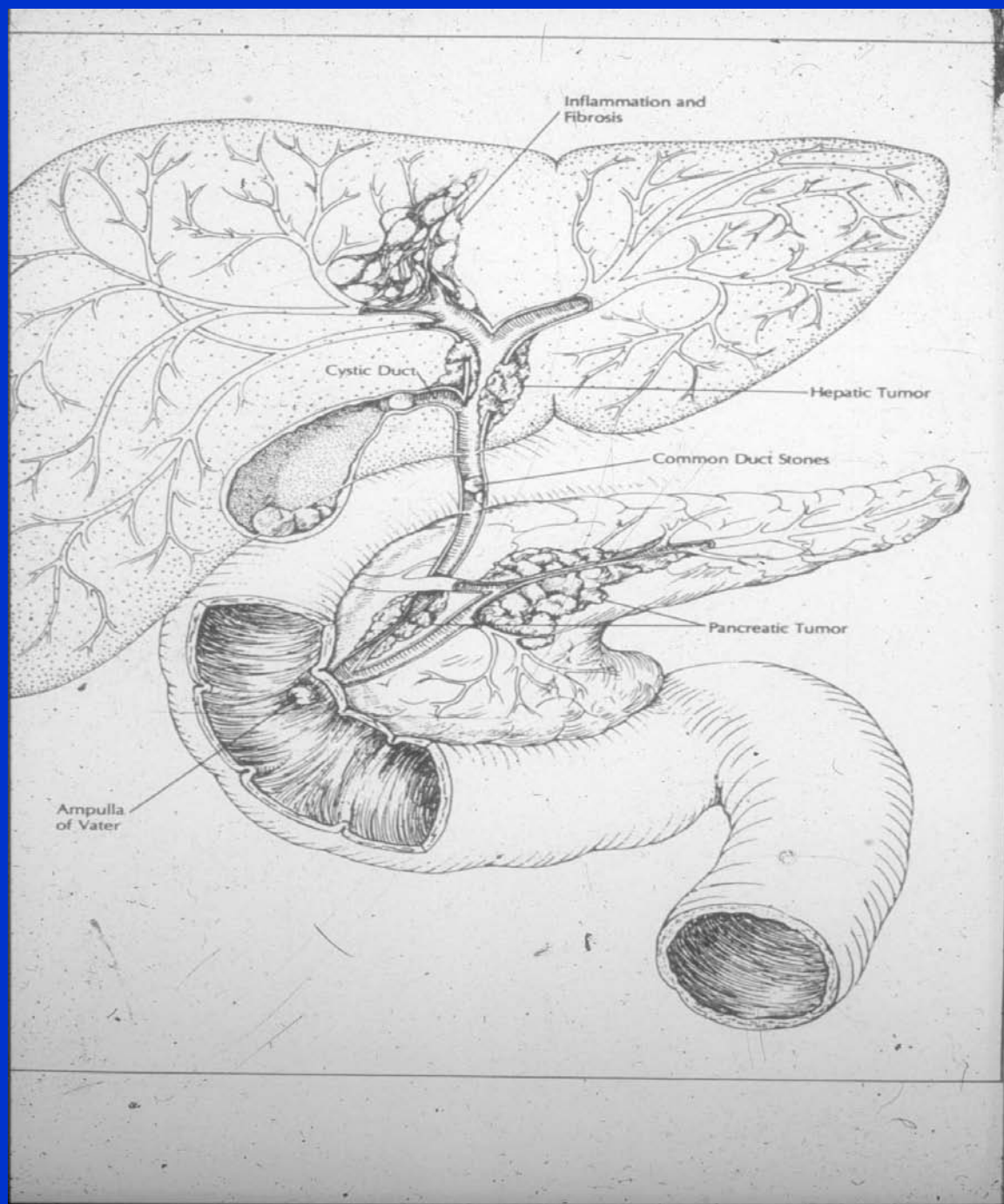


# **THE ROLE OF ERCP IN PSC**

**James W. Ostroff, MD**

**University of California, San Francisco**

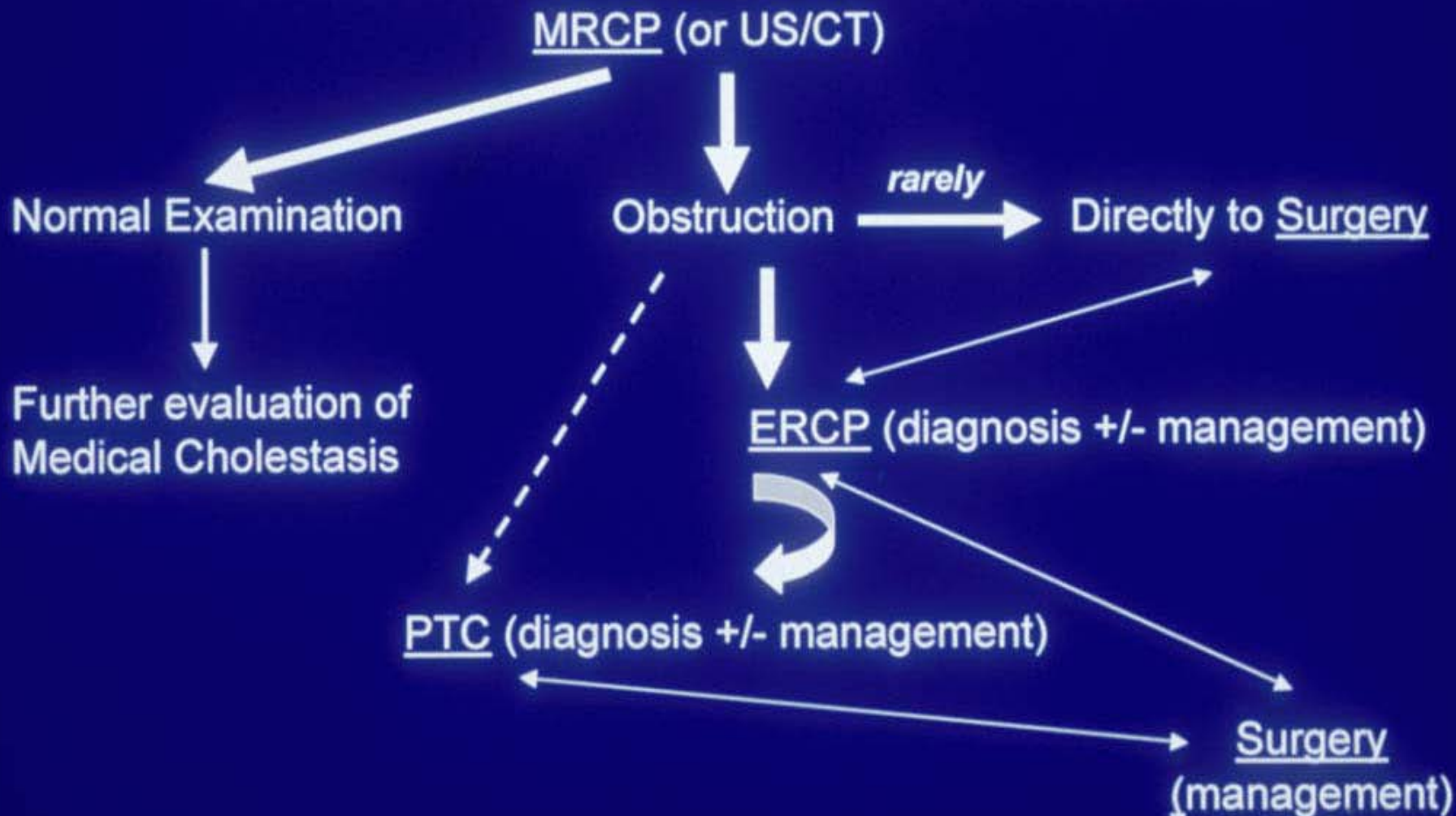
**APRIL 30, 2011**

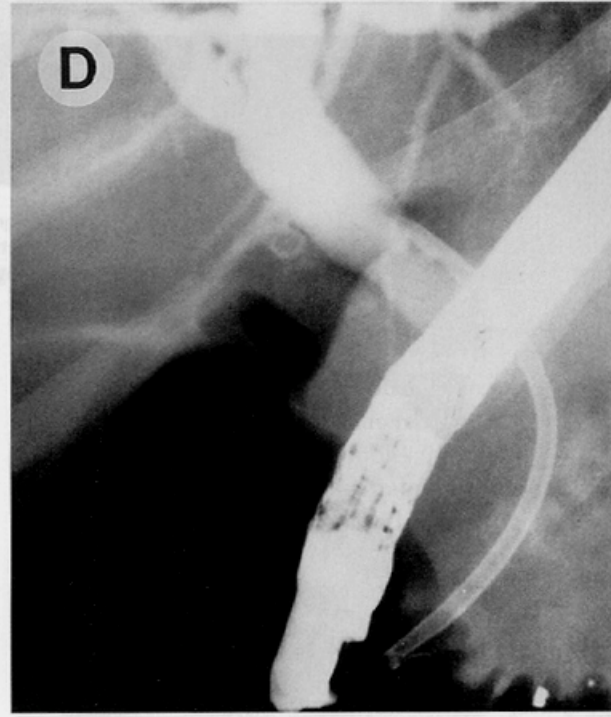
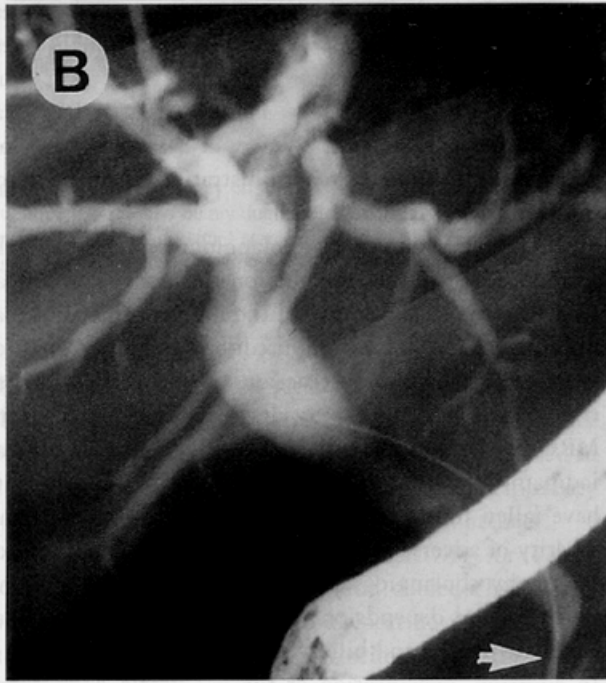
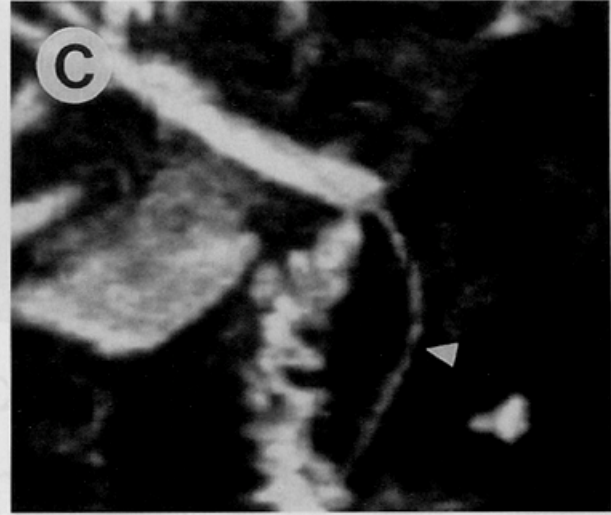
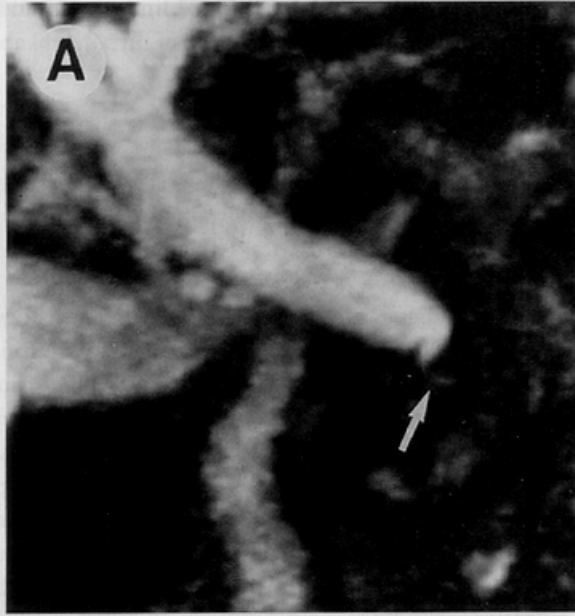


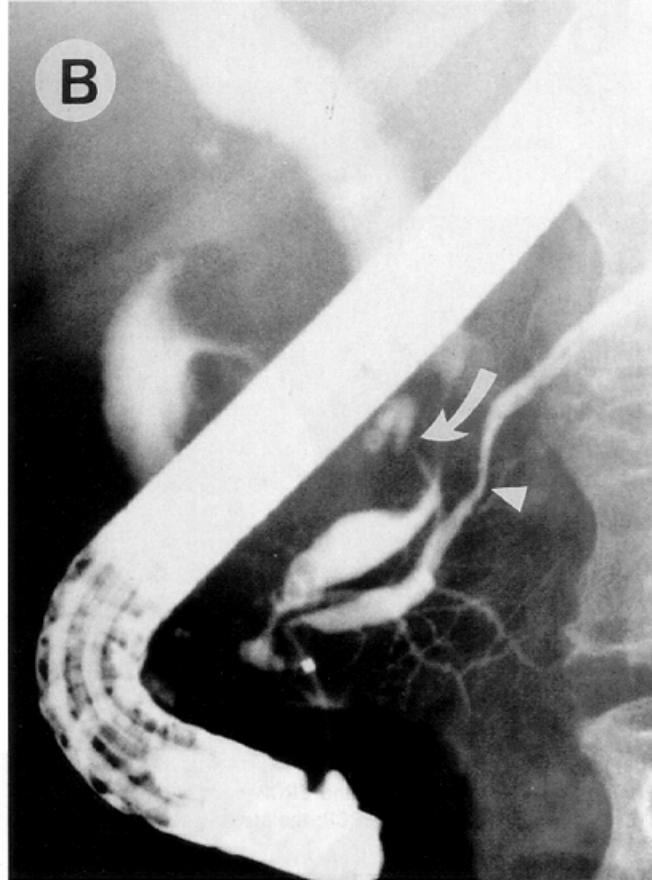
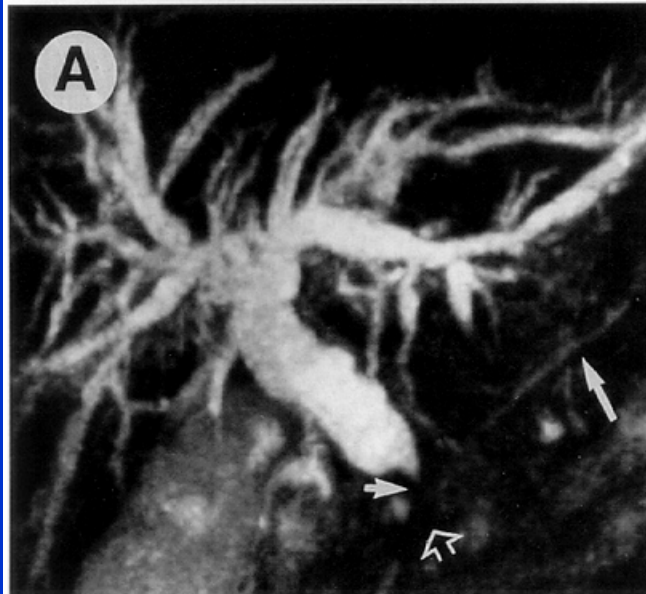
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CHOLANGIO-PANCREATOGRAPHY  
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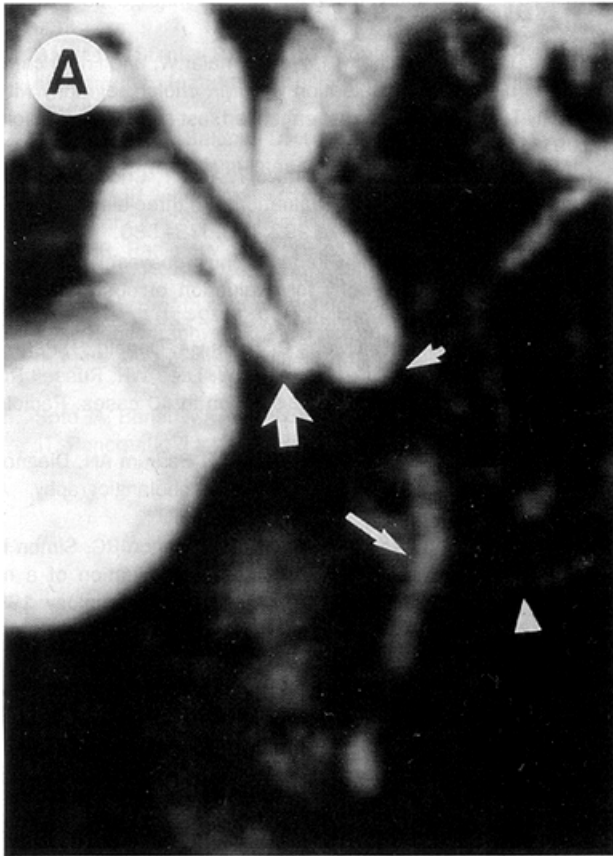
**PERCUTANEOUS TRANSHEPATIC  
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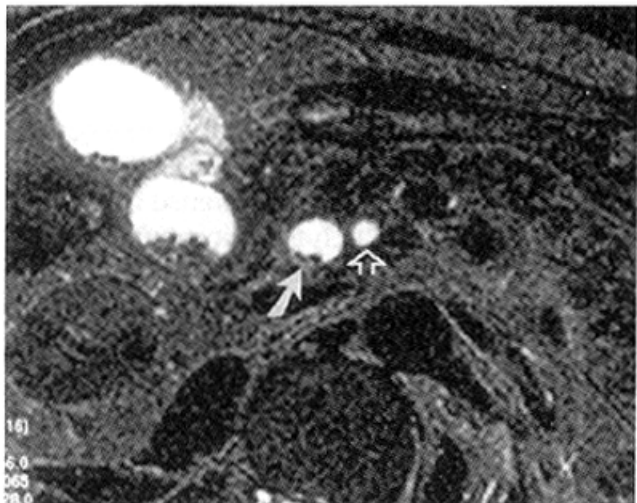
## The Evaluation for Suspected Biliary Obstruction



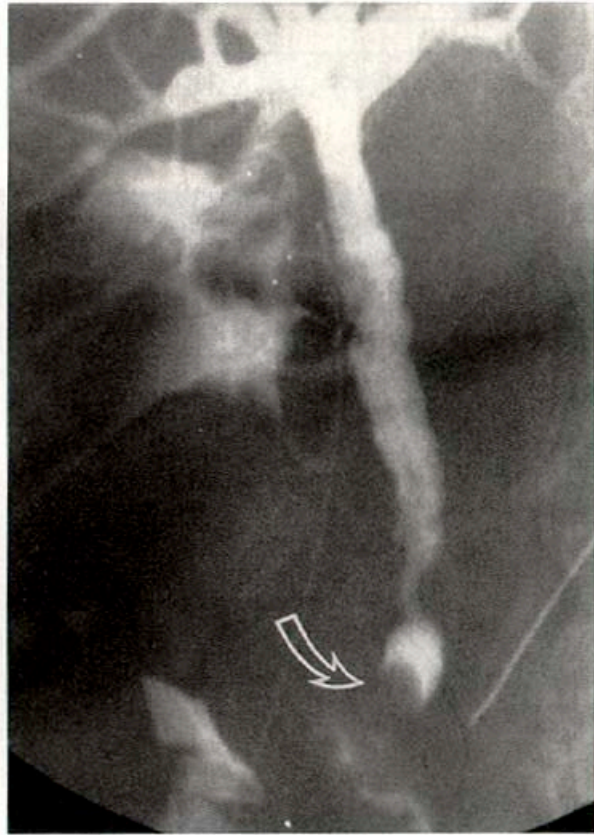
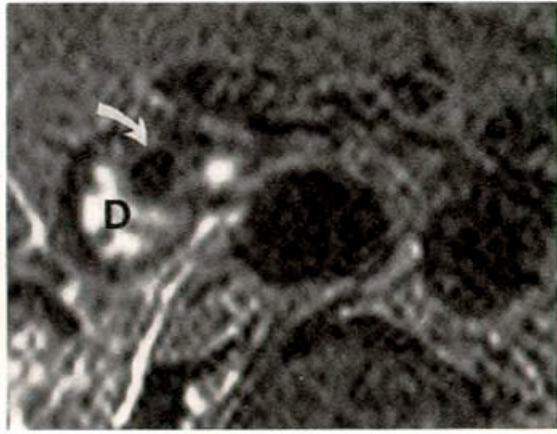
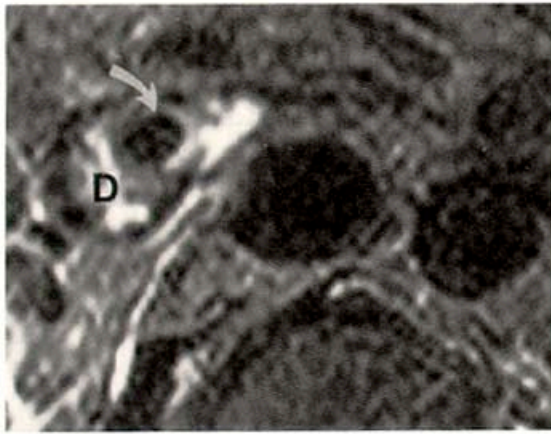


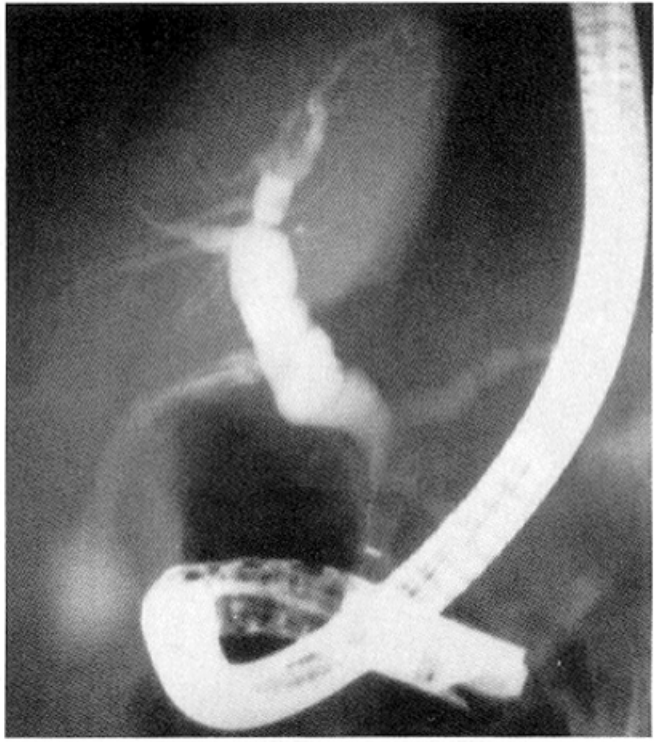
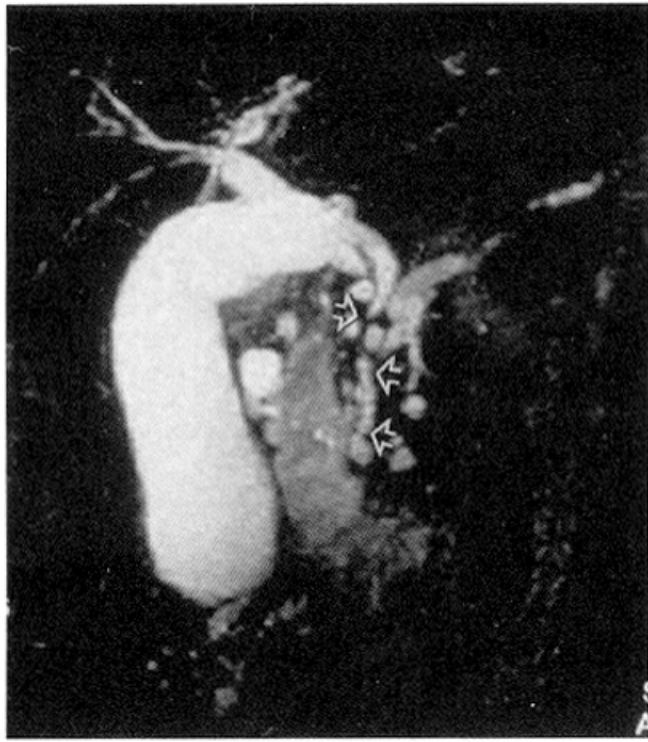


