

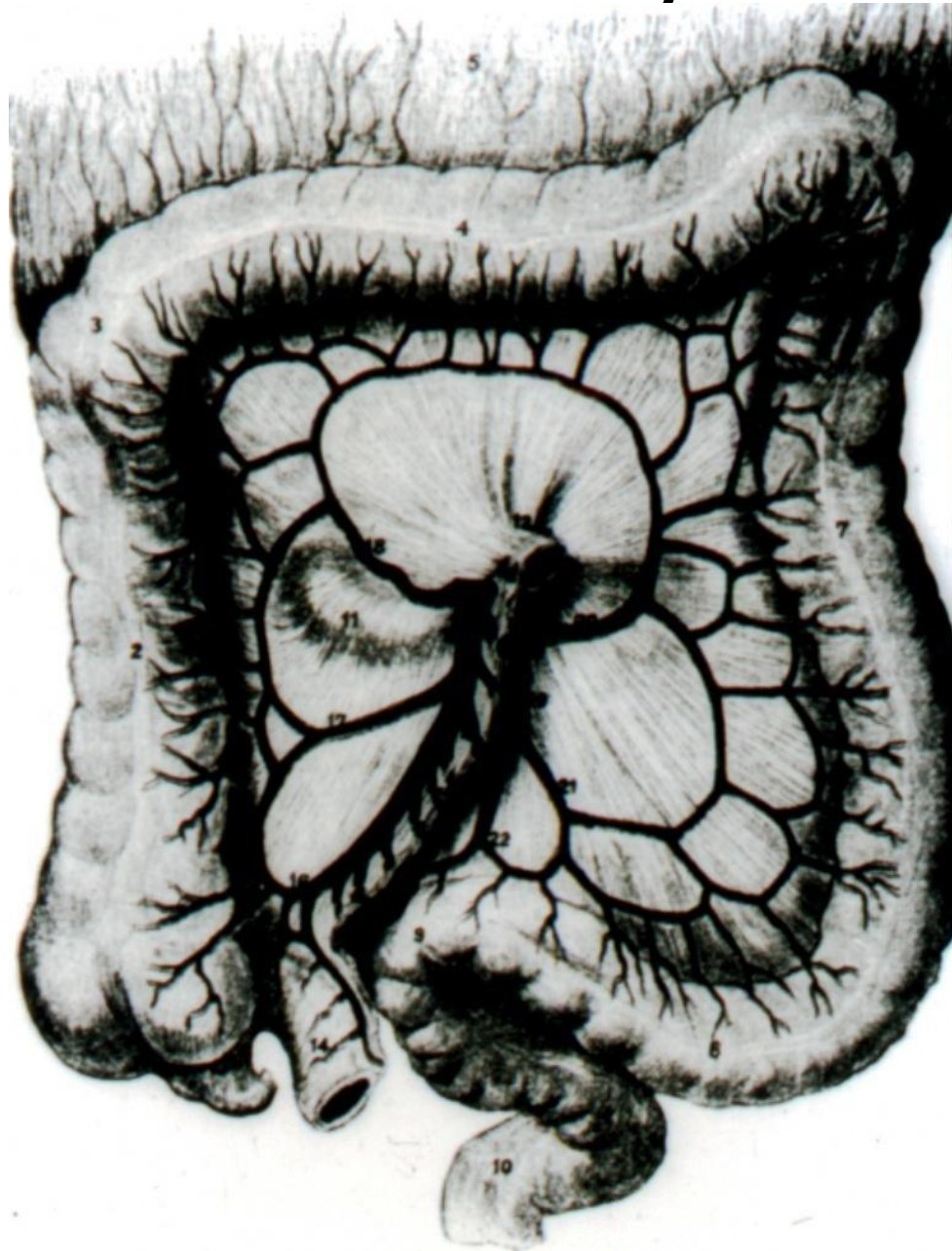
Colon diseases

professor

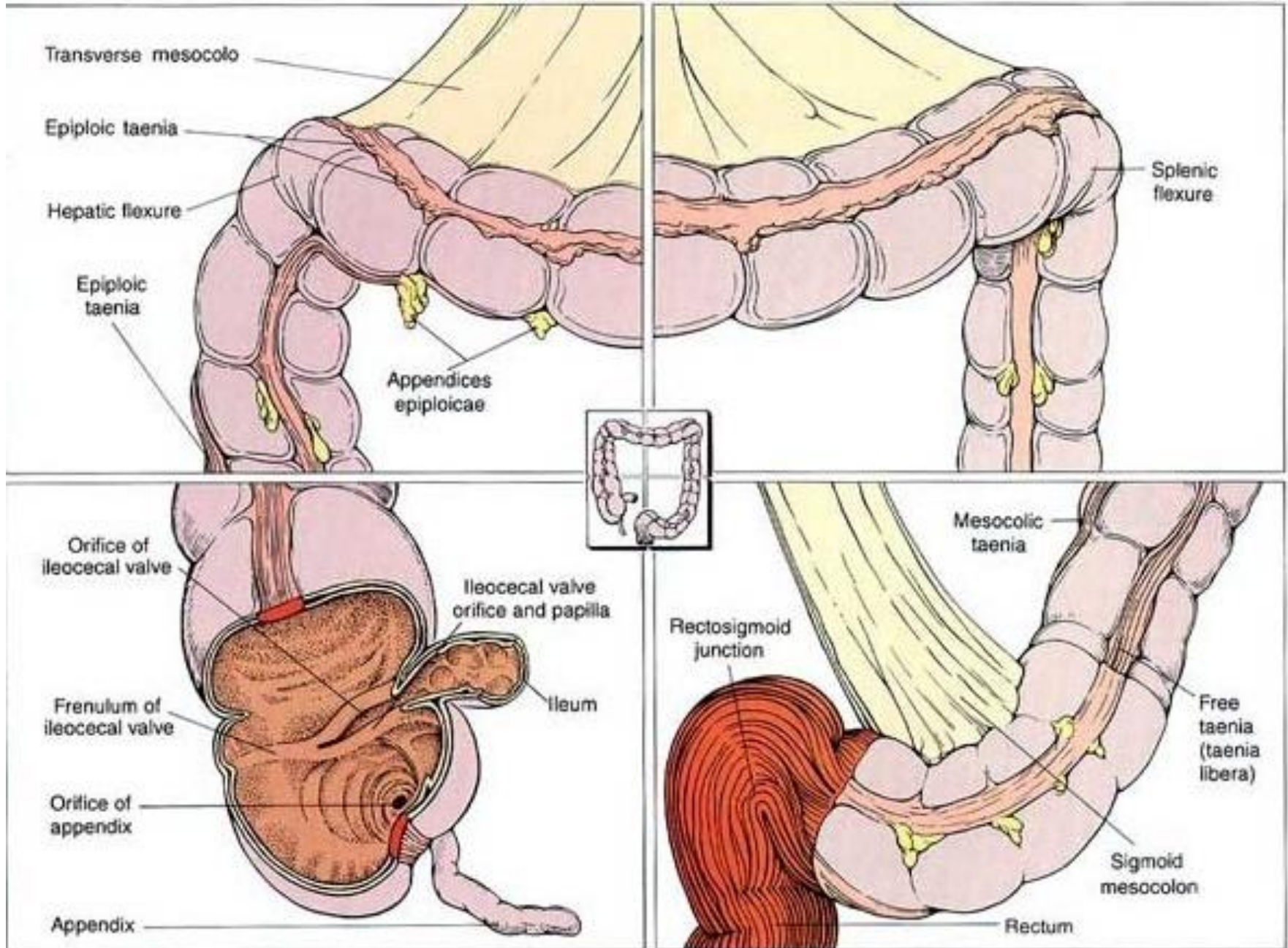
Youry Vladimirovitch

Plotnicov

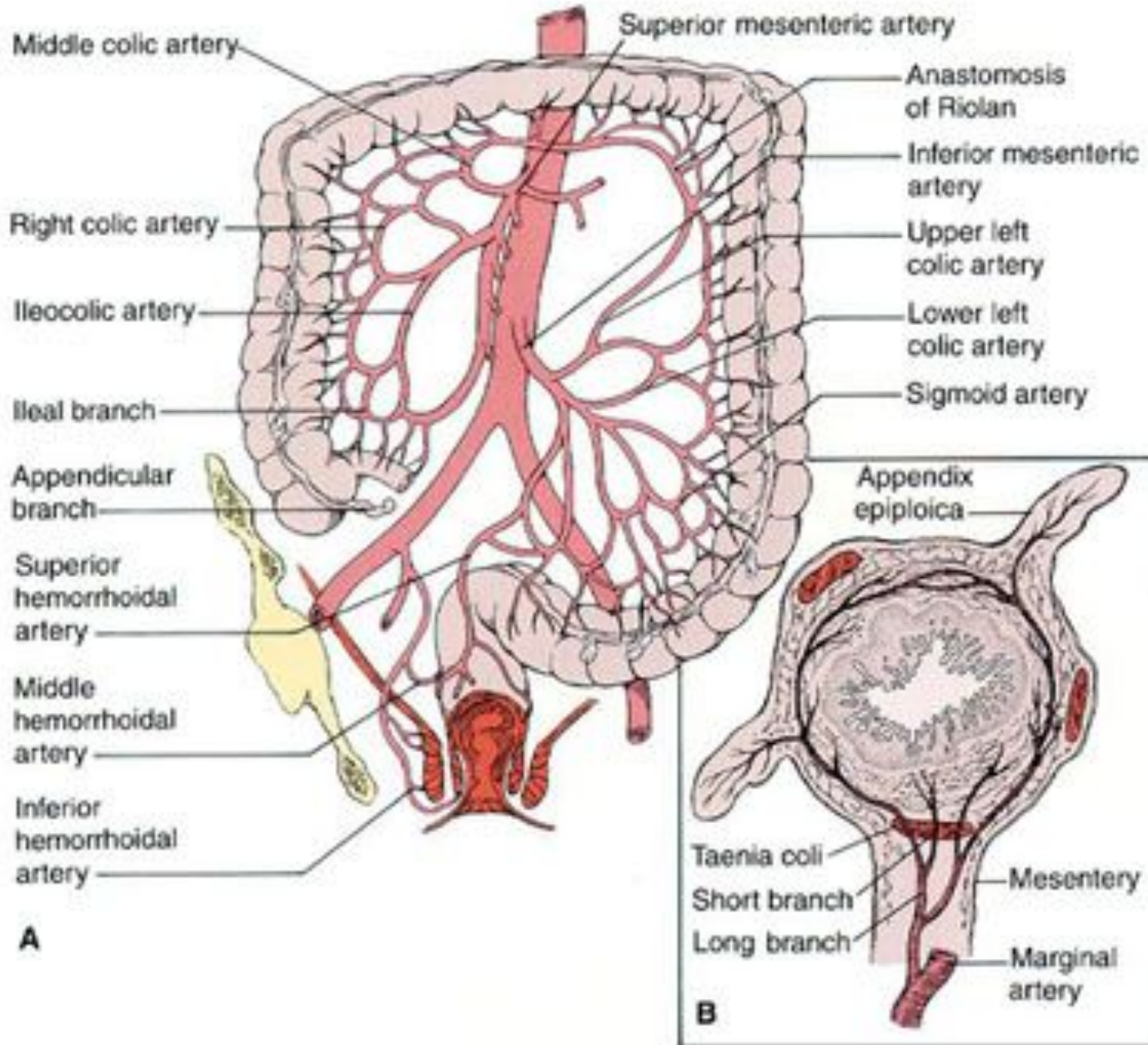
anatomy



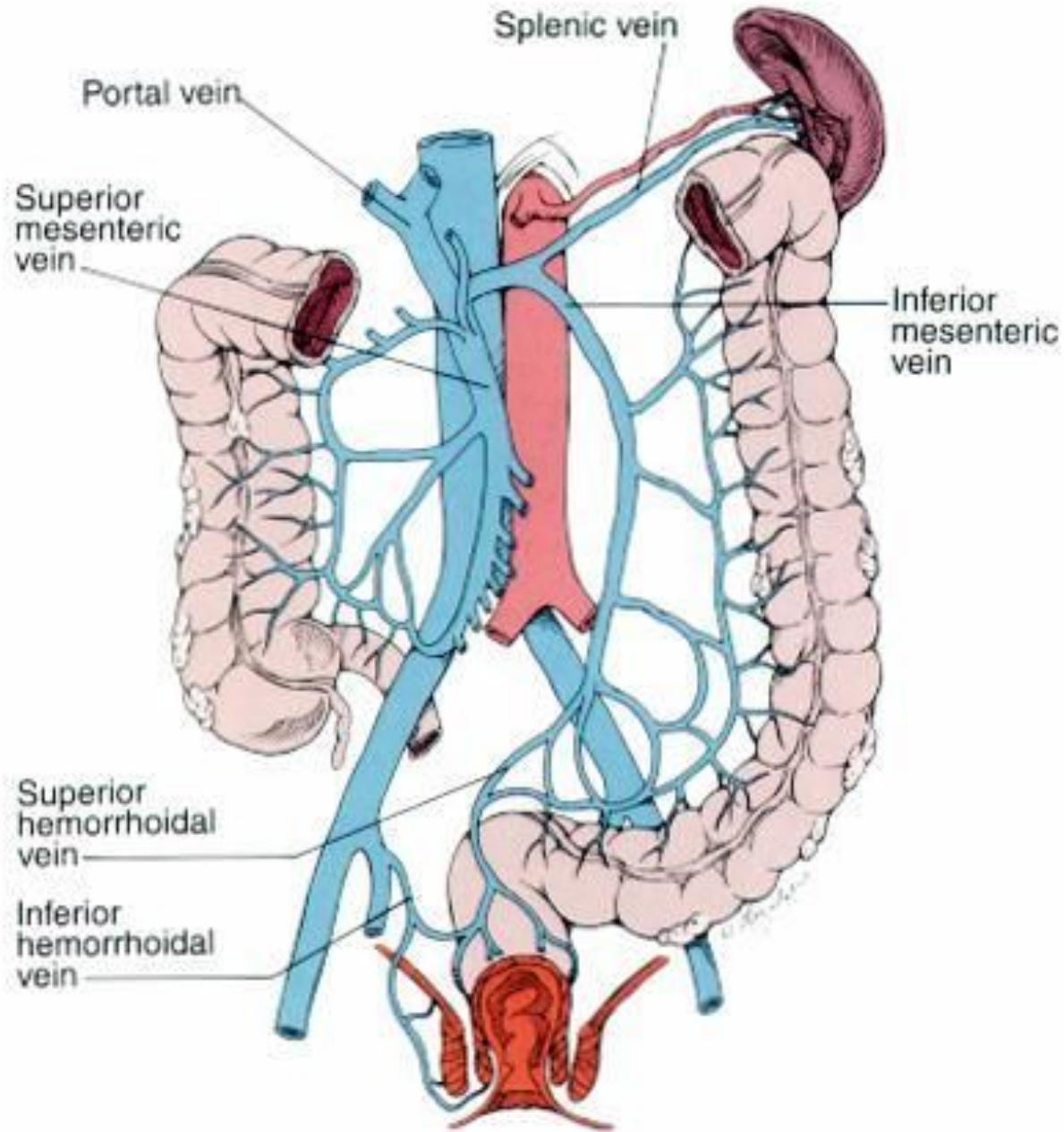
anatomy



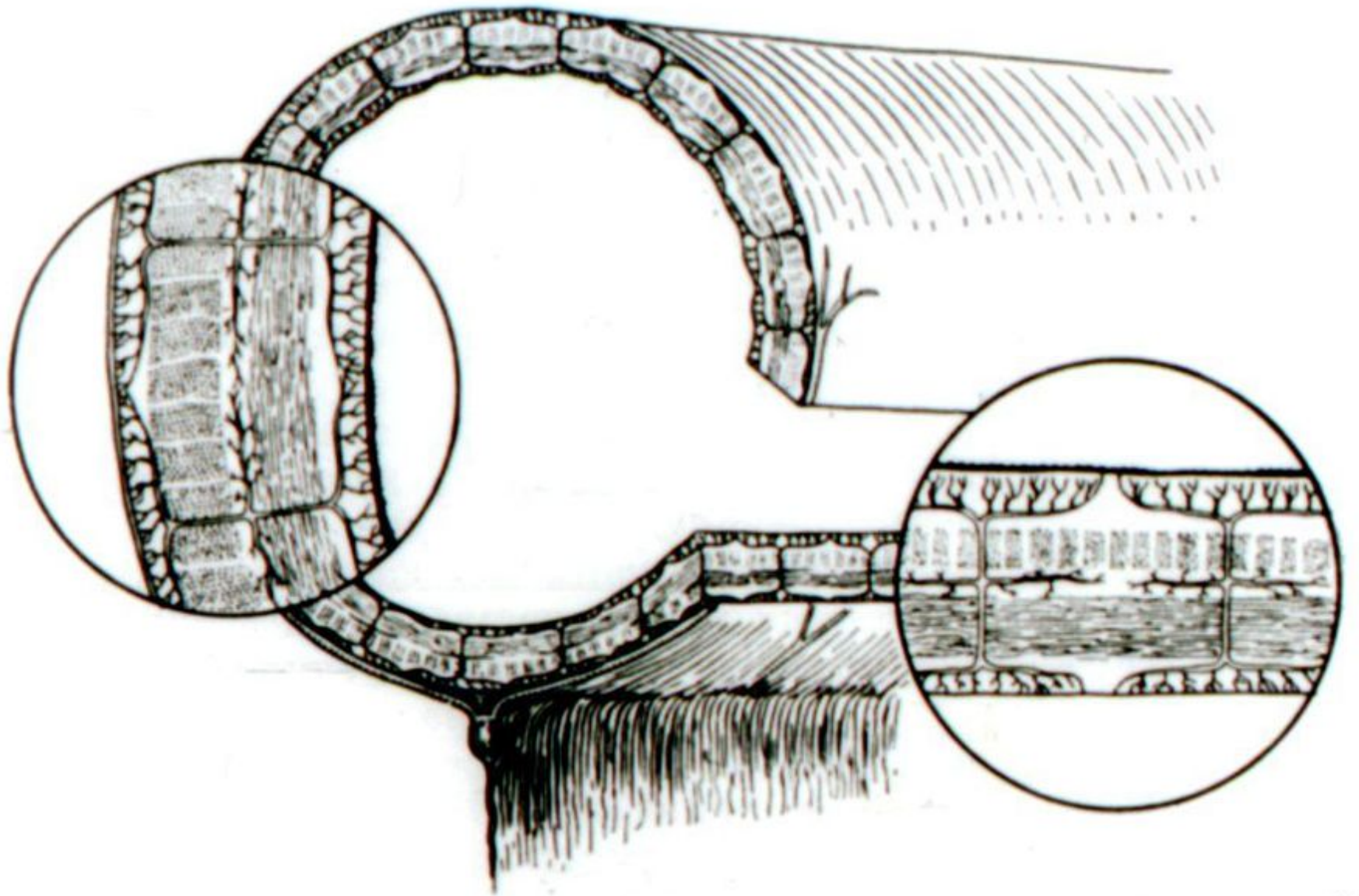
Arterial blood supply



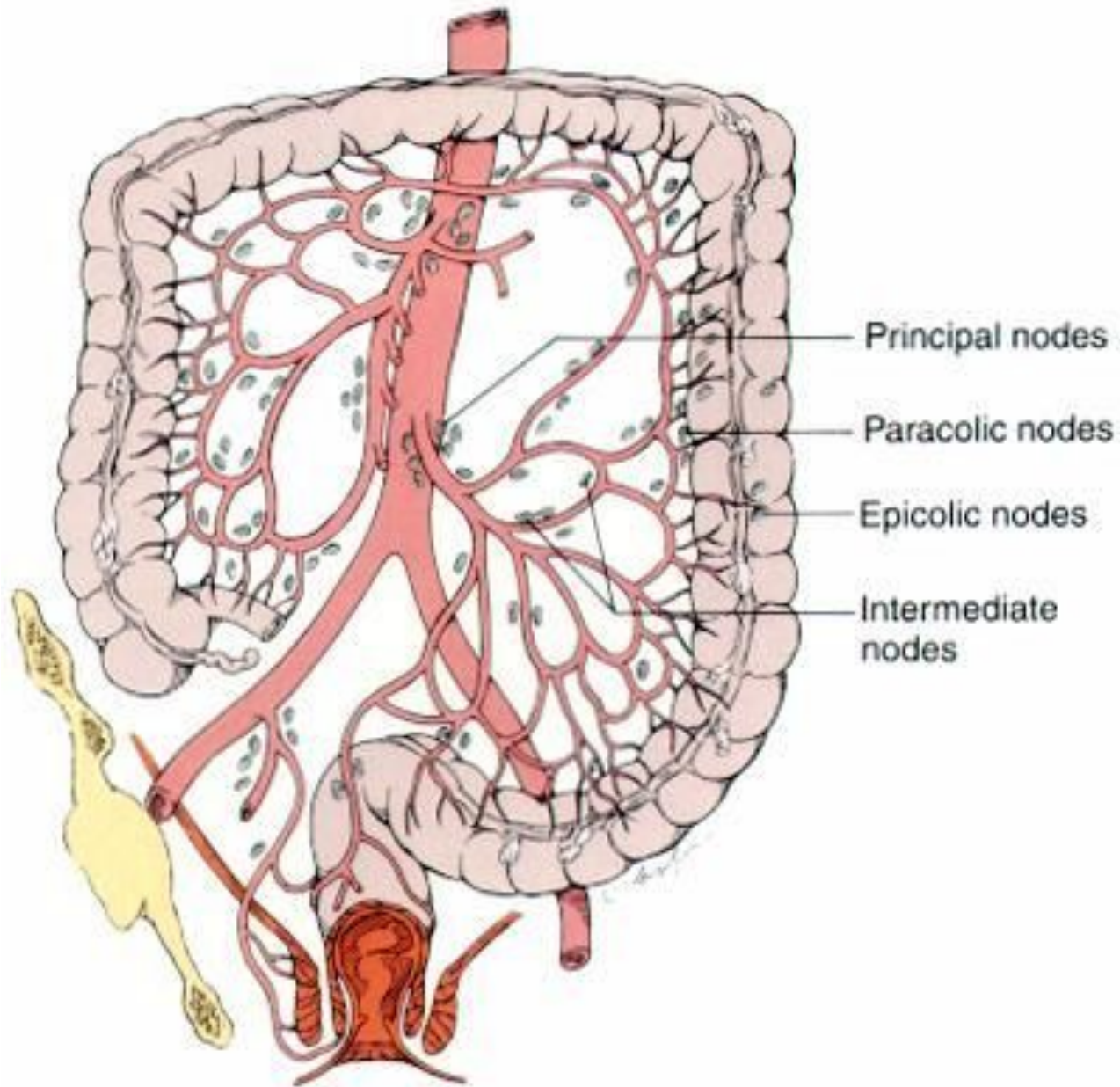
Venose outflow



Intraparietal lymphatic vessels



Lymphatic drainage



Differences of the right and left half

- **Anatomy: on the right the lumen is wider, than at the left (except for the ileocecal valve)**
- **Contention on the right is liquid, at the left dense**
- **Tumours on the right is more often exophytic, at the left endophytic**
- **Exophytic tumours destroyed with a bleeding more often**

Special investigation methods

**1. Physical
investigation**

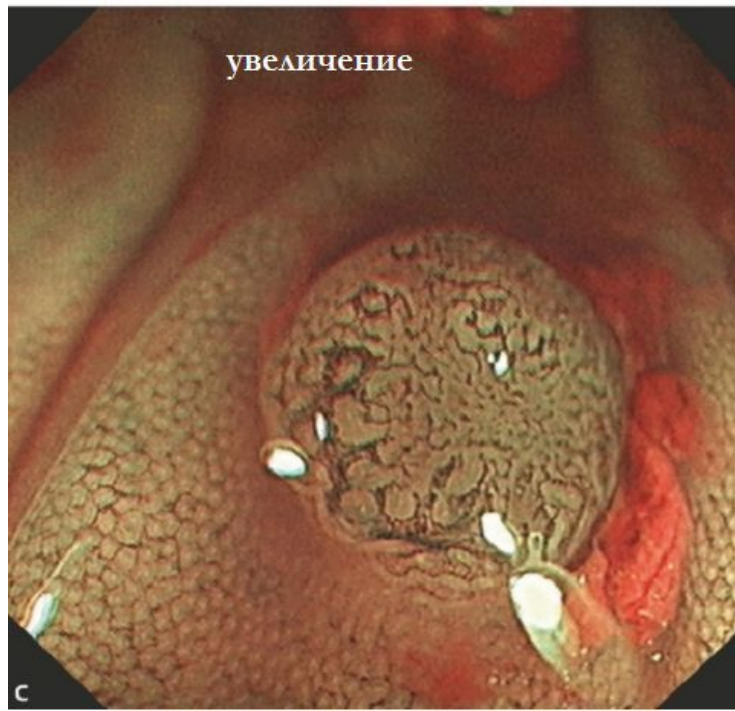
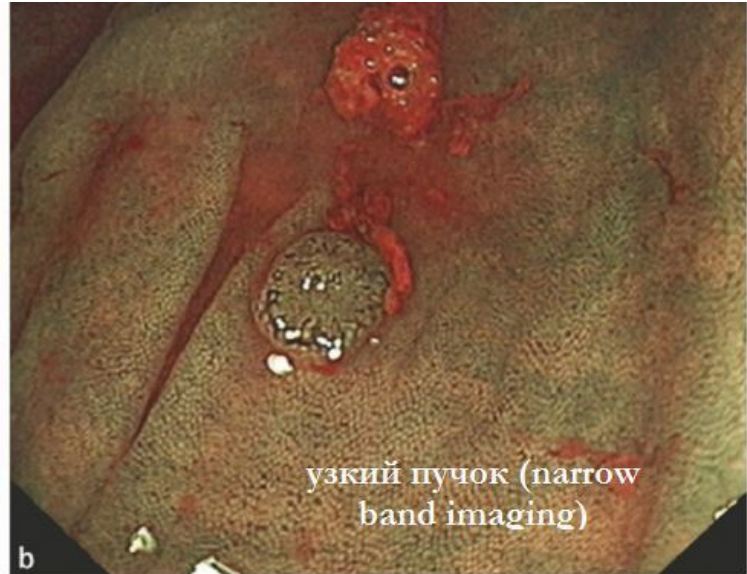
**2. A
proctosigmoido-
scopy**

