INTERVENTIONAL RADIOLOGY

CIRA

Canadian Interventional Radiology Association

Association canadienne de radiologie d'intervention

COMMON PRINCIPLES

- WE USE DYE – WHERE IS IT GOING?
  - IN THE BLOOD VESSEL – NEED TO KNOW CREATININE CLEARANCE
    - IF > 60 NO PROBLEMS
    - IF 30-60 GENERALLY NO PROBLEMS – GIVE FLUIDS FOR INPATIENTS, CHICKEN SOUP AND LOTS OF WATER FOR OUTPATIENTS
    - IF < 30 REQUIRE NEPHROLOGY CONSULT
  - ANYWHERE ELSE – CREATININE NOT IMPORTANT

COMMON PRINCIPLES

- WE STICK THINGS INTO PEOPLE
  - CBC/COAGS FOR ALL!
  - CBC
    - PLATELETS > 50 NOT A PROBLEM
    - PLATELETS 30-50 MAY BE A PROBLEM
    - PLATELETS < 30 A PROBLEM
      - PLATELETS IN A PINCH
  - INR
    - PROCEDURE DEPENDENT
    - FOR ELECTIVE PROCEDURES
      - 1.5 IS OK, 1.6 IS NOT
    - IF THE INR CANNOT BE CORRECTED THEN RISK/BENEFIT MUST BE CONSIDERED
      - FFP IN A PINCH

GASTROENTEROLOGY

CIRA

Canadian Interventional Radiology Association

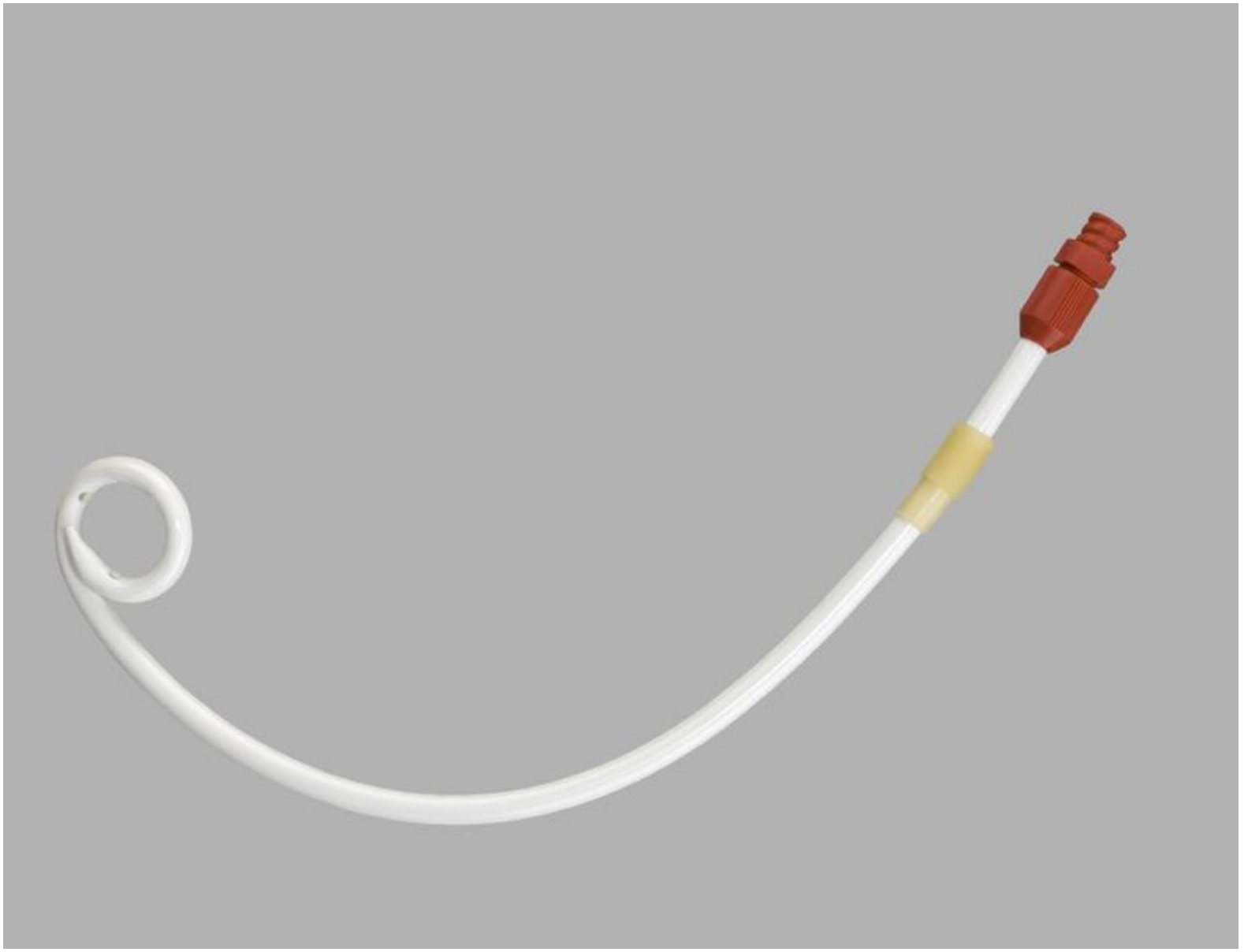
Association canadienne de radiologie d'intervention

G-TUBE

- “BASIC” FEEDING CATHETER
- SIMPLE, CAN USE BOLUS FEEDS
- NO GOOD IF PATIENT ASPIRATES
- RIGOROUS BUT SIMPLE CARE REQUIRED TO KEEP TUBE PATENT
- PATIENT/FAMILY MUST BE COMPLIANT
- ROUTINELY CHANGED EVERY 6 MONTHS

G-TUBE

- PUT IN NG BEFOREHAND IF POSSIBLE
- STOMACH FILLED WITH AIR VIA NG
- PUNCTURE THE STOMACH
- PUT A WIRE THROUGH NEEDLE
  - DEPLOYS RETENTION SUTURE
- PUT TUBE OVER THE WIRE
  - 12 FRENCH STANDARD
  - CAN GO UP TO 20 FRENCH IF NEEDED




SCIENCE photo LIBRARY

GJ-TUBE

- SAME TUBE, ONLY LONGER
- GOES THROUGH THE STOMACH, BUT TIP SITS IN FIRST PART OF JEJUNUM
- REQUIRES CONTINUOUS FEEDS
- GOOD IF PATIENT ASPIRATES
- RIGOROUS BUT SIMPLE CARE REQUIRED TO KEEP TUBE PATENT
- PATIENT/FAMILY MUST BE COMPLIANT
- ROUTINELY CHANGED EVERY 6 MONTHS

J-TUBE

- GOES DIRECTLY INTO THE JEJUNUM
- REQUIRES CONTINUOUS FEEDS
- USED FOR PATIENTS WITH PREVIOUS GASTRECTOMY/DISTAL STRICTURE
- PLACED BY SURGEON
- CHANGED BY IR
- RIGOROUS BUT SIMPLE CARE REQUIRED TO KEEP TUBE PATENT
- PATIENT/FAMILY MUST BE COMPLIANT
- ROUTINELY CHANGED EVERY 6 MONTHS

PEG-TUBE

- PERCUTANEOUS “ENDOSCOPIC” GASTROSTOMY
- SIMPLE, CAN USE BOLUS FEEDS
- NO GOOD IF PATIENT ASPIRATES
- MUCH HARDER TO PULL OUT
- GENERALLY PLACED BY SURGEON, BUT…

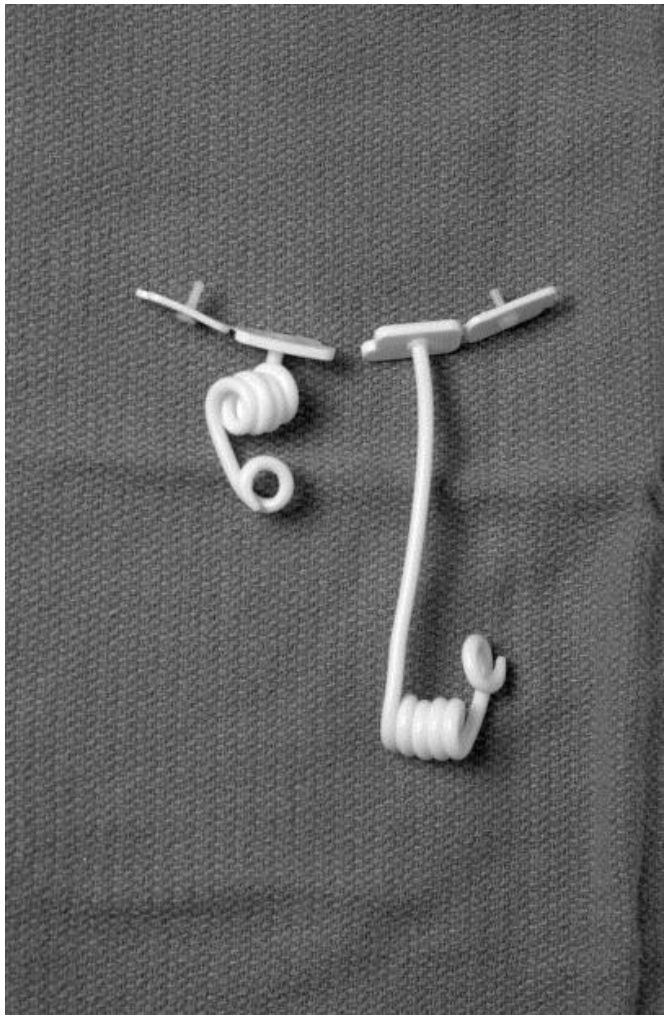

COOK
EXTERNAL REMOVAL
PROXIMAL
8
4
2

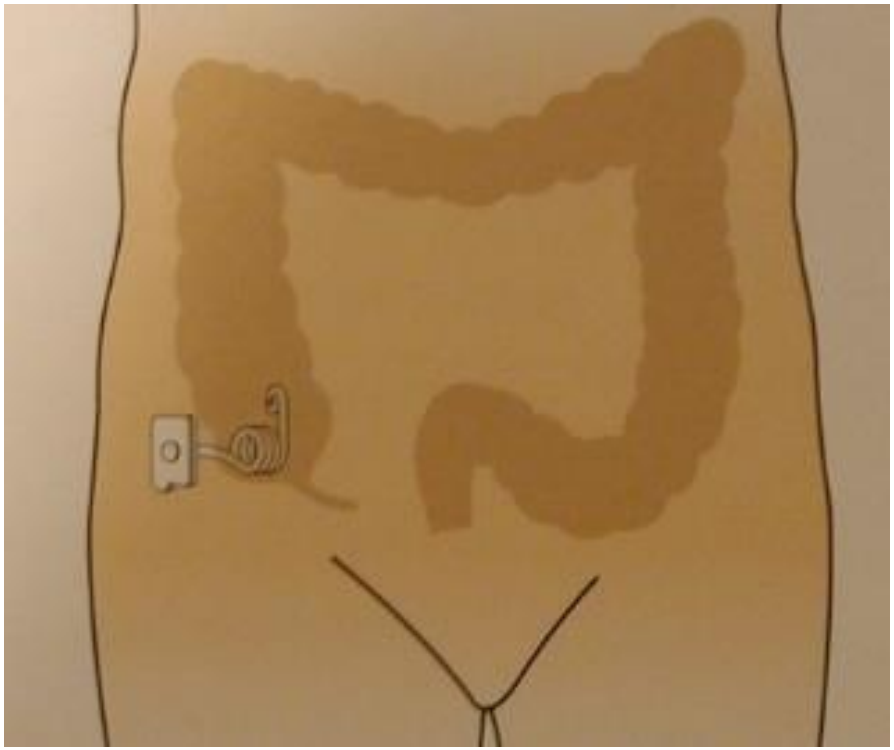
PEG-TUBE

- PUT IN NG BEFOREHAND IF POSSIBLE
- STOMACH FILLED WITH AIR VIA NG
- PUNCTURE THE STOMACH
- STEER WIRE UP THE DUODENUM AND OUT THE MOUTH
- SNARE TUBE DOWN THE ESOPHAGUS AND OUT THE STOMACH
  - 20-24 FRENCH STANDARD

