under anesthesia.
B. Based on the amount and characteristics of the colon on the contrast enema.
C. All of the above

Normal anal canal



Damaged anal canal



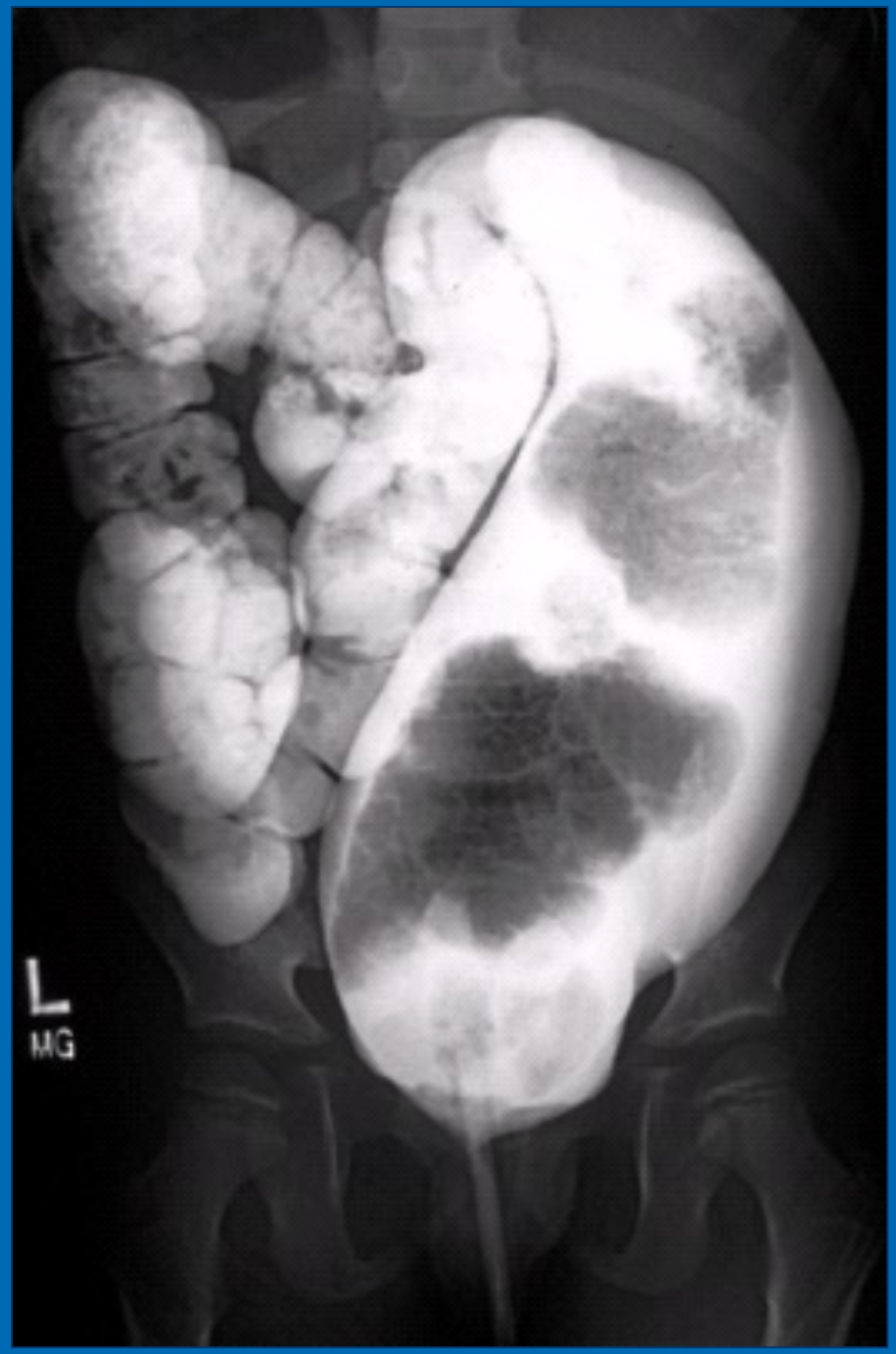
Concept Number 2:

- Determine the characteristics of the patient's colon by looking at the contrast enema and dividing the patients into two groups:

FECALLY INCONTINENT WITH A DILATED COLON (tendency to constipation)

FECALLY INCONTINENT WITH A NON DILATED COLON (tendency to diarrhea)

Fecally Incontinent with a Dilated Colon



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Dilated Colon

(hypomotility)

Large volume and concentrated enemas

Bowel Management

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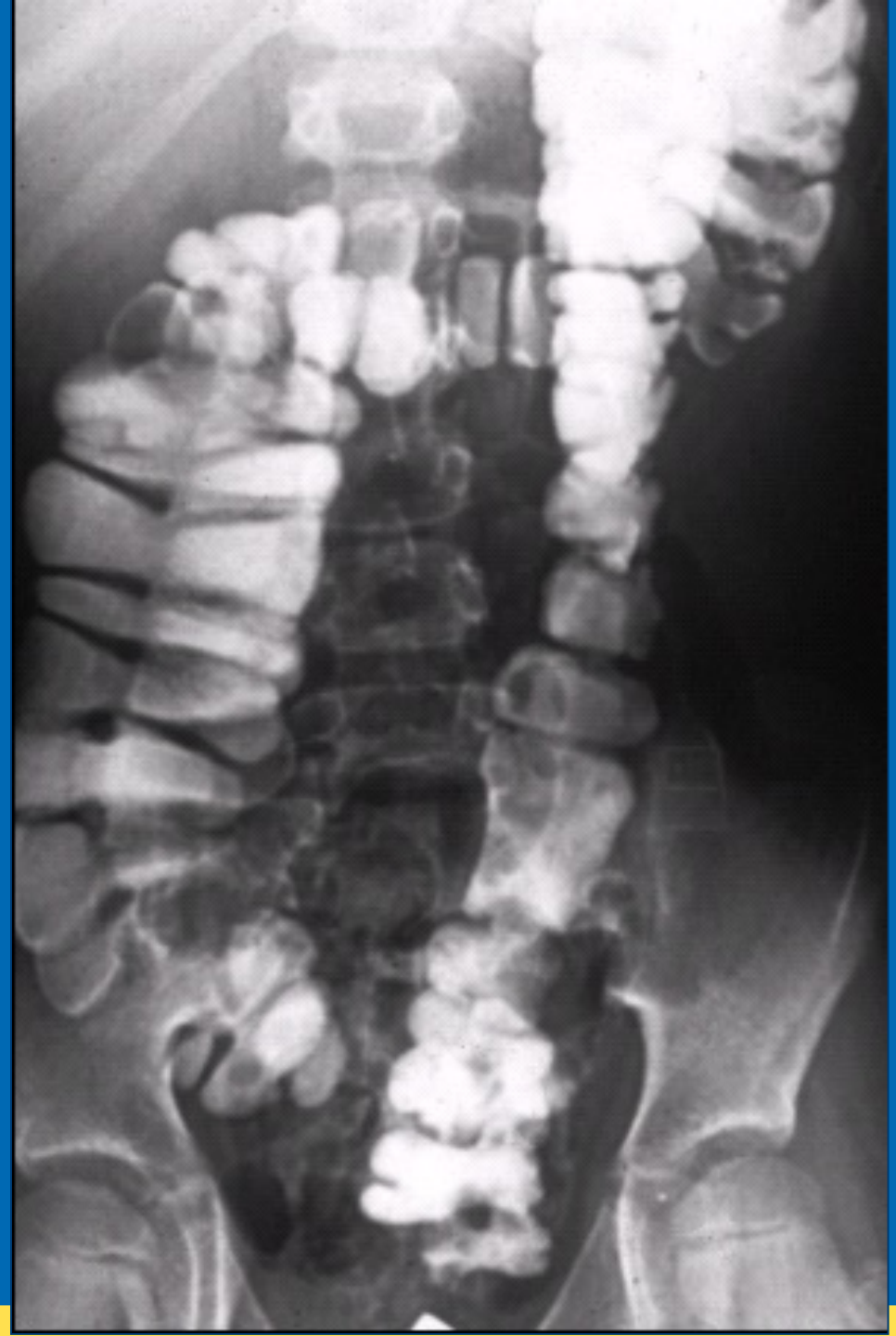
Fecally Incontinent with a NON Dilated Colon



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NON Dilated Colon

(hypermotility)

Small Enema
Constipating Diet
Loperamide
Fiber (pectin)

Bowel Management
Hyperactive Colon

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Enema components

- Saline Solution (200 – 1000ml),
- Glycerin (10 – 40ml),
- Castile soap (9 – 36ml),
- Phosphate (Fleet®)
  - < 4 years – 33 ml
  - > 4 < 10 years – 66 ml
  - > 10 years – 133 ml

Concept Number 3

- Regularly monitor the result of the enema with abdominal radiographs to check the amount of stool in the left colon.

TRIAL AND ERROR!

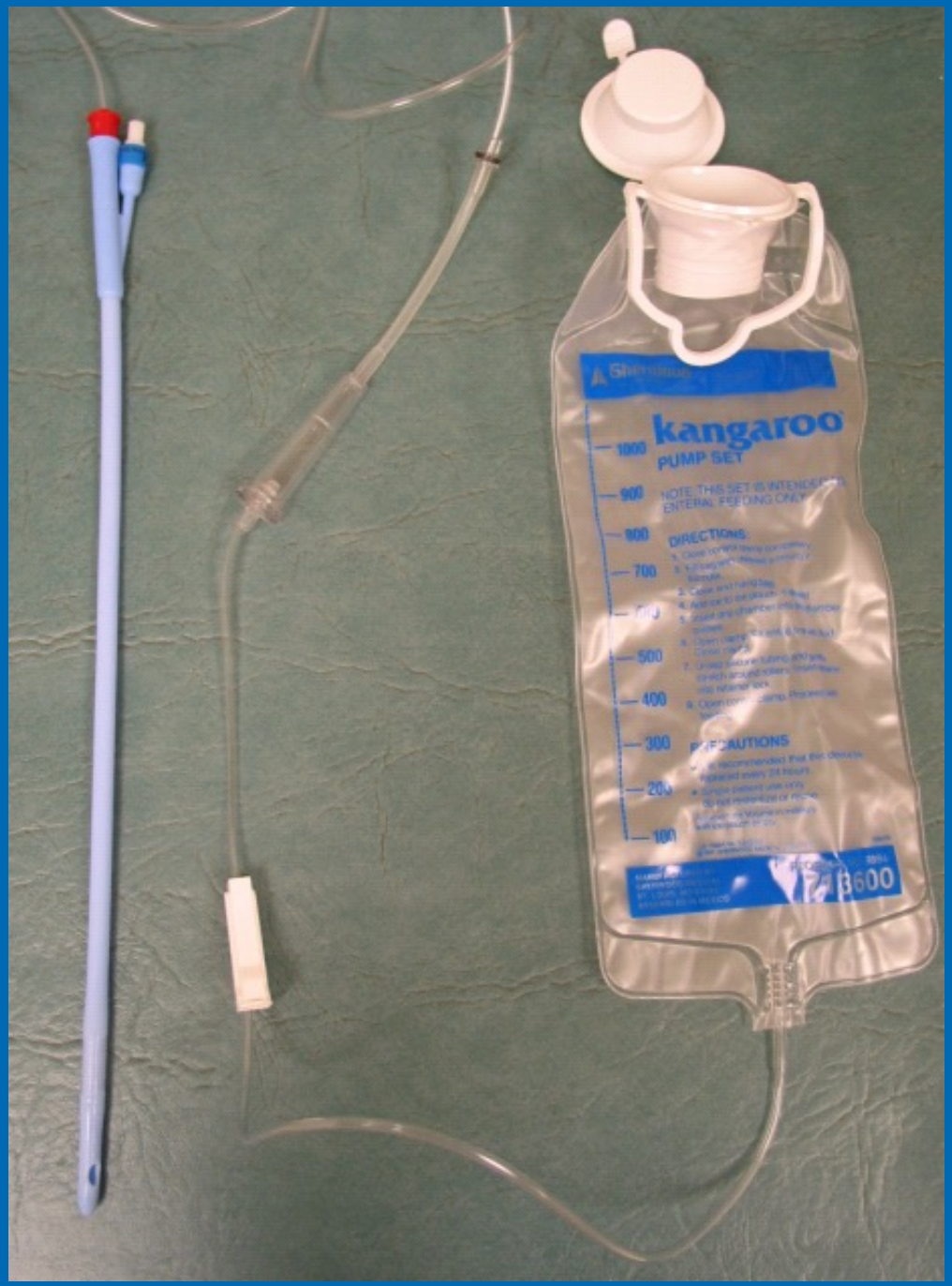
Concept Number 4

- Modify the type of enema daily, during a one week period, depending on the clinical results and the abdominal radiograph.

Concept Number 5

- Do not administer laxatives and enemas in the same patient.

Enema Administration Technique



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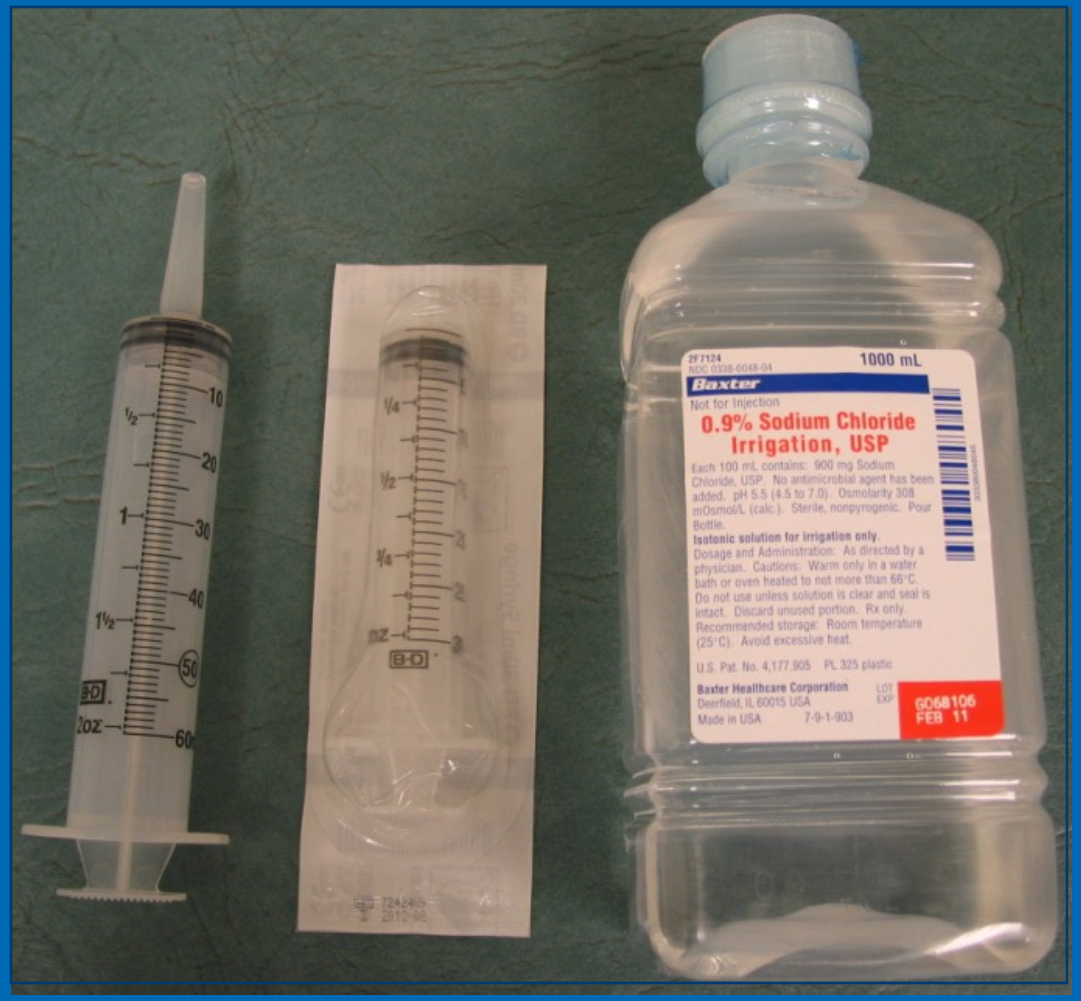
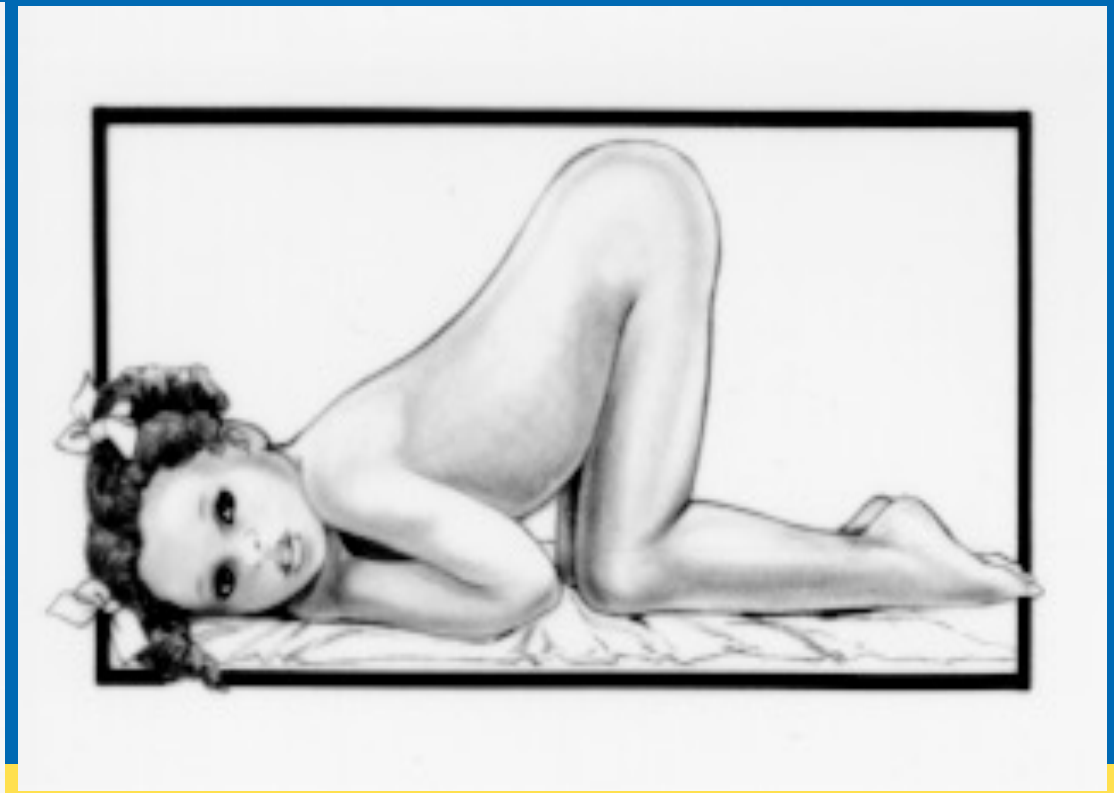

1000 mL
Baxter
Not for injection
0.9% Sodium Chloride
Irrigation, USP
Isotonic solution for irrigation only.
Baxter Healthcare Corporation
Deerfield, IL 60015 USA
Made in USA


K-Y
GEL LUBRICANTE
PARA LUBRICACIÓN ÍNTIMA
SOLUBLE EN AGUA
SEGURO Y DISCRETO
TRANSPARENTE
NO GRASO
Johnson & Johnson
Peso Líq. / Cont. Neto
100g



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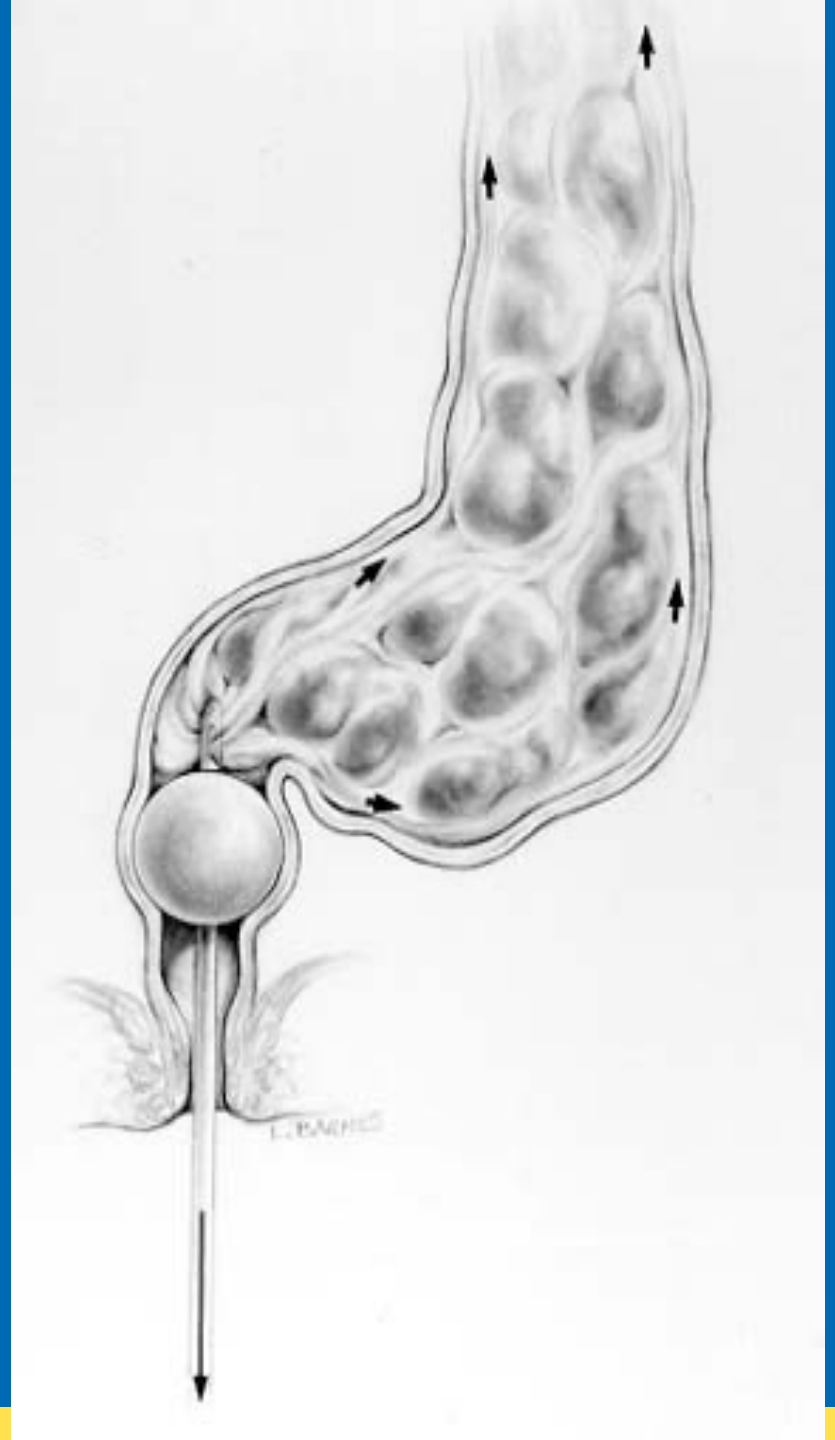