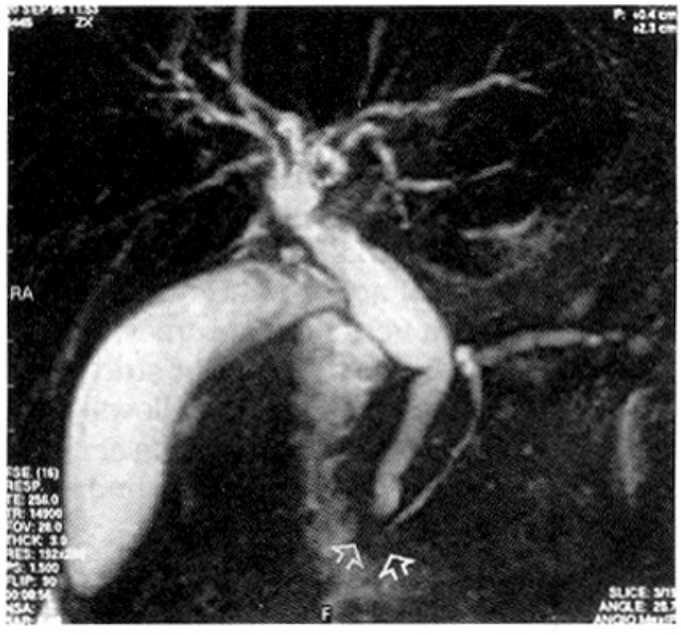


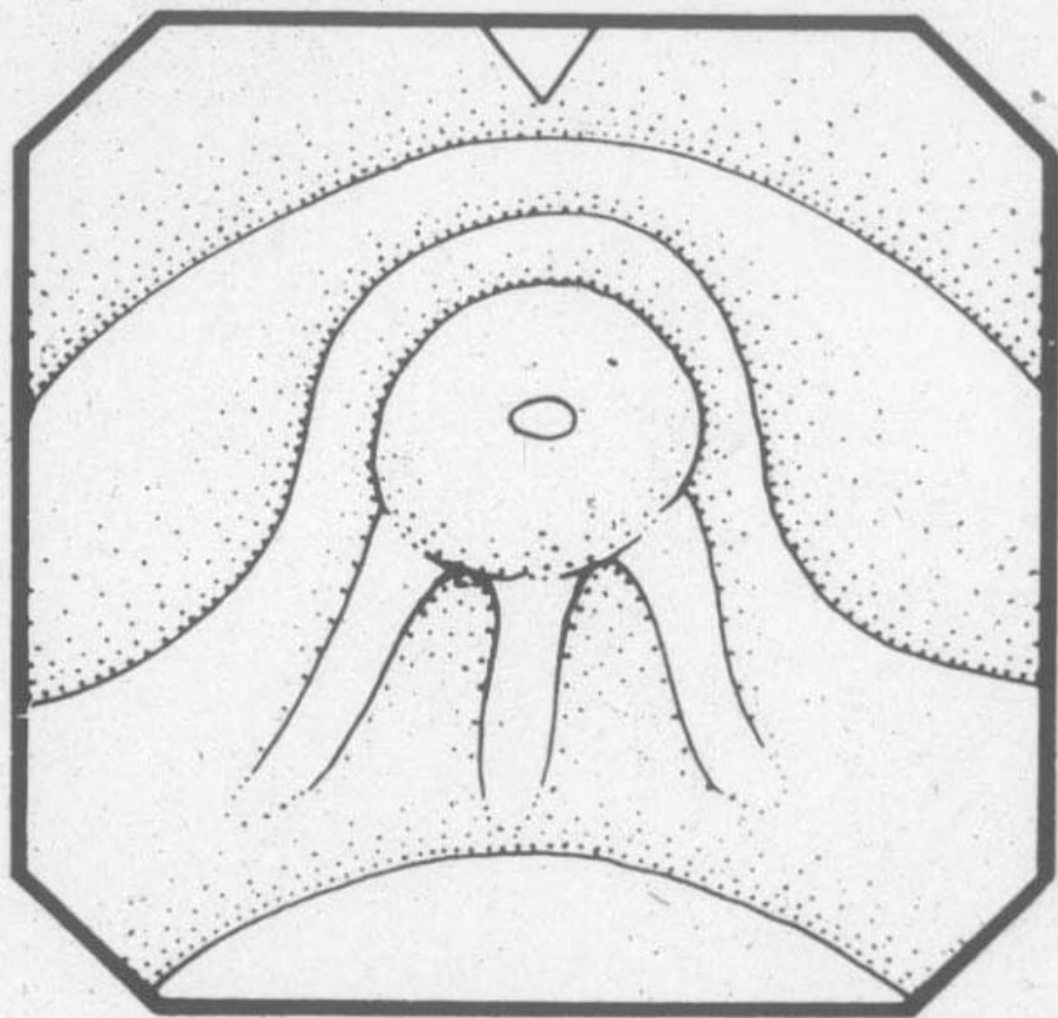


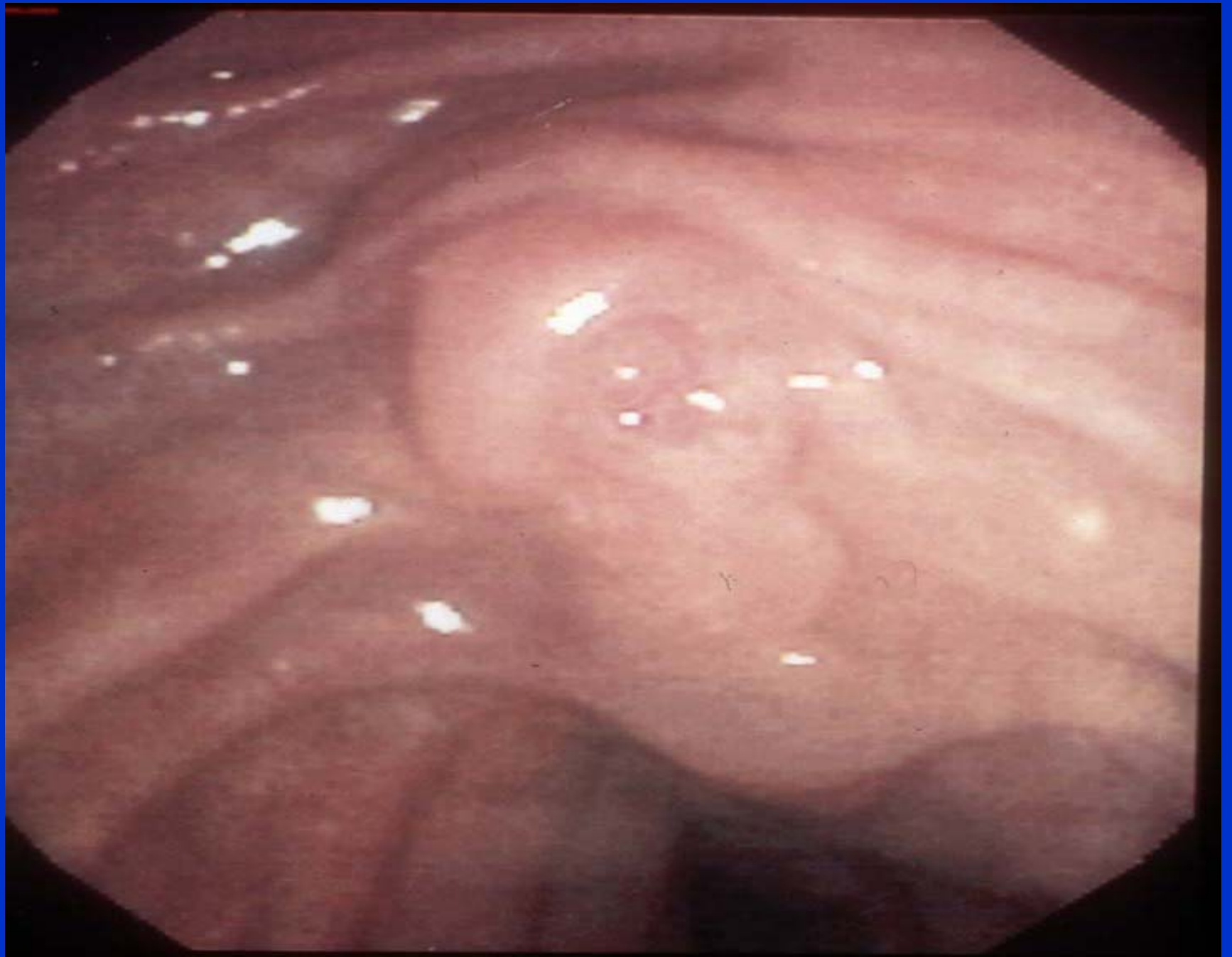


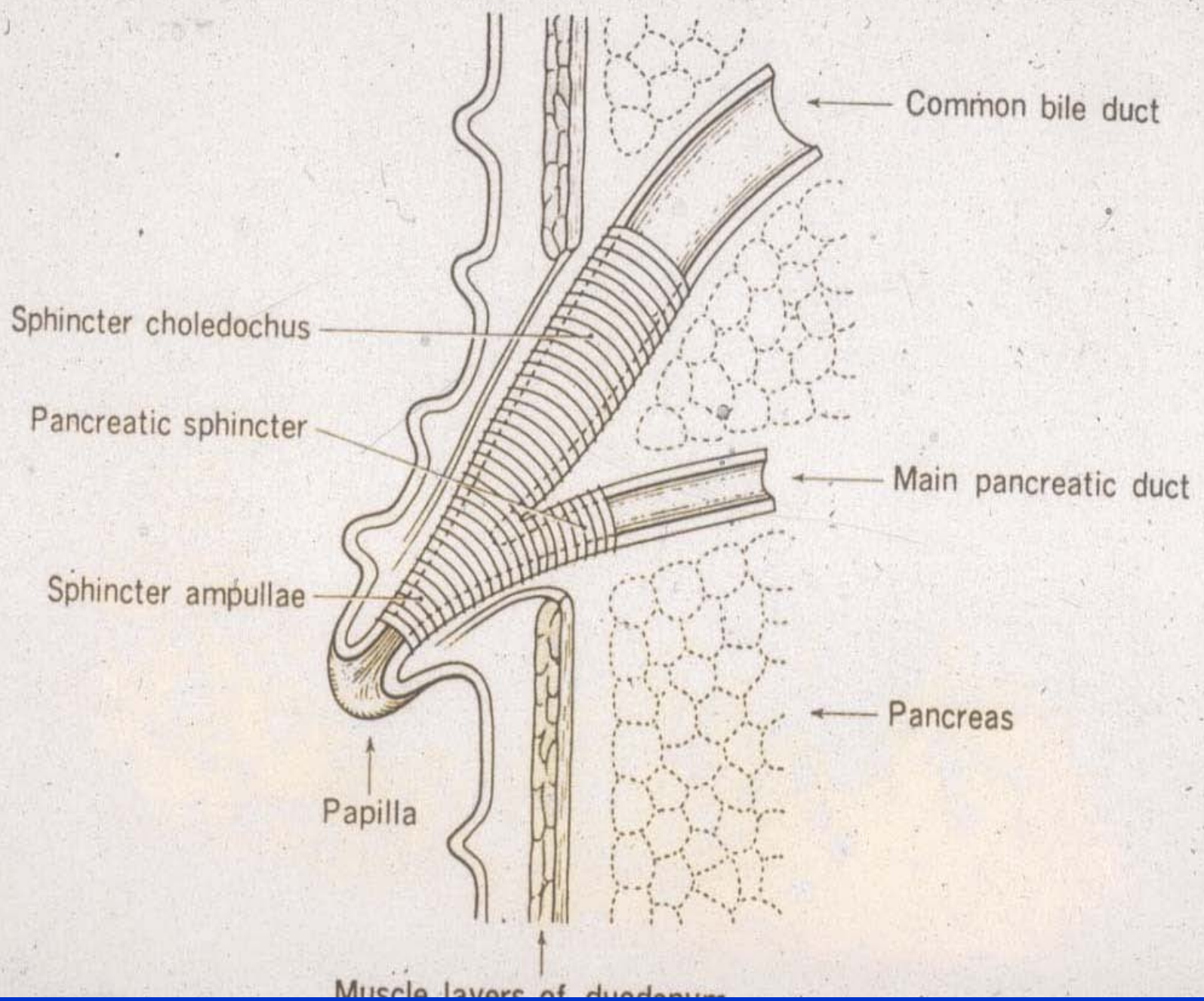


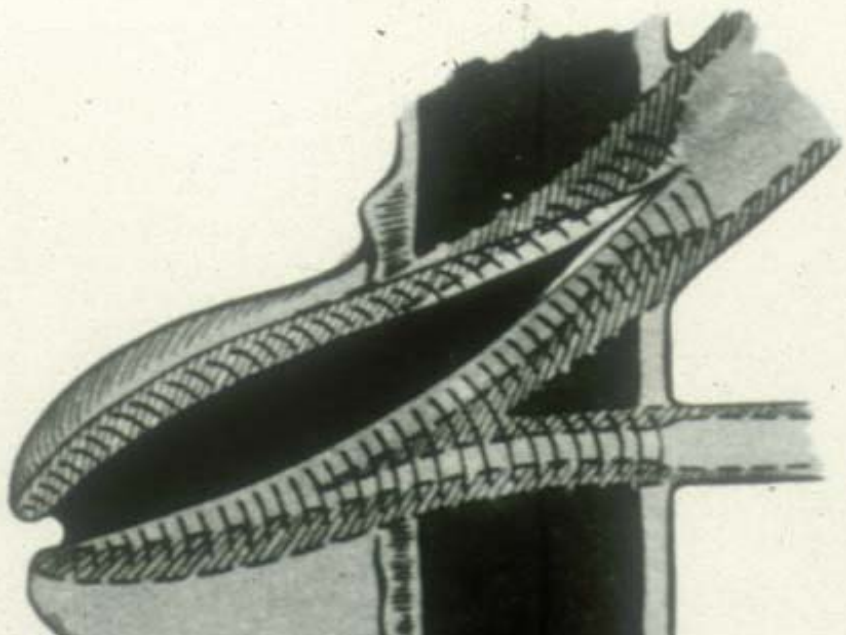
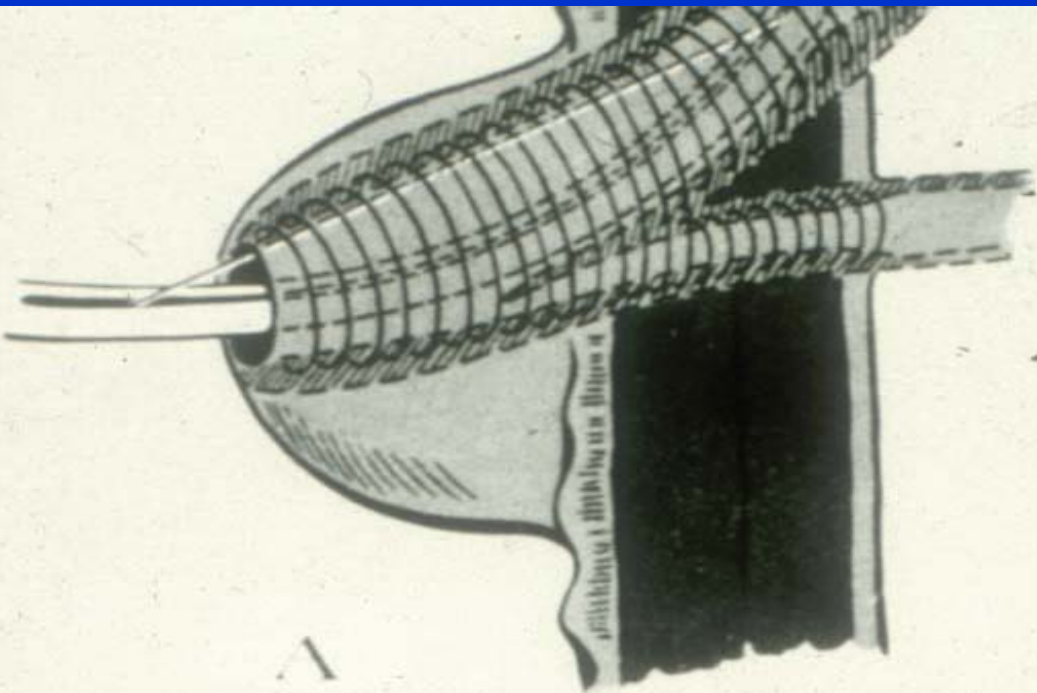












## **Perform the Procedure in a Safe Setting**

- **Trained and experienced staff**
- **Adequate back-up**
- **Complete medical resuscitation of patient**
- **Slow and methodical sedation**
- **Don't be rushed**
- **Liberal use of anesthesiologist**

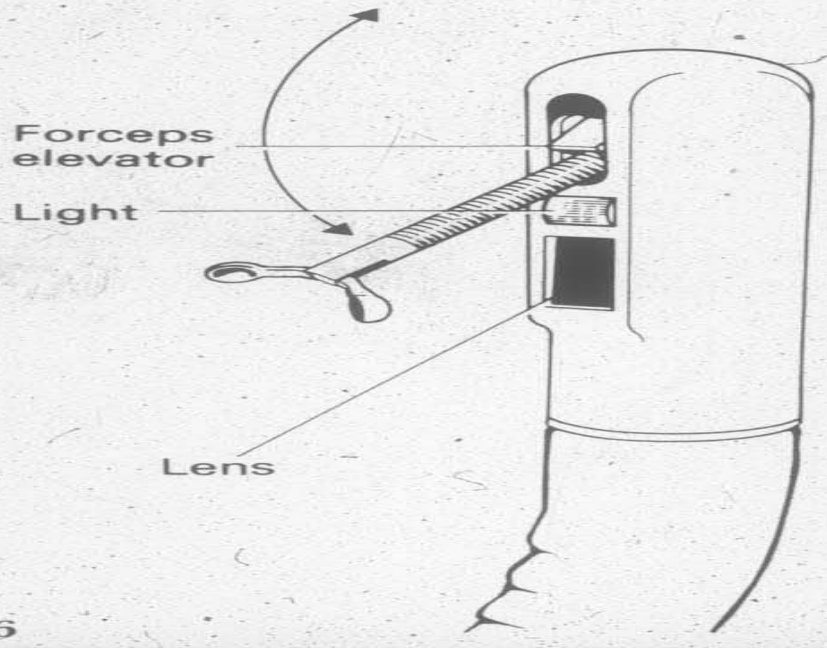
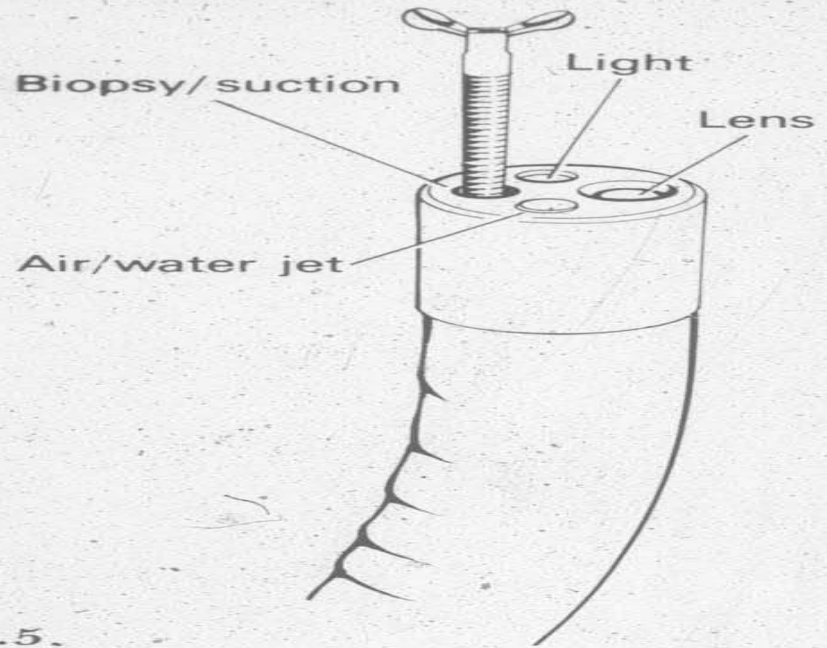