CECOSTOMY TUBE

- PERCUTANEOUS CATHETER INSERTED INTO THE CECUM
- PROVIDES AN ANTEGRADE ENEMA
- USUALLY USED IN CHILDREN WITH OVERFLOW DIARRHEA SECONDARY TO REFRACTORY CONSTIPATION





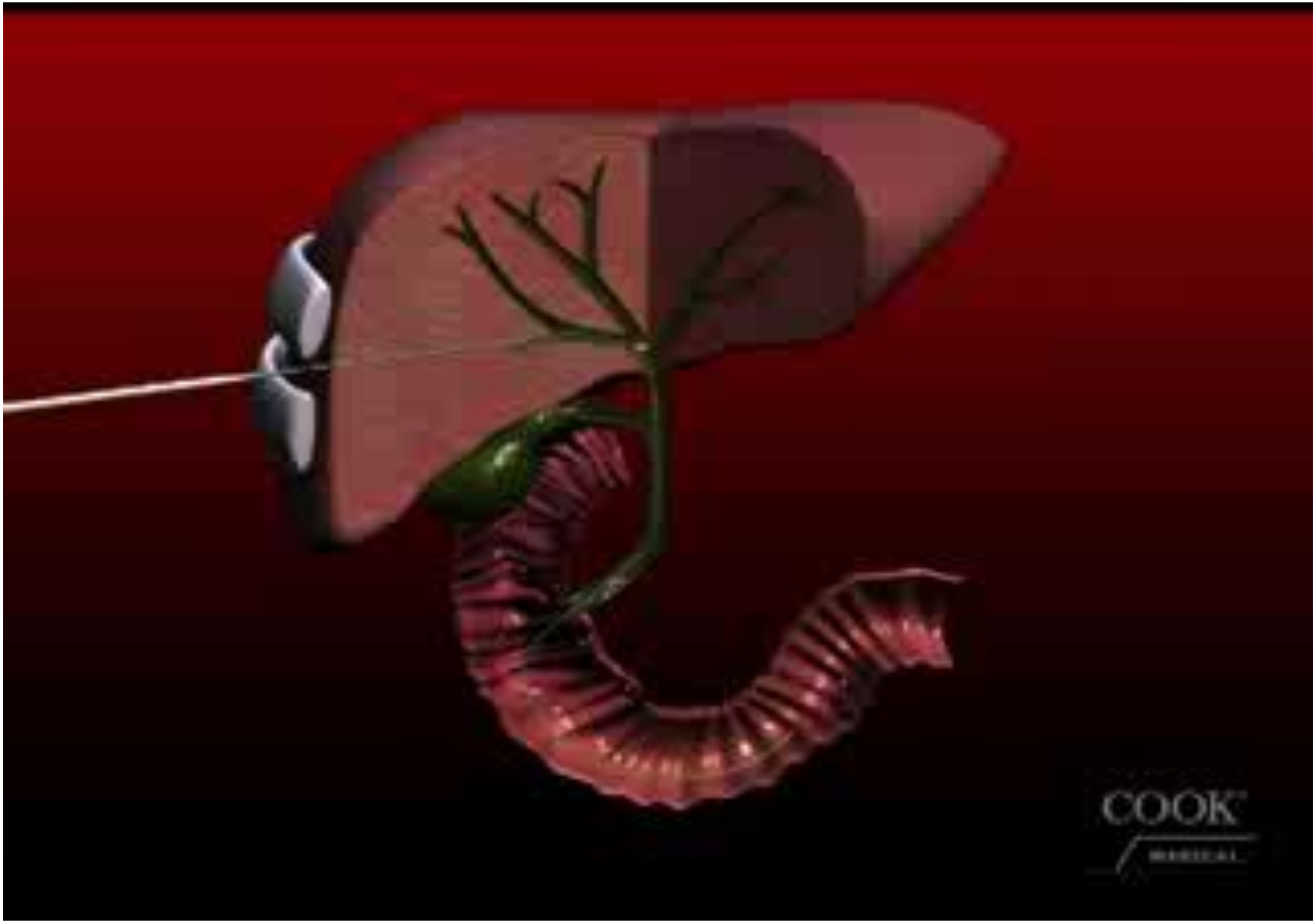
PERCUTANEOUS BILIARY DRAINAGE

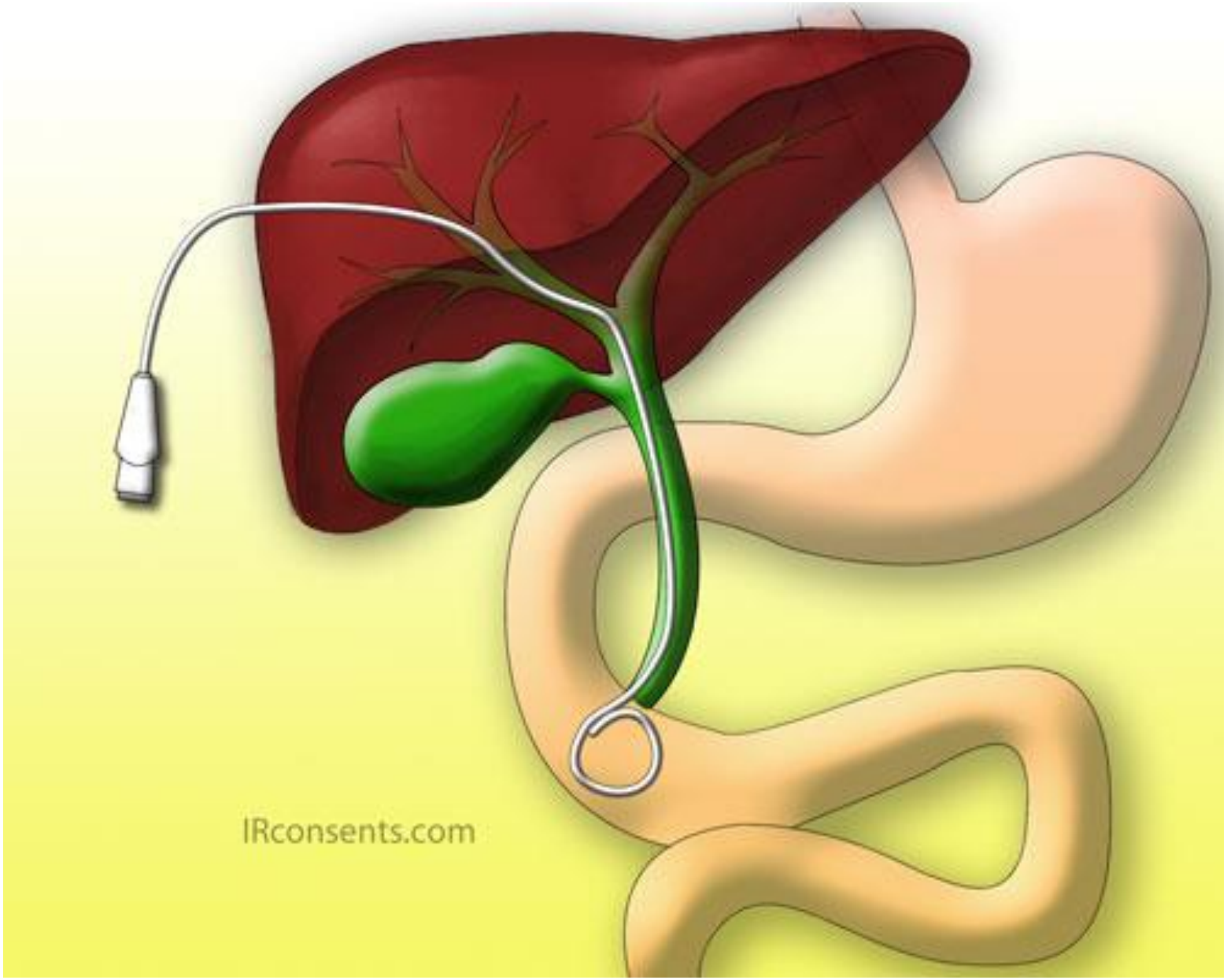
- FOR OBSTRUCTING STONES OR MASSES
- CAN BE BENIGN OR MALIGNANT
- RIGOROUS BUT SIMPLE CARE REQUIRED TO KEEP TUBE PATENT
- PATIENT/FAMILY MUST BE COMPLIANT
- ROUTINELY CHANGED EVERY MONTHS

PERCUTANEOUS BILIARY DRAINAGE

- USE ULTRASOUND TO PUNCTURE A BILIARY DUCT
- CAN BE LEFT- OR RIGHT-SIDED
- PUT A WIRE THROUGH NEEDLE
- GUIDE WIRE THROUGH CBD INTO DUODENUM IF POSSIBLE
  - ALLOWS INTERNAL/EXTERNAL DRAINAGE
- OTHERWISE CATHETER IS LEFT IN CBD AND DRAINAGE IS VIA A BAG