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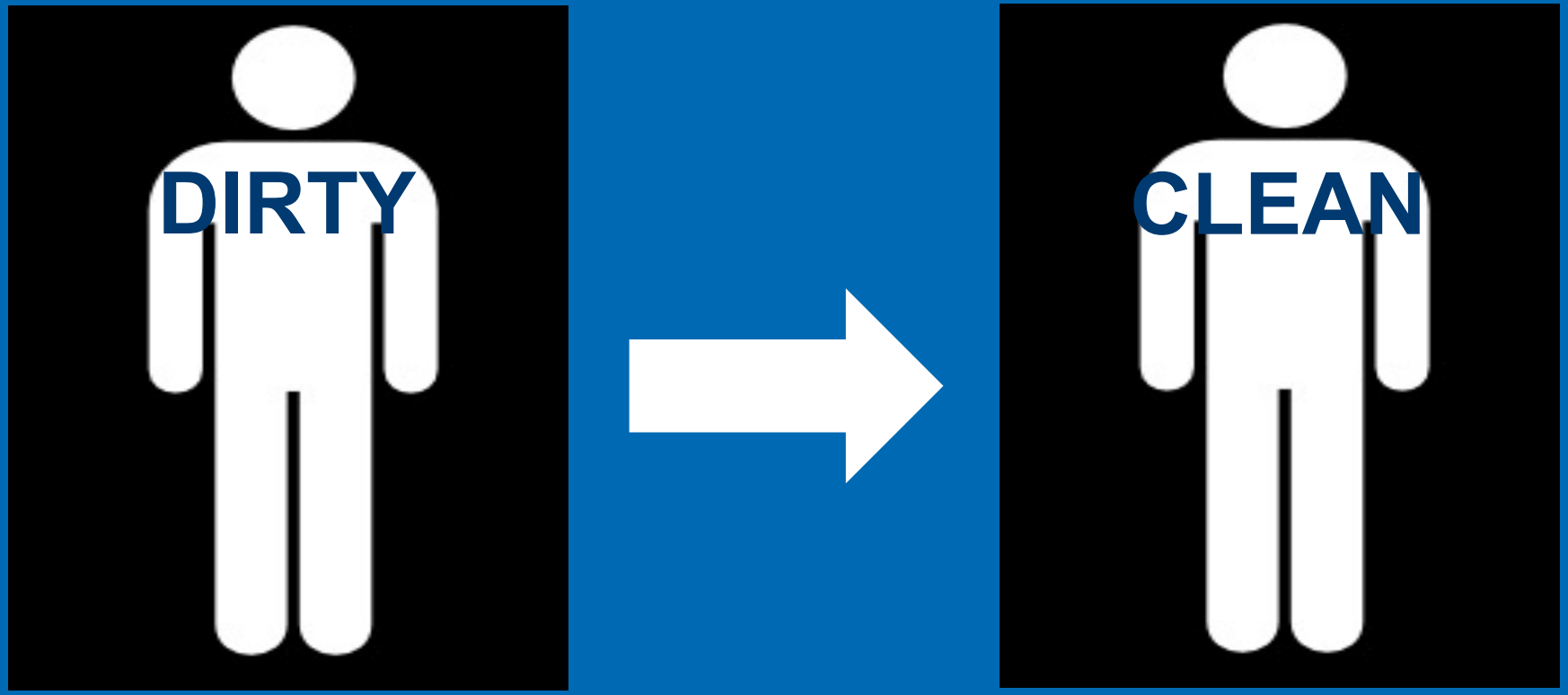
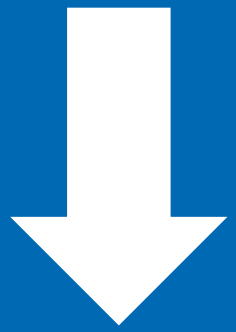
Bowel Management Troubleshooting



How to adjust the enema

- Patient's underwear is not clean and abdominal film shows significant amount of stool in the left colon



- Increase volume and/or concentration of the enema

How to adjust the enema

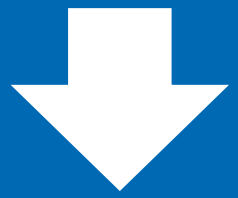
- Parents report that it took more than one hour, after receiving the enema, to have a bowel movement

- Increase the concentration of the enema

How to adjust the enema

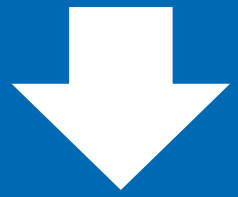
- Pain, nausea or vomiting during the enema with abdominal film that is:

clean



Decrease enema's concentration

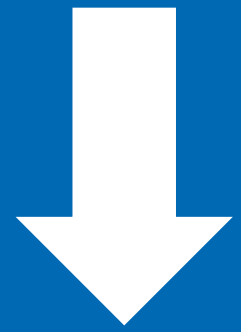
stool in the left colon



Slow administration and warm the solution

How to adjust the enema

- Clear liquid accident just after the enema



- Decrease the volume or pass a Foley catheter after the bowel movement or decrease the concentration.

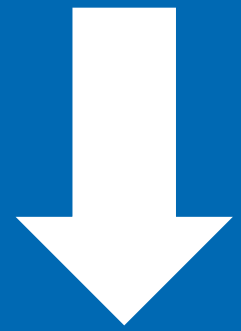
How to adjust the enema

- Child cannot handle the amount of volume prescribed.

- Decrease the volume and increase the concentration.

How to adjust the enema

- Clean colon in abdominal x-ray and the child is still passing stool (having accidents) between enemas



- Add Loperamide and constipating diet

Our Results

overall 95% success

Hypomotility
(dilated colon)

97% success

Hypermotility
(non dilated colon)

81% success

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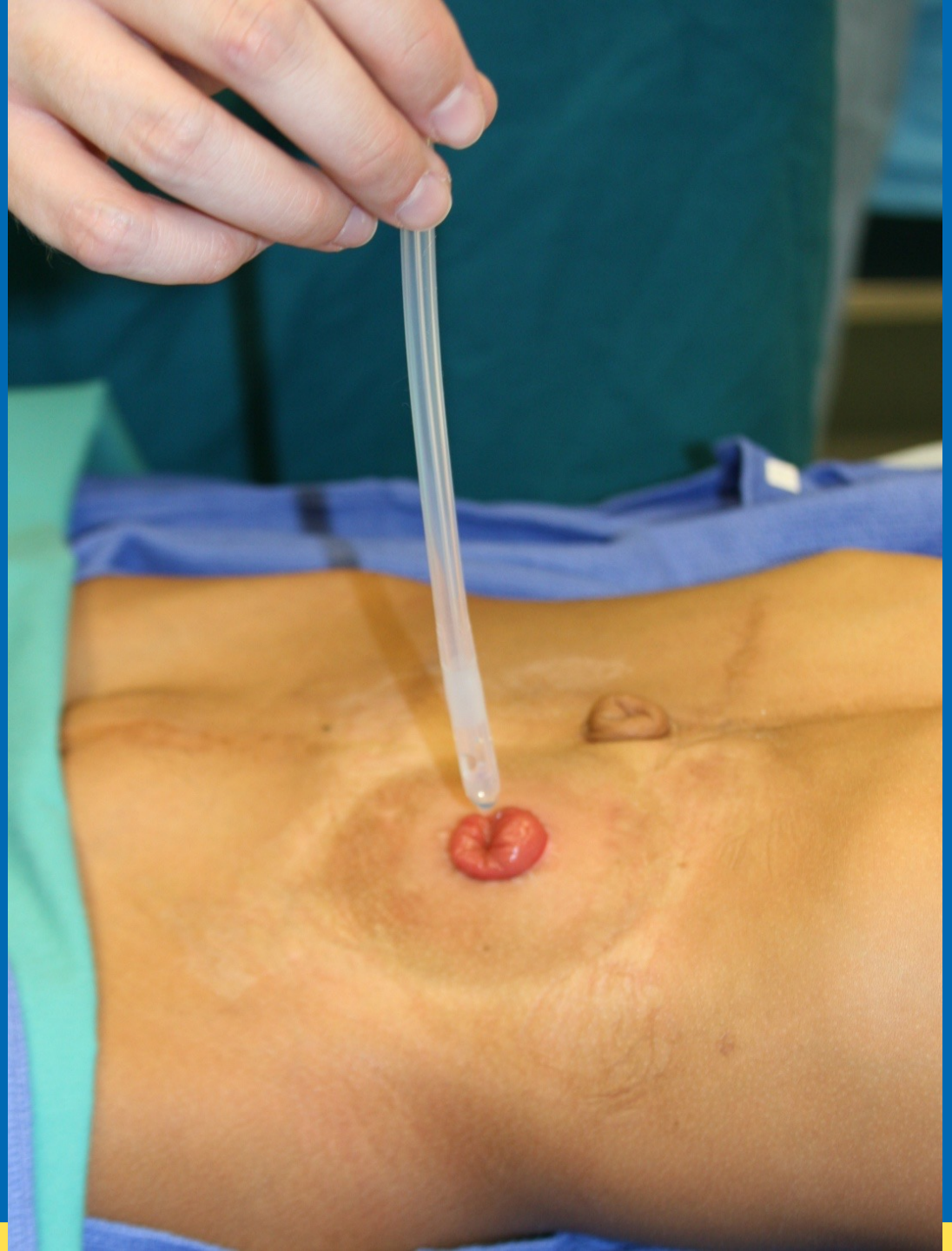
“New” Concept:

- Bowel Management through the stoma.
  - Cloacal exstrophy patients
  - Patients with anorectal malformation that received a “colostomy for life”



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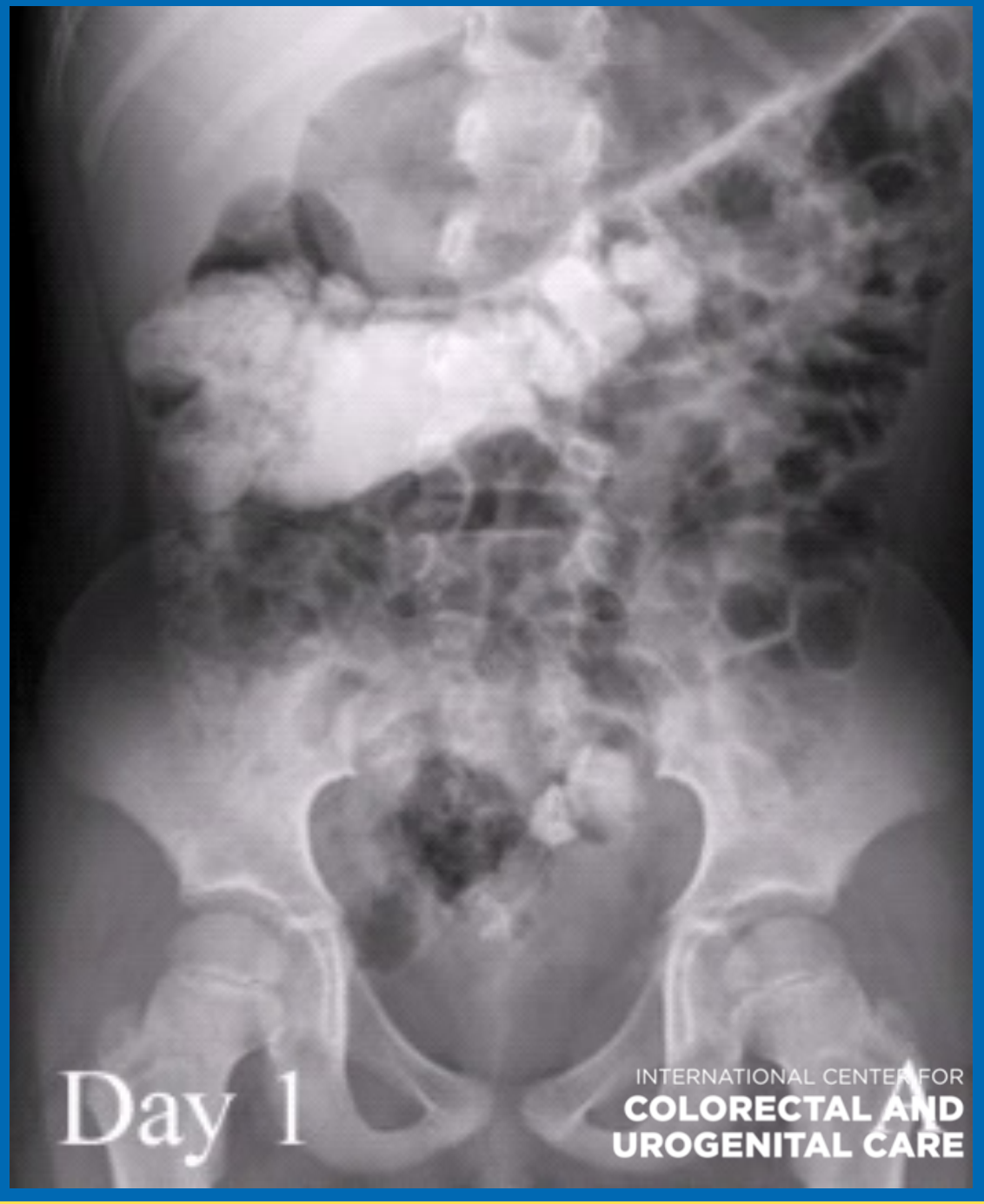
New Concept

- Bowel management for diaper rash (after colostomy closure).

Residual contrast from the previous day's exam. Enema: 500ml normal saline + 10 ml of glycerin.



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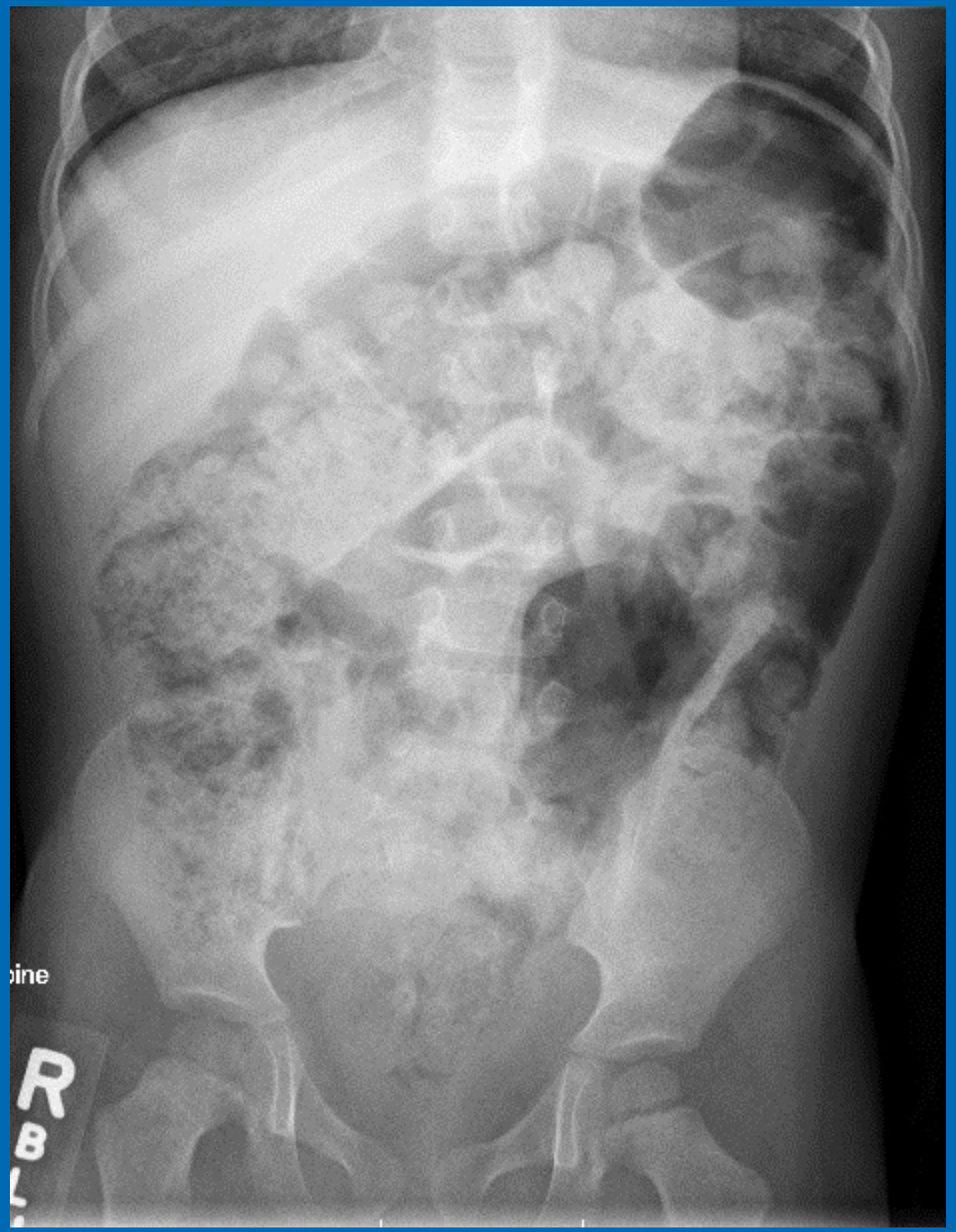
No more contrast but still a significant amount of stool.
Parent's report: still passing stool between enemas.
Decision: 500 ml of saline + 20 ml of glycerin.



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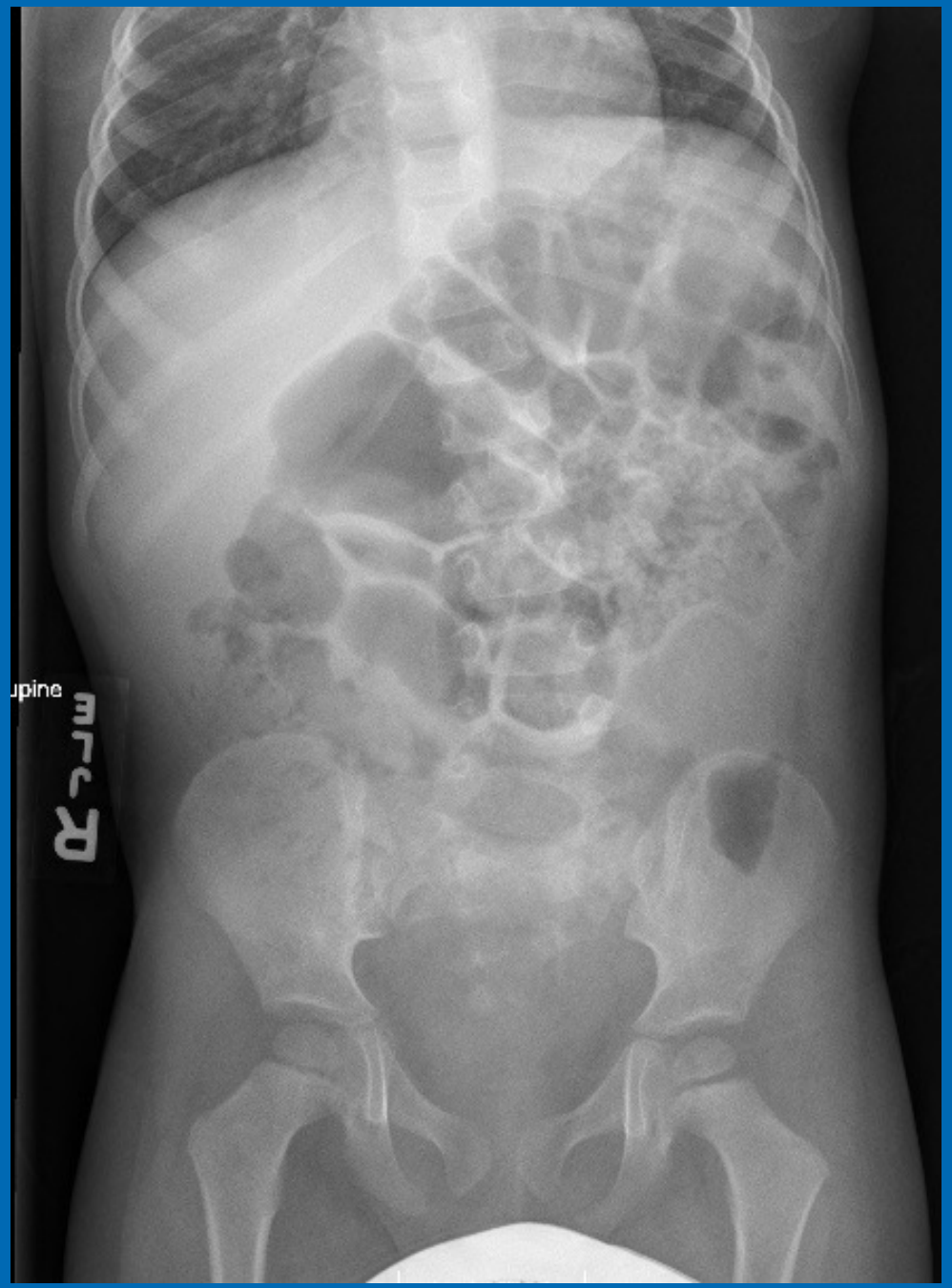
Colon almost clean, reported less accidents. Decision: 500 ml of saline + 30 ml of glycerin.



