



# INTERVENTIONAL RADIOLOGY



Canadian Interventional Radiology Association

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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



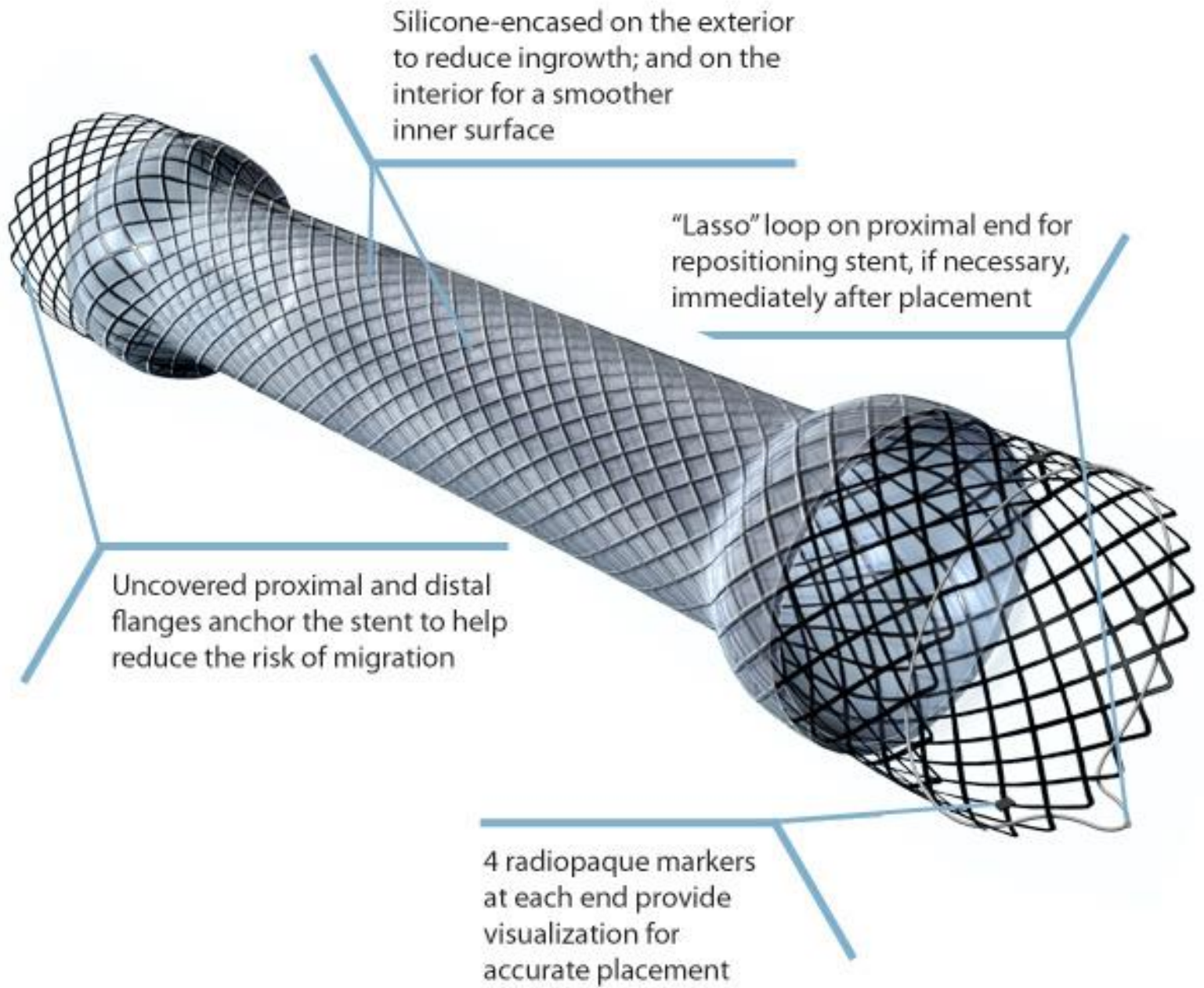
# ONCOLOGY

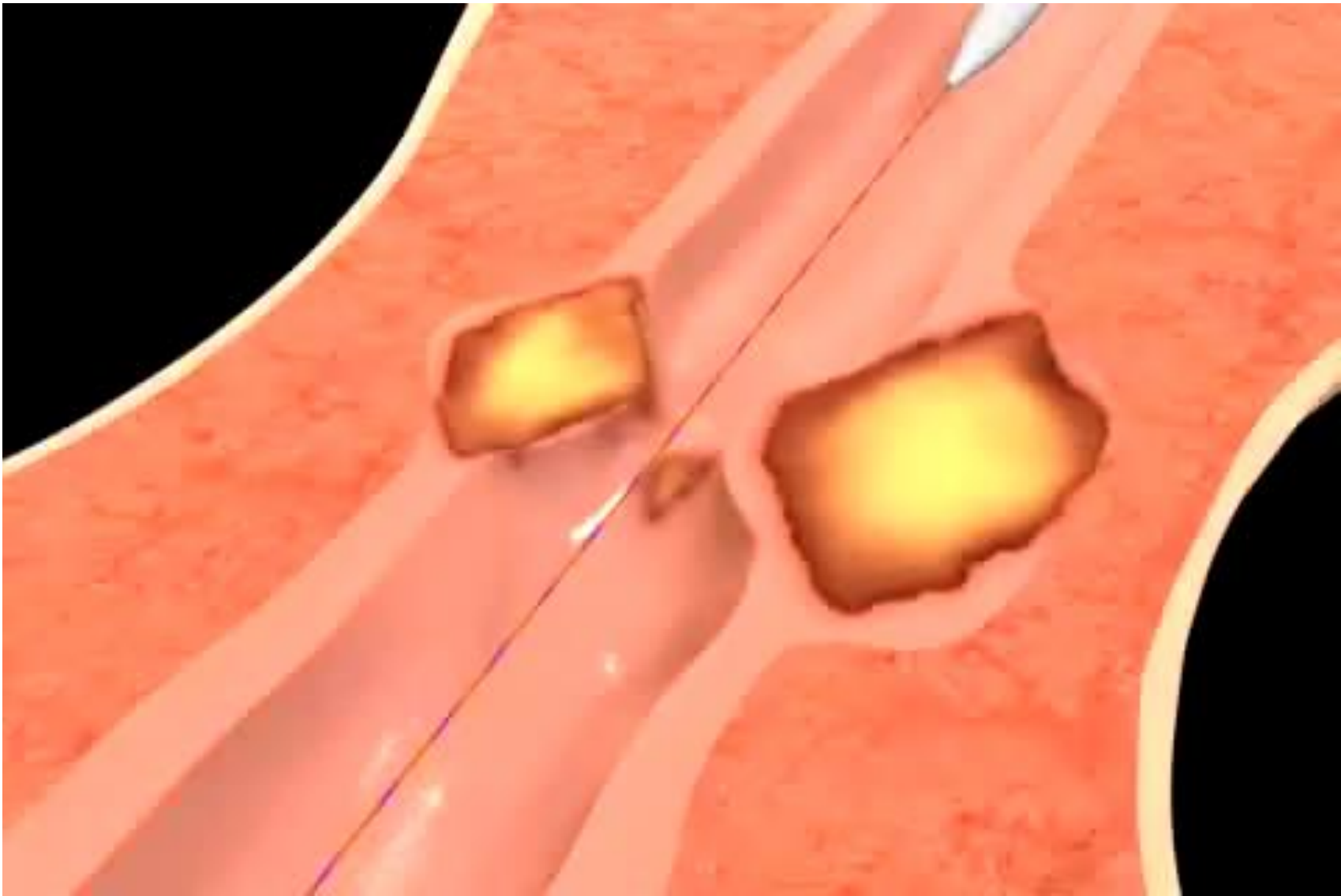


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# ESOPHAGEAL STENTING

