

**USMF "N. Testemitanu"
Catedra
Radiologie si Imagistica
Medicala**

**Boli chirurgicale.
Investigatii Radio-Imagistice**

Radiografia panoramica a cavitatii abdominale



(ortostatism, proiectie antero-posterioara, aspect obisnuit)

Ro-grafia de panorama a cavitatii abdominale

- Cuiburi de rindunici



ocluzie intestinala inalta

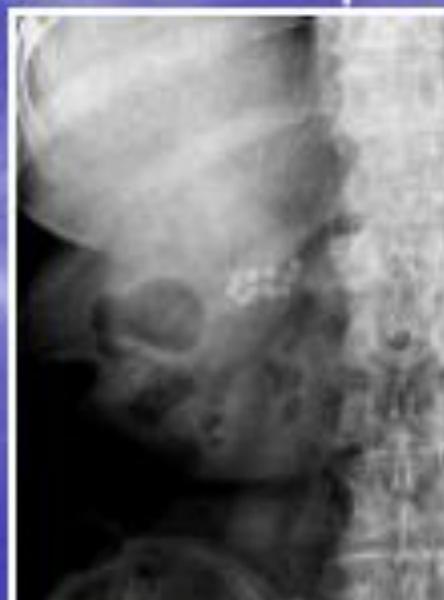
Radiografia abdominala simpla

- calcificari biliare (~30%)
- vezicula de portelan
- calcificari pancreatice
- aerobilia = prezenta de aer in caile biliare.

Cauze: anastomoze bilio-digestive, colecistita emfizematoasa.

- inlocuita de ecografie

Calculi radioopaci



"Vezicula de portelan"



Aerobilie



Colecistita emfizematoasa

ULTRASONOGRAFIA

METODA DE ELECTIE PENTRU COLECIST/C.B.

- **AVANTAJUL VIZUALIZARII DIRECTE:** peretii, continutul v.b.; calea bilara principala + ficat/pancreas;
- primul examen **in ictere;**
- rapida, fara pregatire (urgente => colica biliara), ieftina;
- rezolva > de 90% din patologia biliara.

Ecografia

- **Metoda de electie** pentru studiul neinvaziv al cailor biliare. Randamentul metodei este mare. Precizeaza sediul si cauza obstructiei (in cazul icterului obstructiv) in peste 90% din cazuri.
- ***Vezicula biliara*** este un organ cavitatar, ovalar, cu diametrul longitudinal maxim de 8-9 mm, Prezinta un perete ecogen de maxim 3 mm grosime. Continutul veziculei este transonic, omogen.
- ***Canalul cistic*** se poate evidentia uneori ca un canal transonic fin.
- ***Calea biliara principala*** are un diametru de maxim 6 mm.
- **Permite diagnosticul:** malformatii, litiaza, colecistita, tumori veziculare, patologia biliara cu dilatatii de cai biliare – indica nivelul obstructiei si tipul de leziune.



Coledocolitiaza

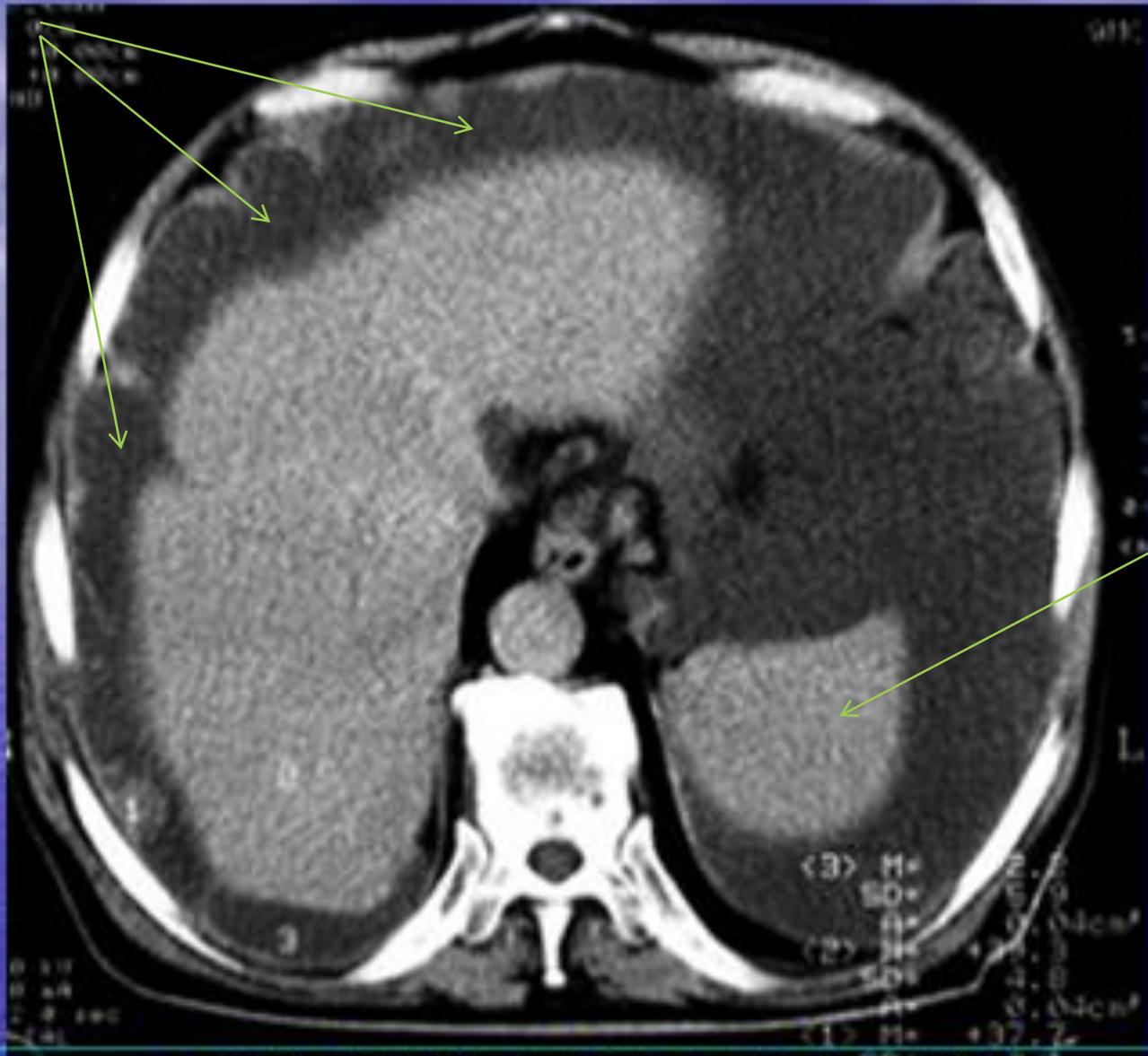


Colecistolitiaza

US:FICAT CIROTIC,SCLERO-ATROFIC;ASCITA



Lichid perihepatic (hipodens)

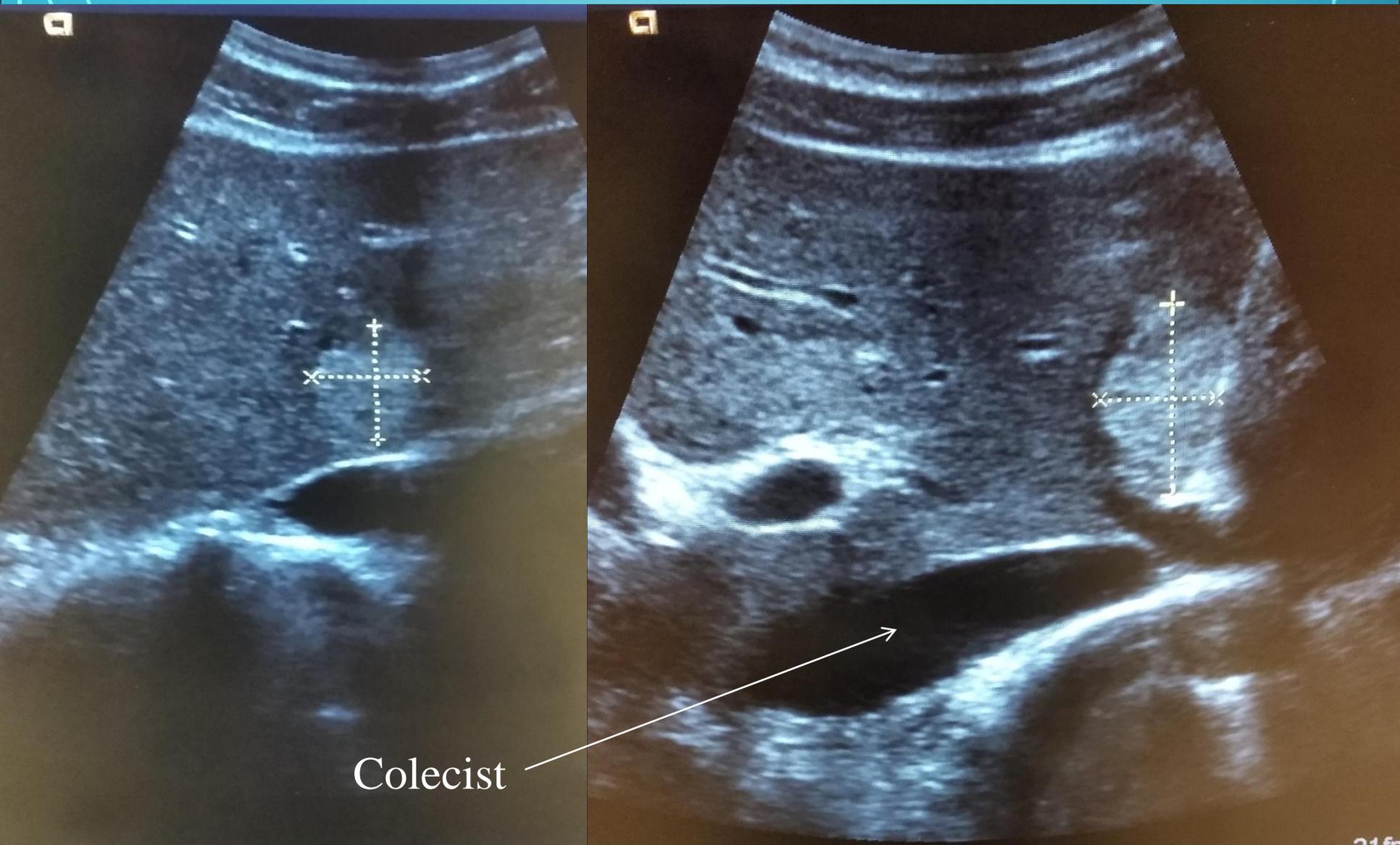


Splina

CT:FICAT CIROTIC;ASCITA VOLUMINOASA

HEMANGIOM HEPATIC (USG)

ARIE LEZIONALA HIPERECOGENA, NET DELIMITATA



Colecist

Colangiografia endoscopica

ERCP=**E**ndoscopic **R**etrograde **C**olangio-**P**ancreatography

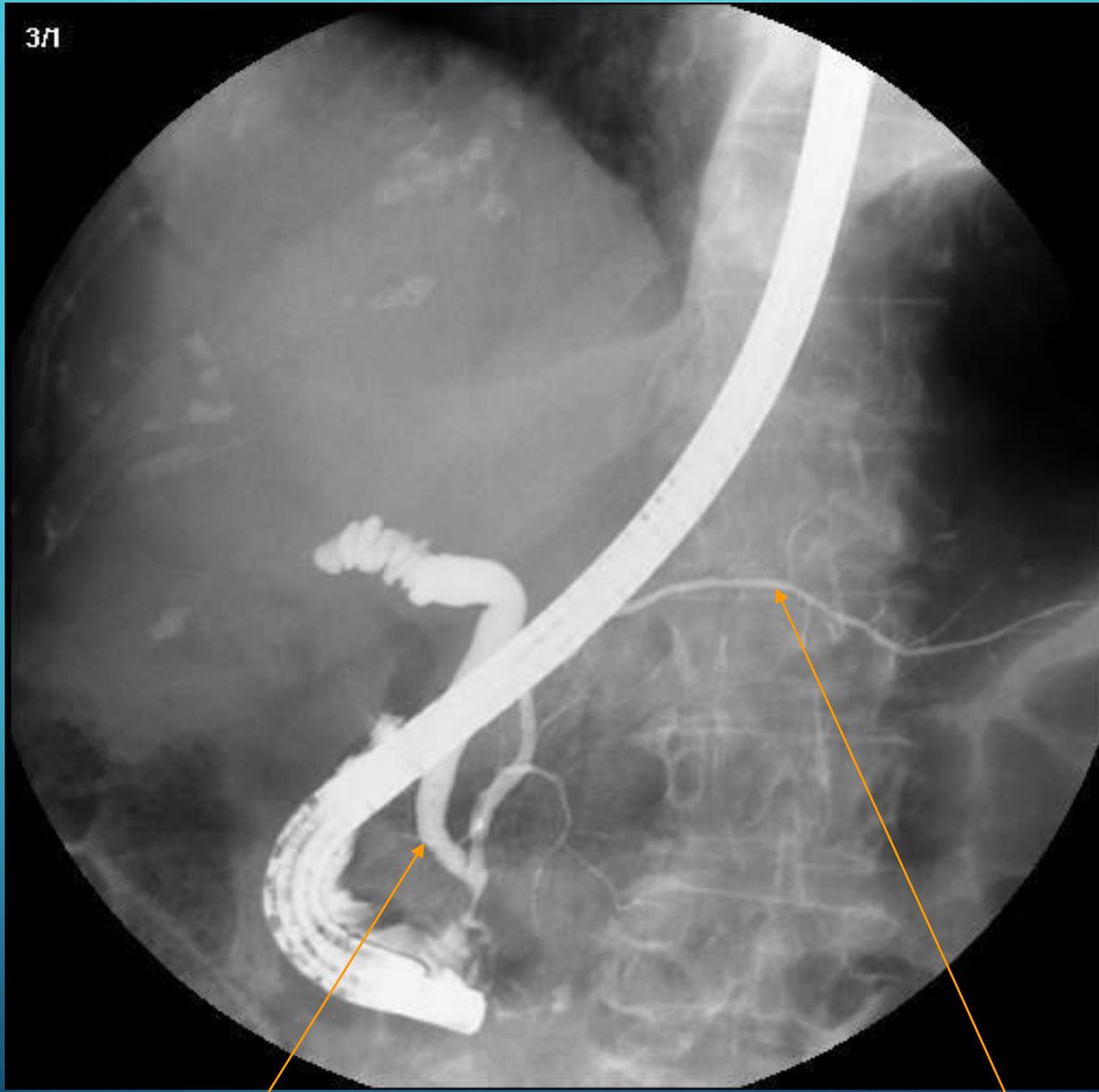
INDICATII: -litiiza canalara obstructiva-in scopul extragerii calculilor dupa sfincterotomie prealabila;

-icterele sec.pancreatitei cronice.

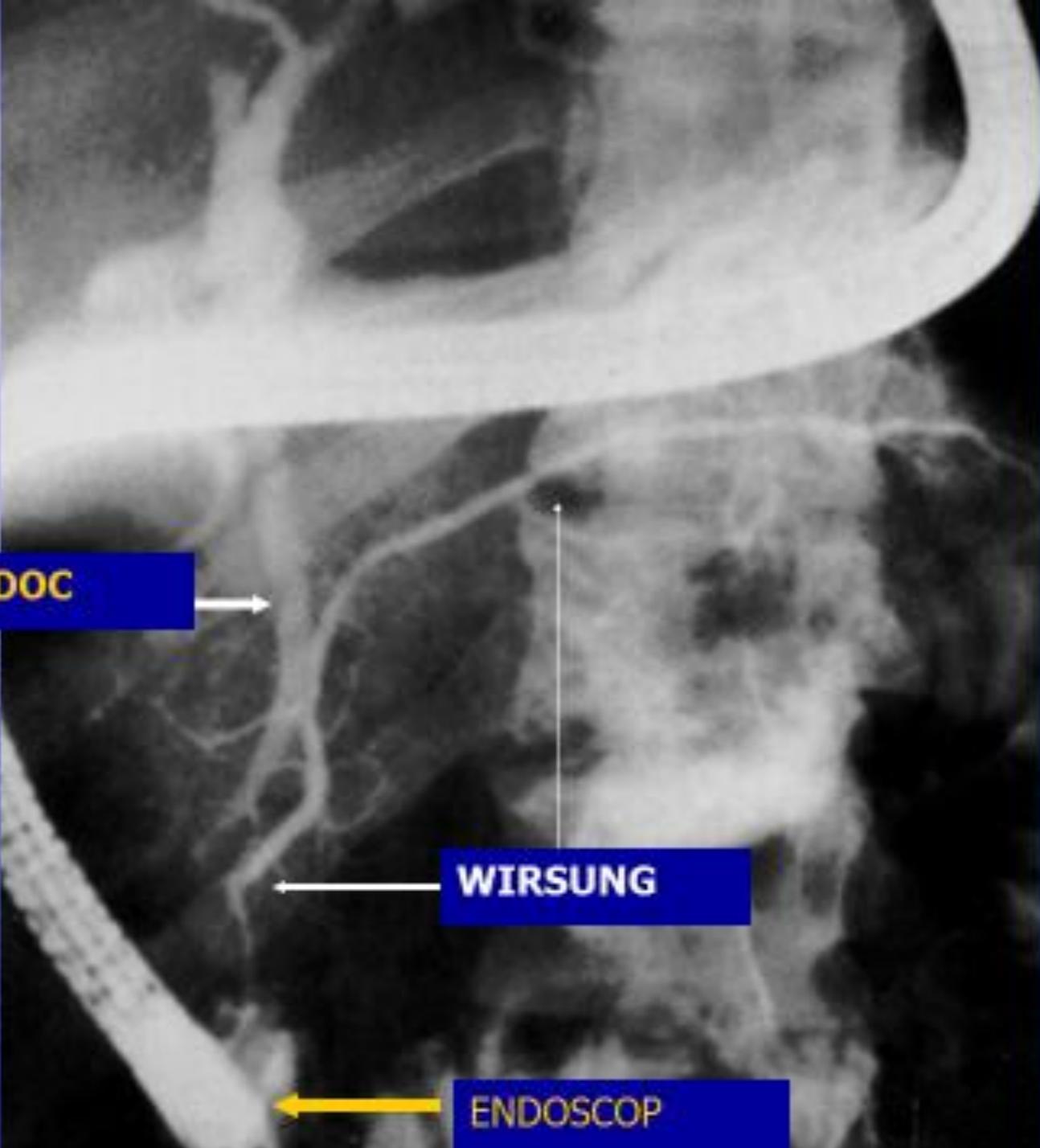
TEHNICA: -cateterism retrograd=>papila Vater **sub control vizual & fluoroscopic(pe masa de scopie !)**;

-injectie contrast iodat diluat (120 mg Iod/ml);

-floroscopie/grafii tintite,pozitii PA-OAD-OAS.



Opacifierea **cailor biliare** si a ductului **pancreatic (Wirsung)**



ERCP:
NORMAL

COLEDOC

WIRSUNG

ENDOSCOP

CALCUL RADIOTRASPARENT (COLESTEROLIC) PREZENT LA NIVELUL COLEDOCULUI

In cadrul sindromului
postcolecistectomie,
dilatatia cailor biliare este
mai accentuata **> 1,5cm**

Dilatarea poate fi cauzata de
calculii biliari restanti sau de
hipertrofia sfincterului Oddi
(la 1-2 ani postoperator)

471



COLANGIOGRAFIA PER/POSTOPERATORIE

PEROPERATOR:

- cu scop de evidentiere a calculilor in c.b.;
- cateterizare cistic, dupa colecistectomie;
- injectie contrast iodat & radiografii => pe masa op..

POSTOPERATOR:

- pe tub T (KEHR): evid. calculi restanti;
- ETAPA OBLIGATORIE PT EXTRACTIA PERCUTANA
A CALCULILOR RESTANTI POST-OPERATOR

Colangiografia postoperatorie pe tub Kehr

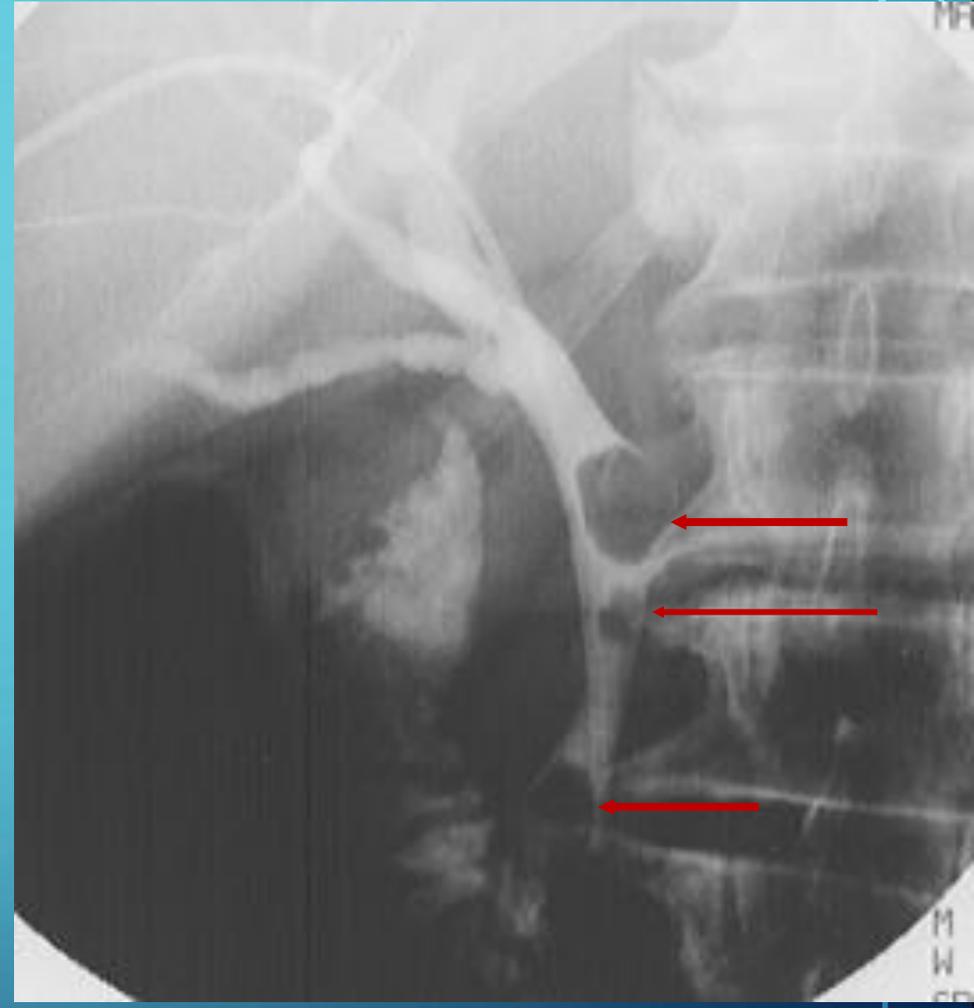
(tub in "T" instalat in coledoc)

- ❖ De electie pentru excluderea litiazelor restante sau a obstructiilor biliare acute postoperatorii.

Tub Kehr

**Calcul restant in coledoc
(imagine lacunara)**





**COLANGIOGRAFIE PE TUB T:
CALCULI RESTANTI POSTOPERATOR**

COMPUTER TOMOGRAFIA

INDICATI: -icter obstructiv, in cazul esecului US(10%)

-decelarea sediului & etiologiei

obstacolului biliar;

-extenzia loco-regionala a cancerului VB/CB;

-decelare metastaze hepatice

TEHNICA: -examen nativ +contrast

-sectiuni pt intregul ficat ,colecist,pancreas.

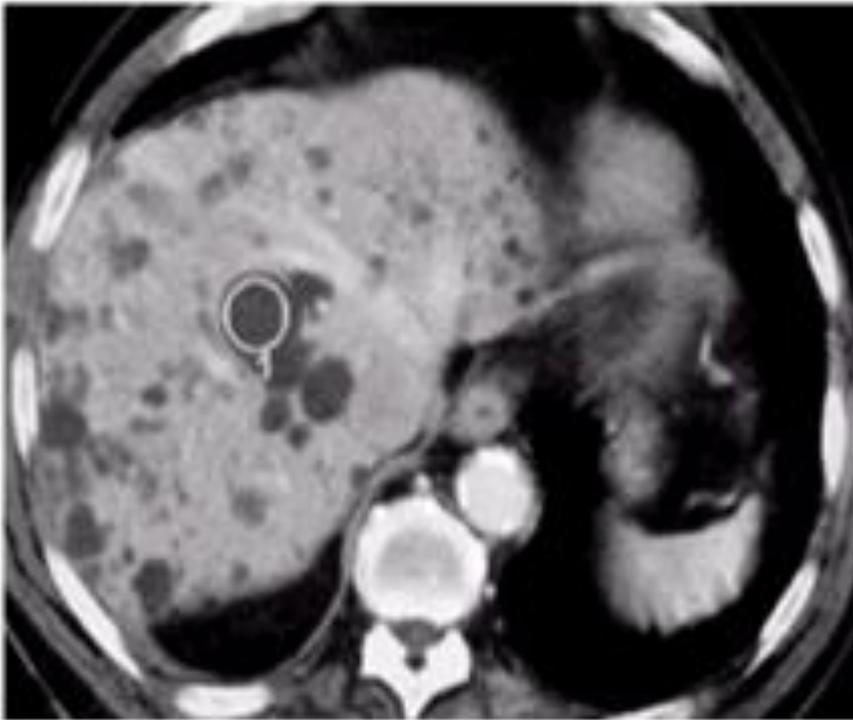


CT: CARCINOM VEZICULA BILIARA + MTS. HEPATICE

Chisturi hepatice

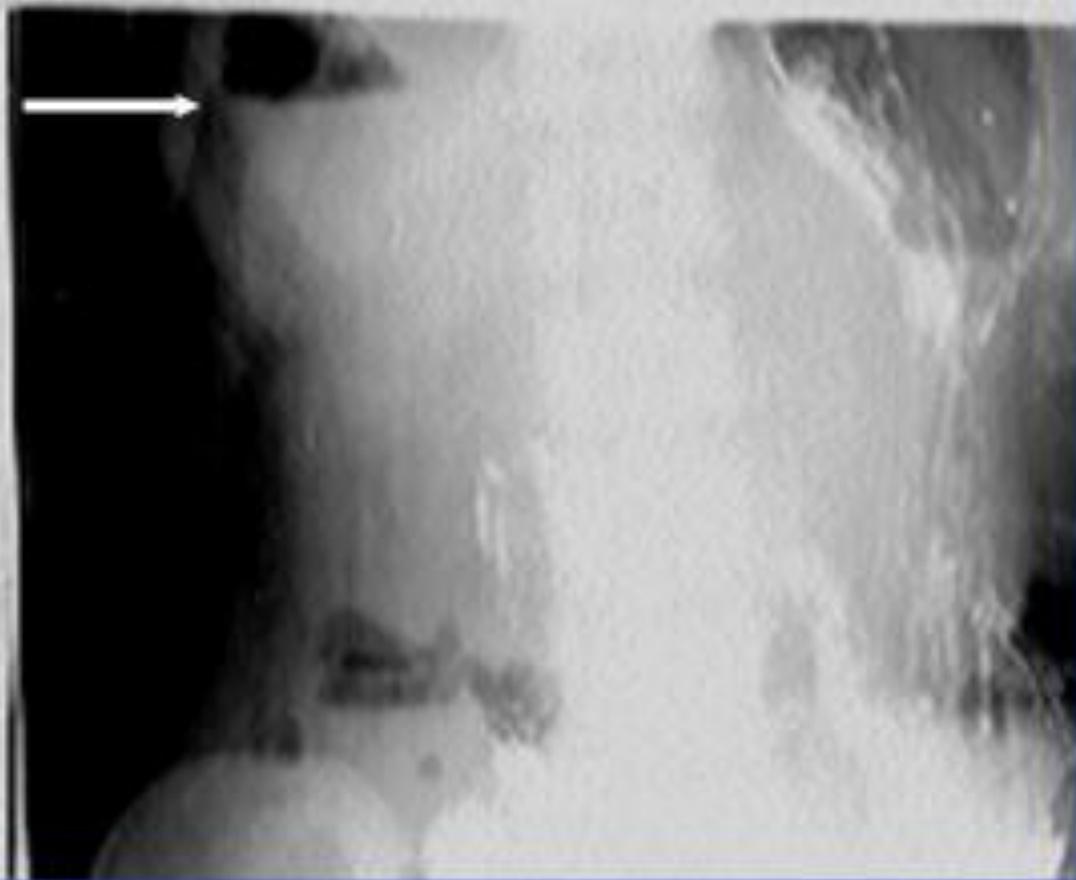
Multiple, difuze (dimensiuni mici)

Unic (poliseptat)



CT cu contrast, plan axial

RADIOGRAFIE STANDARD: ABCES HEPATIC



Abces hepatic



CT – în faza presupurativă: zonă hipodensă ce captează heterogen contrastul. În faza de supurație: o zonă hipodensă central, neiodofilă, înconjurată de o capsulă regulată cu grosime de 2-4 mm, discret hipodensă spontan, ce se încarcă moderat cu contrast.