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Clean colon,
clean child.

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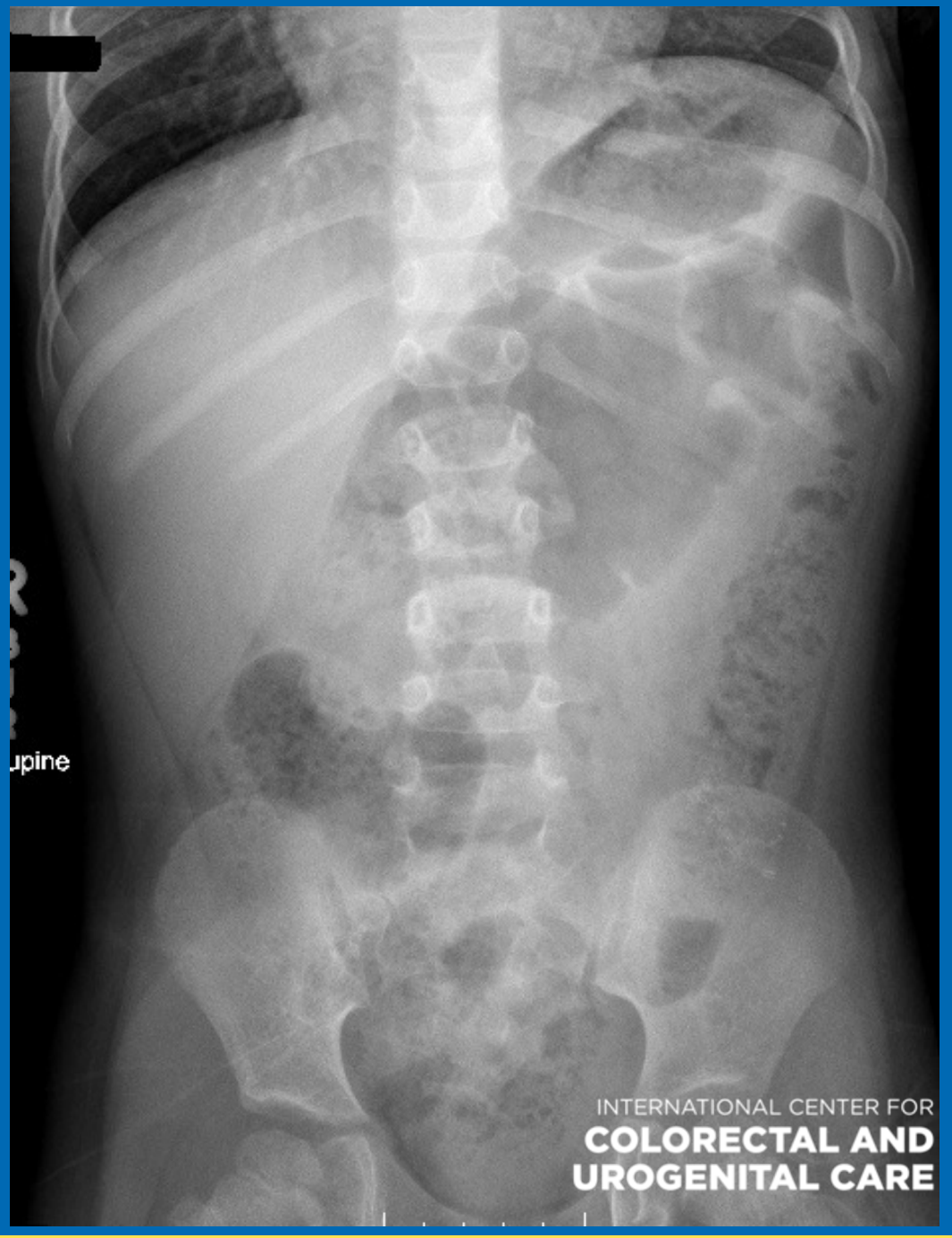
10 yo, female patient with fecal incontinence.

What enema do you want to start her on?



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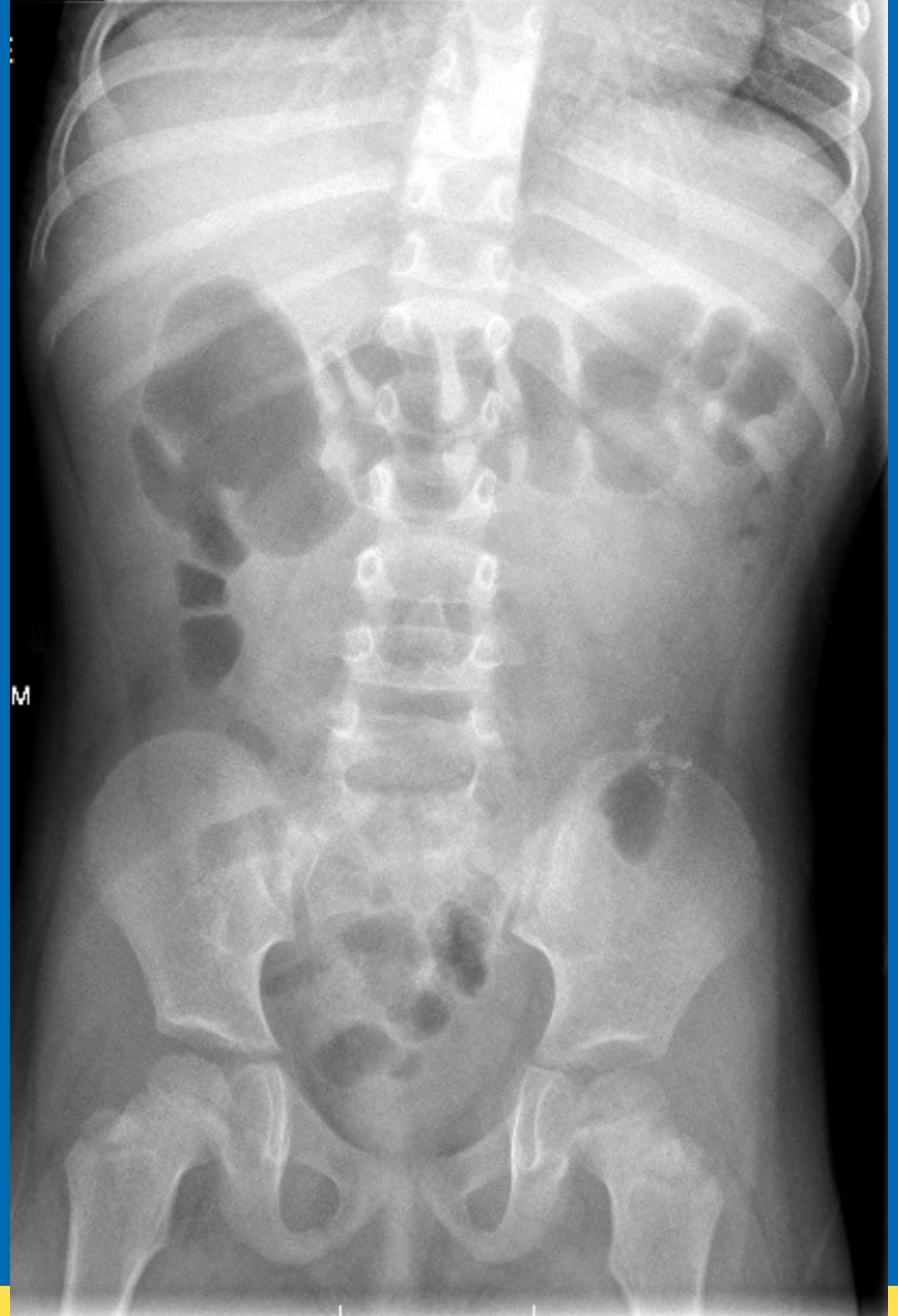
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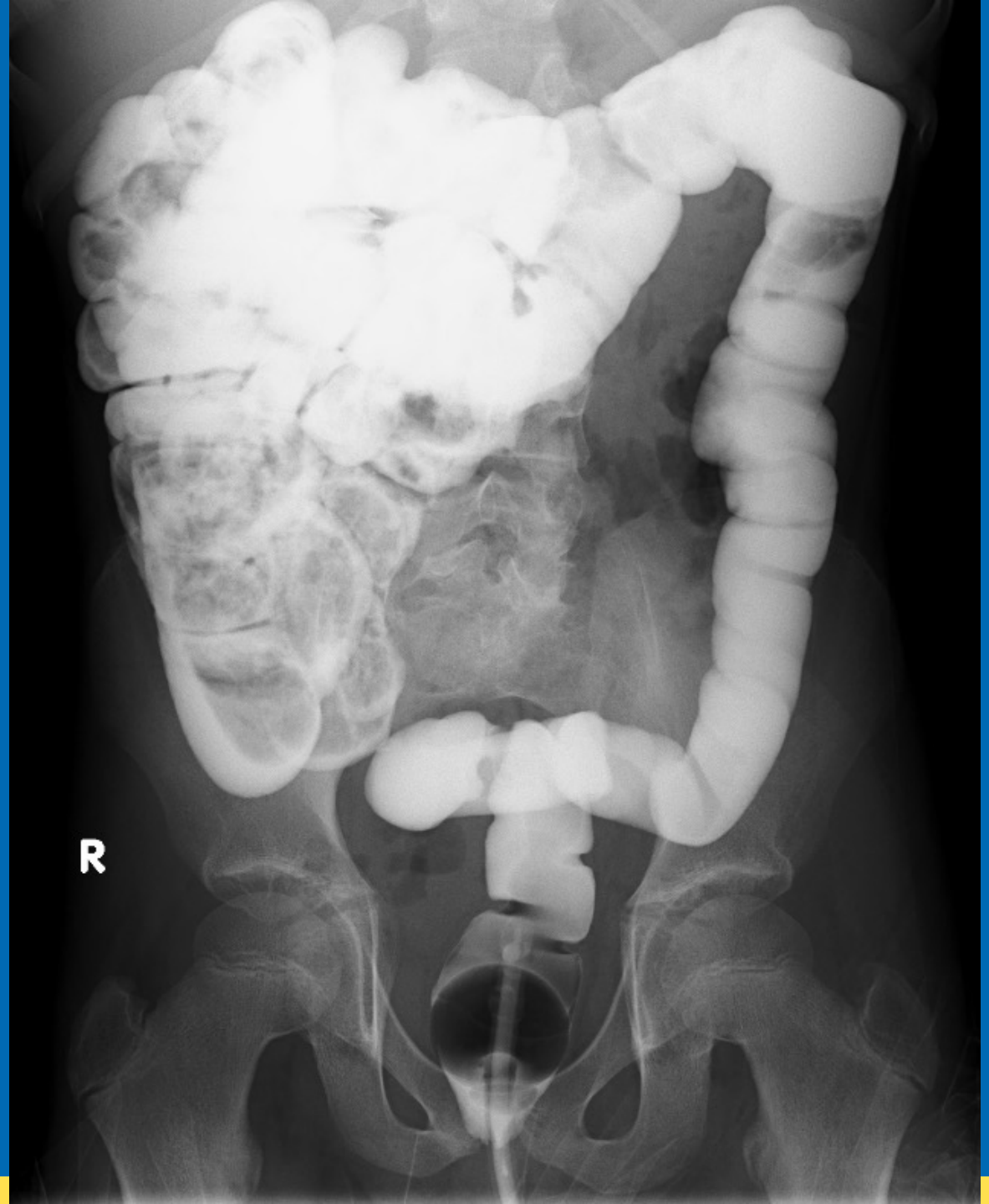
11 yo, ARM



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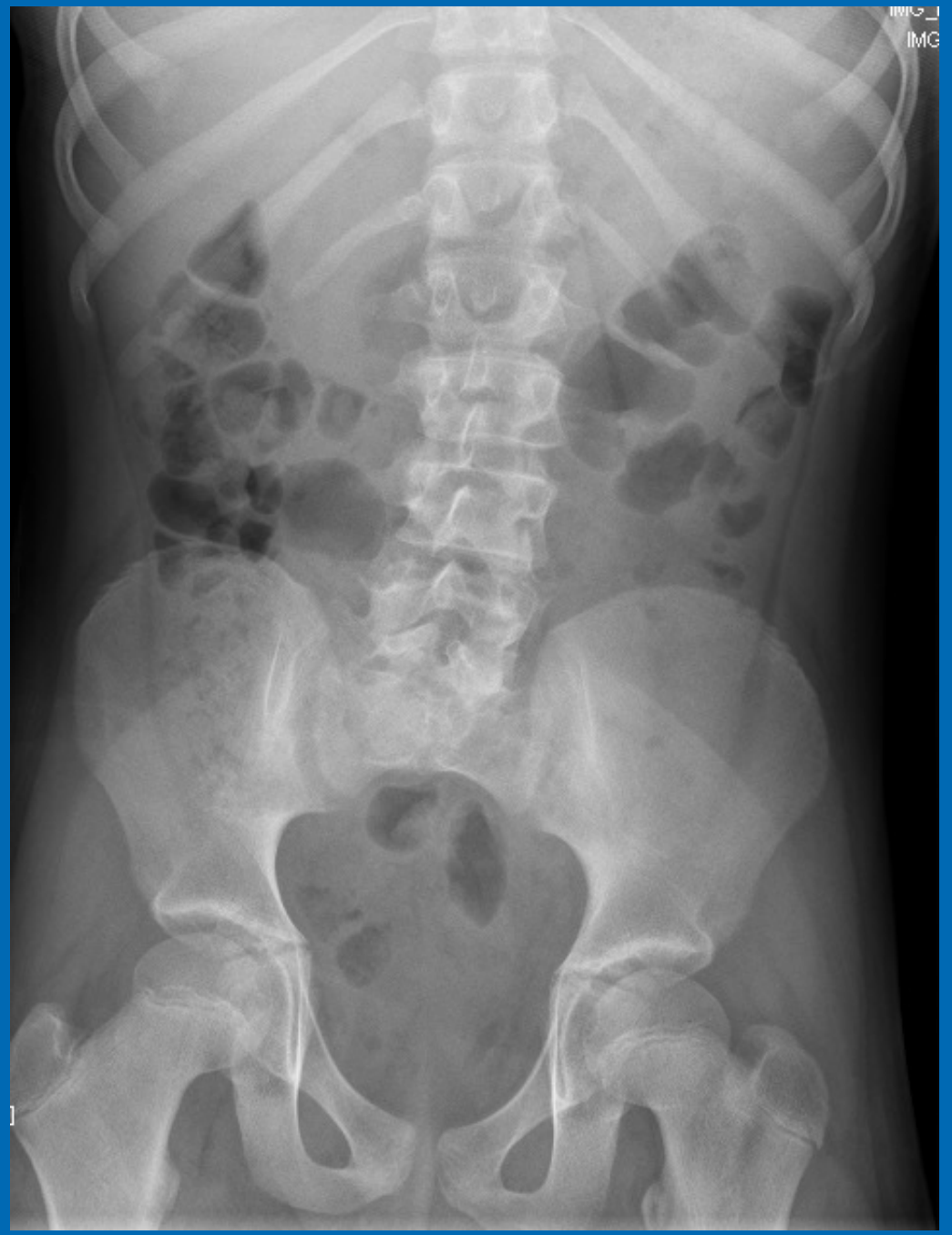
Abdominal radiograph one day after the contrast enema



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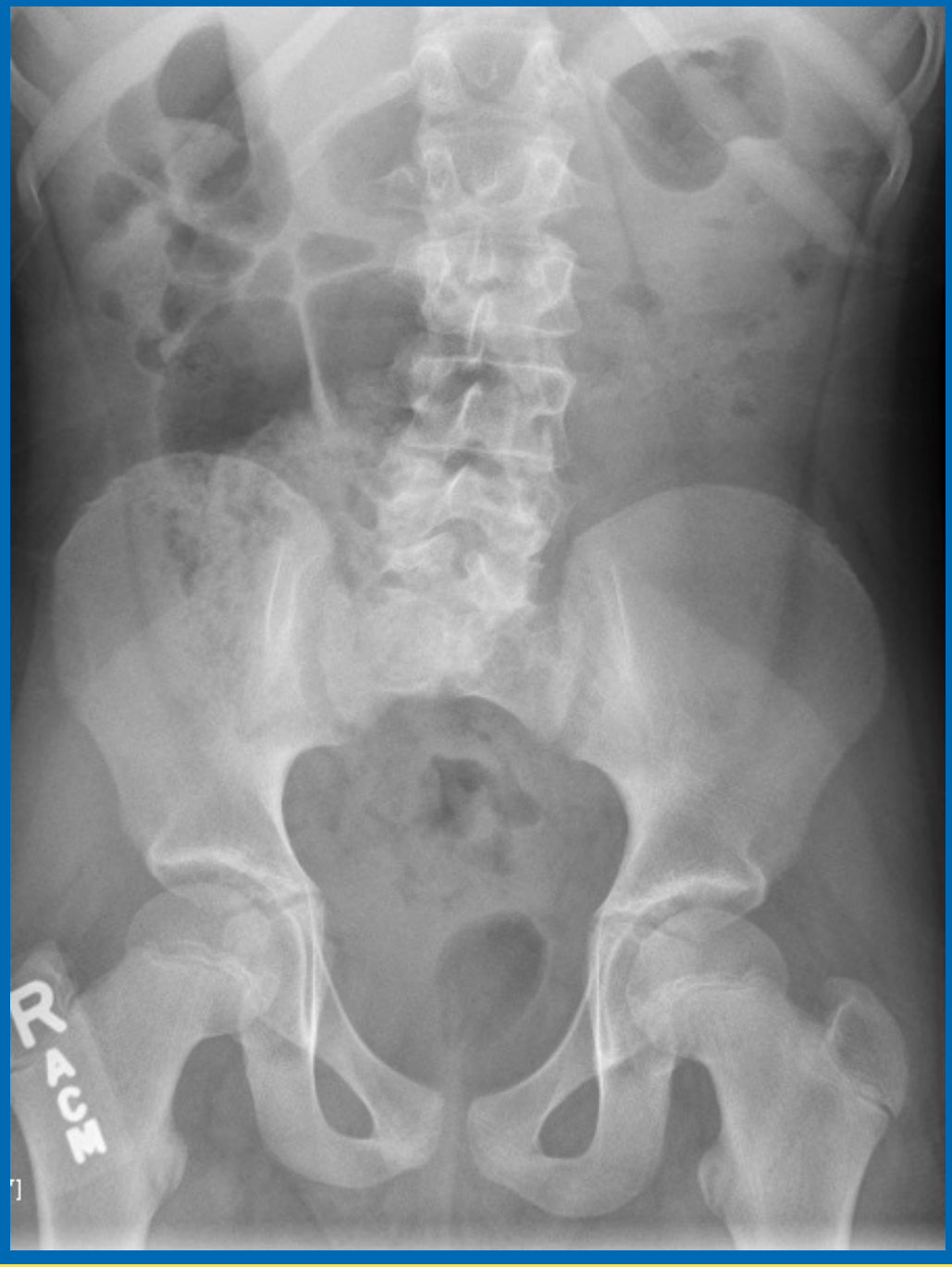
Based on the contrast enema:

A. Hypermotile (non-dilated)
B. Hypomotile (dilated)

What enema do you want to start him on?