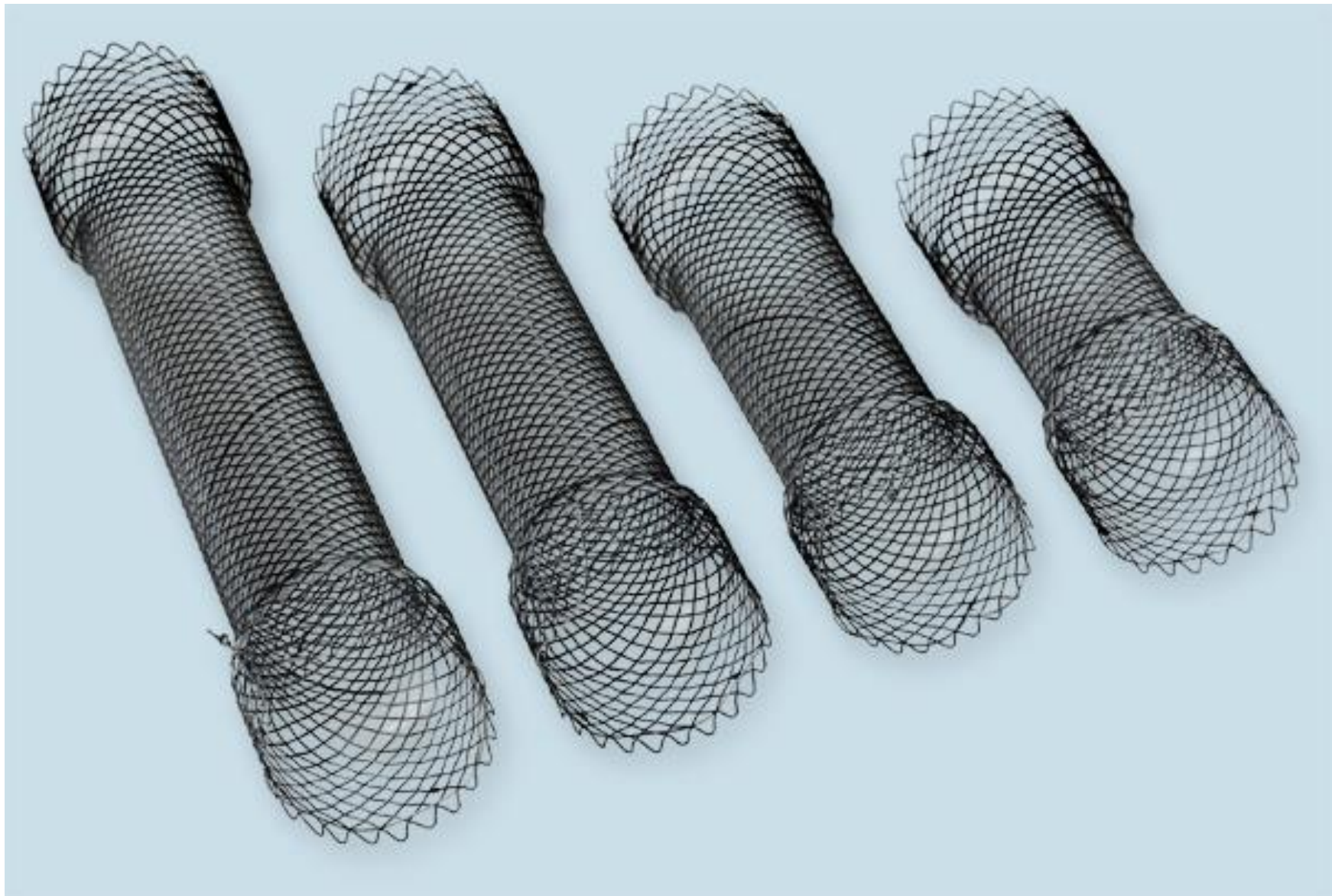
- FOR MALIGNANT ESOPHAGEAL STRICTURES
- CAN BE USED AS A SURGICAL “BRIDGE”
- REQUIRES 2 CM CLEARANCE FROM THE UPPER ESOPHAGEAL SPHINCTER
- CAN STENT LOWER ESOPHAGEAL SPHINCTER
  - WILL CAUSE REFLUX
- CAN ALSO STENT STOMACH, PROXIMAL DUODENUM
- DISTAL DUODENUM IS ALSO POSSIBLE WITH ENDOSCOPIC ASSISTANCE