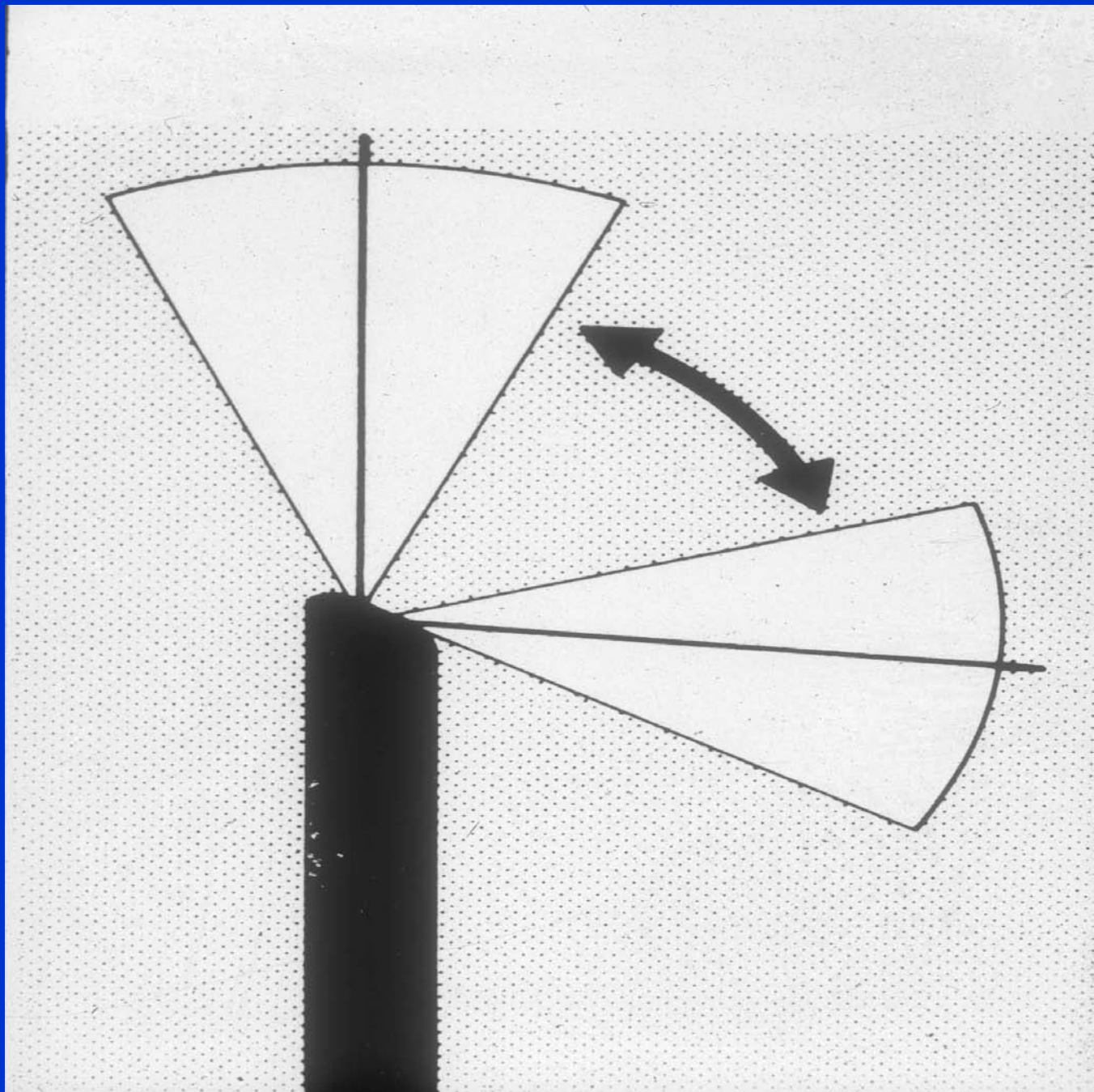


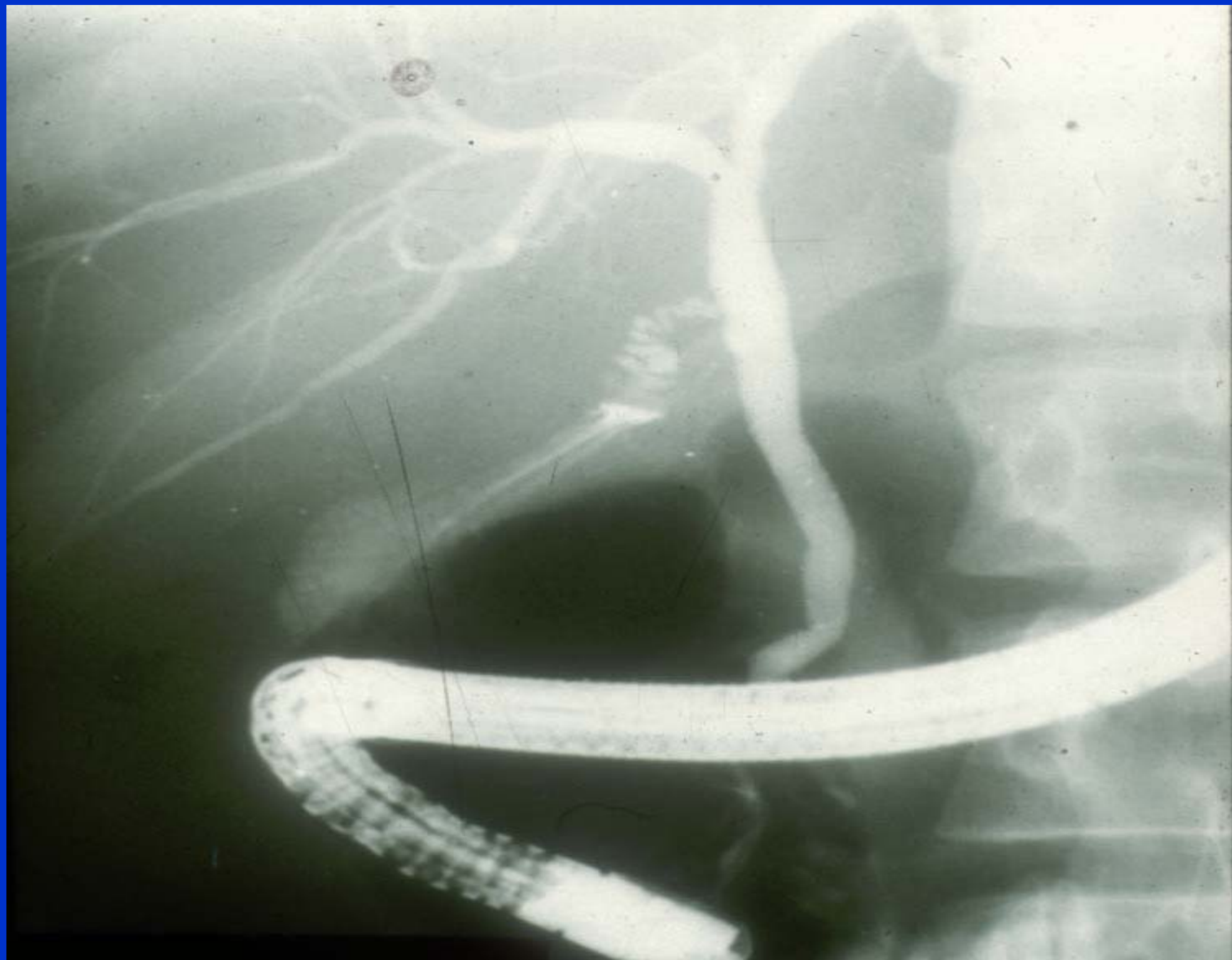


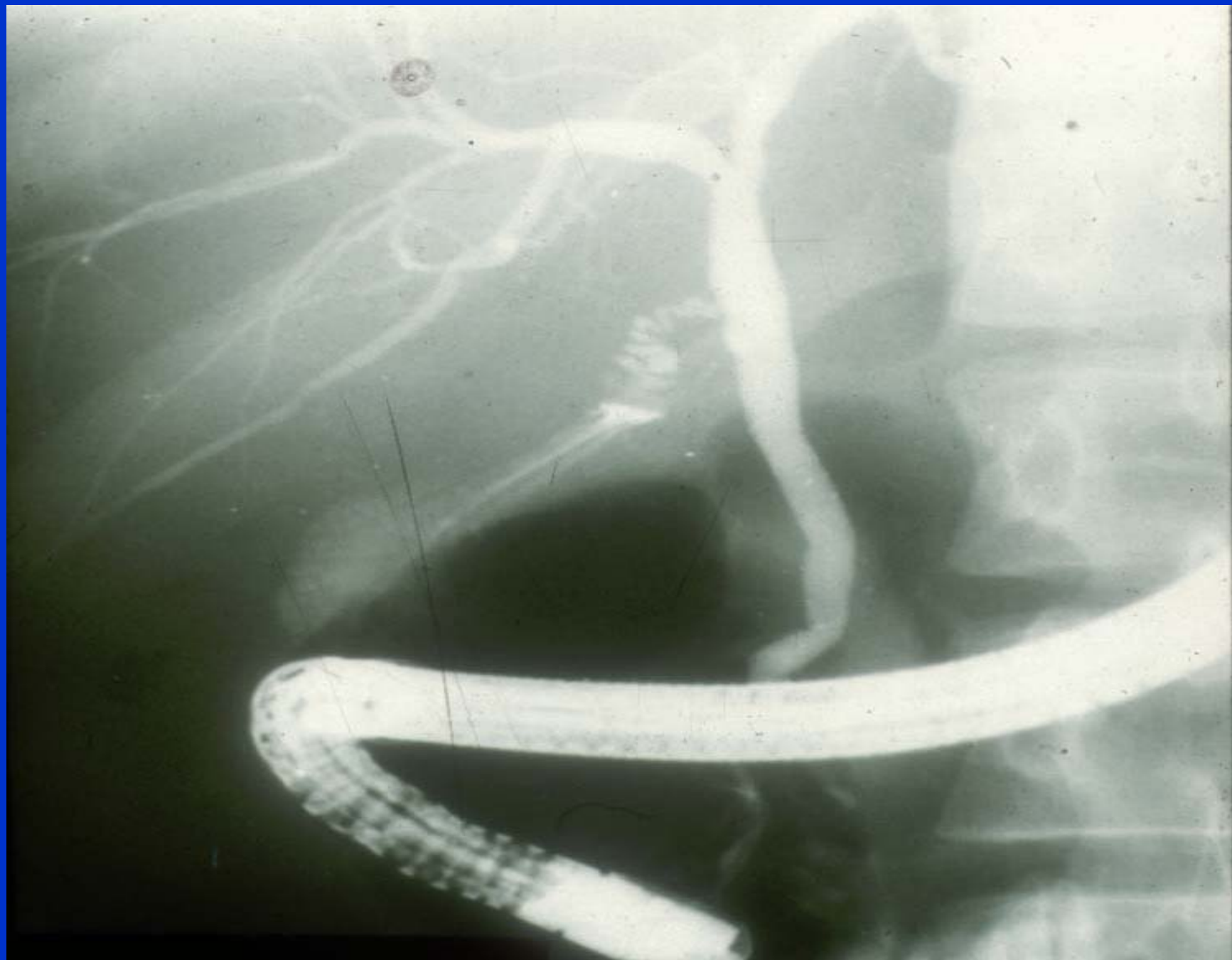






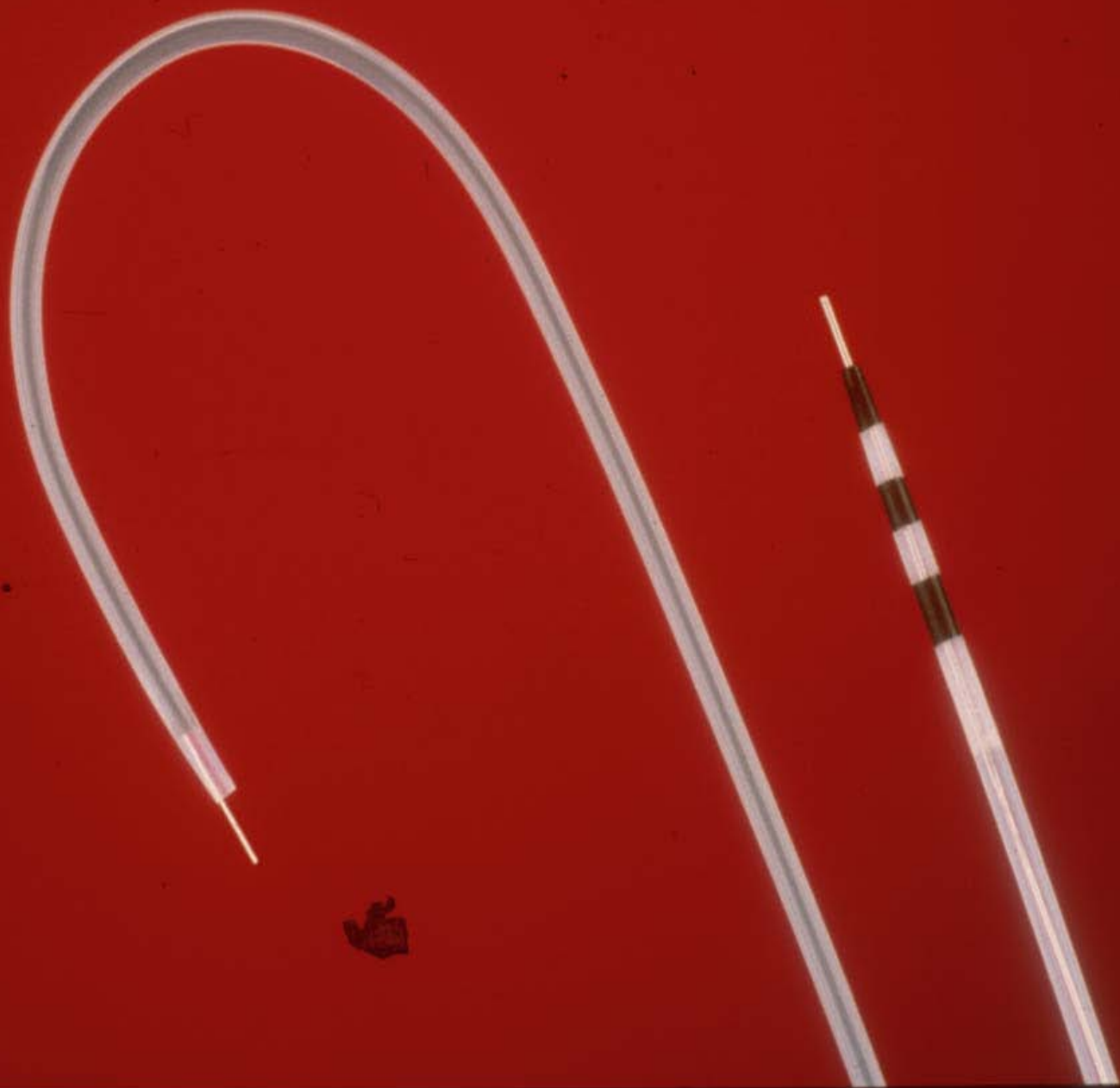


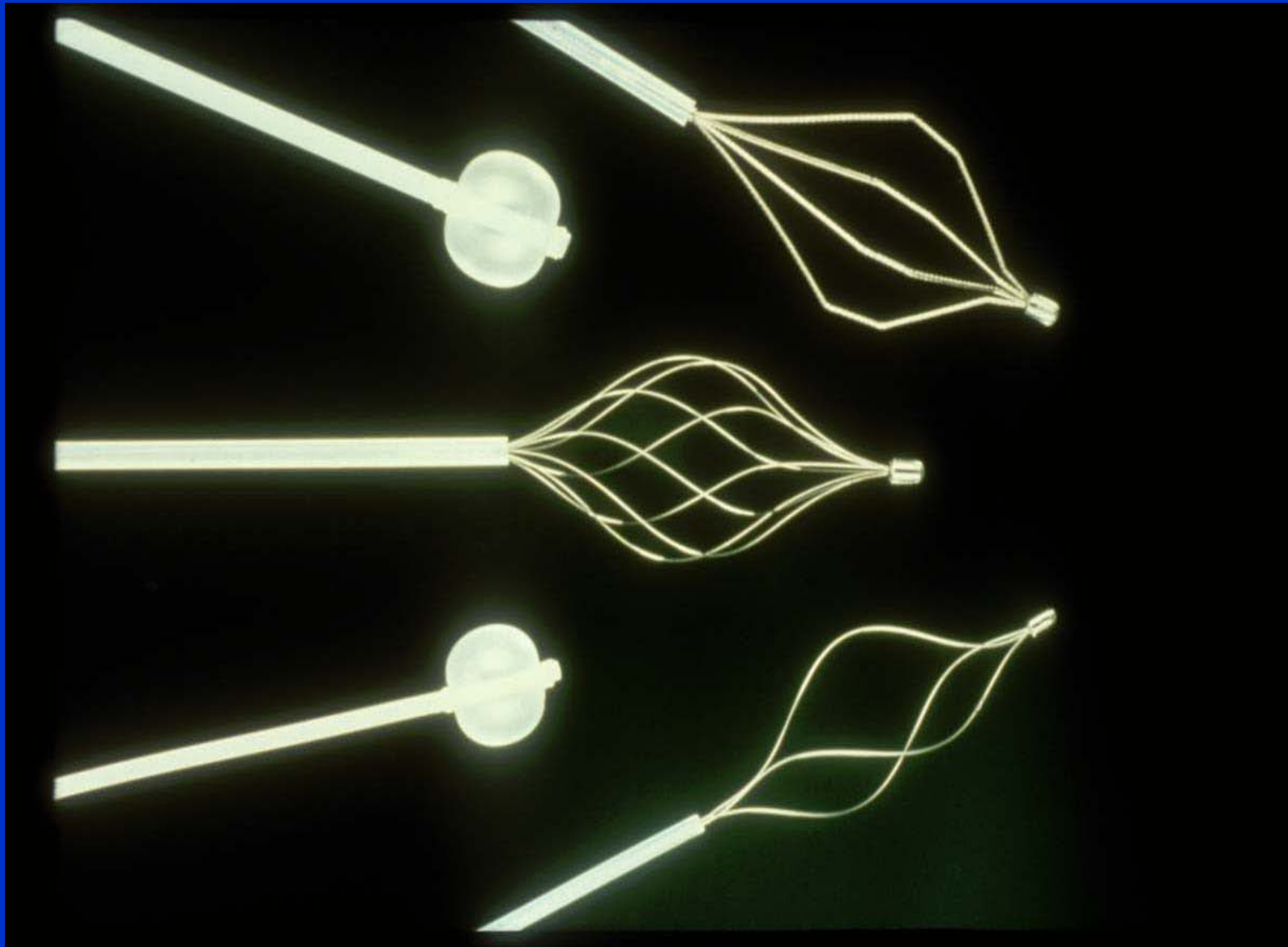




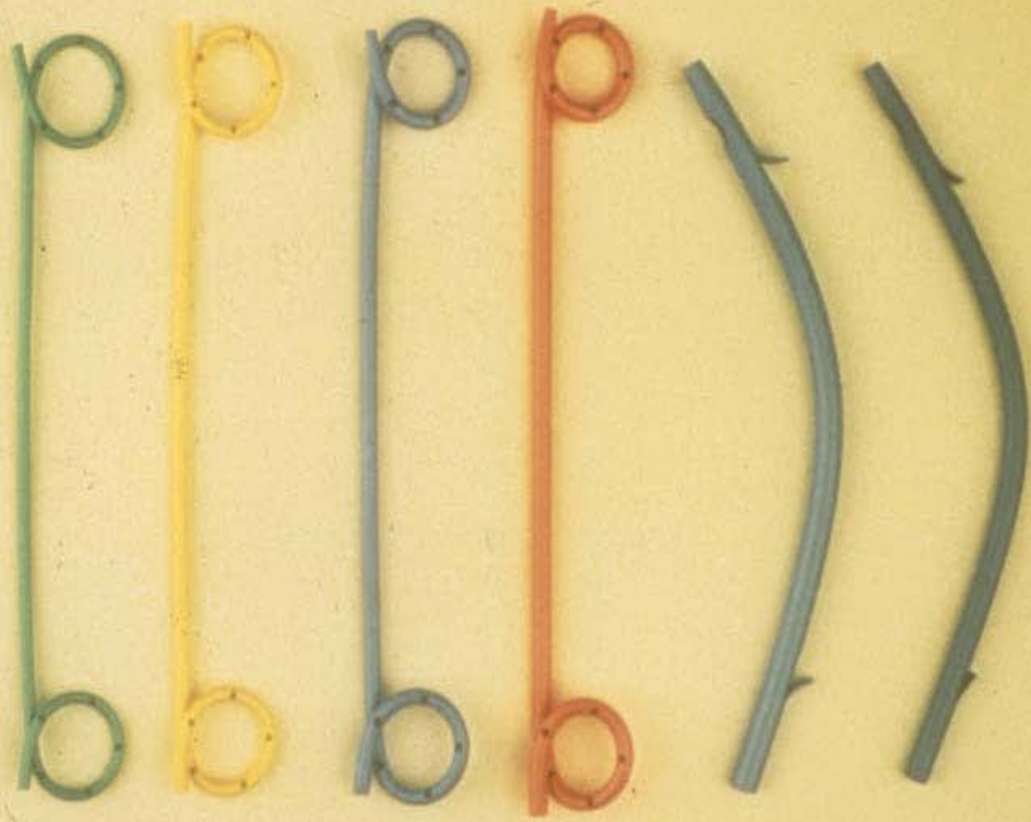


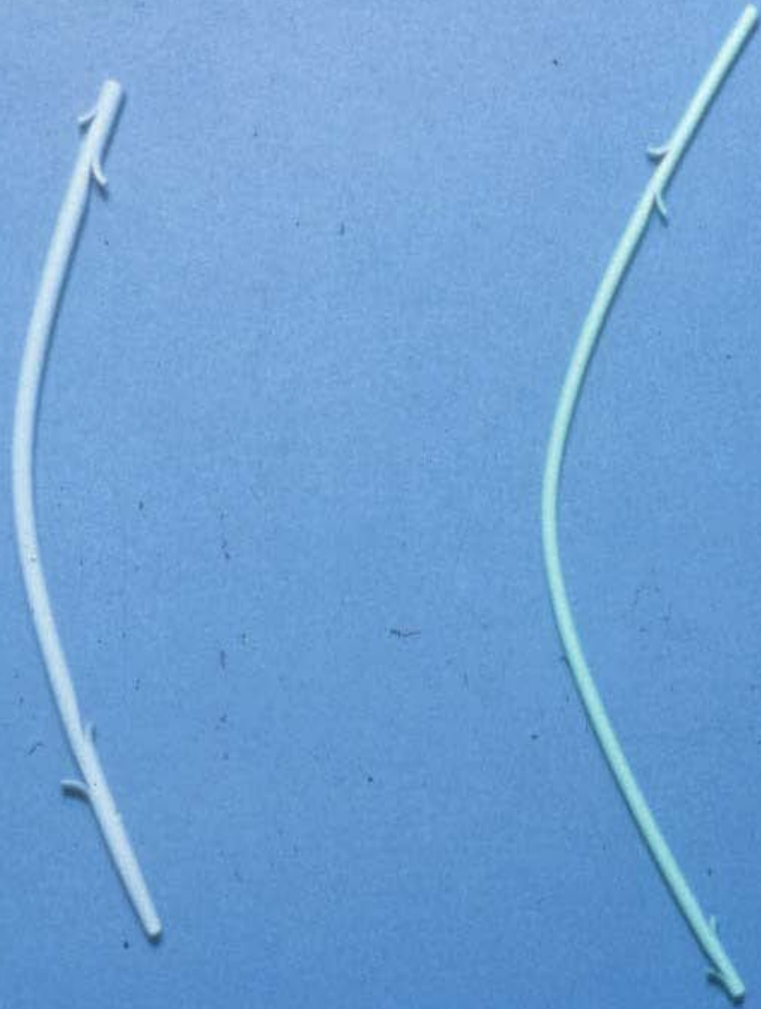


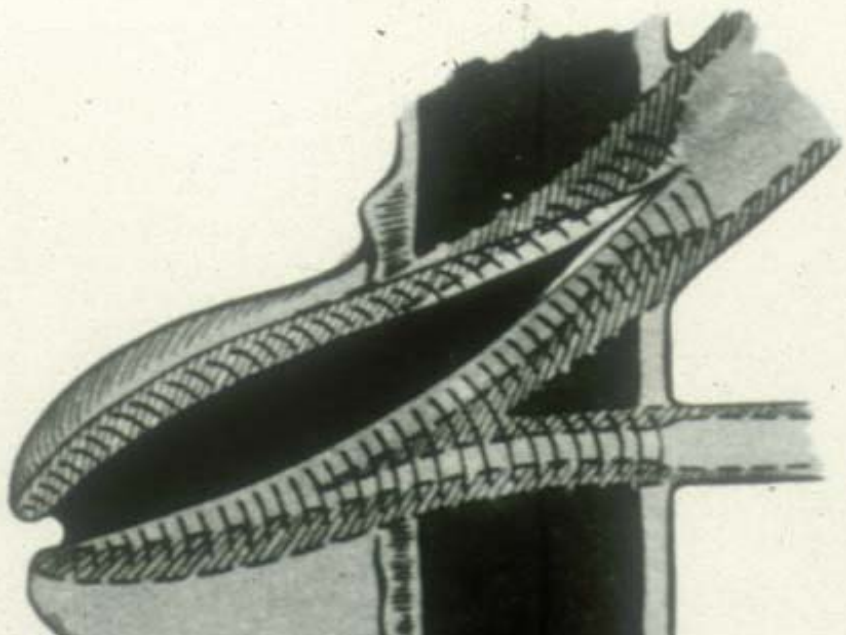
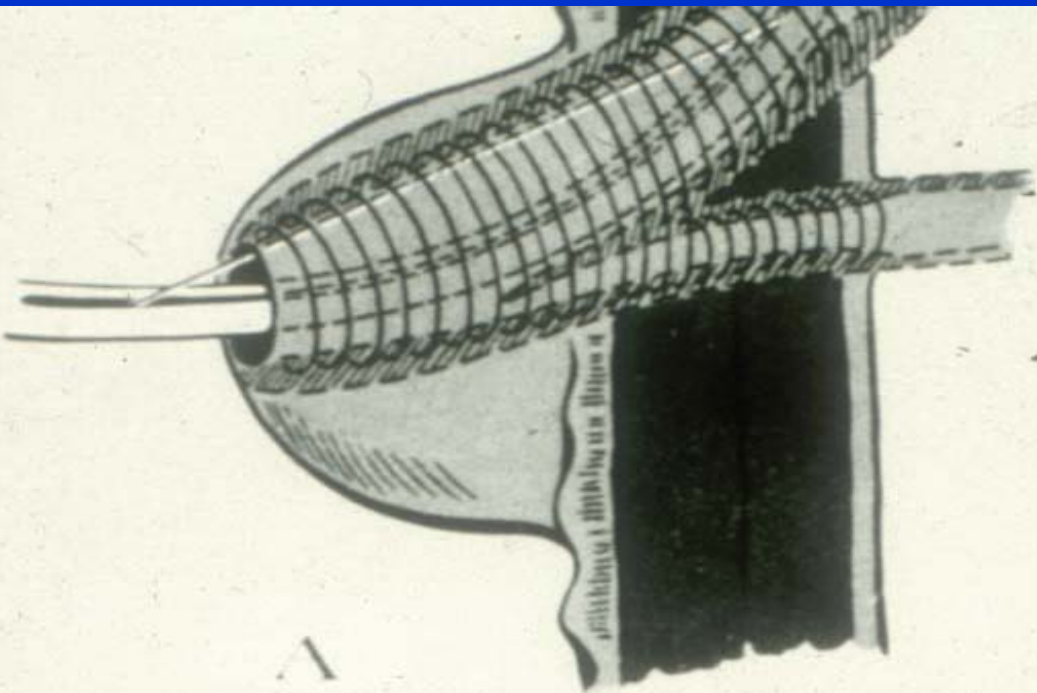