A. 300 ml of saline only
B. 300 ml of saline + 1 pediatric fleet
C. 1000 ml of tap water
D. 300 ml of saline + 30 of glycerin + 27 ml of soap

6 accidents



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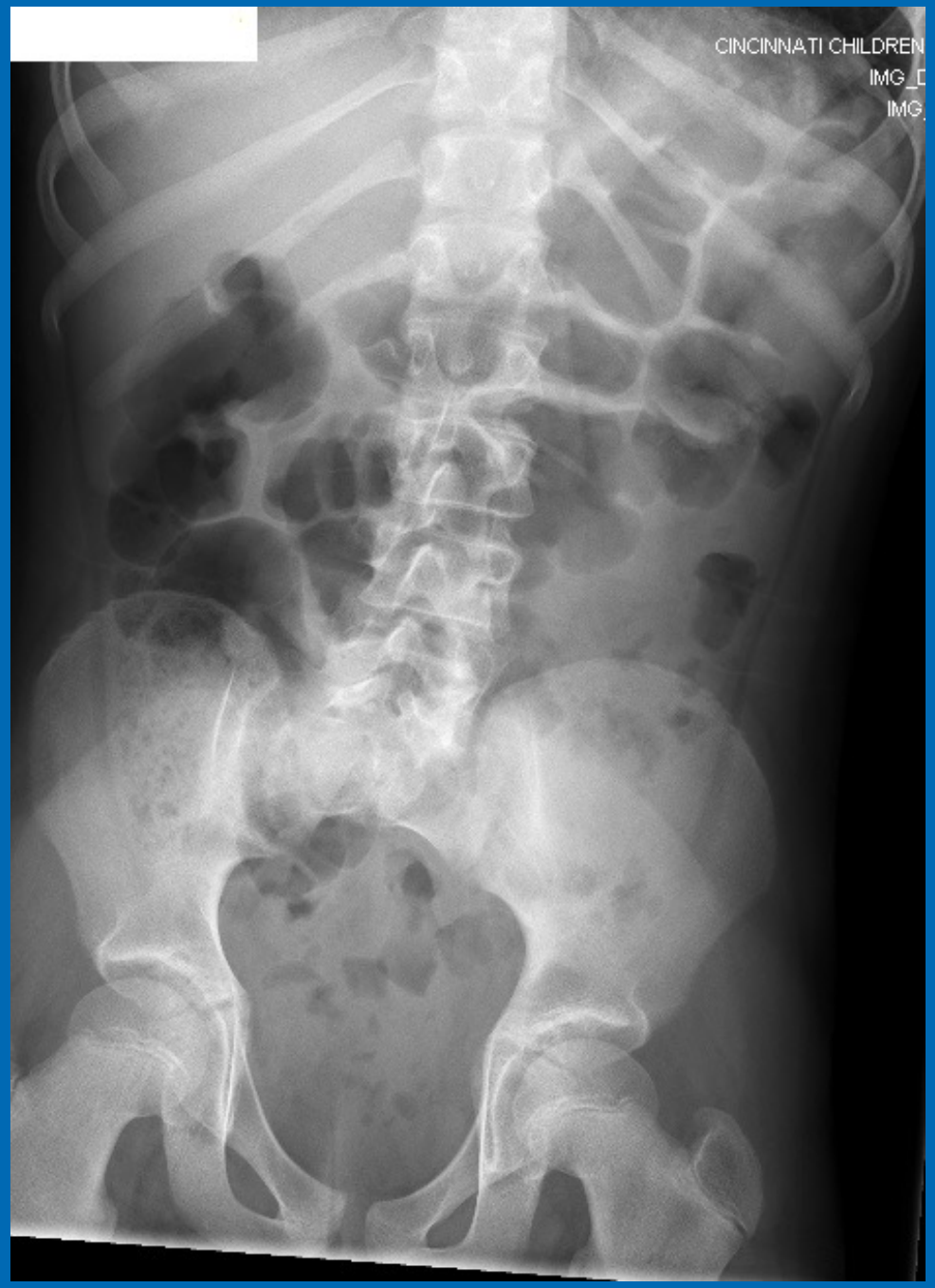
What changes do you want to make on his enema?

A. Increase the concentration to 300 ml of saline + 30 ml of glycerin
B. Decrease the volume to 100 ml of saline
C. Add Imodium

Clean patient



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You are on call and a mother calls at 2 am saying that she put the enema in her daughter today and nothing came out. Patient is a little uncomfortable but stable. What do you recommend?

A. Give another enema
B. Keep the child seated in the toilet
C. Give laxatives
D. Pass a Foley catheter and get as much fluid out, x-ray tomorrow
E. Come to the emergency room

For the same girl in the previous slide, the x ray sent the following morning showed accumulation of stool. What is your recommendation?

A. She needs a Malone to improve the enema administration
B. She needs colonic resection
C. She needs a more concentrated enema
D. She needs a less concentrated enema
E. She needs laxatives

Loperamide

Dosage (Usual) Oral:

Acute diarrhea:

Children: Initial doses (in first 24 hours):

2-5 years (13-20 kg): 1 mg 3 times/day

6-8 years (21-30): 2 mg twice daily

9-12 years (>30 kg): 2 mg 3 times/day

After initial dosing, 0.1 mg/kg doses after each loose stool but not exceeding initial dosage

Children >12 years and Adults: 4 mg initially, followed by 2 mg after each loose stool, up to 16 mg/day

Chronic diarrhea:

Children: 0.08-0.24 mg/kg/day divided 2-3 times/day, maximum: 2 mg/dose

Adults: 4 mg initially followed by 2 mg after each unformed stool until diarrhea is controlled; reduce dosage to meet individual requirements. When optimal dosage is determined, may administer total dosage once daily or in divided doses. Average daily maintenance dosage: 4-8 mg; if improvement is not seen with 16 mg/day for at least 10 days, symptoms are unlikely to be controlled by further therapy

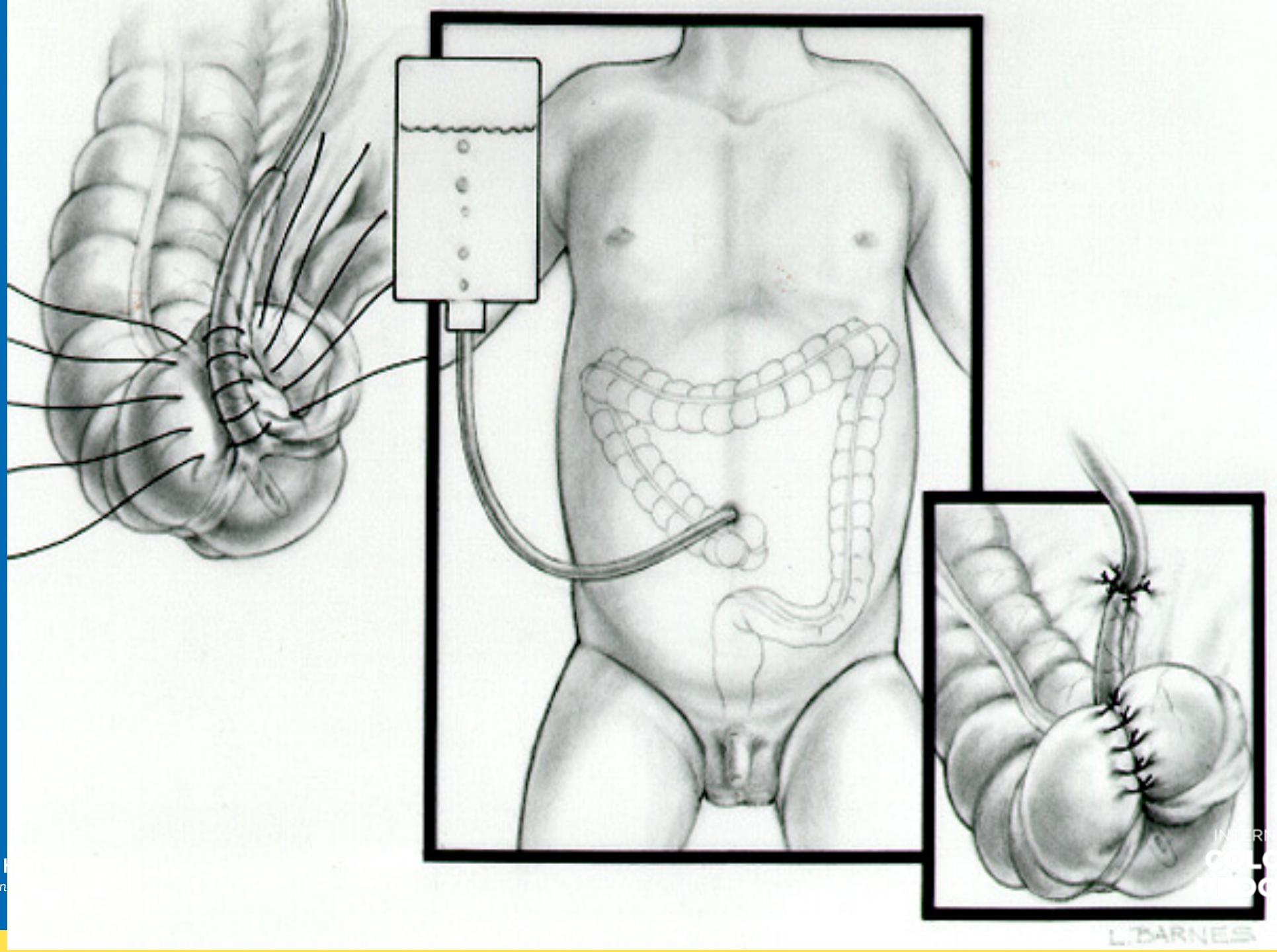
DIETS

Laxative Foods

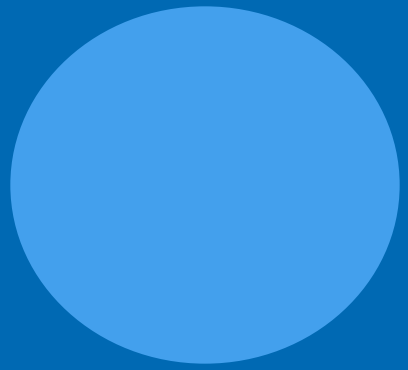
Milk or Milk Products
Fats
Fried Foods
Fruits
Vegetables
Spices
Fruit Juices
French Fries
Chocolate

Constipating Foods

Apple Sauce
Apple Without Skin
Rice
White Bread
Bagels
Boiled, Broiled, Baked Meat, Chicken or Fish
Soft Drinks
Banana
Pasta
Pretzels
Tea
Potato
Jelly (No Jam)



Malone Procedure



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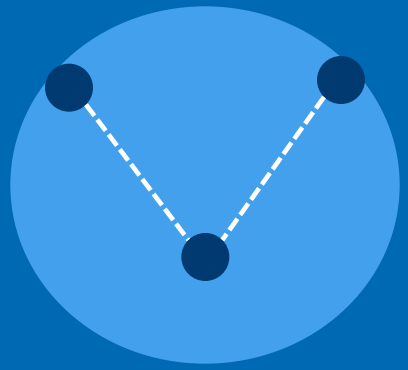

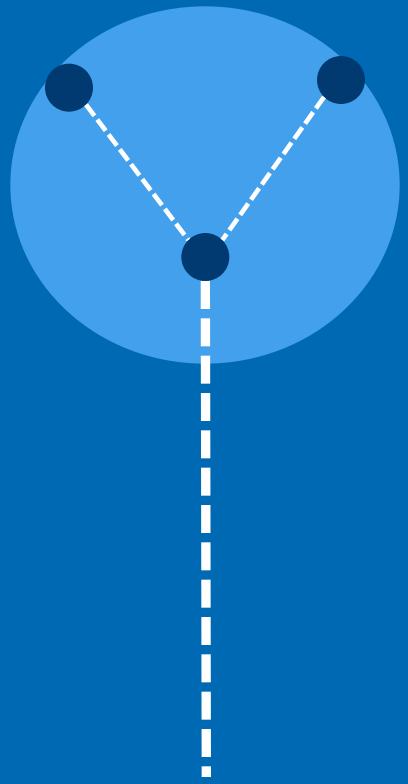

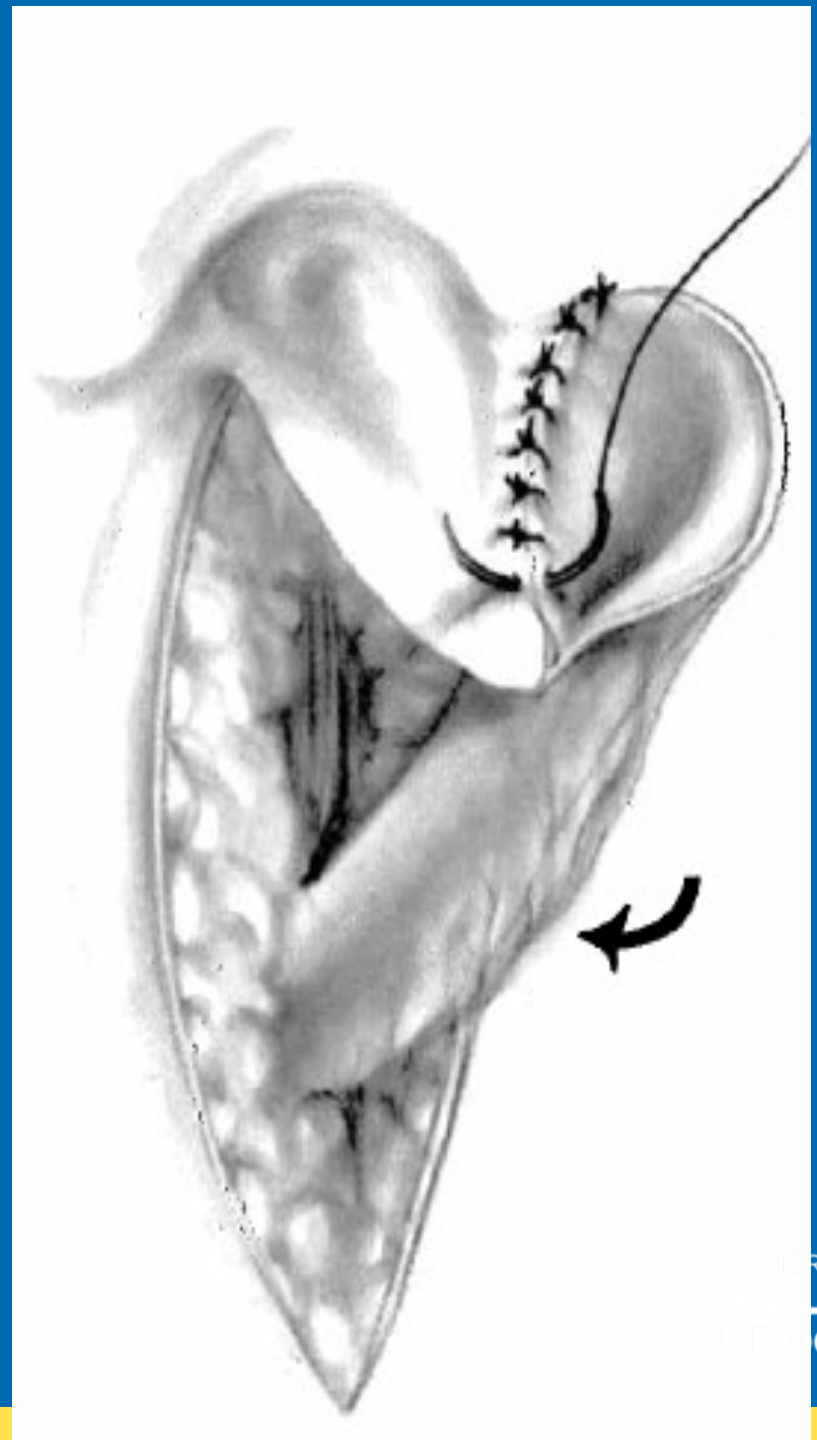

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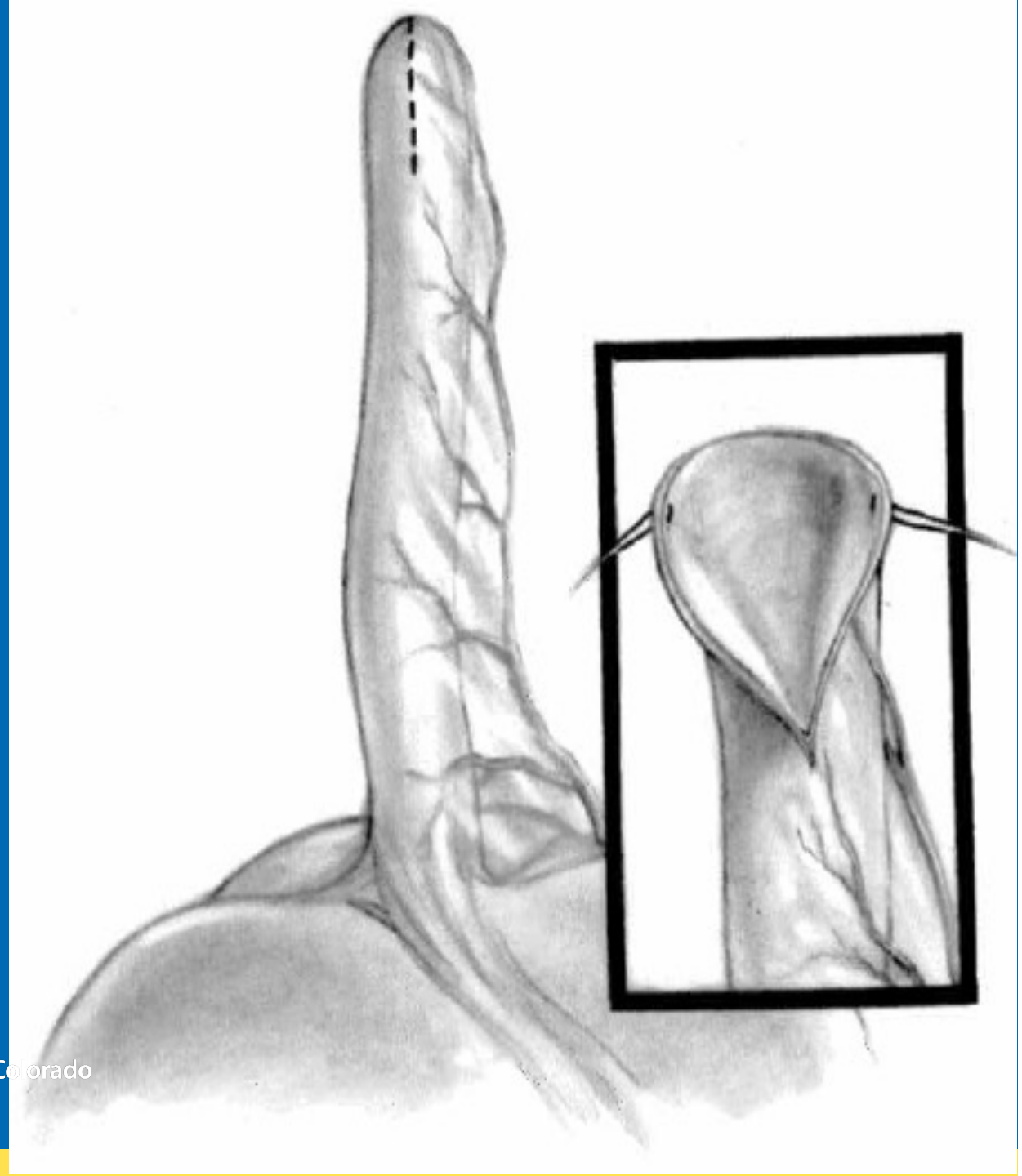