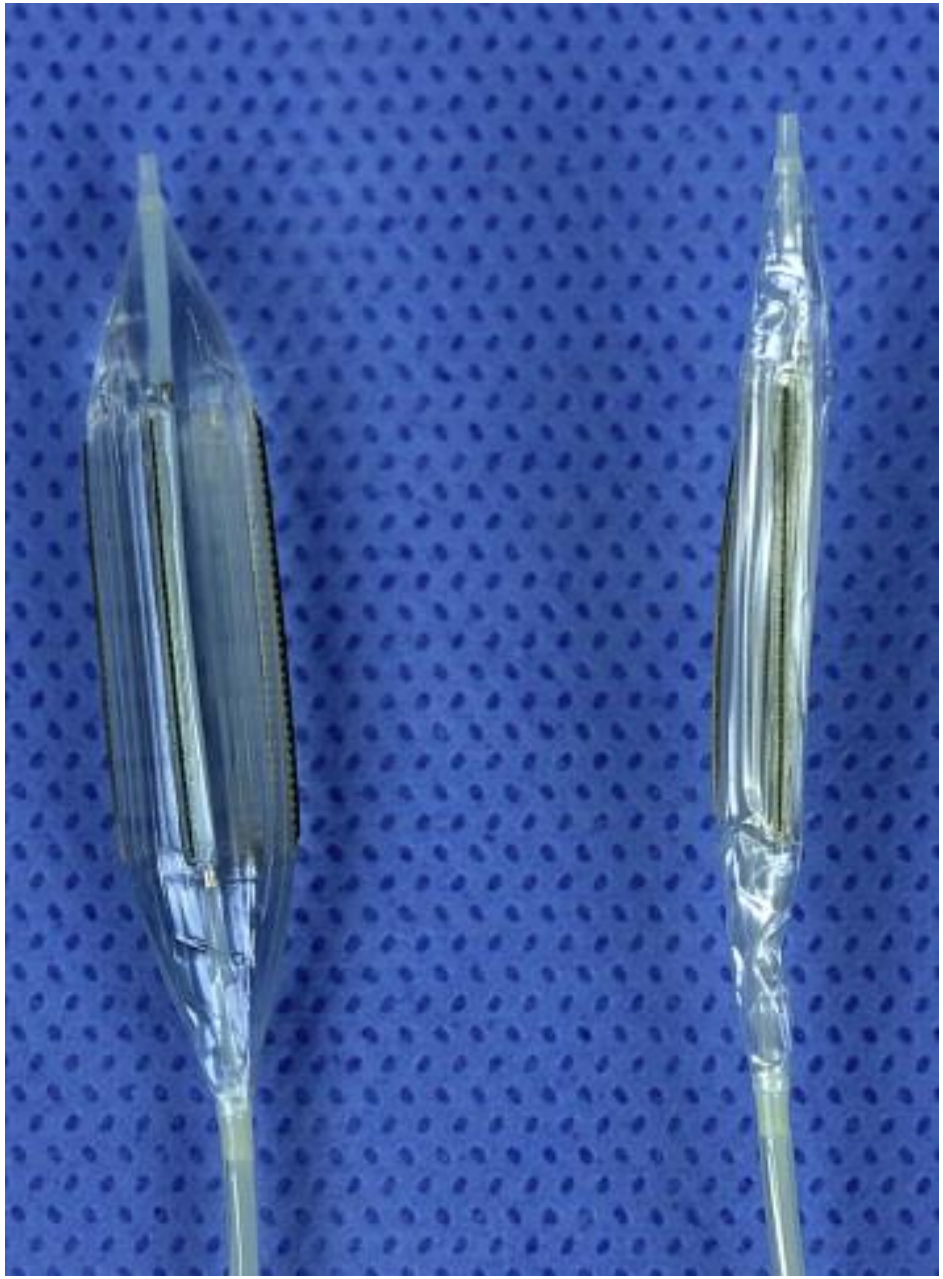

10.2 FR
MAC-LOC™

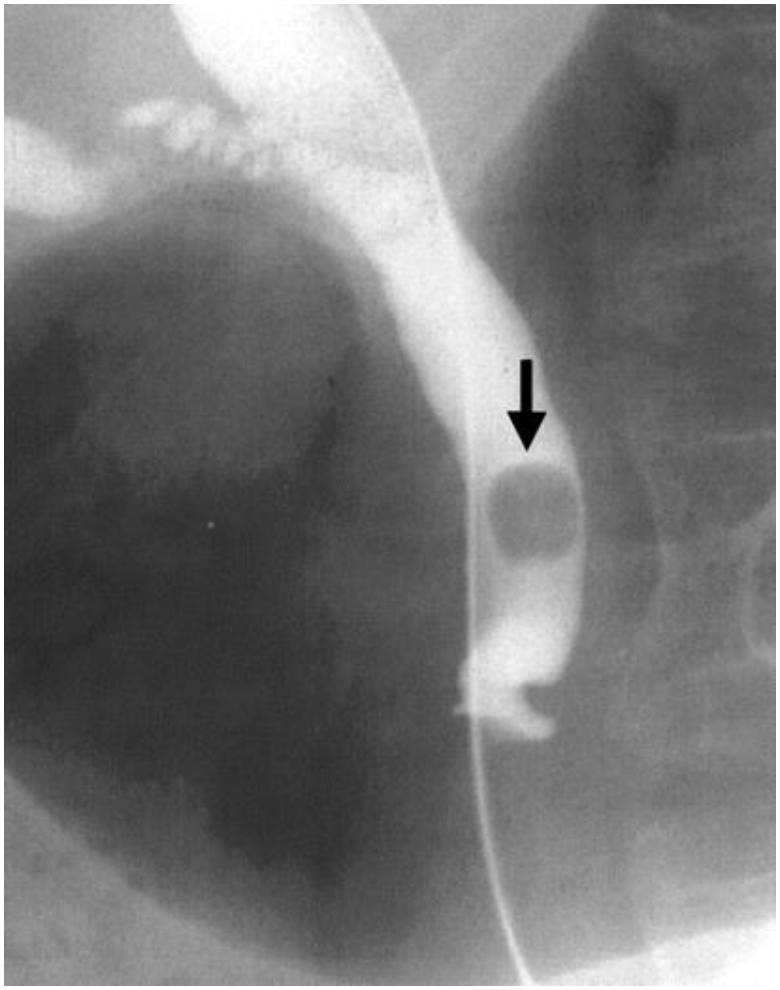

COOK
MEDICAL

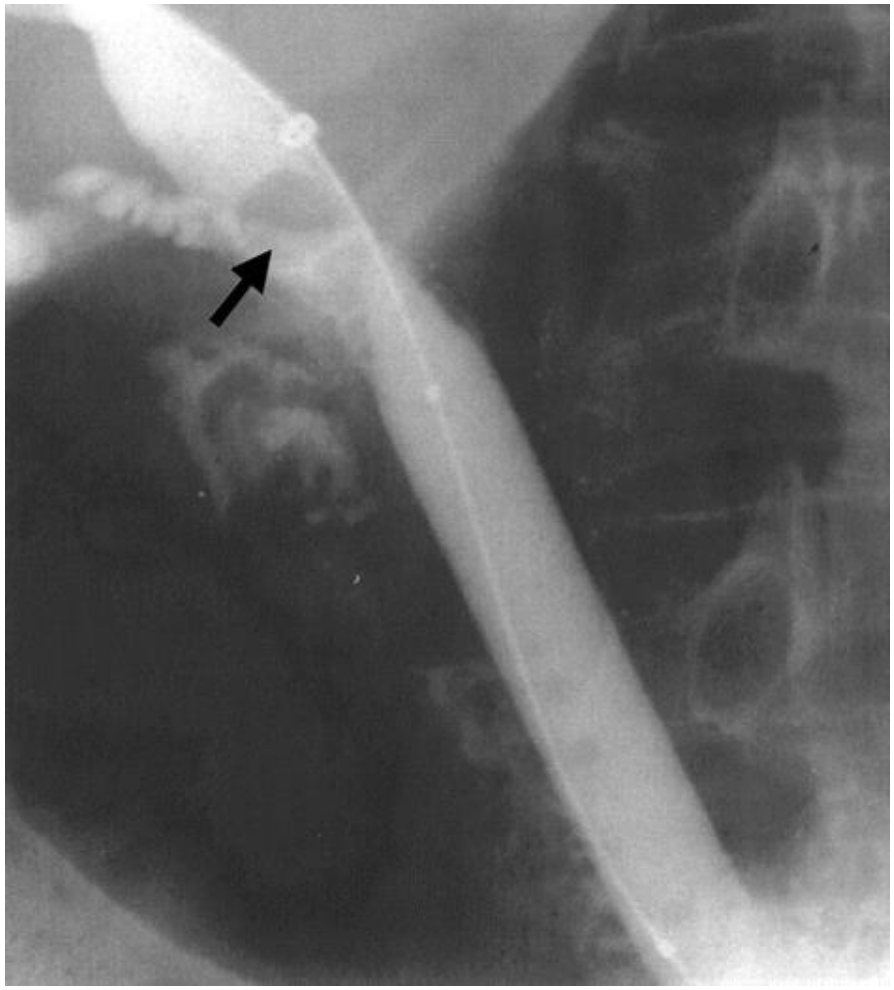

IRconsents.com

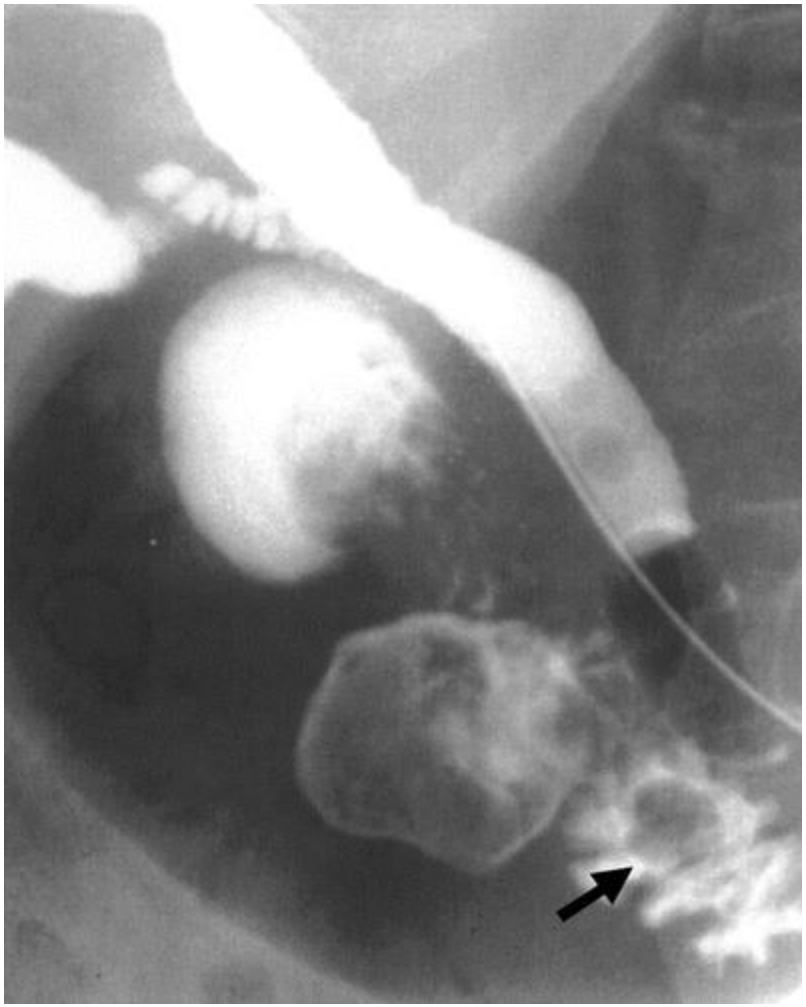
PERCUTANEOUS STONE REMOVAL

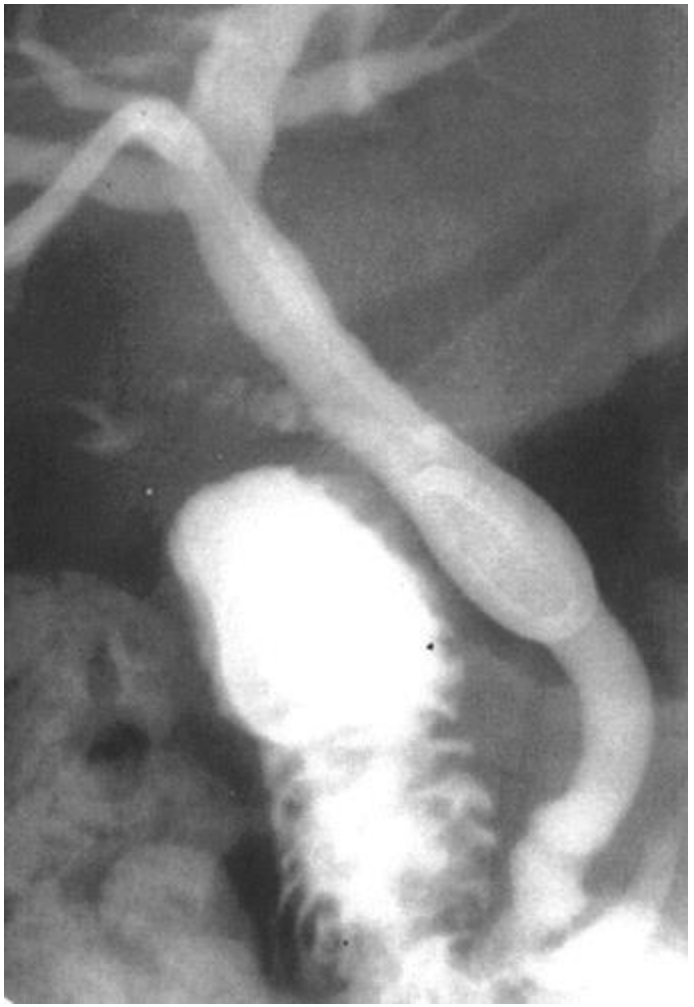
- ALTERNATIVE PROCEDURE TO ERCP
- BILIARY TRACT ACCESSED UNDER ULTRASOUND SIMILAR TO BILIARY DRAINAGE
- SPHINCTER DILATED USING A CUTTING BALLOON FOLLOWED BY A HIGH-PRESSURE ANGIOPLASTY BALLOON
- STONES CAN BE “PUSHED” INTO THE DUODENUM WITH A PARTIALLY INFLATED BALLOON
- DRAINAGE CATHETHER CAN BE PLACED IF NEEDED