COLANGIOGRAFIA RMN

MRCP=Magnetic Resonance
ColangioPancreatography

METODA NOUA DE VIZUALIZARE DIRECTA

**ANATOMICA PRIN RECONSTRUCTIE COMPUTE-
RIZATA A COLECISTULUI SI CAILOR BILIARE**

AVANTAJE:-ULTRARAPIDA & NEINVAZIVA;

-FIDELITATE ANATOMICA;

**-asociere cu vizualizarea
ficat,pancreas.**

DEZAVANTAJ:-pret ridicat;

-accesibilitate redusa.

0.5T SYSMIR310C01

KITAZATO UNIV. EAST

5

1/8

4.1



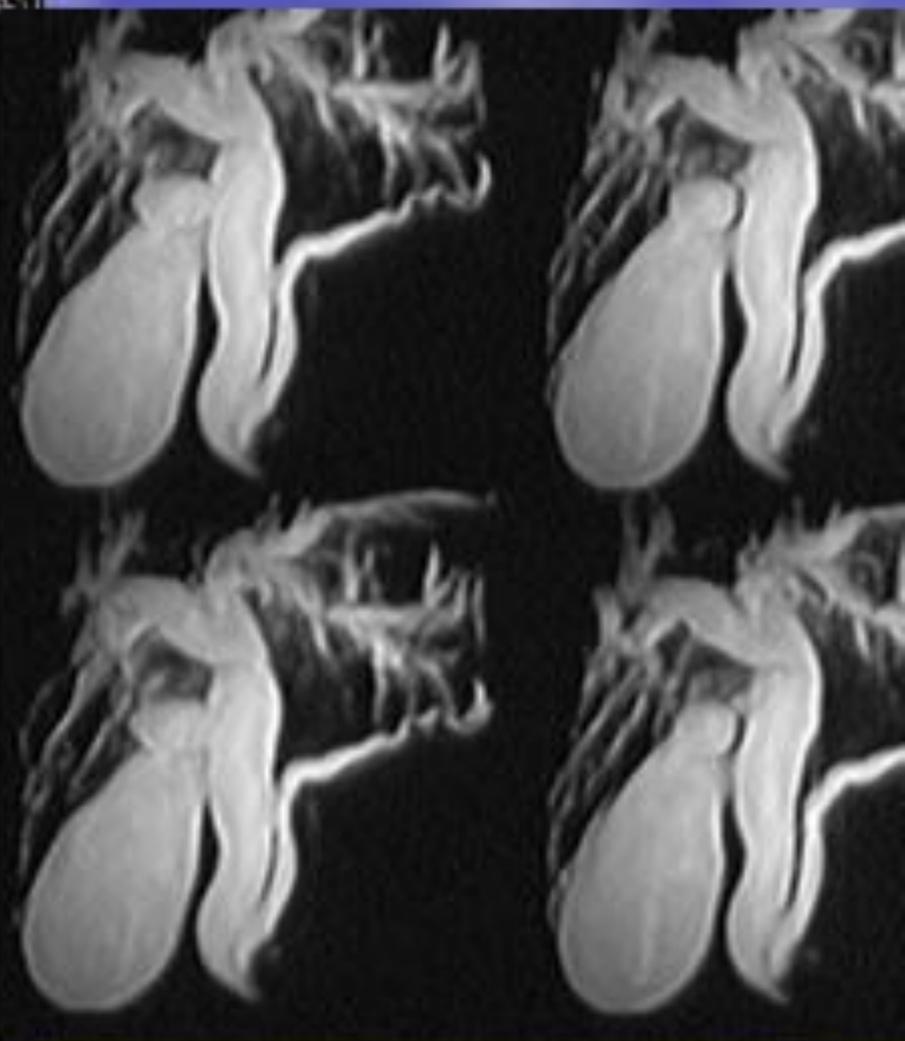
0

1/E1

12.54Hz

16

10.0sp/C

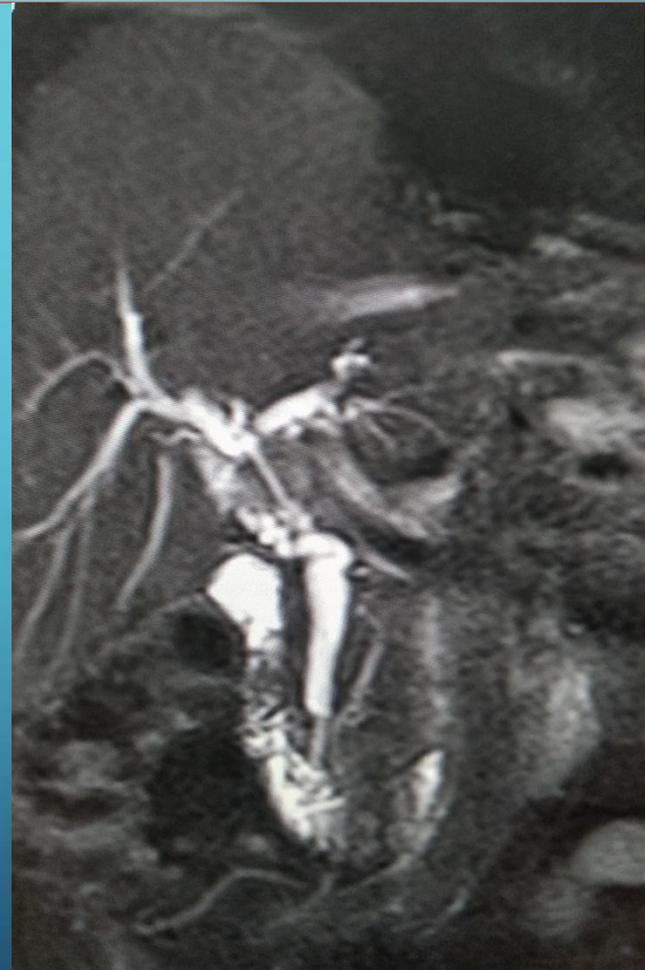


IRMN:COLANGIO-PANCREATOGRFIE(MRCP)

COLANGIOCARCINOM (KLATSKIN TUMOR)



MRCP – plan coronal



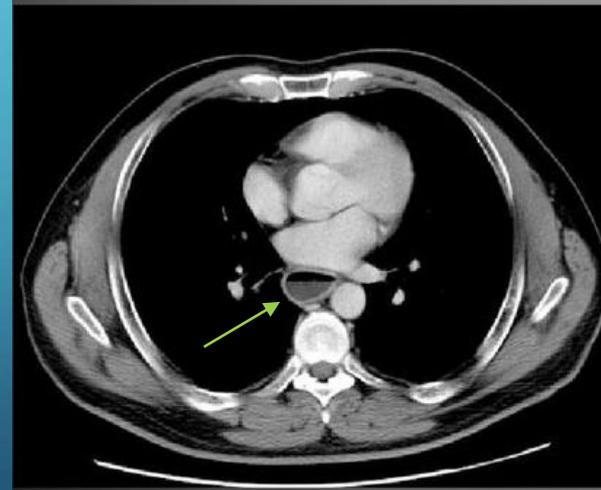
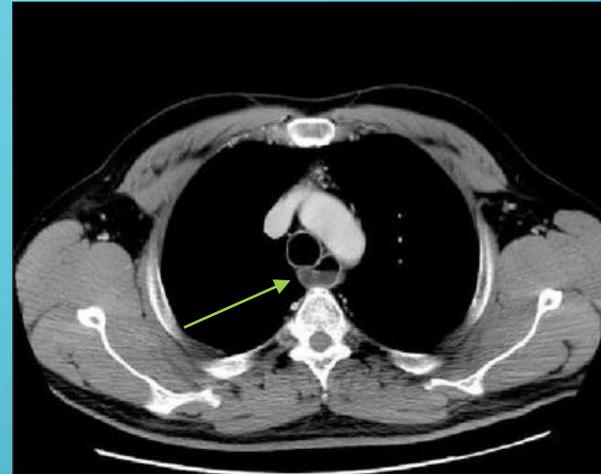
IRM, protocol T2 haste, plan coronal

PATOLOGIA ESOFAGULUI

ACHALASIA

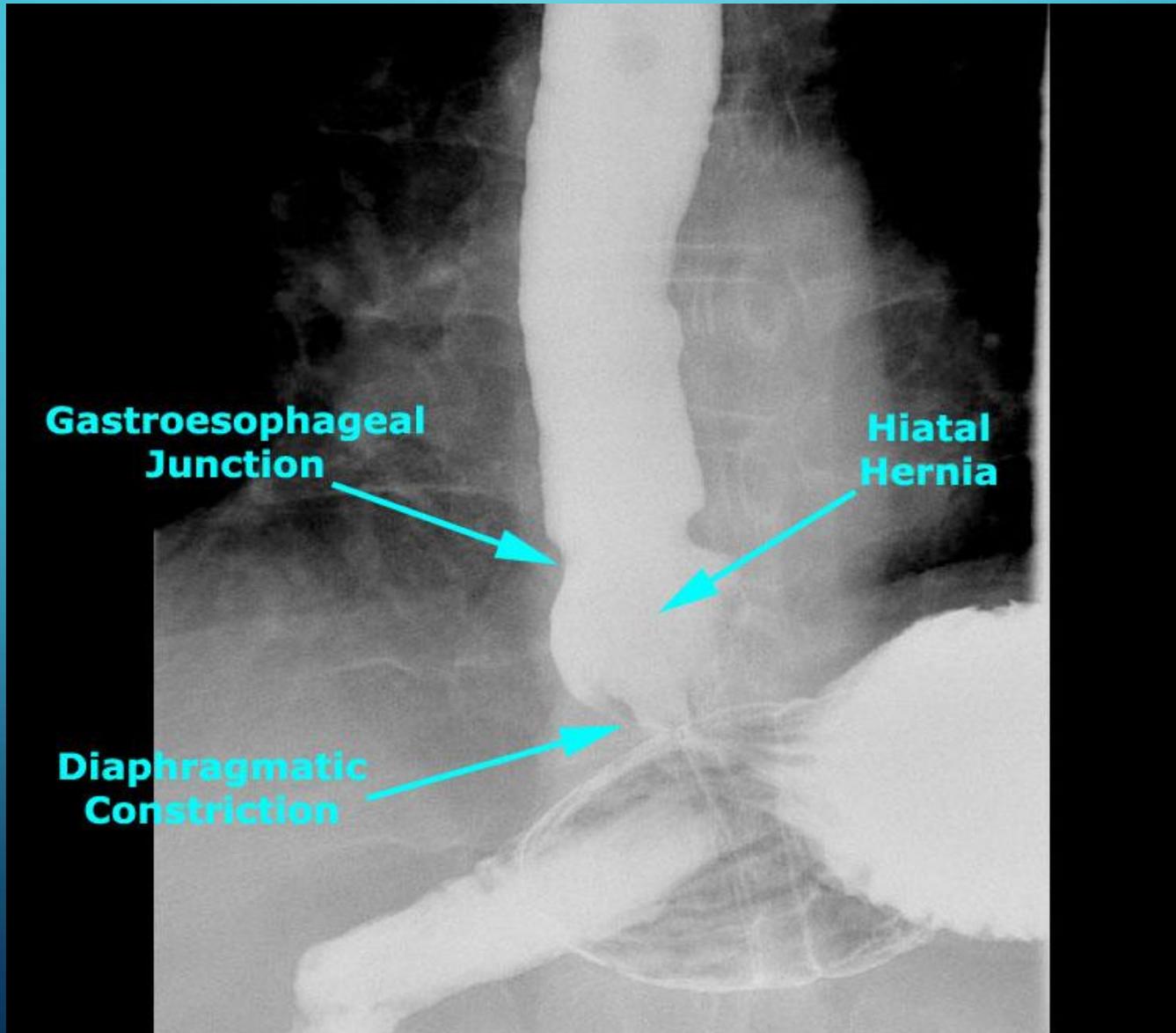


Rx cu contrastare baritata

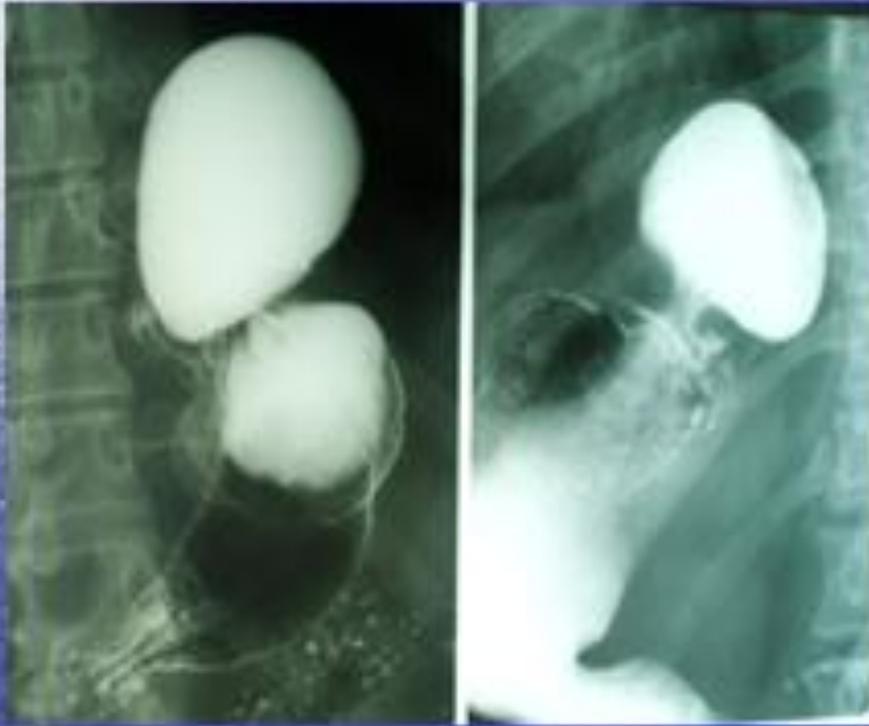


CT nativ - imagini axiale

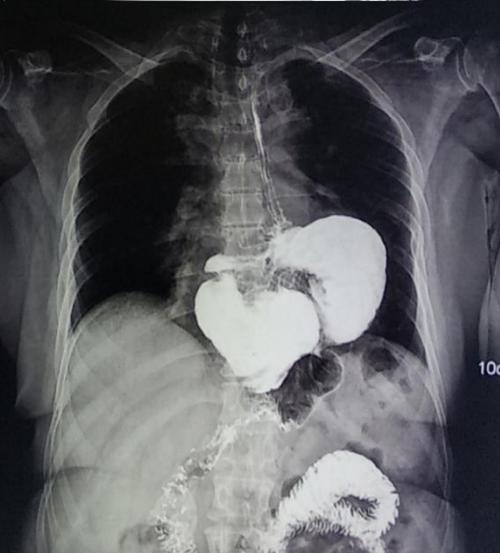
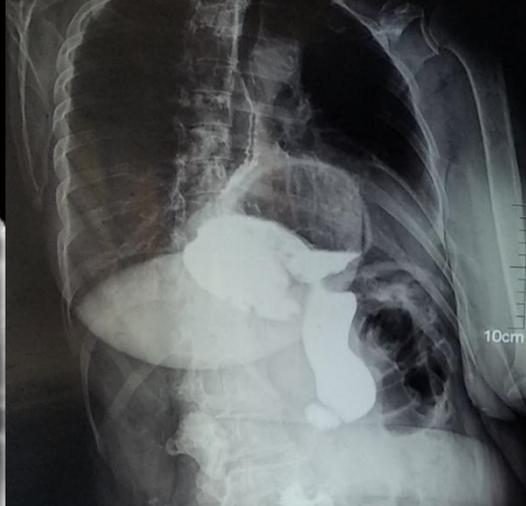
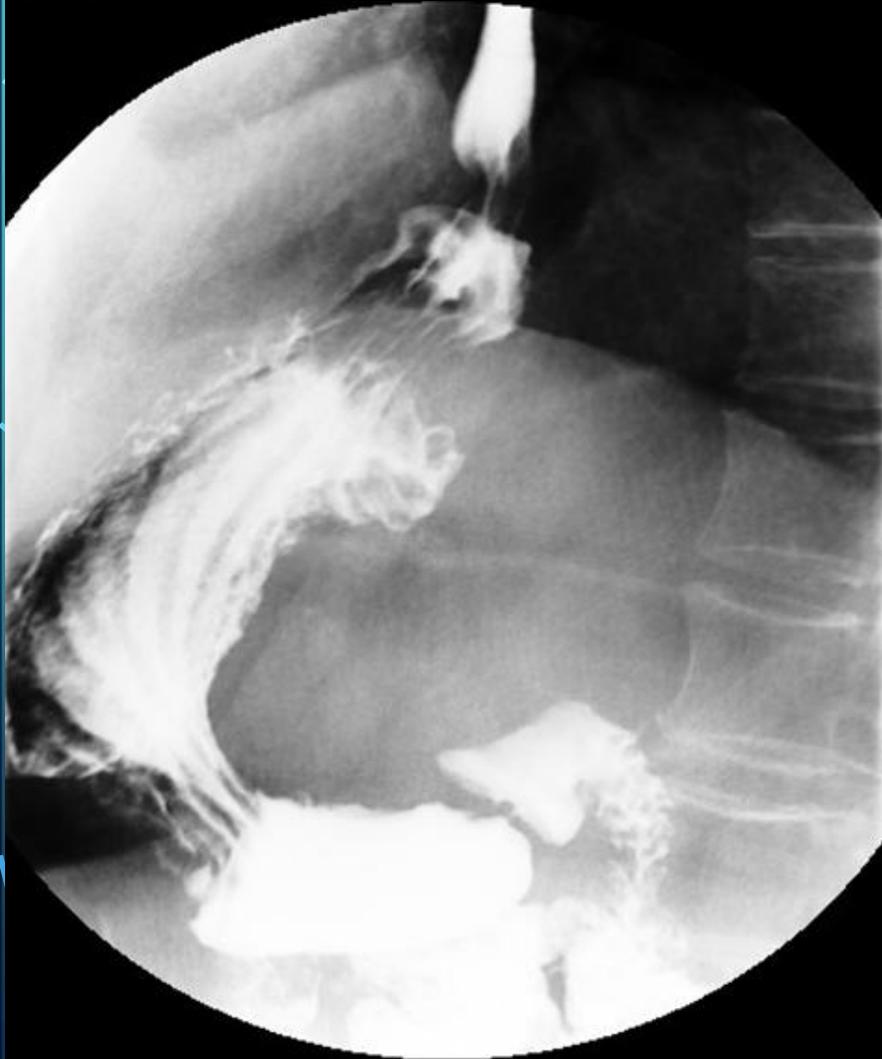
HERNII HIATALE



HERNII HIATALE



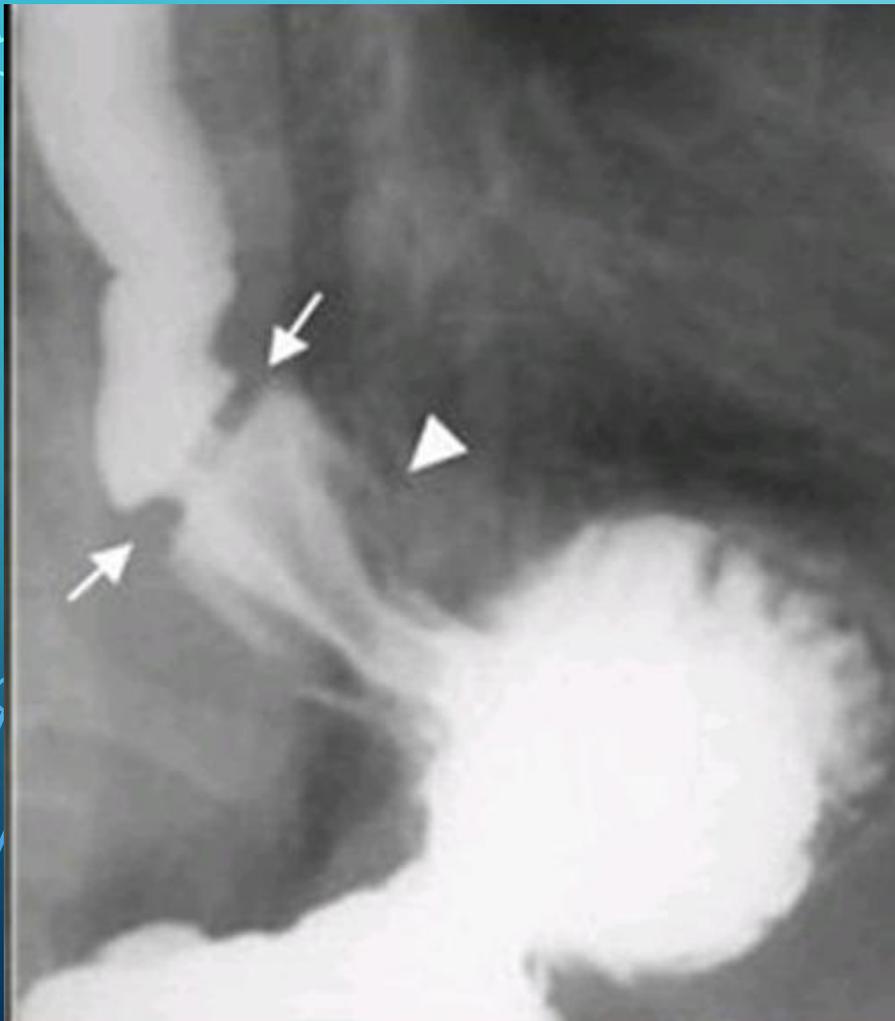
HERNII HIATALE



HERNII PARAESOFAGIENE



HERNII HIATALE VS PARAESOFAGIENE



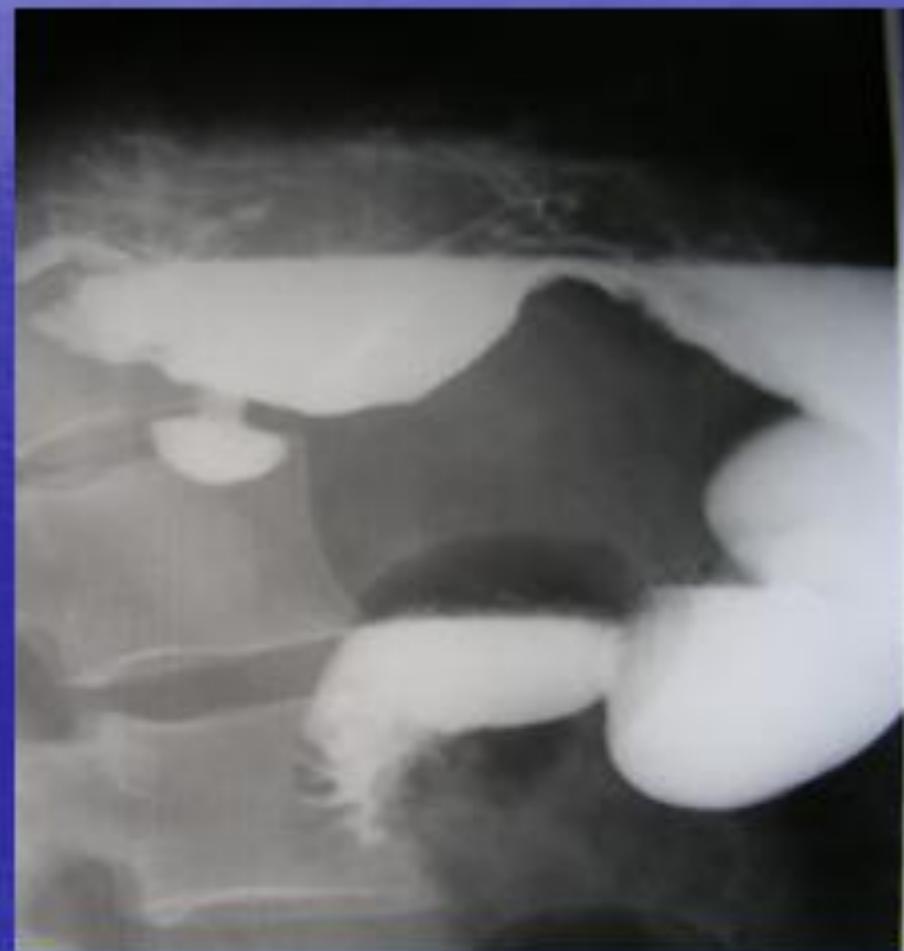
Radioscopia stomacului și duodenului cu masă baritată, cotrastare obișnuită

- metoda cea mai informativă în aprecierea formei și sediului duodenului;
- apreciază funcția motorică a duodenului, prin vizualizarea mișcărilor peristaltice.



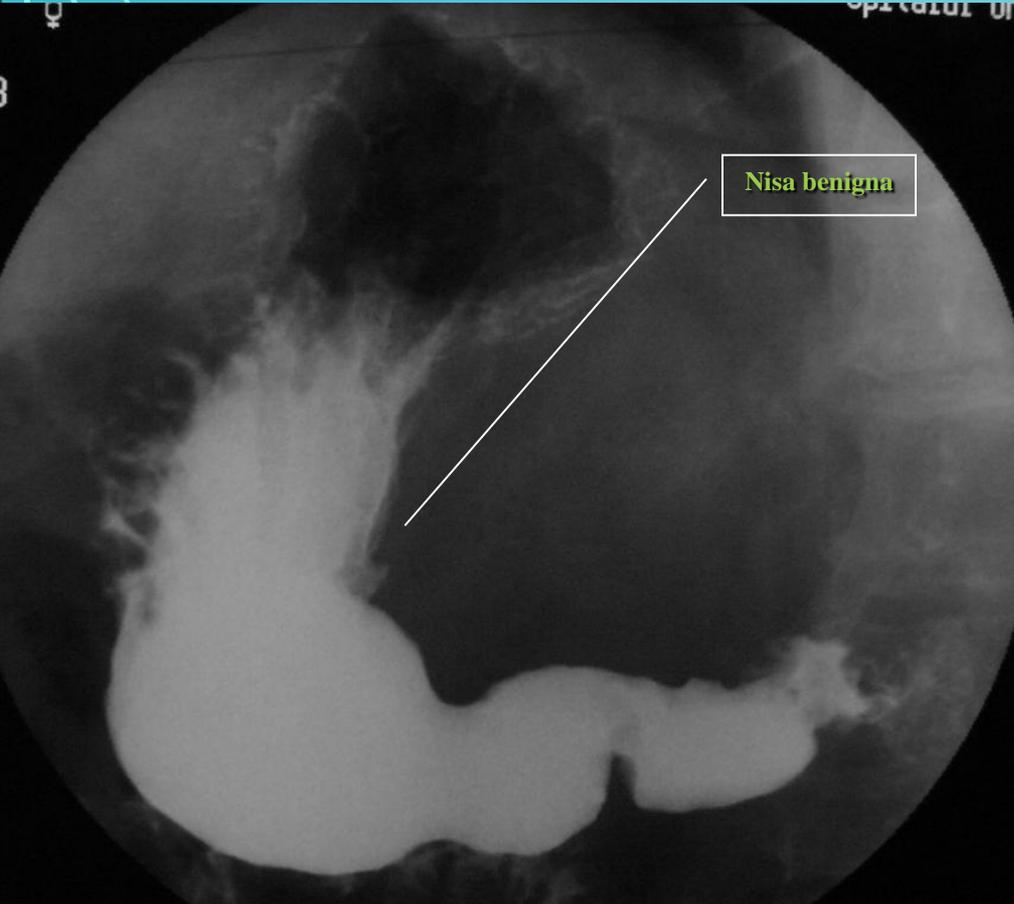
Radioscopia stomacului și duodenului cu masă baritată prin cotrastare obișnuită