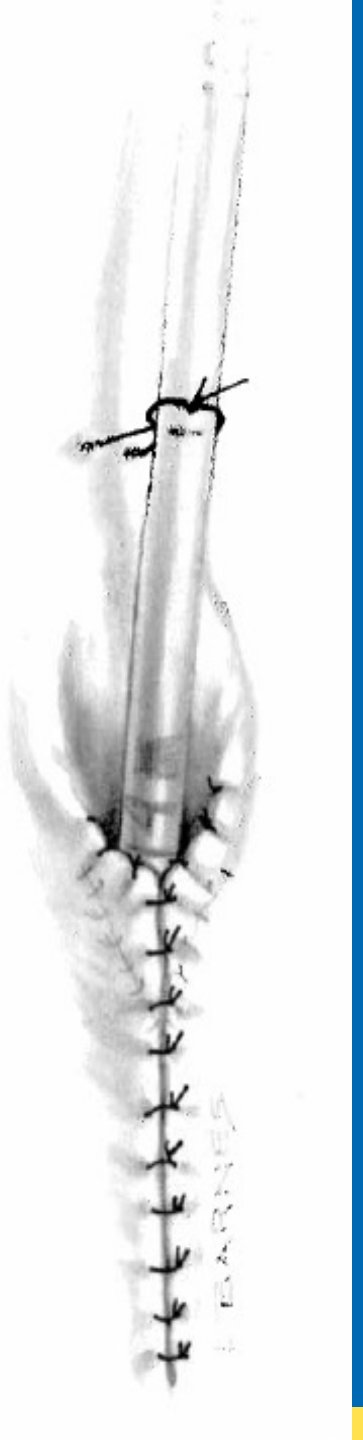

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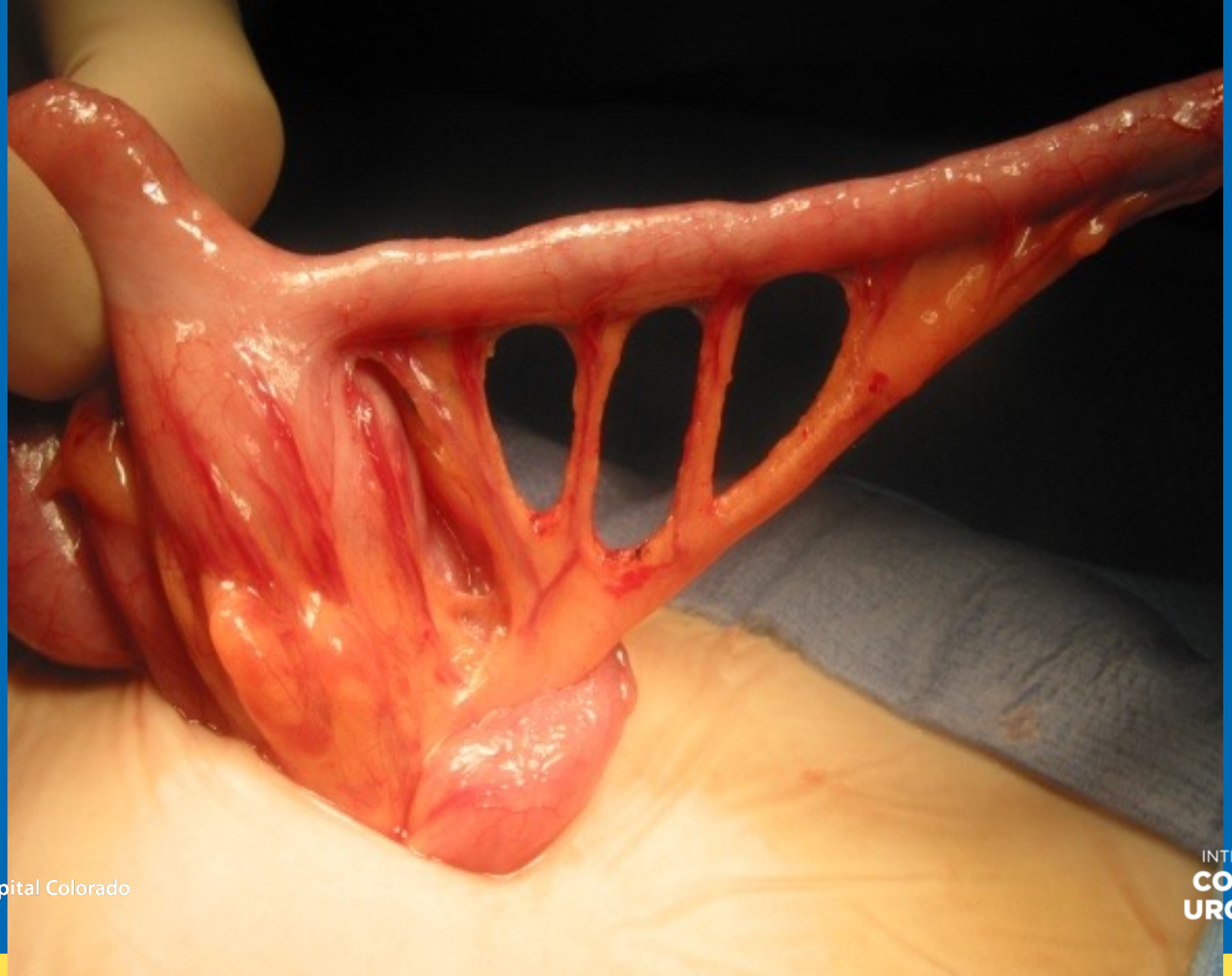

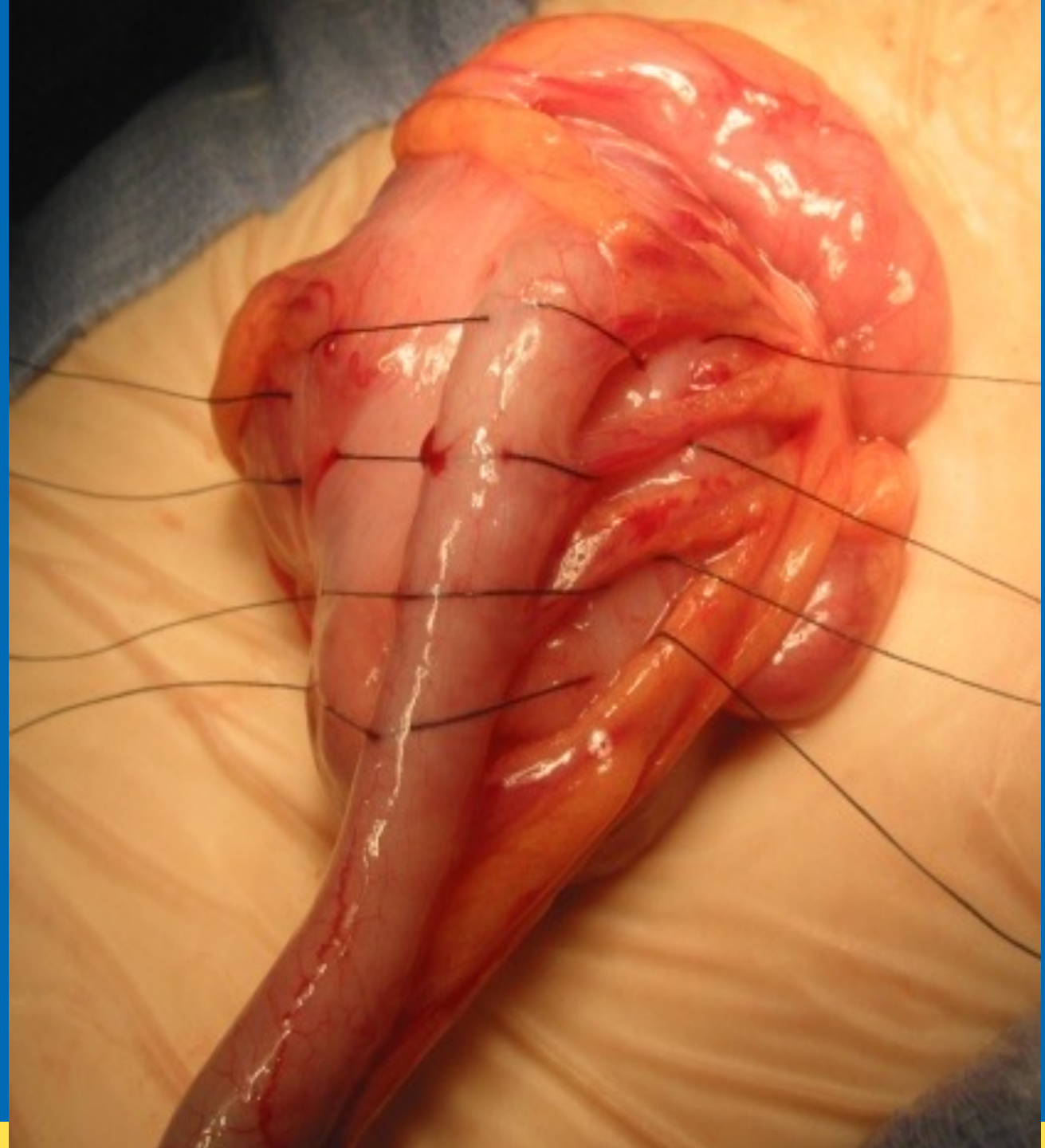

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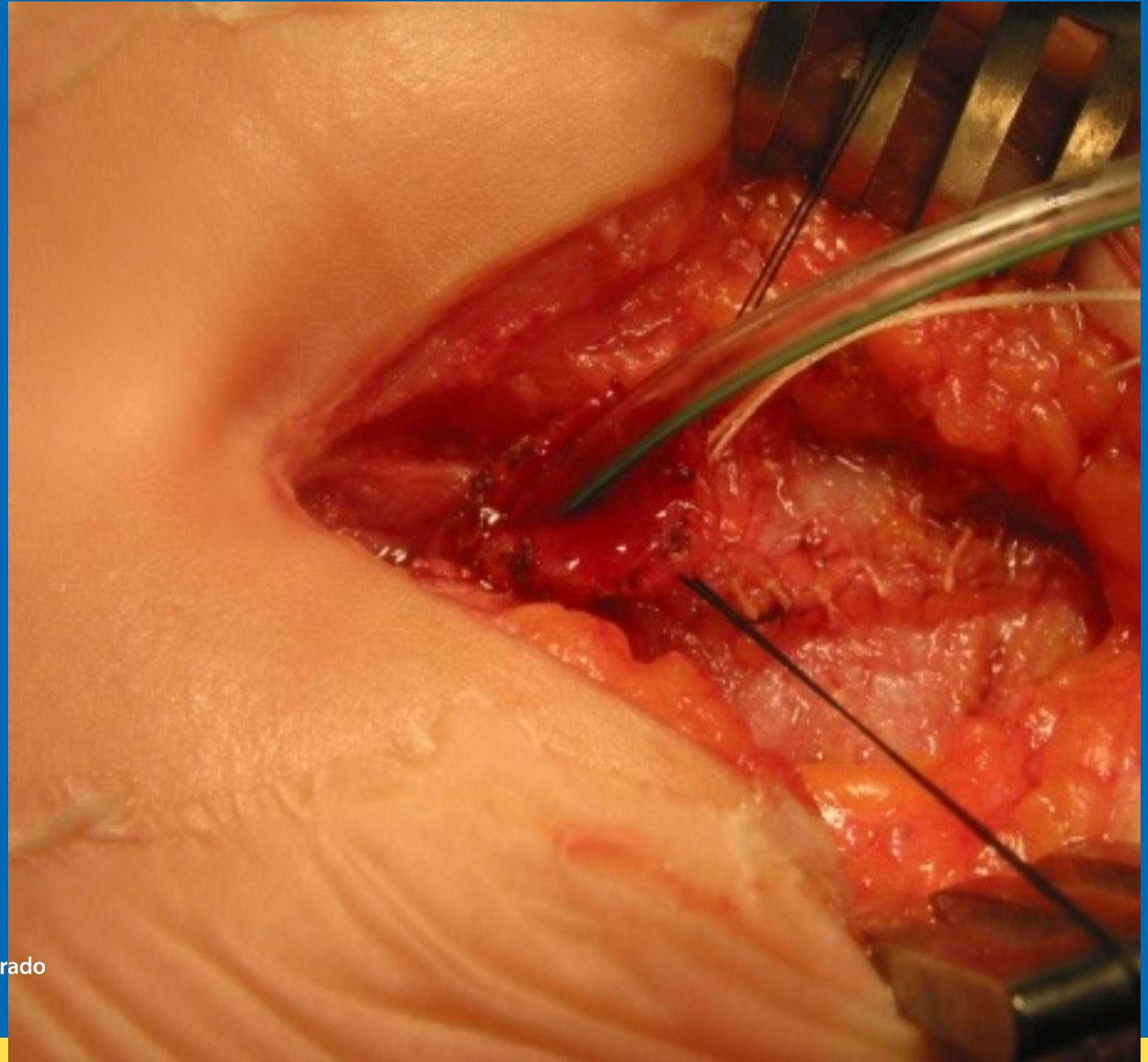

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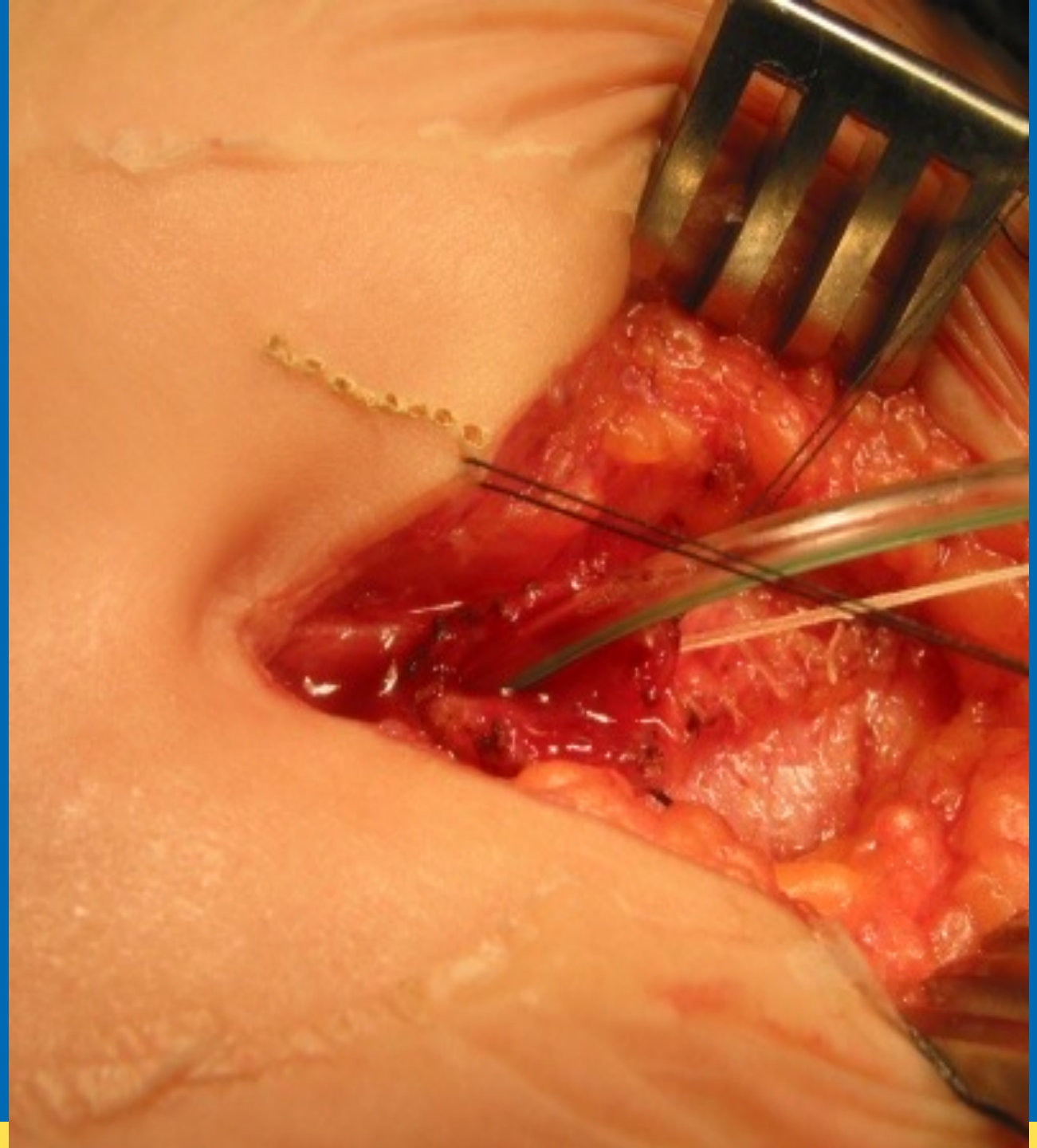

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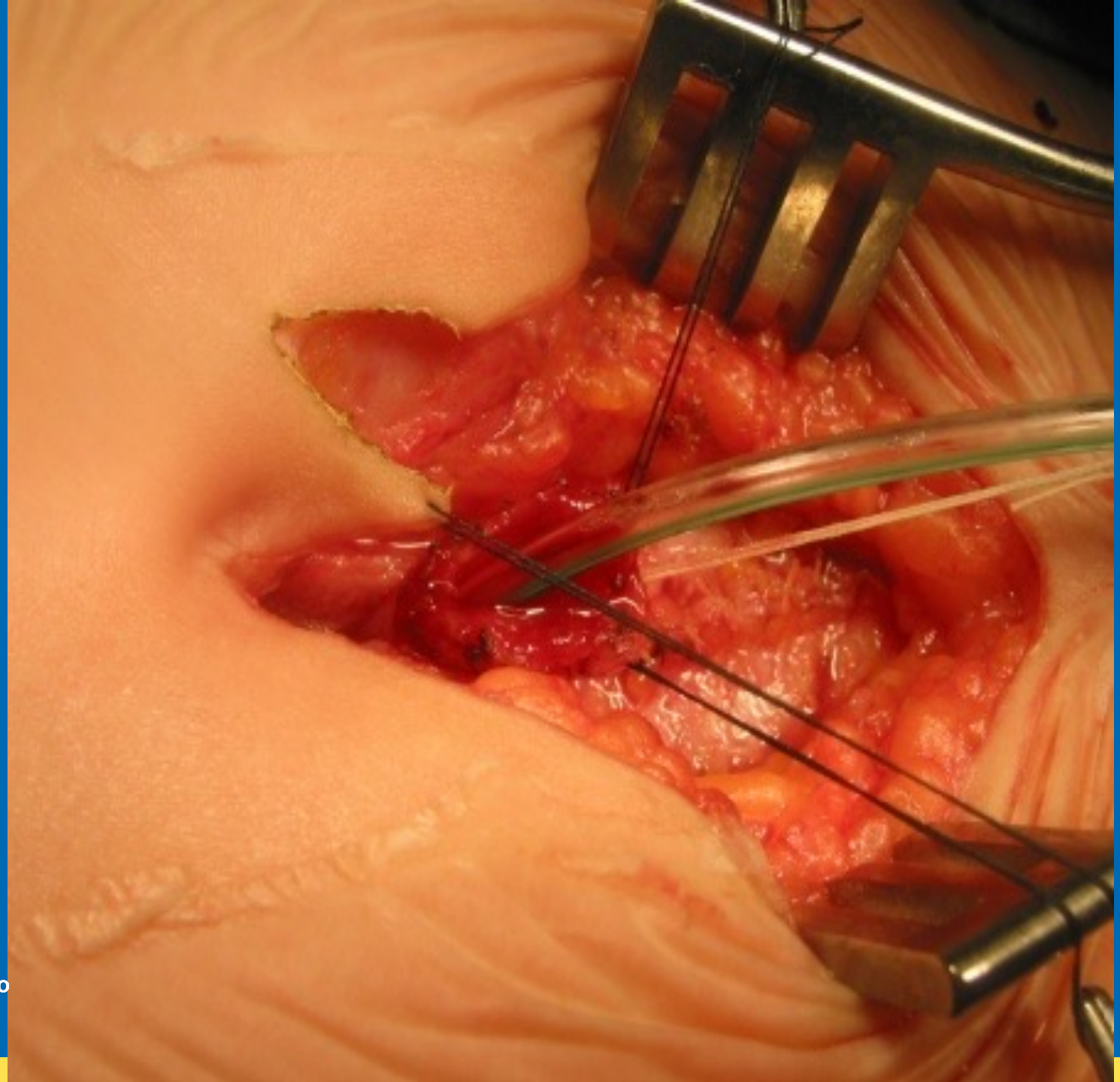

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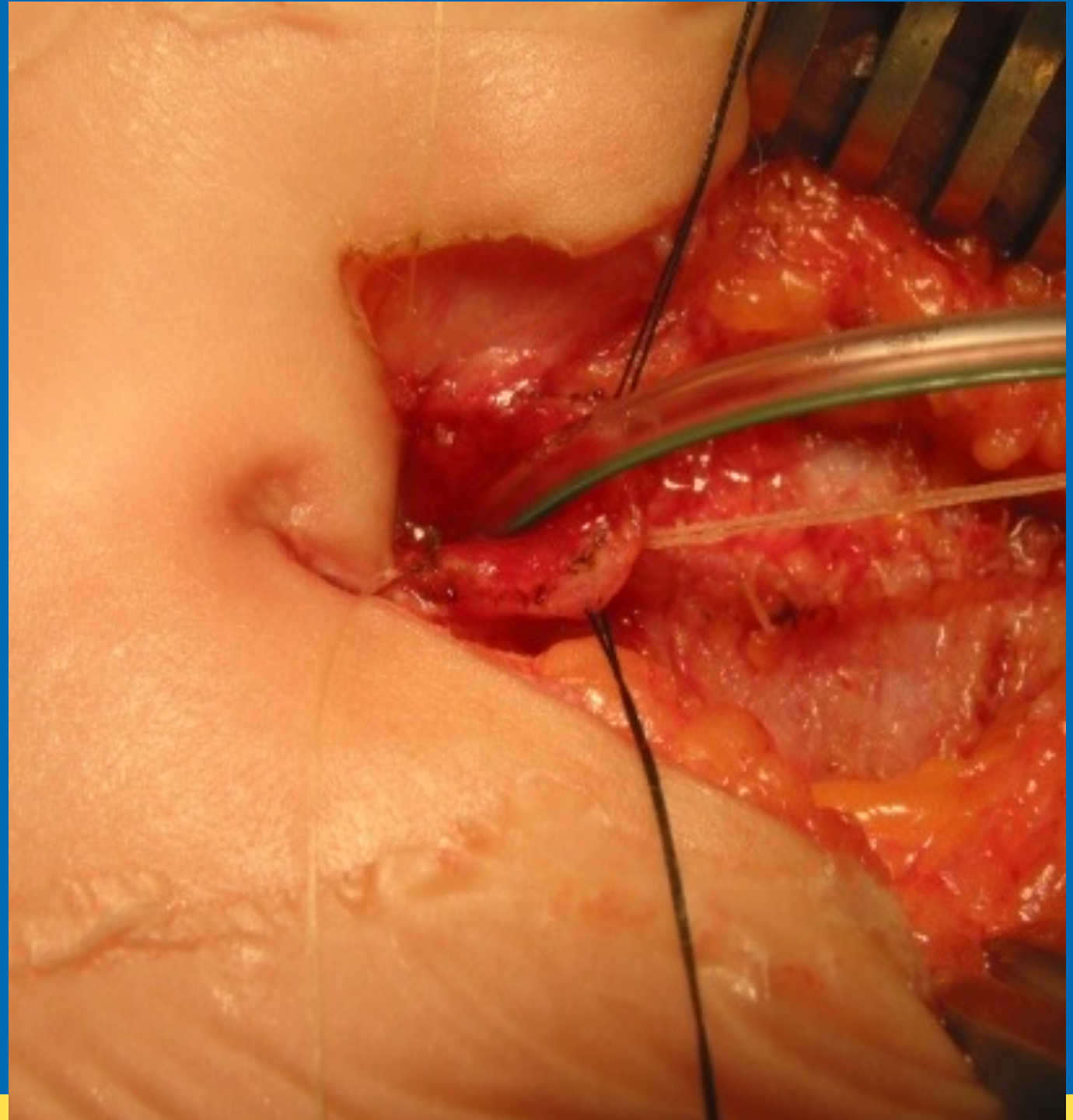