3. Fibrocolonoscopy

Colonoscopy - an initial cancer



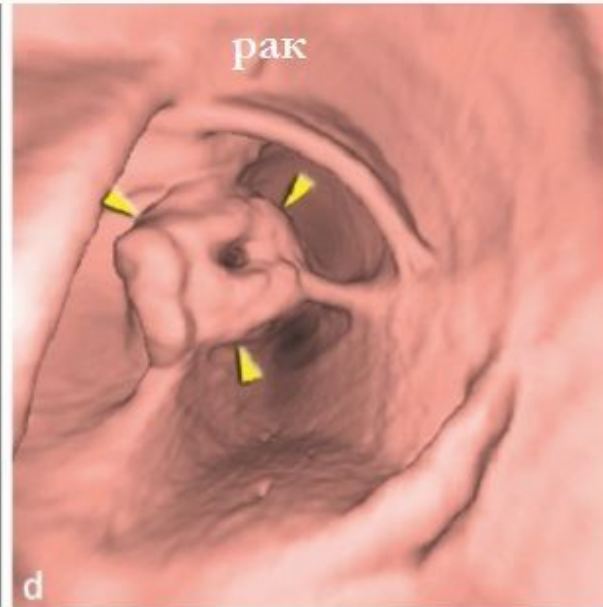
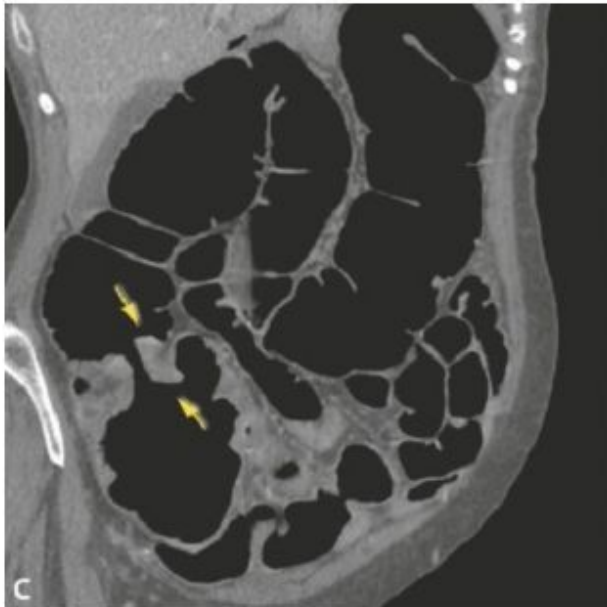
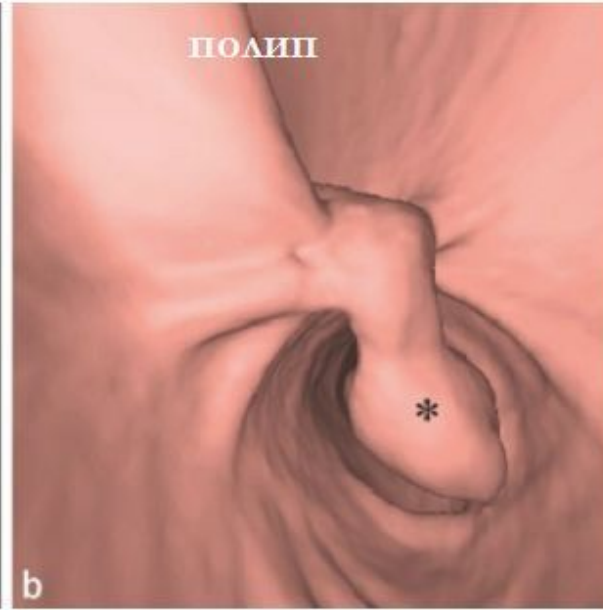
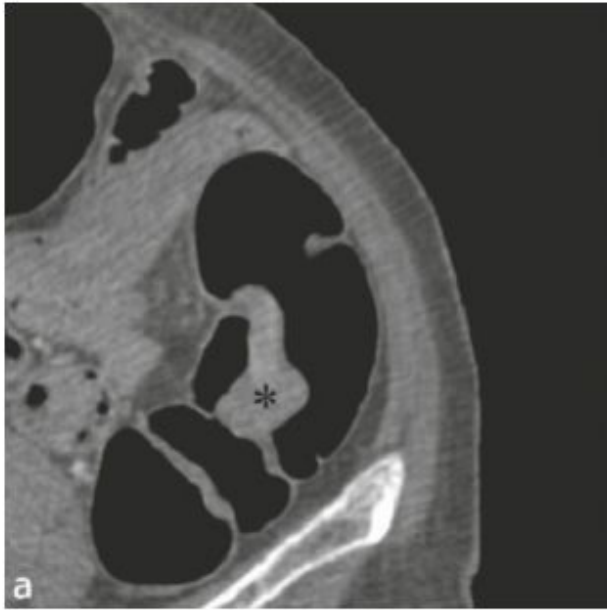
Modern colonoscopy



Special investigation methods

- 4. irrigoscopy (including virtu-al)**
- 5. abdominal cavity US**
- 6. radial methods (CT, PET, etc.)**
- 7. laparoscopy**
- 8. intravenous urography**
- 9. reactions to an occult blood**
- 10. cancer markers**

Virtual colonoscopy



**At what a cancer localization more
often**

an enemy?

**At what a cancer localization more
often**

**Visible
bleeding?**

**AT WHAT A CANCER LOCALIZATION
MORE OFTEN**

**Disturbance
of passability**

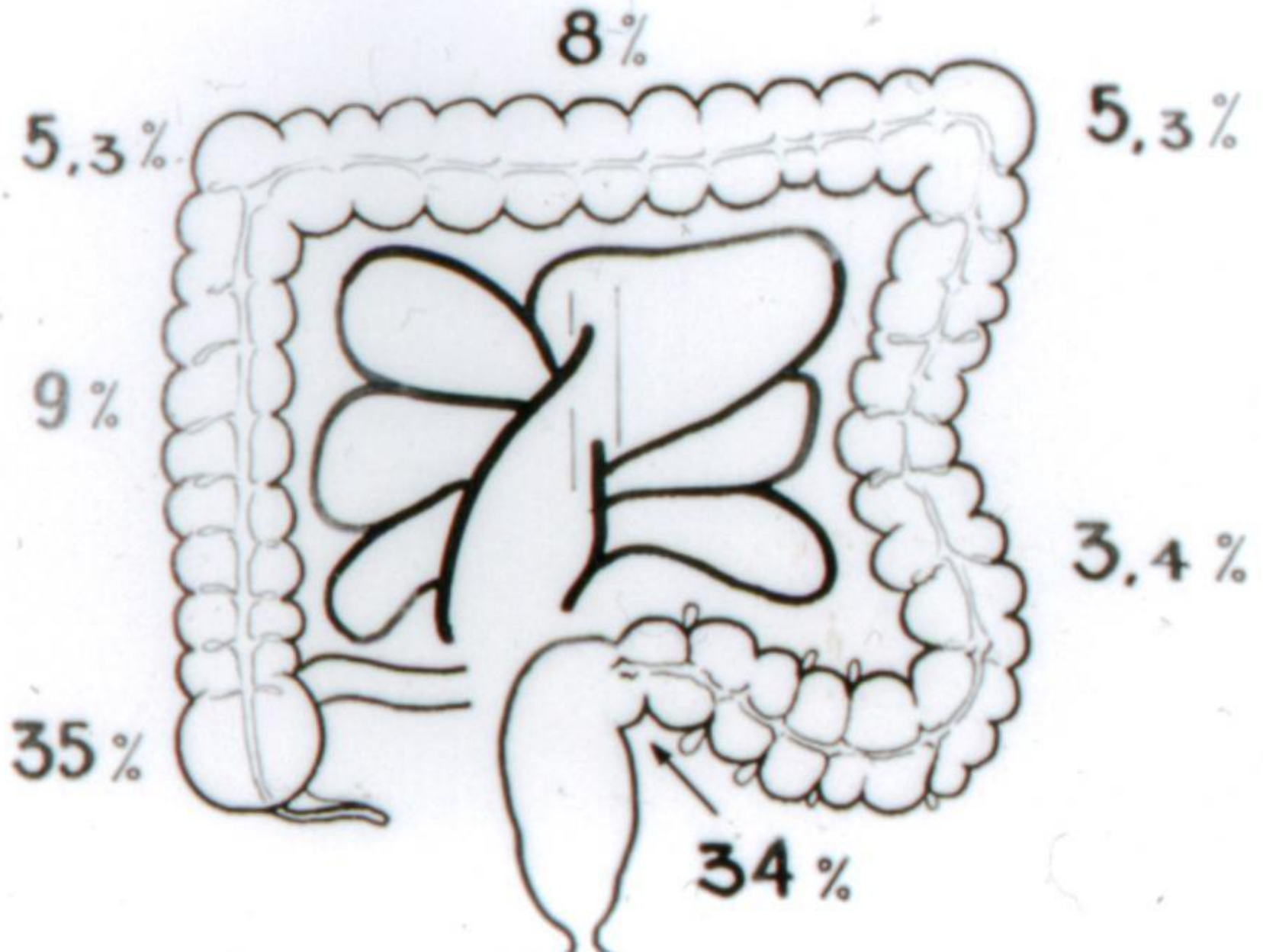
**AT WHAT A CANCER LOCALIZATION
MORE OFTEN**

**Perforation is
more
possible?**

**AT WHAT A CANCER LOCALIZATION MORE
OFTEN**

**Fistulas,
phlegmons
are possible?**

Colon cancer localisation



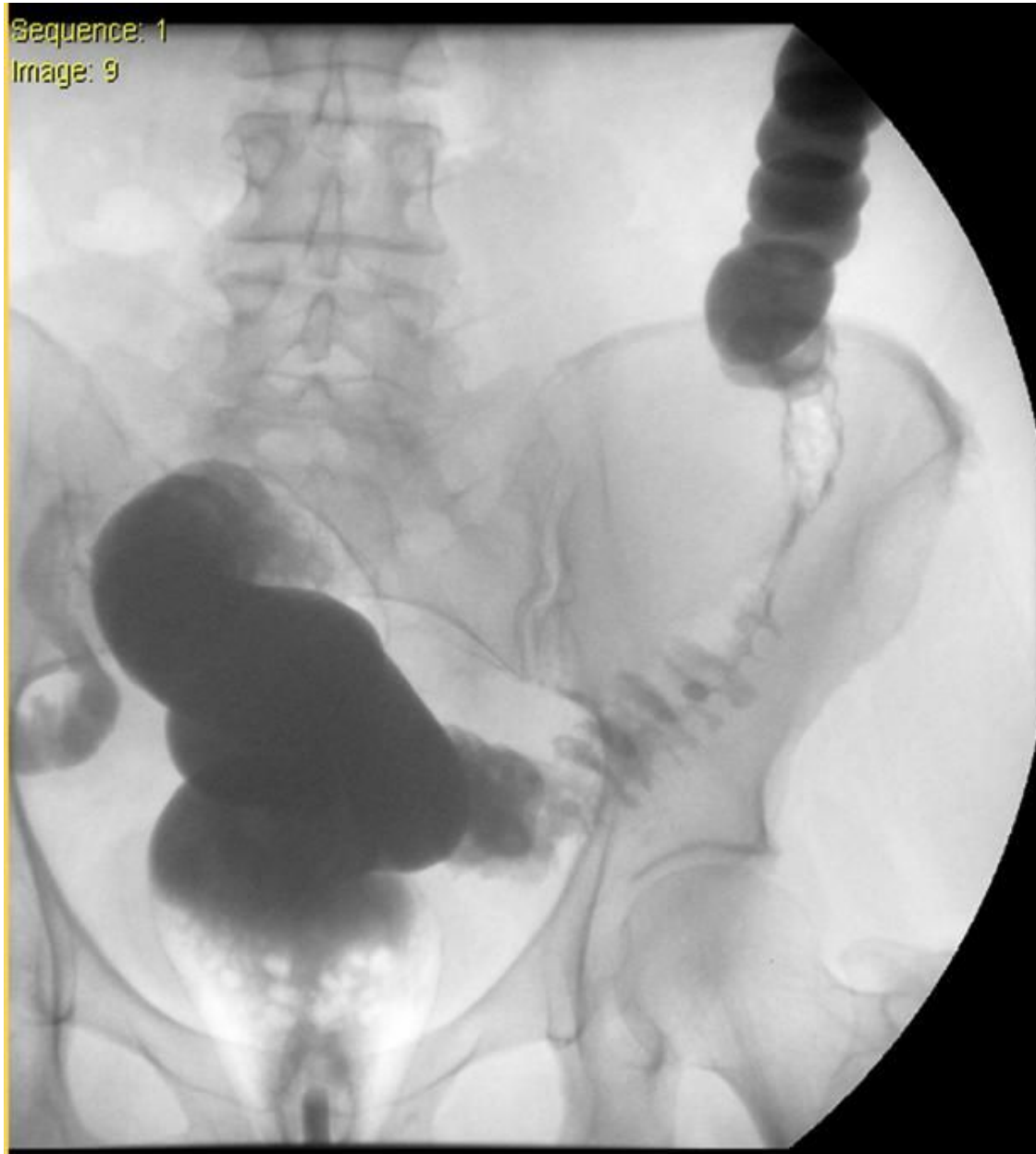
Cancer clinical signs

- 1. Functional signs without intestinal disorders (a pain, etc.)**
- 2. Intestinal disorders (diarrheas, con-stipations, alternating)**
- 3. Disturbances of intestinal passabi-lity**
- 4. Pathological discharge**
- 5. Disturbance of the general conditi-on of patients**
- 6. Palpating detection of a tumour**

Cancer clinical forms

- 1) toxico-anemic**
- 2) enterocolitic**
- 3) dyspeptic**
- 4) obturational**
- 5) pseudo-inflammatory**
- 6) tumoral**

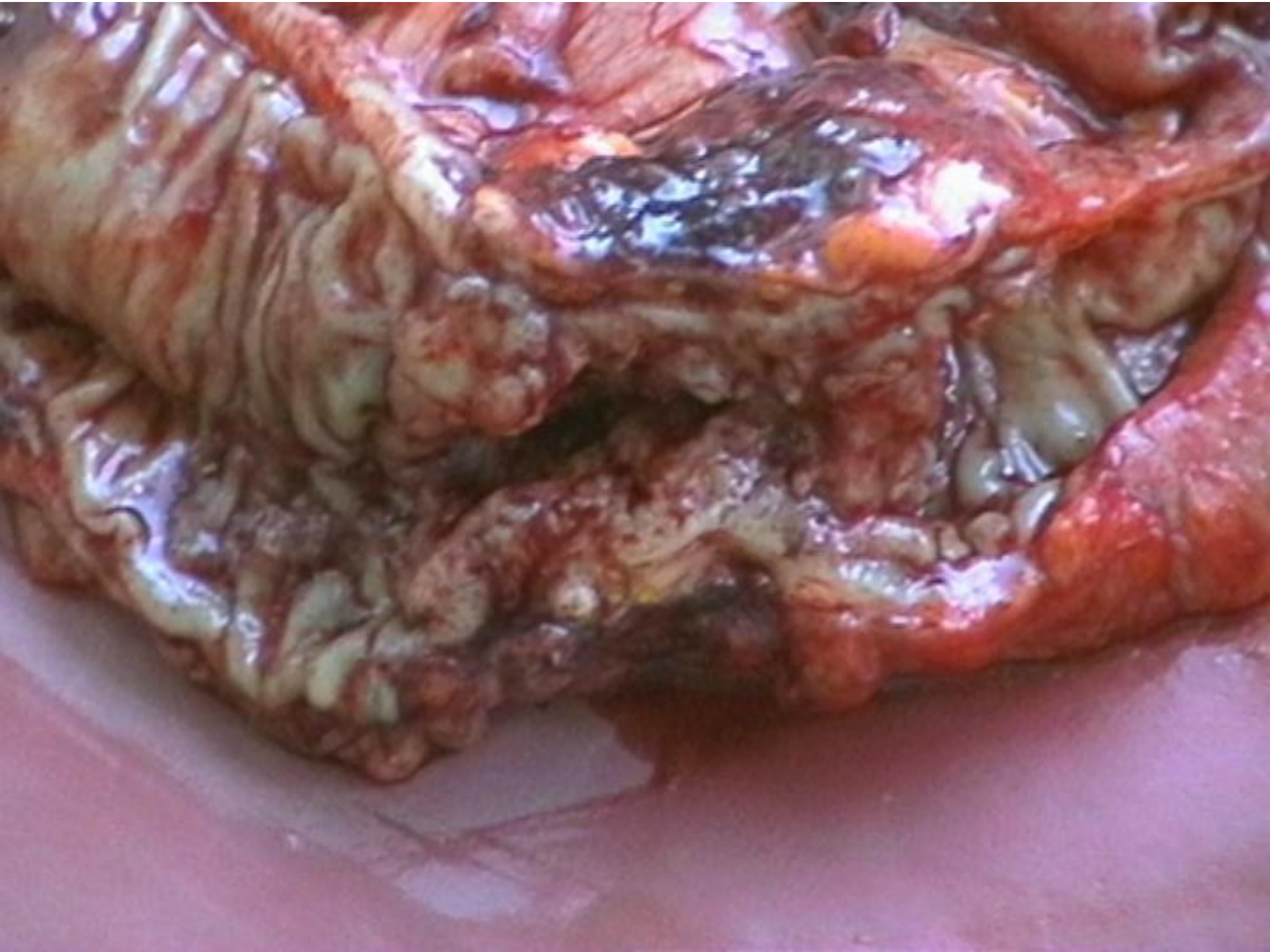
Colon cancer diagnosis



Colon cancer diagnosis







TNM



Поражение
слизистой и
подслизистого
слоя (T1)



Опухоль прорастает
в мышечную
стенку (T2)



Сквозное
прорастание
мышечной
стенки (T3)



Нормальный
лимфатический
узел (N₀)



Метастазы в
лимфатических
узлах (N1)



Нет отдаленных
метастазов (M₀)

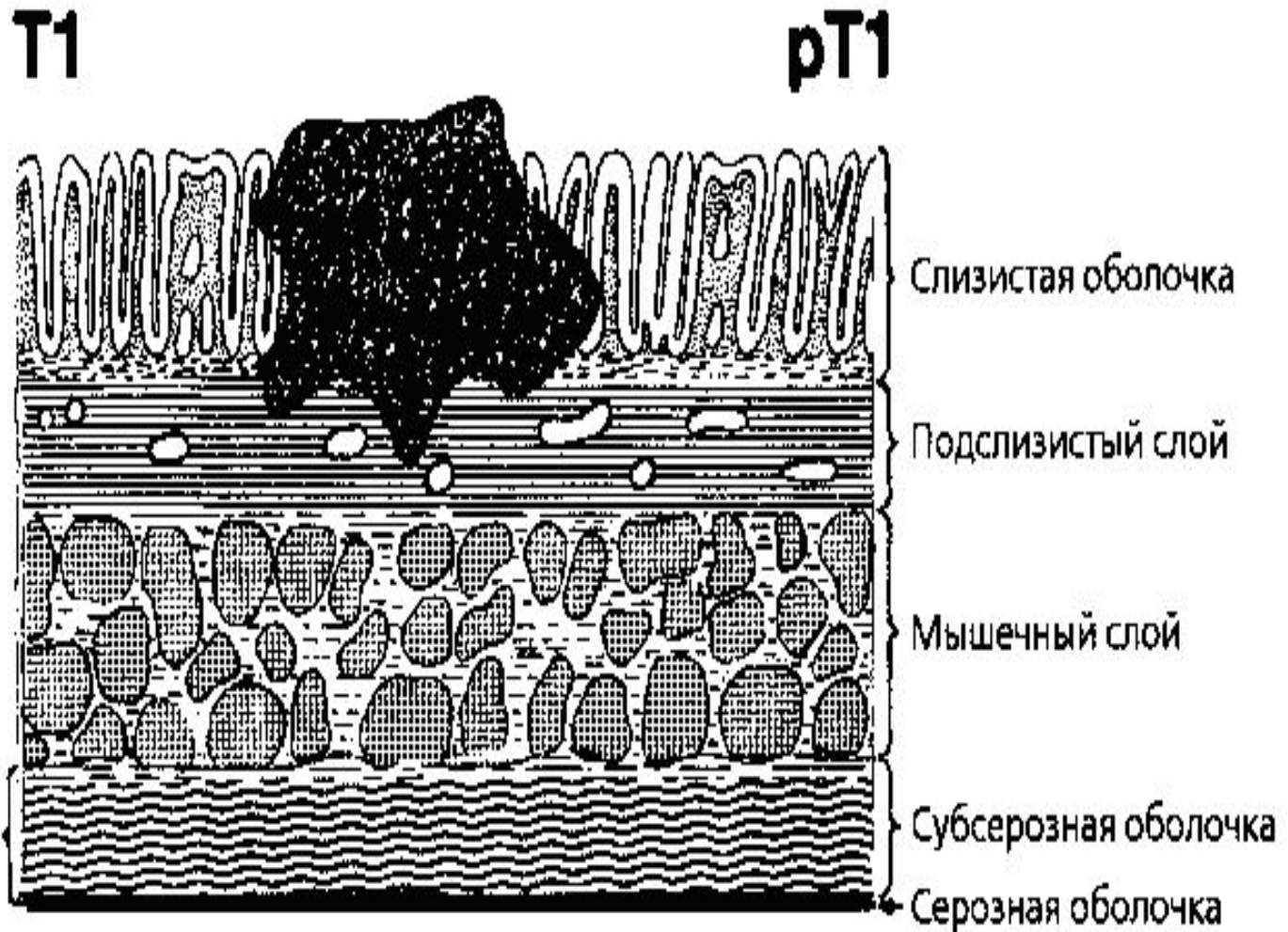


Есть отдаленные
метастазы (M1)

TNM - T

- **T_x - the estimation of a primary tumour is impossible**
- **T₀ - the primary tumour is not found out**
- **T_{is} - a cancer in situ: cancer cells find out within the limits of a basal membrane of glands or in own plate of a mucous membrane**

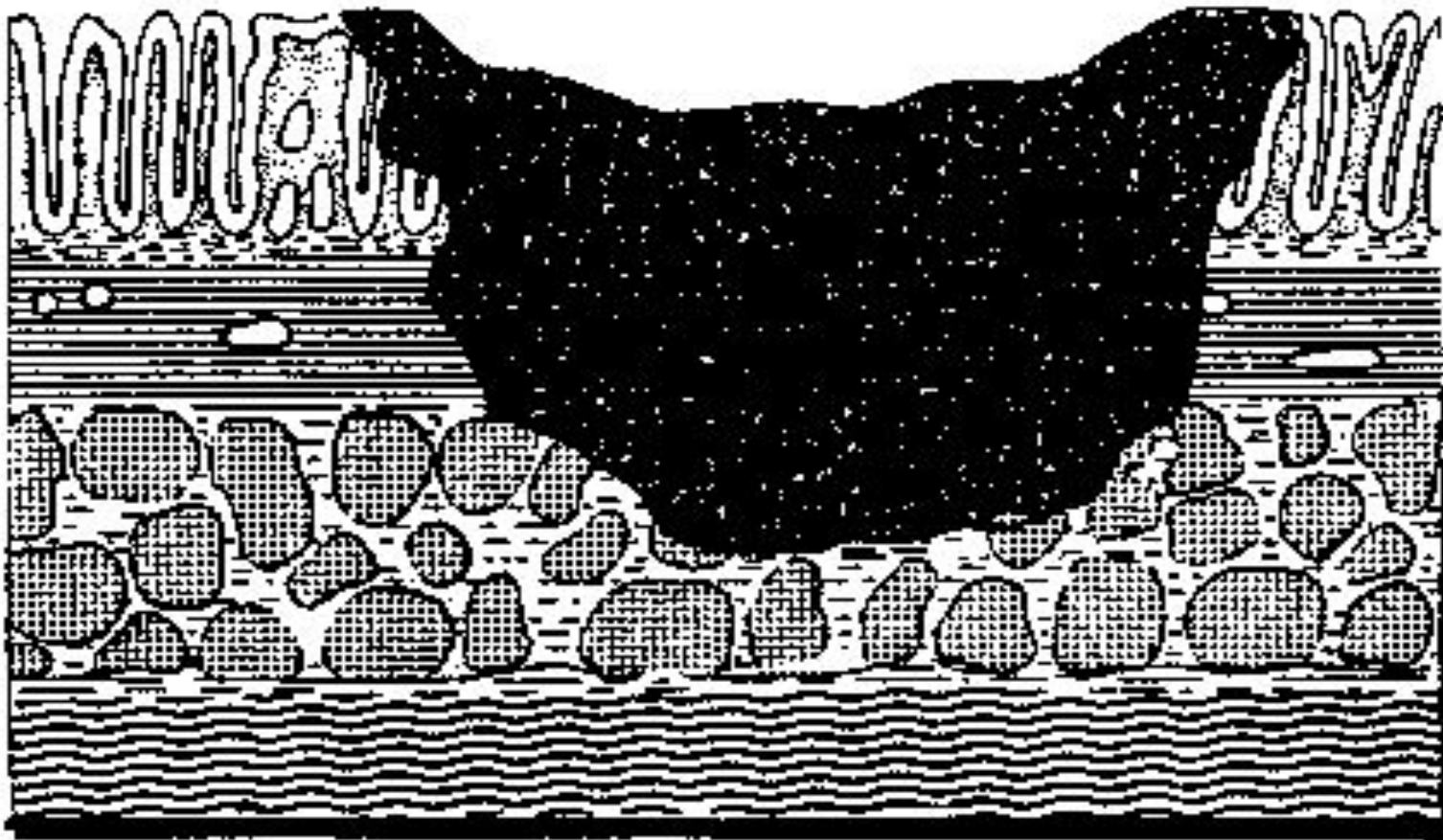
T1 – The tumour amazes a submucouse layer