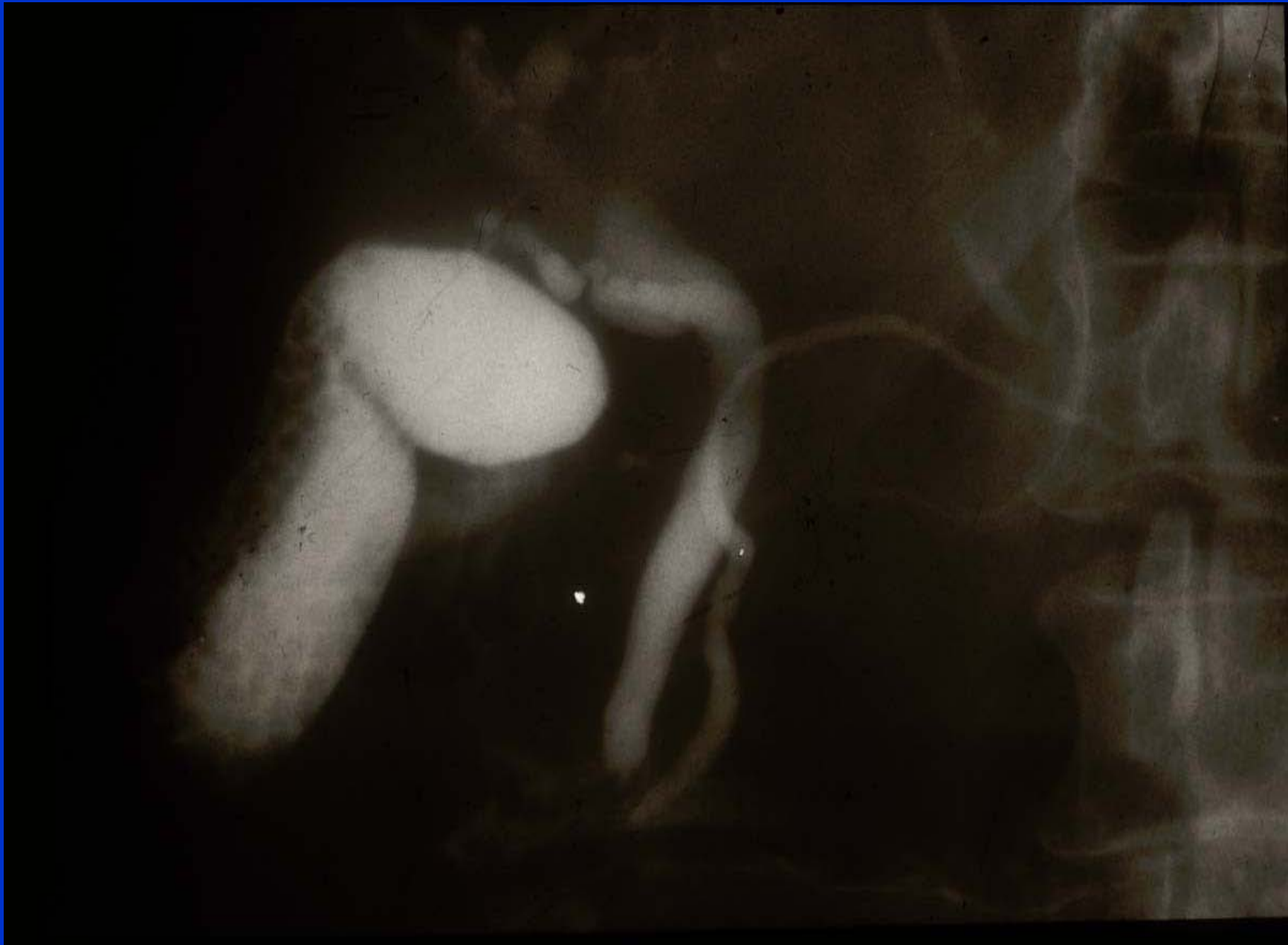










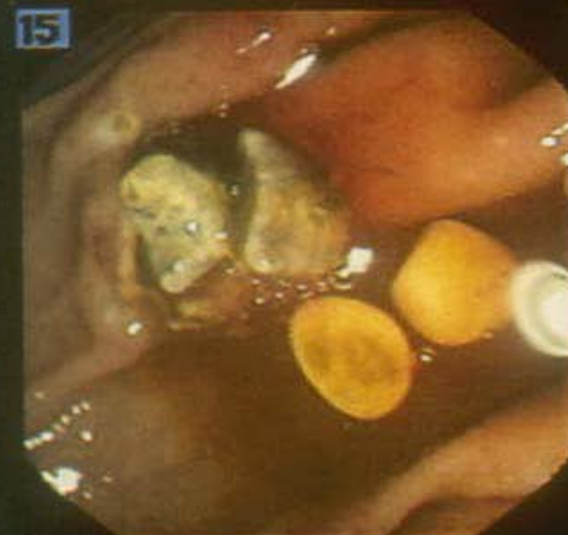
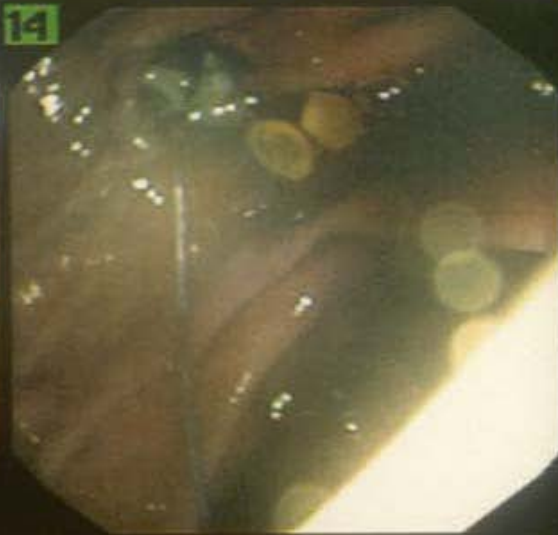




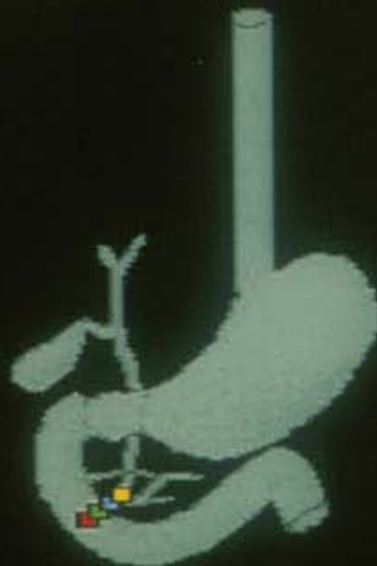




# UCSF MEDICAL CENTER



MANUEL MORON  
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Dec 4, 1992



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- 15 Choledocholithiasis
- 16 Choledocholithiasis

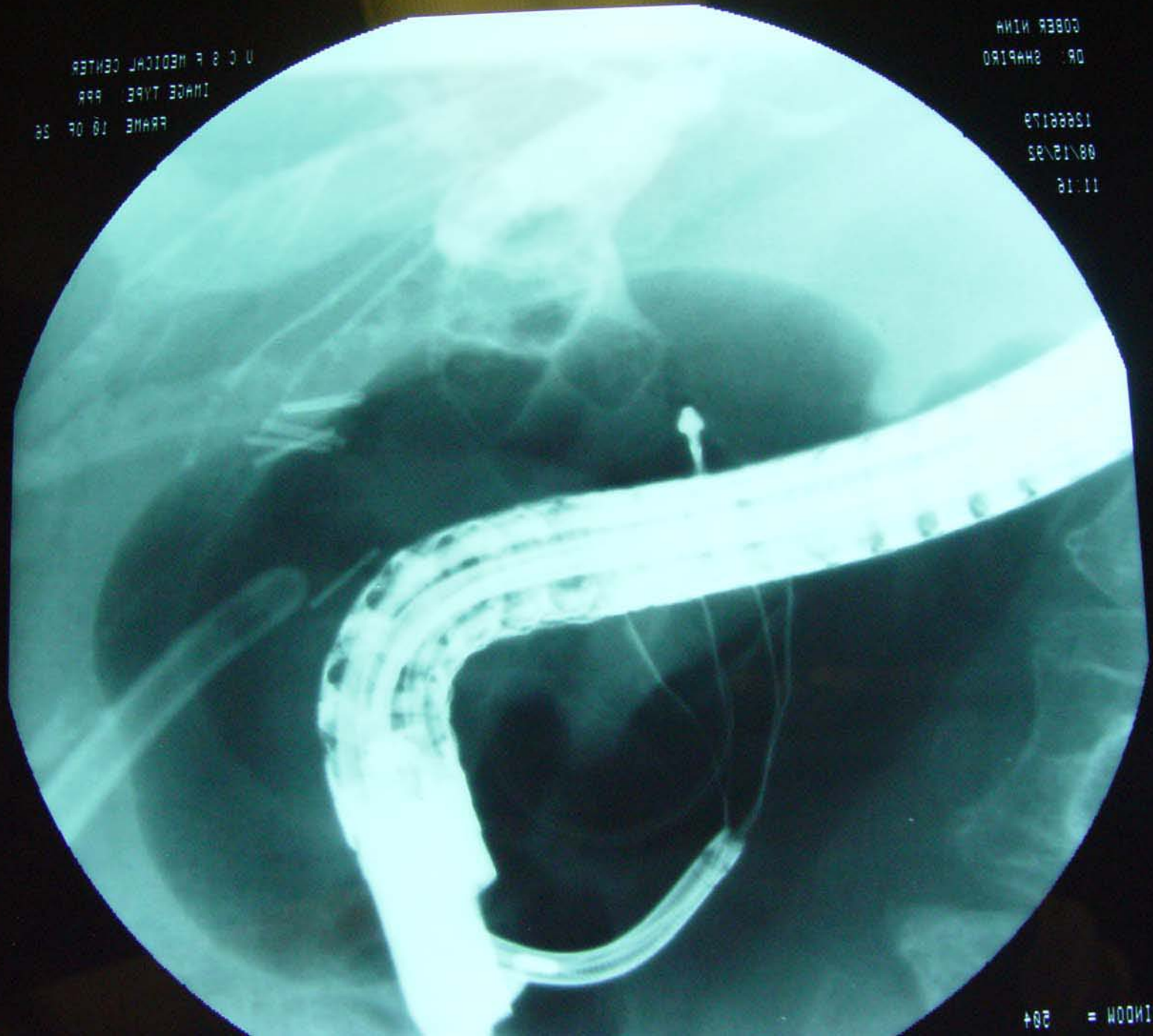
Endoscopist: James W Ostroff MD

U. C. S. F. MEDICAL CENTER  
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GOBER NINA  
DR. SHAPIRO

CENTER  
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9 OF 26

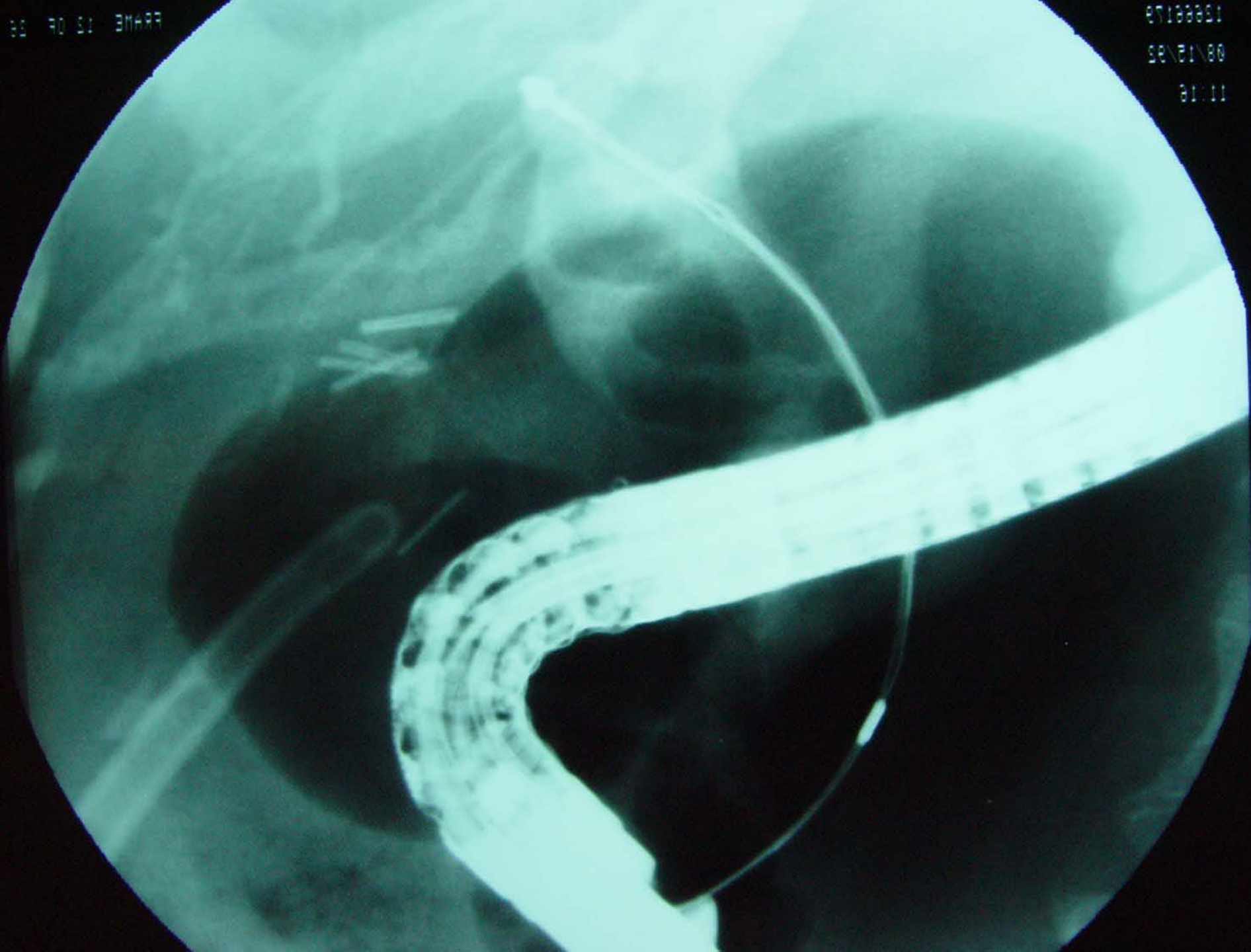
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## Cytological Diagnosis of Malignancy

### Sensitivity

- Specimen from Bile Duct: 50-80% Cholangio, 35 % Pancreas
- Specimen from Pancreatic Duct: 50% pancreatic Cancer

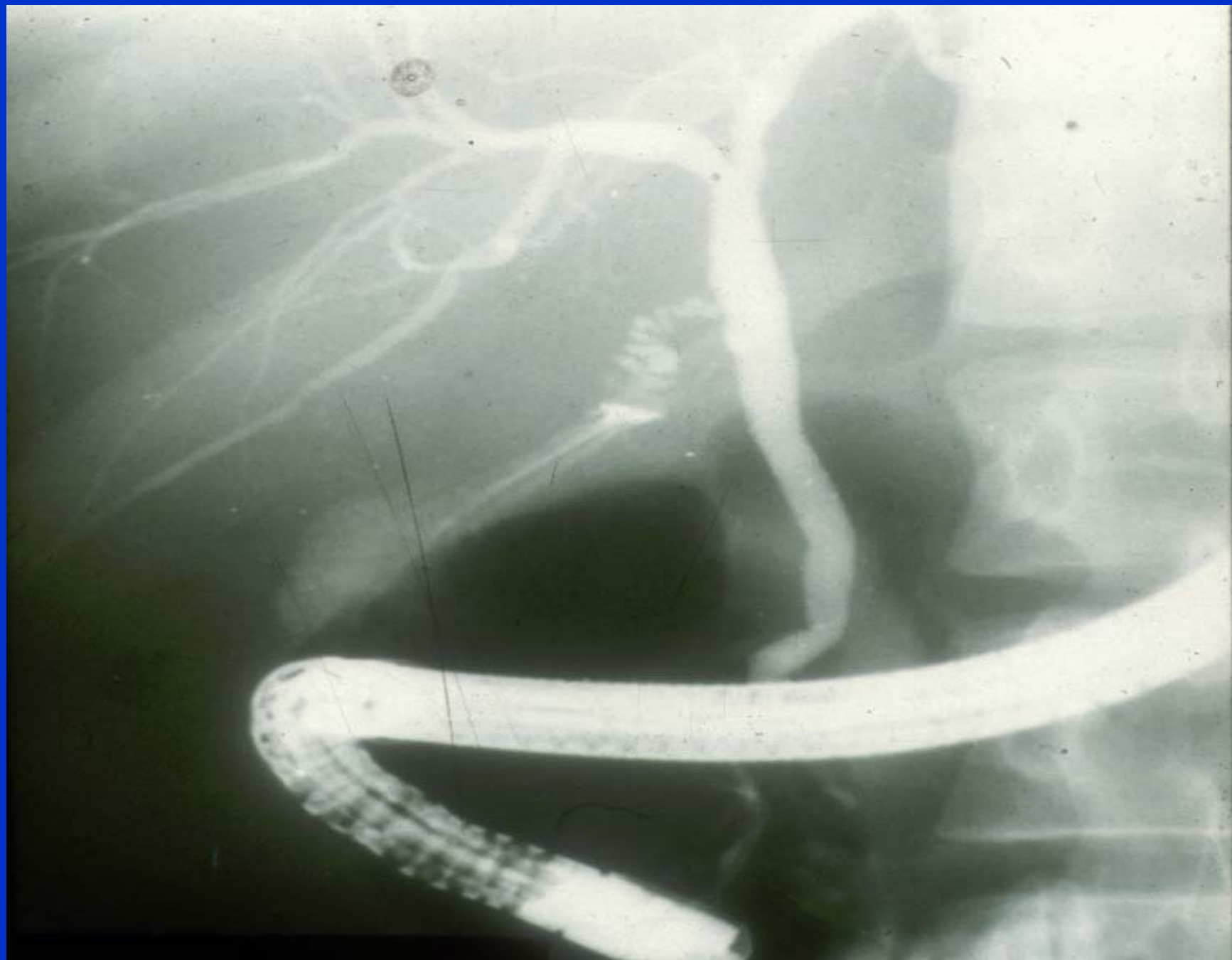
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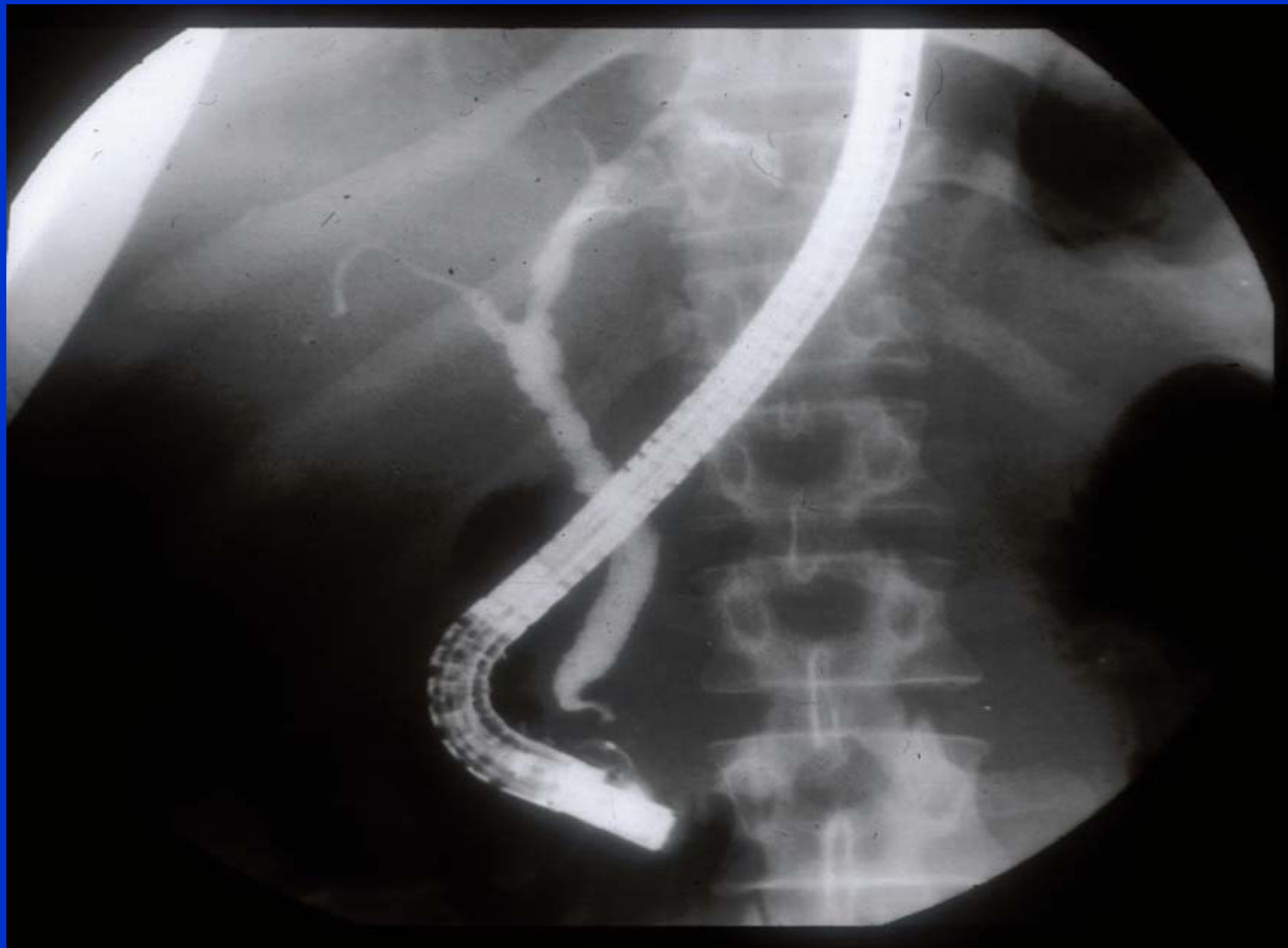
- sampling, rapid preservation, desmoplastic tumor, cautery artifact after a sphincterotomy
- fluid for K-ras mutation ?????

## **Who Gets Admitted to The Hospital**

- **Anyone who wants to post procedure**
- **Anyone who can't drink lots of fluid**
- **Anyone with pain**
- **Everyone who is cut with a needle knife or requires a pre-cut**
- **Everyone who had post ERCP pancreatitis before**