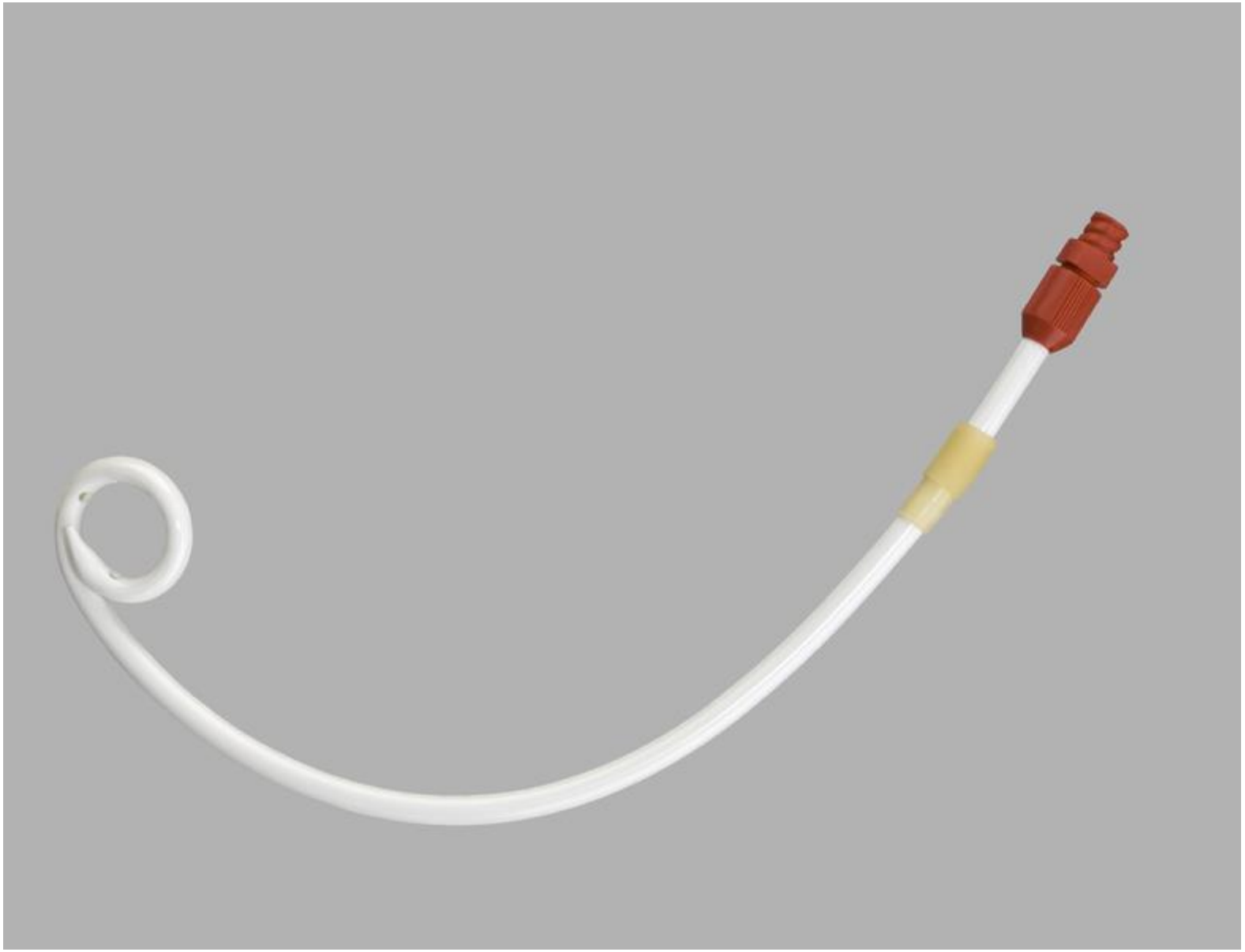


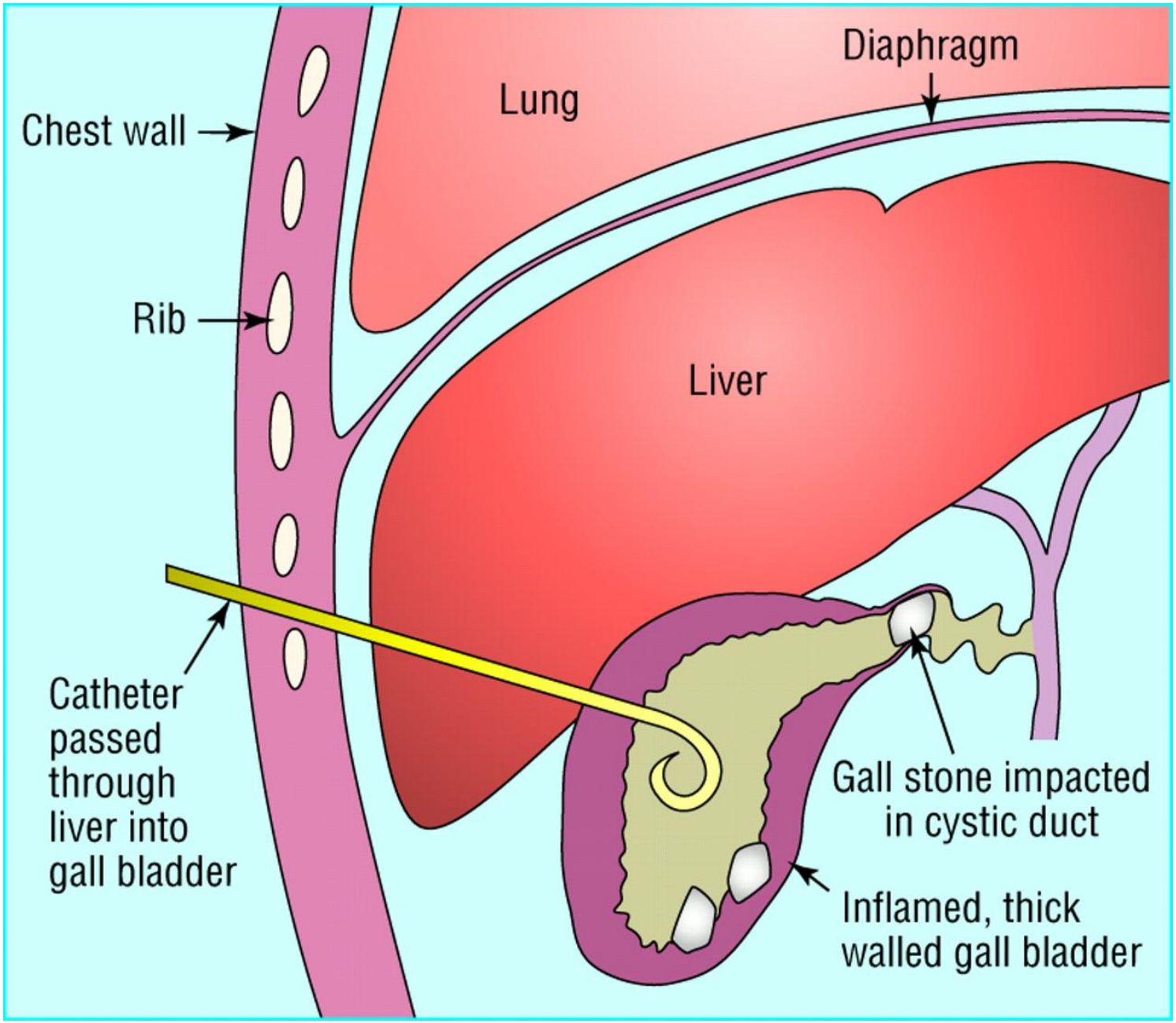




PERCUTANEOUS CHOLECYSTOSTOMY

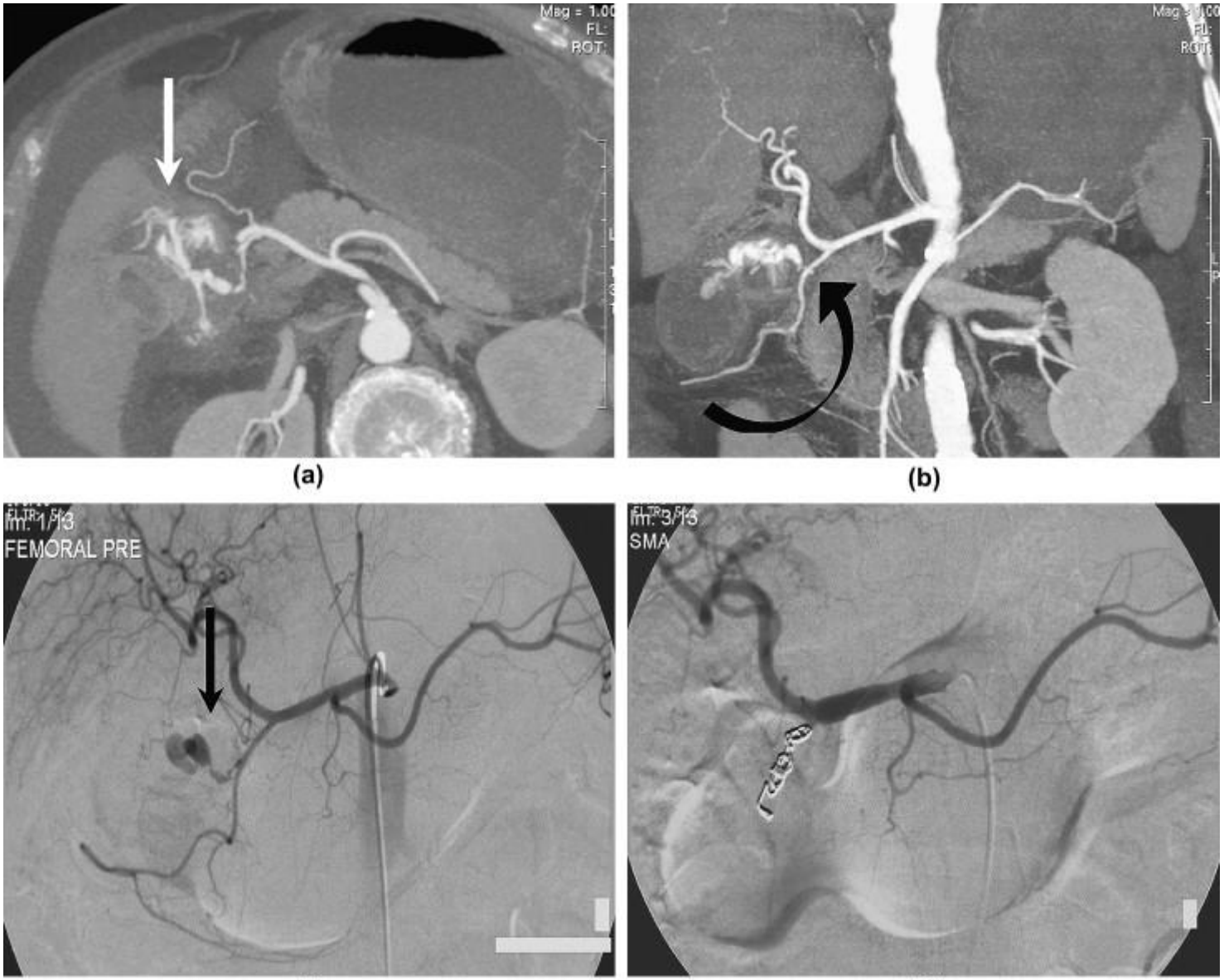
- USUALLY IN THE SETTING OF ACUTE CHOLECYSTITIS
- CATHETER MUST REMAIN IN SITU UNTIL TRACT MATURES TO PREVENT BILE PERITONITIS
  - 2 WEEKS MINIMUM
  - 6 WEEKS OPTIMAL




Diaphragm
Lung
Chest wall
Rib
Liver
Catheter passed through liver into gall bladder