- Diverticol pulsativ gastric

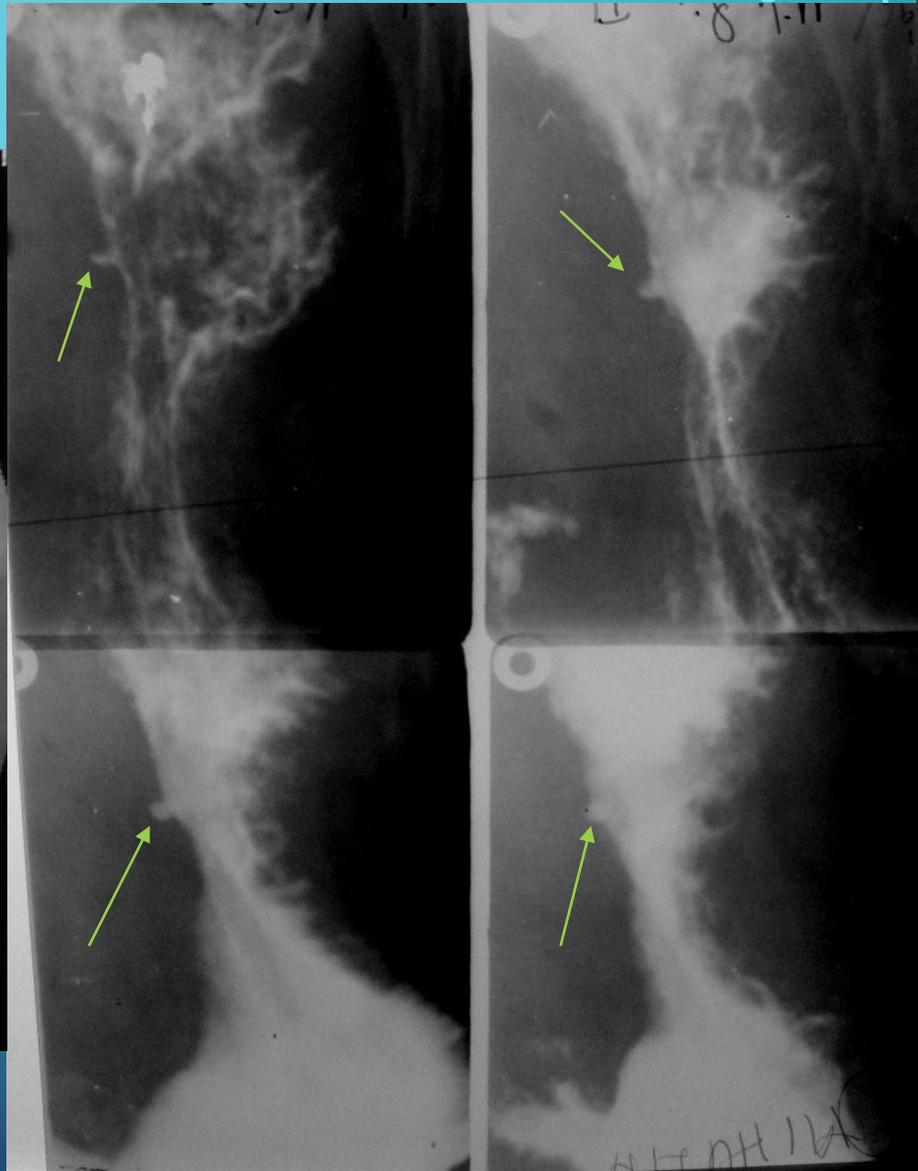


Ulcer gastric

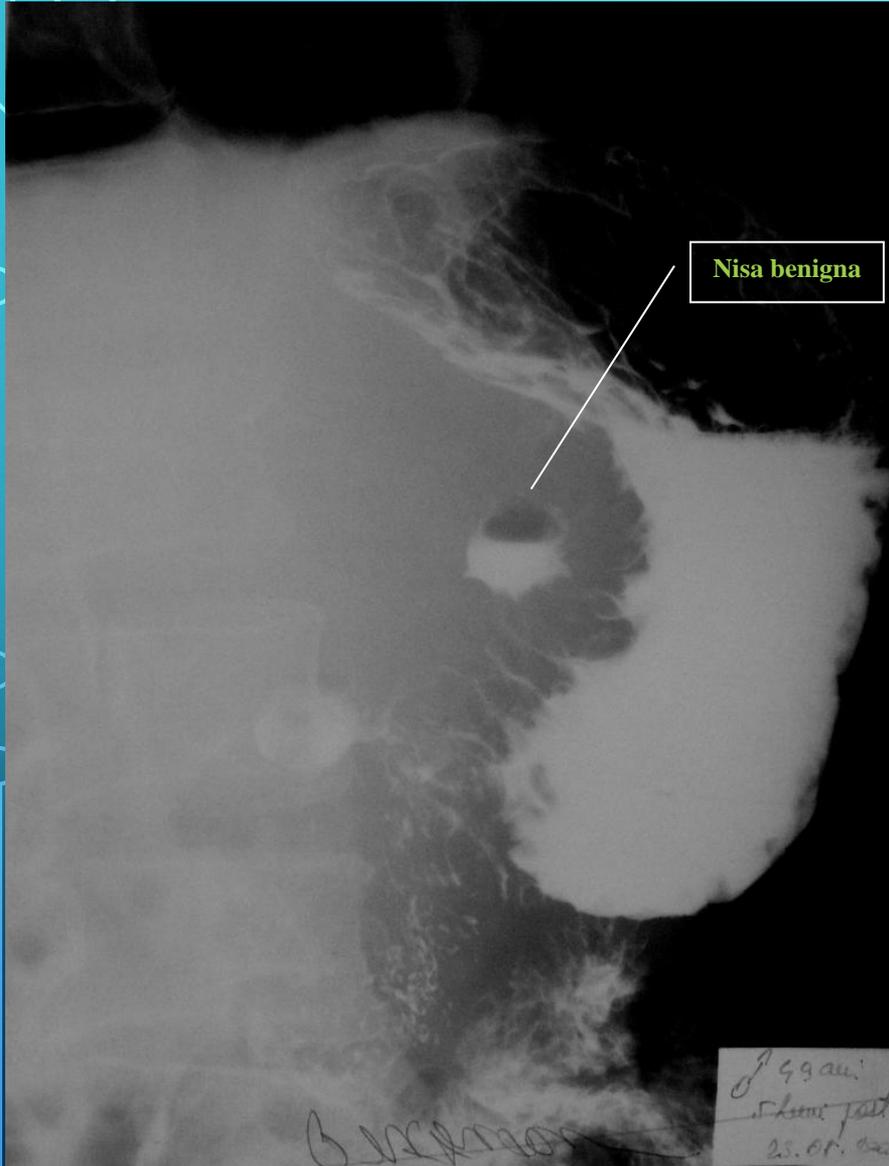




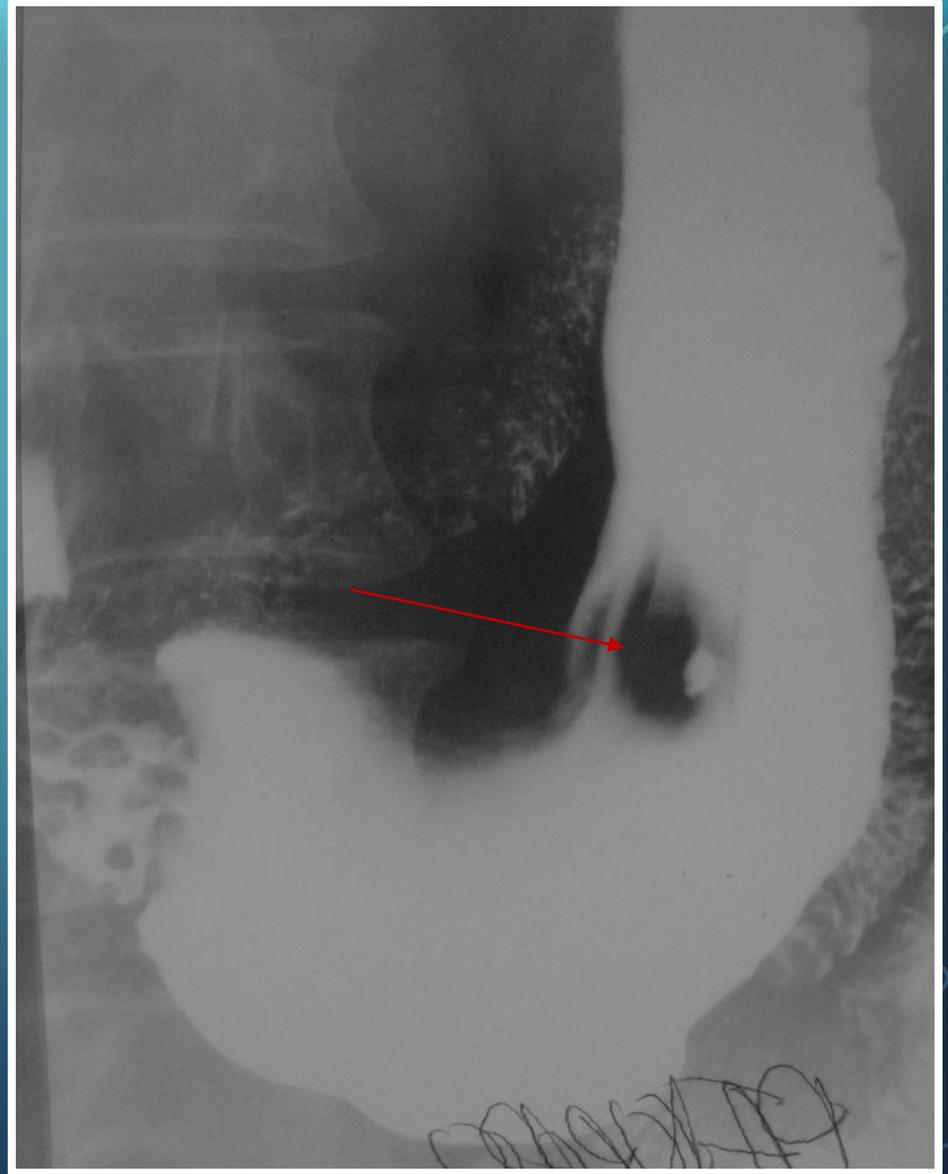
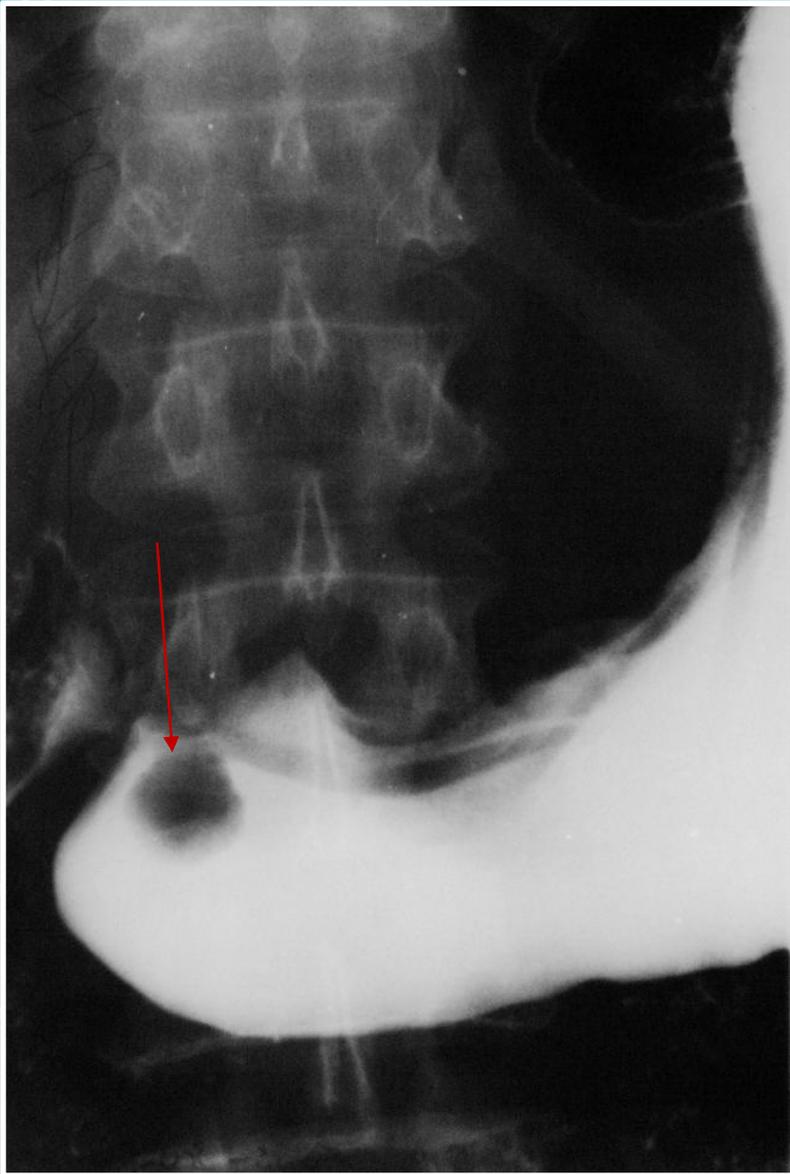
Nisa benigna



NISA HAUDECK



Polip gastric - imagine lacunara, rotunda, bine delimitata

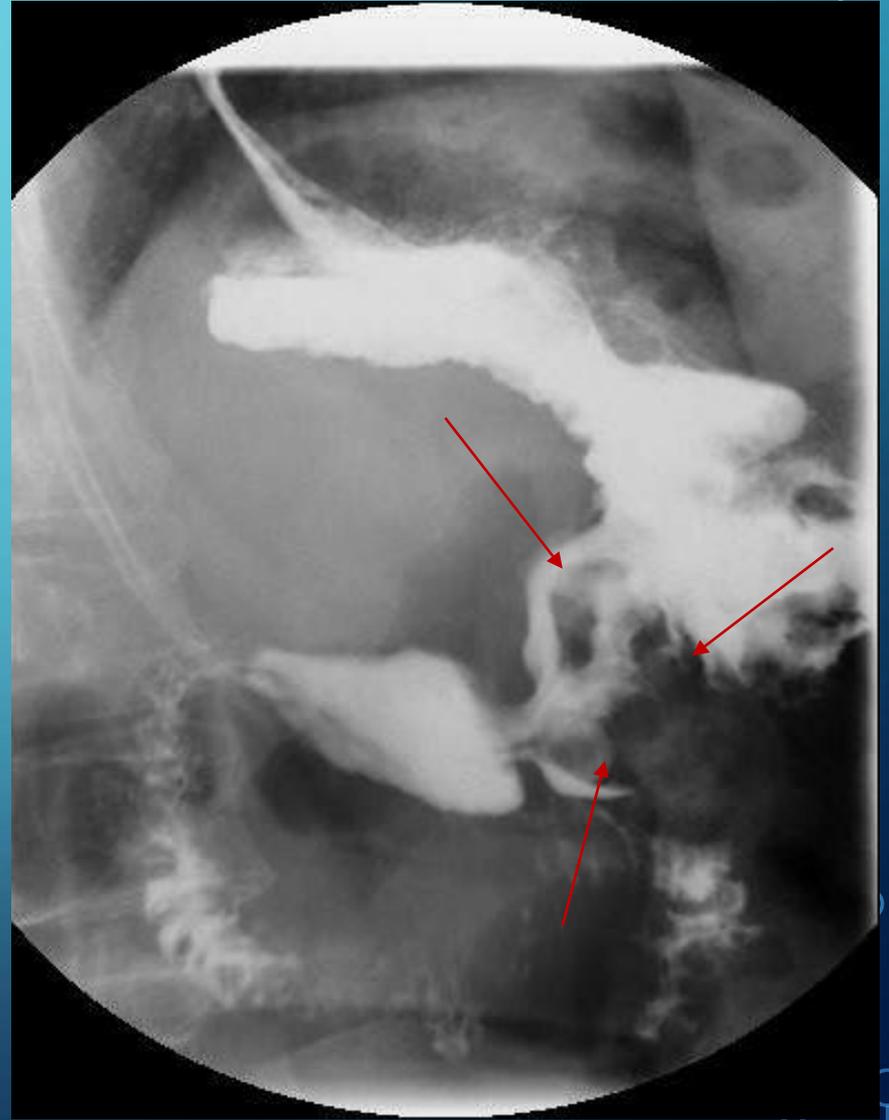
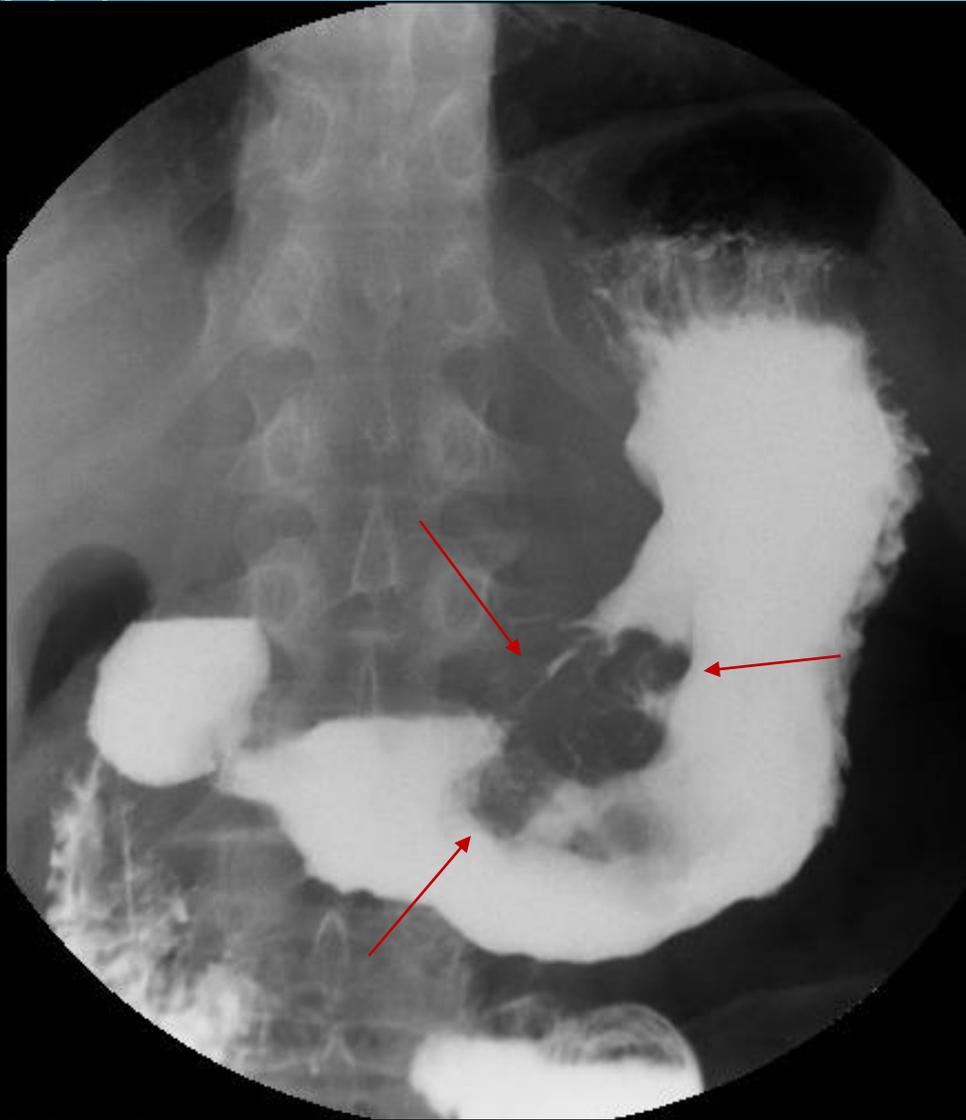


TUMORI MALIGNI

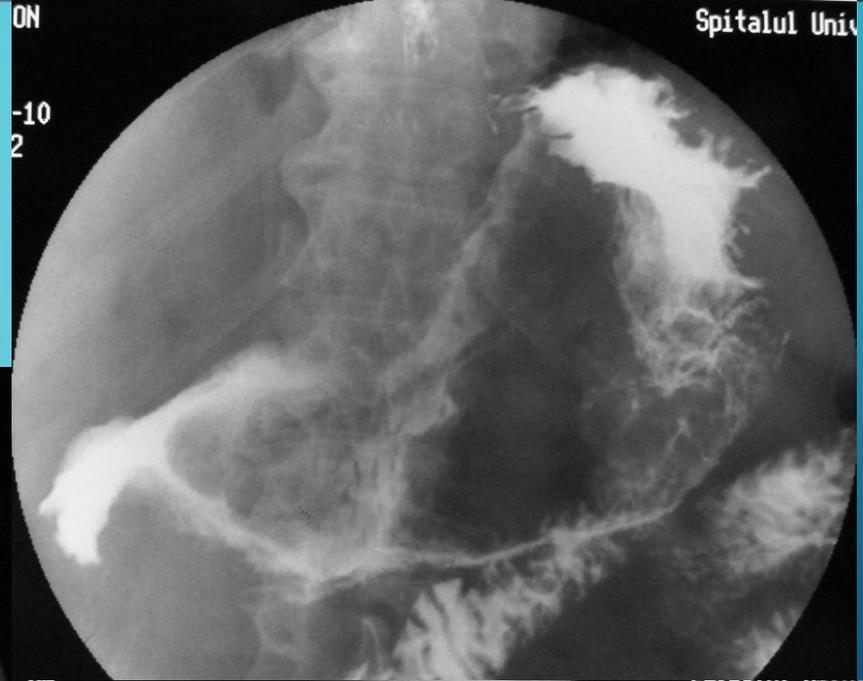
- Cancer vegetant
- Cancer infiltrativ



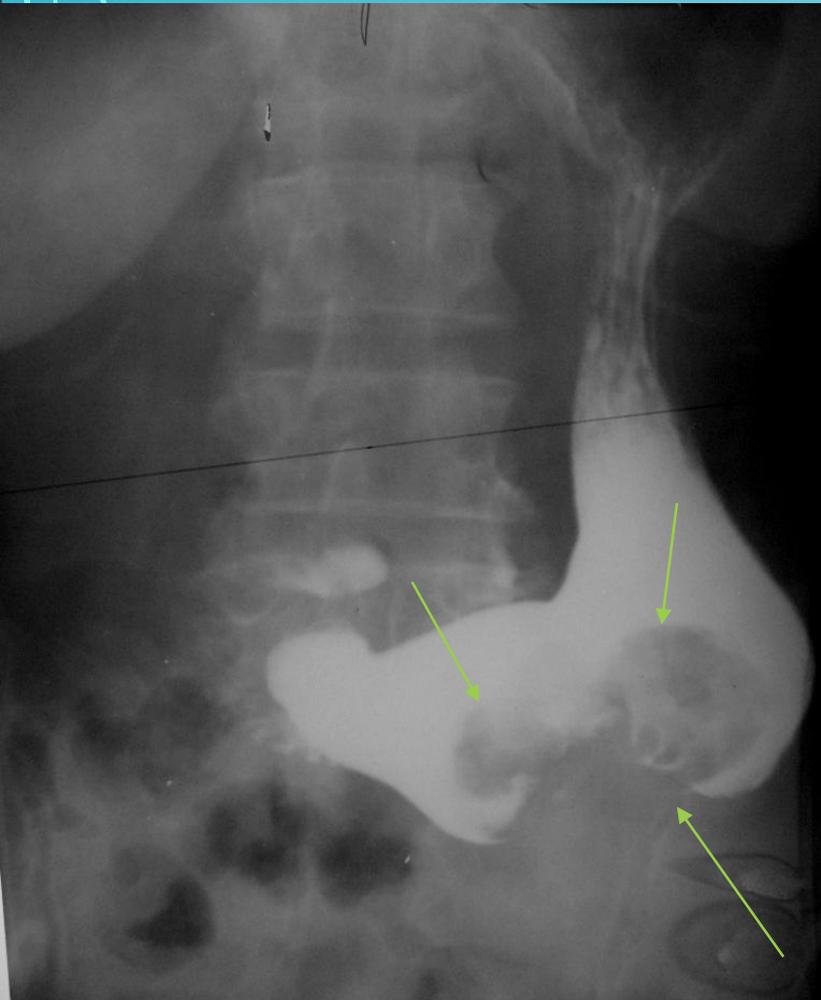
Cancer vegetant al stomacului



Cancer gastric



Forma vegetativa adenocarcinom gastric

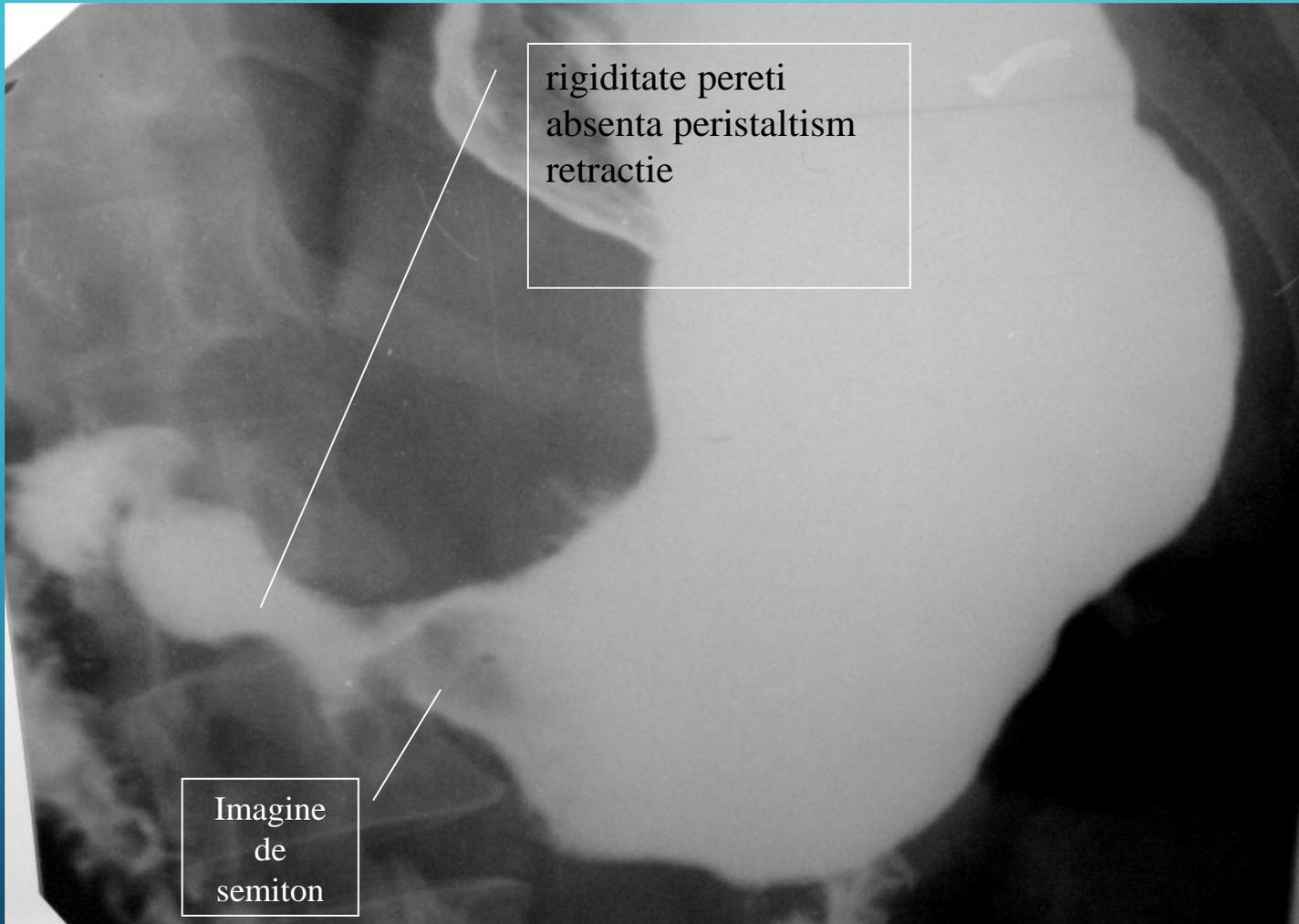


Forma proliferativa (vegetanta):
imagine lacunara, contur neregulat,
imagini de semiton, pinteni maligni.