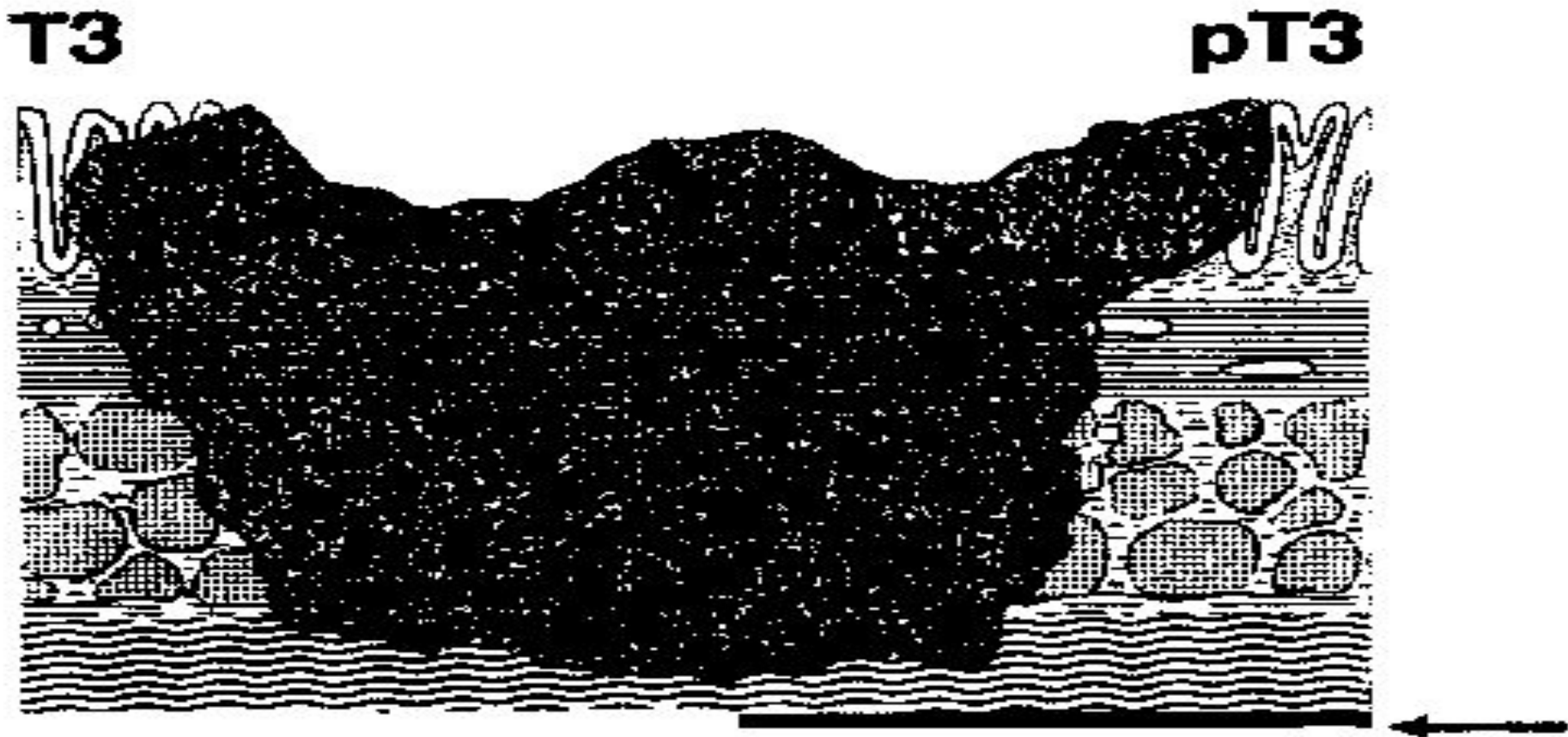
T2 - the tumour spreads into a muscular layer

T2

pT2



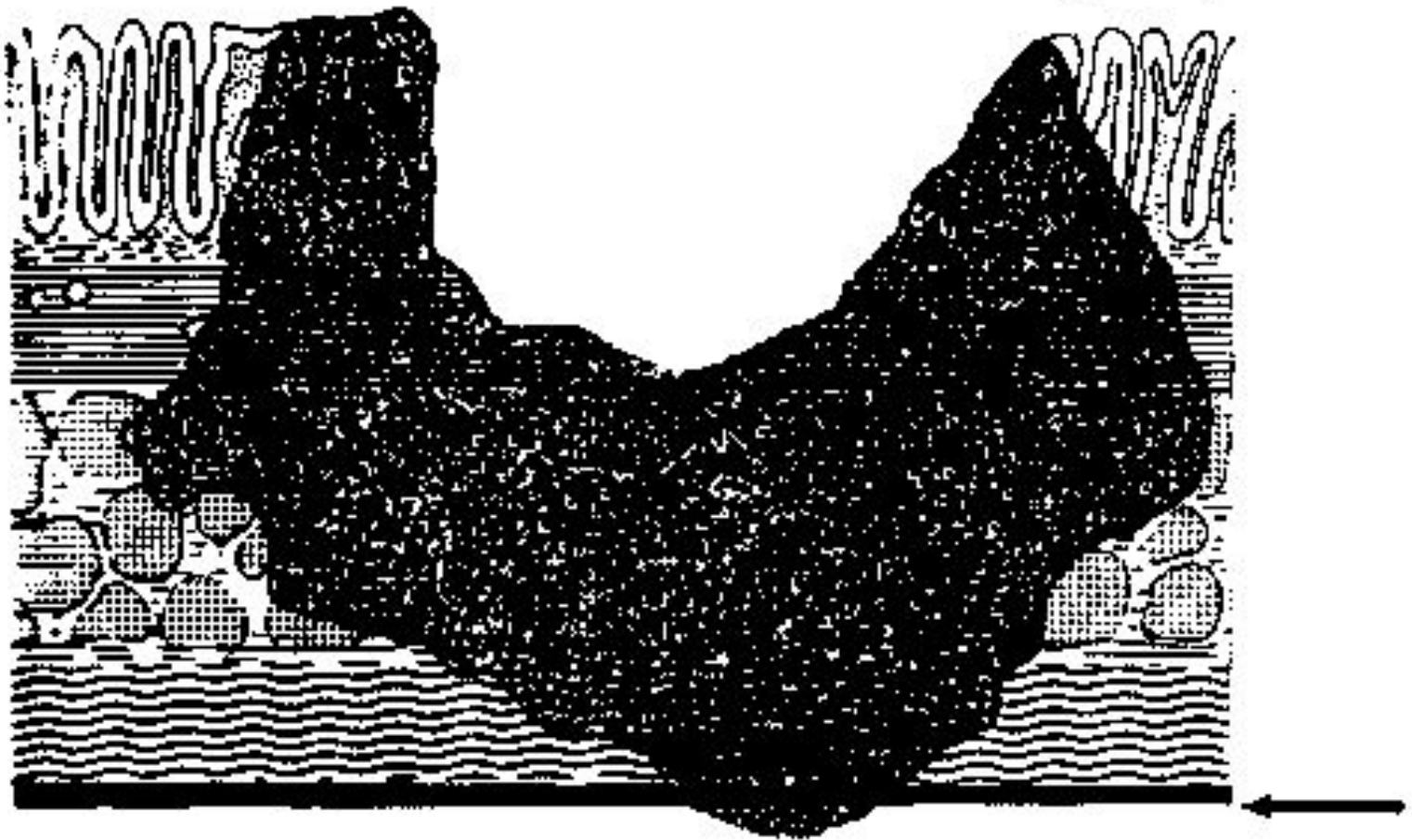
T3 - the tumour gets into a subserous layer or not covered by a paracolitis and pararectal peritoneum fat



T4 - the tumour amazes the neighboring organs and tissues and/or spread through a visceral peritoneum

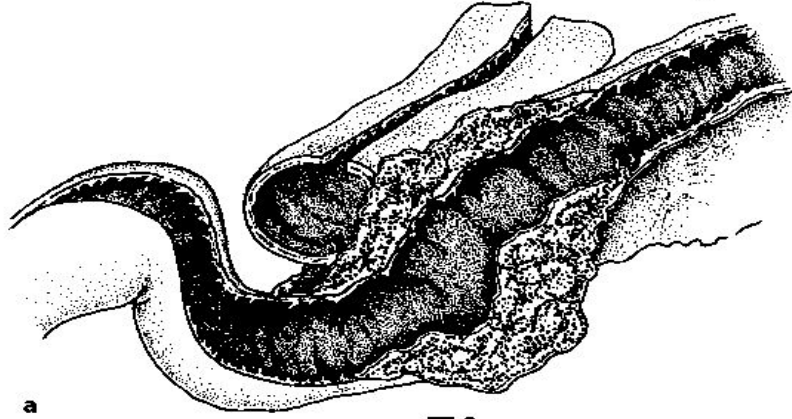
T4

pT4



T4

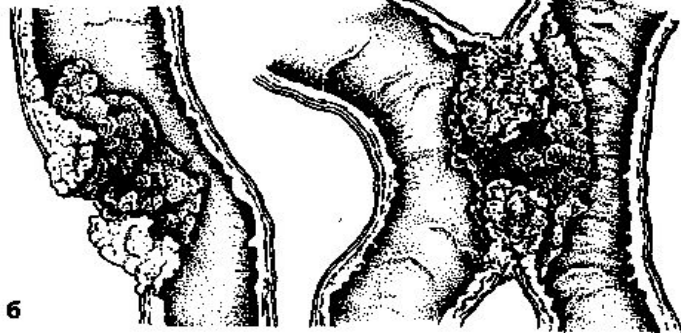
pT4



a

T4

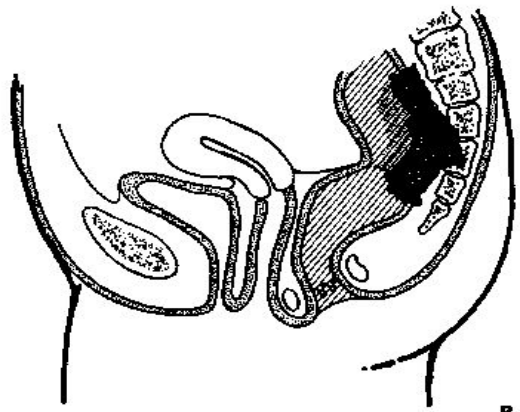
pT4



6

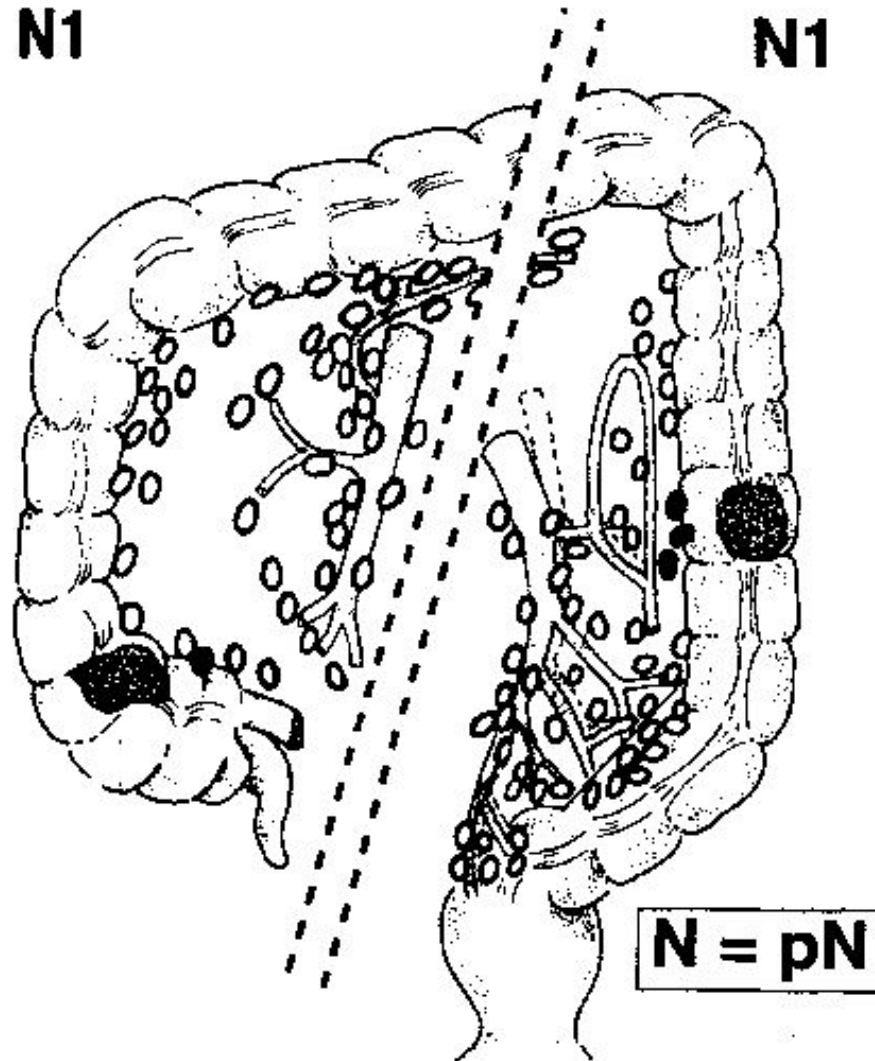
T4

pT4

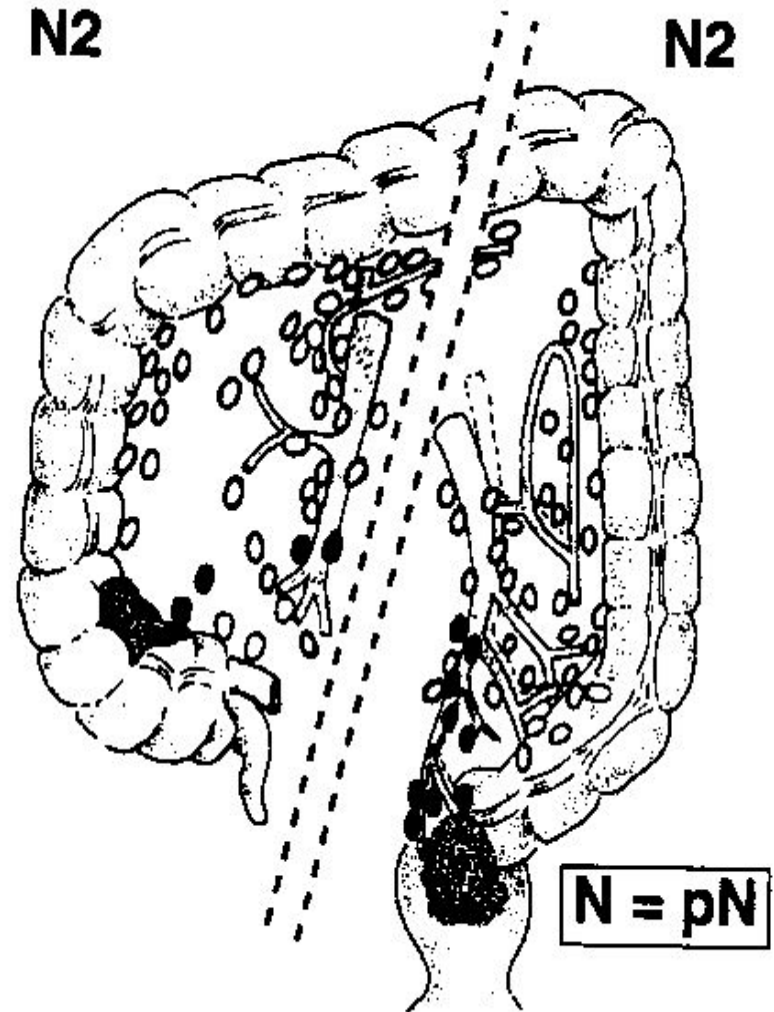
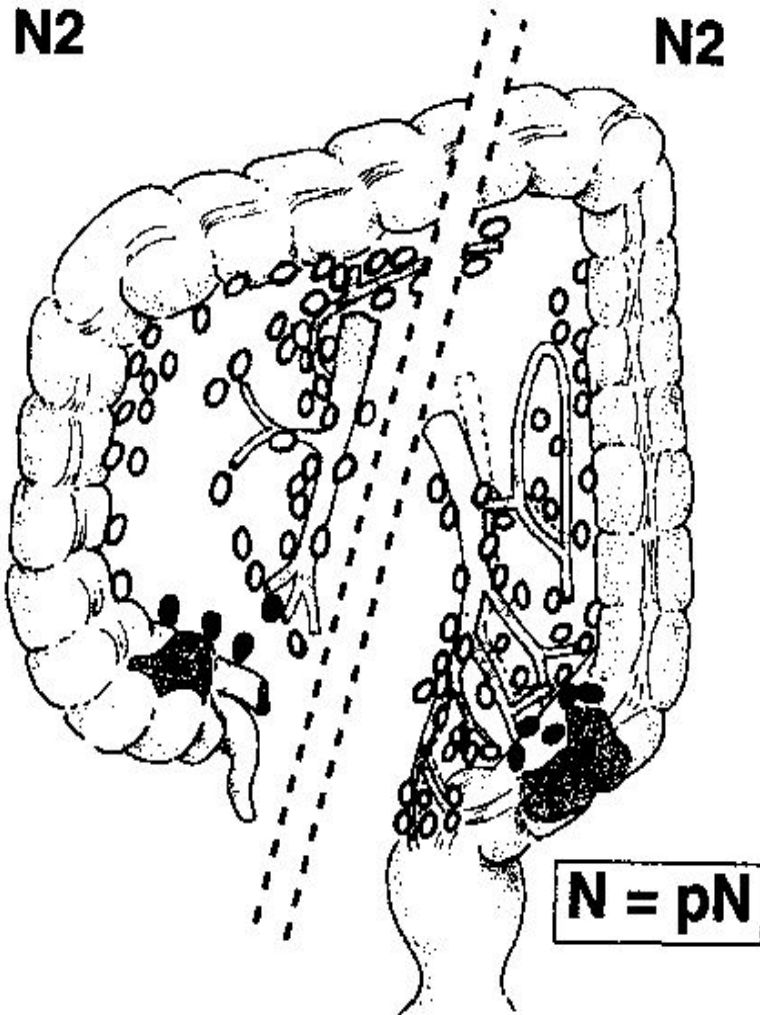


B

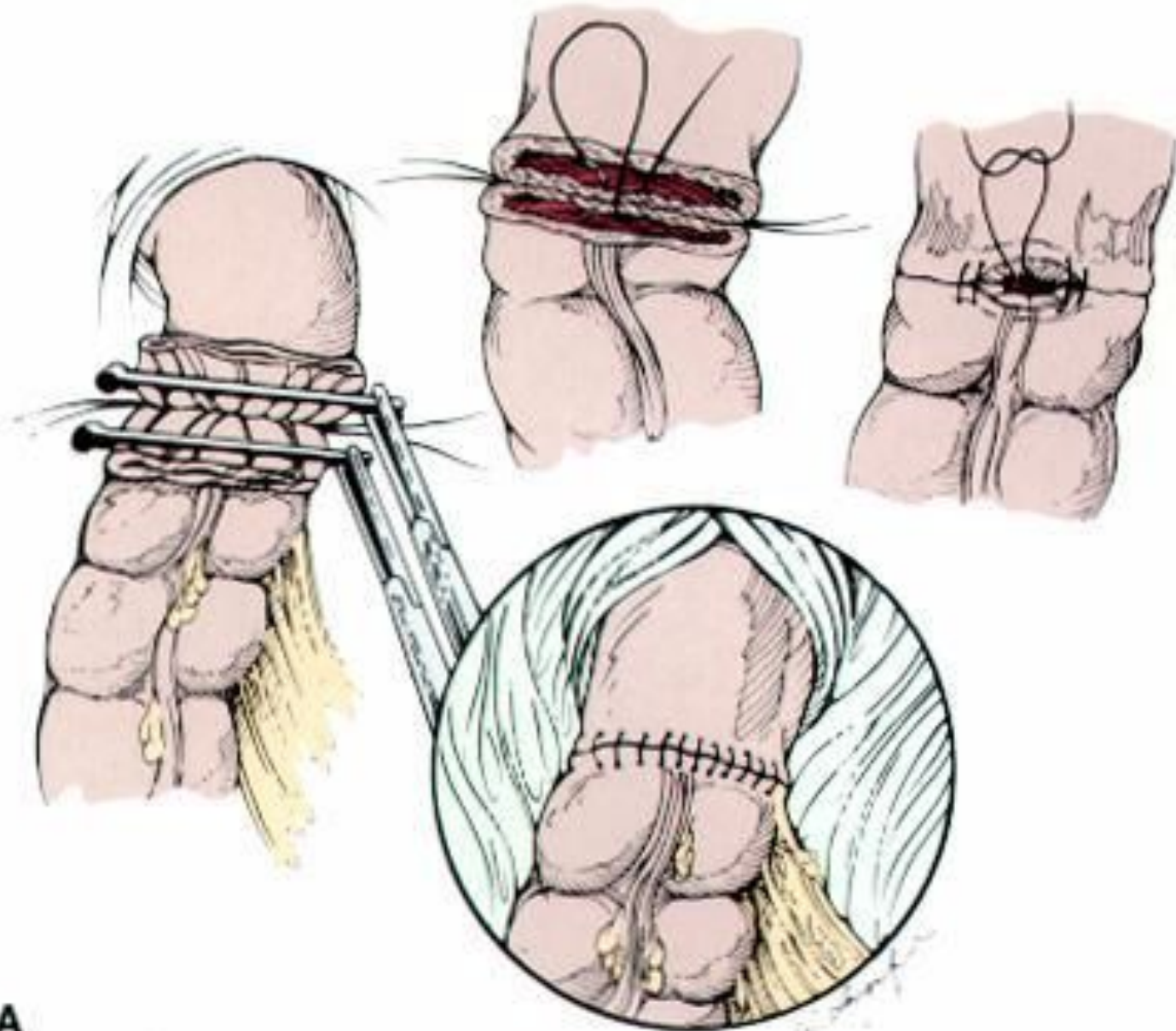
N1 - it is amazed from 1 up to 3 regional lymphonoduses



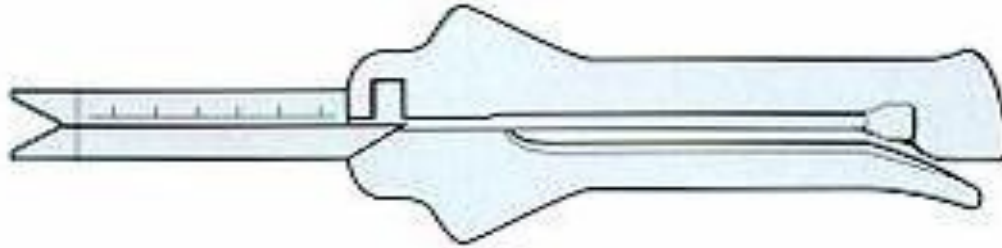
N2 - it is amazed 4 and more regional lymphonoduses