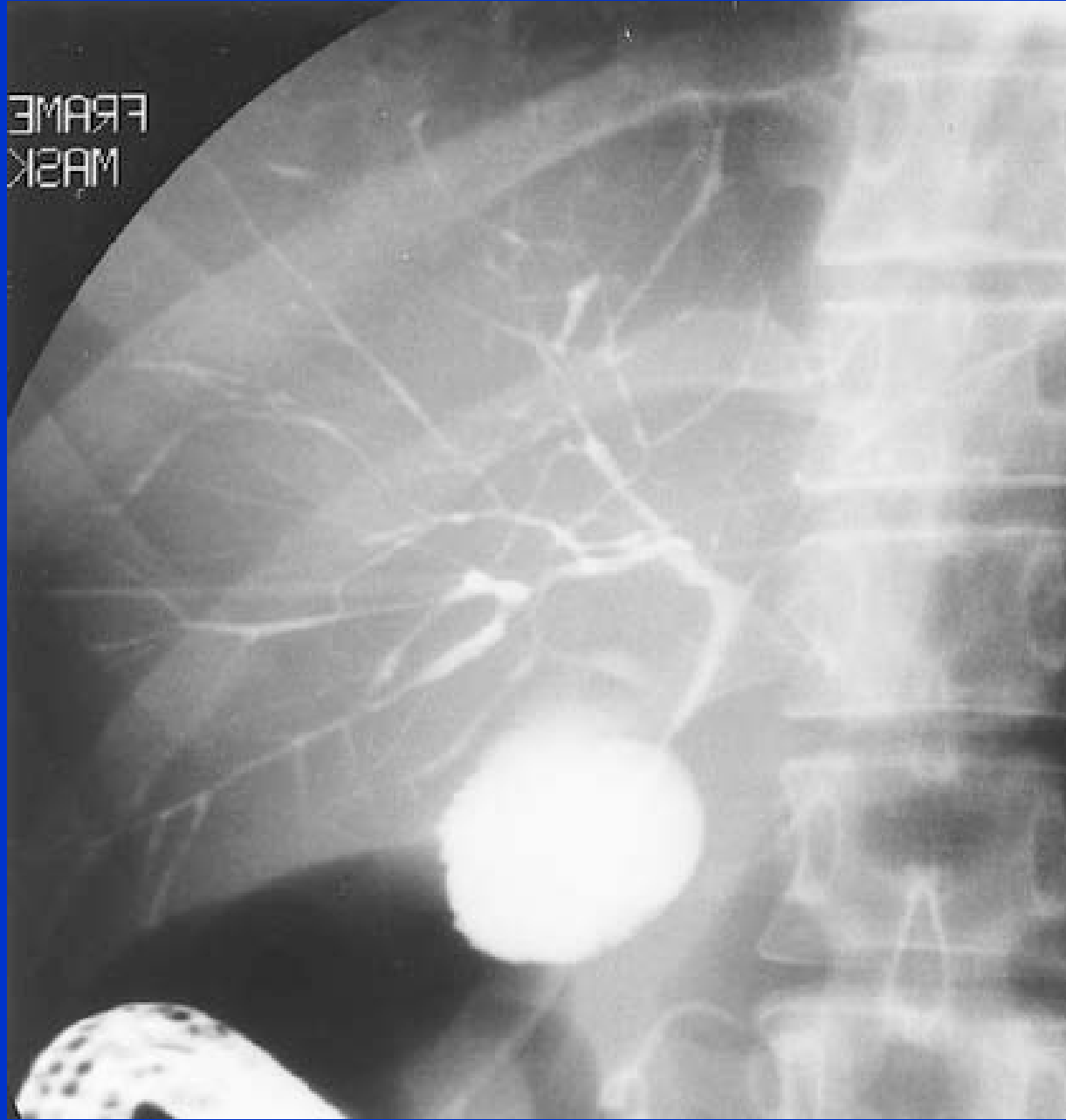


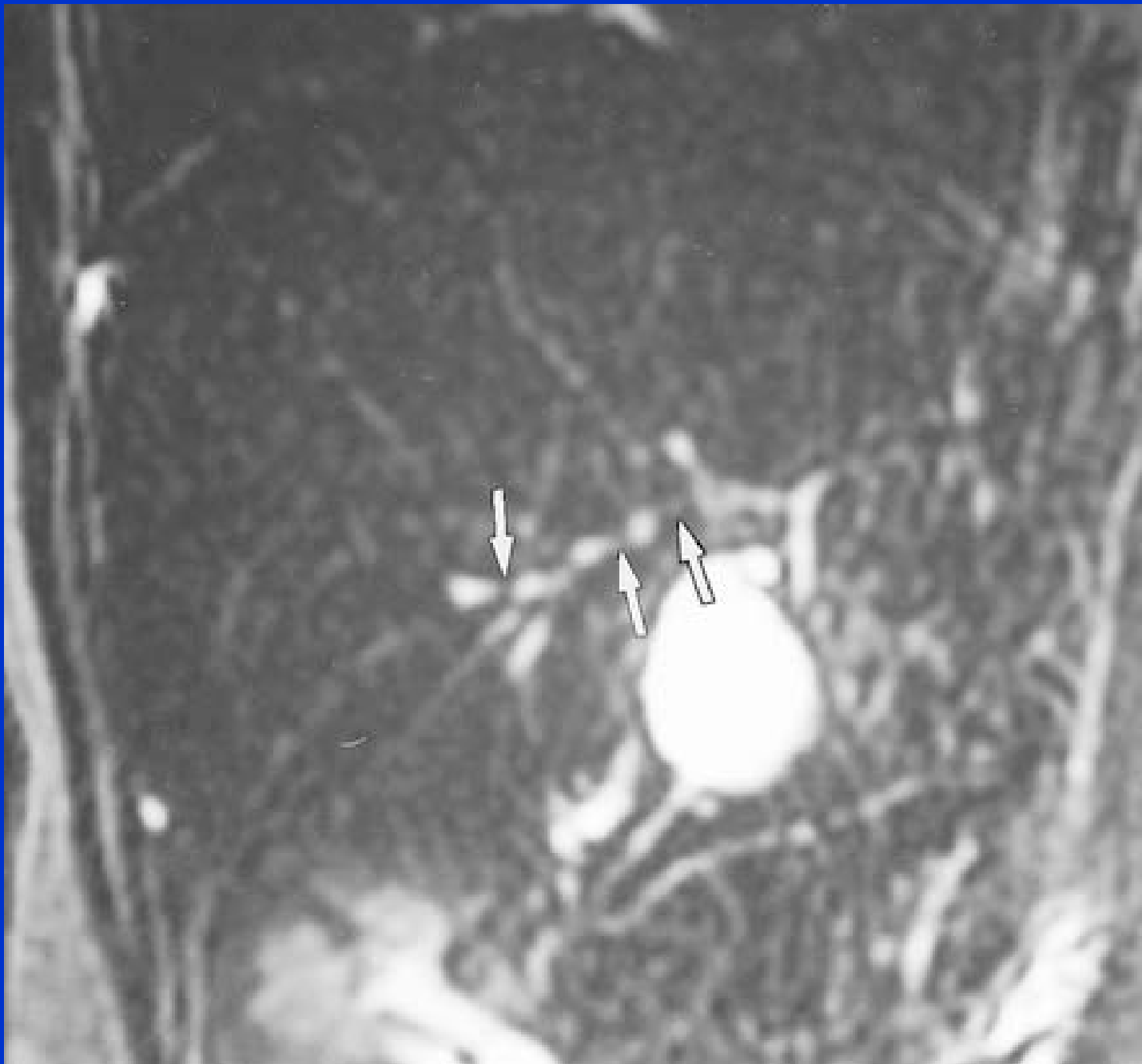
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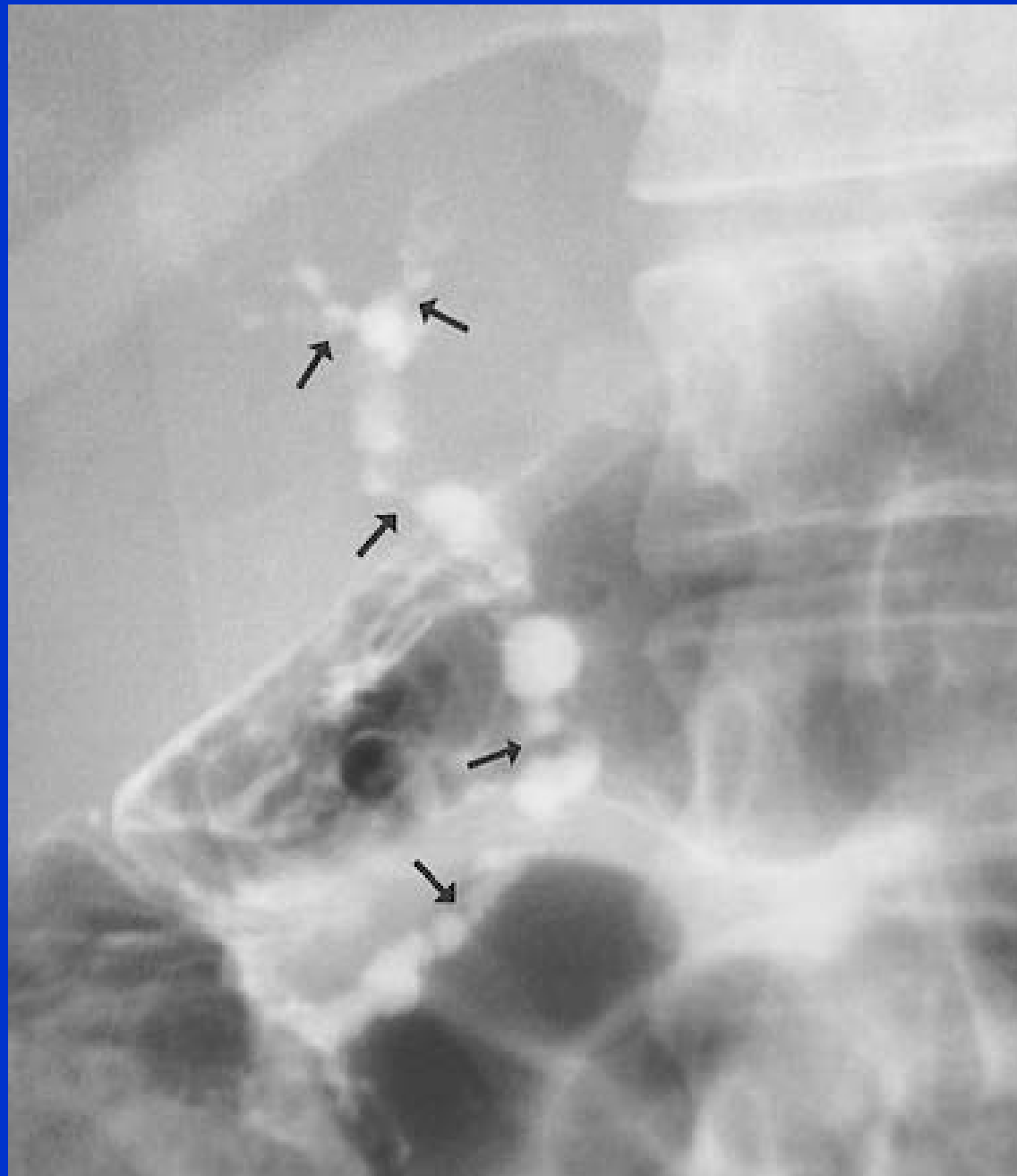
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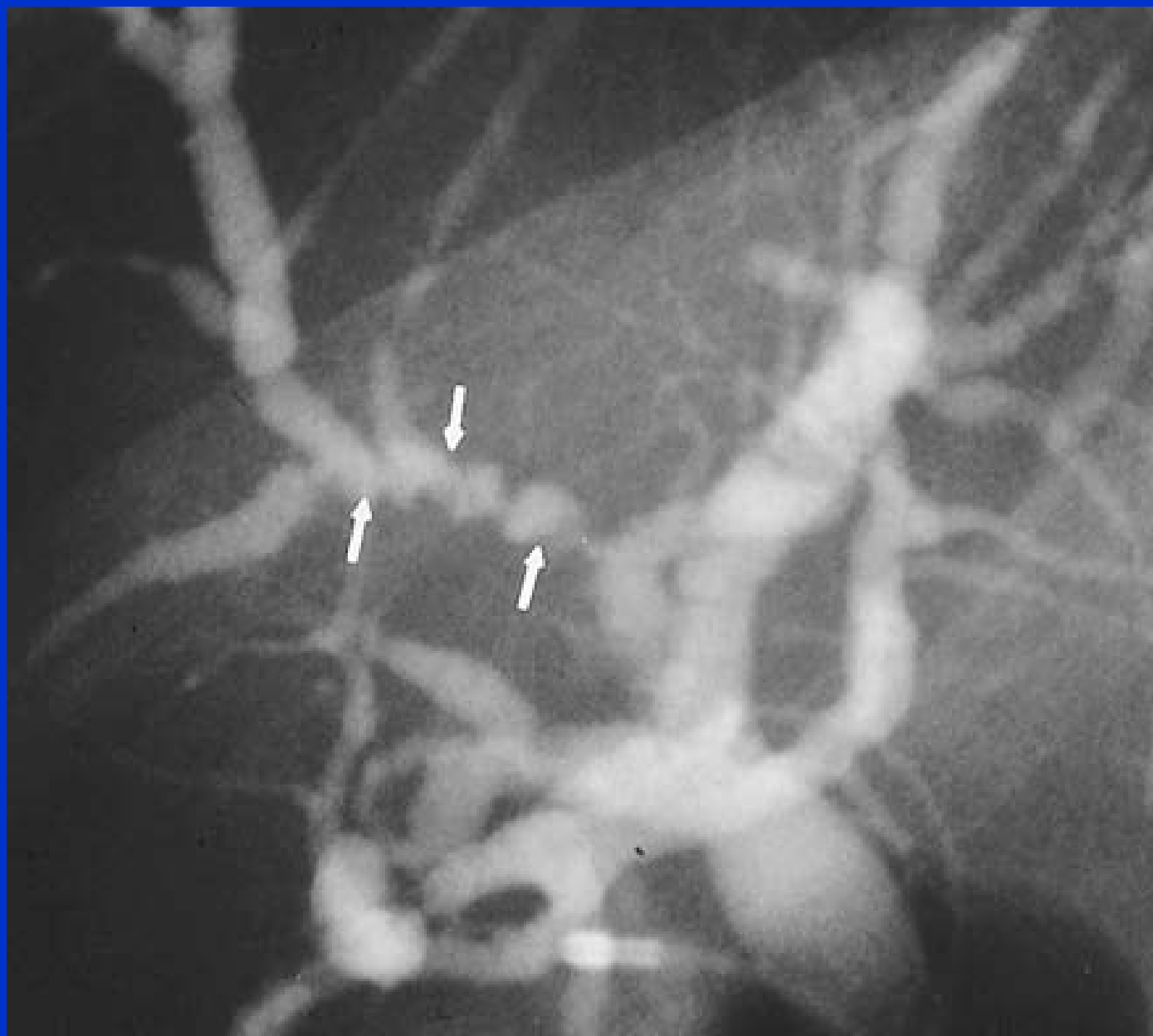


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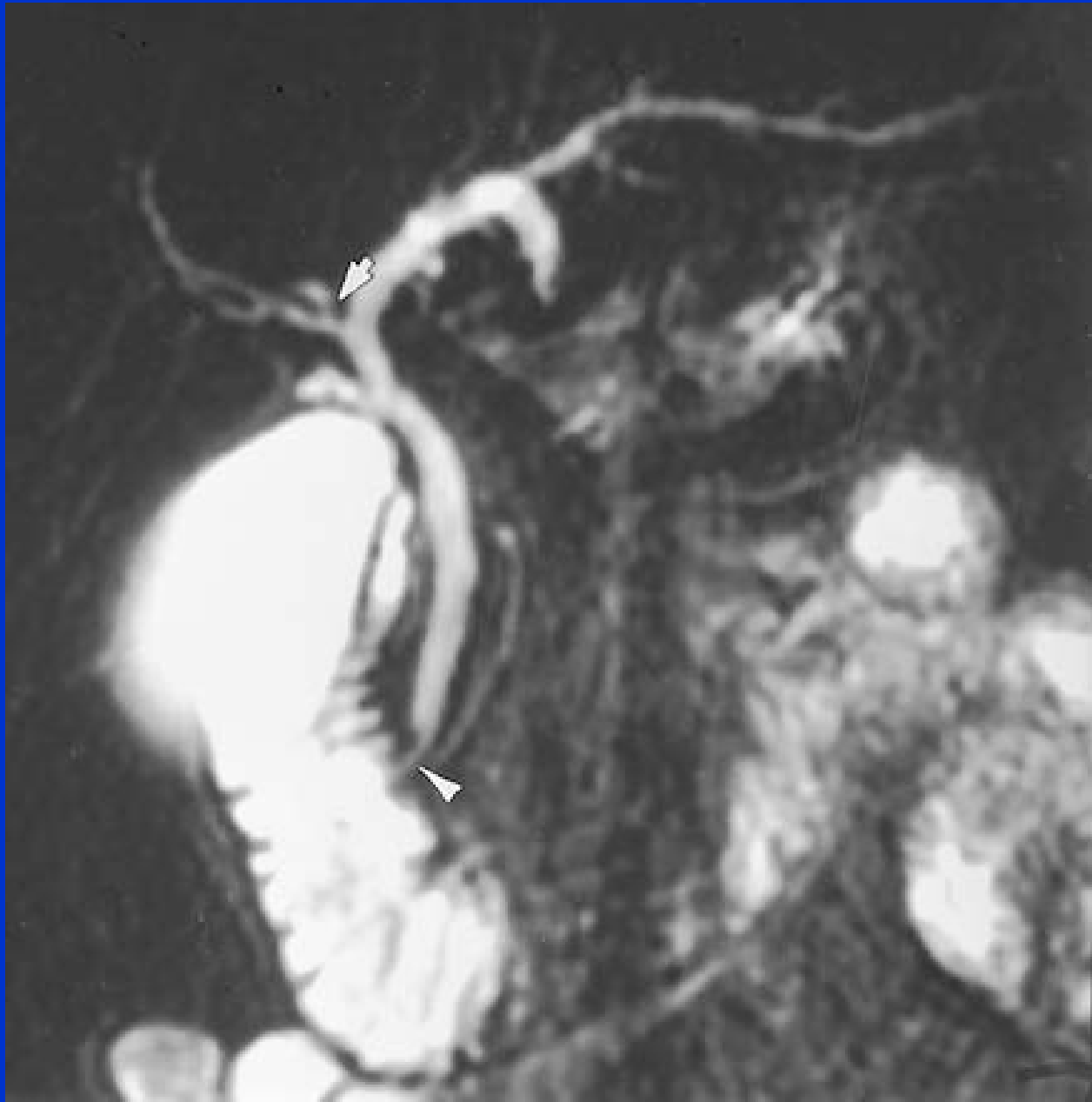