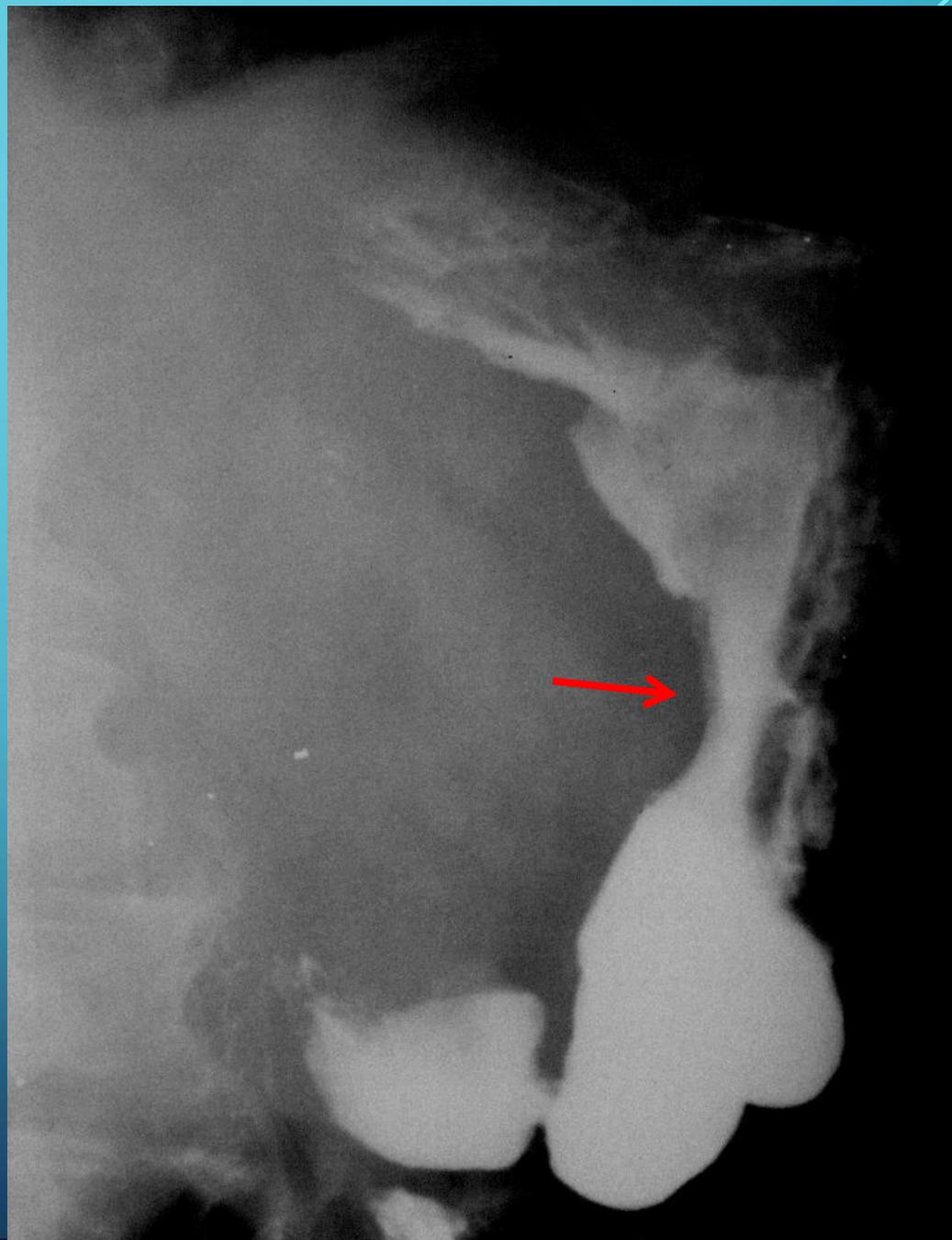
FORMA VEGETATIV-INFILTRATIVA



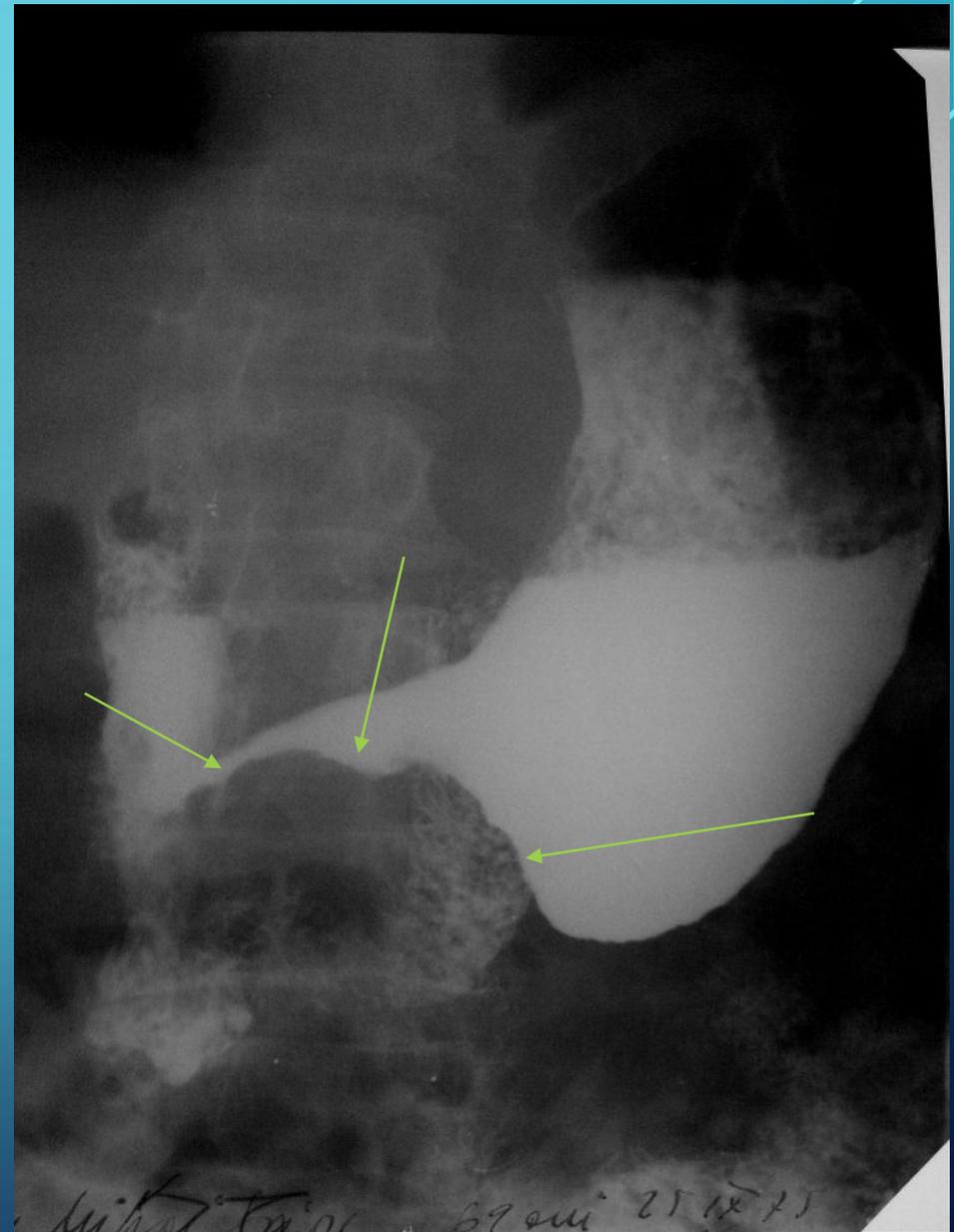
FORMA INFILTRATIVA



FORMA INFILTRATIVA



Forma infiltrativa

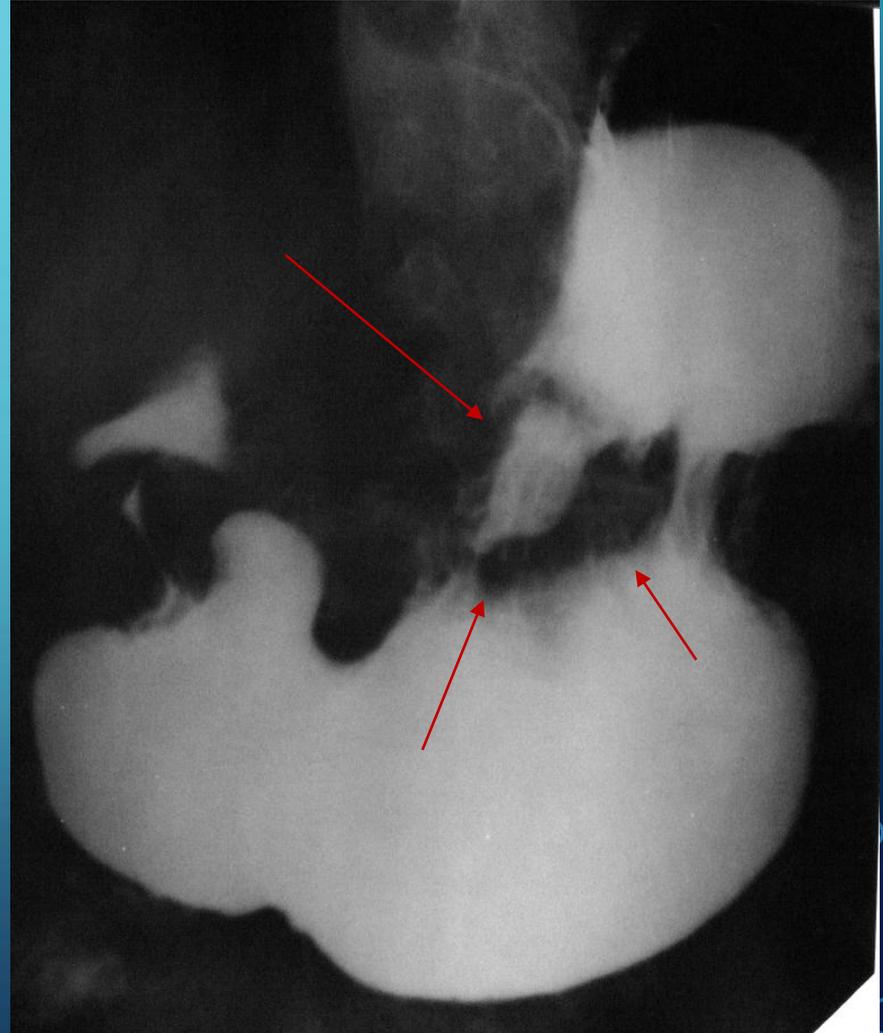
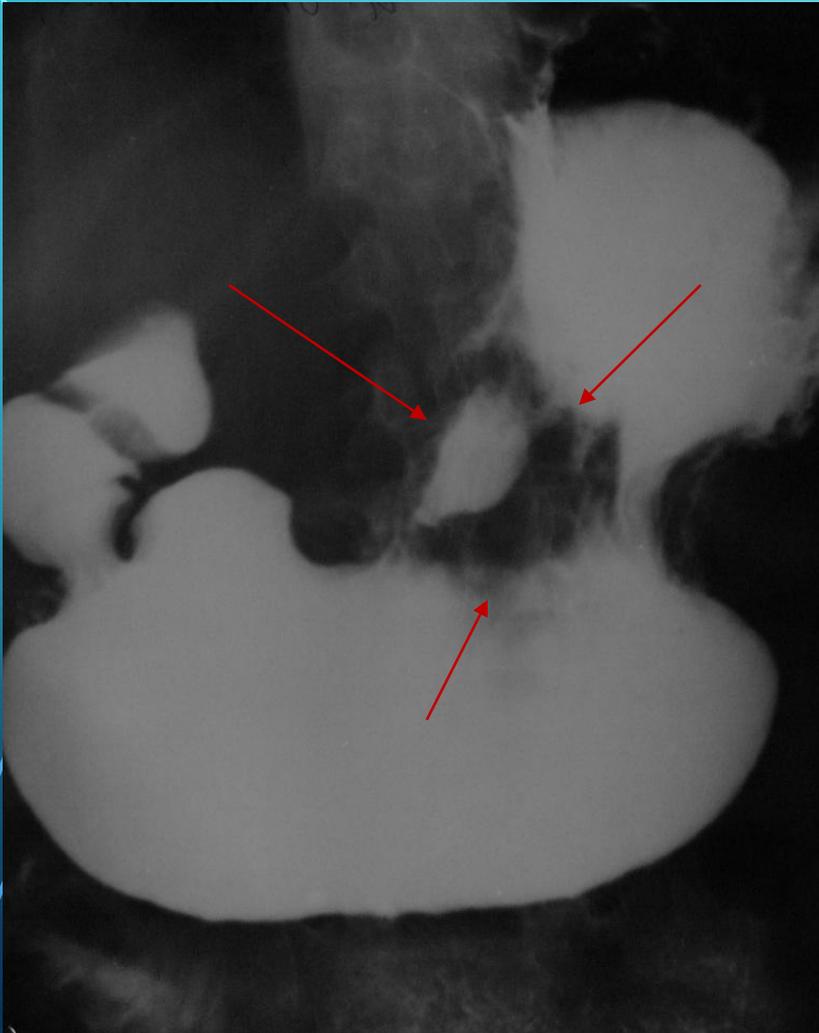


FORMA ULCERANTA

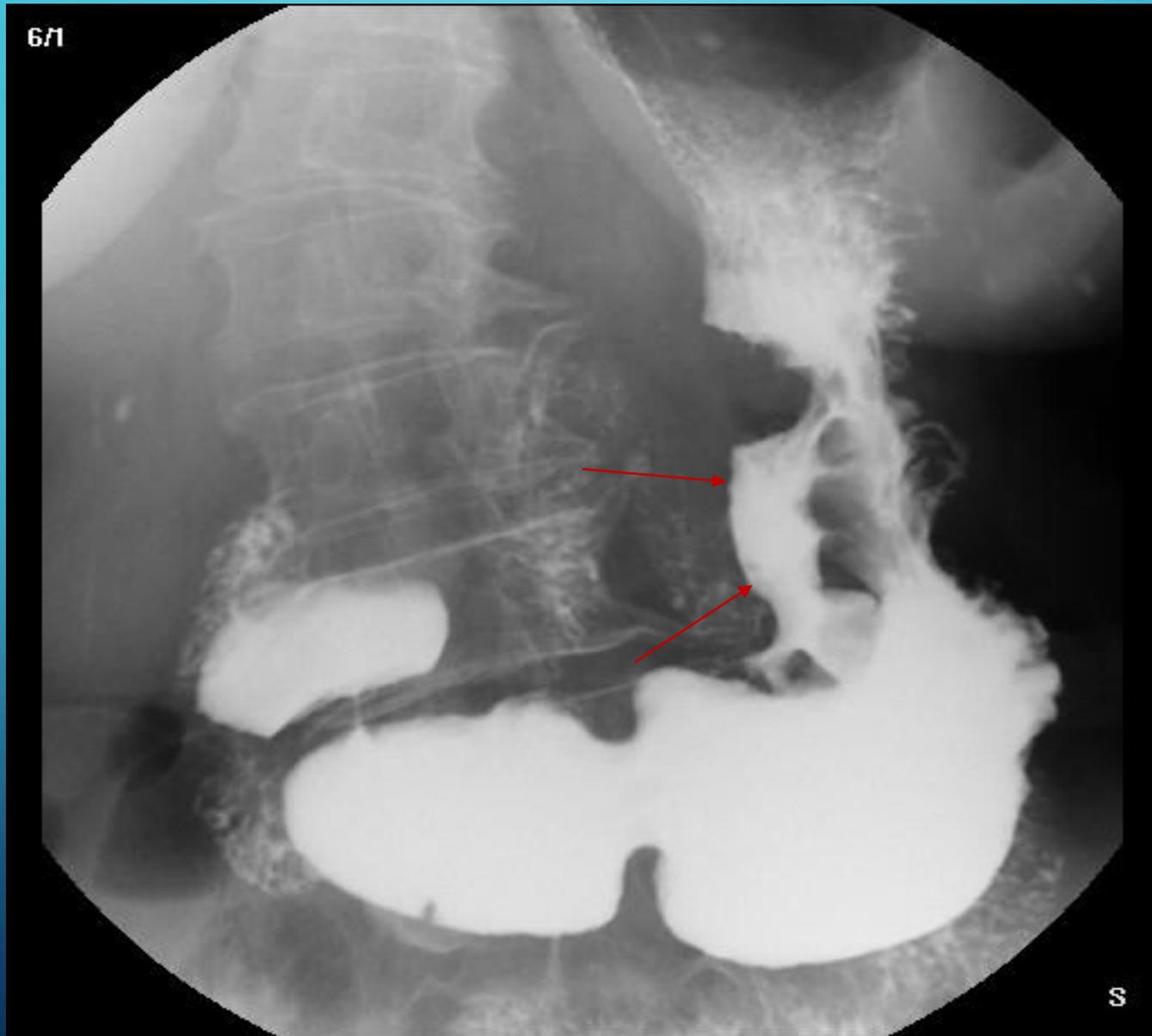
Nisa maligna retrasa
din **contur**, dezvoltata
pe o zona rigida



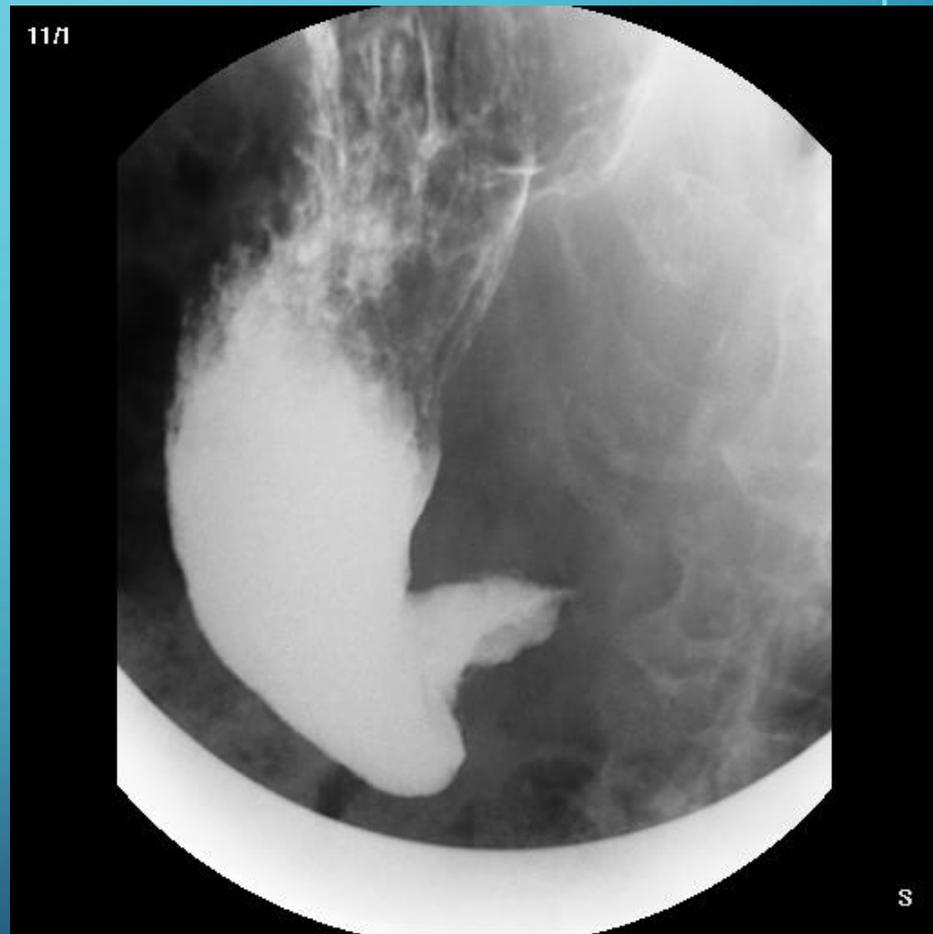
Forma ulceranta



Nisa maligna



Stenoza maligna antro-pilorica

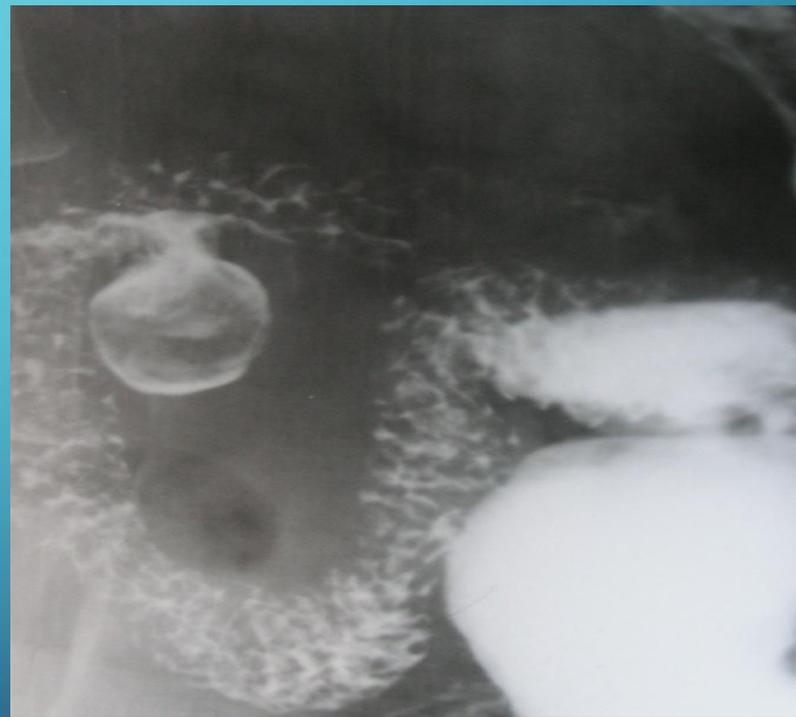


DIVERTICULUL DUODENAL

- dereglare locala de contur cu formarea formațiunii sacciforme în peretele duodenal.



Pe conturul extern D2

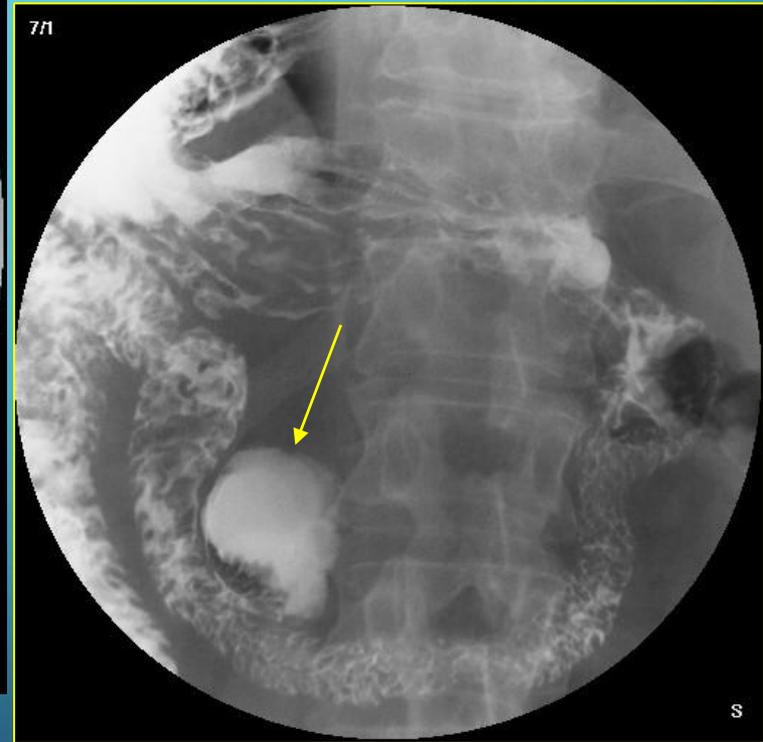


Pe conturul intern D1

Diverticuli duodenali

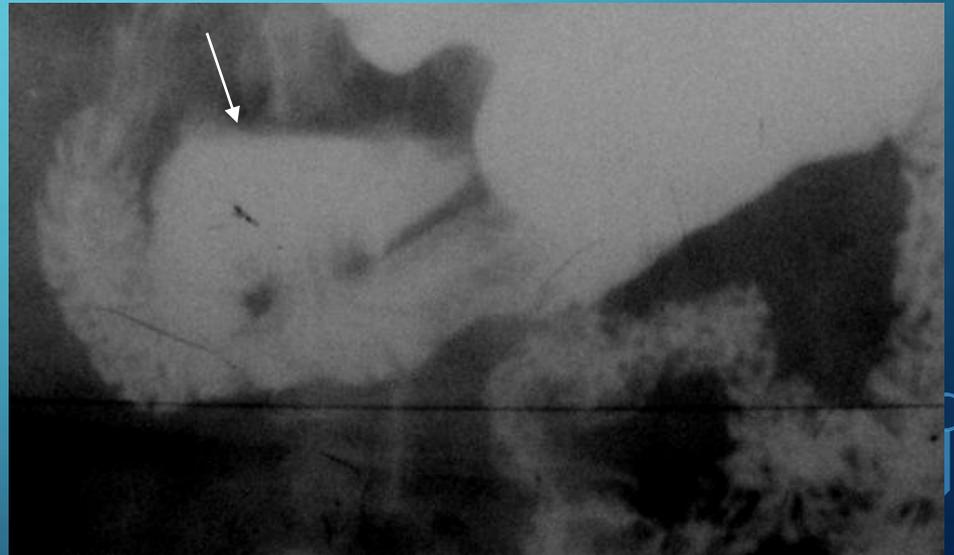


Pe conturul intern D3

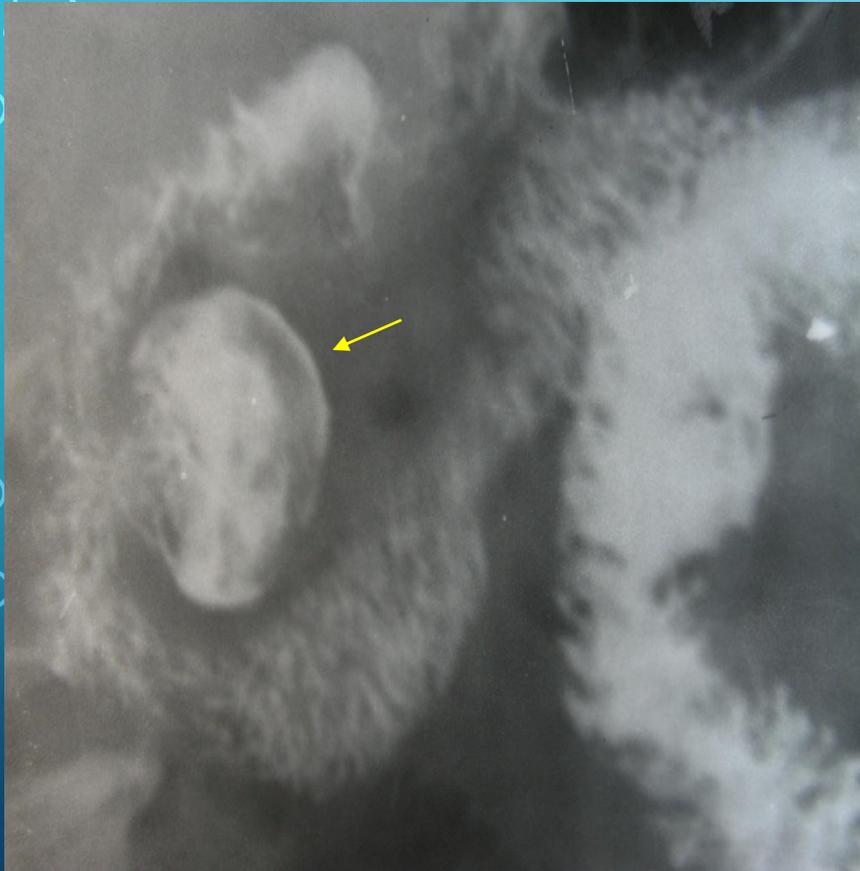


Pe conturul intern D2

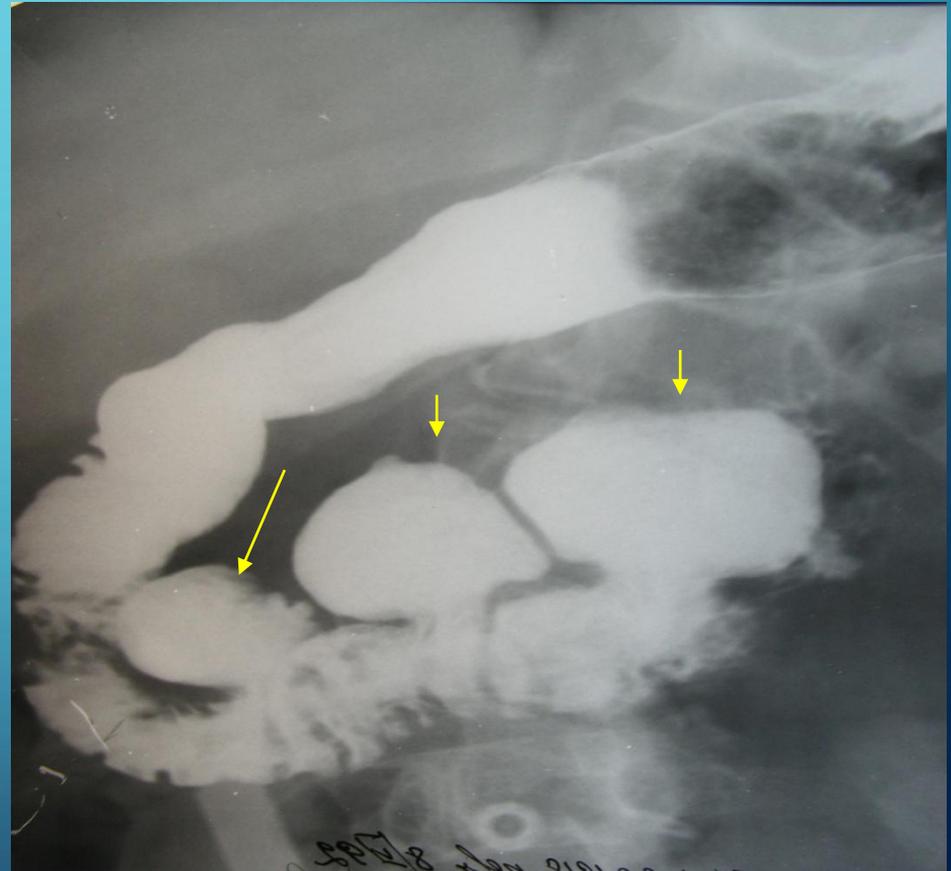
DIVERTICUL DUODENAL PE CONTURUL INTERN D3