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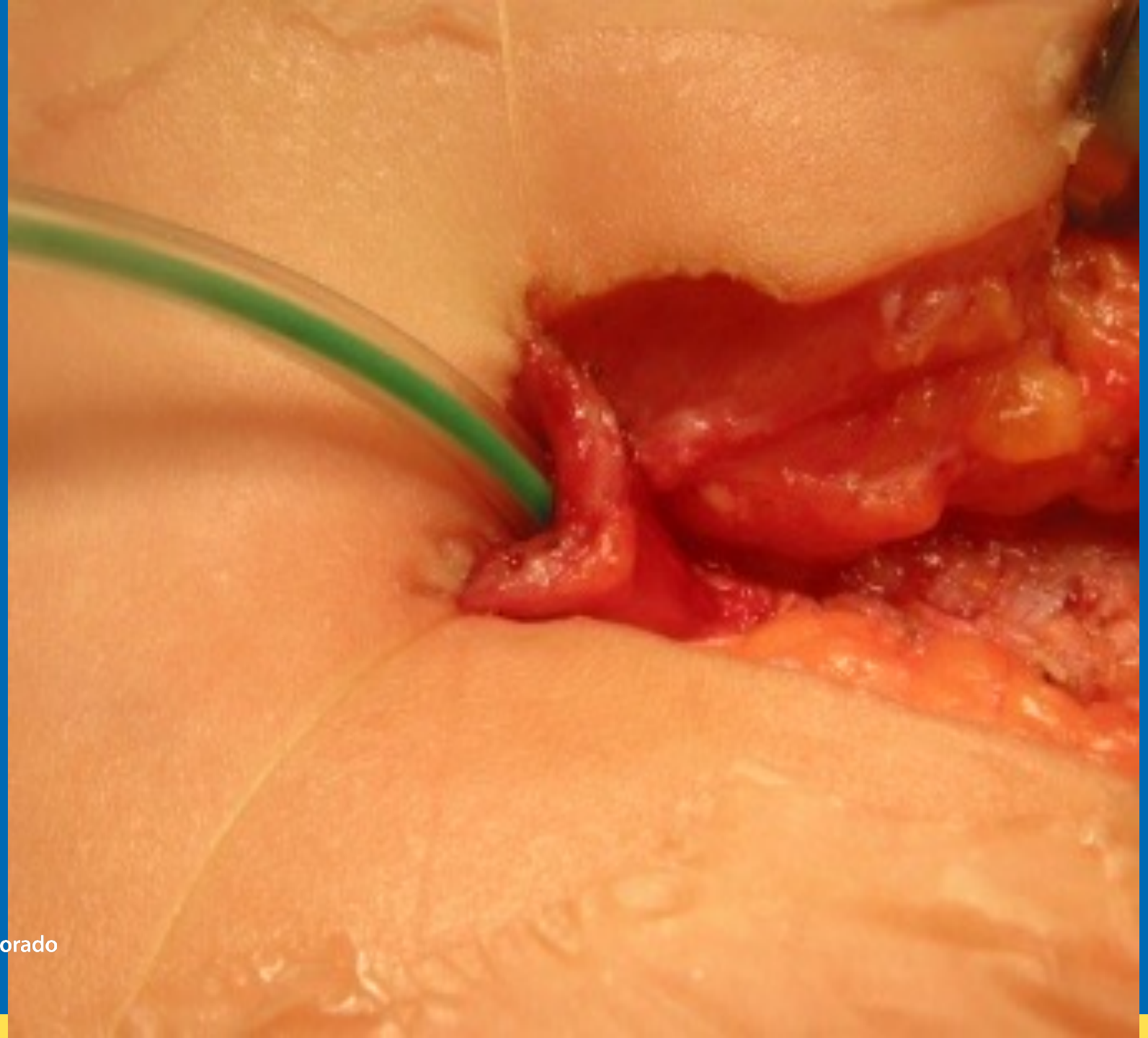

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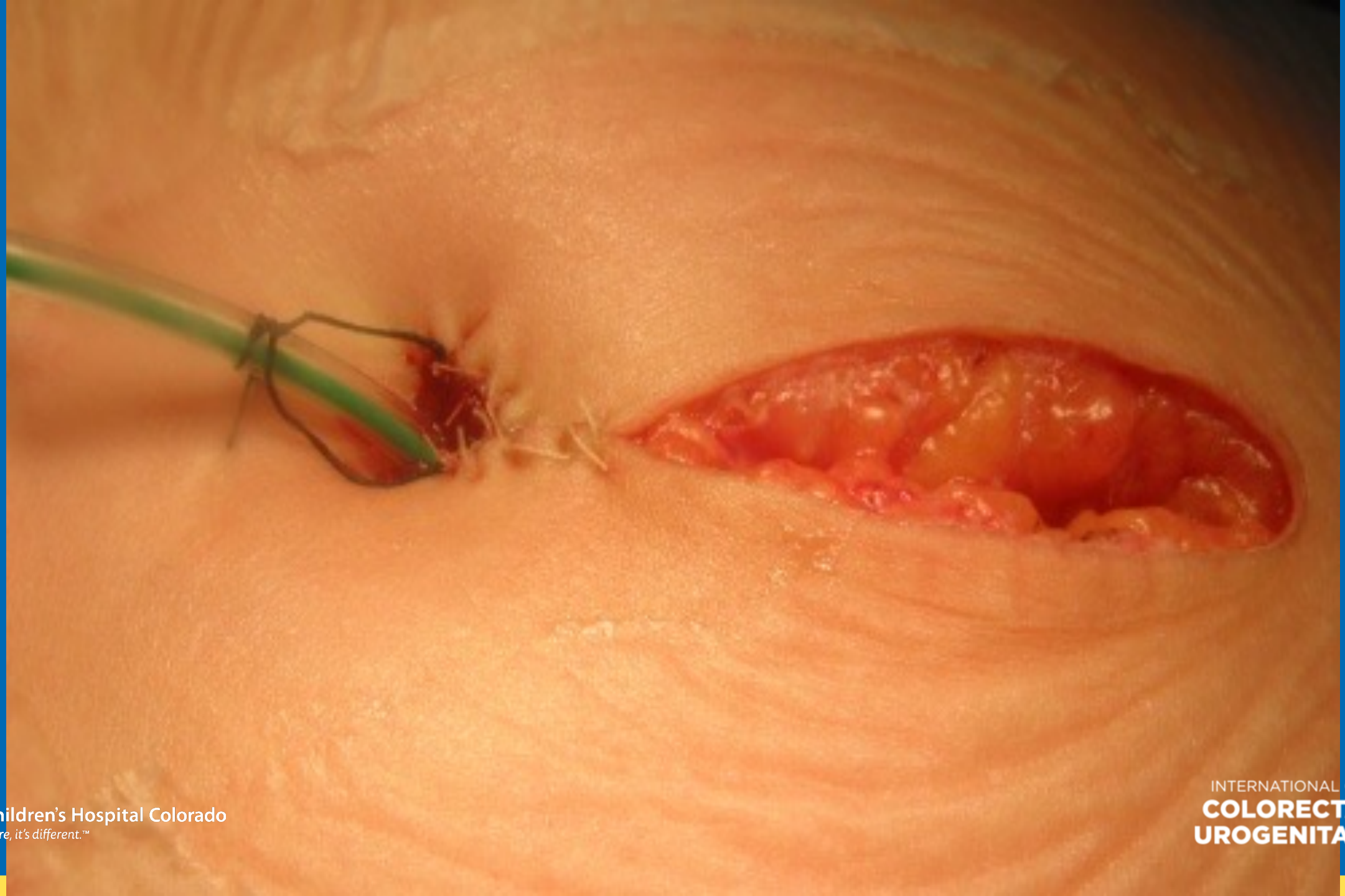

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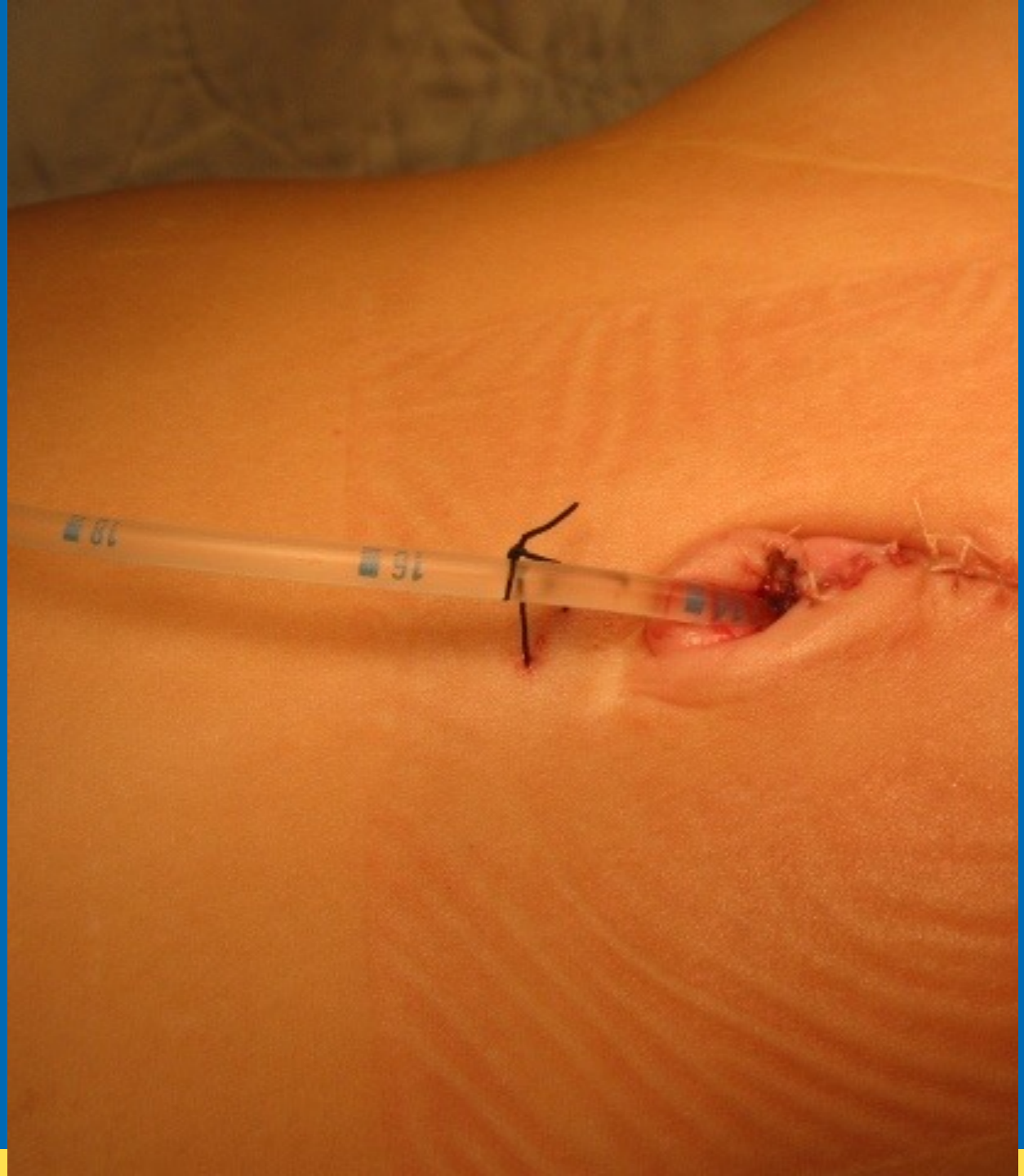

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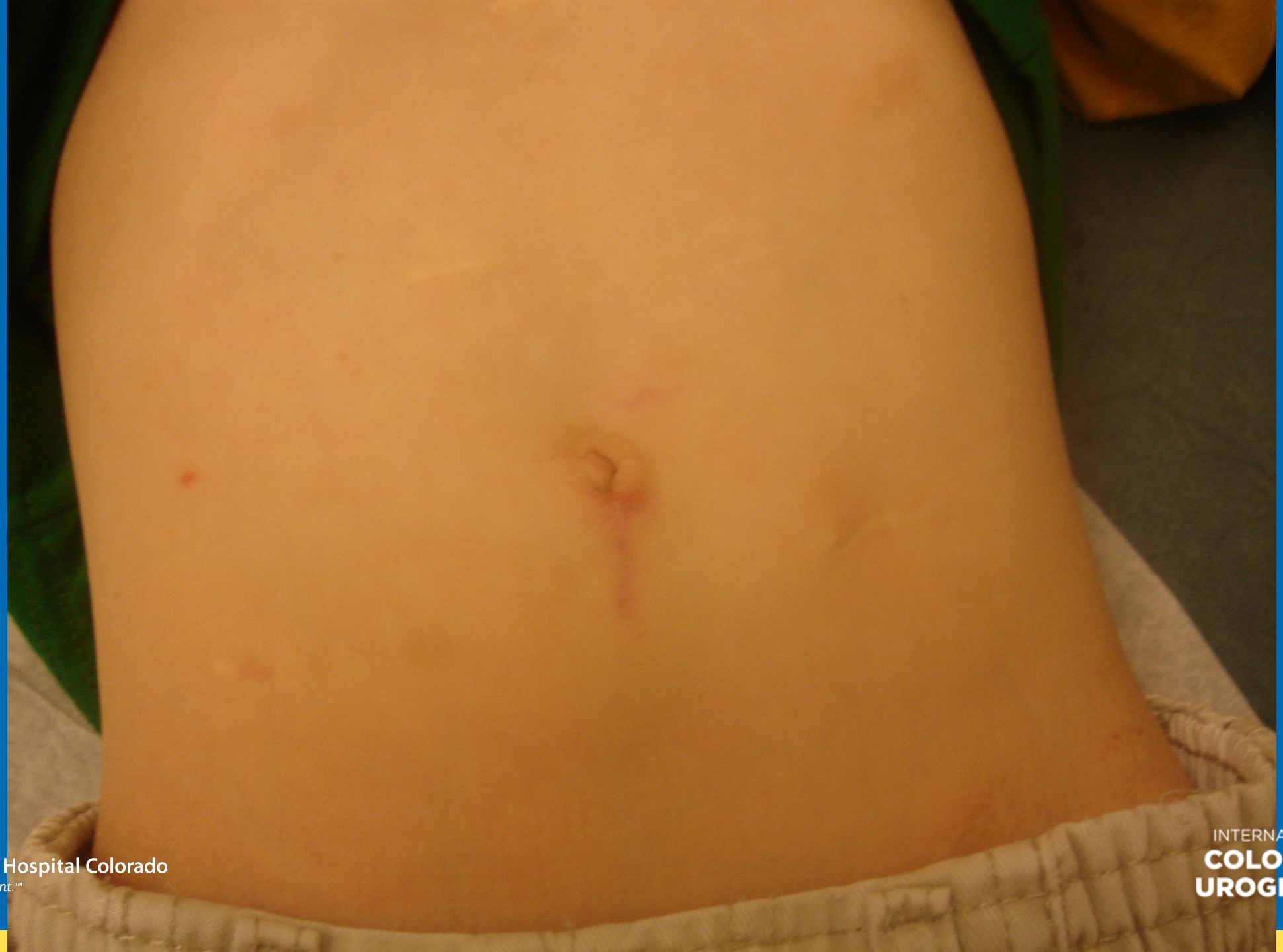

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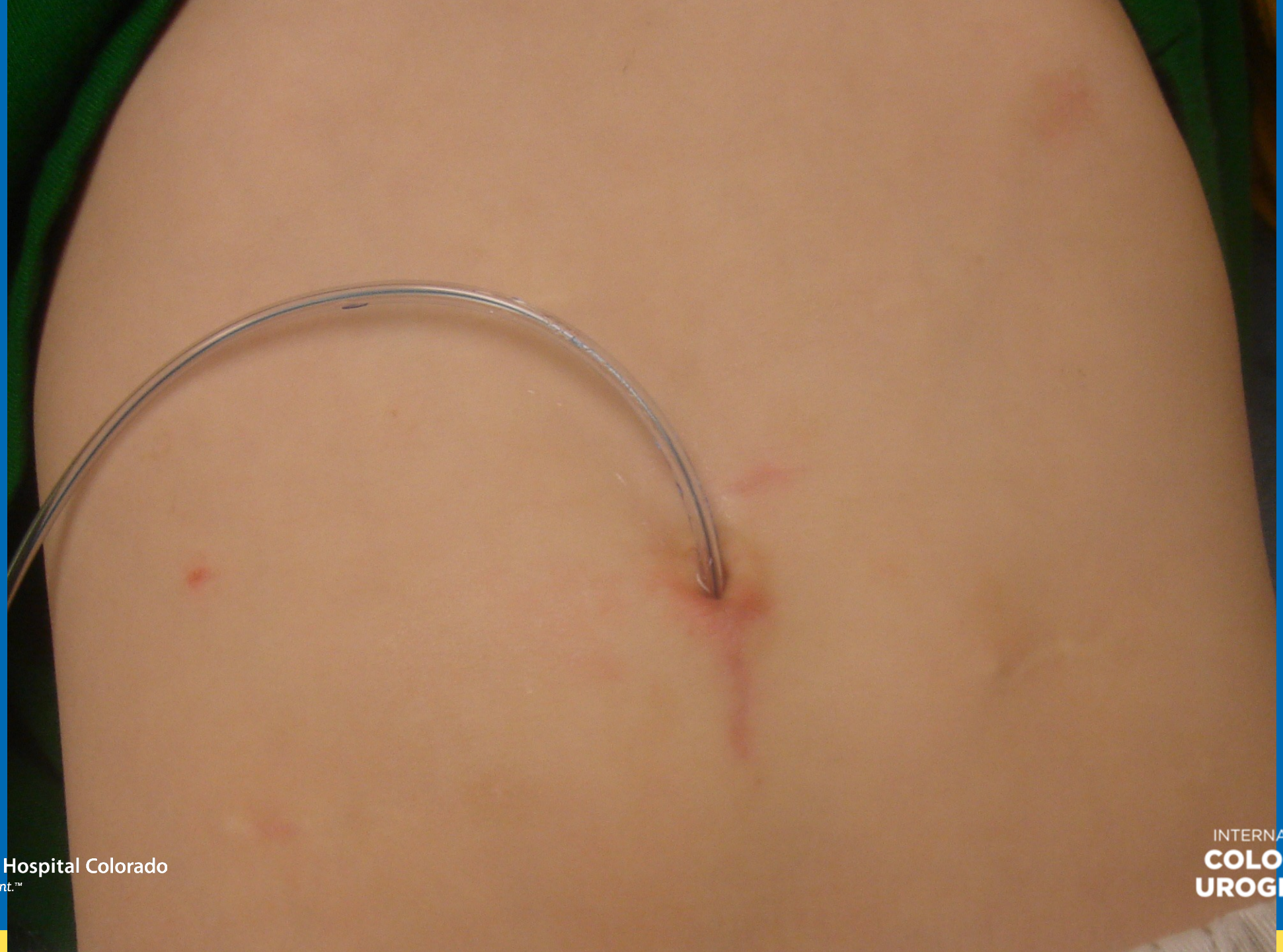