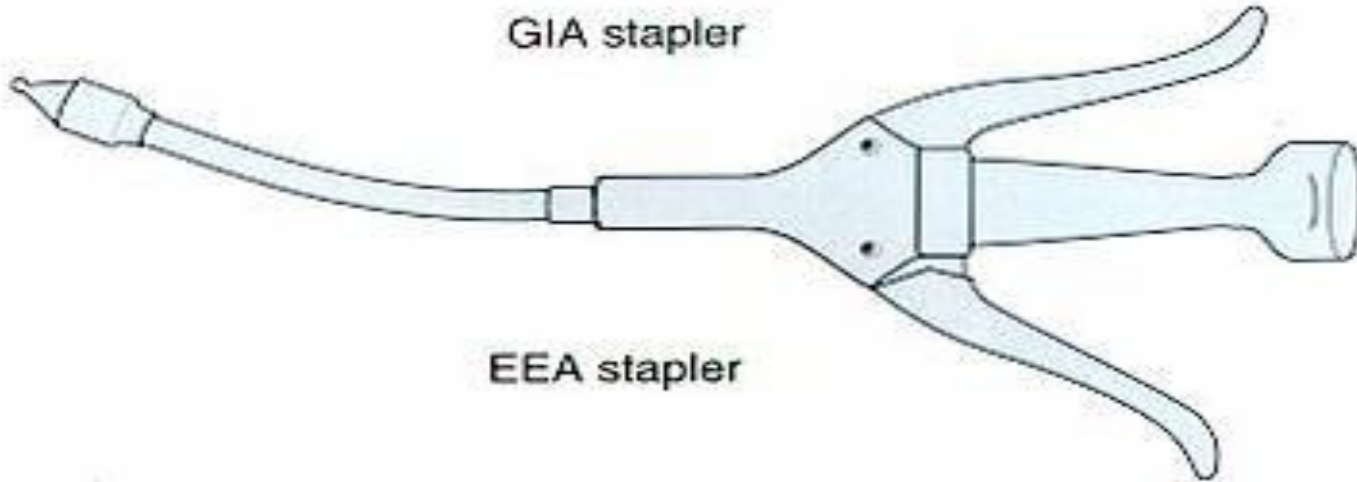
Manual suturing of an intestine



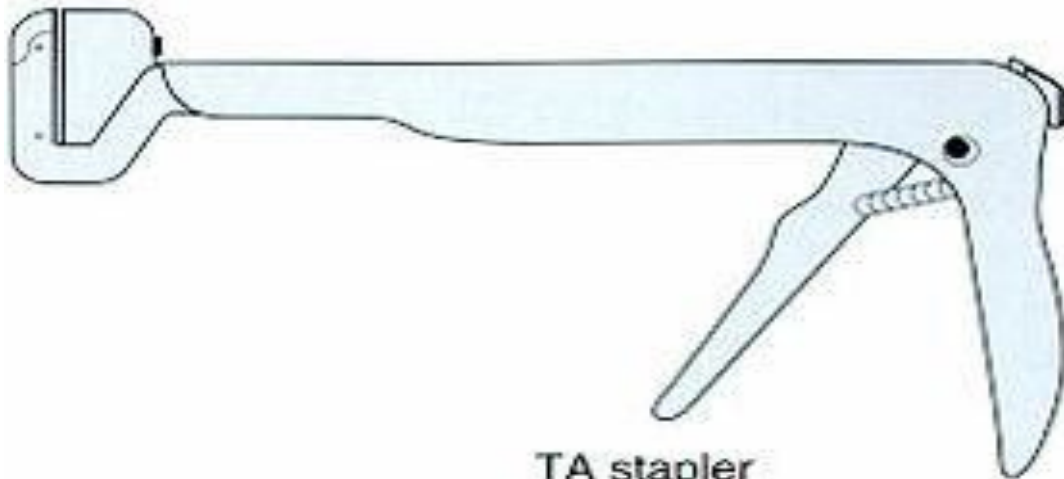
Staplers



GIA stapler

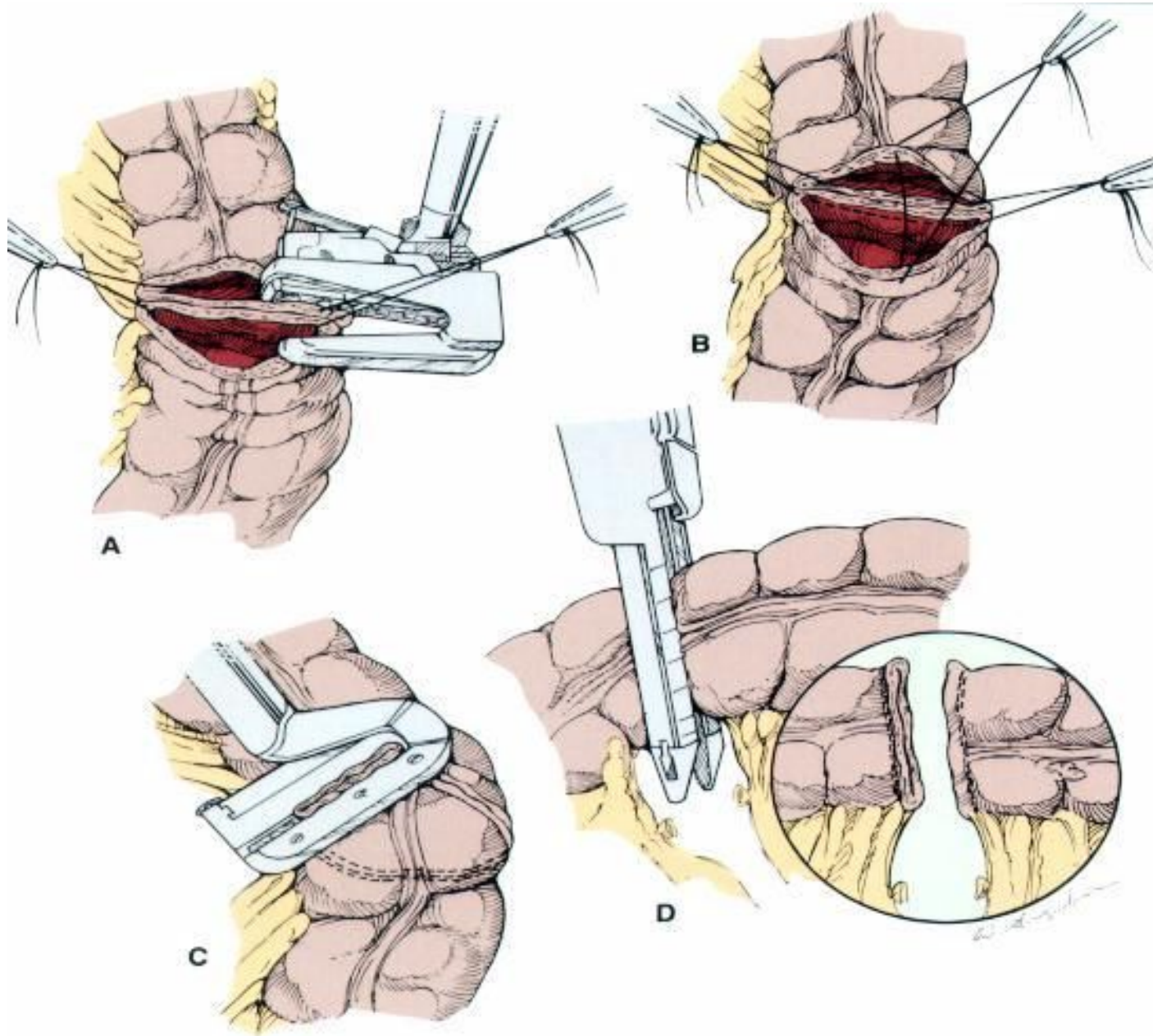


EEA stapler

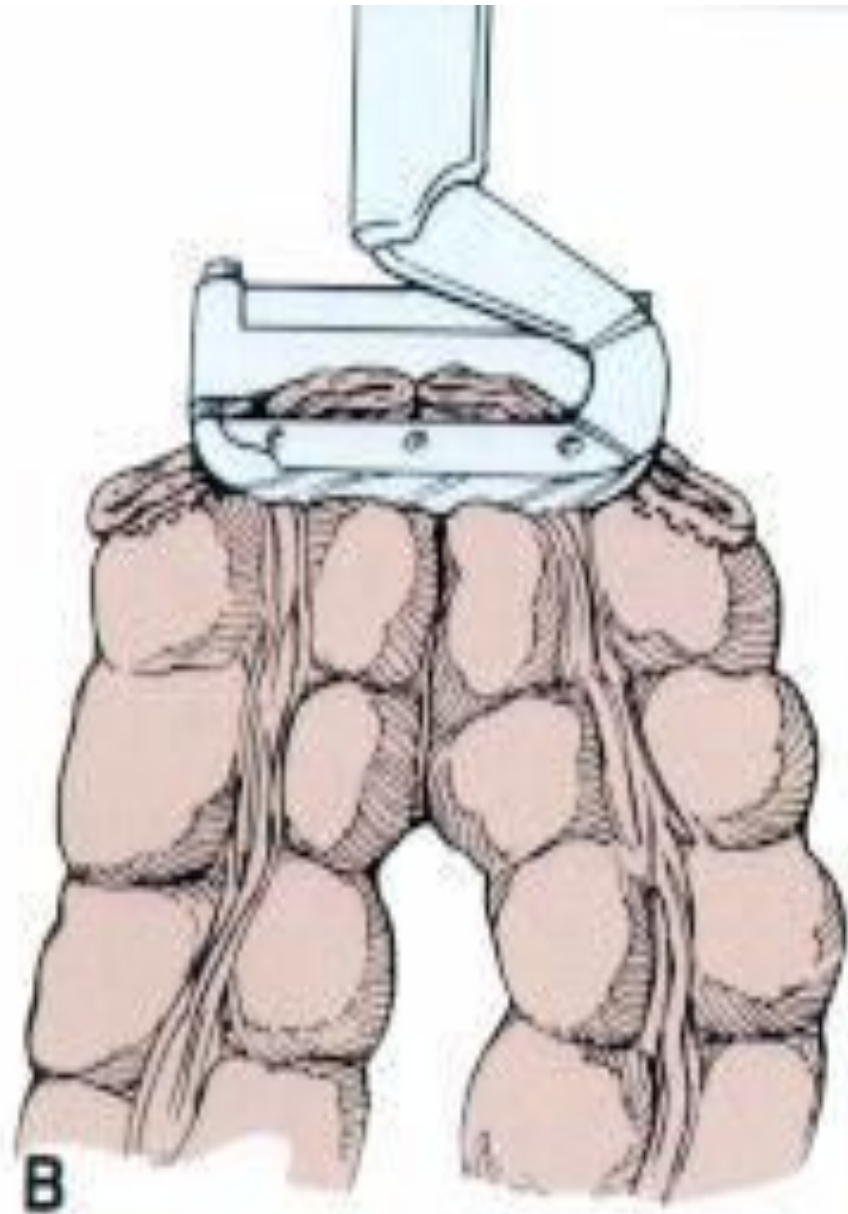
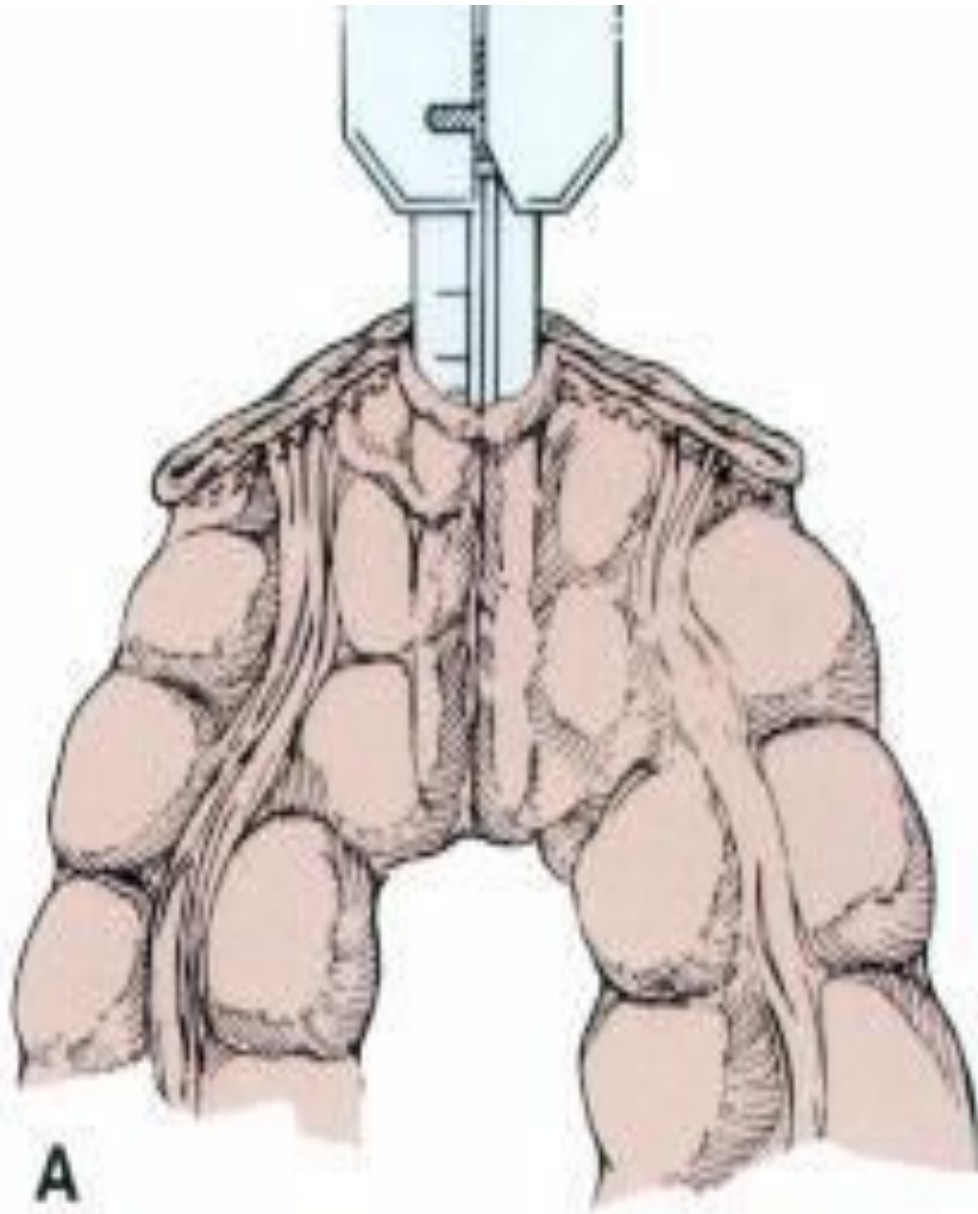


TA stapler

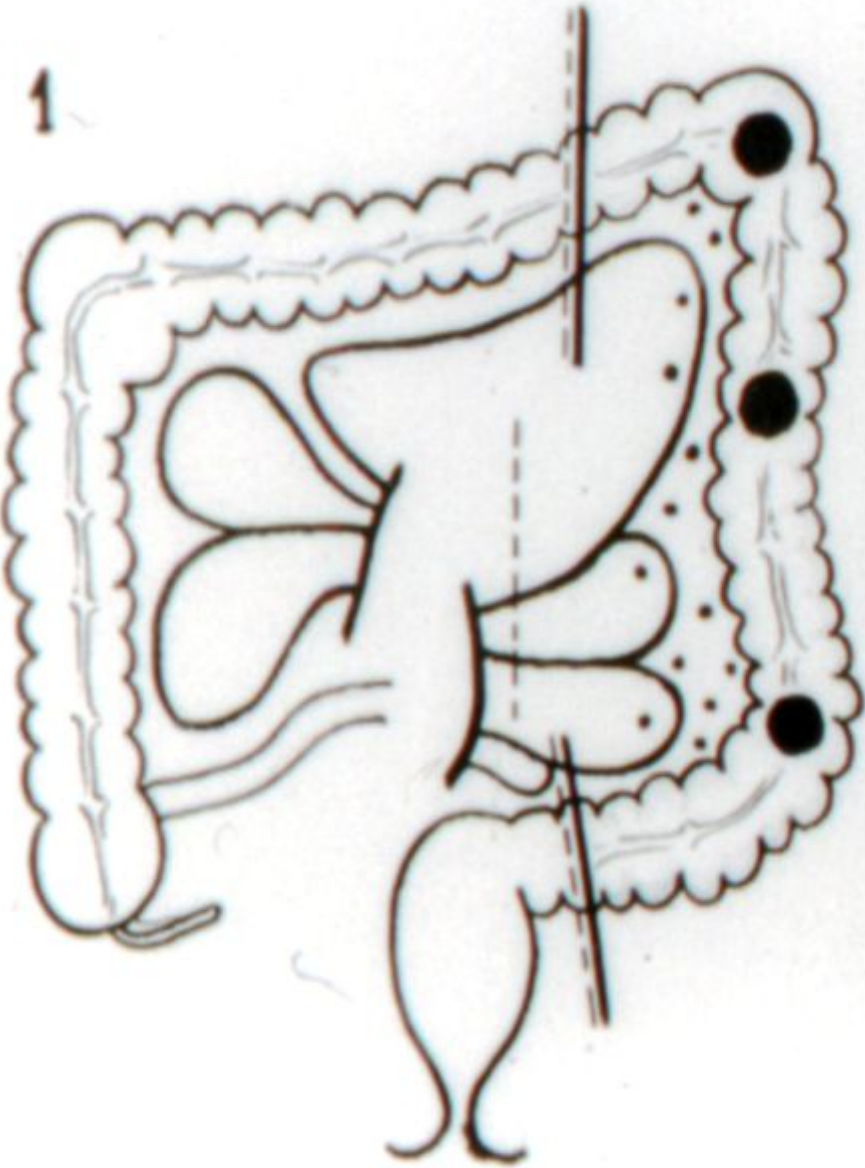
Hardware seam



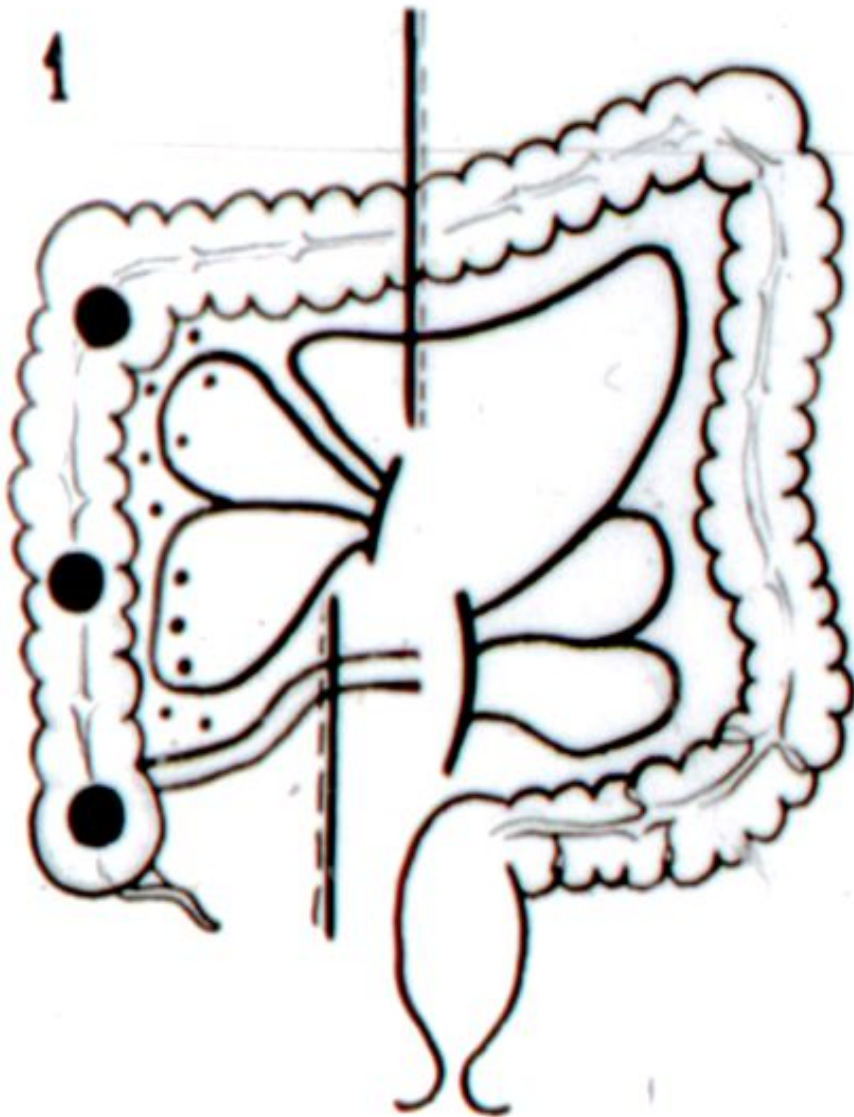
Hardware seam



Left half resection (hemicolectomy)

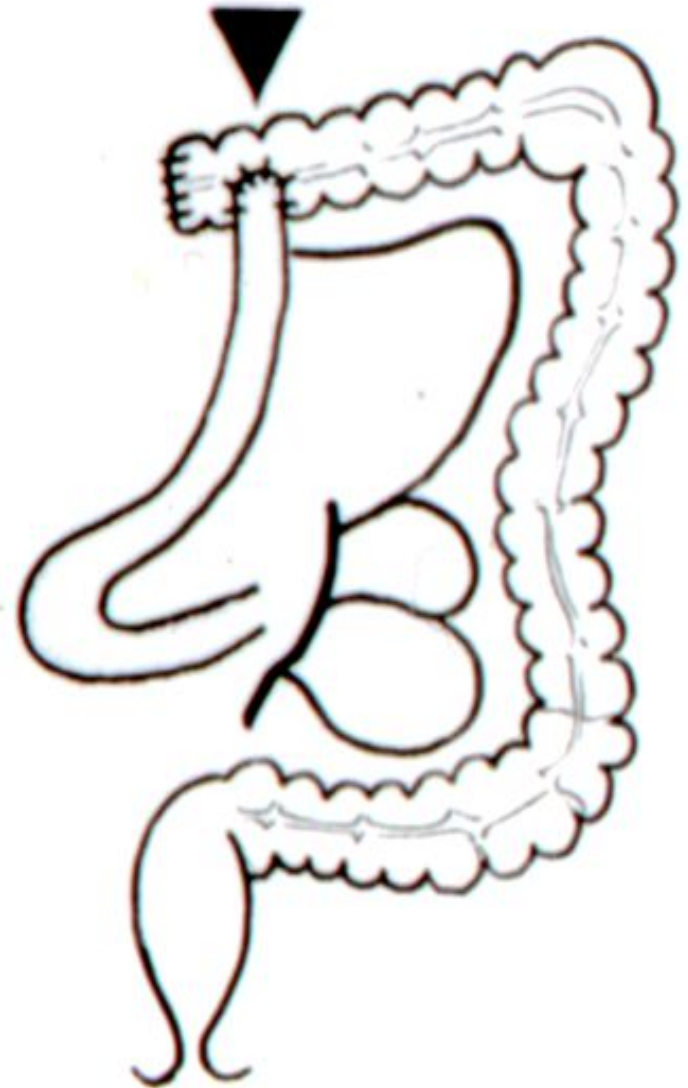


Right half resection (hemicolectomy)