DIVERTICULUL DUODENAL

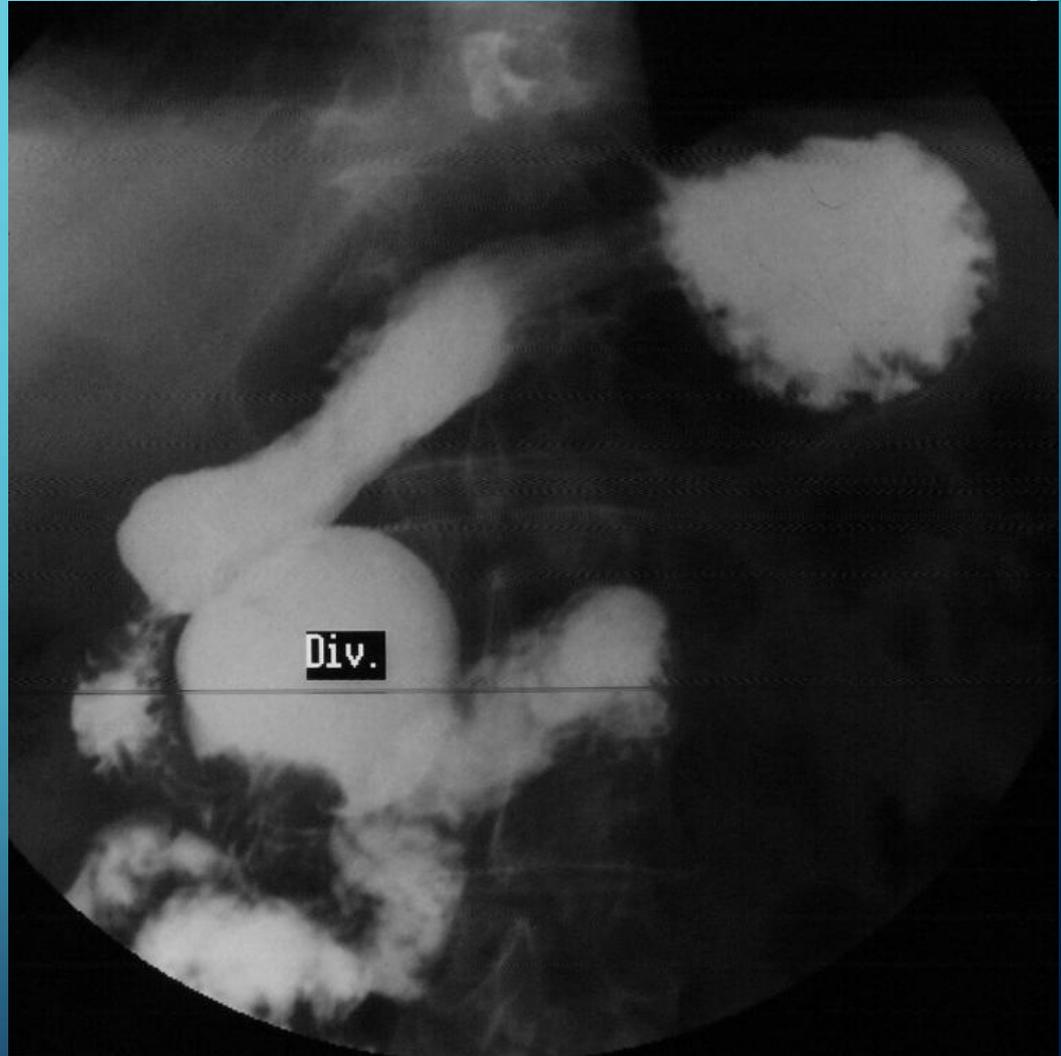


Pe conturul intern D2



Pe conturul intern D3

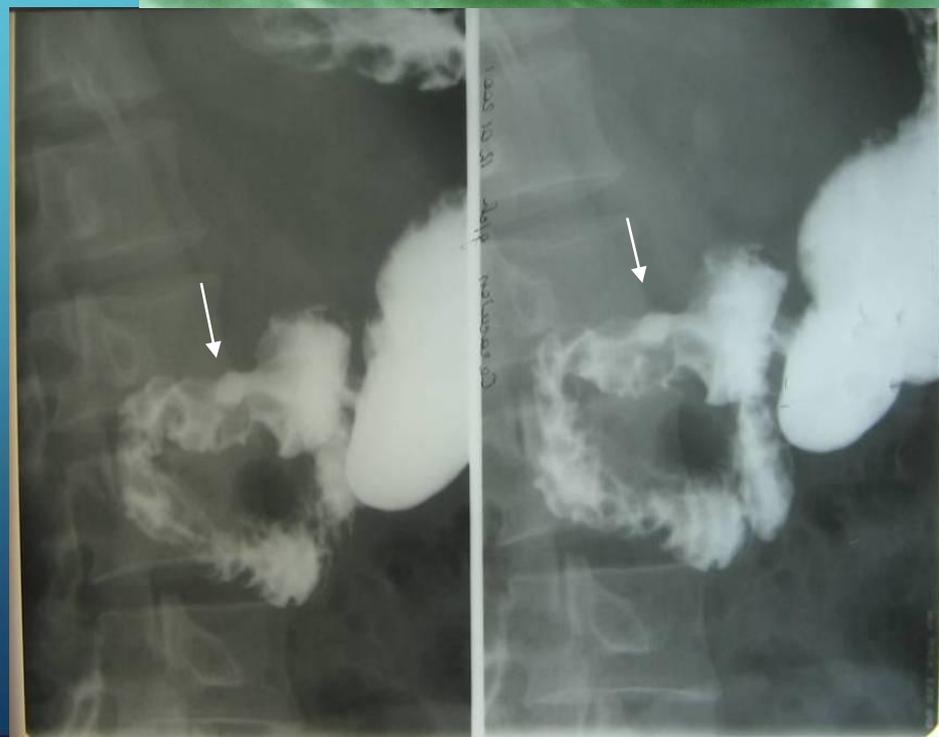
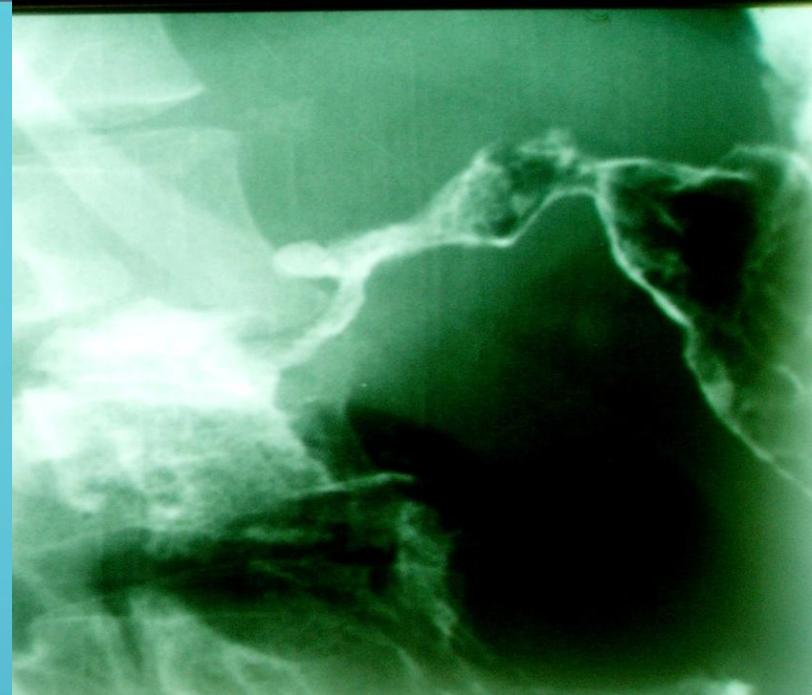
DIVERTICULI DUODENALI D4



ULCERELE DUODENALE BULBARE ȘI POSTBULBARE

SEMIOTICA RADIOLOGICĂ

- Simptomul nișei
- Halou inflamator în jur
- Convergență de pliuri
- Deformații postulceroase a duodenului
- Hipersecreție gastrică și reflux duodeno-gastral
- Dereglări evacuatorii



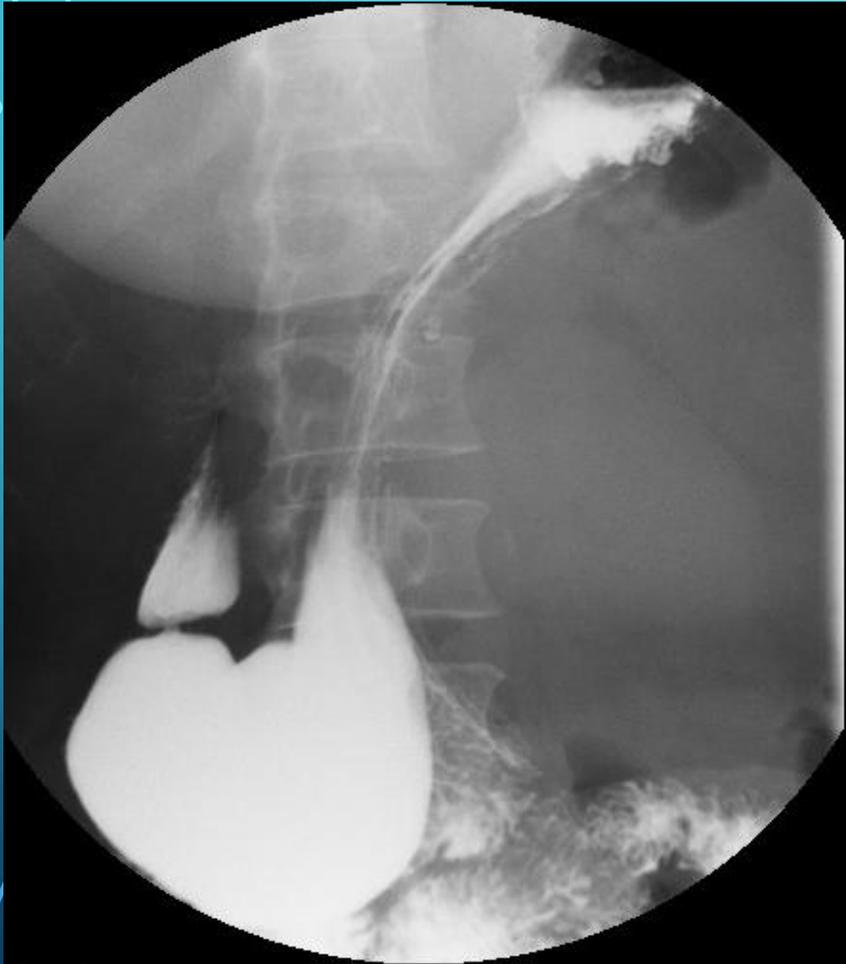
Imagine de nisa: *plus de umplere*



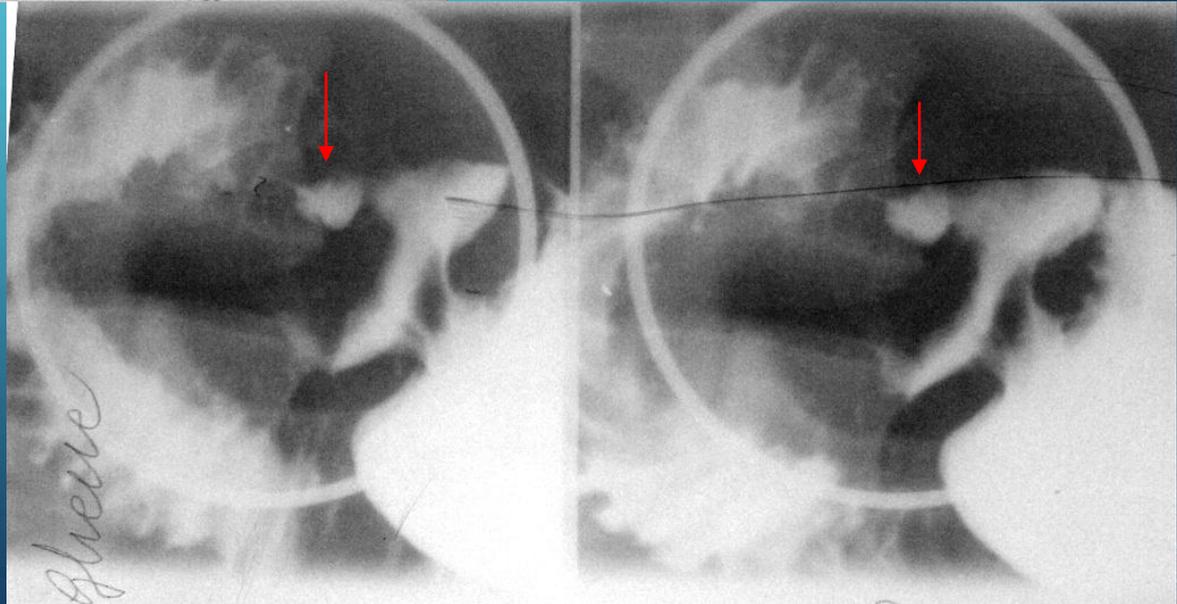
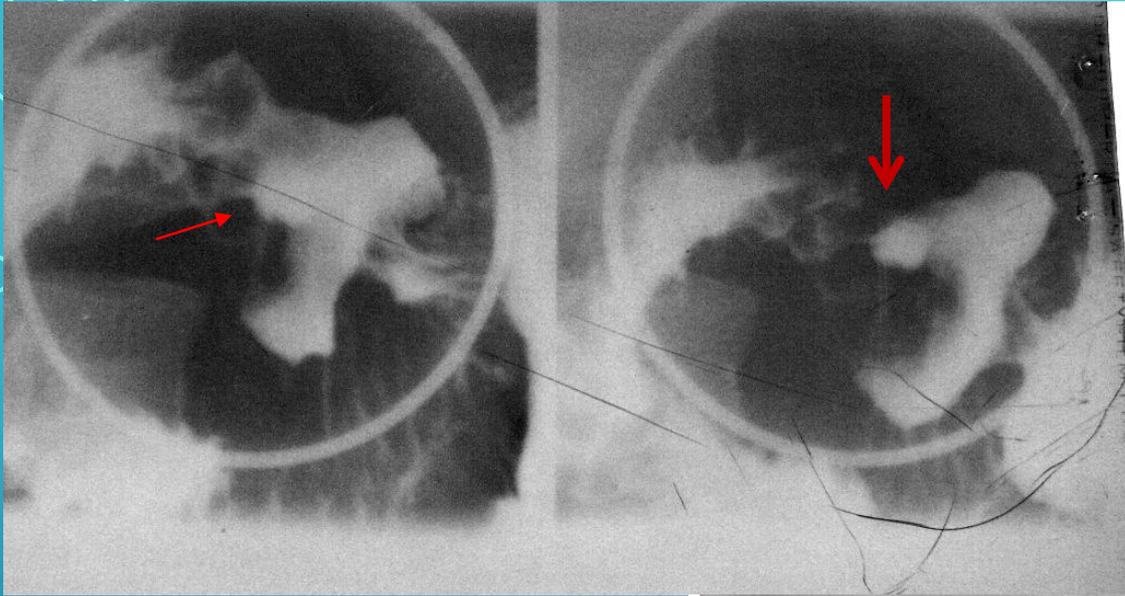
ULCERE BULBARE IN OGLINDA



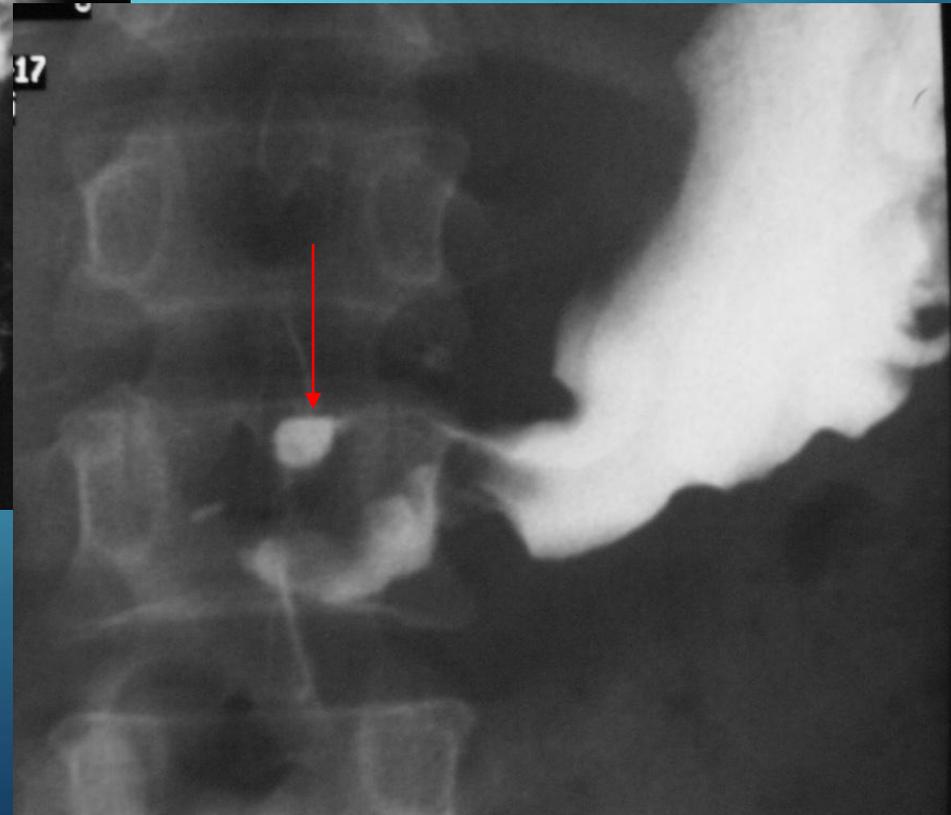
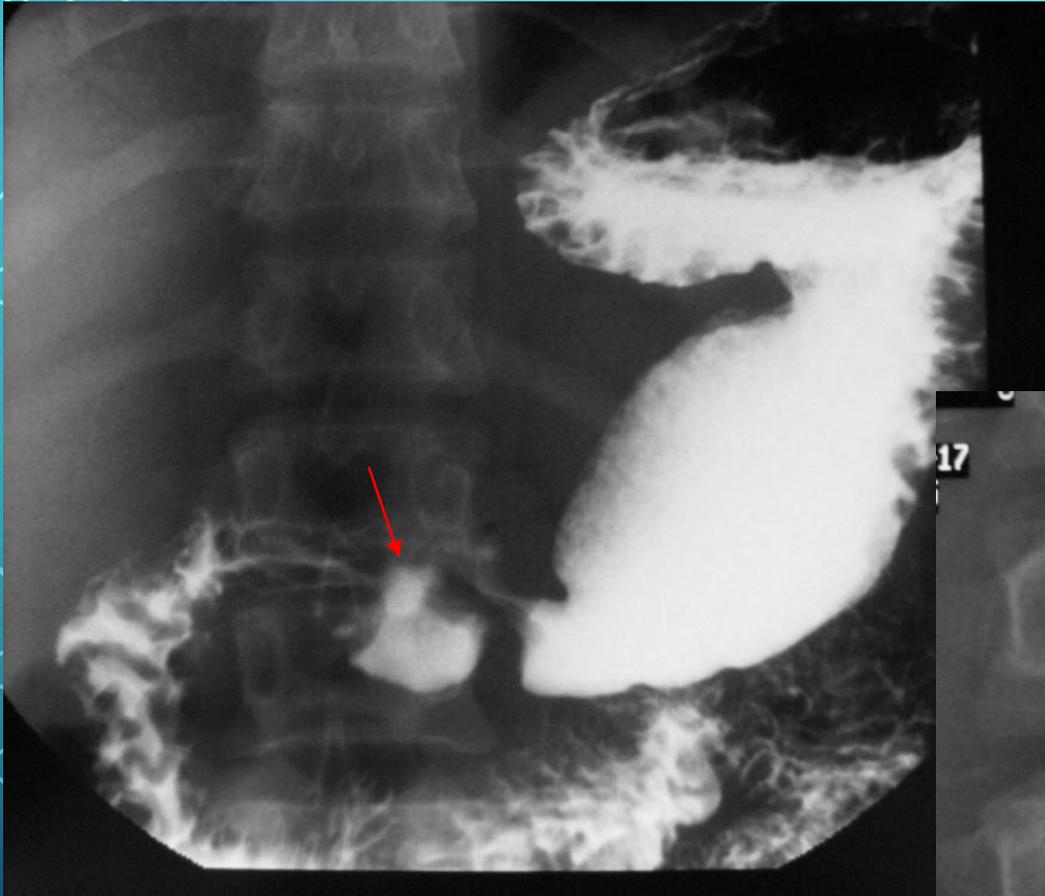
BULB DD NORMAL VS DEFORMAT "TRIFOI"



ULCER BULB DUODENAL (NISA)

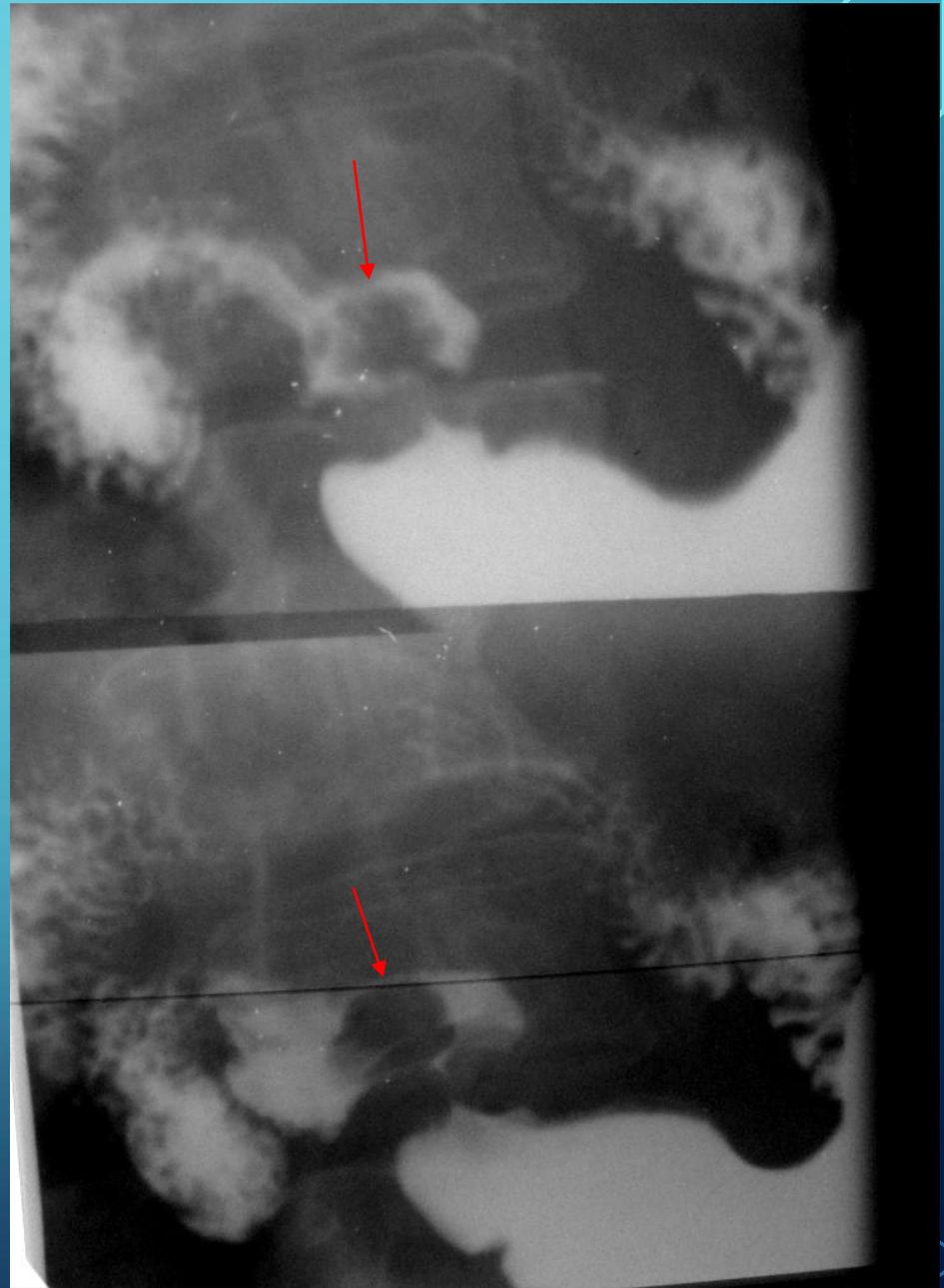
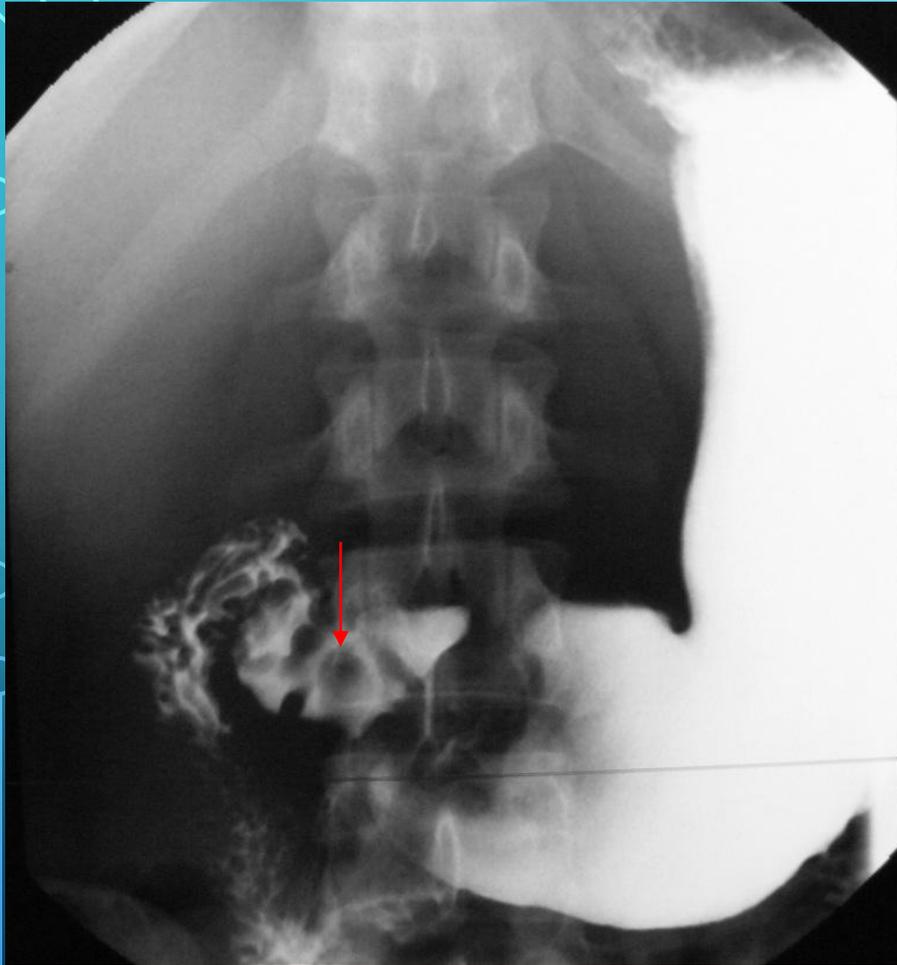


ULCER DUODENAL/ COMPRESIE

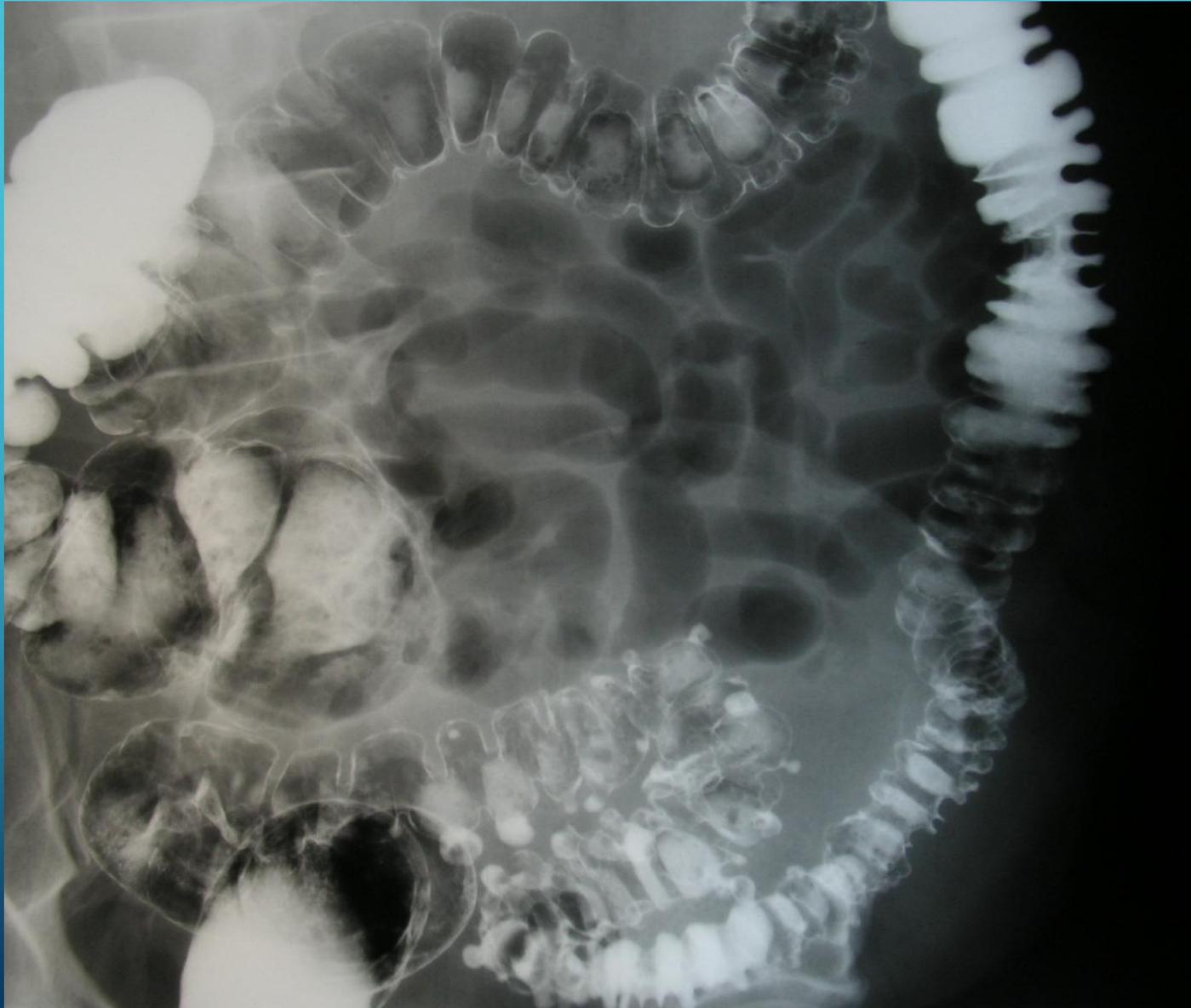


POLIP BULBAR

(DEFECT DE UMLERE)