Gall stone impacted in cystic duct
Inflamed, thick walled gall bladder

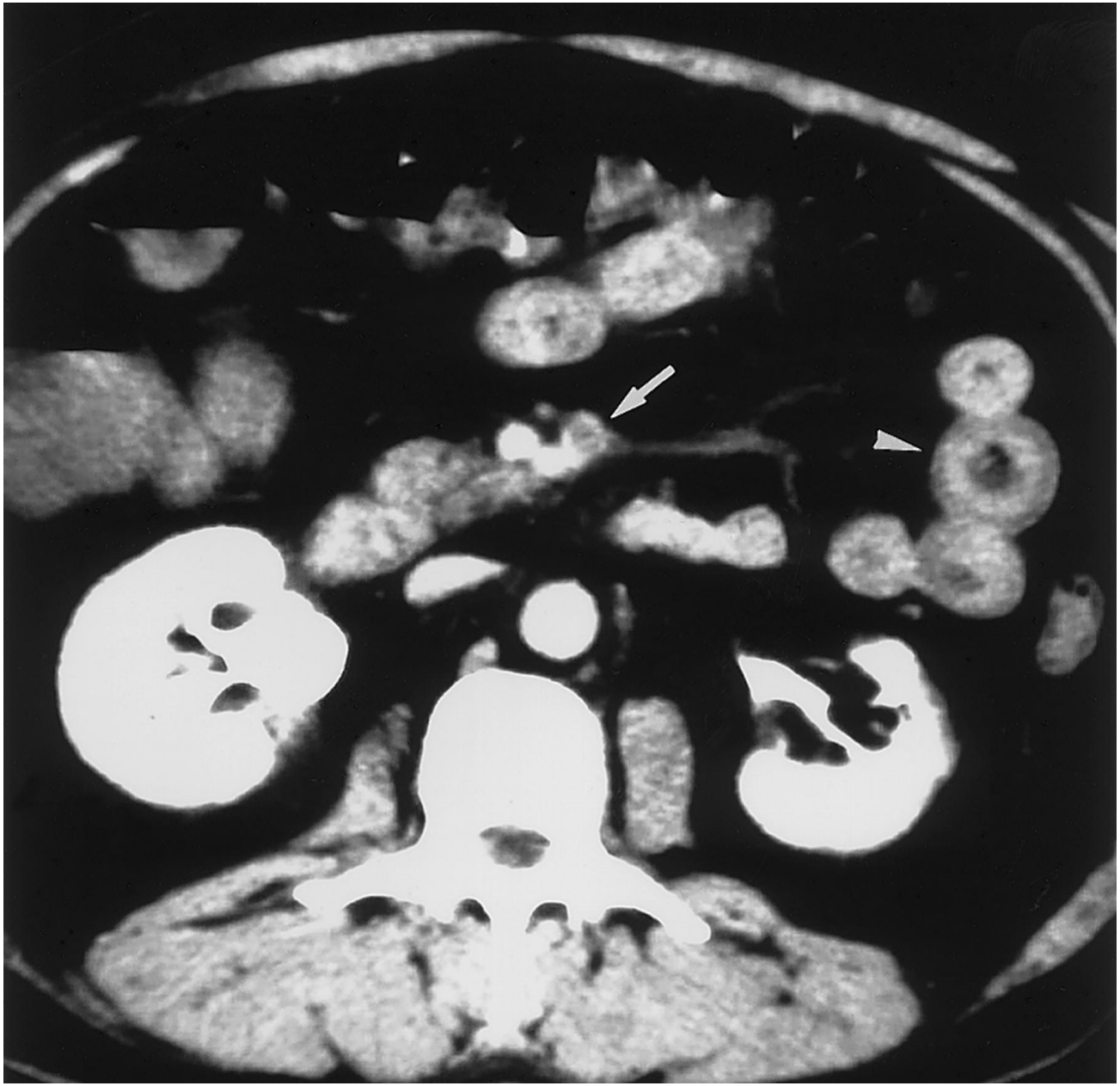
MESENTERIC ANGIOGRAPHY

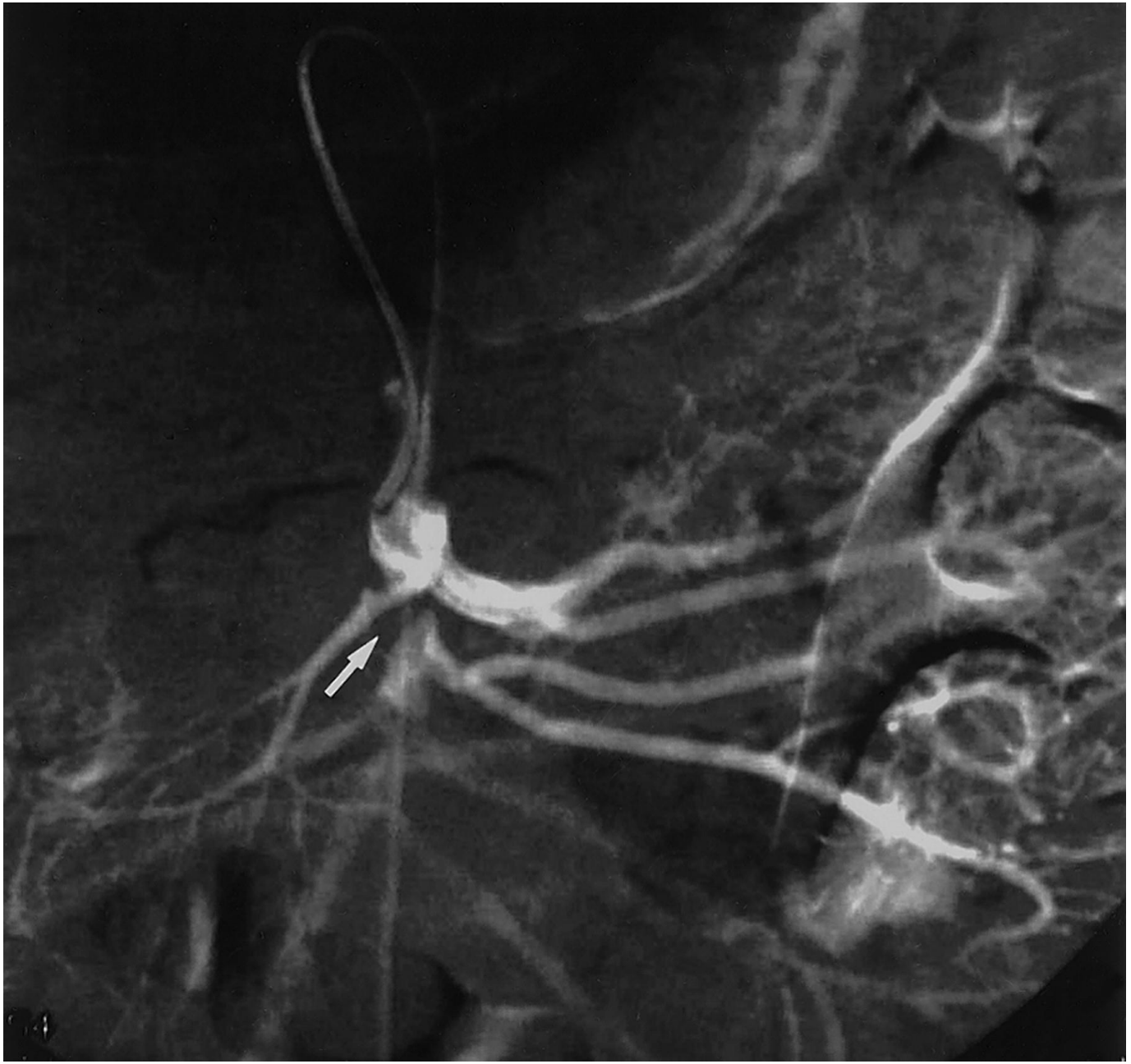
- USUALLY PERFORMED FOR GI BLEEDING
- IF PATIENT CAN TOLERATE IT SHOULD HAVE A CT ANGIOGRAM PRIOR TO ANGIOGRAPHY
- ANGIOGRAPHY OF QUESTIONABLE VALUE IN THE SETTING OF A NEGATIVE CT ANGIOGRAM
- CAN PROPHYLATICALLY EMBOLIZE GDA/LGA FOLLOWING ENDOSCOPY