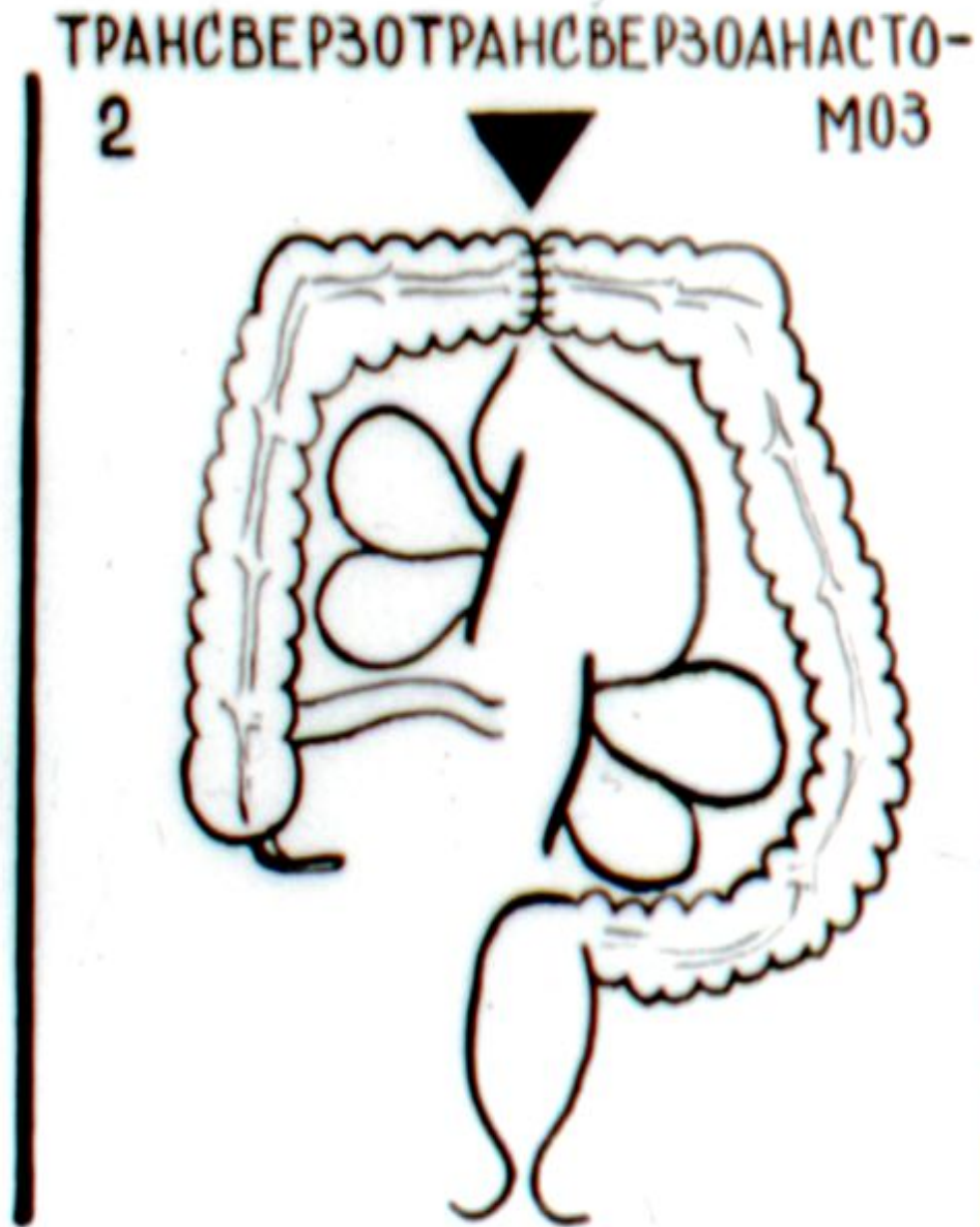


ИЛЕОТРАНСВЕРЗОАНАСТОМОЗ

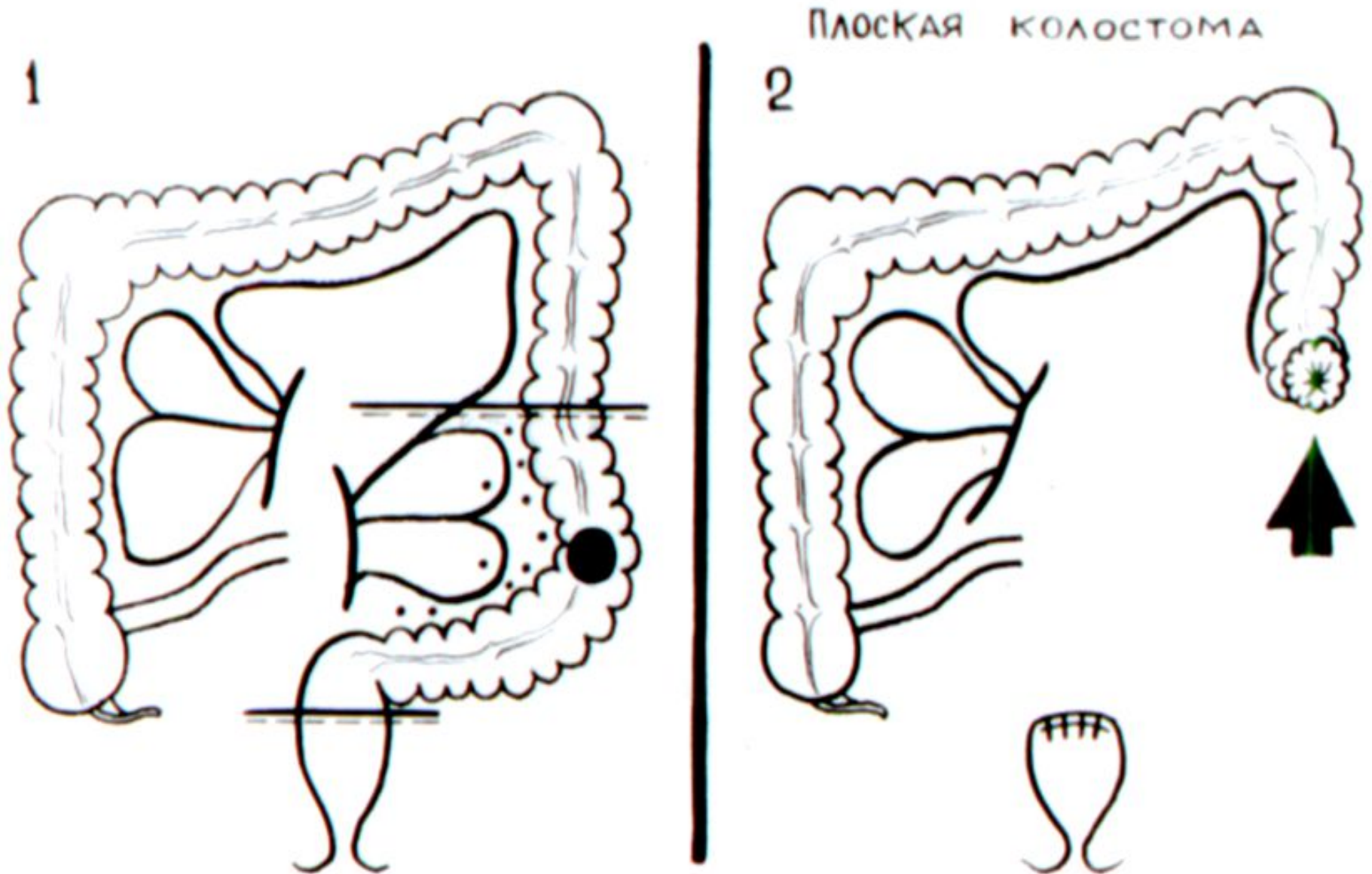
2



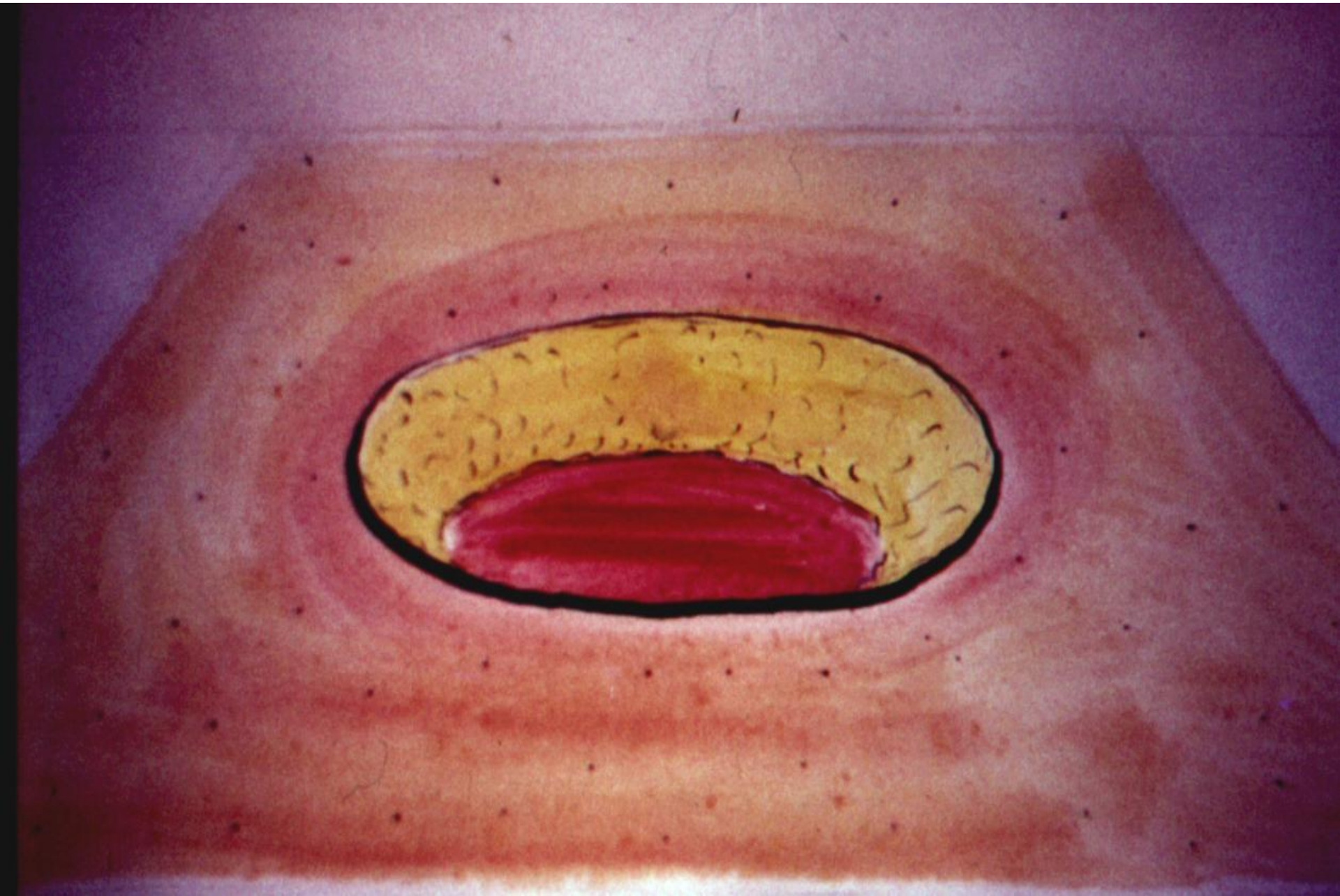
Transversum resection



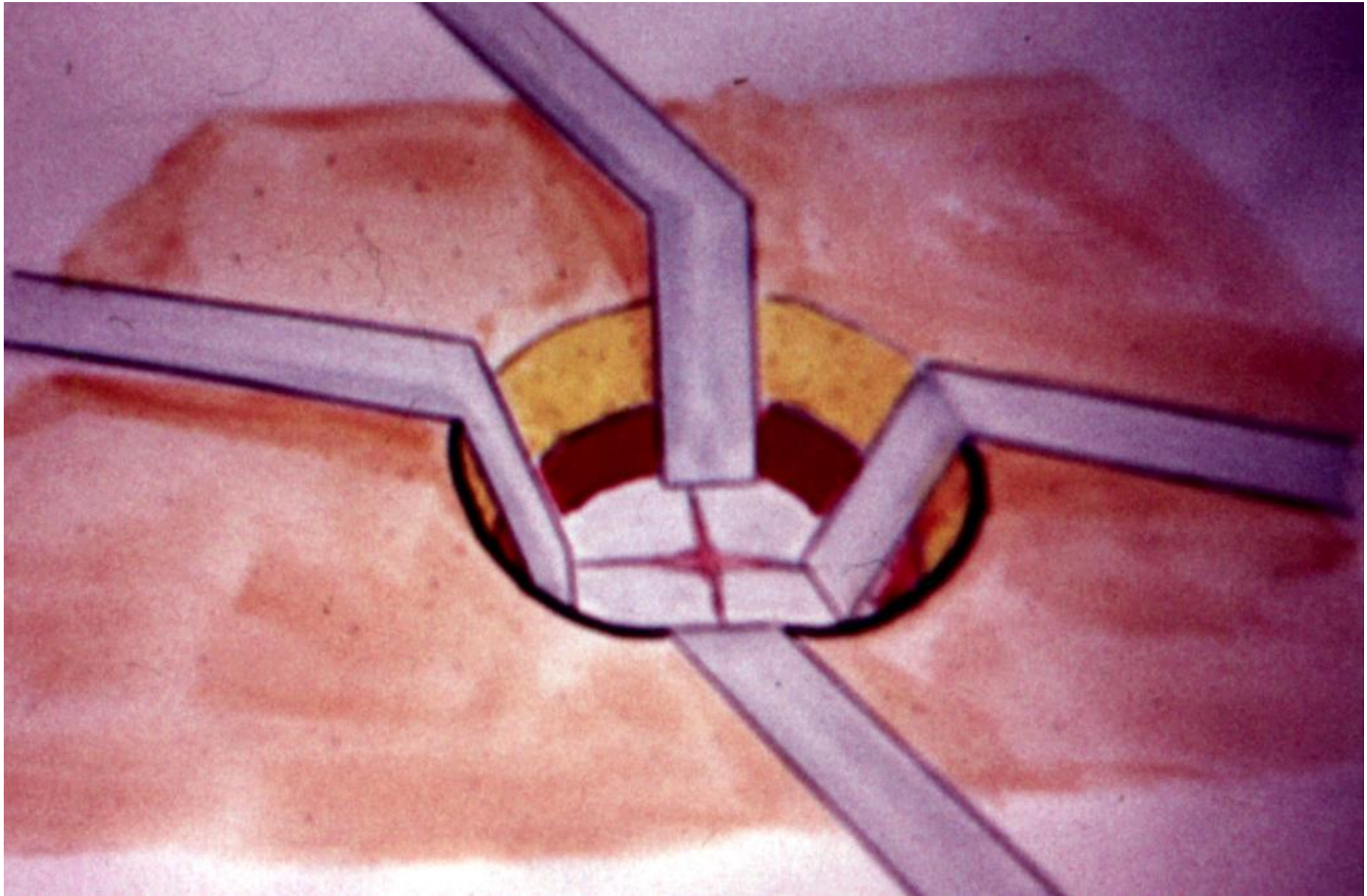
Type Hartmann resection



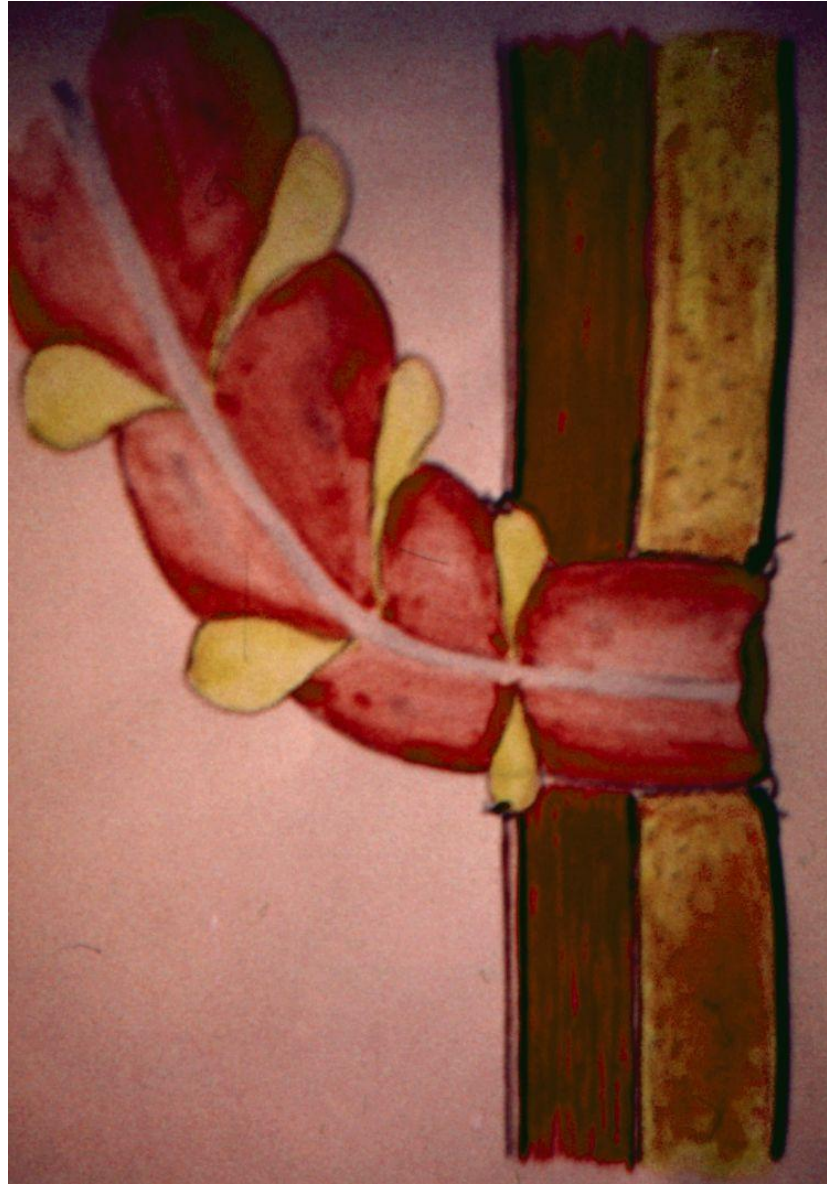
Terminal flat colostomy on E.G.Topuzov



Terminal flat colostomy on E.G.Topuzov



Terminal flat colostomy on E.G.Topuzov



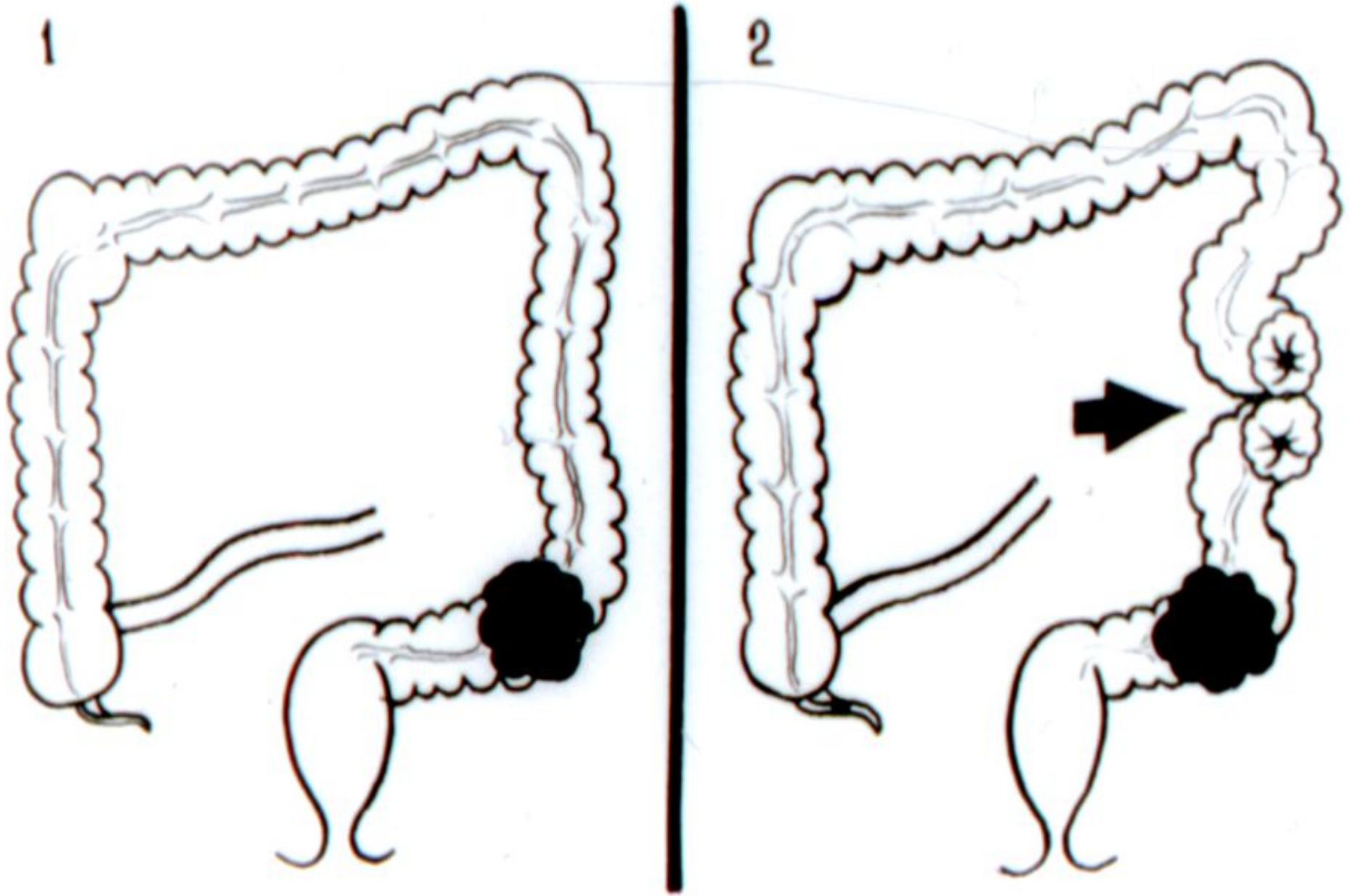
Terminal flat colostomy on E.G.Topuzov



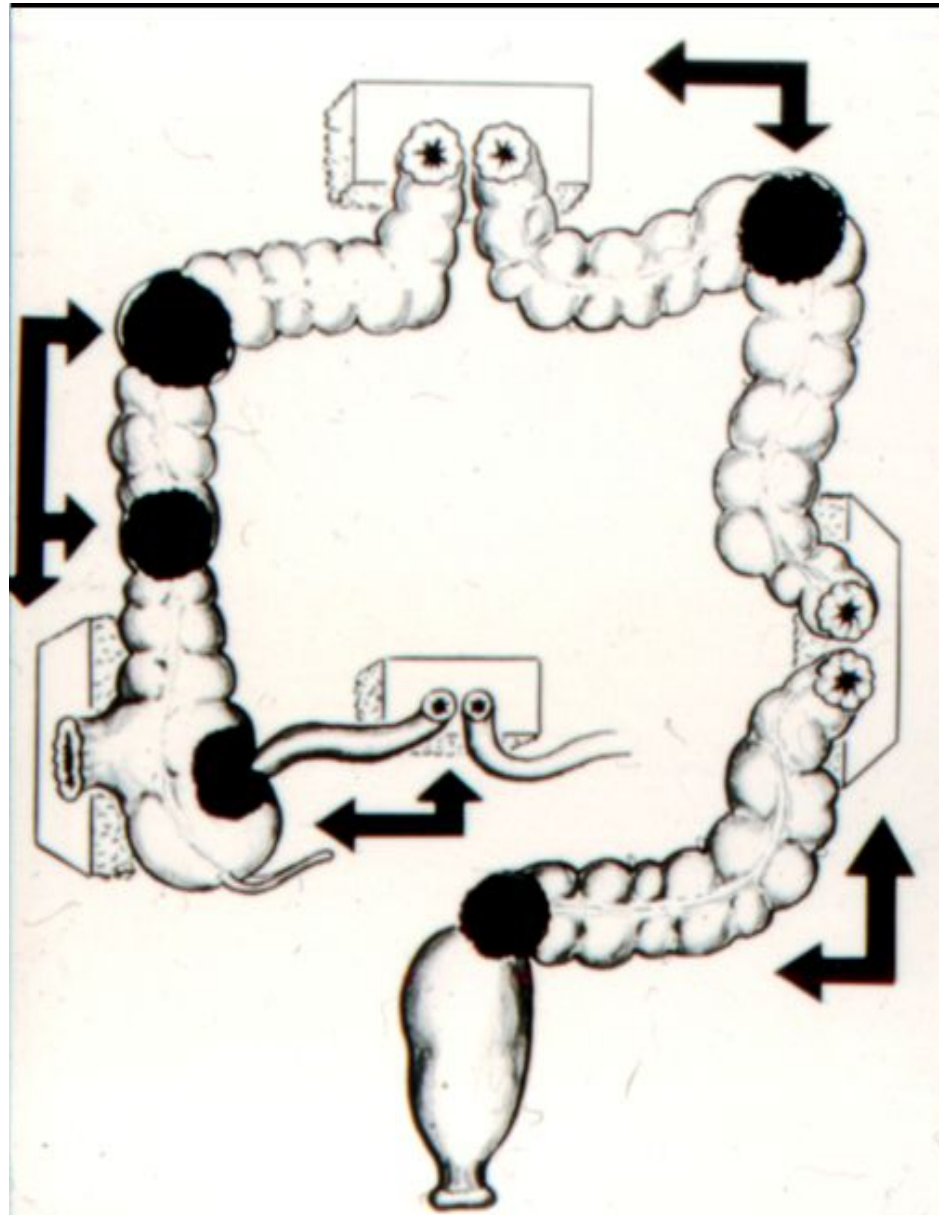
E.G. Topuzov's updating of Hartmann type operation



Double-barrelled colostomy



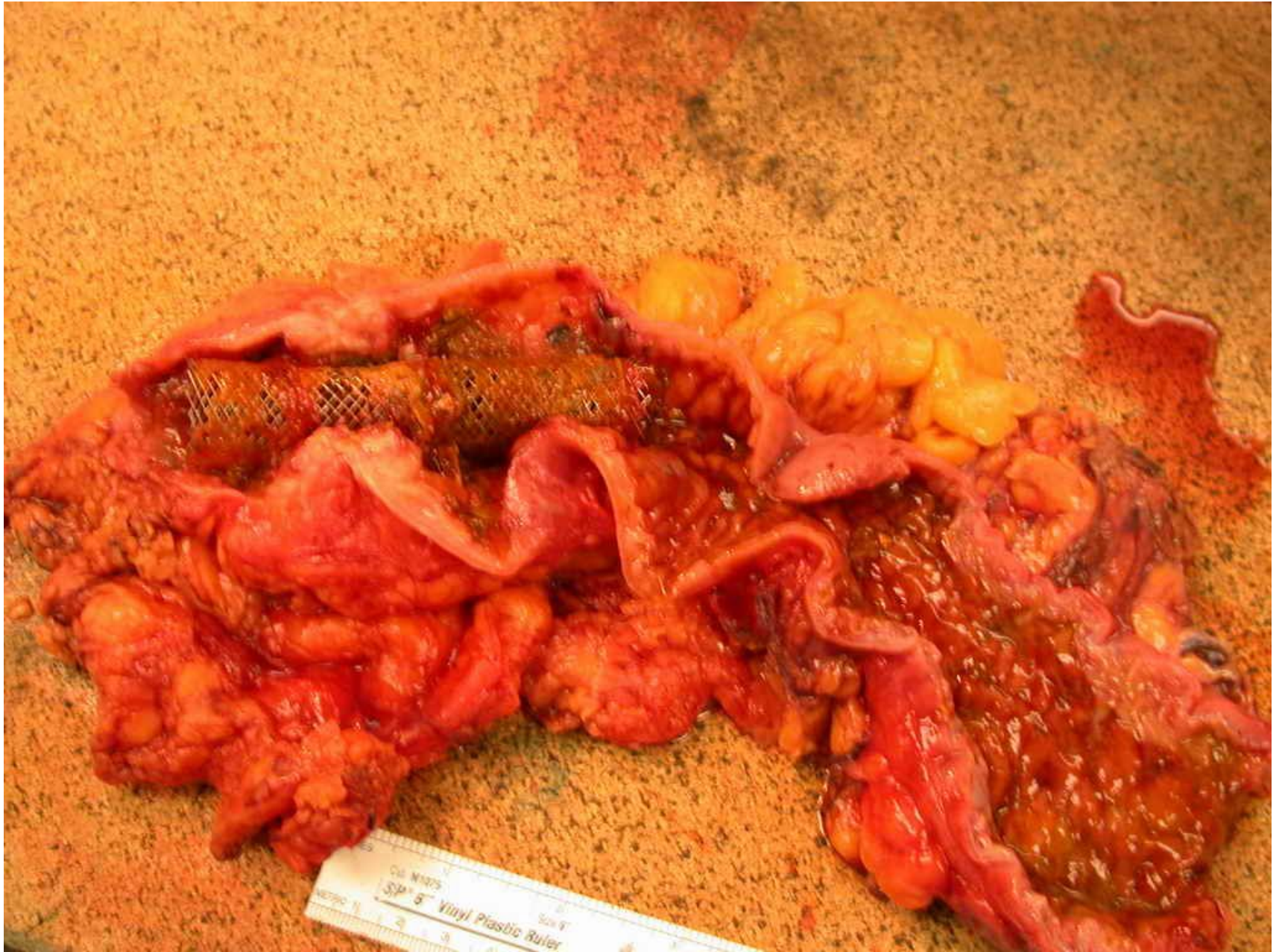
Colostomy formation places



stenting



stenting



complications

The intestinal obstruction is most typical for a tumor localization in the colon left half or in a sigmoid intestine (here is more often marked endophytic tumour growth, fecal masses more dense, diameter of an intestine is less). The principal cause of an obstruction - narrowing of an intestine lumen, but sometimes it causes an invagination of an intestine at exophytically growing tumour or volvulus of the intestine caused by a tumour. Harbingers of development of an obstruction are the constipations, replaced diarrheas, rumbling in an abdomen, a periodic abdominal distention.

complications

The inflammation in tissues surrounding a tumour (up to phlegmon or abscess de-velopment) is marked at 8-10% of patients. It is more often marked at tumours of caecum and ascending colon.