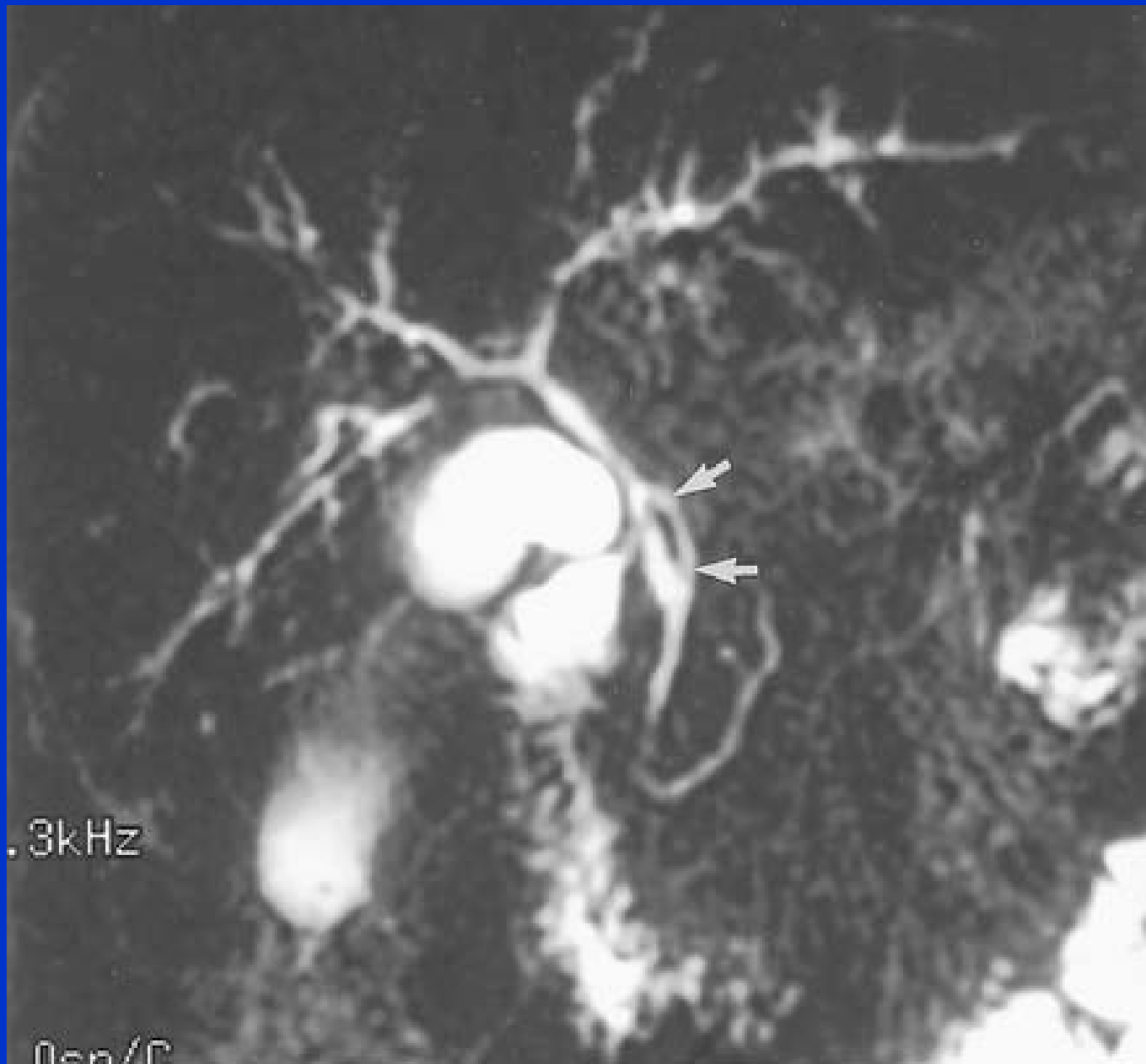








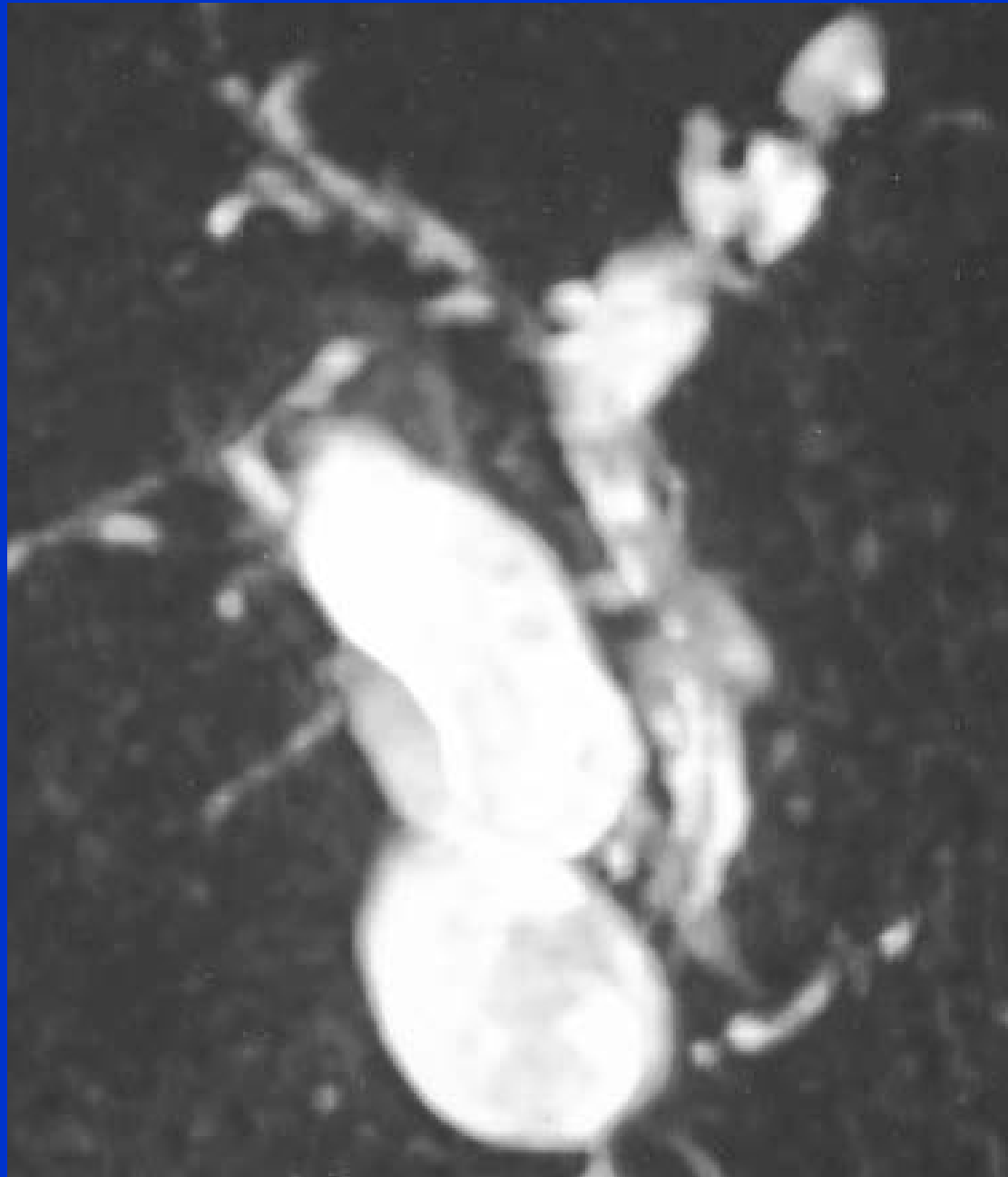










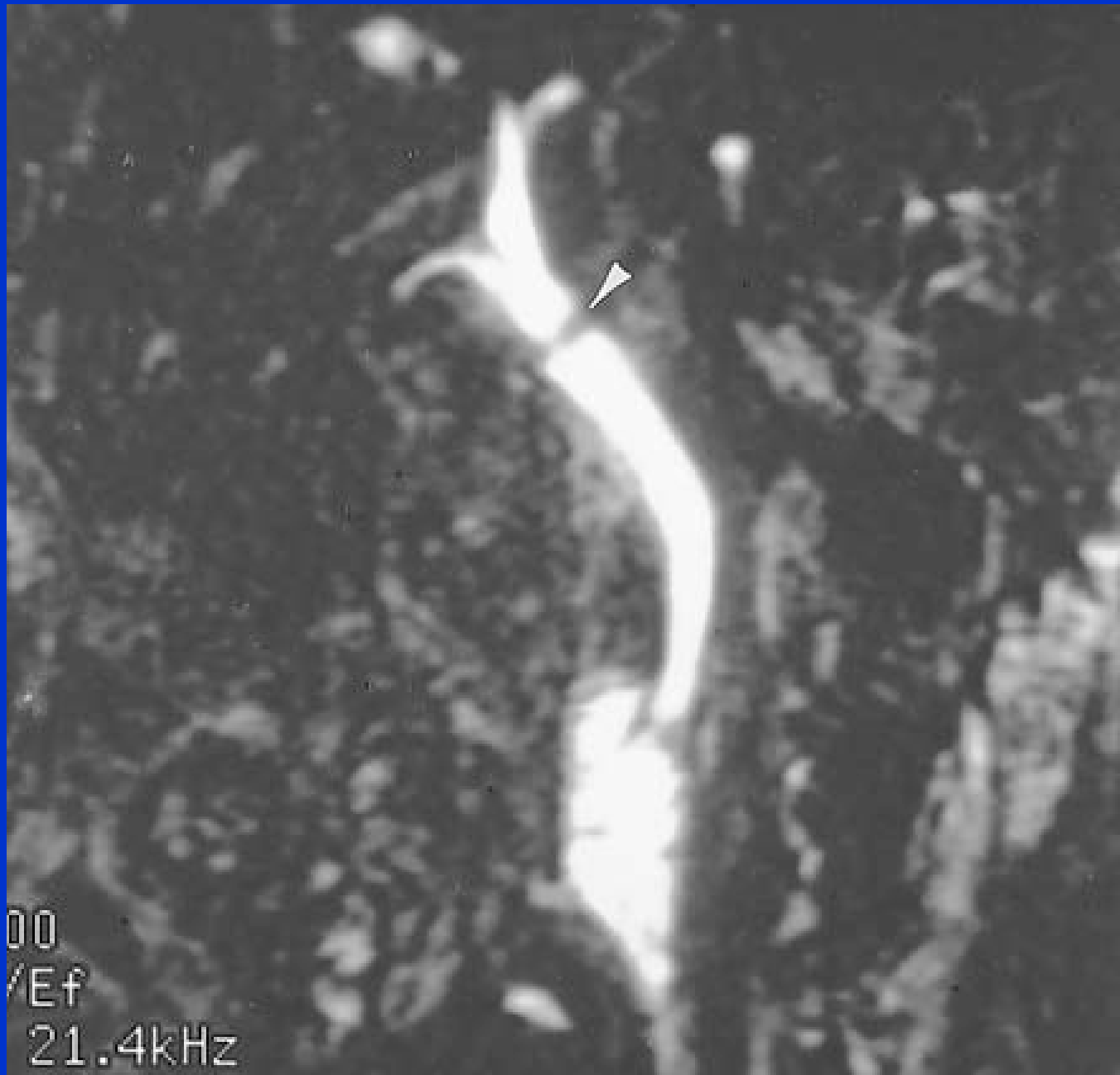




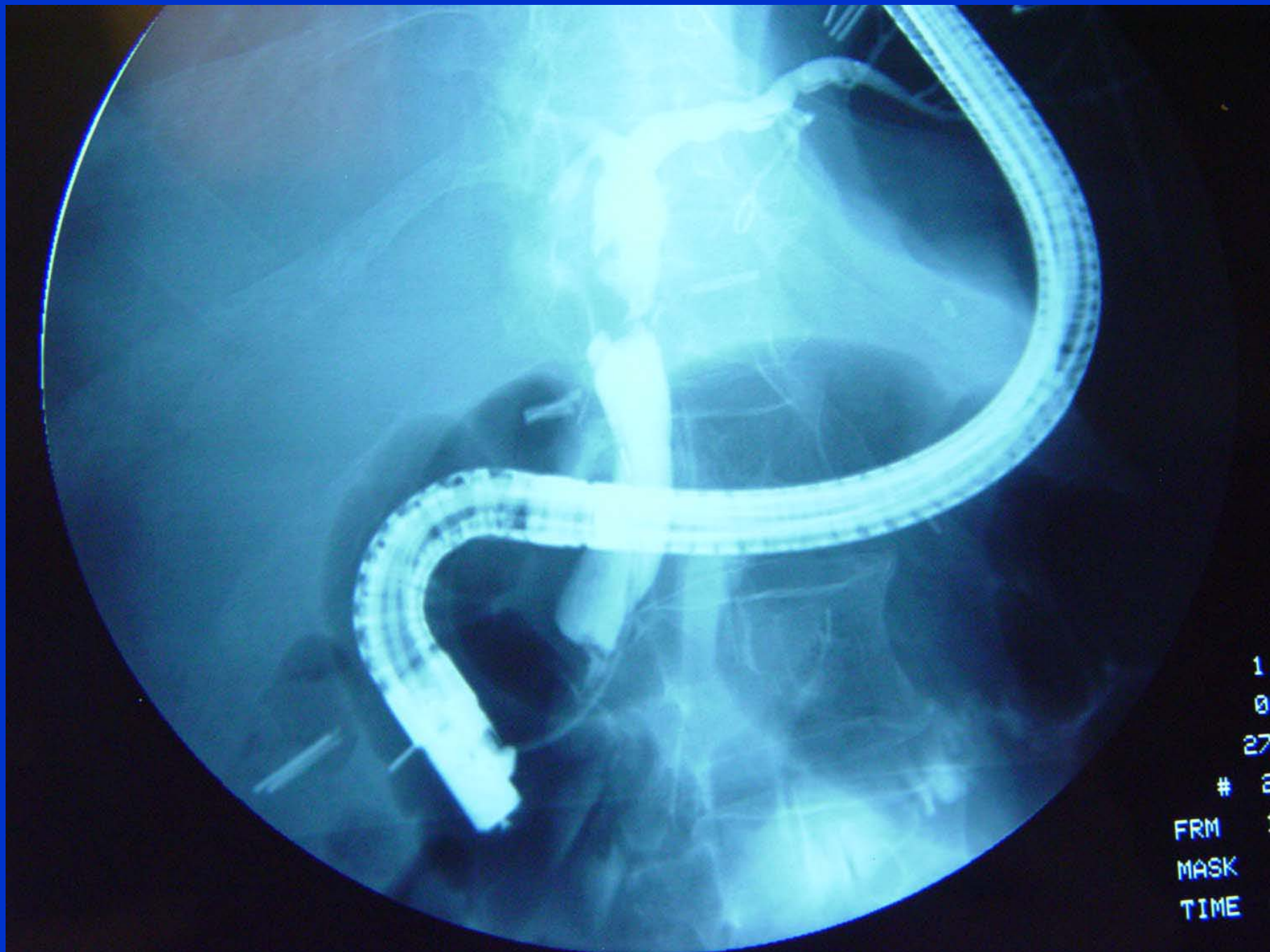








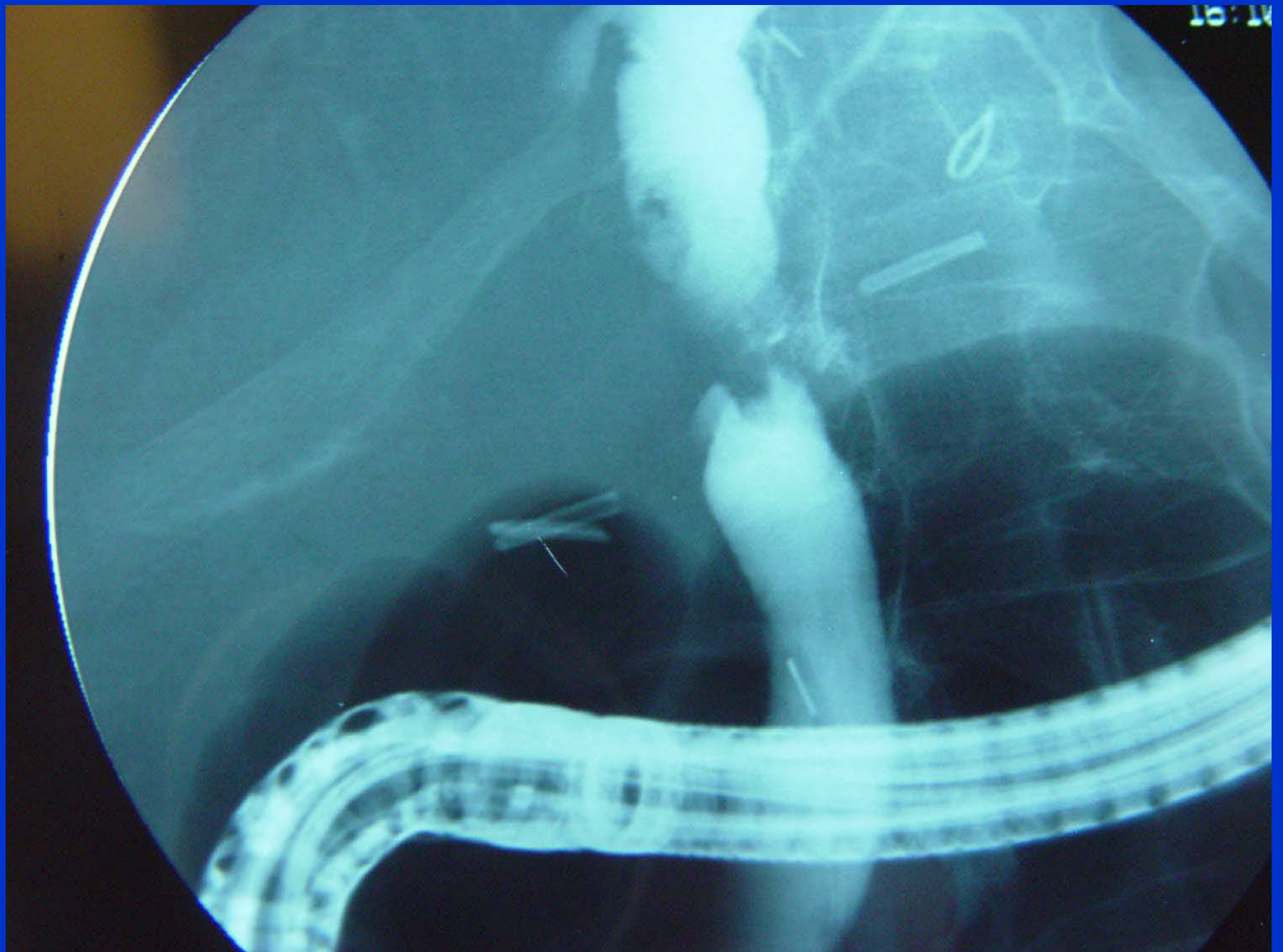
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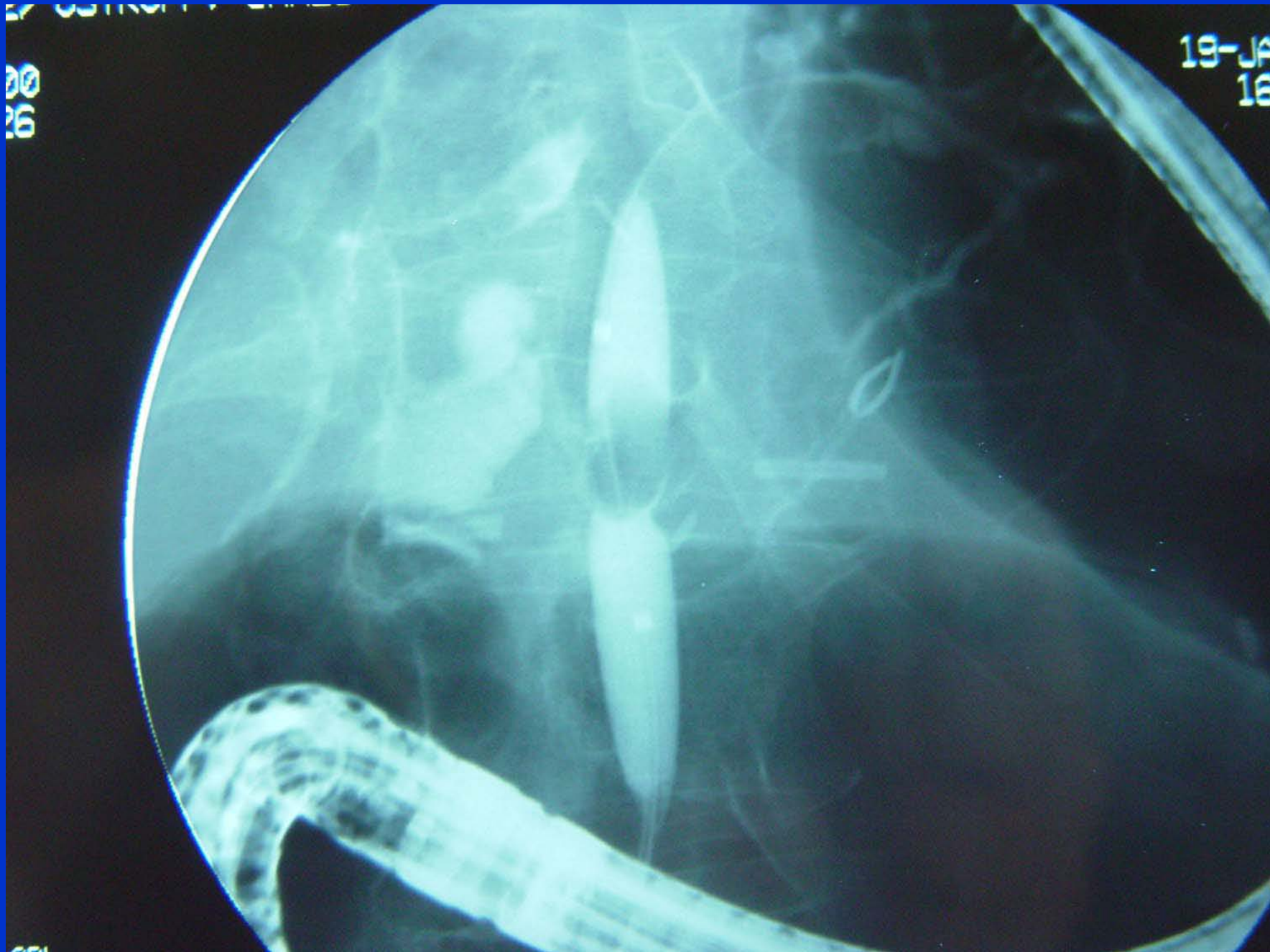


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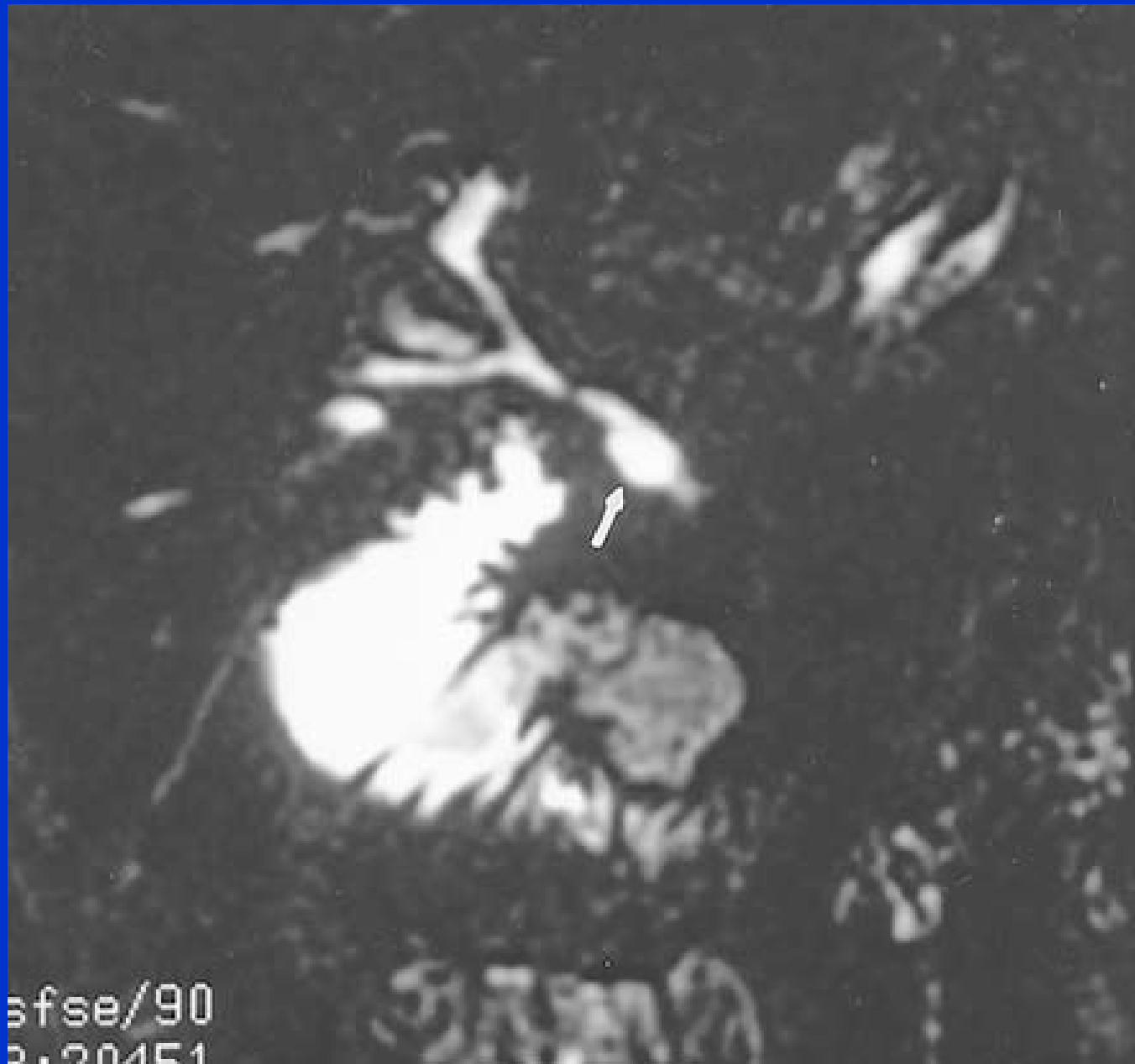




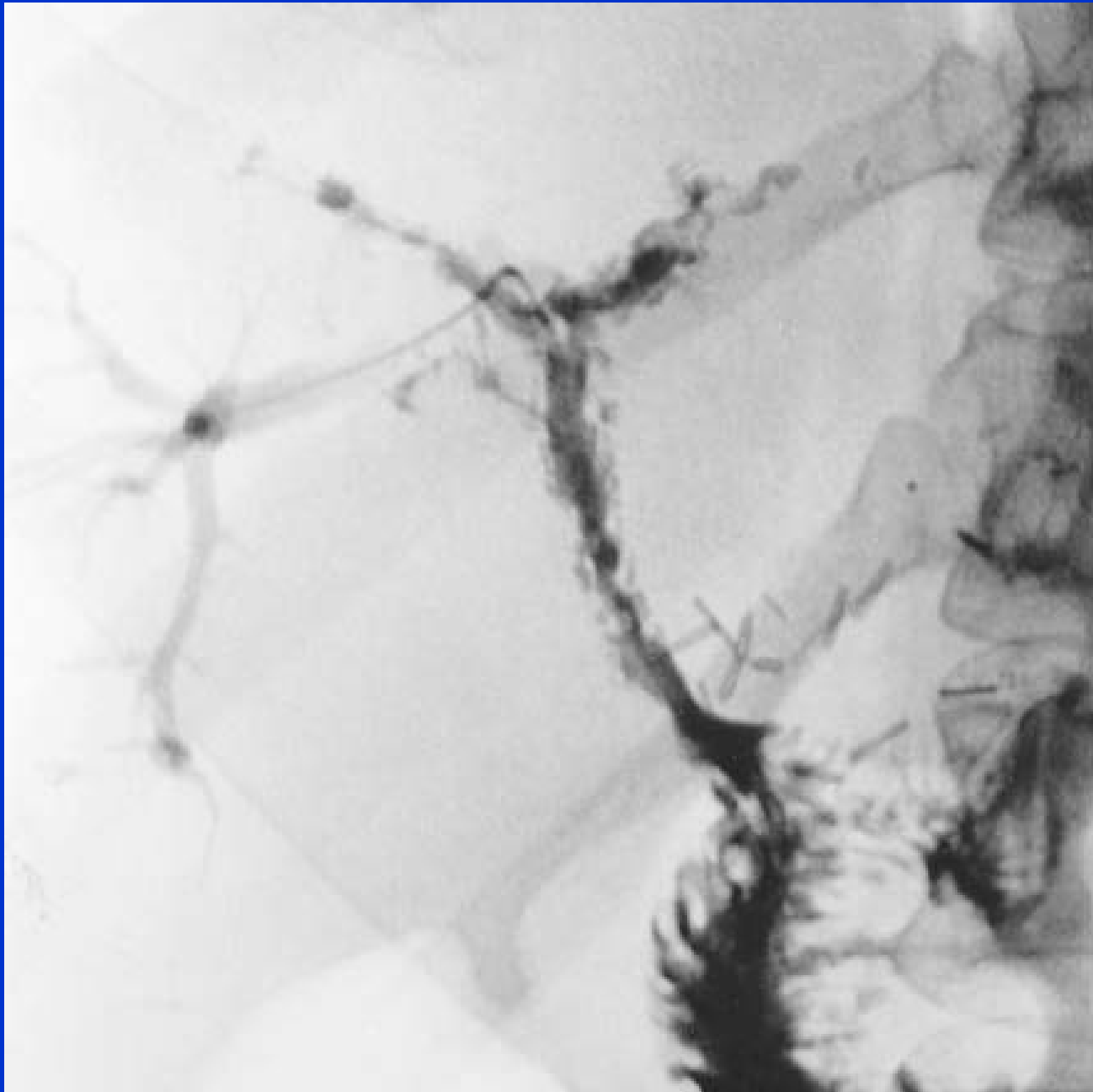
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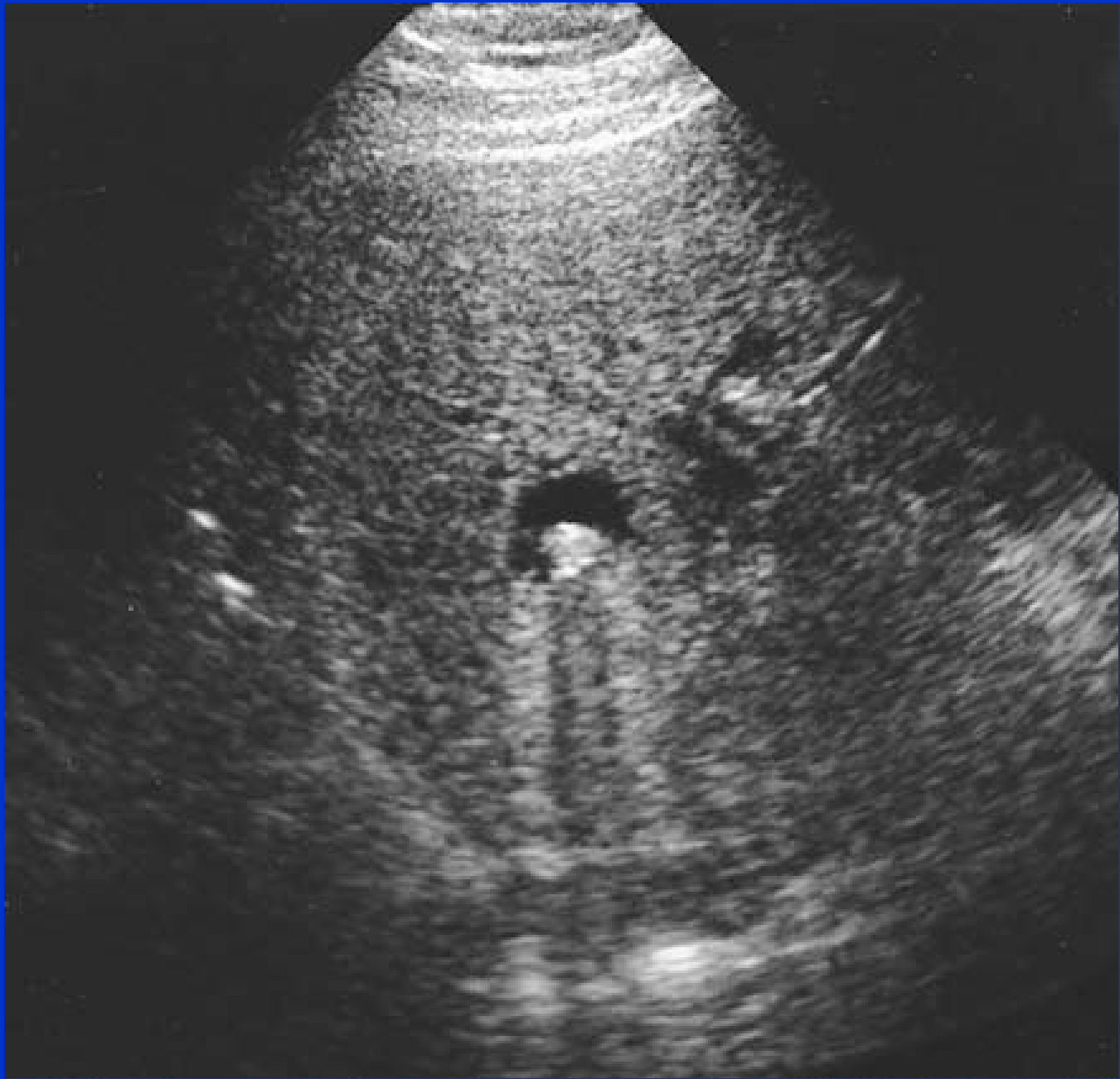