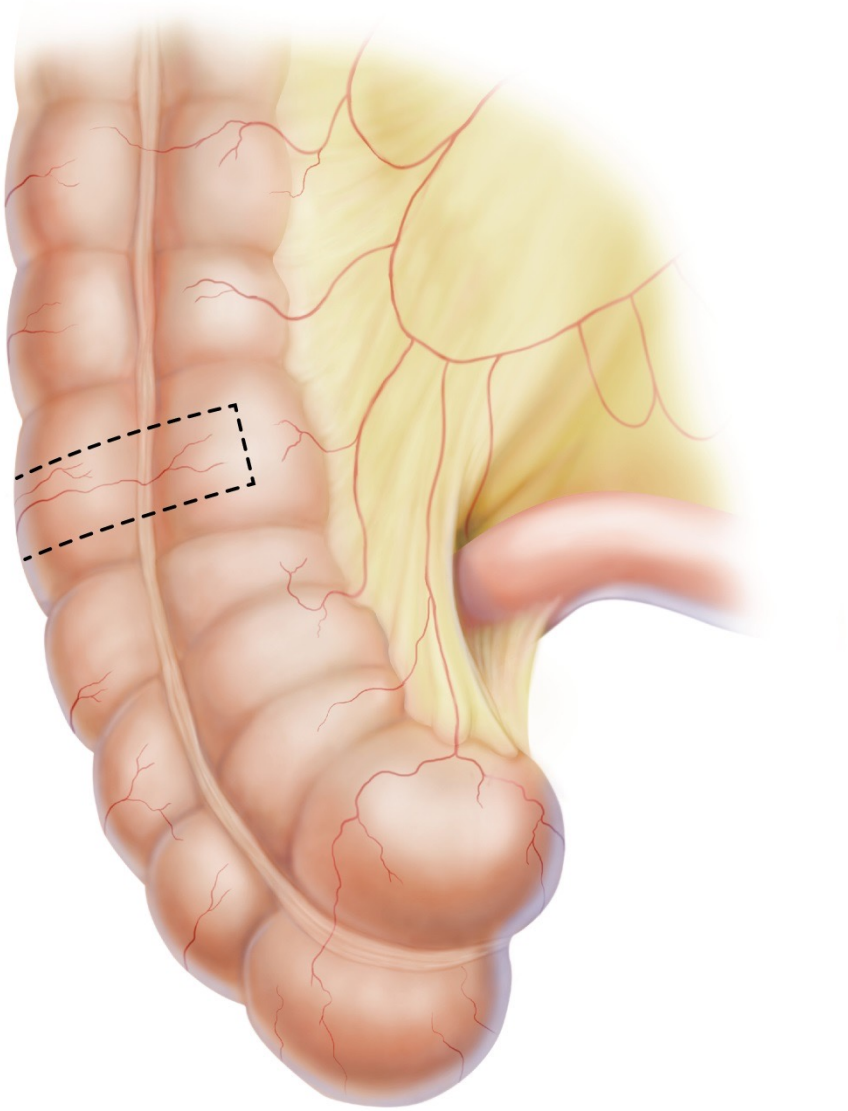

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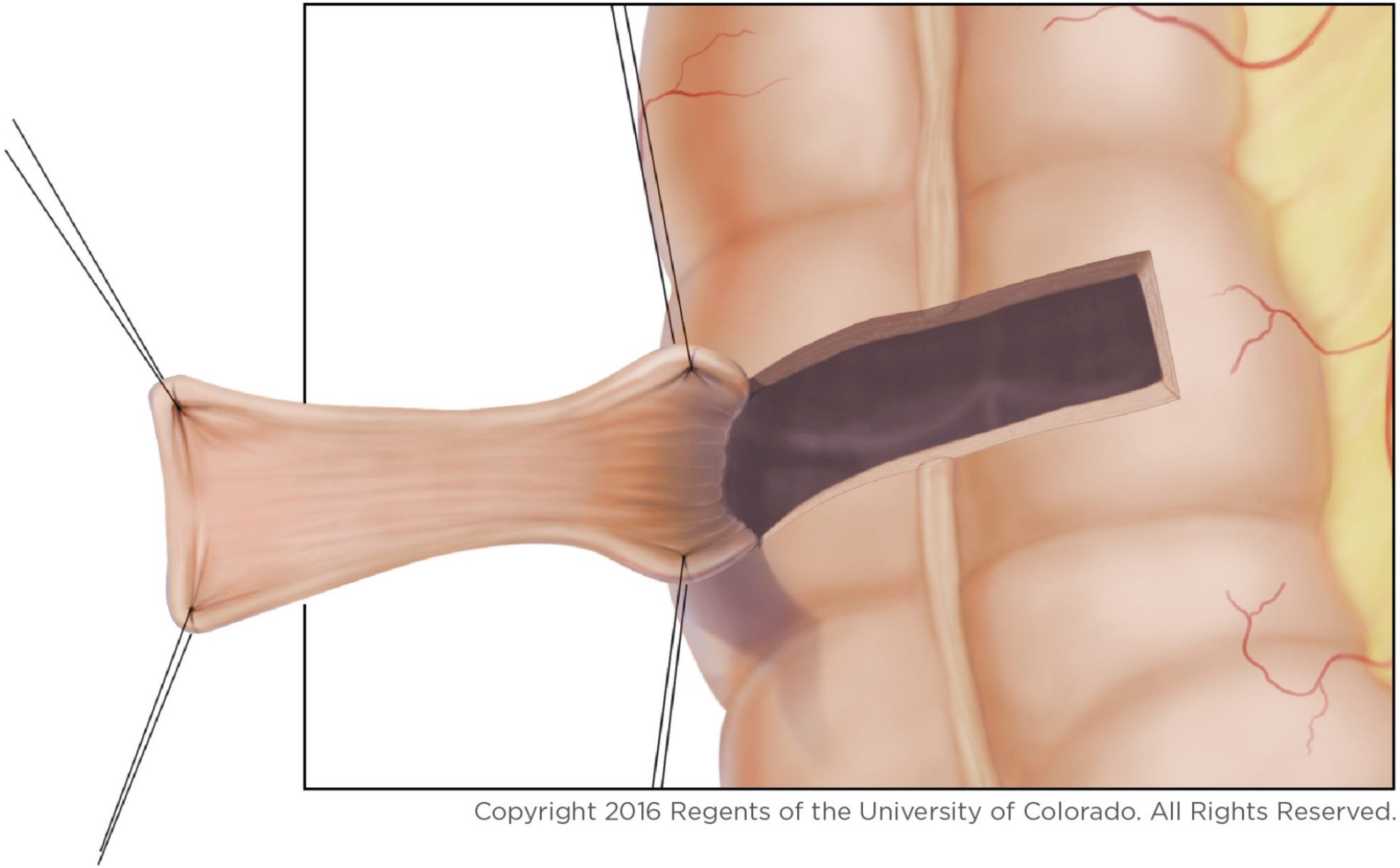