Question

Pain in the right ileal region, a tumour and a heat.

With what diseases you should differentiate?

complications

Perforation of an intestine can be as in a zone of the tumour, at its disinte-gration or a ulceration, and in addu-cent loop (more often in a caecum) at the phenomena of an obstruction (overdistension).

Perforation in a free abdominal cavity conducts to deve-lopment of a fecal peritonitis. At per-foration phlegmons develop in a fat behind of an intestine and abscesses of a

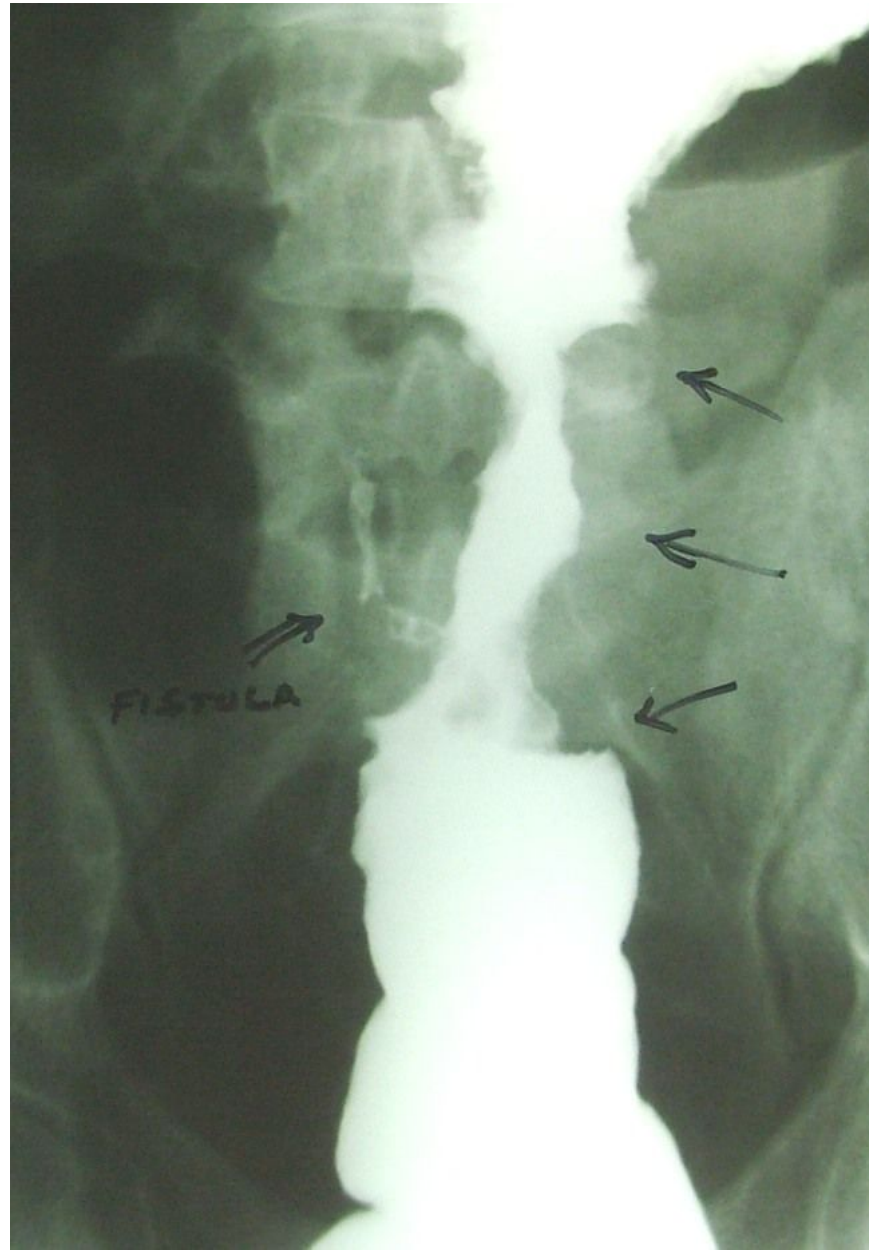
Question

**At what colon
can-cer
complication
Schetkin-Blumberg
sign more often is
defined?**

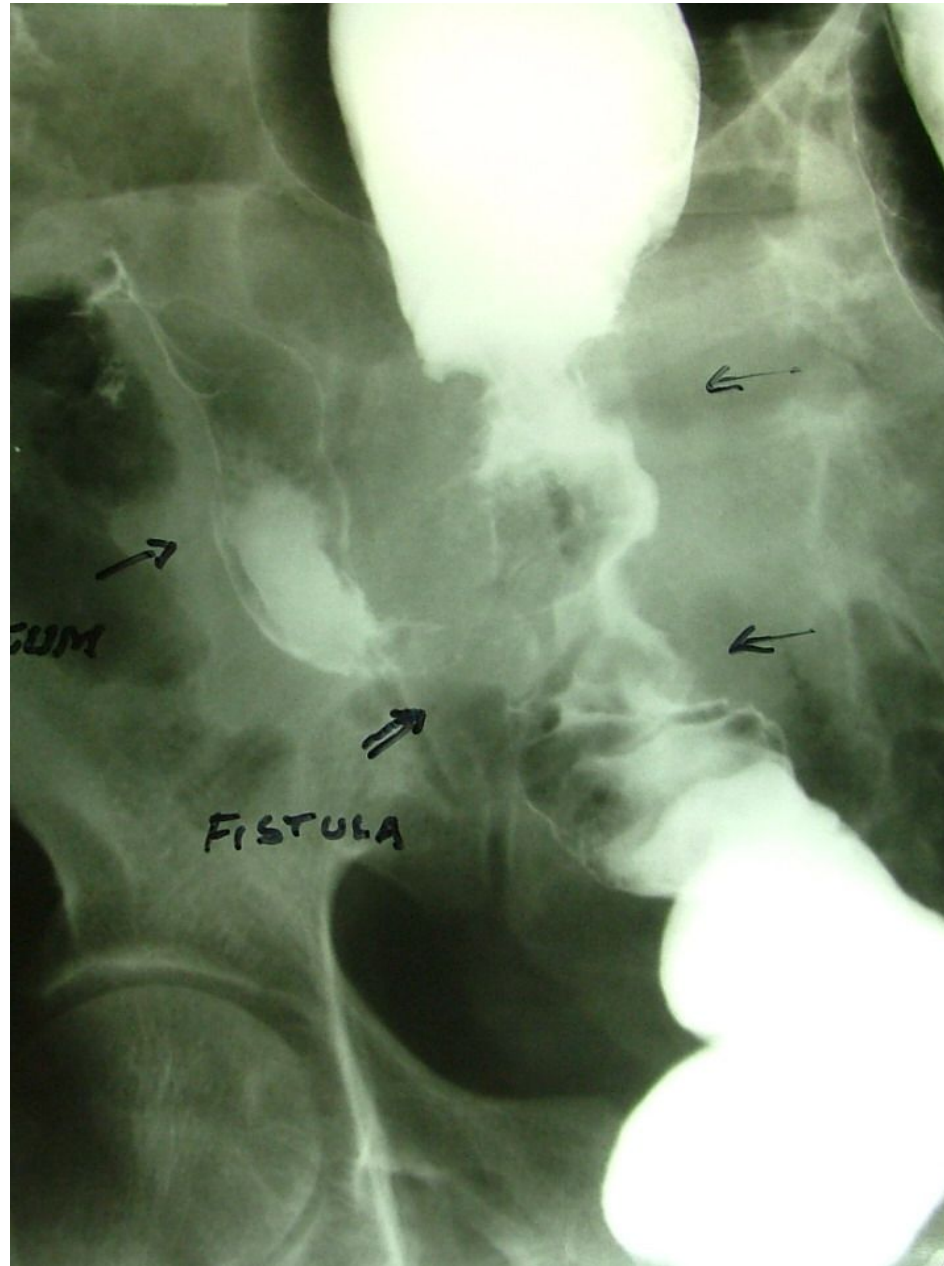
complications

Formation of fistulas at spreading at the near-rest hollow organs (co-lo-small intestinal, co-lo-gastric, colo-vesical) carry to rare complications

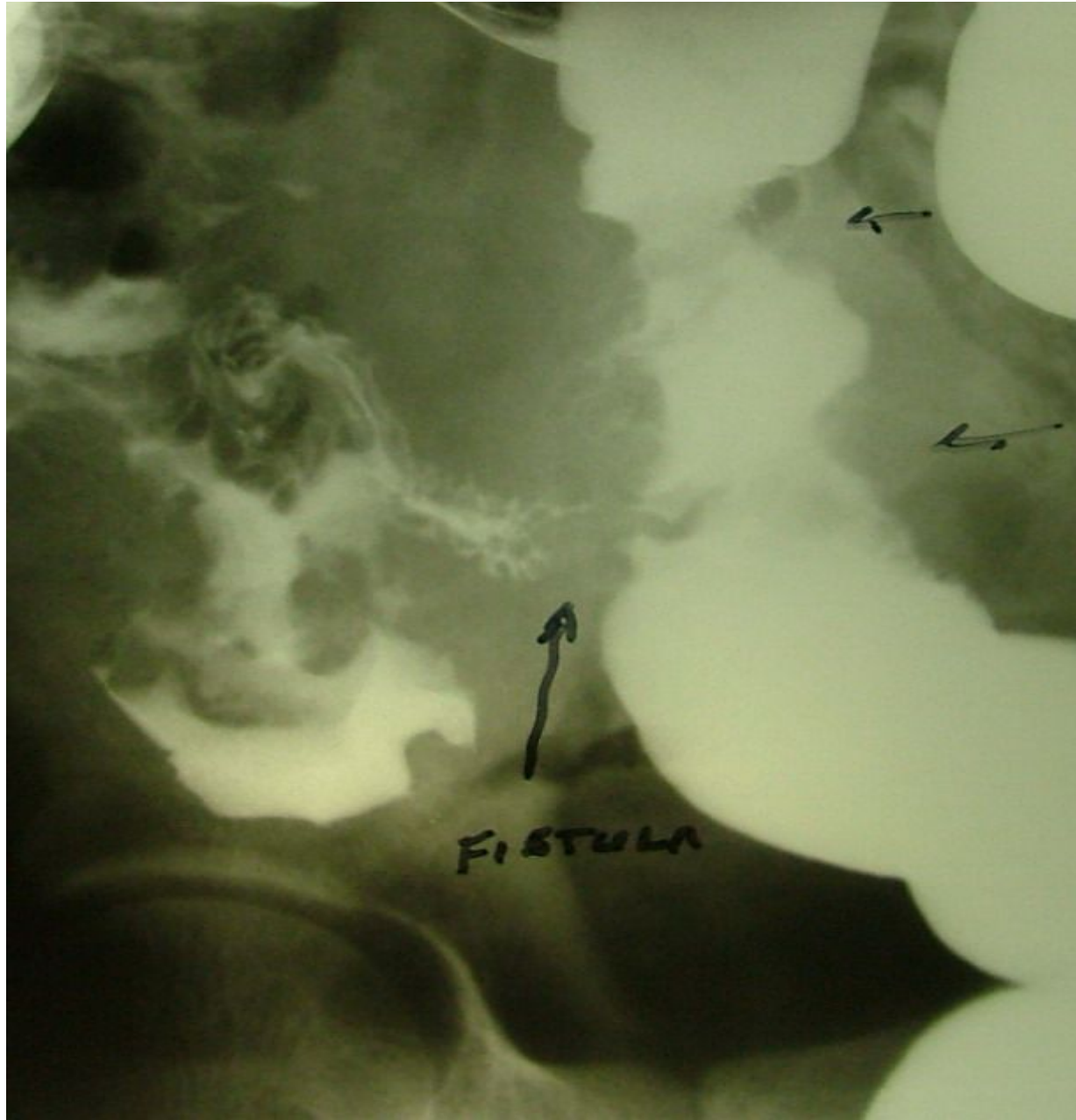
Cancer complication - fistula



Cancer complication - fistula



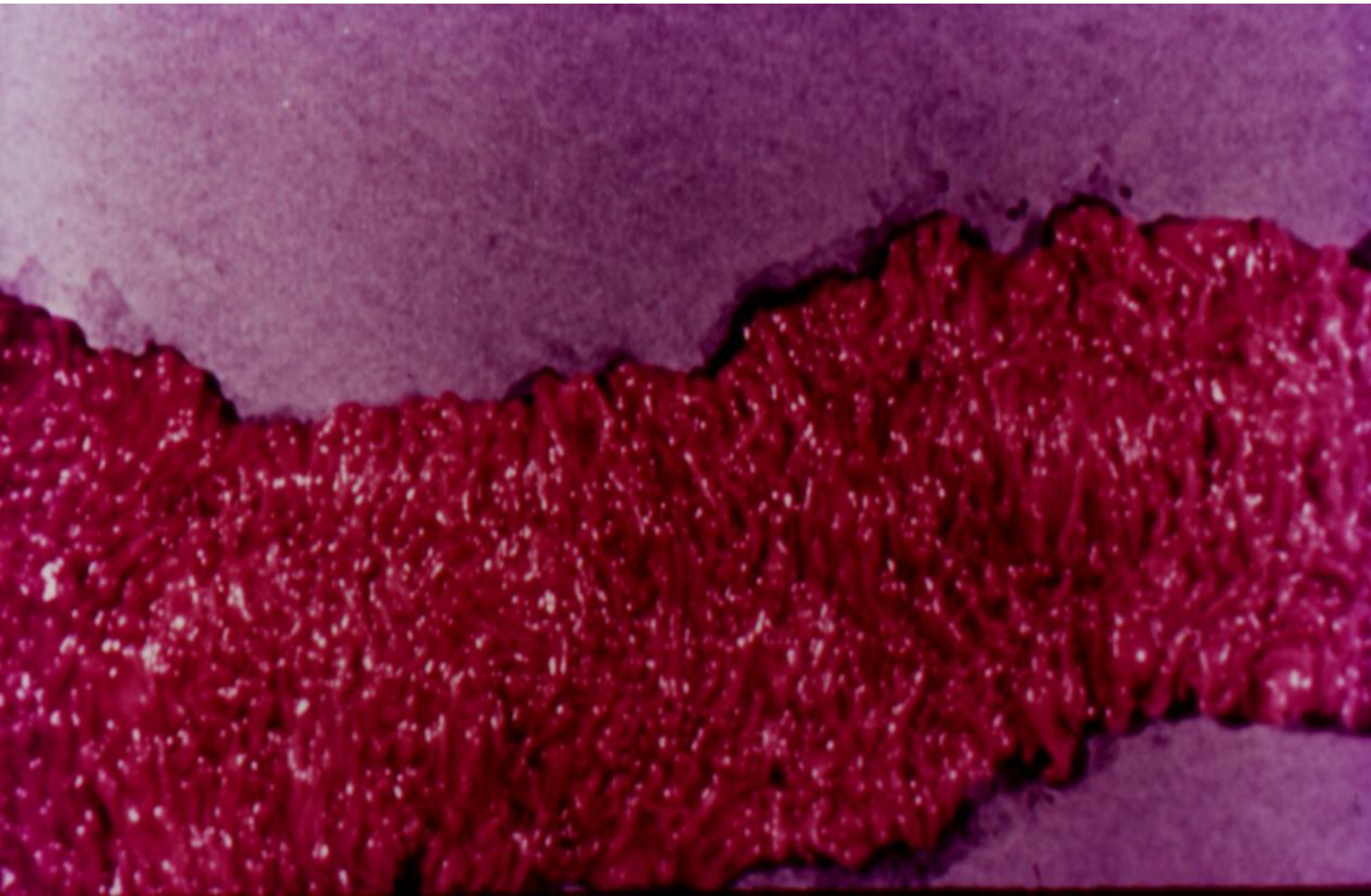
Cancer complication - fistula



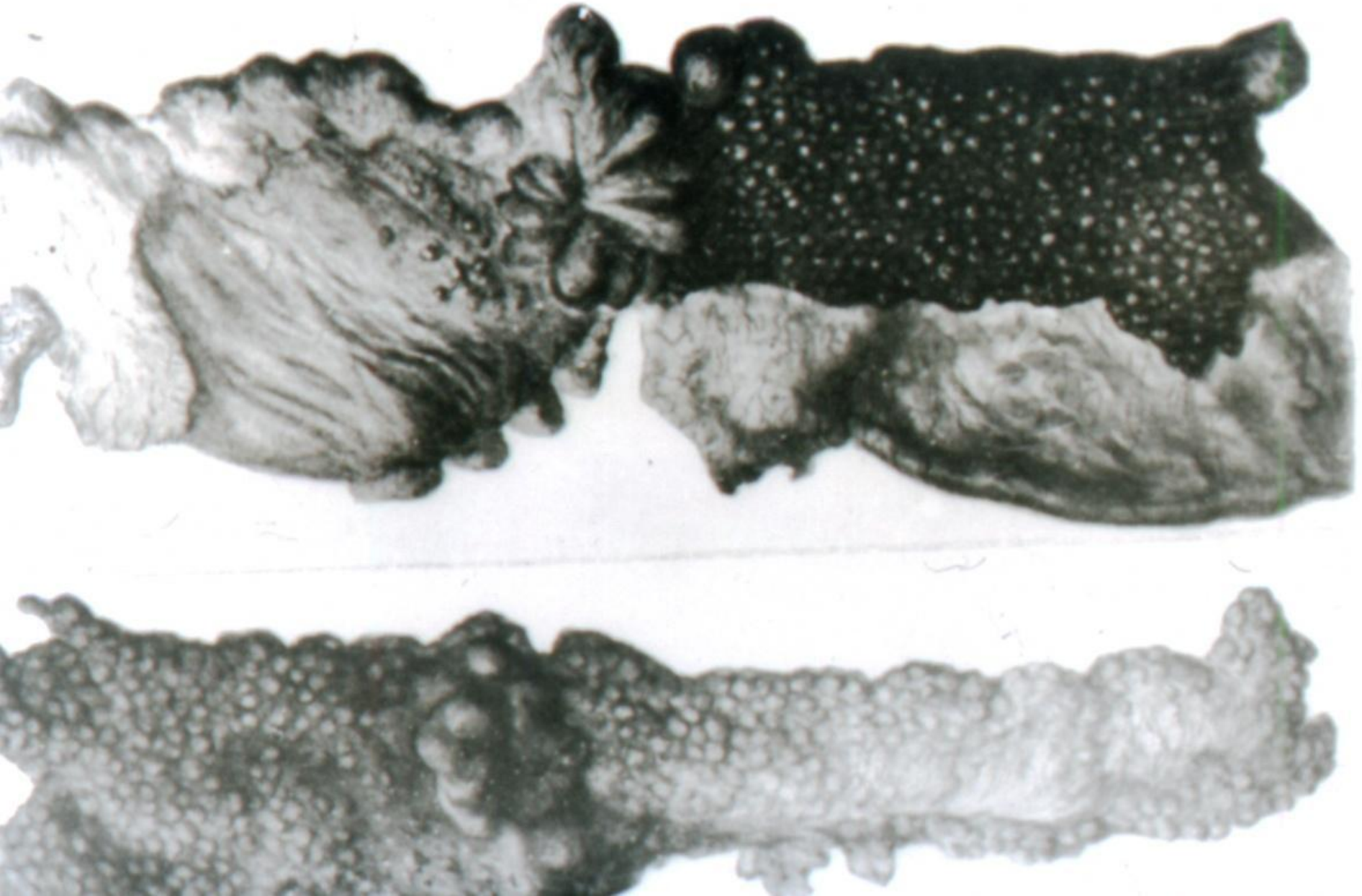
complications

The intestinal bleeding
happens, as a rule,
insig-nificant. Sometimes
it is shown in the form of
an impurity of not
changed blood in a feces.
Is hid-den (occult) is more
often.