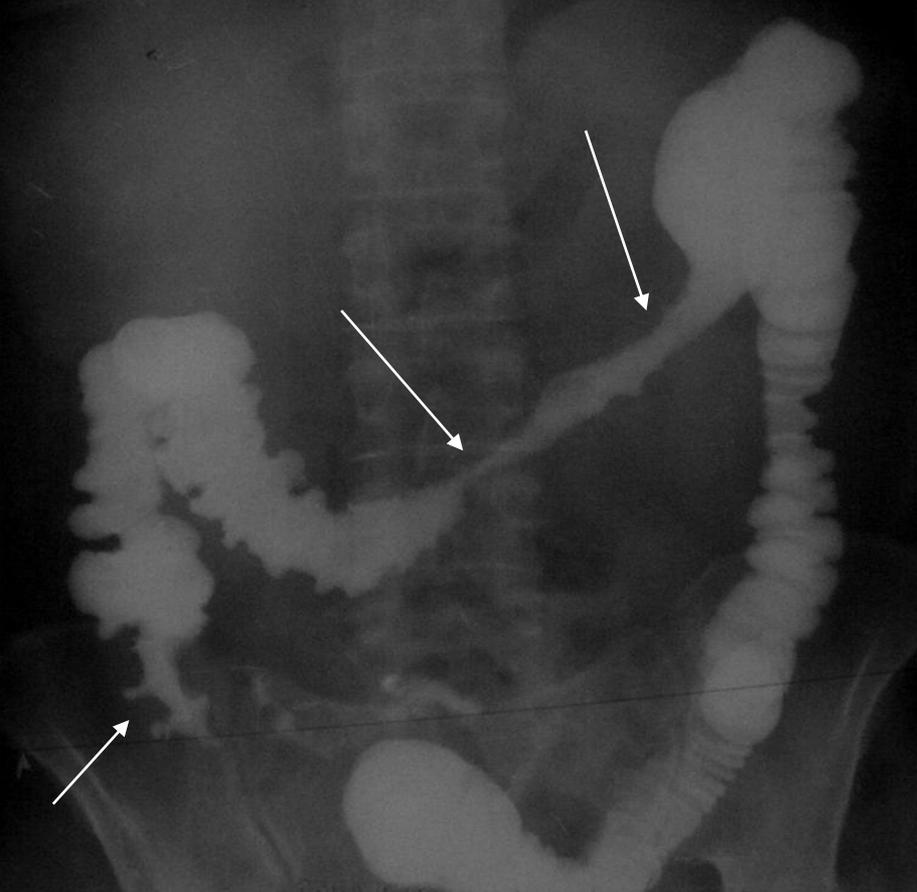
IRIGOGRAFIE



IRIGOGRAFIE

- Rectocolita hemoragica

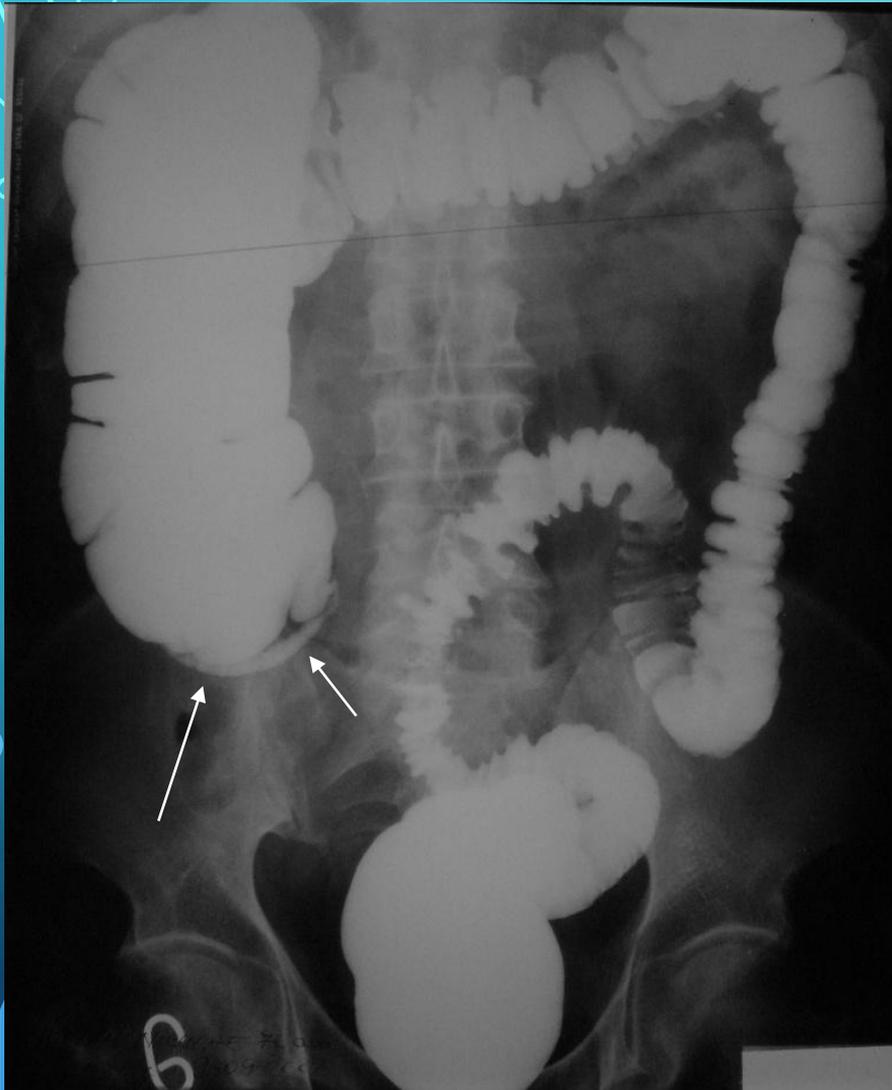




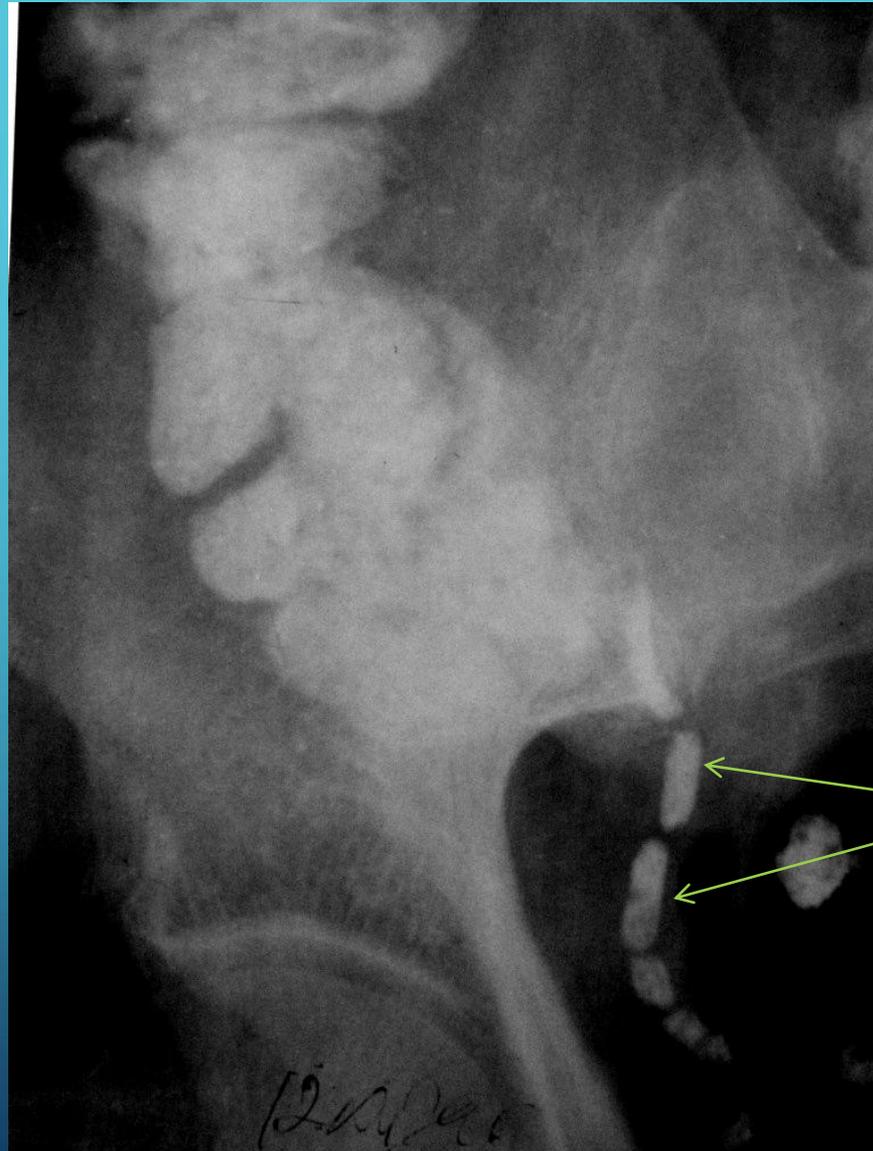
Boala Crohn



APENDICE VERMIFORM



APENDICITA CRONICA

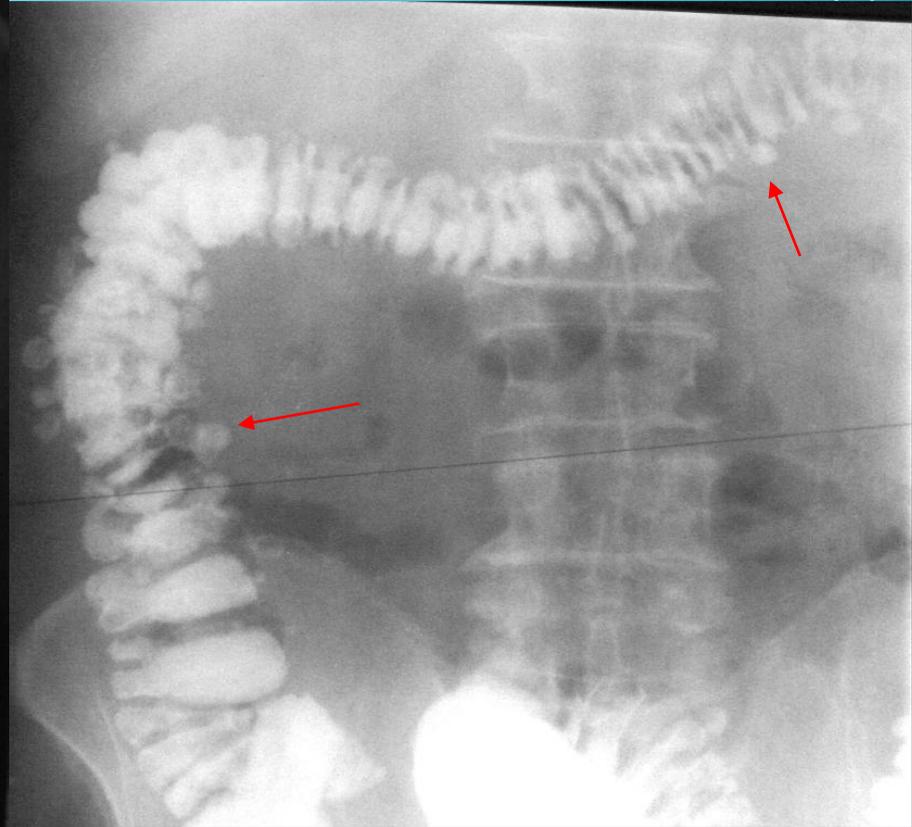
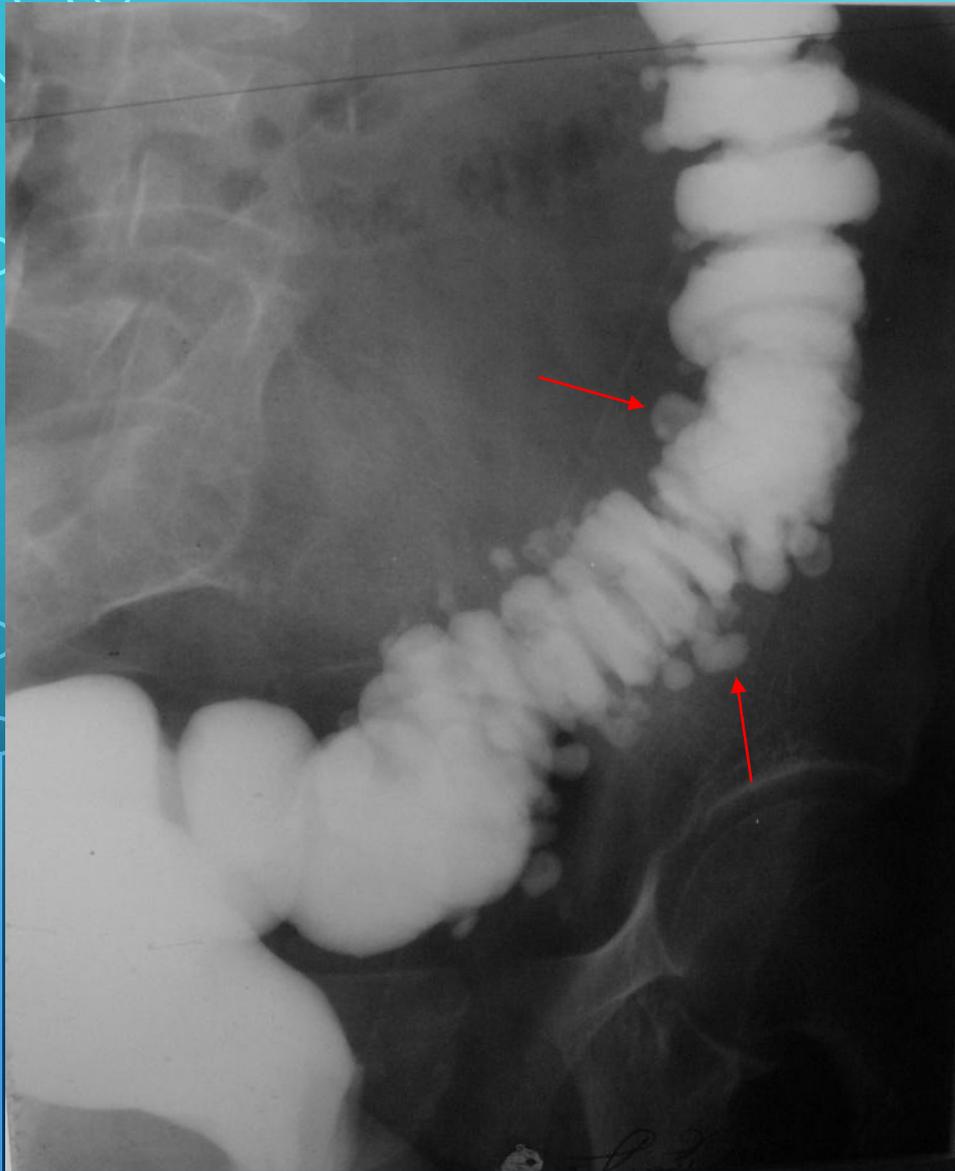


Coproliti

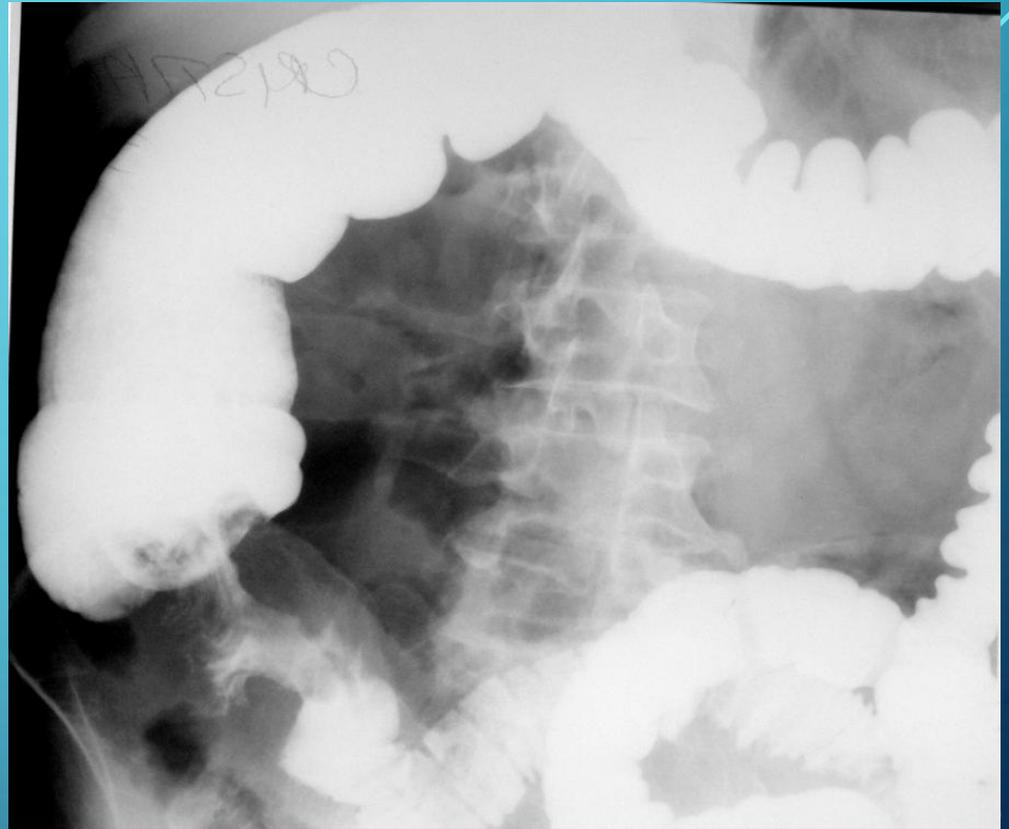
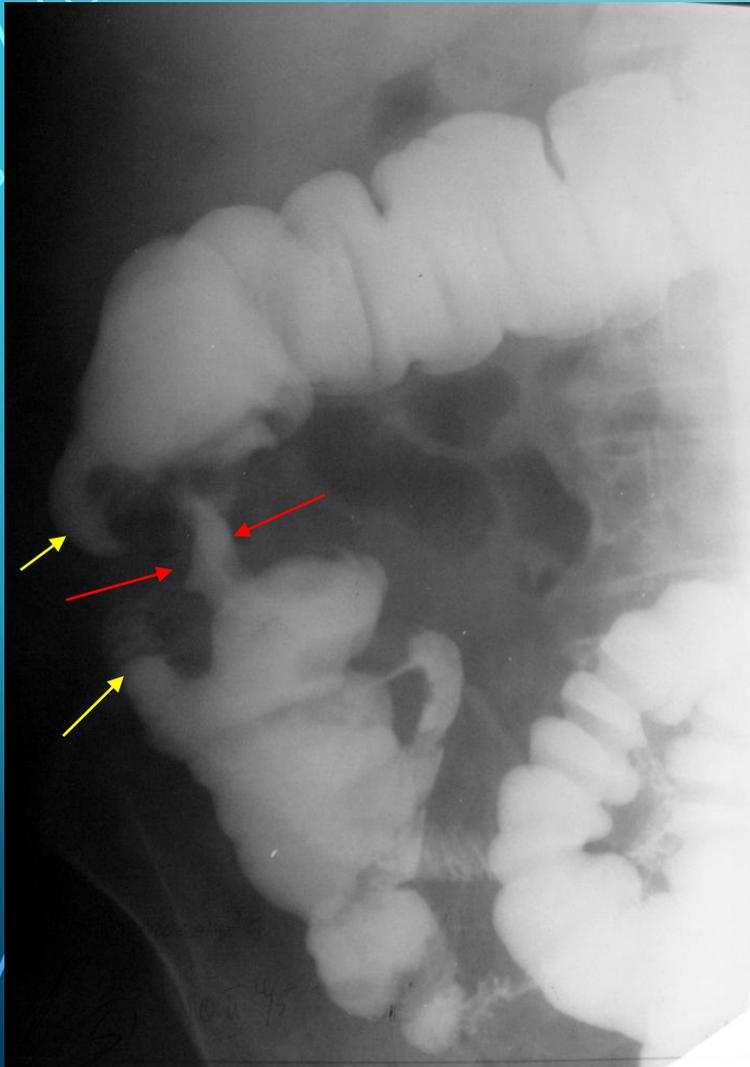
PTOZA DE COLON TRANSVERS



DIVERTICULI – PLUS DE UMPLERE



CANCER PREDOMINANT INFILTRATIV



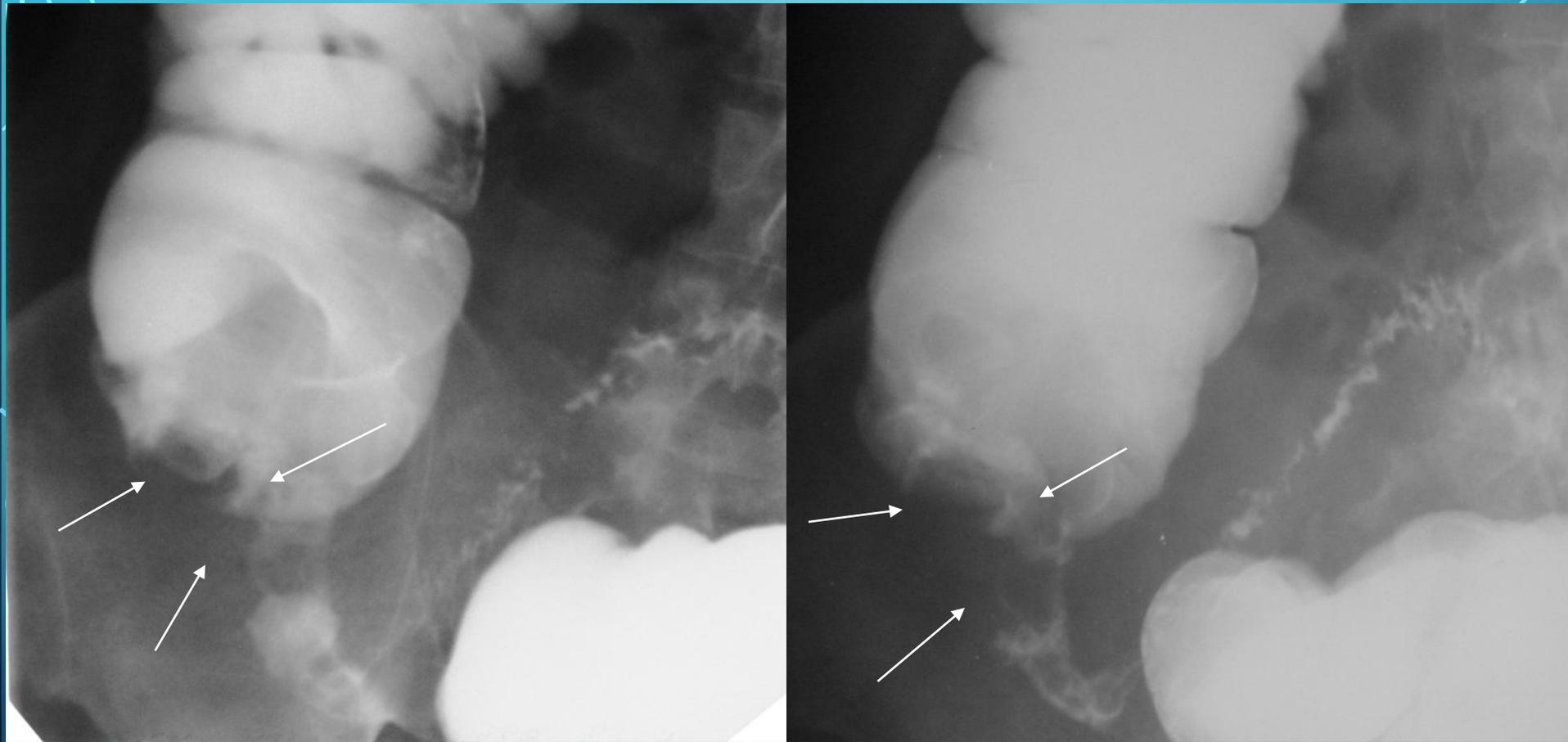
Stenoza concentrica cu pasajul
substantei baritate, **pinteni maligni** si
imagini de semiton – realizeaza
imaginea de “cotor de mar”.

IRIGOGRAFIE

Cancer infiltrativ colon sigmoid (cotor de mar)

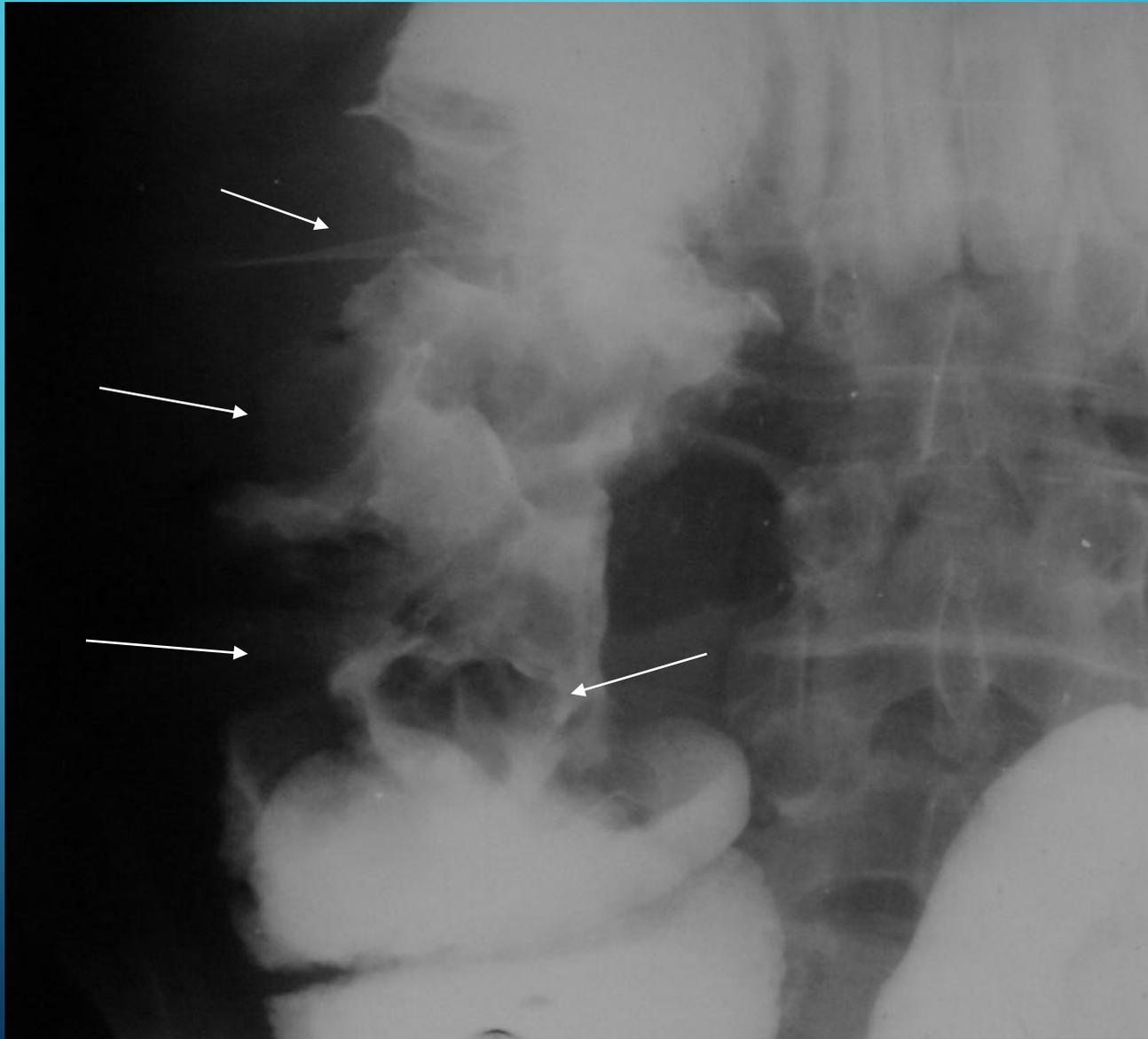


CANCER VEGETATIV CECAL



Imagine lacunara (defect de umplere) ce intereseaza regiunea cecala, cu pinten malign si imagine de semiton.