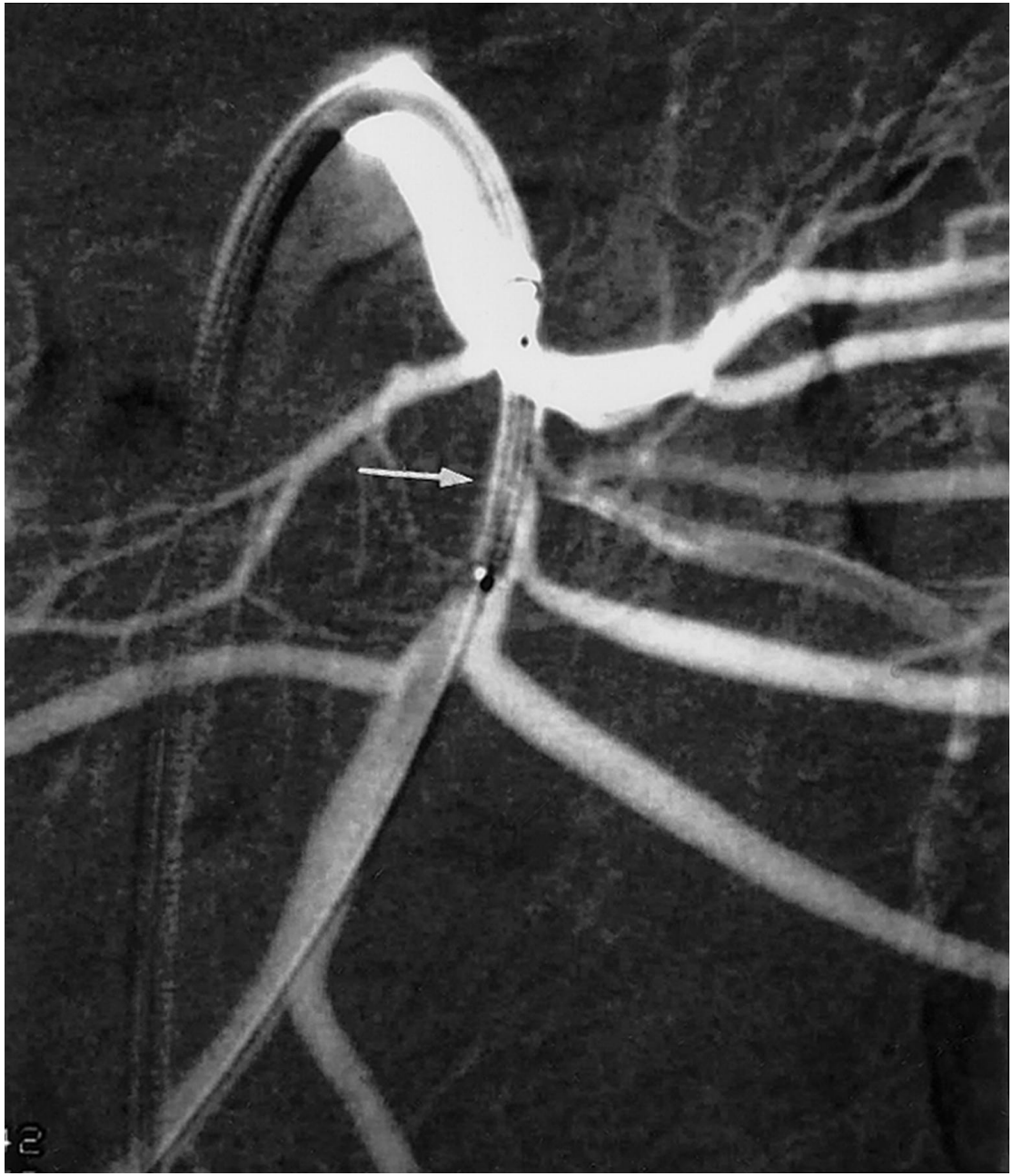

(a)
(b)
Im: 1/13
FEMORAL PRE
(c)
Im: 3/13
SMA
(d)