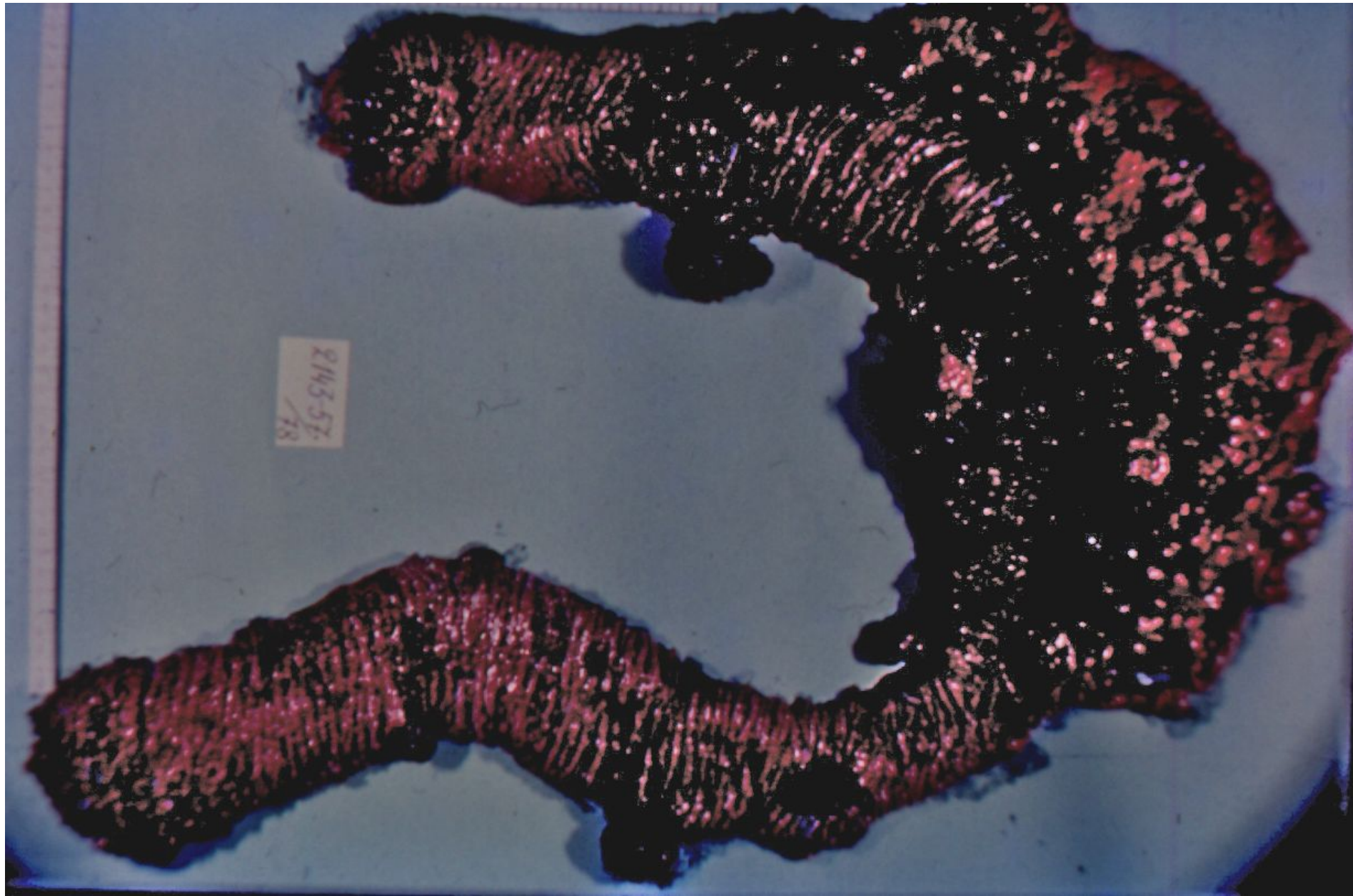
Colon diseases



Cancer on a background a polyposis



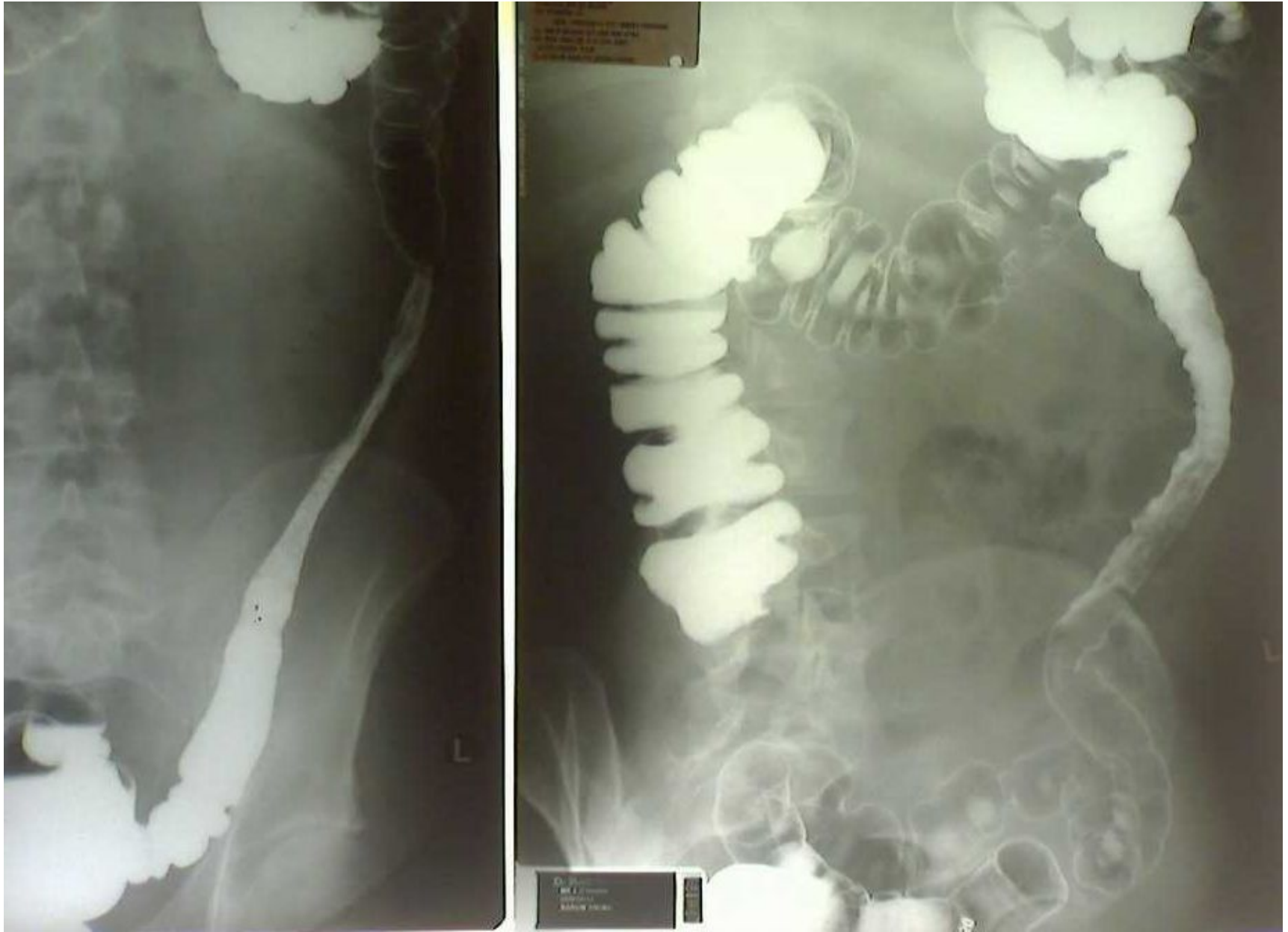
Poliposis



Nonspecific colitises

- 1. Ulcerouse**
- 2. Granulomatous
(Crohn's disease)**
- 3. Ischemic**

«Drainpipe» sign



colitis



Cystous colitis



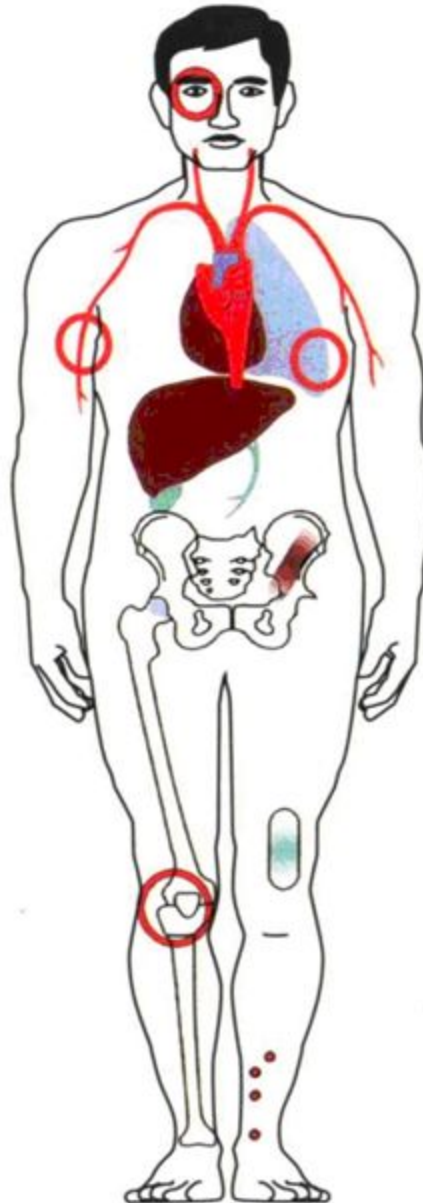
биопсионные щипцы →

Extraintestinal displays

vessels
vasculitis
thromboembolism

liver
fatty steatosis
chronic active hepatitis
primary sclerosing cholangitis

joints
peripheral arthropathy
sacroiliac disease
spondylitis



eyes
episcleritis
uveitis
conjunctivitis

heart
plevroprikardit
myocarditis

kidneys
oxalate stones
renal tubular damage

skin
pyoderma gangrenosum
erythema nodosum

complications

Toxic megacolon

Perforation

Peritonitis

Intestinal obstruction

Bleedings

Abscesses

Fistulas

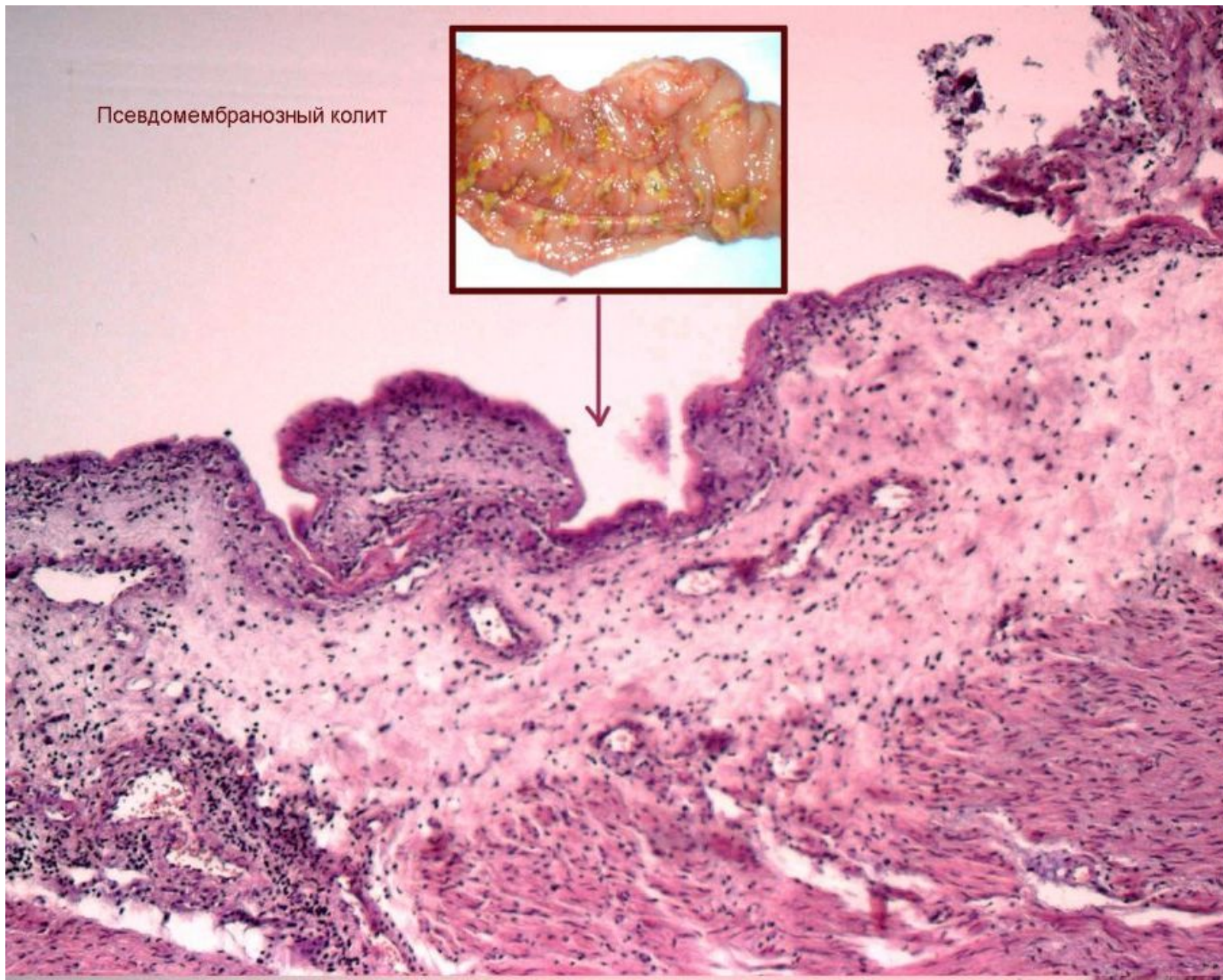
Infiltrates

Indications to operation at ulcerose colitis

- Intestinal bleeding.**
- 1. The frequency of bowel movements 12 or more per day with a macroscopically severe admixture of blood against the background of the introduction of combined therapy with steroid hormones for 7 days;**
- 2. The volume of the stool with the intense bloody 1000 ml per day or more;**
- 3. The volume of blood loss, confirmed by scintigraphy, 150 ml per day or more.**

Pseudomembranous colitis

Псевдомембранозный колит



Polyps

Hyperplastic

Tubular adenoma

**Tubulovilliferous
adenoma**

Villiferous adenoma

polips



ID. No. :
Name :

Sex : Age :
D. O. Birth :

03/02/2004
09:04:04

CVP: A2/4
D. F:
Bi:5 Gr:N

Physician :
Comment :



ID. No. :
Name :

Sex : Age :
D. O. Birth :

03/02/2004
09:04:52

CVP: A4/4
D. F:
Bi:5 Gr:N

Physician :
Comment :



poliposis



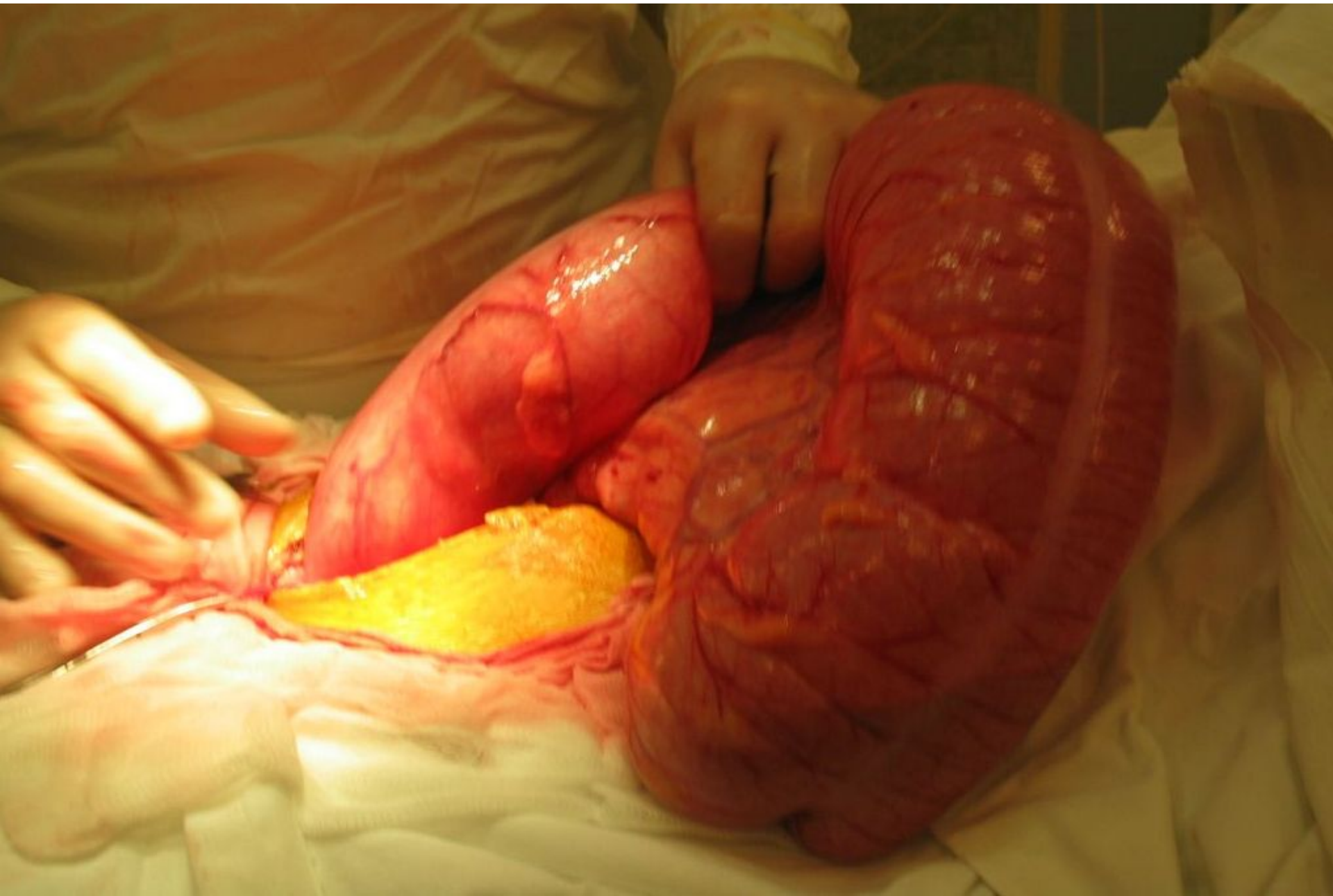
poliposis



Congenital diseases

- 1. Hirshsprung disease**
- 2. Megacolon**
- 3. Dolichocolon**

Hirschsprung disease



Differential diagnostics

- 1. Myxedema**
- 2. Medicinal influences
(morphinum and so forth)**
- 3. ...**
- 4. ...**
- 5. Depressions**
- 6. Schizophrenia**
- 7. Scleroderma**
- 8. Chagas disease**