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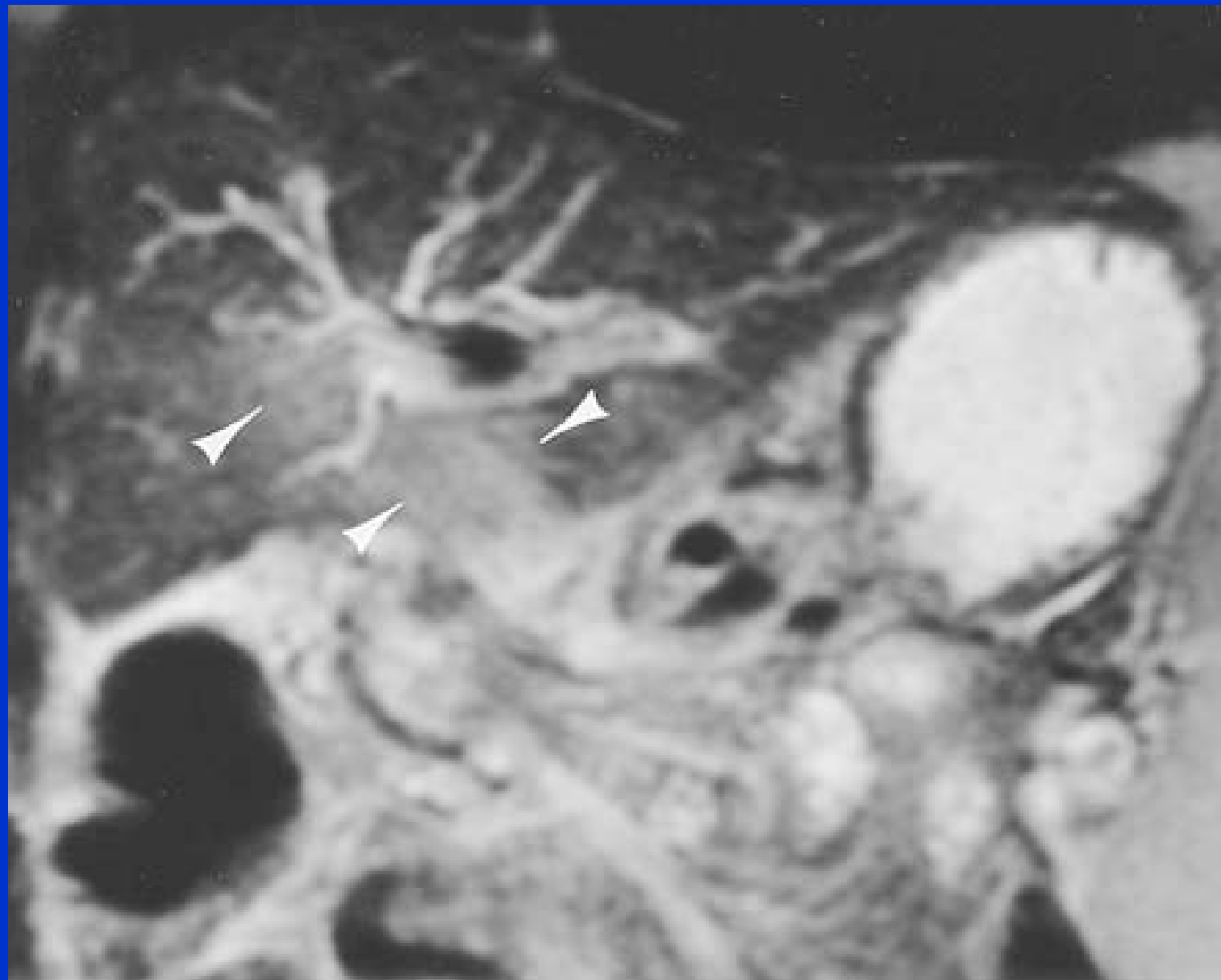




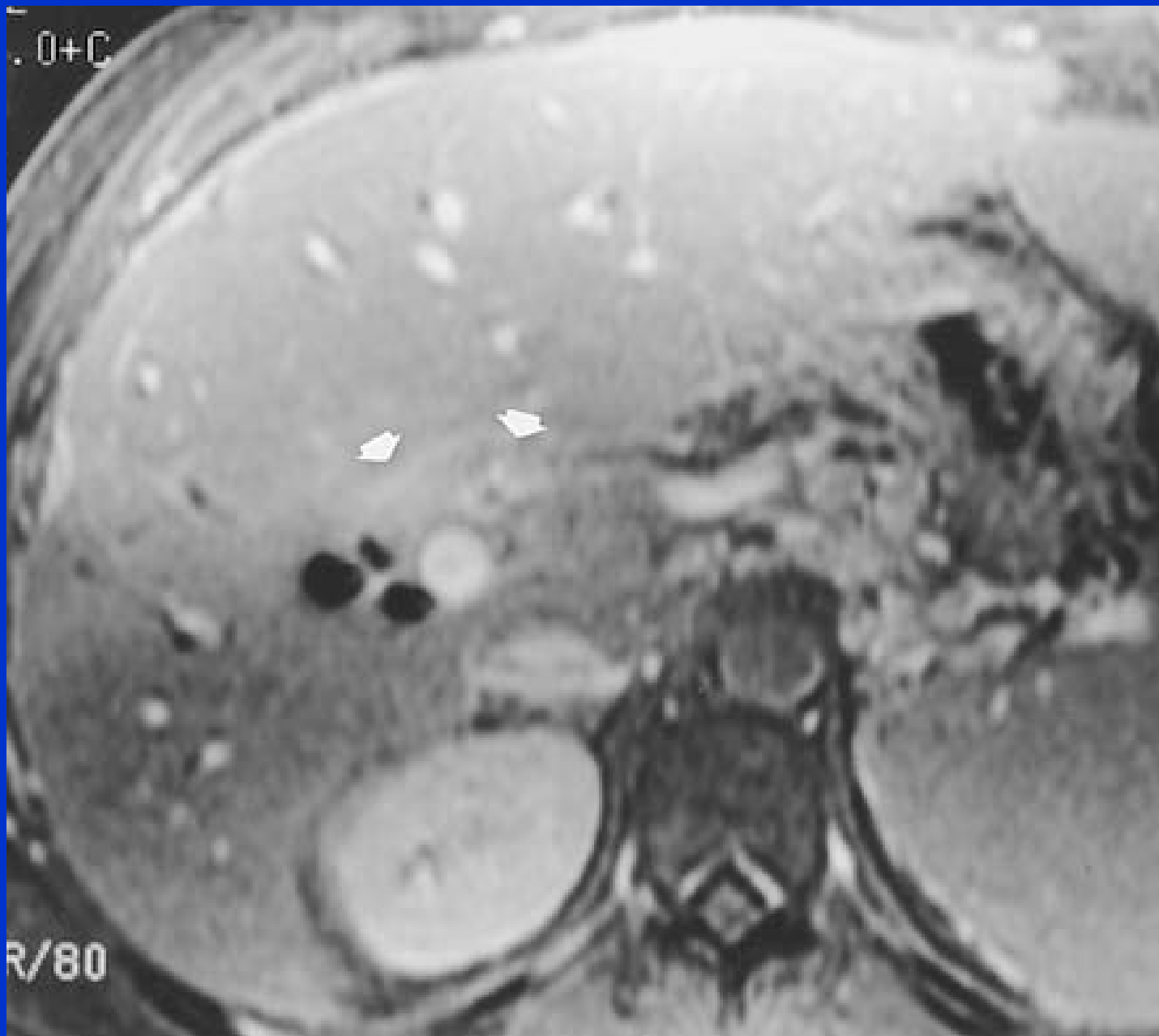


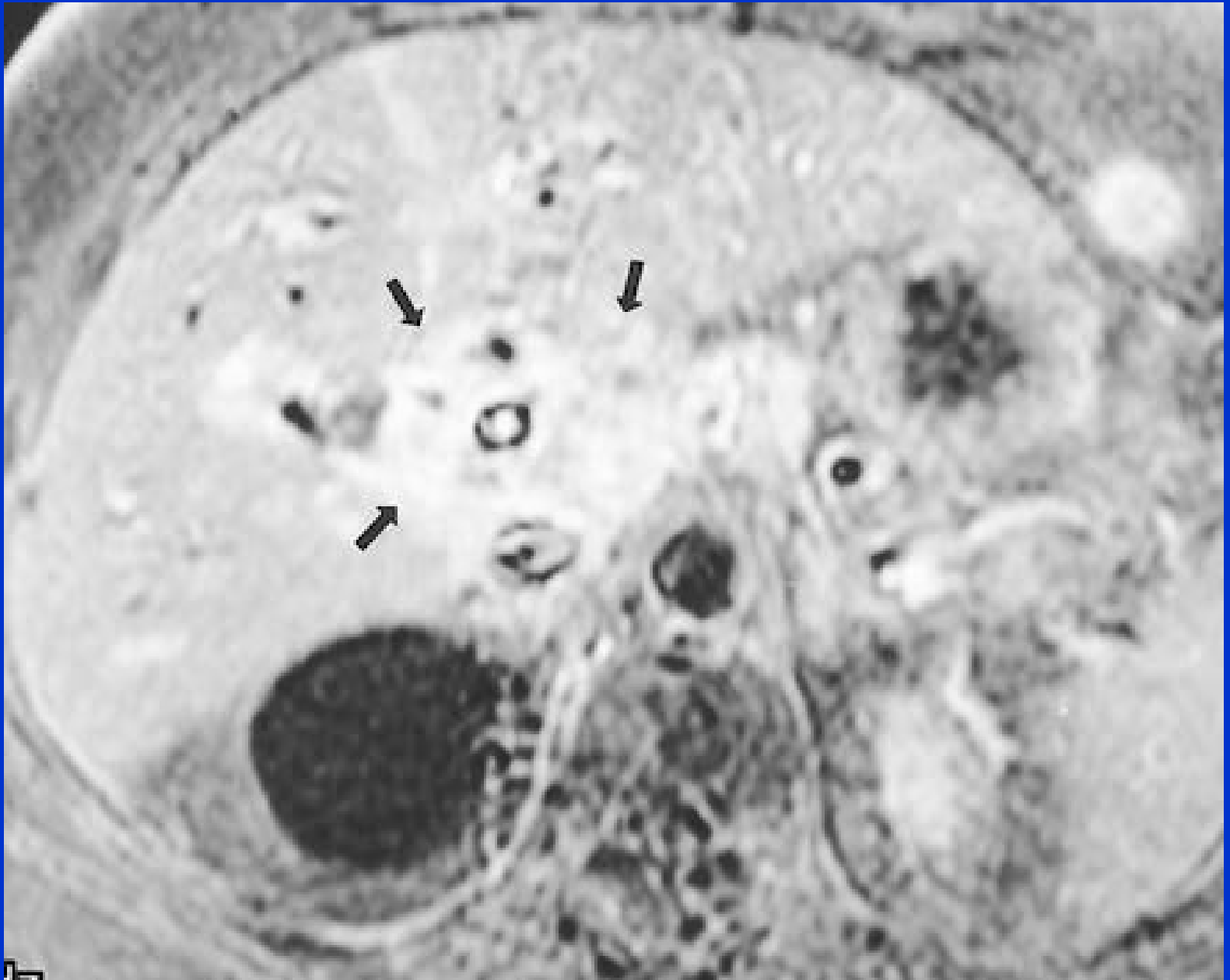














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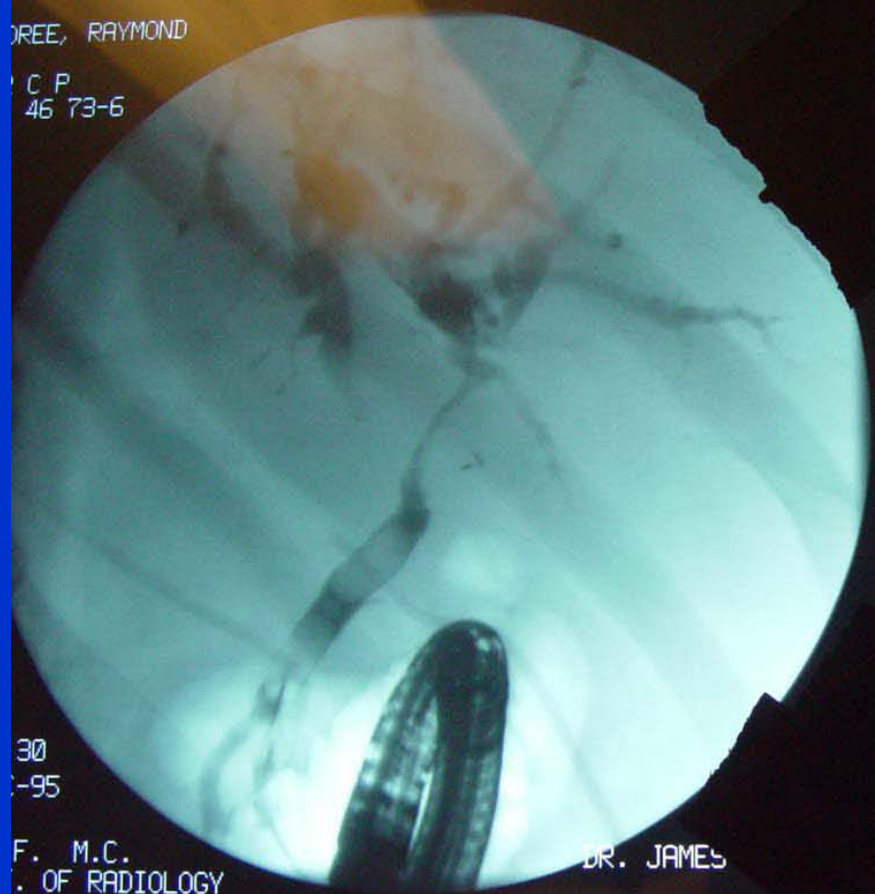
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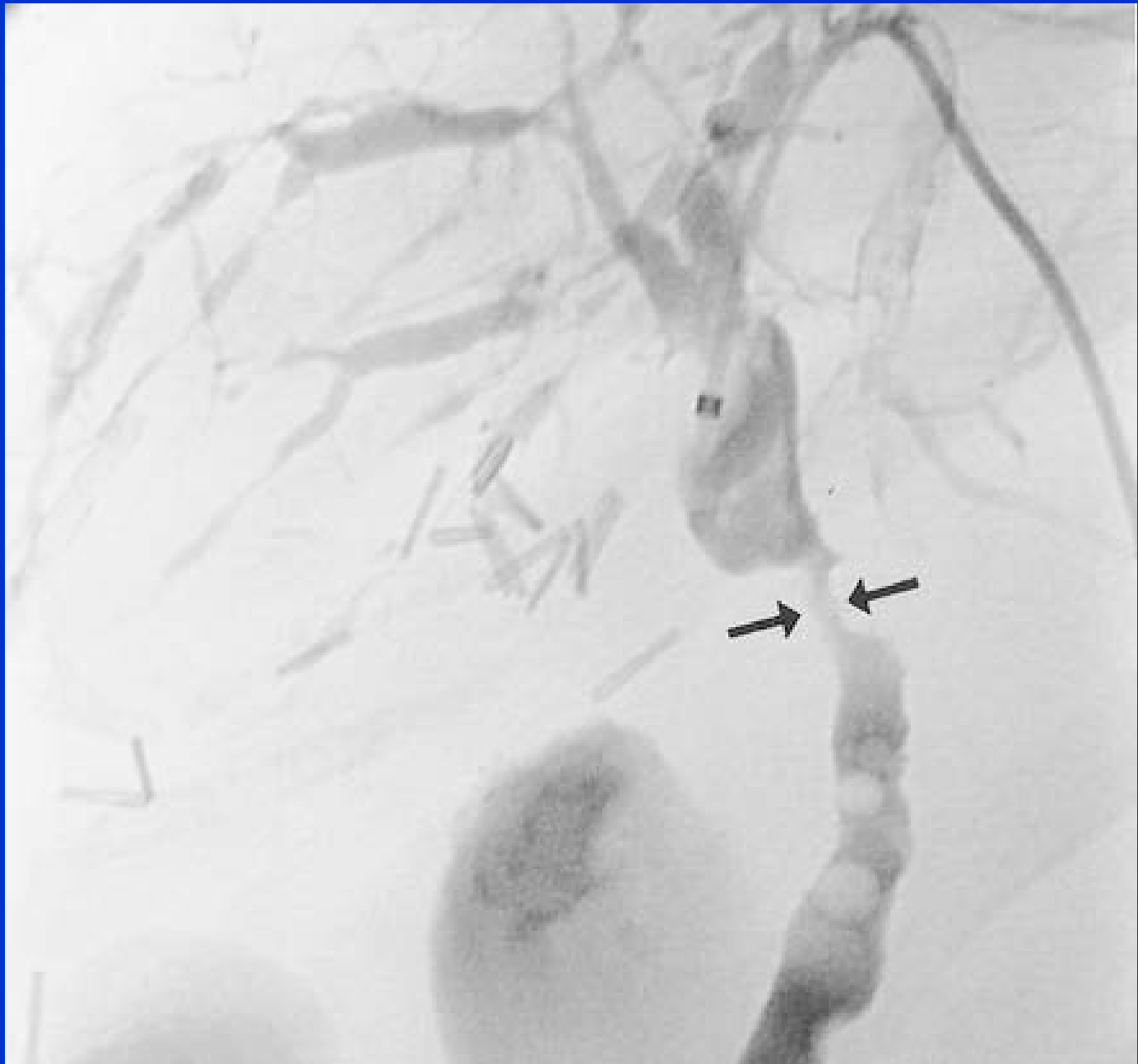
F. M.C.  
. OF RADIOLOGY

DR. JAMES

DR







**PTC vs ERCP**  
**PTC+ ERCP**

**Complications:**

- Pancreatitis
- Cholangitis
- Bleeding
- Retroduodenal Perforation
- Cardio Pulmonary Complications

## ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAPHY

Major Early Complications from Diagnostic and Therapeutic ERCP: A Prospective Multi-center Study. Loperfido et al. Gastrointestinal Endoscopy 1998;48:1

	<u>Major Complications</u>	<u>Death Rate</u>
• <b>Diagnostic ERCP (942)</b> <b>(0.21%)</b>	<b>13 (1.38%)</b>	<b>2</b>
• <b>Therapeutic ERCP (1827)</b> <b>(0.49%)</b>	<b>98 (5.4%)</b>	<b>9</b>

– (P < 0.0001)

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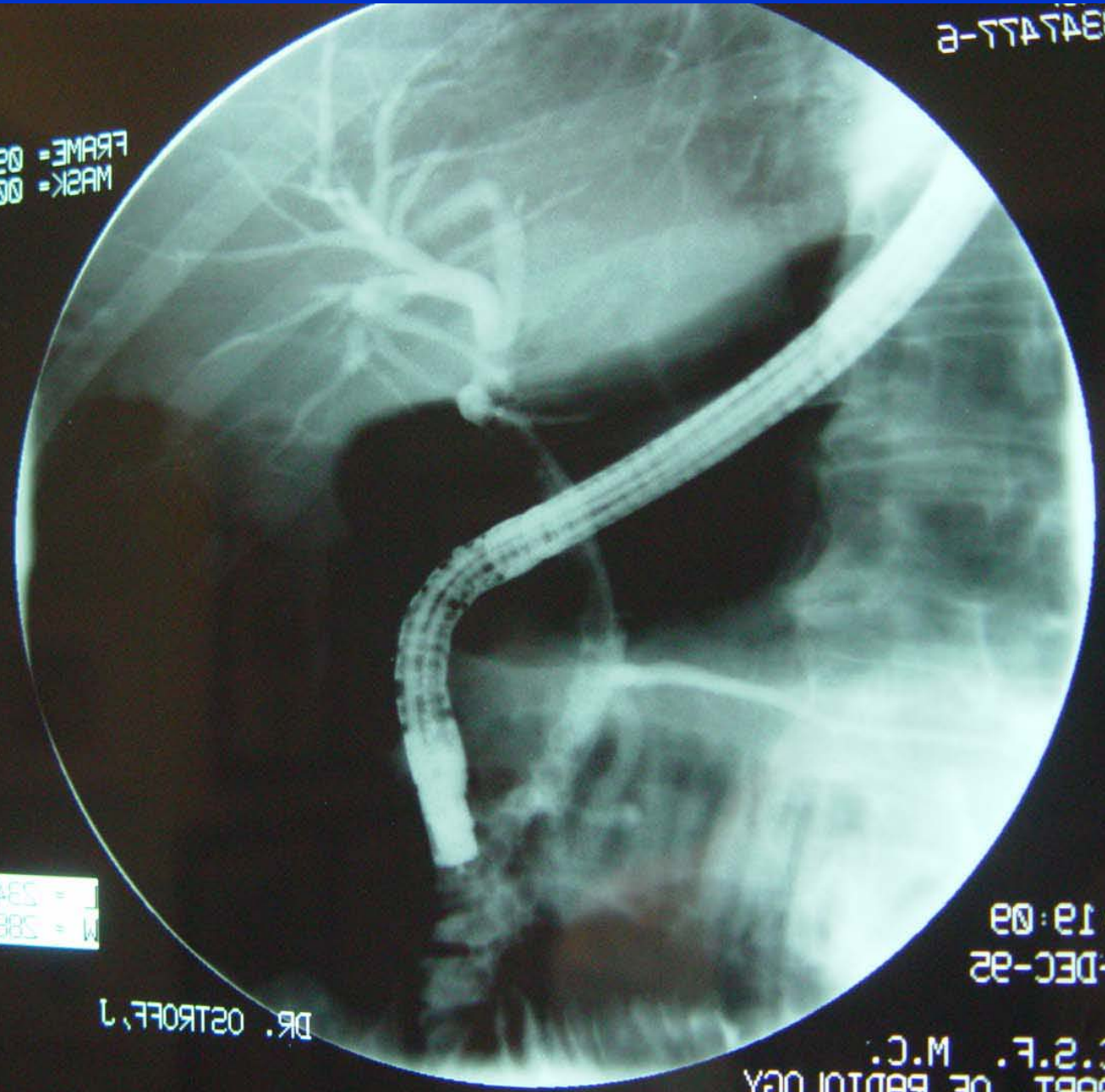
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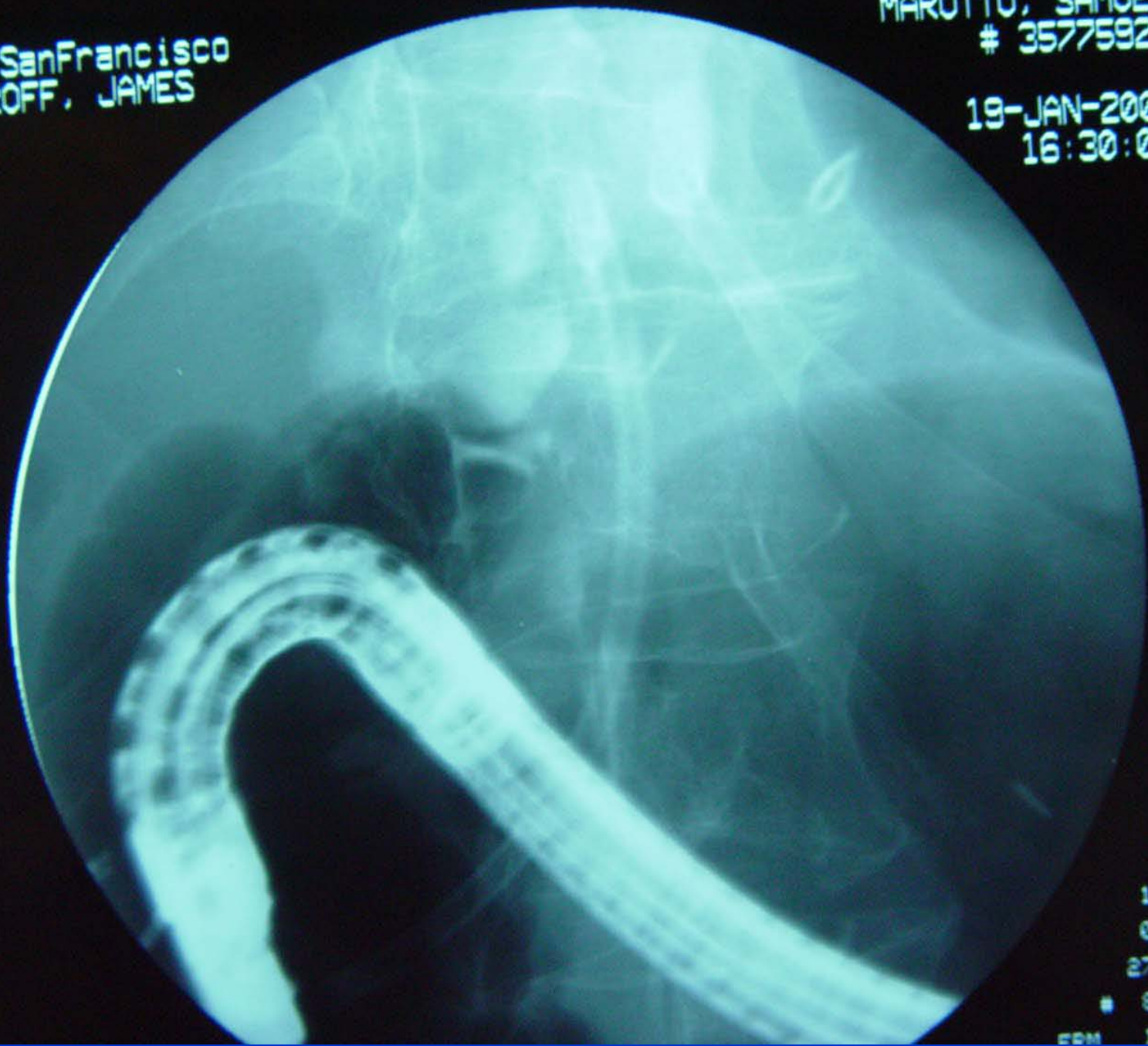
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DEPART. OF RADIOLOGY



U.C. San Francisco  
OSTROFF, JAMES

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# COMPLICATIONS AFTER ERCP IN PATIENTS WITH PRIMARY SCLEROSING CHOLANGITIS

*Compared complication rate after ERCP in consecutive patients with PSC compared with control patients with biliary strictures who did not have PSC*

## • RESULTS

-85 ERCP's in 30 patients with PSC

-70 ERCP's in 45 control patients

### *Complications*

-PSC (11/85) [12.9%] vs Control (6/70) [8.6%] (little difference) P=0.45

-PSC complications (with acute symptoms 7/24 [29.2%])

-PSC complications (elective 4/61 [6.6%]) (significant) P=0.01

**Patients with PSC who had complications had more total and acute ERCP's**

**No difference in the rate of complications in diagnostic vs therapeutic ERCP's**

**No difference in diagnostic vs therapeutic ERCPs nor stent placement and dilation-only therapeutic ERCP**

Complications after ERCP in patients with primary sclerosing cholangitis.