Cancer vegetant ceco-ascendent



APENDICITA ACUTA RETROCECALA (CT)

MARIREA IN DIMENSIUNI A APENDICELUI VERMIFORM (DIAMETRU >6MM);
INFILTRATIE INFLAMATORIE PERICECALA/PREZENTA COPROLITILOR

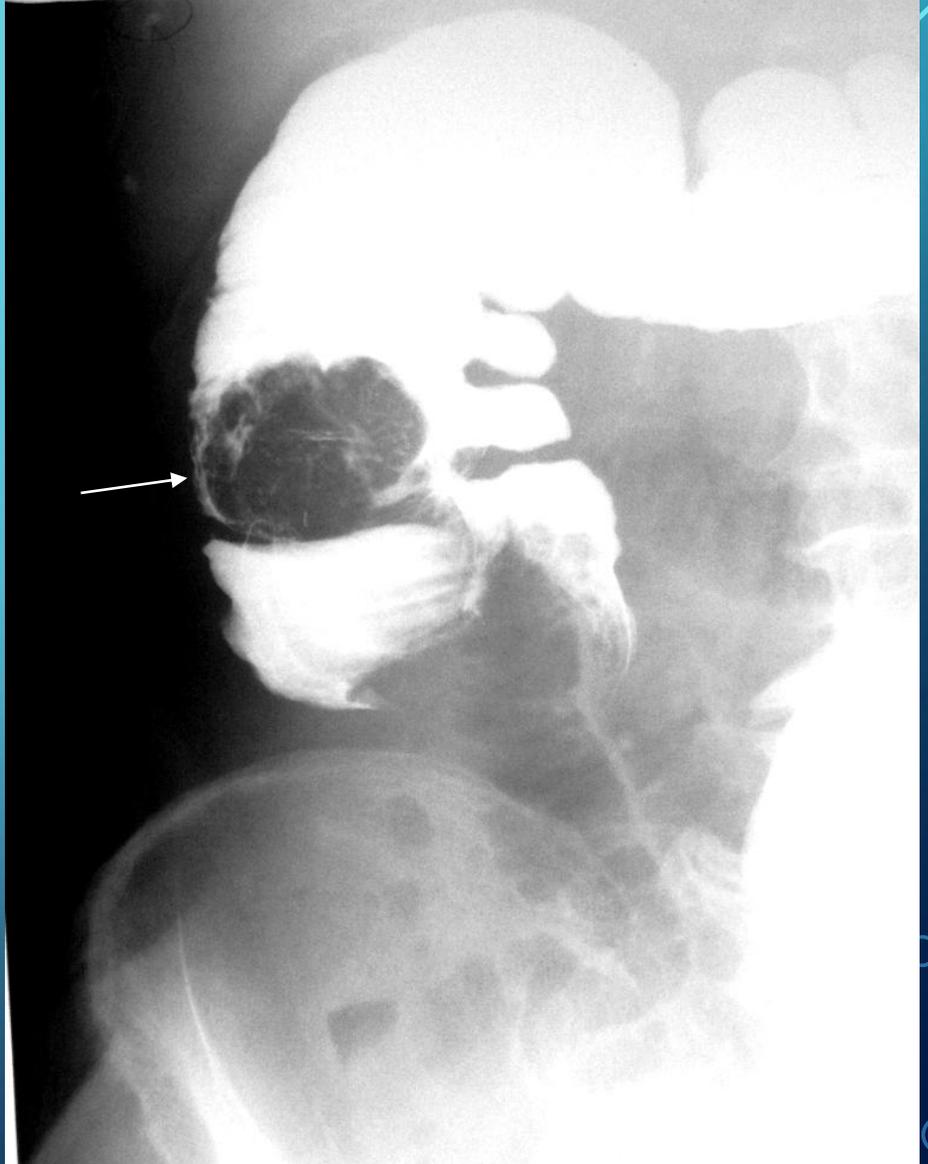
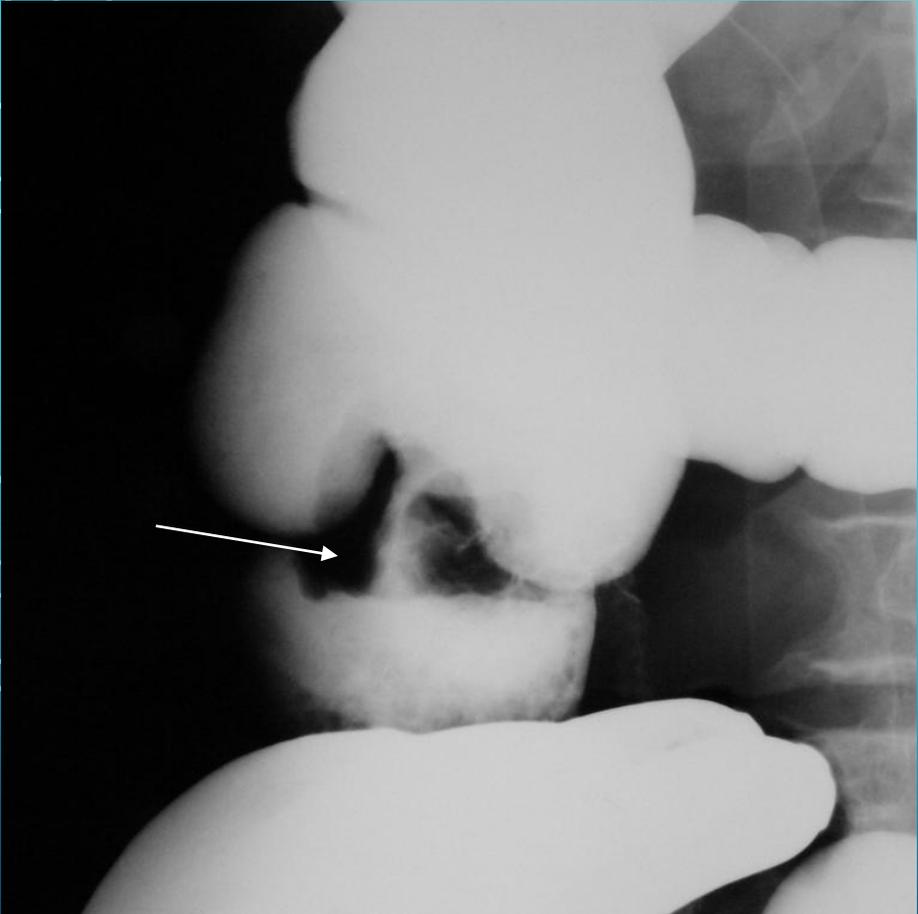


Plan sagital

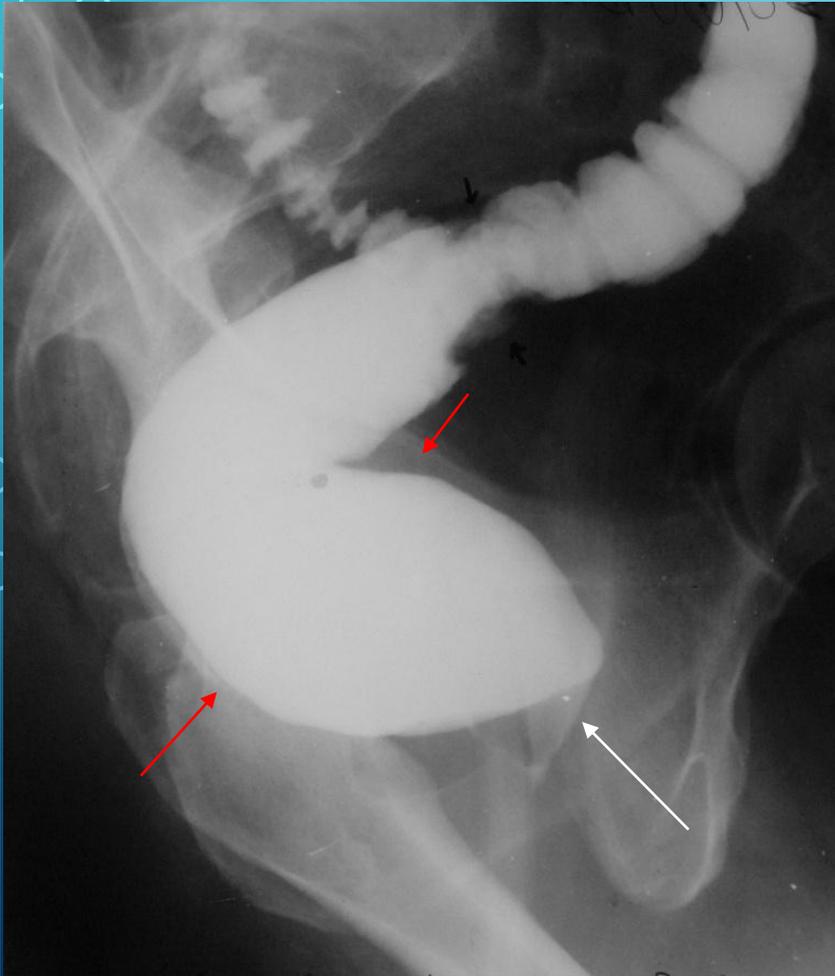


Plan coronal

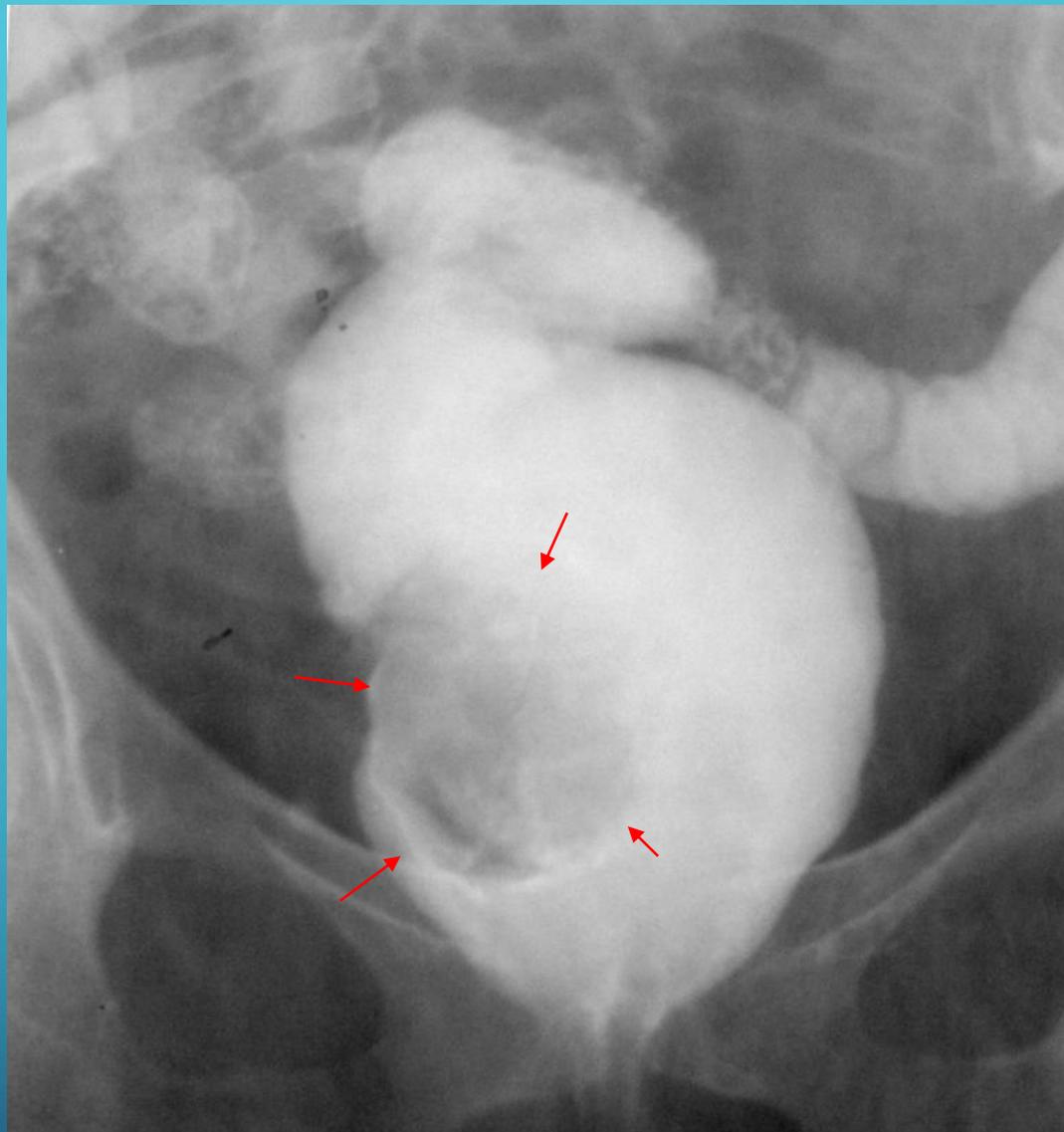
CANCER VEGETATIV-INFILTRATIV



STENOZA SIGMOIDIANA MALIGNA

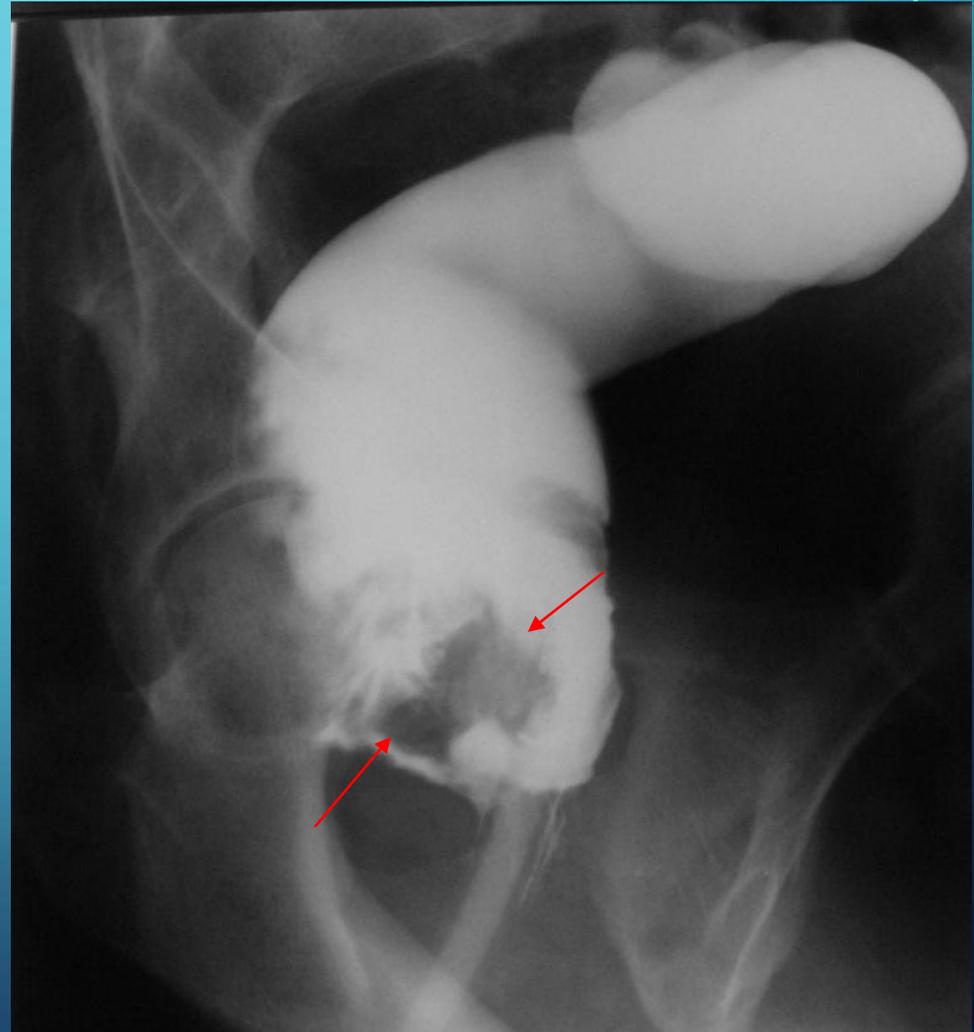


cu dilatare intestinala
supraiacenta



IMAGINE LACUNARA (DEFECT DE UMLERE) LA NIVELUL PERETELUI POSTERO-LATERAL DREAPTA AL AMPULEI RECTALE, CONTUR NEREGULAT

CANCER VEGETANT RECTAL (IRIGOGRAFIE)



STOMACUL OPERAT

Fara rezectie gastrica

- vagotomie cu piloroplastie
- sutura ulcerului
- gastroentero-anastomoze

Cu rezectie gastrica

- anastomoza gastroduodenala T-T tip Pean-Billroth I
- anastomoza gastro-jejunala T-L tip Reichel-Polya
- anastomoza gastro-jejunala T-L tip Hoffmeister-Finsterer

MANIFESTARI PATOLOGICE POSTOPERATORII

La nivelul bontului:

- gastrita
- ulcerul peptic
- invaginatia
- cancerul

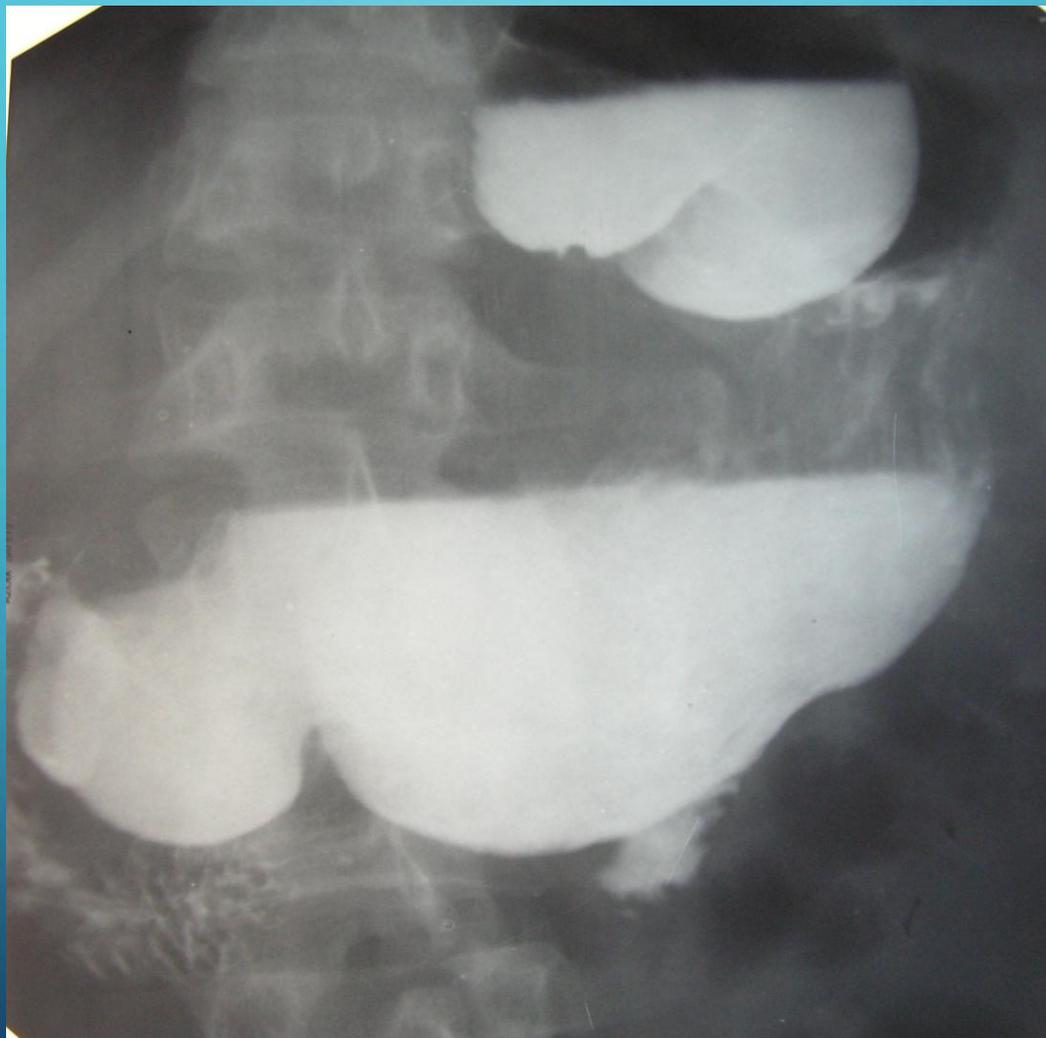
La nivelul anastomozei

- stomita

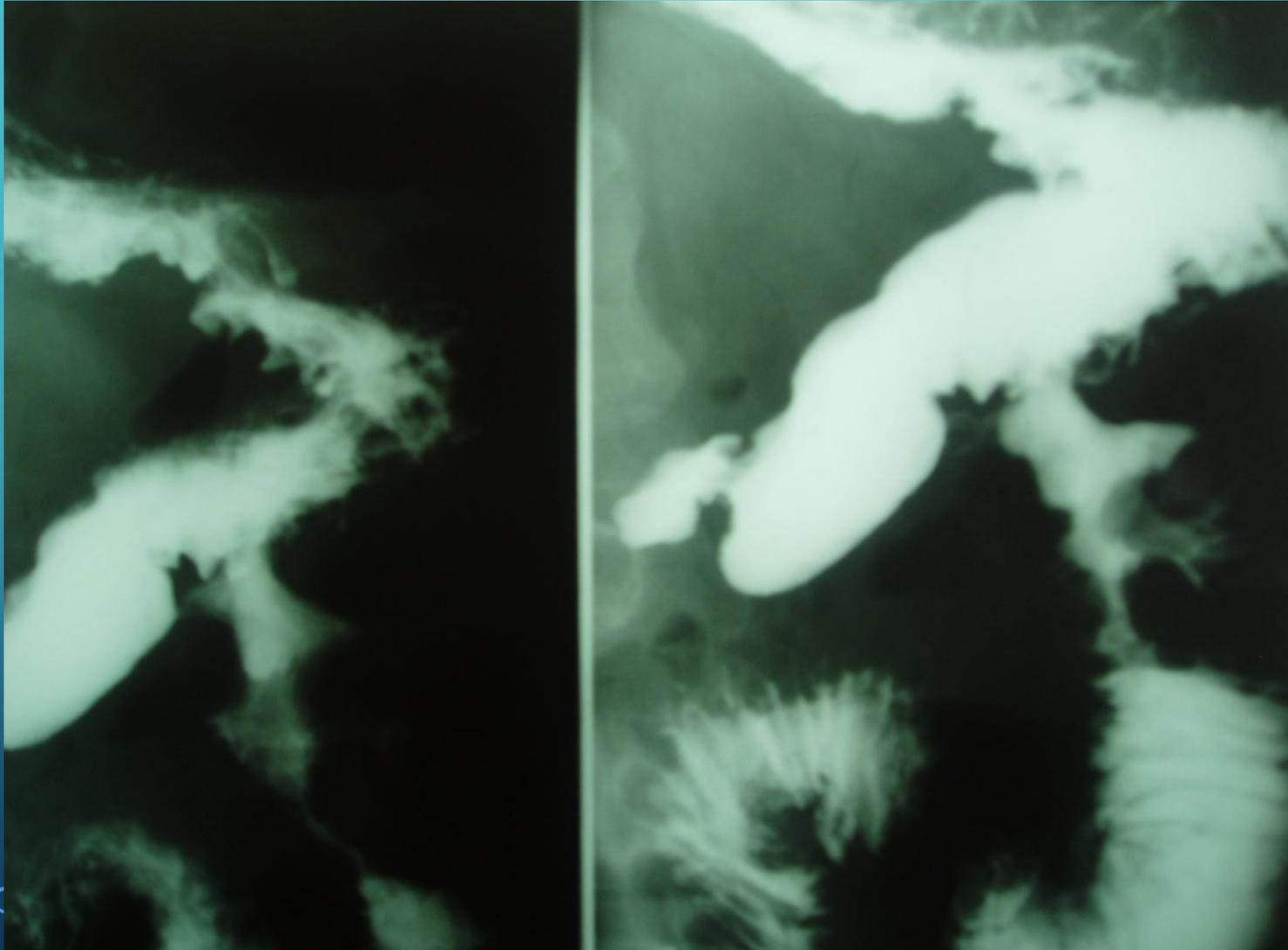
La nivelul anselor anastomotice

- ulcerul peptic
- sindr. de ansa aferenta
- “dumping” sindrom – secundar unei evacuari rapide a bontului