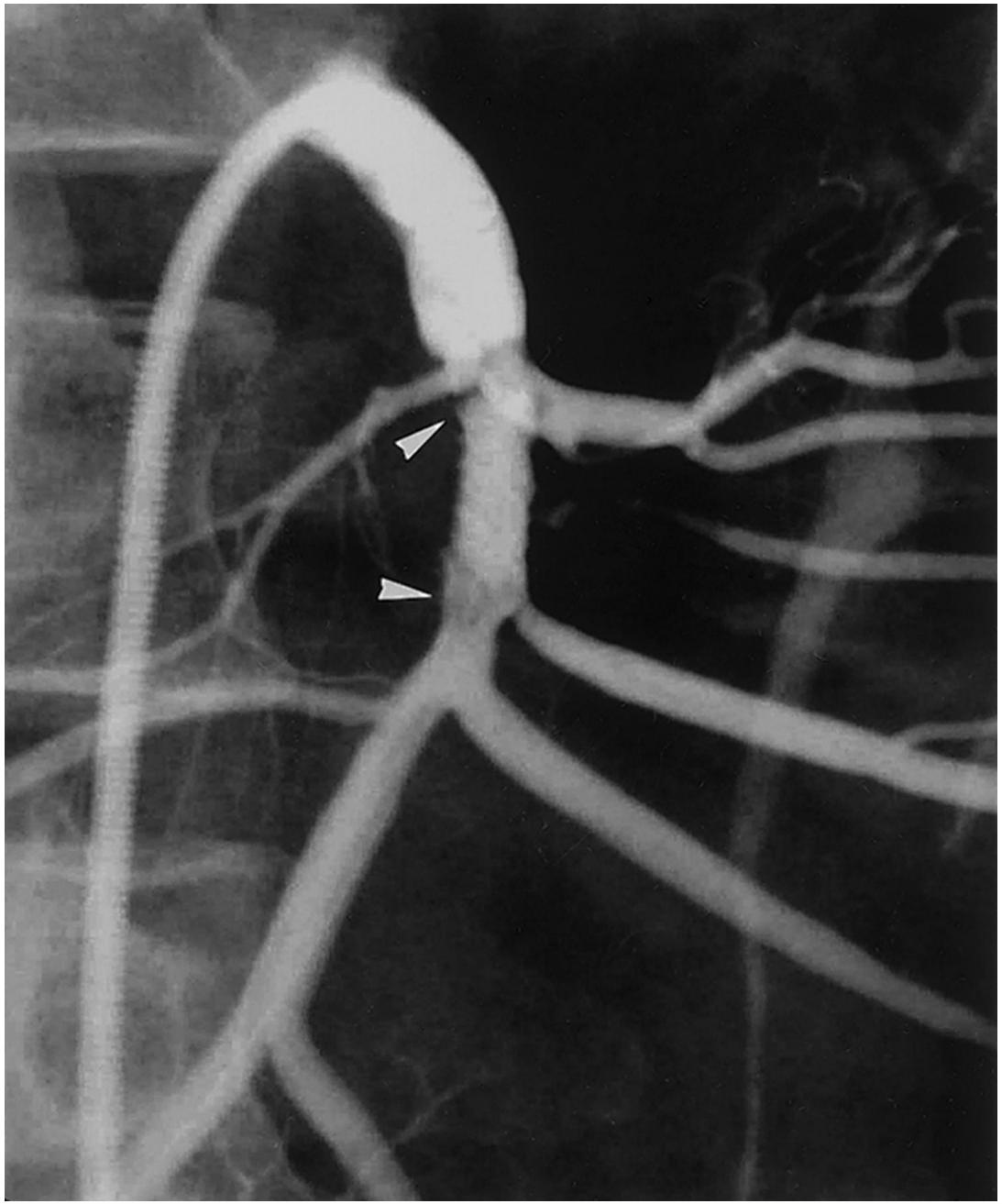
MESENTERIC THROMBOLYSIS

- FOR ACUTE MESENTERIC ISCHEMIA
- CT ANGIOGRAM PERFORMED PRIOR TO ANGIOGRAPHY FOR DIAGNOSIS/PLANNING



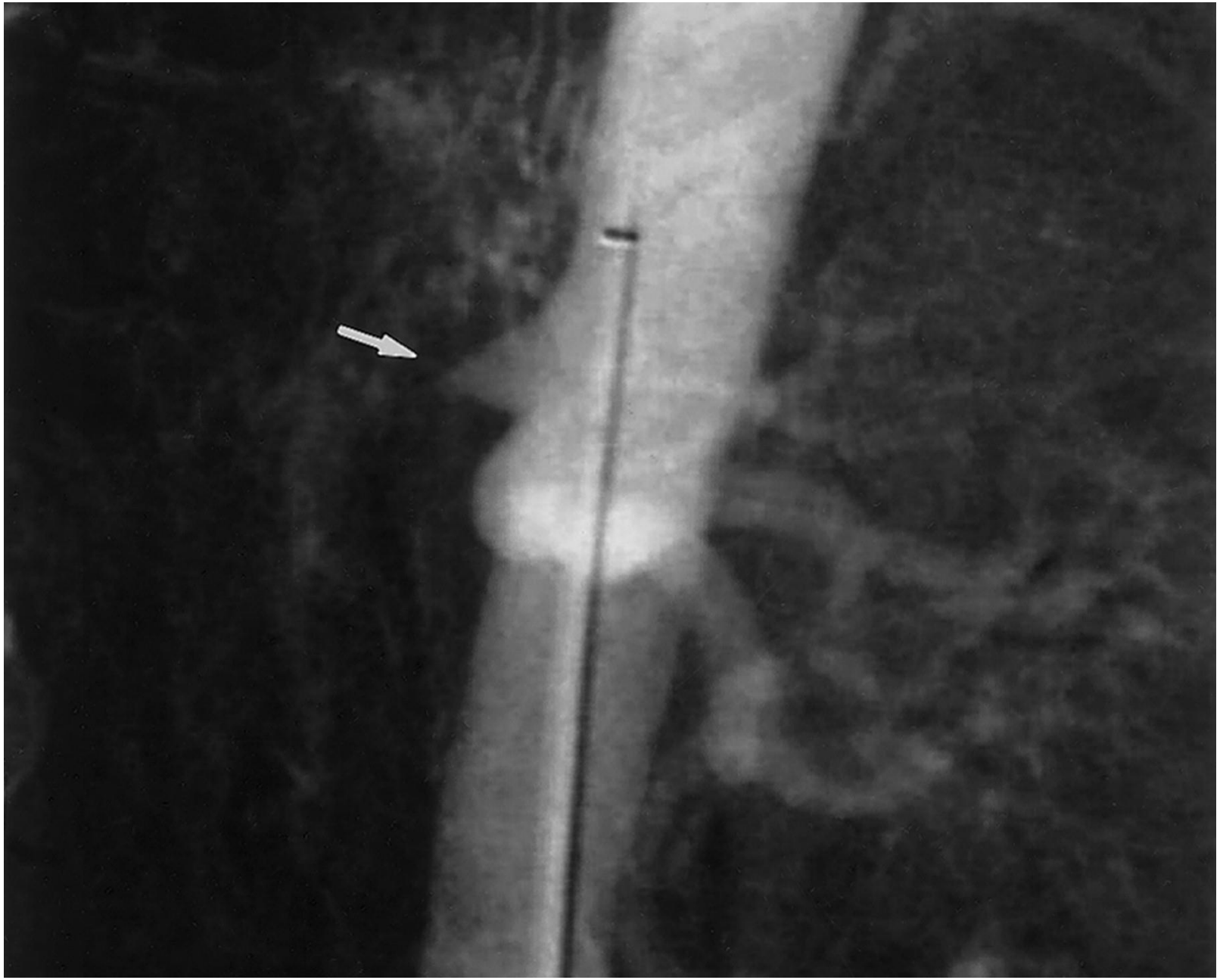


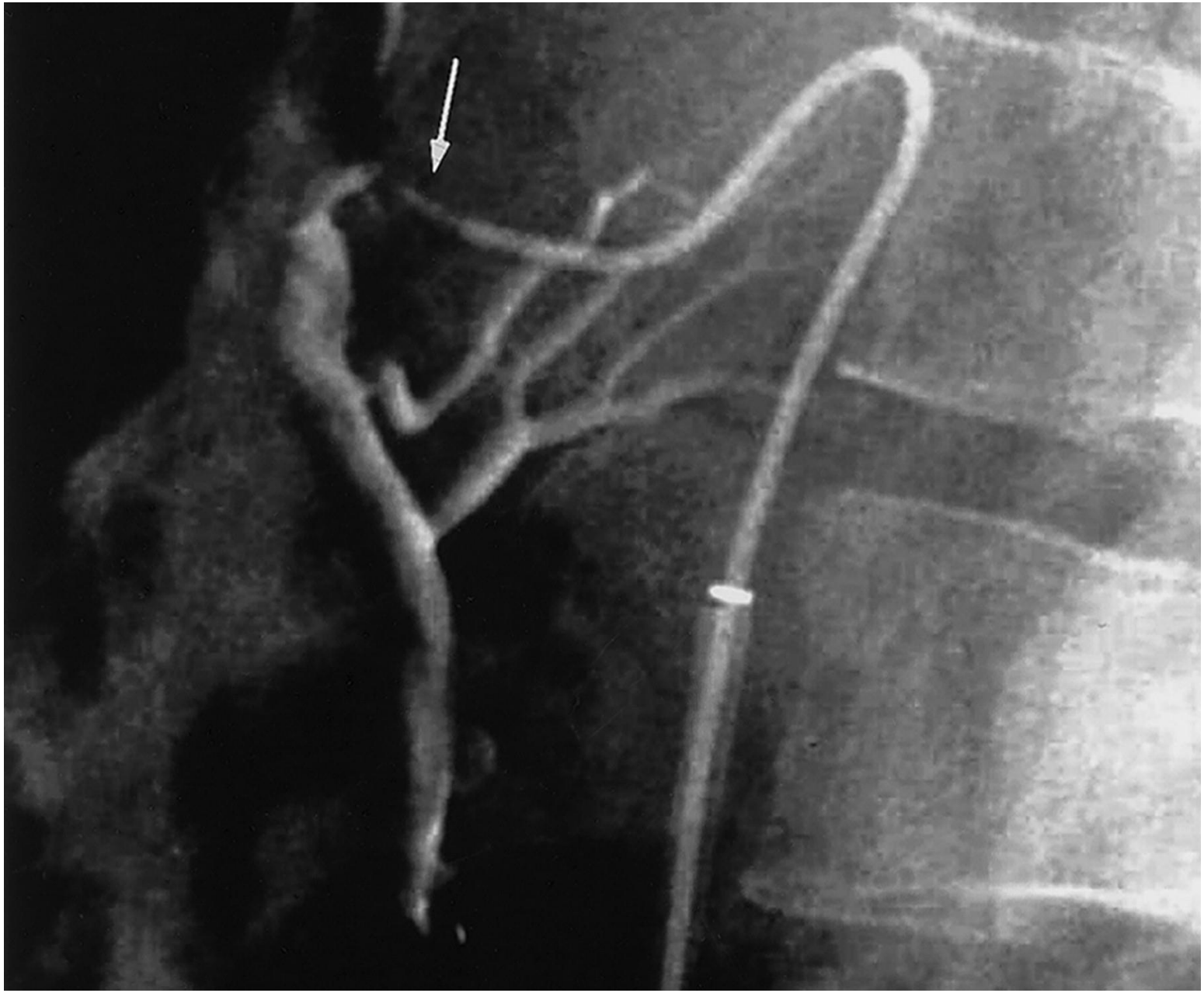


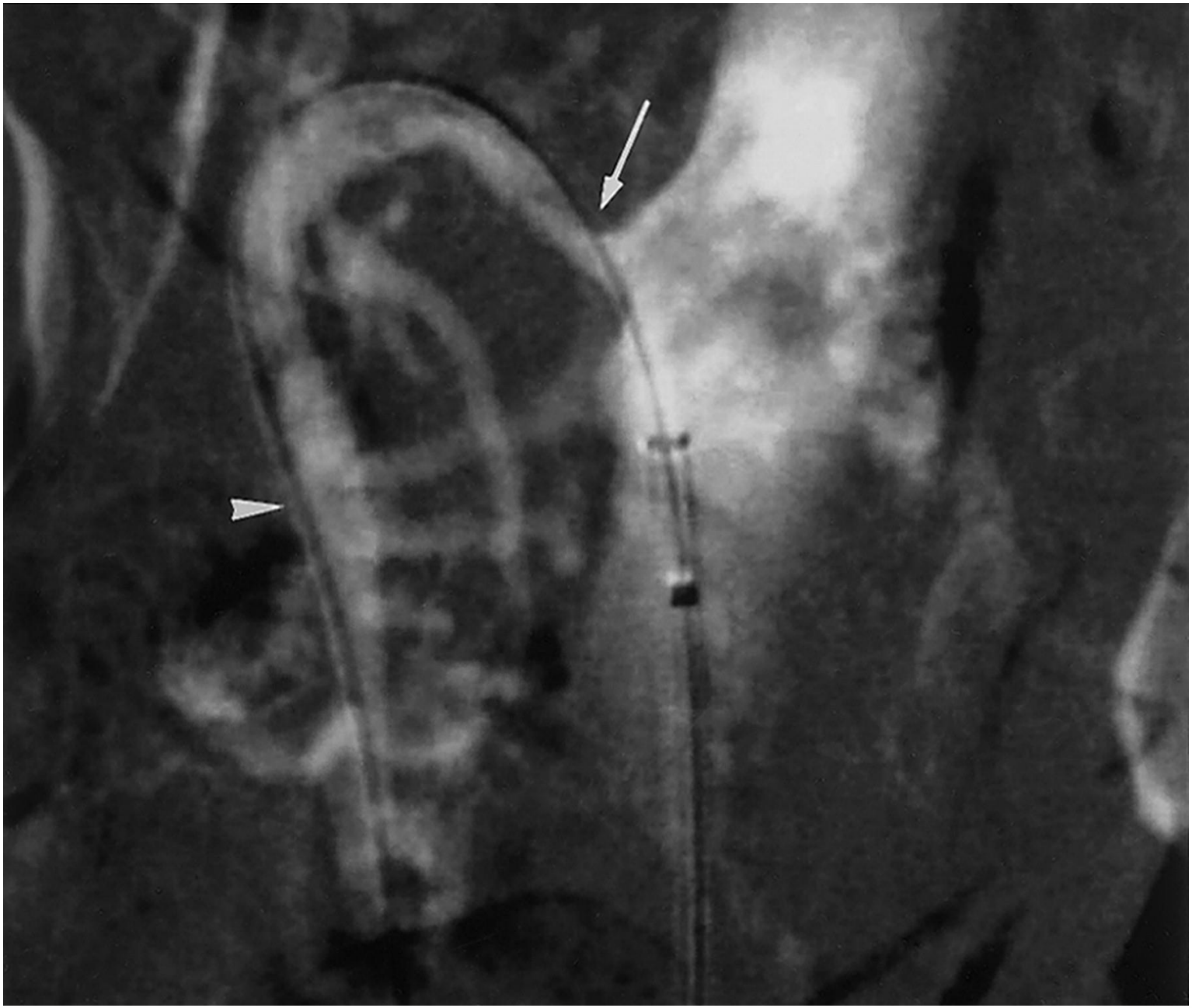


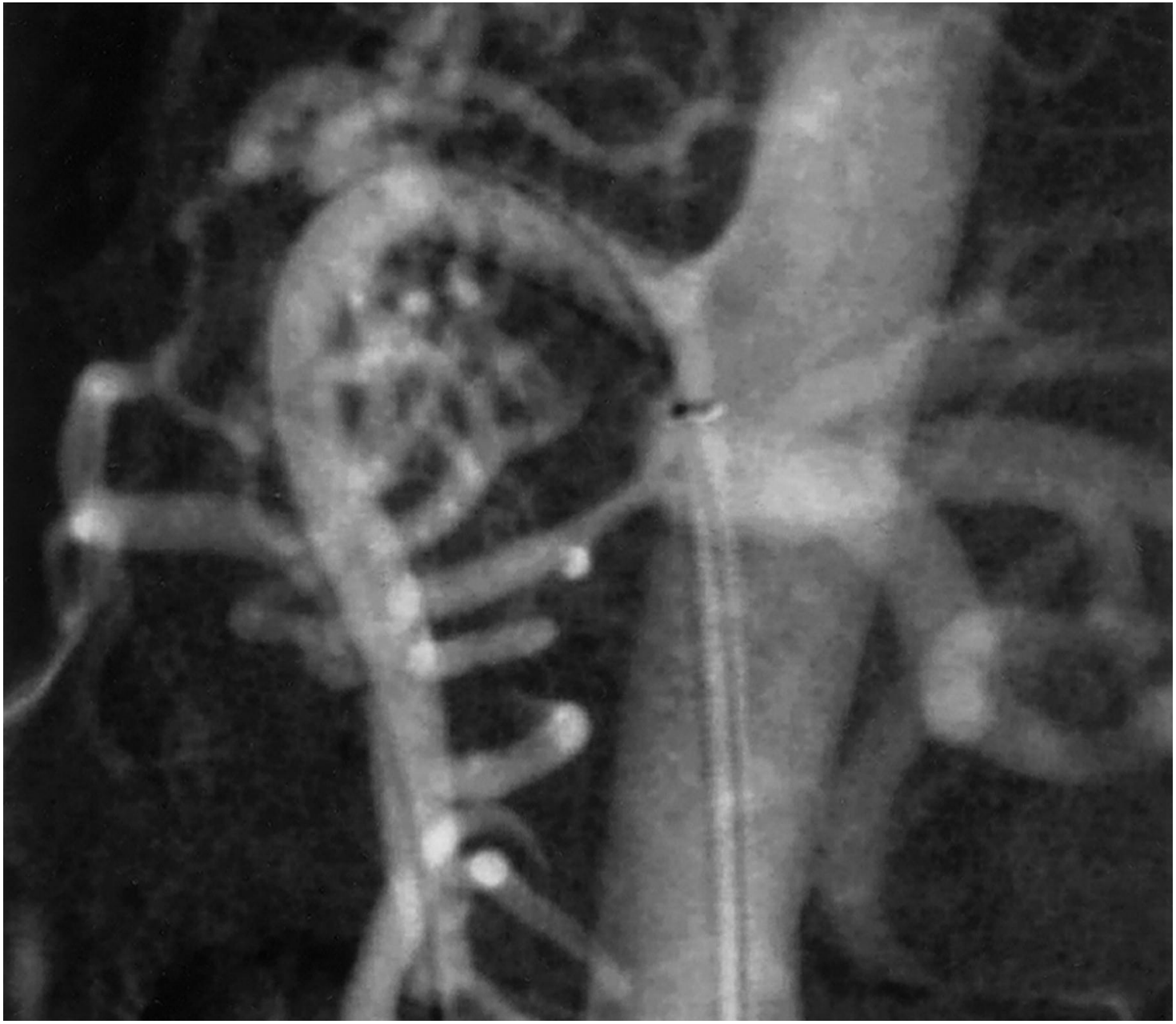
MESENTERIC STENTING

- FOR CHRONIC MESENTERIC ISCHEMIA
- CT ANGIOGRAM PERFORMED PRIOR TO ANGIOGRAPHY FOR DIAGNOSIS/PLANNING
- FOR CHRONIC ISCHEMIA BOTH CELIAC AND SMA NEED TO BE STENOTIC TO WARRANT TREATMENT
  - EXCELLENT COLLATERAL CIRCULATION VIA GDA