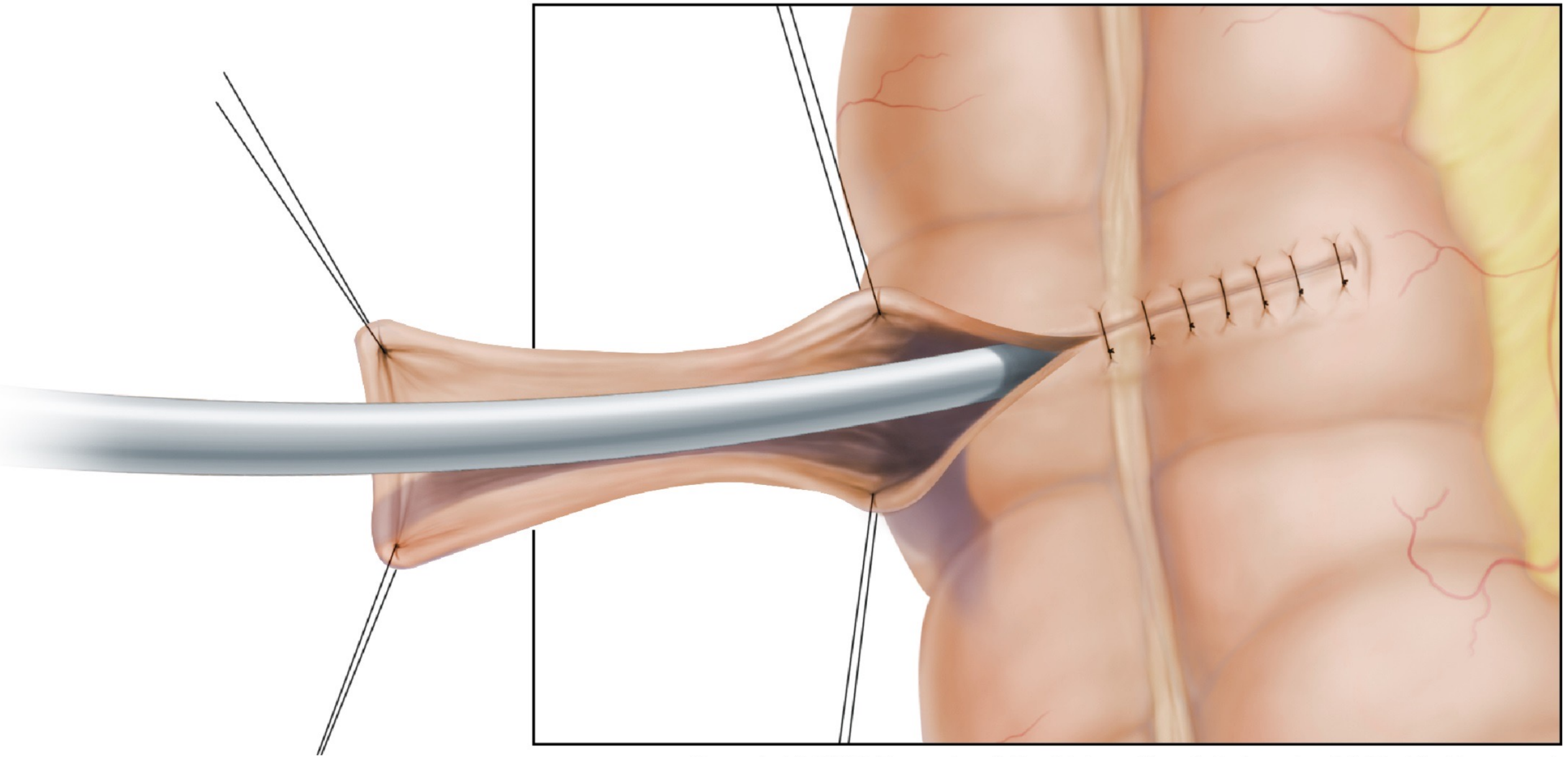

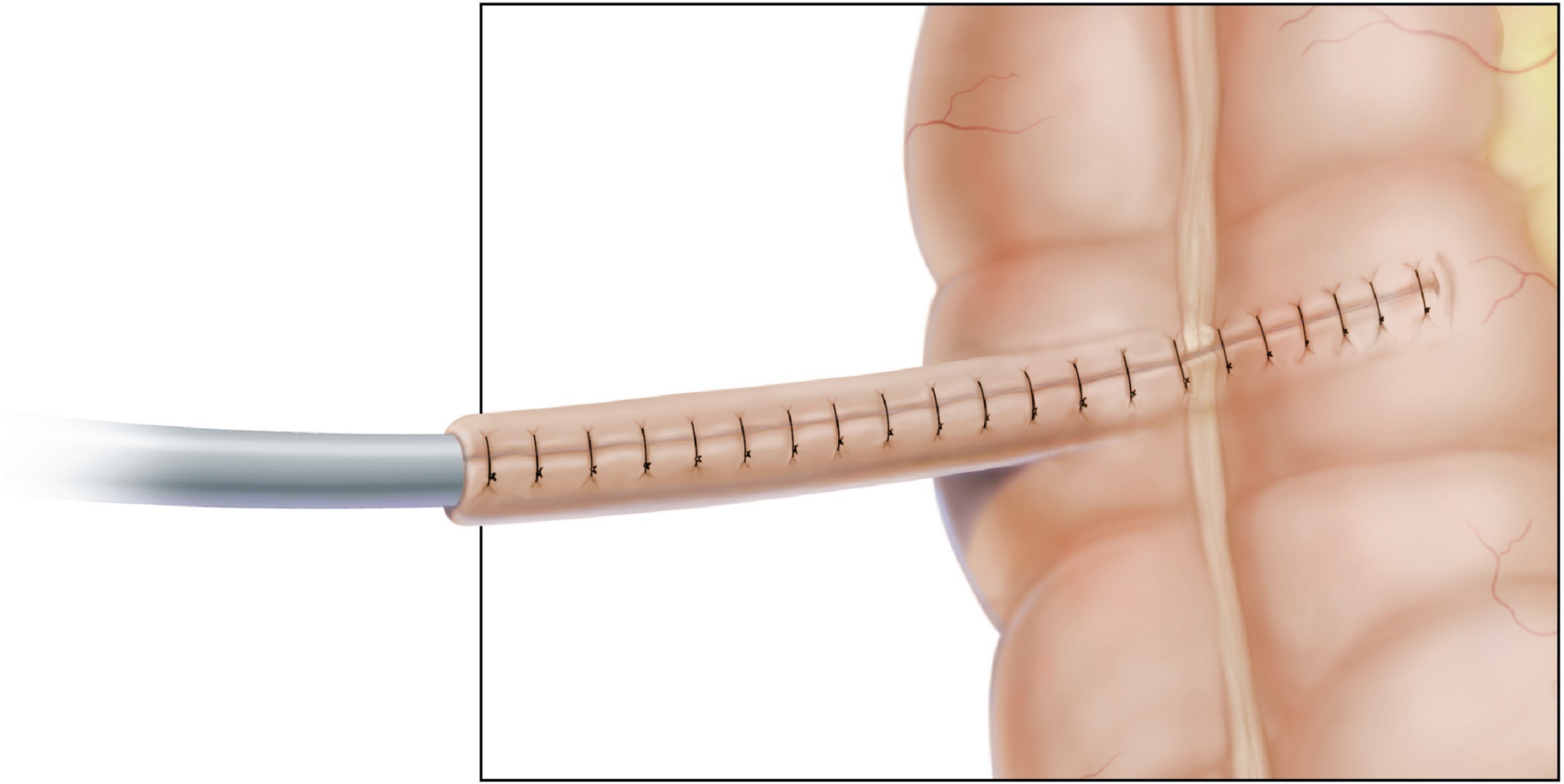

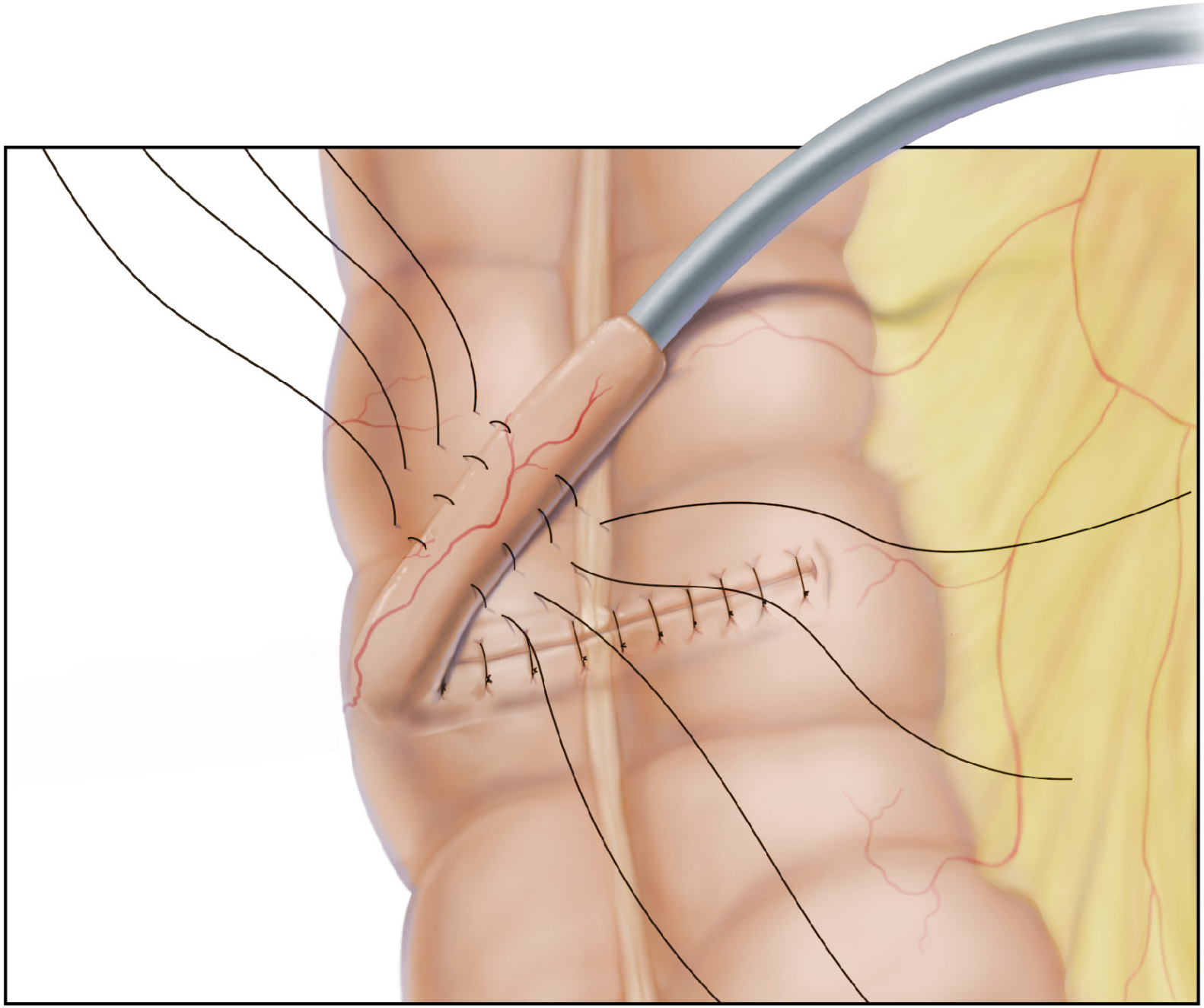

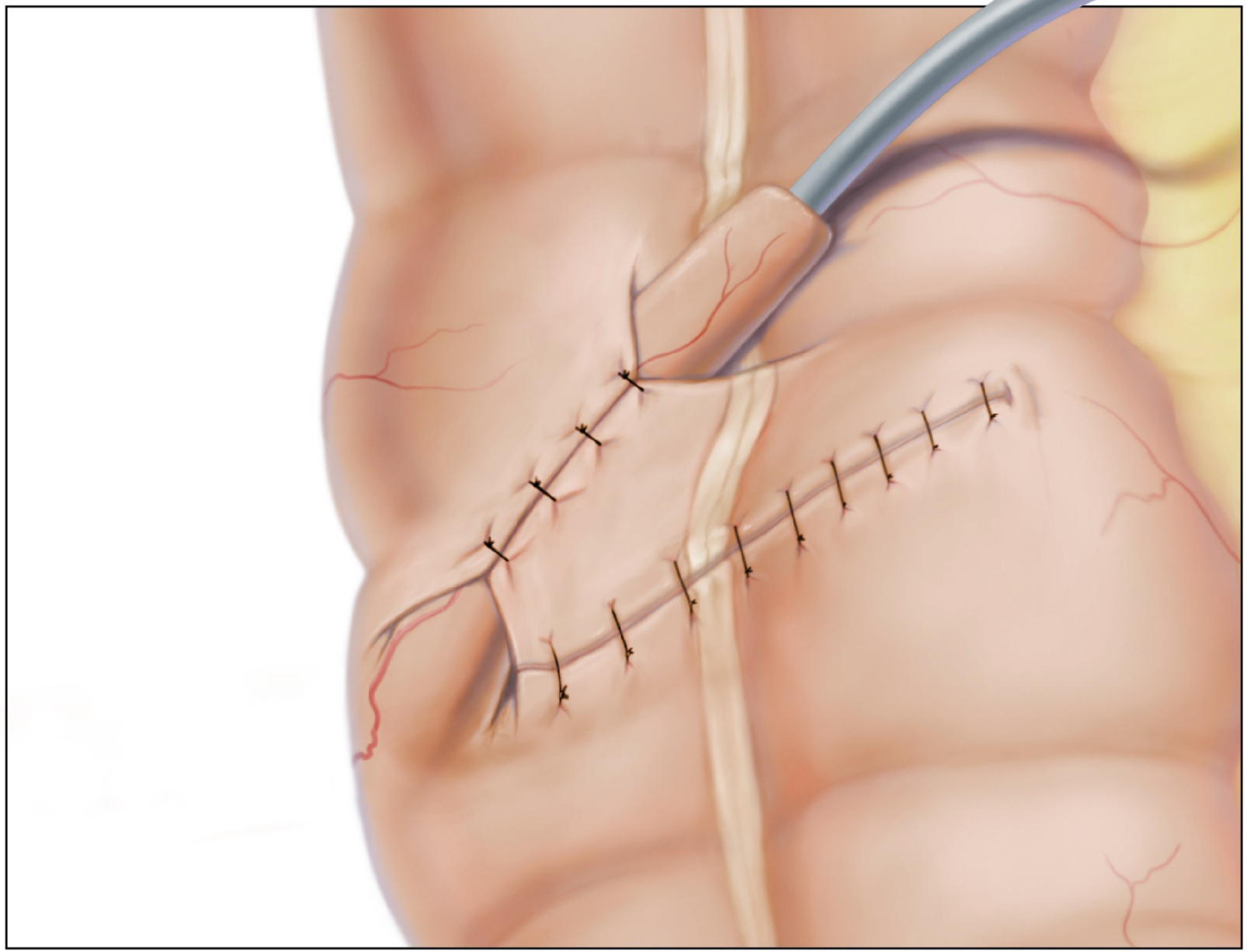

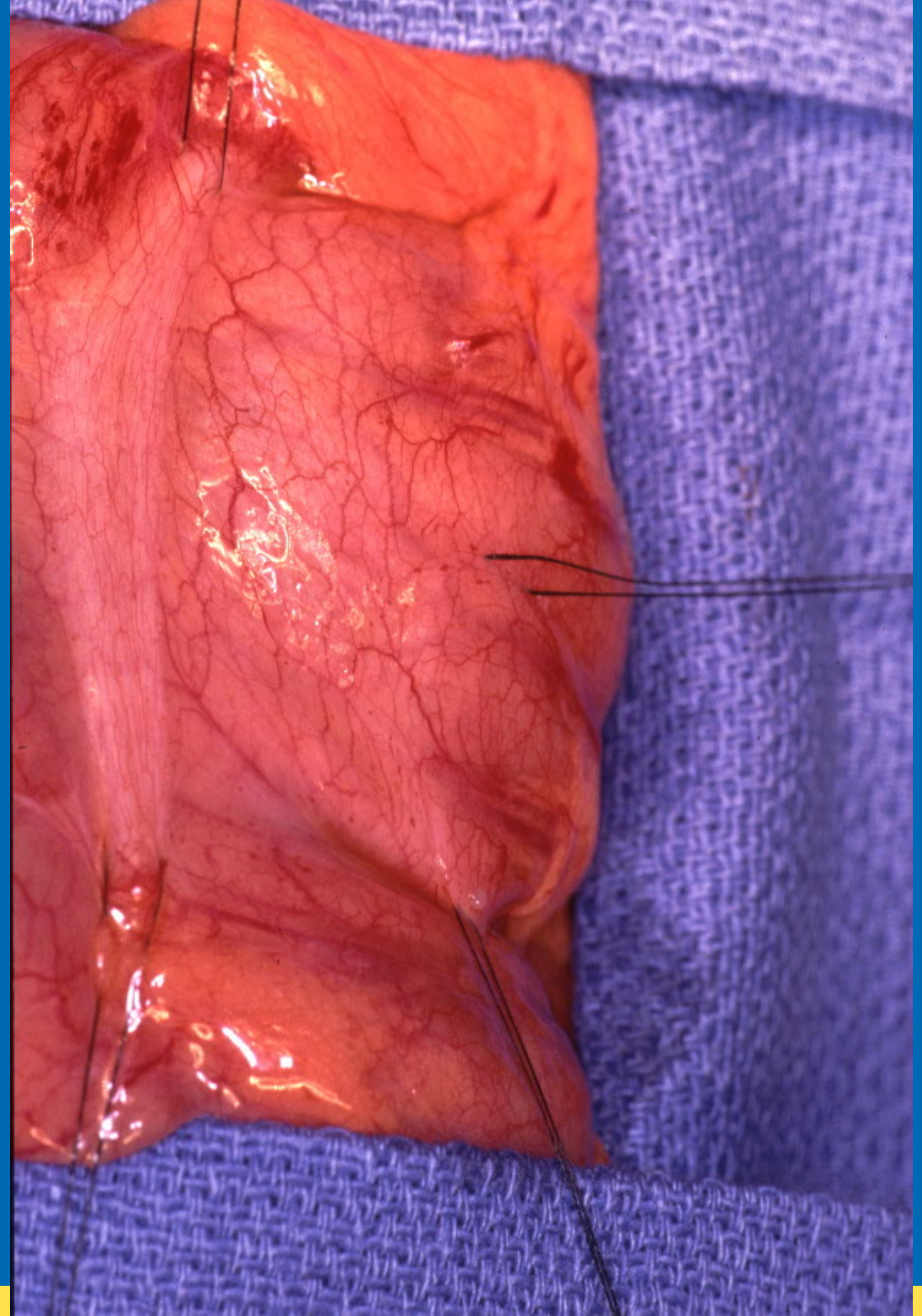

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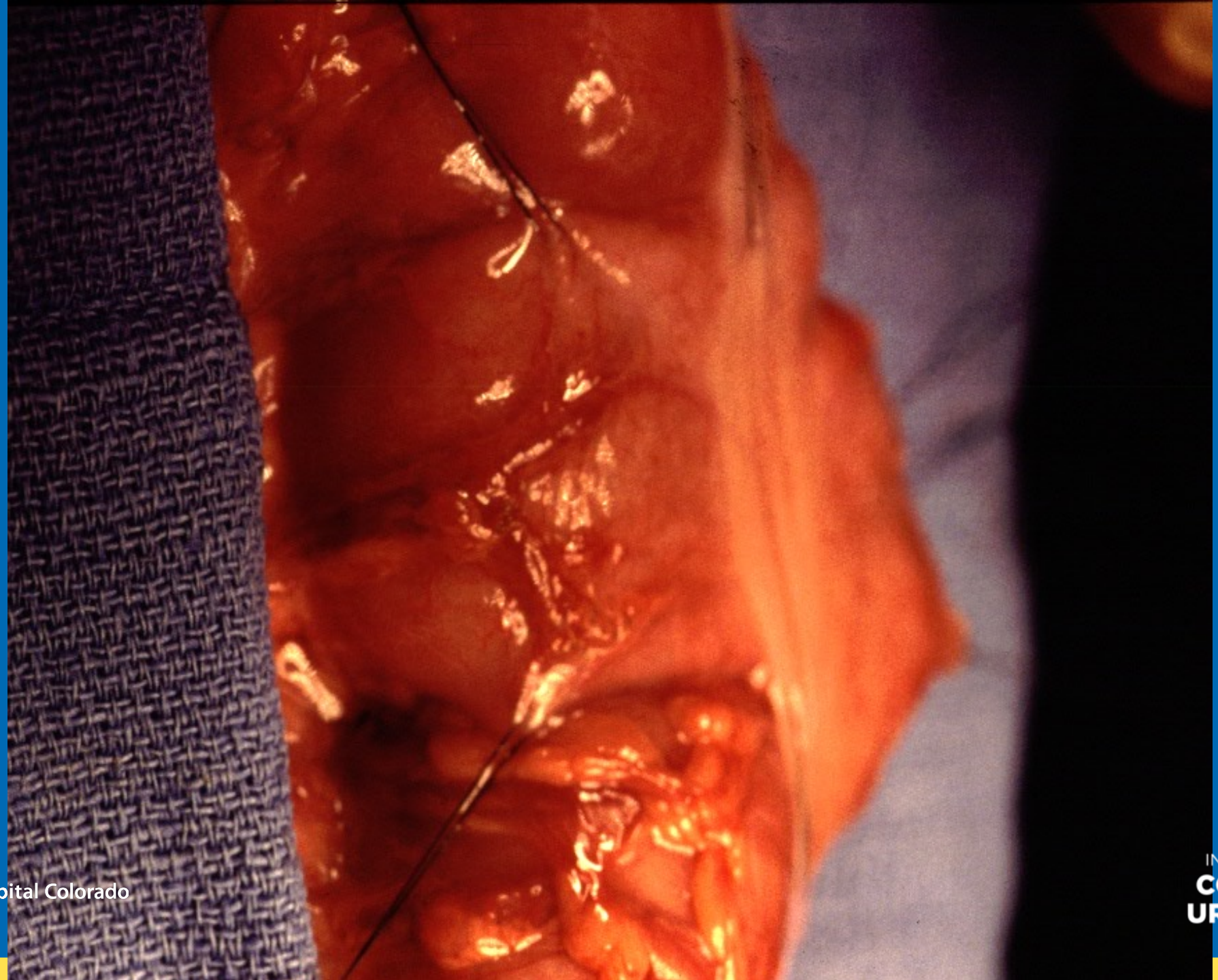

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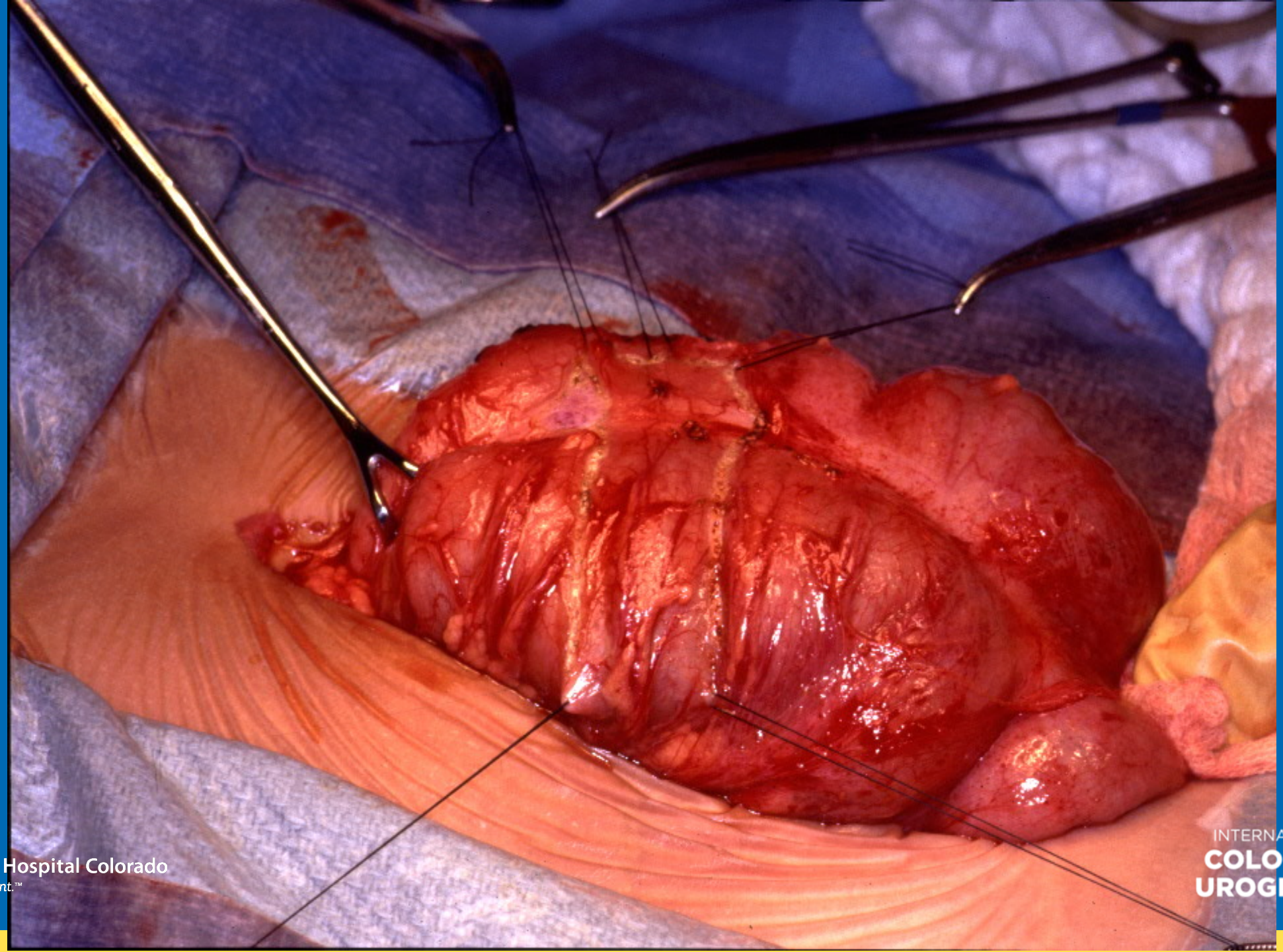

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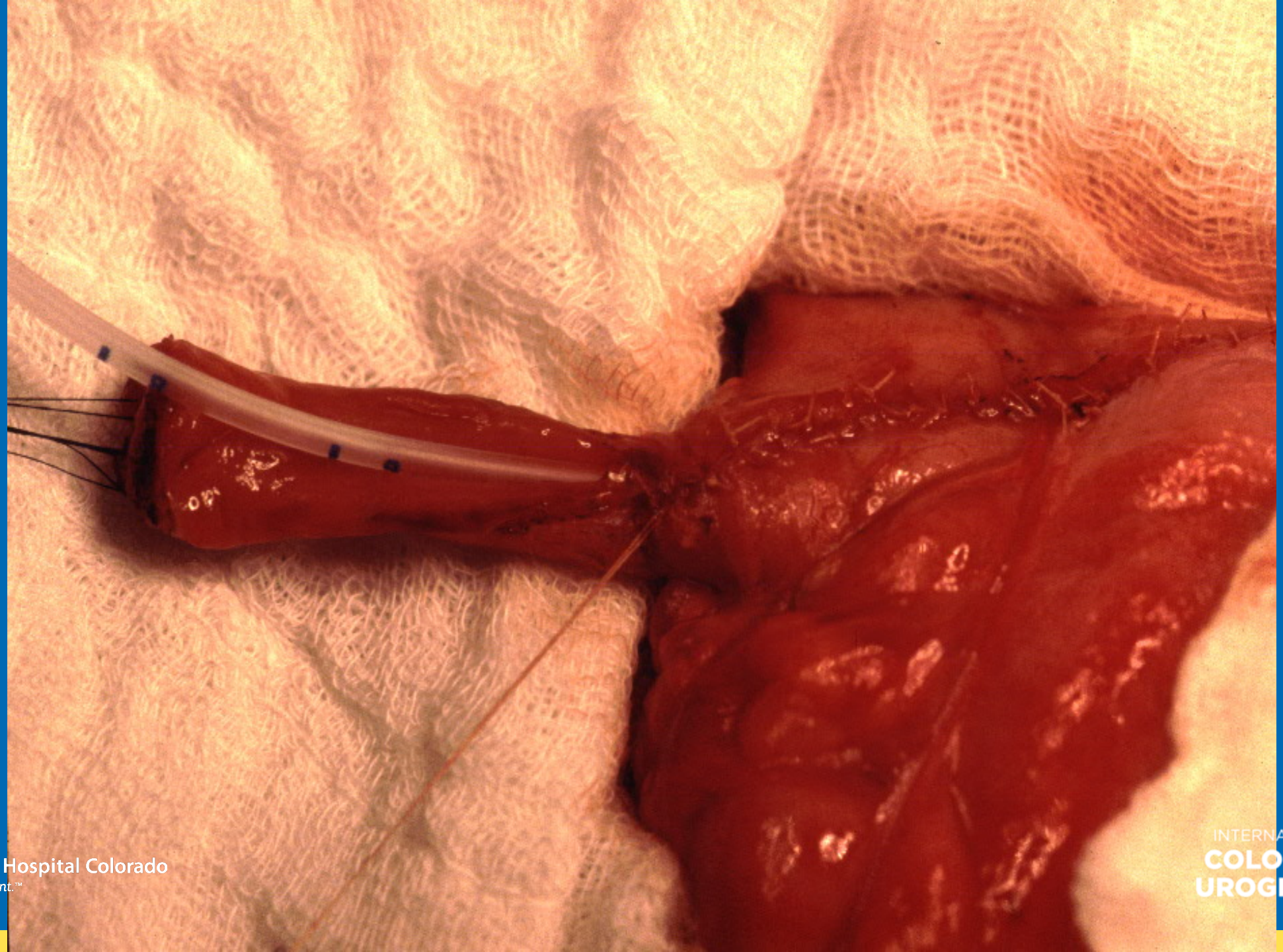

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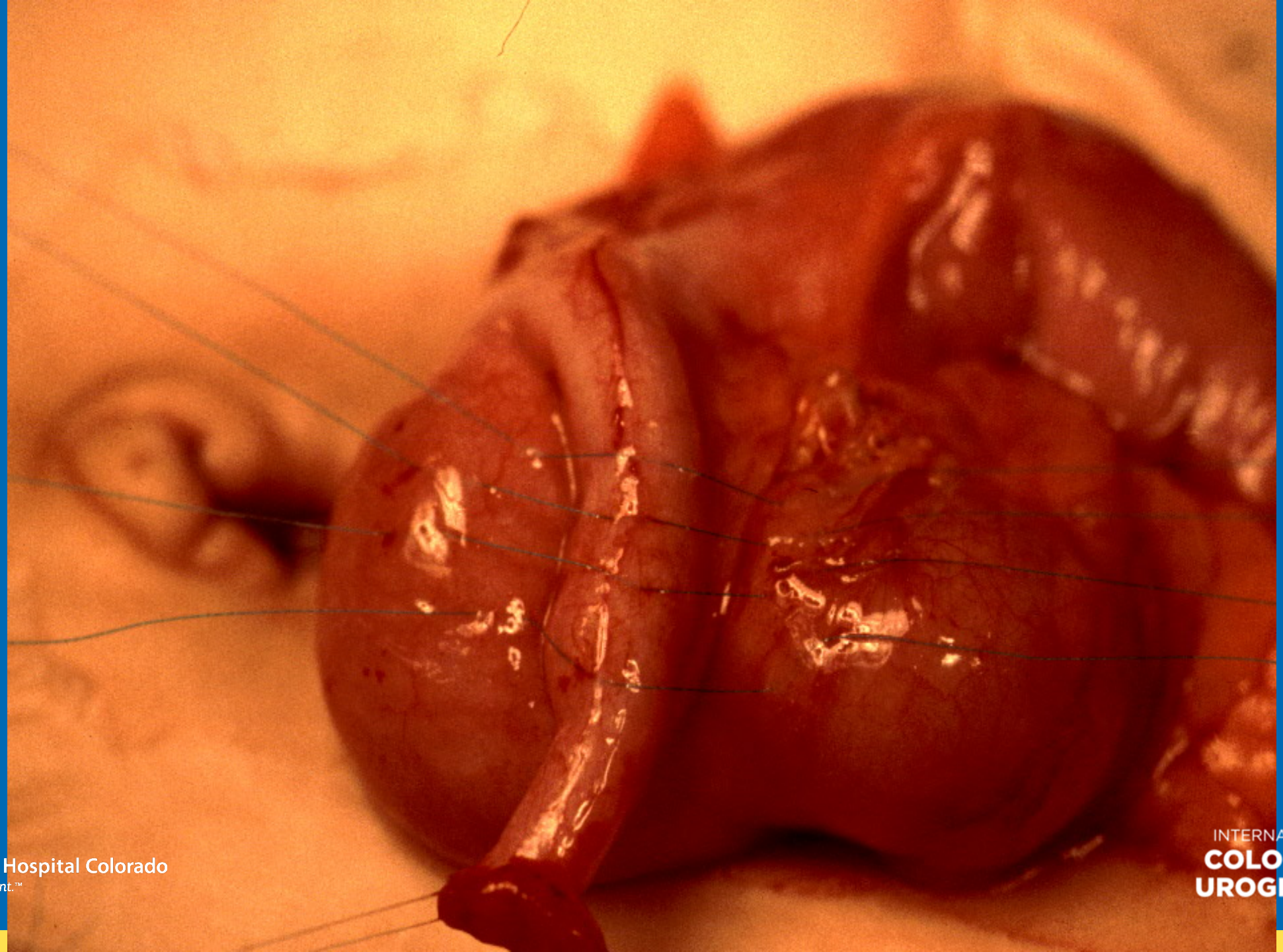

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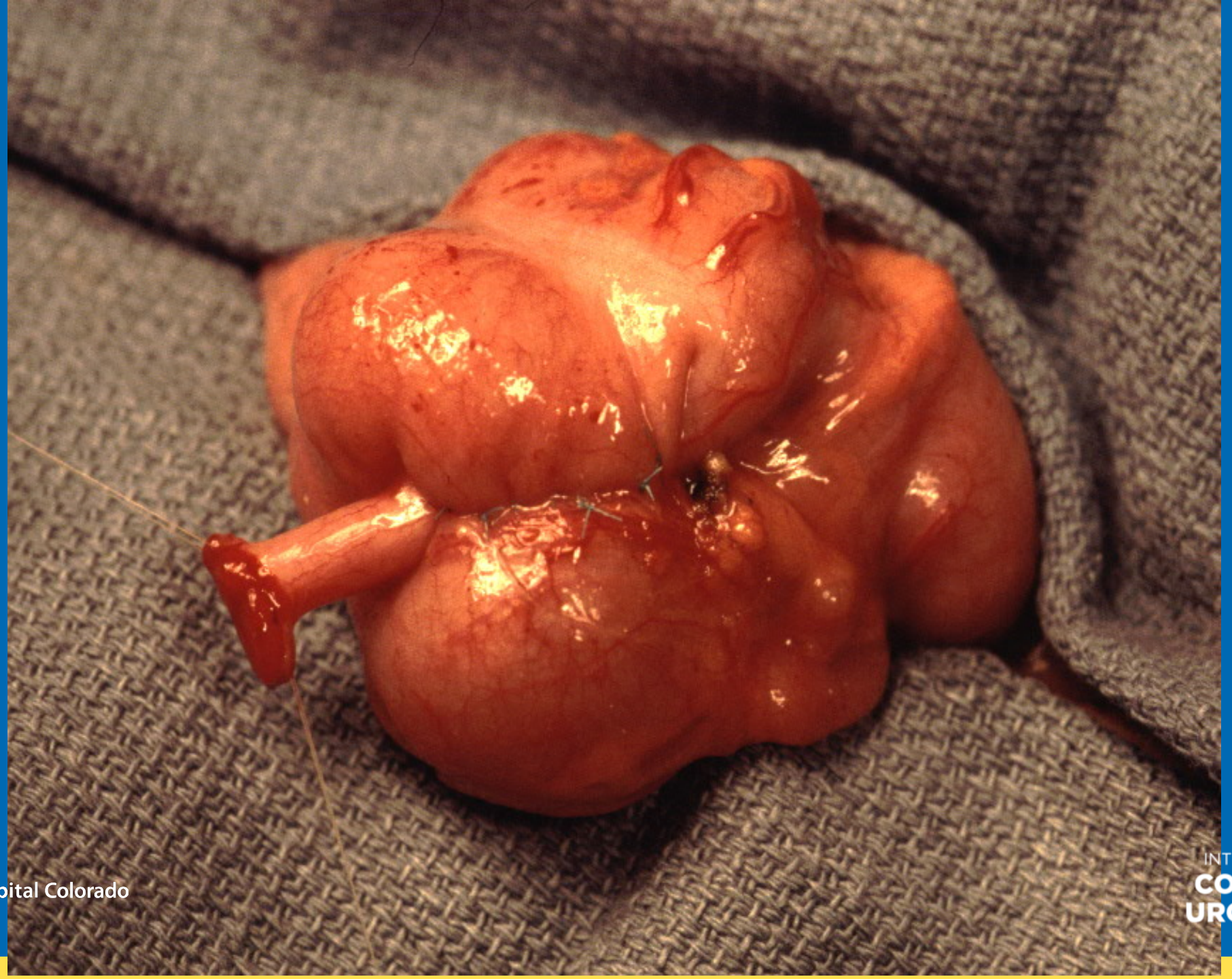

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