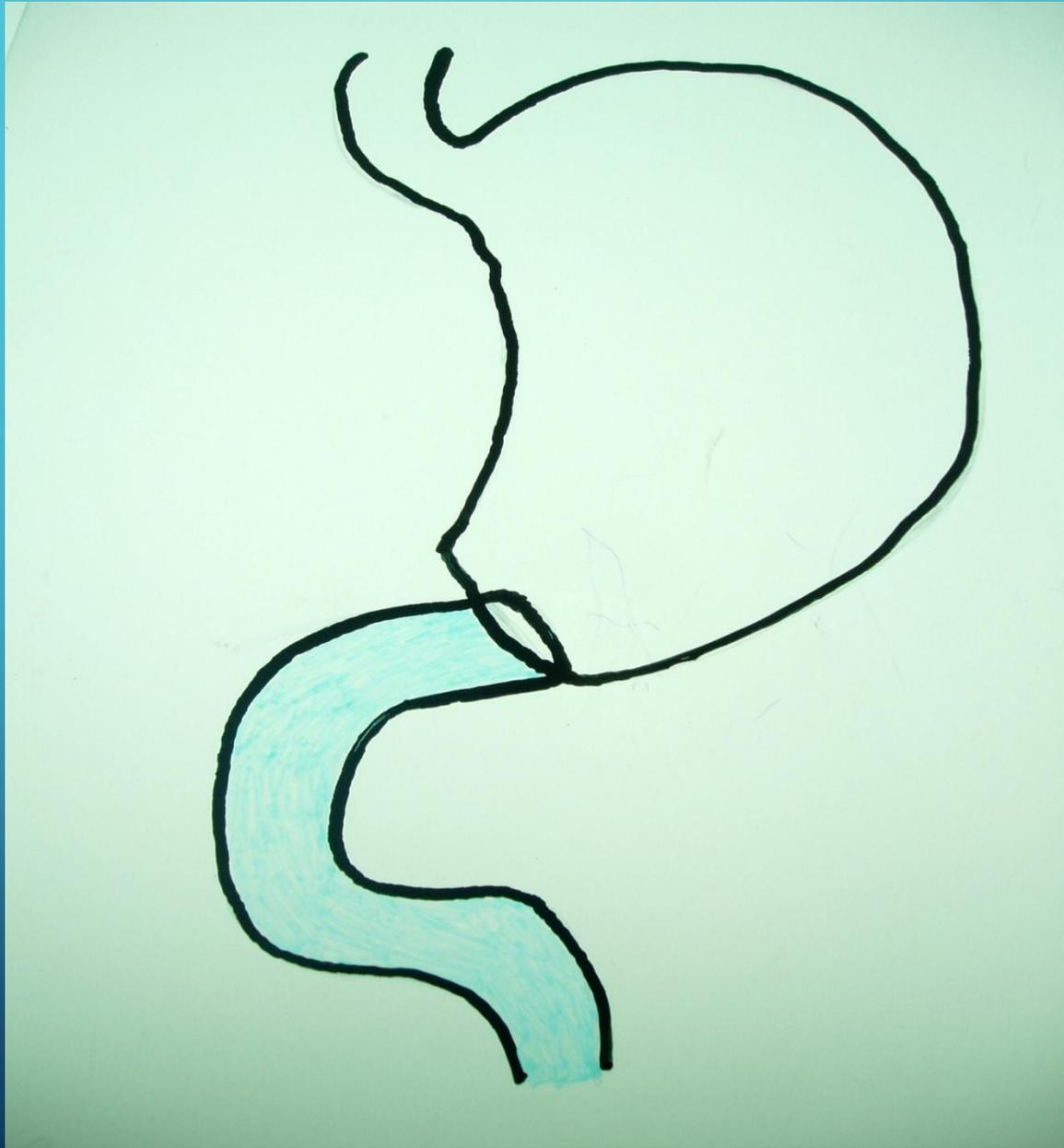
VSP



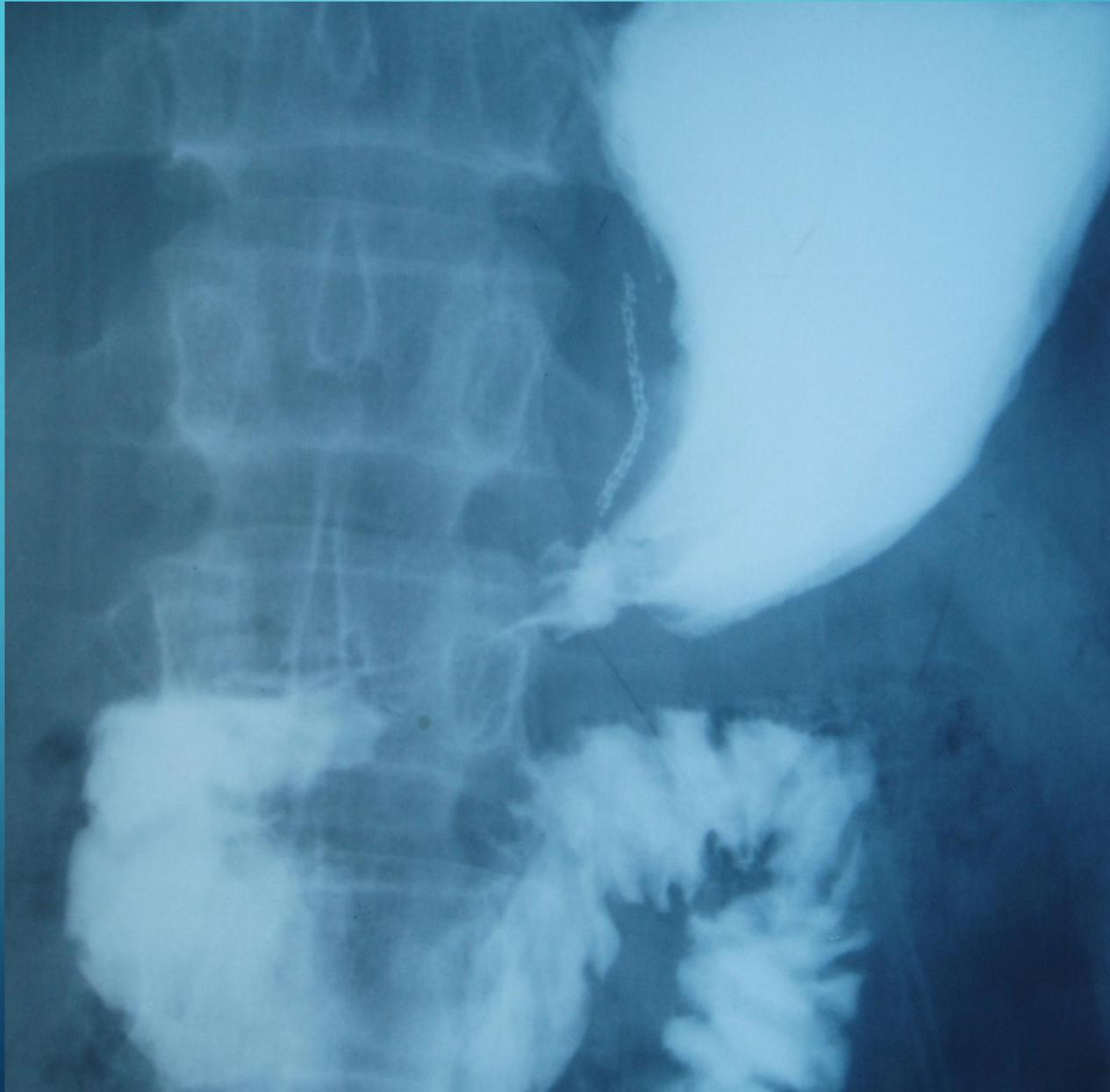
GEA



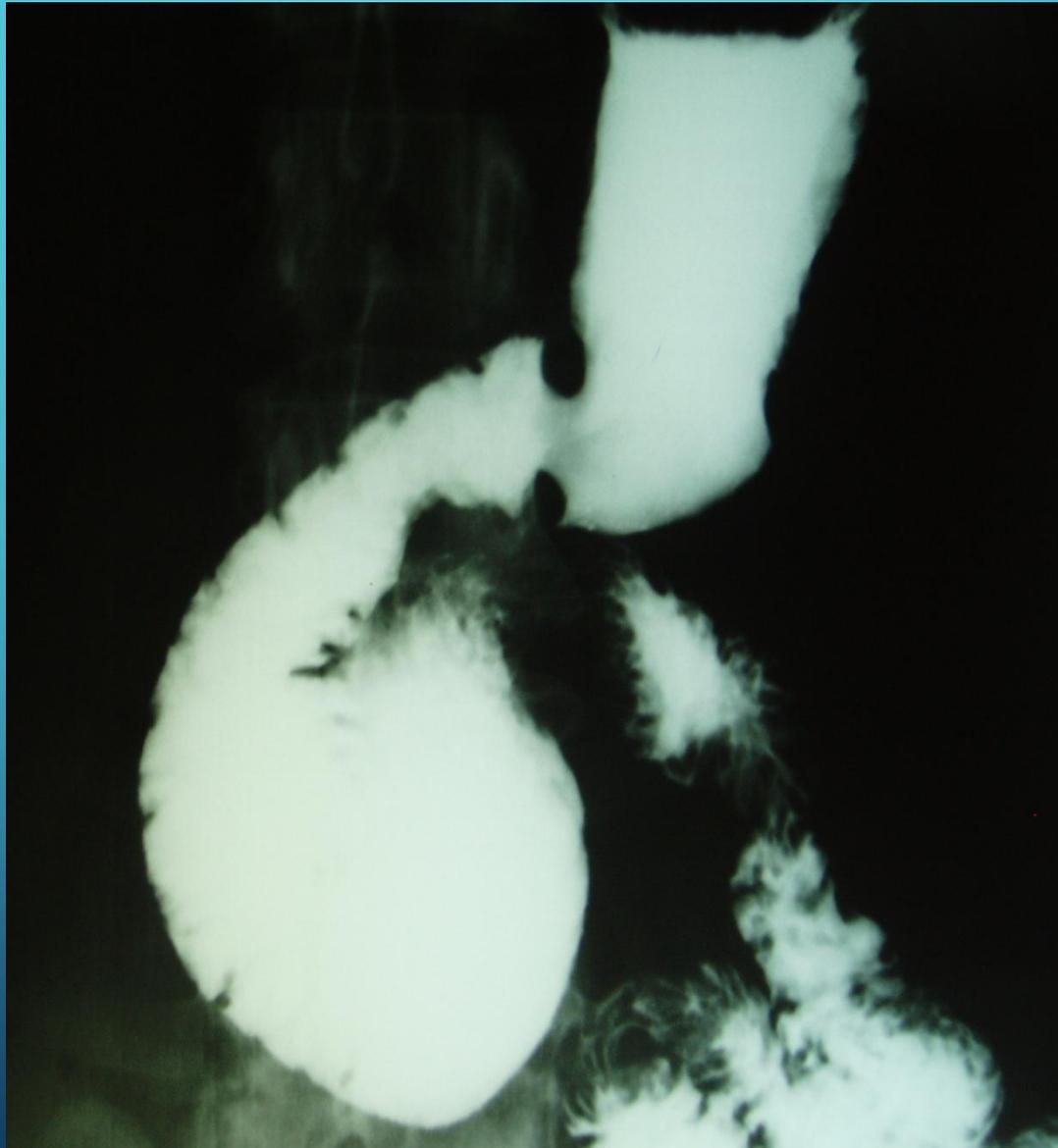
BILLROT-I



BILLROT-I



BILLROT-I



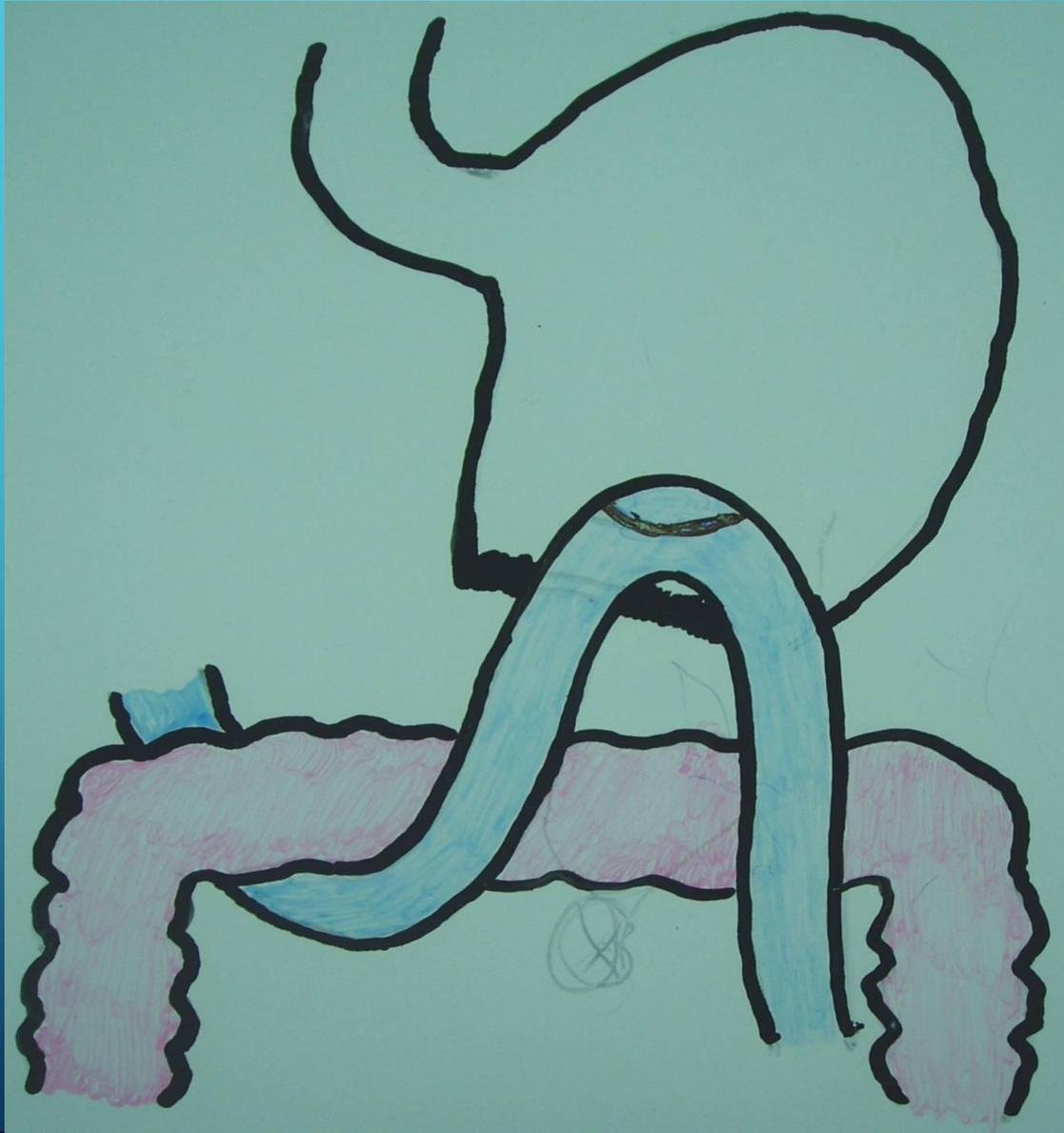
BILLROT-II REICHEL-POLYA



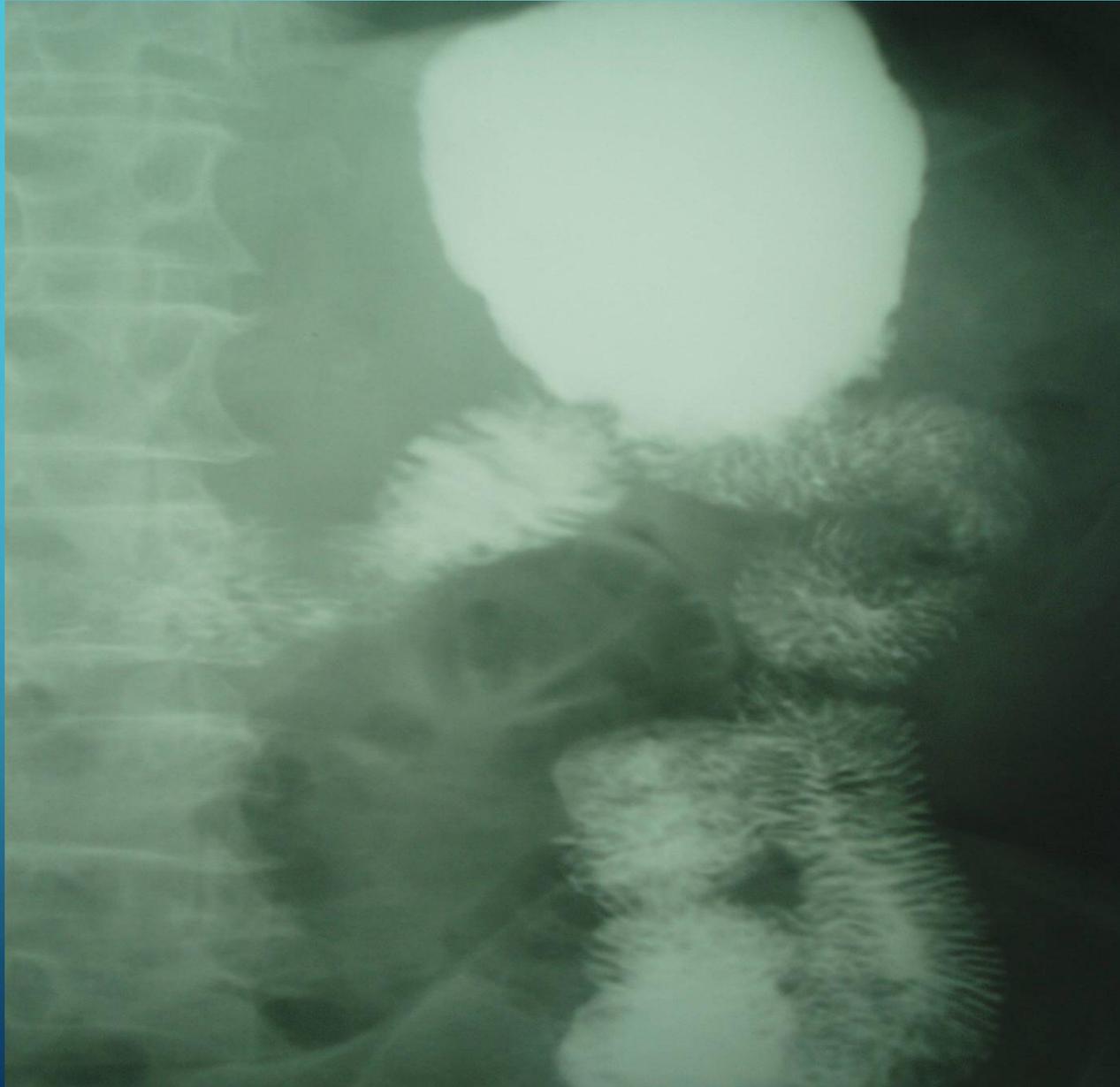
BILLROT-II MAINIGENU



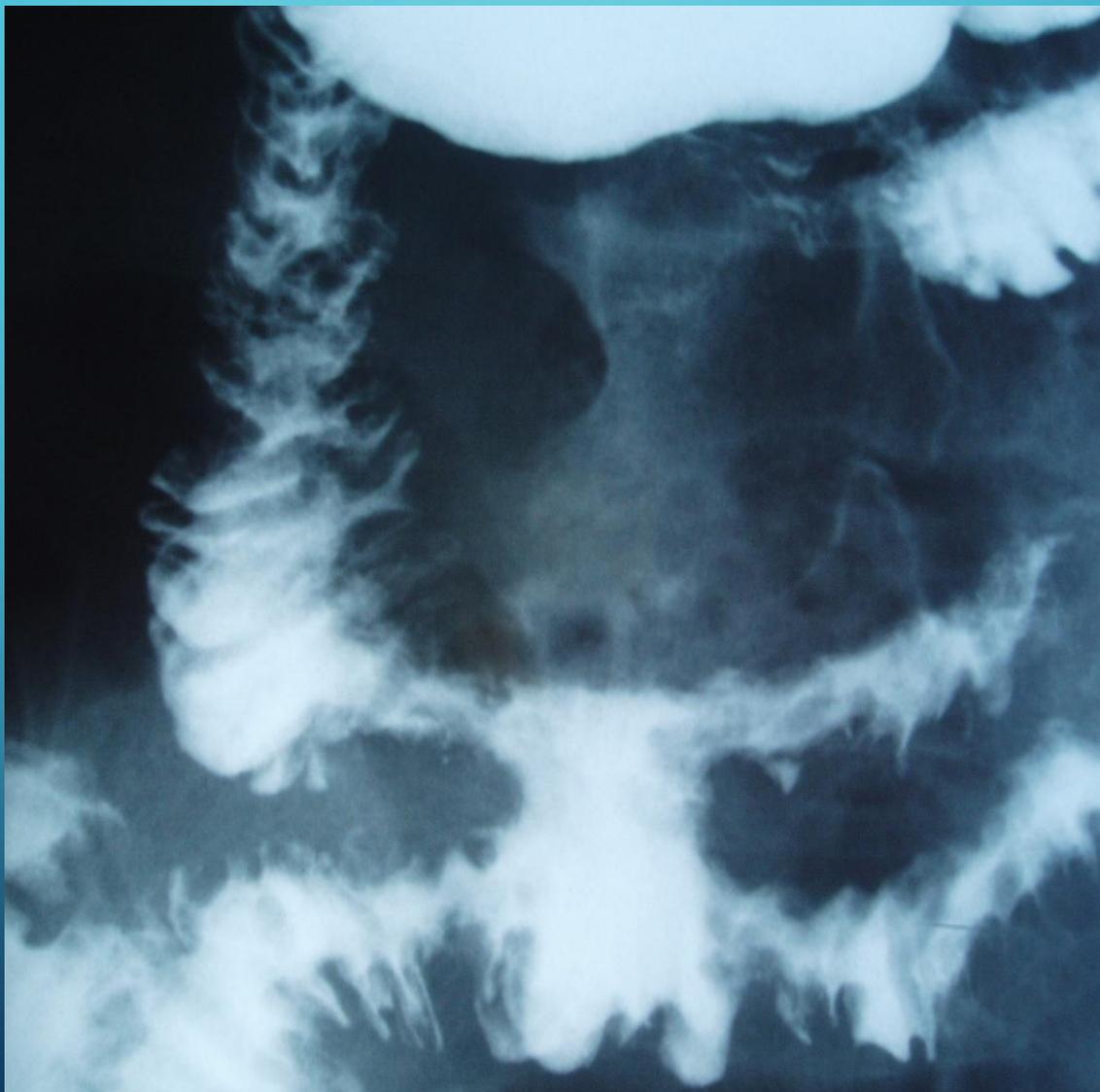
BILLROT-II HOFM.-FINSTERER



BILLROT-II HOFM.-FINSTERER



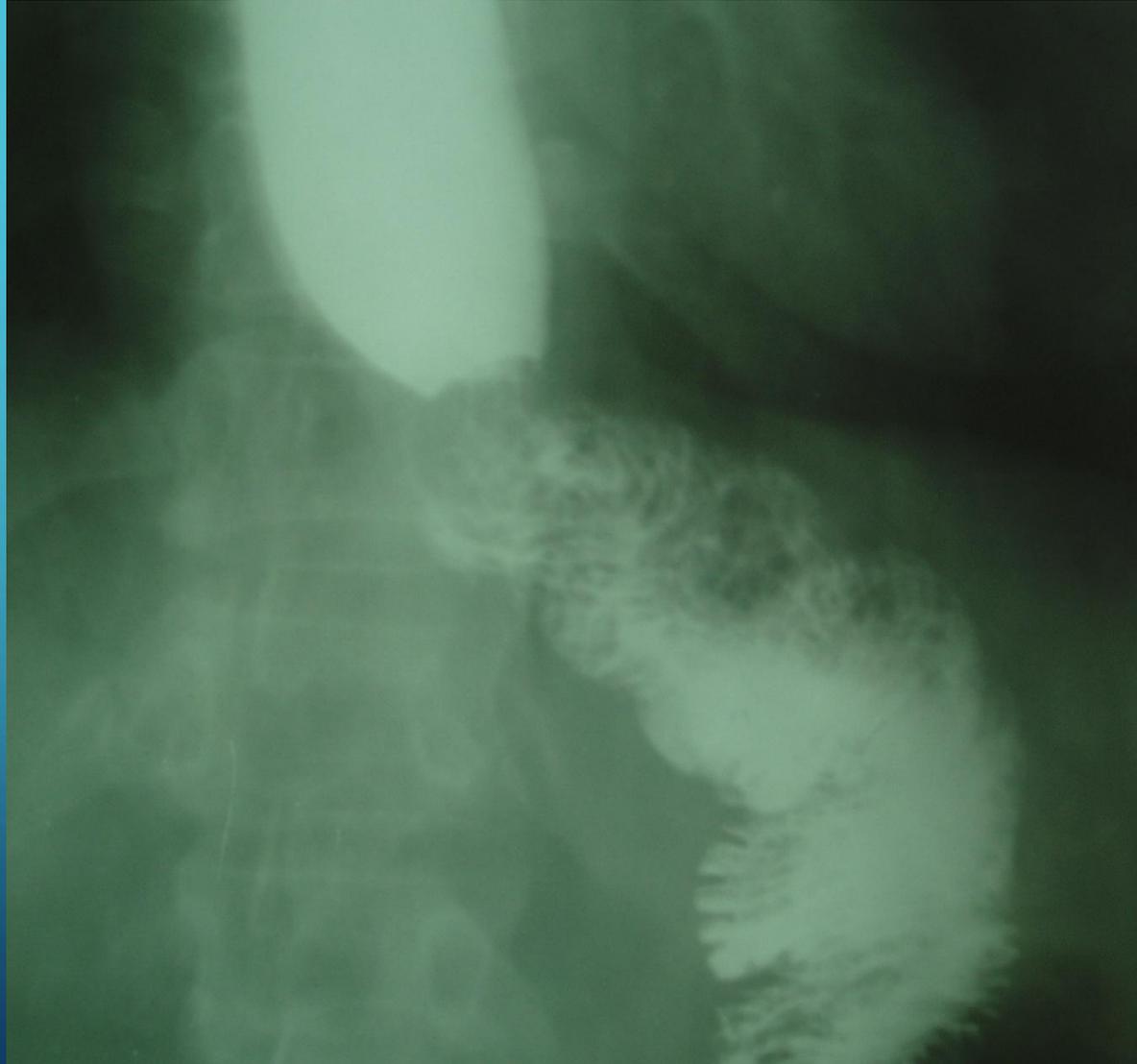
BILLROT II BALFUR



ROUX



GASTRECTOMIE



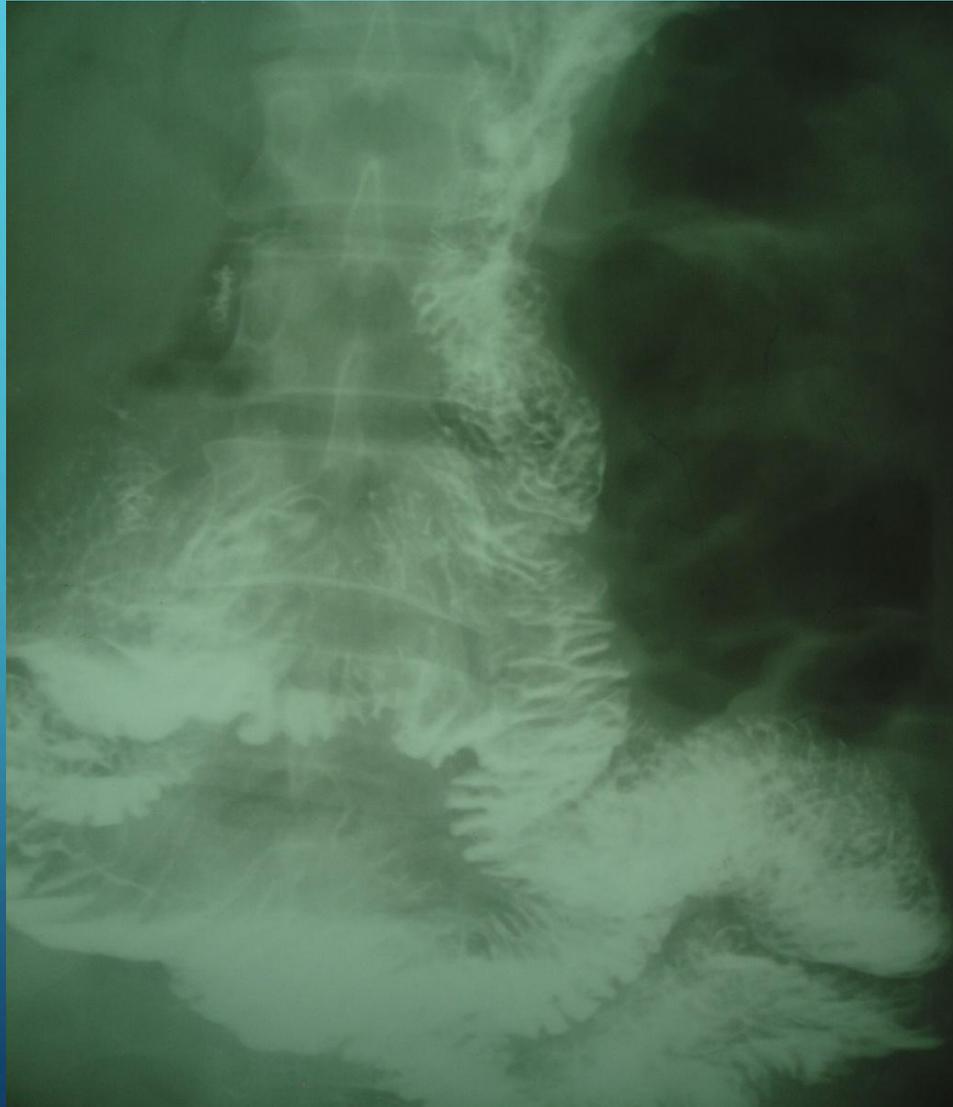
BSO (SAA)



BSO (ANASTAMOZITA)



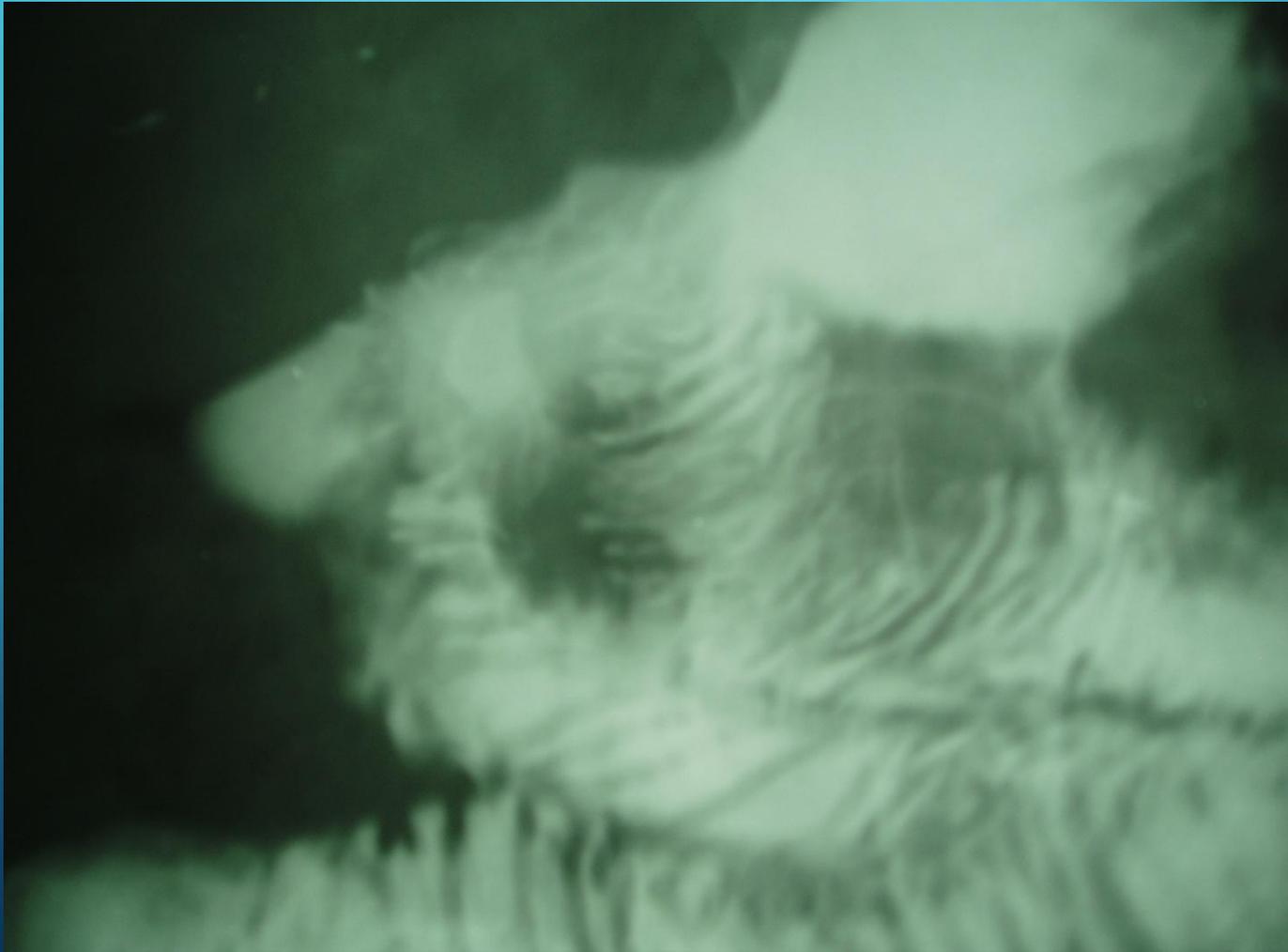
BSO (ANASTOMOZITA, SAE)



BSO (SAA+ULCER PEPTIC)



BSO (ULCER PEPTIC GEA)



LUCRU INDIVIDUAL

1. Metodele imagistice de examinare în maladii chirurgicale. Valoarea ultrasonografiei abdominale în patologiile abdominale chirurgicale.
2. Algoritmul diagnosticului imagistic în abdomen acut (radiografia standard, CT, ultrasonografia).
3. Evaluarea imagistică în patologiile chirurgicale ale căilor biliare. Colangiografia. Tipurile: endoscopica, peroperatorie, postoperatorie pe tub Kehr (tub în „T”), prin IRM. Indicațiile colangiografiei prin IRM.
4. Algoritmul diagnosticului imagistic în hernia hiatală.
5. Algoritmul diagnosticului imagistic în formațiunile de volum: tubul digestiv, ficat, pancreas, căile biliare.
6. Evaluarea imagistică a stomacului operat.
7. Diagnosticul imagistic al lichidului intraabdominal.



3D prone
Ex: 16217

Se:4
Volume Rendering No cut

DFOV:41.1 cm
STND:SS40 No Filter

KHALANAT P.
71818 POLULIBAHIS
F 70 4983
DOB: May 15 1947
ExDec 12 2017

Multumesc pentru atentie!

R A I

DCA:OFF

Multi Color
No VOl
V 140
A 65
rot 0.80s/HE+ 13.9mm/sat
2mm 1.375 1/1.25ap
R: 0.0
1:43:30 PM
+280 L = -862