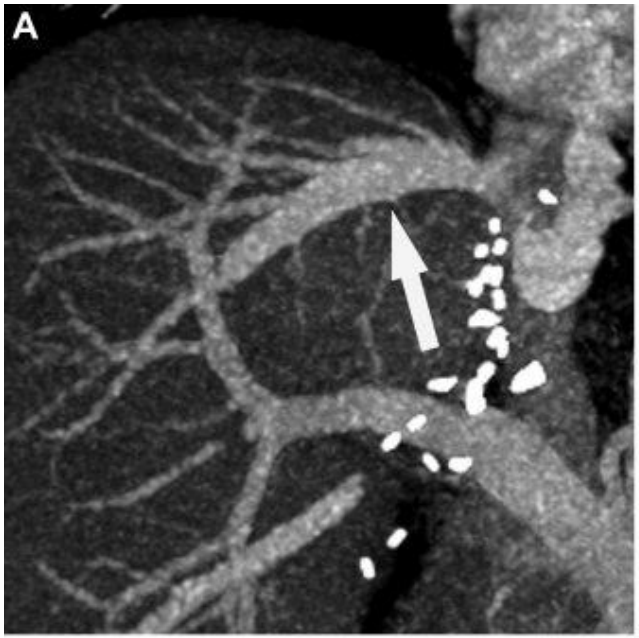


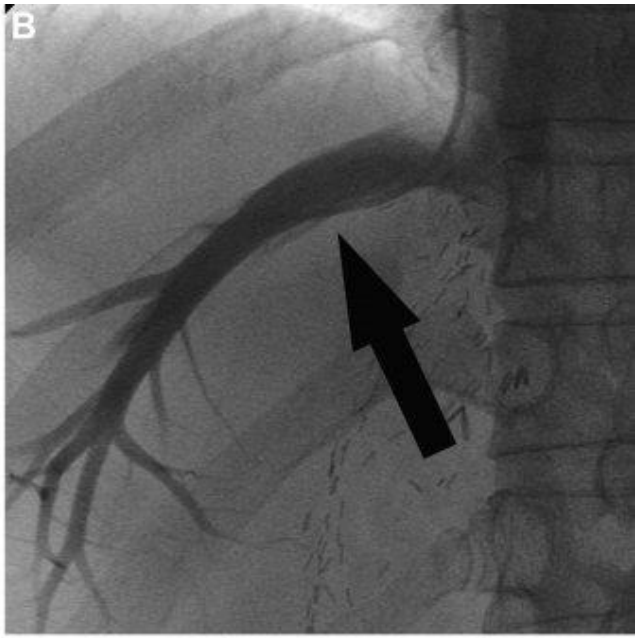


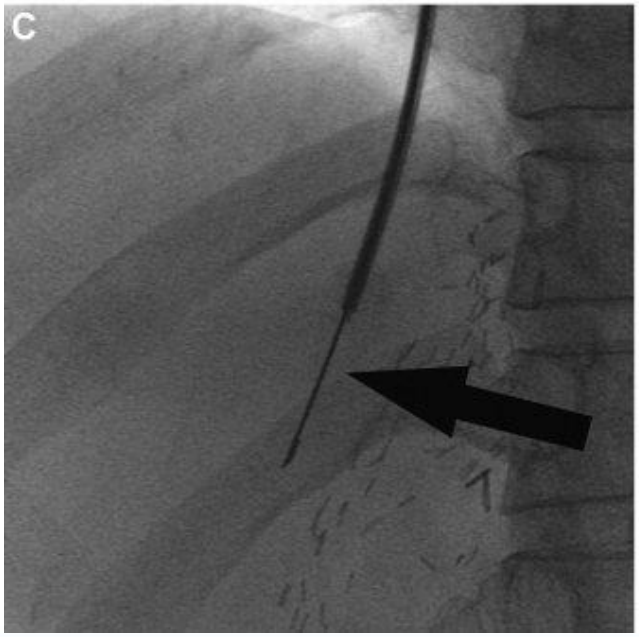


TRANSJUGULAR LIVER BIOPSY

- FOR PATIENTS WITH UNCORRECTABLE COAGULOPATHY
- ACCESS IS VIA RIGHT INTERNAL JUGULAR VEIN
- STEEL CATHETER IS ADVANCED INTO RIGHT HEPATIC VEIN AND DIRECTED ANTERIORLY
- BIOPSY NEEDLE IS ADVANCED THROUGH THE CATHETER AND BIOPSY PERFORMED
- ANY BLEEDING FROM PARENCHYMA IS DIRECTLY INTO THE HEPATIC VEIN

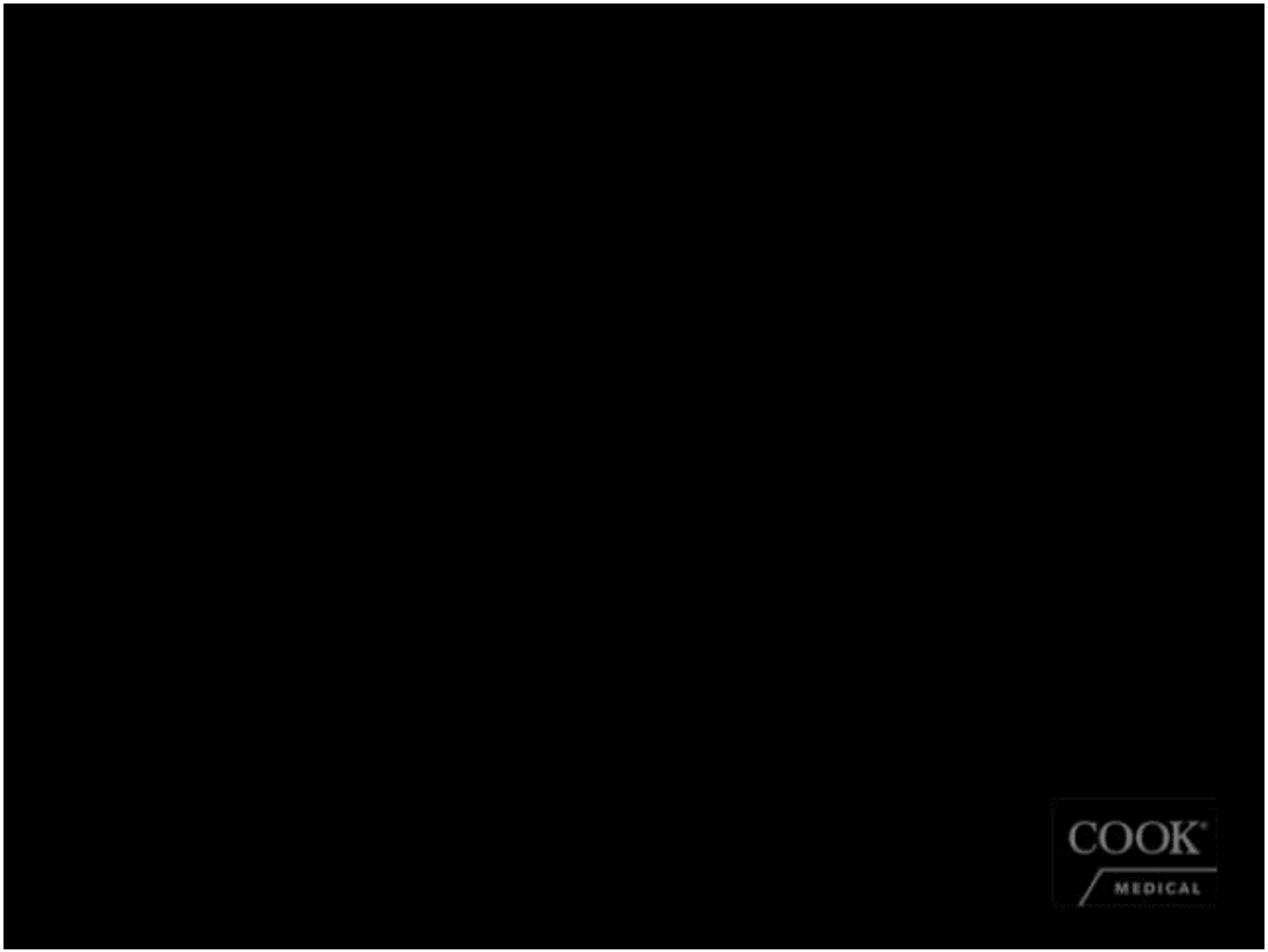

A


B


C

TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT (TIPS)

- INDICATIONS
  - GI BLEEDING DUE TO PORTAL HYPERTENSION/VARICES
  - REFRACTORY LARGE-VOLUME ASCITES
- NEEDLE DIRECTED FROM HEPATIC VEIN INTO PORTAL VEIN
  - MULTIPLE TRICKS TO FACILITATE THIS BUT CAN BE EXTREMELY DIFFICULT AND REQUIRE LARGE AMOUNTS OF SEDATION
- TRACT IS STENTED TO CREATE A PERMANENT SHUNT AND REDUCE PORTAL PRESSURE


COOK
MEDICAL

ABDOMINAL PARACENTESIS

- PERFORMED UNDER ULTRASOUND GUIDANCE TO INCREASE SAFETY
- ONE OF THE FEW PROCEDURES THAT CAN BE PERFORMED IN PATIENTS THAT ARE COAGULOPATHIC
- GENERALLY USE A 5 FRENCH YUEH CATHETER

TUNNELED PERITONEAL DRAINAGE CATHETERS

- FOR REFRACTORY ASCITES
- USUALLY PALLIATIVE
  - REFRACTORY MALIGNANT ASCITES HAS PROGNOSIS OF 1-4 MONTHS
- REQUIRES RELIABLE PATIENT/FAMILY
  - CAN INDEPENDENTLY DRAIN ASCITES AS NEEDED
- PROCEDURE IDENTICAL TO PLACEMENT OF A PERITONEAL DIALYSIS CATHETER

ewimed

PleurX Pleura

Katheter Implantationstechnik

www.ewimed.com

CIRA

For more information please contact

CIRA

Canadian Interventional Radiology Association

Association canadienne de radiologie d'intervention

www.ciraweb.org

info@ciraweb.org

ACKNOWLEDGMENTS:

Dr. Robert Cook (Western Memorial Regional Hospital) for providing this presentation