GastrointestEndosc. 2008; 67(4):643-8 (ISSN: 0016-5107)Etzel JP; Eng SC; Ko CW; Lee SD; Saunders MD; Tung BY; Kimmey MB; Kowdley KV Department of Medicine, University of Washington Medical Center, Seattle, Washington, USA.

## ENDOSCOPIC MANAGEMENT OF PRIMARY SCLEROSING CHOLANGITIS (PSC) RESULTS IN SLOWING OF DISEASE PROGRESSION

➤ *Endoscopic sphincterotomy and balloon dilation without stent placement was used in symptomatic patients with multifocal PSC with extrahepatic and intrahepatic strictures.*

➤ *Dilation was attempted to secondary branches of the right and left lobe and dominant extrahepatic strictures with 4 mm and 6 mm balloons.*

➤ *PSC patients were compared with PSC patients awaiting transplantation who did not undergo therapeutic intervention. Endpoints were transplant, death, Child-Pugh score and the modified Mayo score*

### • RESULTS

- 17 patients underwent 127 ERCP's with dilation
- 1 episode of pancreatitis, no perforations or cholangitis
- trend toward slower progression in the dilated group

## PREDICTORS OF SUCCESSFUL CLINICAL AND LABORATORY OUTCOMES IN PATIENTS WITH PRIMARY SCLEROSING CHOLANGITIS UNDERGOING ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY

**N= 104 patients with PSC underwent 204 ERCP's**

- **56 were diagnostic ERCP's**
- **Clinical improvement seen in 35% after diagnostic and 70% after therapeutic ERCP's**  
**LFT's: aspartate aminotransferase, alanine aminotransferase and alkaline phosphatase improve after diagnostic and therapeutic ERCP's**
- **Serum Bilirubin levels decreased only in the therapeutic group (may be a more sensitive indicator of success in therapy)**

### **RESULTS:**

**Dominant strictures, endoscopic therapy and high serum bilirubin were predictors of successful clinical and laboratory improvement**

**Total complication rates were equivalent between diagnostic and therapeutic ERCP's.....*BUT* severe complications were more common in the therapeutic group**

**Predictors of successful clinical and laboratory outcomes in patients with primary sclerosing cholangitis undergoing endoscopic retrograde cholangiopancreatography. Eloubeidi, Mergener, Jowell, Branch and Baillie**

**Can J Gastro 2003 Apr; 17 (4): 243-8**

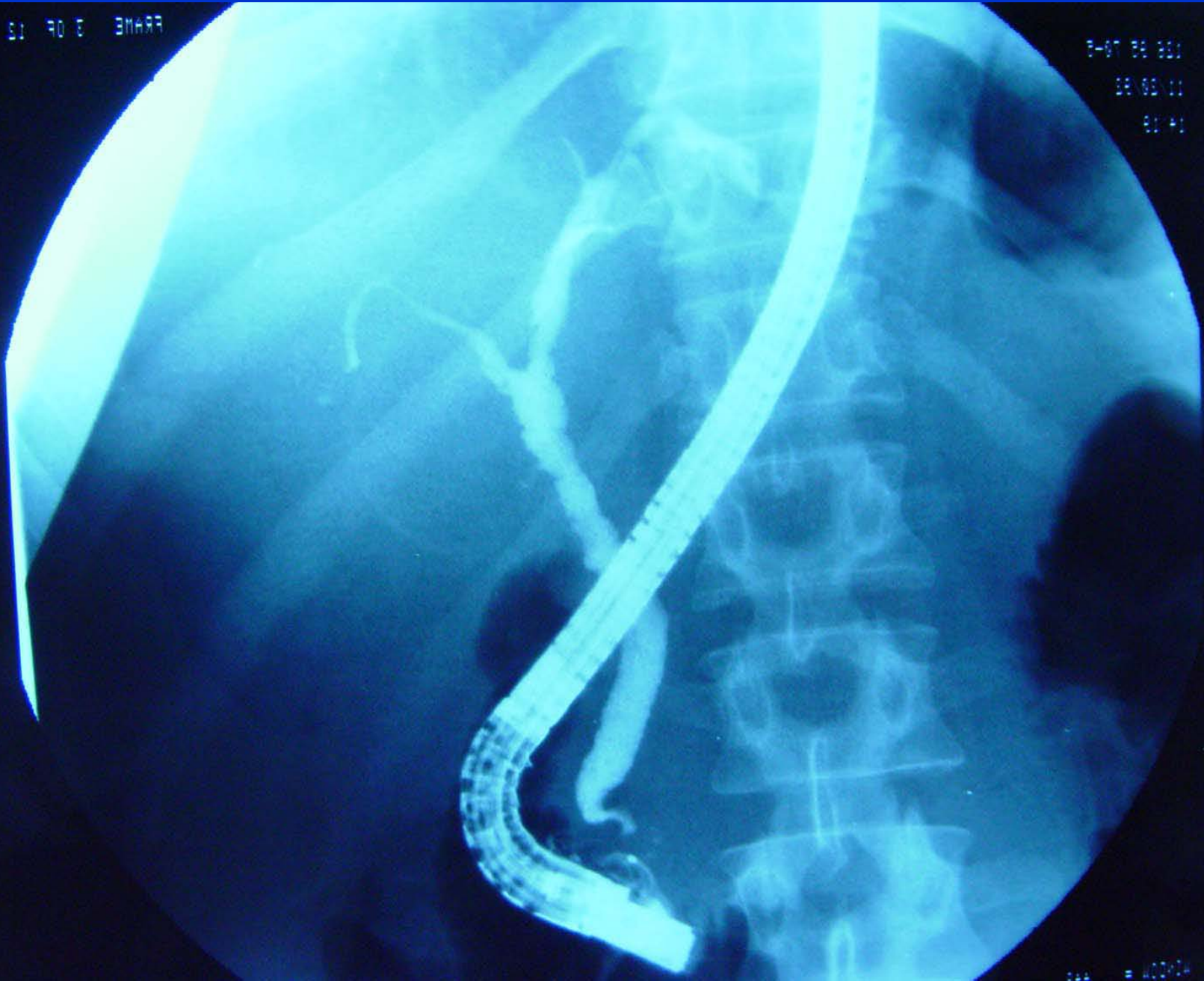


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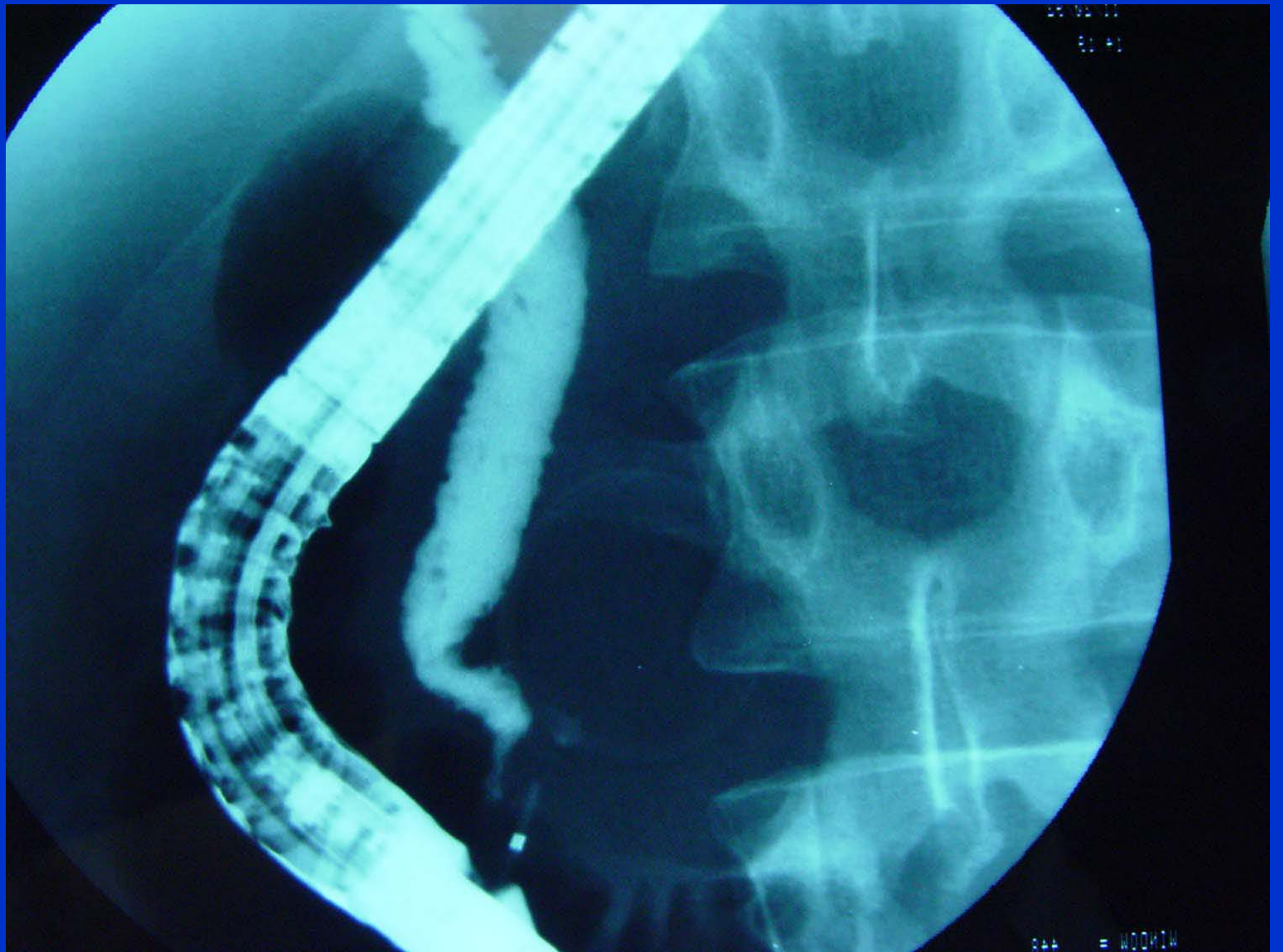
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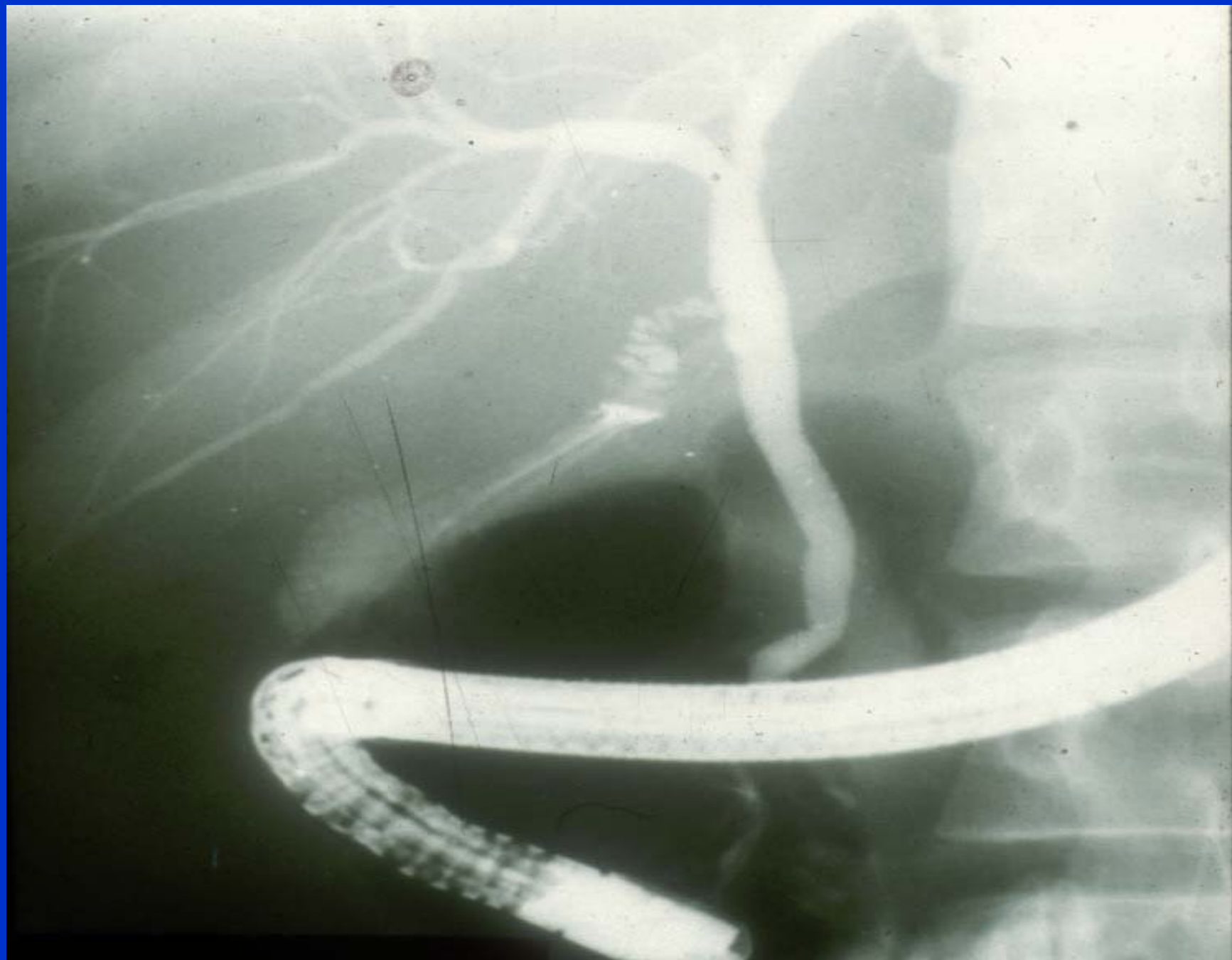
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## 37y.o. Man Presenting with:

- jaundice
- liver failure

- **Hx:** *Ulcerative Colitis and Sclerosing Cholangitis.*
- *Progressive liver failure with both intrahepatic disease and dominant strictures of the extrahepatic biliary tree.*
- **Lab:**  
Bilirubin 22, Ca 19-9 1850



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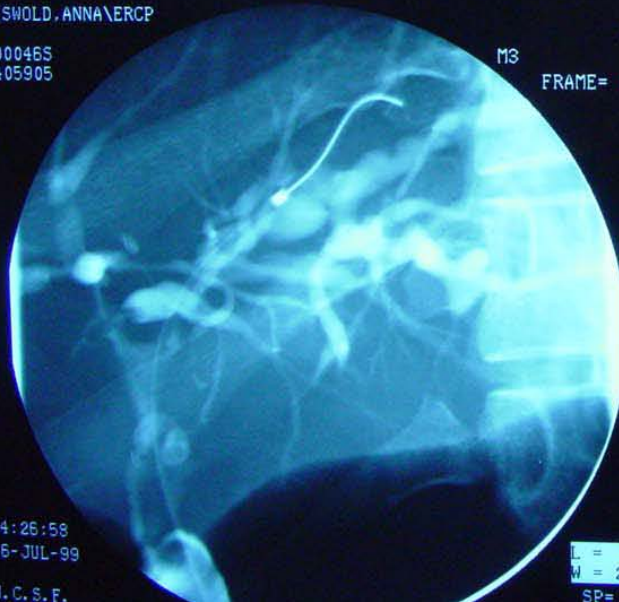
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S. OSTROFF MD.

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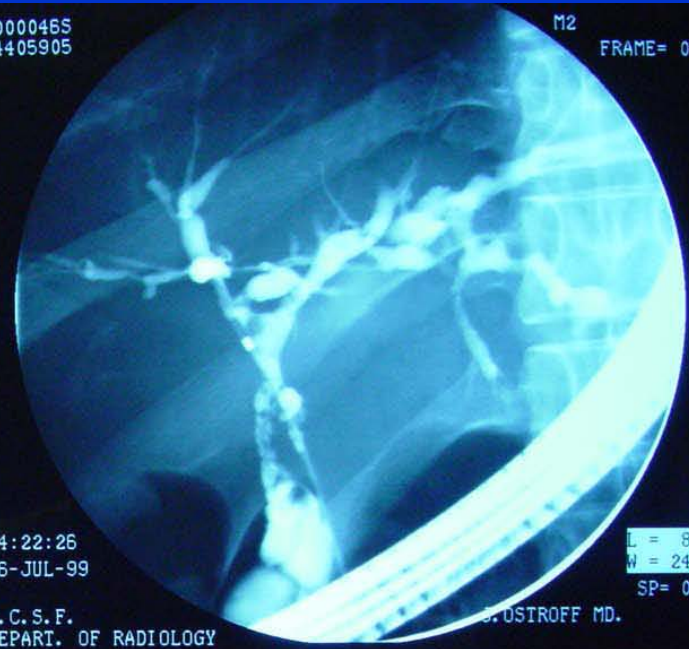
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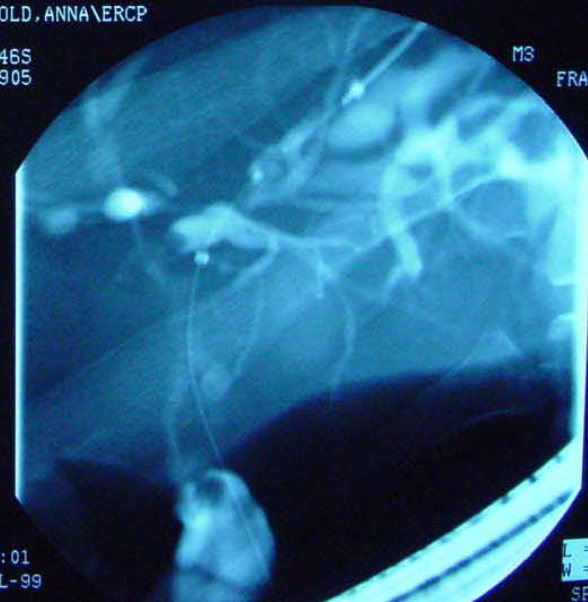
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S. OSTROFF MD.

GRI SWOLD, ANNA \ERC P

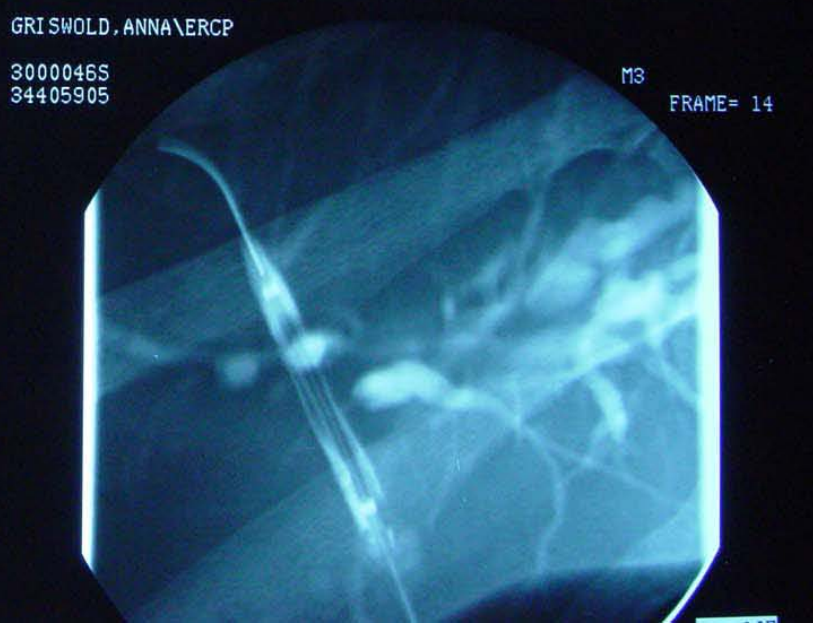
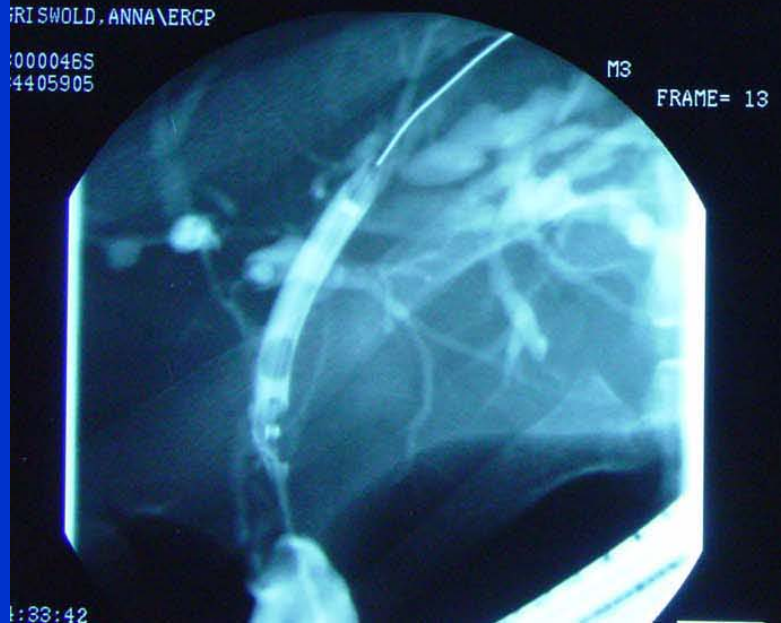
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U.C.S.F.  
DEPART. OF RADIOLOGY

GRISWOLD, ANNA\ERCP

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OSTROFF MD.



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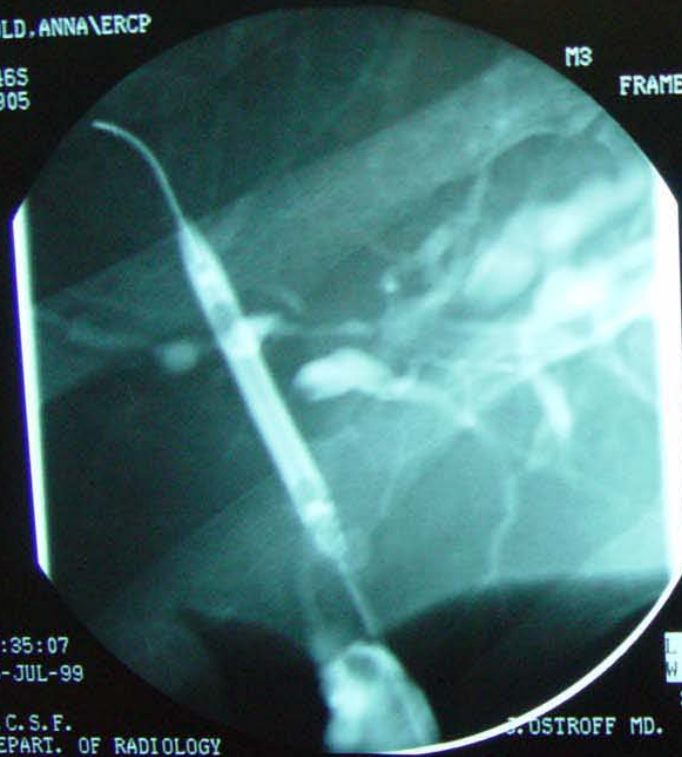
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DEPART. OF RADIOLOGY

GRISWOLD, ANNA\ERCP

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OSTROFF MD.



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U.C.S.F.  
DEPART. OF RADIOLOGY

OSTROFF MD.

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U.C.S.F.  
DEPART. OF RADIOLOGY

OSTROFF MD.

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## **SUMMARY**

- **Diagnostic ERCP's**
  - To make diagnosis
  - Staging of disease
  - Cytology to exclude cholangiocarcinoma
- **Therapeutic ERCP's (dilations)**
  - Part of a multidisciplinary approach
  - End point established
  - “Bridge” to Liver transplantation