diverticuls

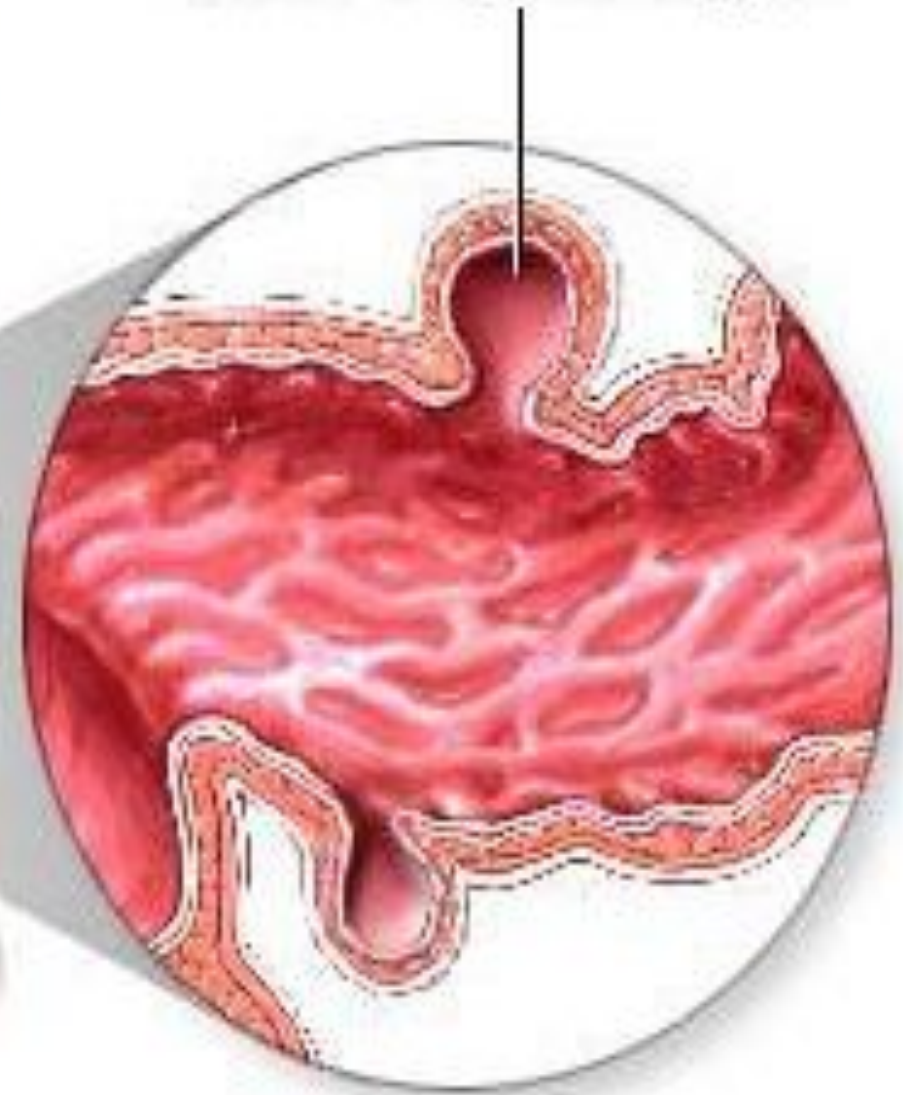
Diverticul

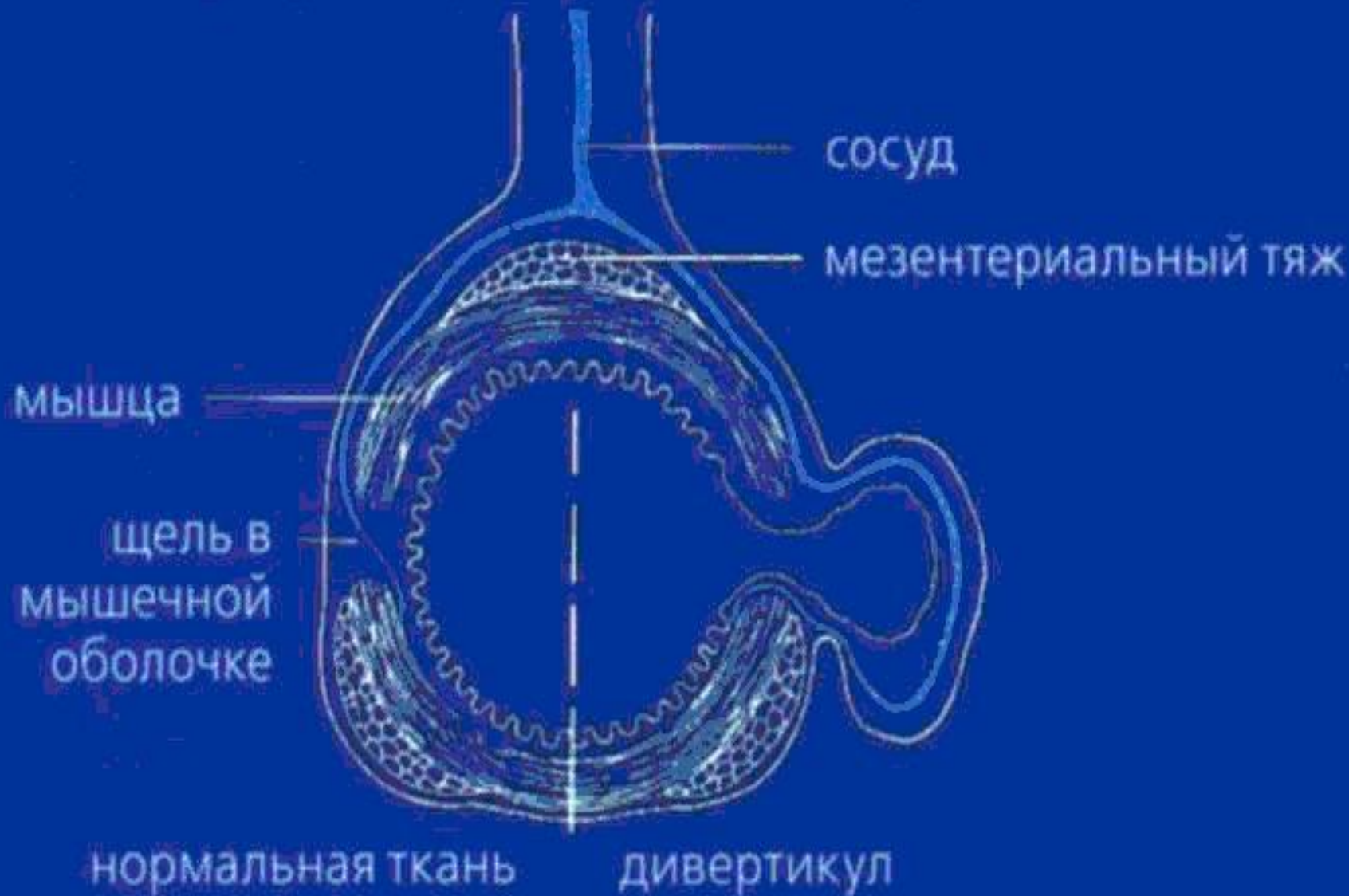
Diverticulosis

Diverticulitis

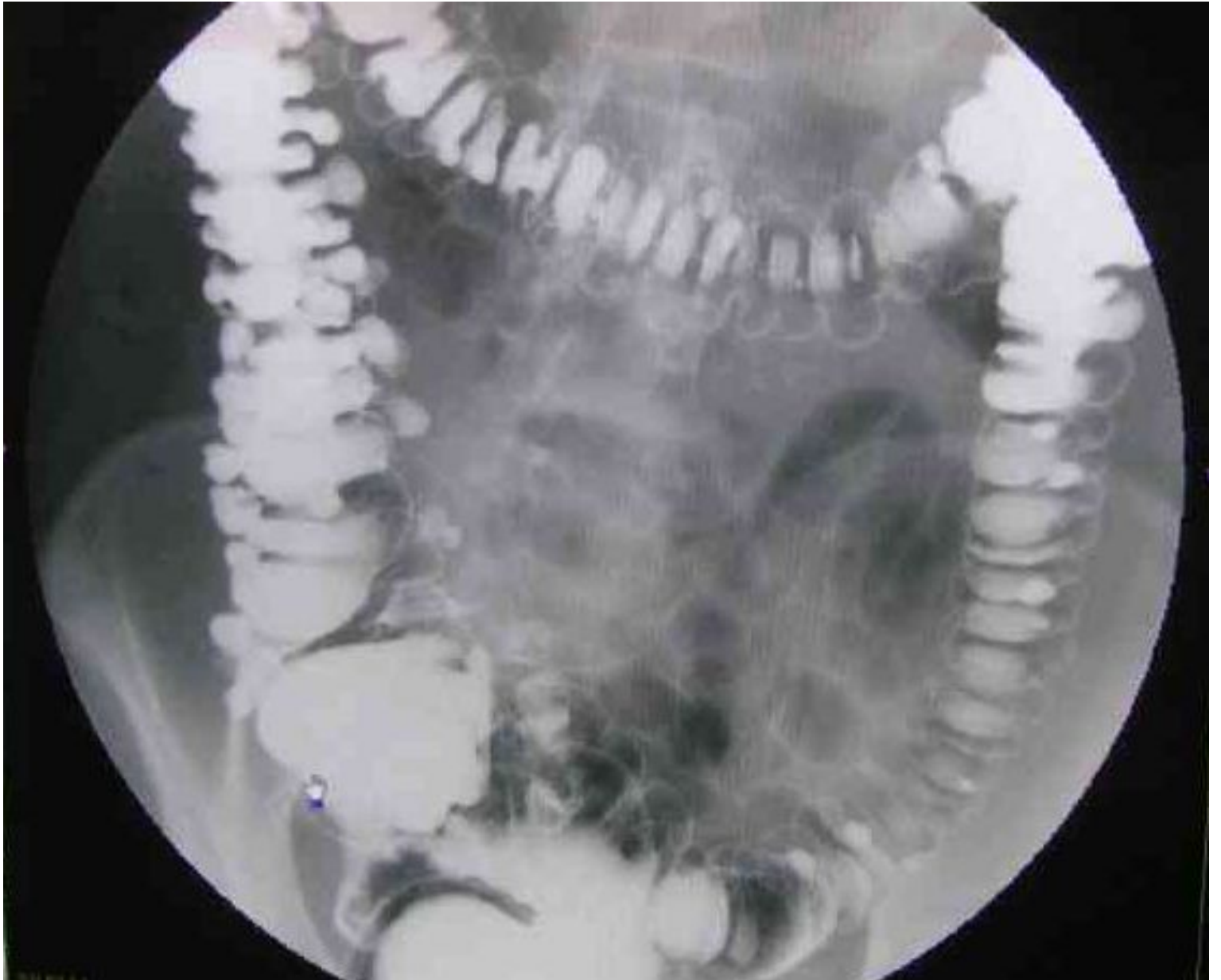
diverticul

Дивертикул

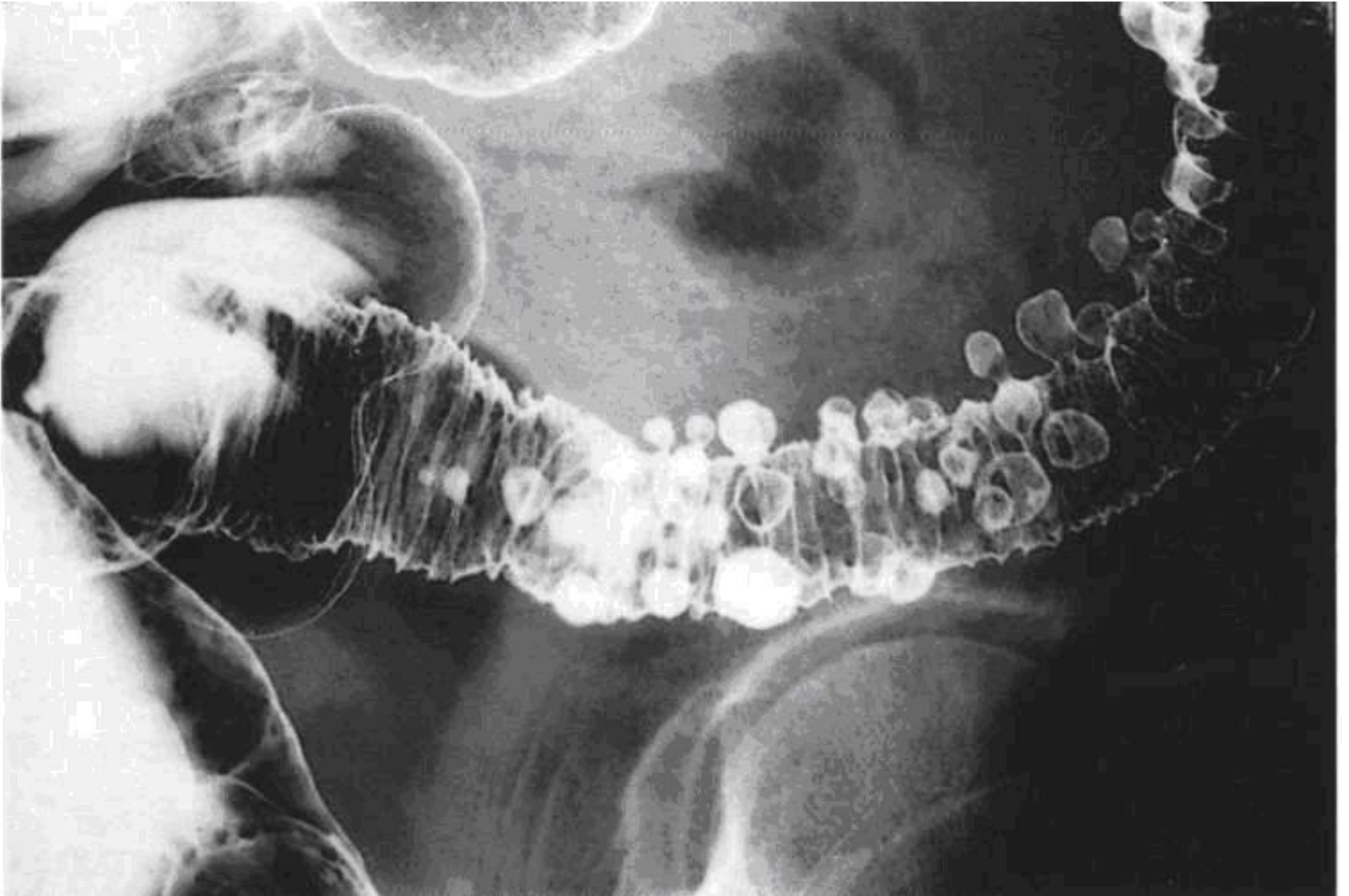




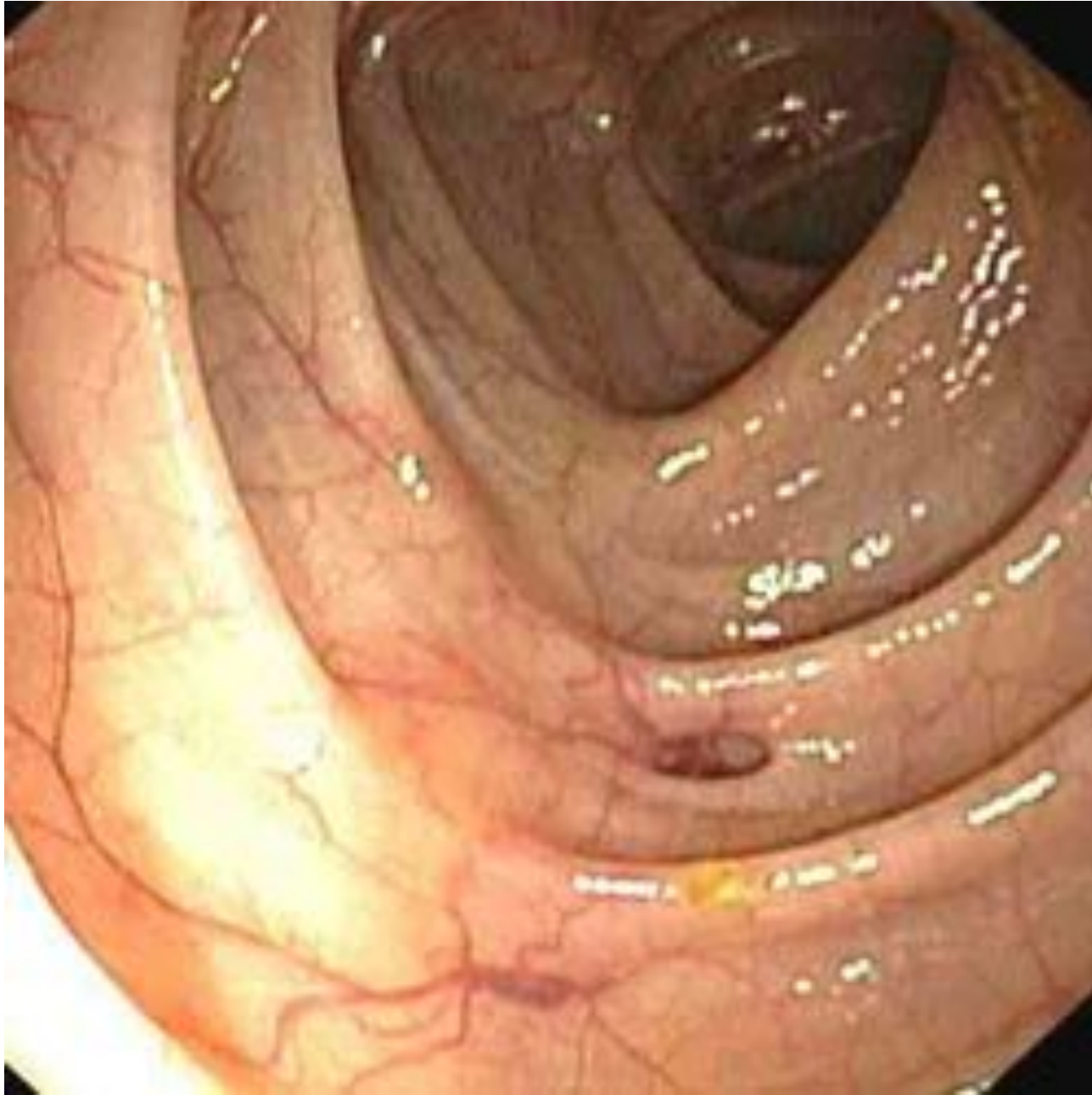
diverticulosis



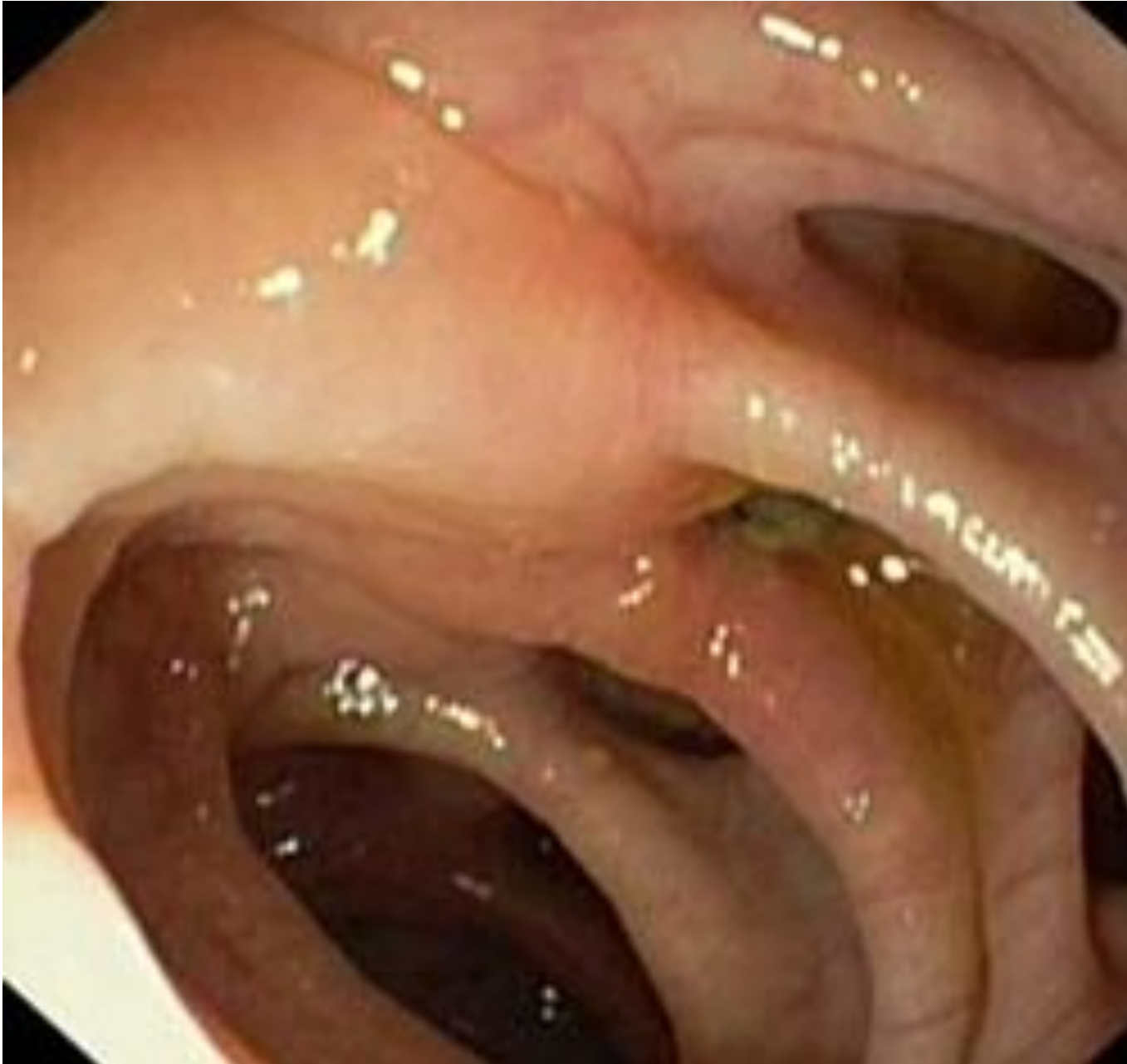
diverticulosis



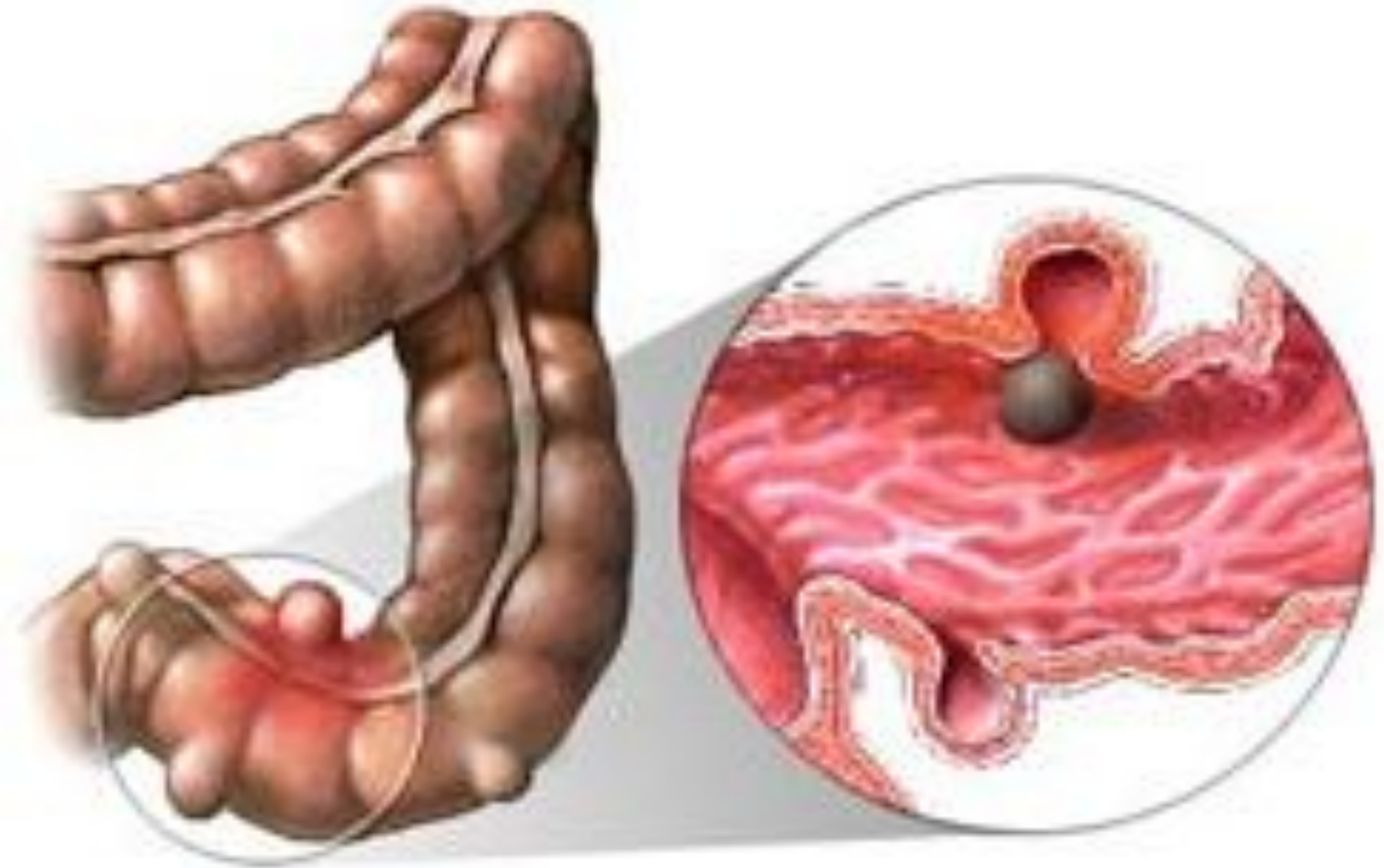
diverticuls



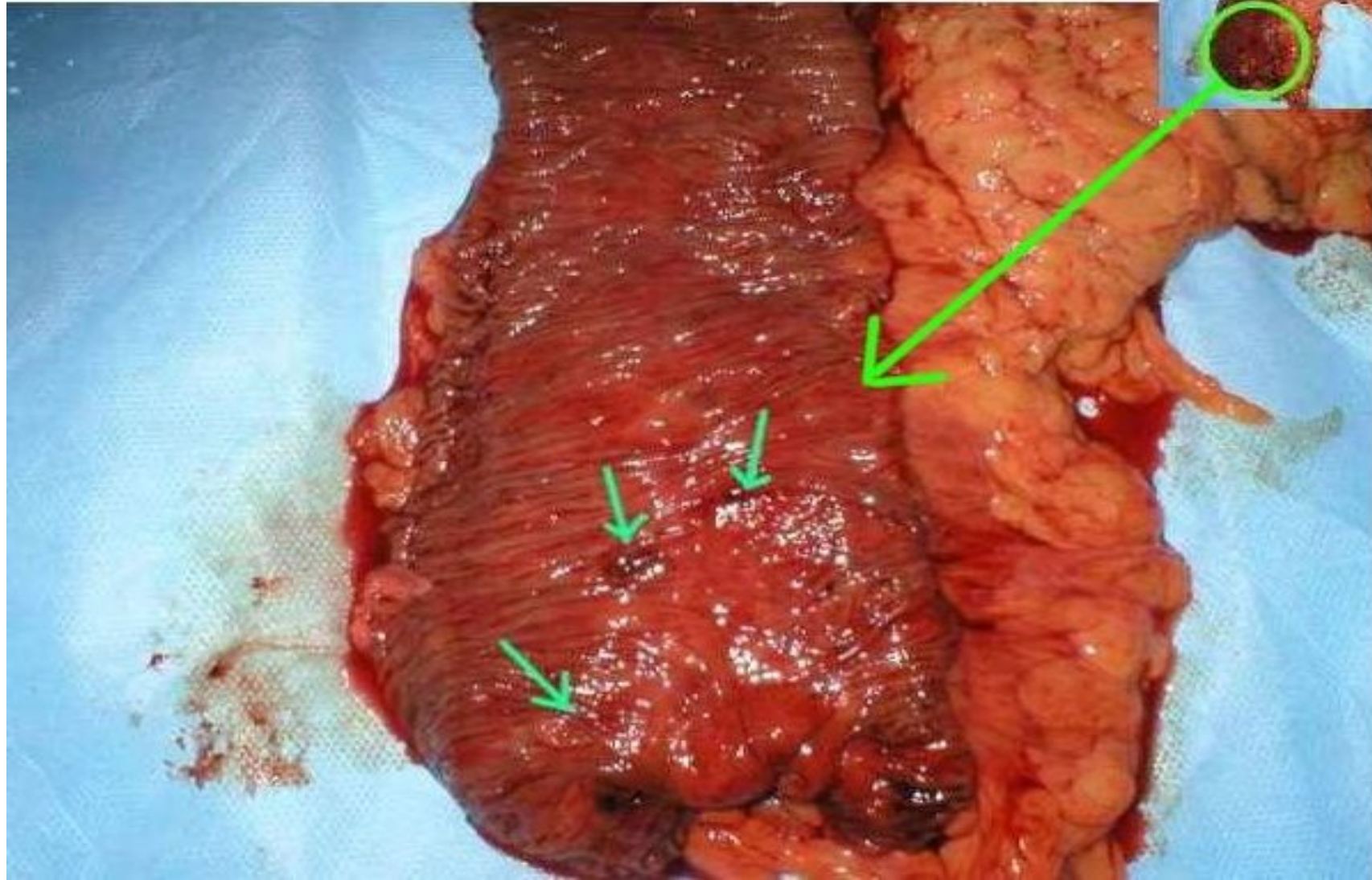
Multiple diverticuls



Diverticul - obturation



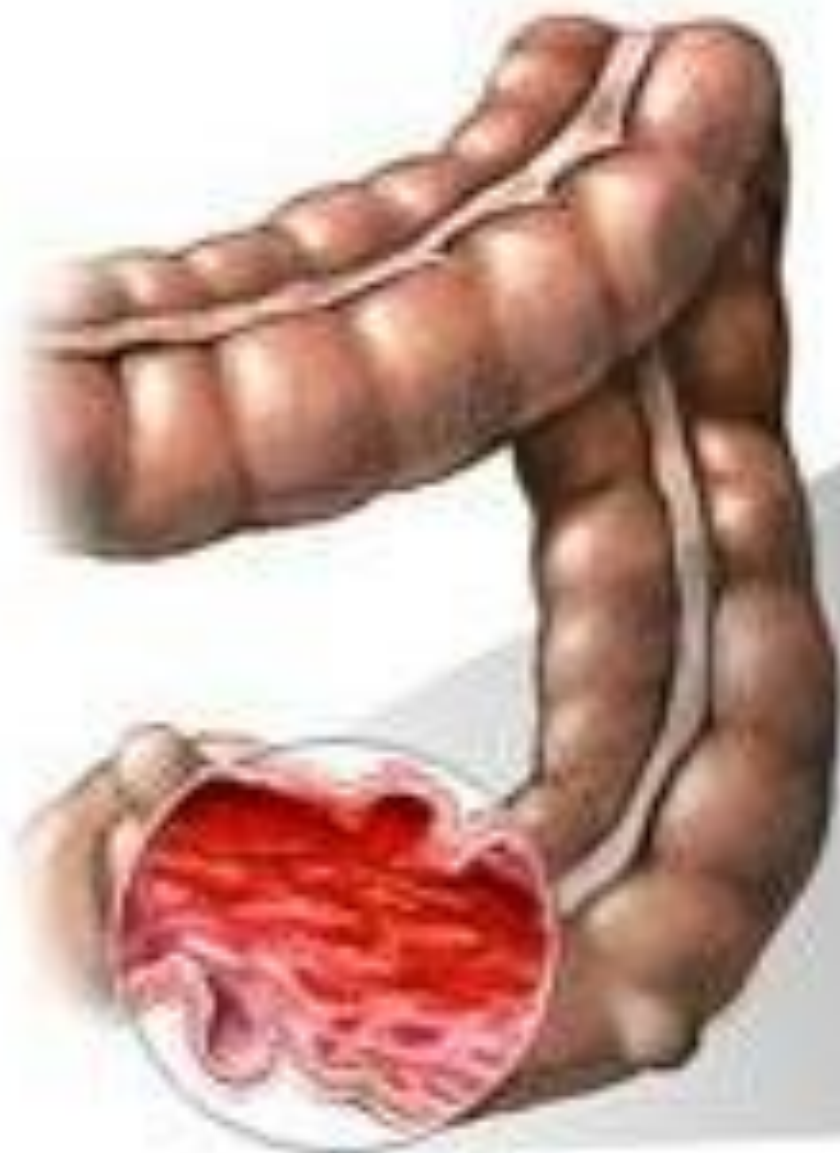
diverticulosis



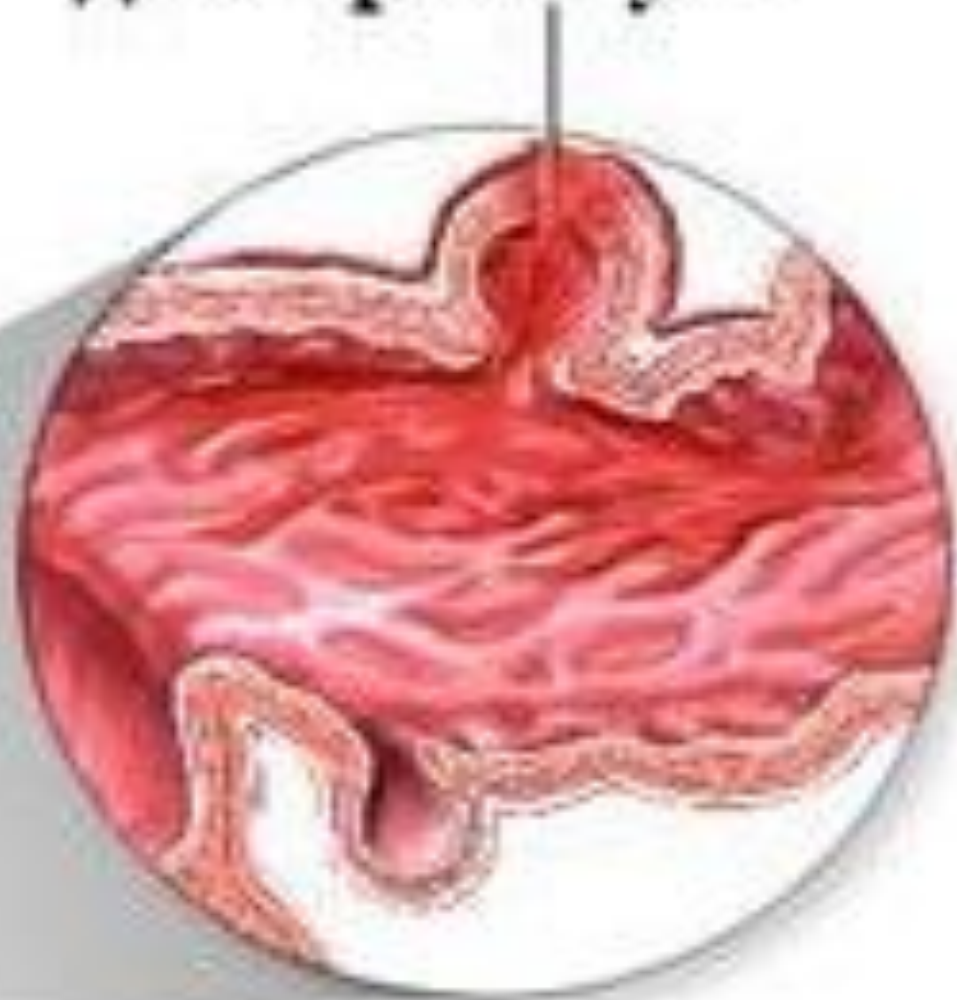
Fecal stone in a diverticulum



diverticulitis



дивертикул



Clinical features

• Acute diverticulitis is well nicknamed 'left-sided appendicitis'; an acute onset of central abdominal pain which shifts to the left iliac fossa accompanied by fever, vomiting and local tenderness and guarding. A vague mass may be felt in the left ileal fossa and also on rectal examination. Perforation into the general peritoneal cavity produces the signs of general peritonitis. A pericolic abscess is comparable to an appendix abscess but on the left side; a tender mass accompanied by a swinging fever and leucocytosis.

Clinical features

• Chronic diverticular disease exactly mimics the local clinical features of carcinoma of the colon; there may be diarrhoea alternating with constipation which progresses to a large bowel obstruction with vomiting, distension, colicky abdominal pain and constipation: (note that small bowel obstruction from adhesion of a loop of small Intestine to the inflammatory mass is not uncommon). There may be episodes of pain in the left ileal fossa, passage of mucus or bright red blood per rectum or of melaena, or there may be anaemia due to chronic occult bleeding. Examination reveals tenderness in the left ilioal fossa and there is often a thickened mass in the

Diverticulitis

- This results from infection of one or more diverticula. An inflamed diverticulum may.
 1. Perforate:
 - a) into the general peritoneal cavity;
 - b) with formation of pericolic abscess;
 - c) into adjacent structures; bladder, small bowel and vagina;
 2. Produce chronic infection with inflammatory fibrosis resulting in strictures and obstructive symptoms — acute or chronic.

Diverticulitis

The Hinchey classification - proposed by Hinchey et al. in 1978[1] classifies a colonic perforation due to diverticular disease. The classification is I-IV:

- Hinchey I - localised abscess (paracolic)**
- Hinchey II - pelvic abscess**
- Hinchey III - purulent peritonitis (the presence of pus in the abdominal cavity)**
- Hinchey IV - faeculent peritonitis.**

The Hinchey classification is useful as it guides surgeons as to how conservative they can be in emergency surgery. Recent studies have shown with anything up to a Hinchey III, a laparoscopic washout is a safe procedure[2] avoiding the need for a

**diverticulosis, bleeding,
subtotal colectomy**



**diverticulosis, bleeding,
subtotal colectomy**



**Thank`s for
attention!**