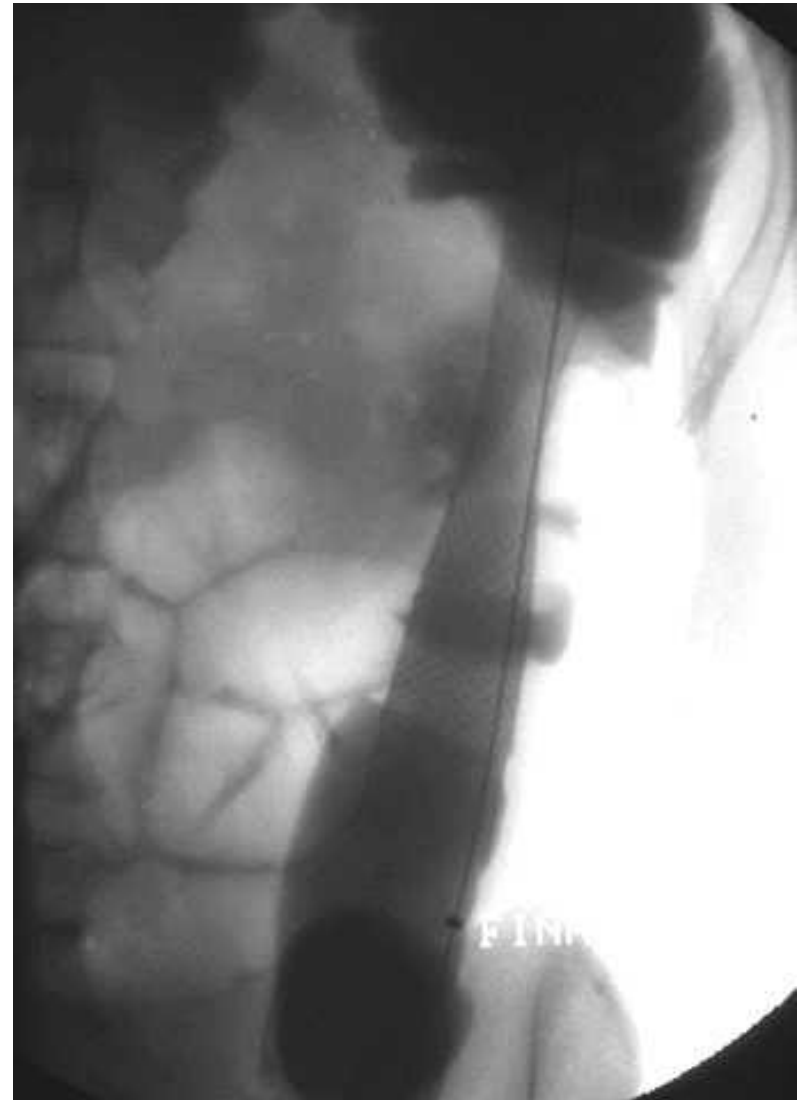




# COLONIC STENTING

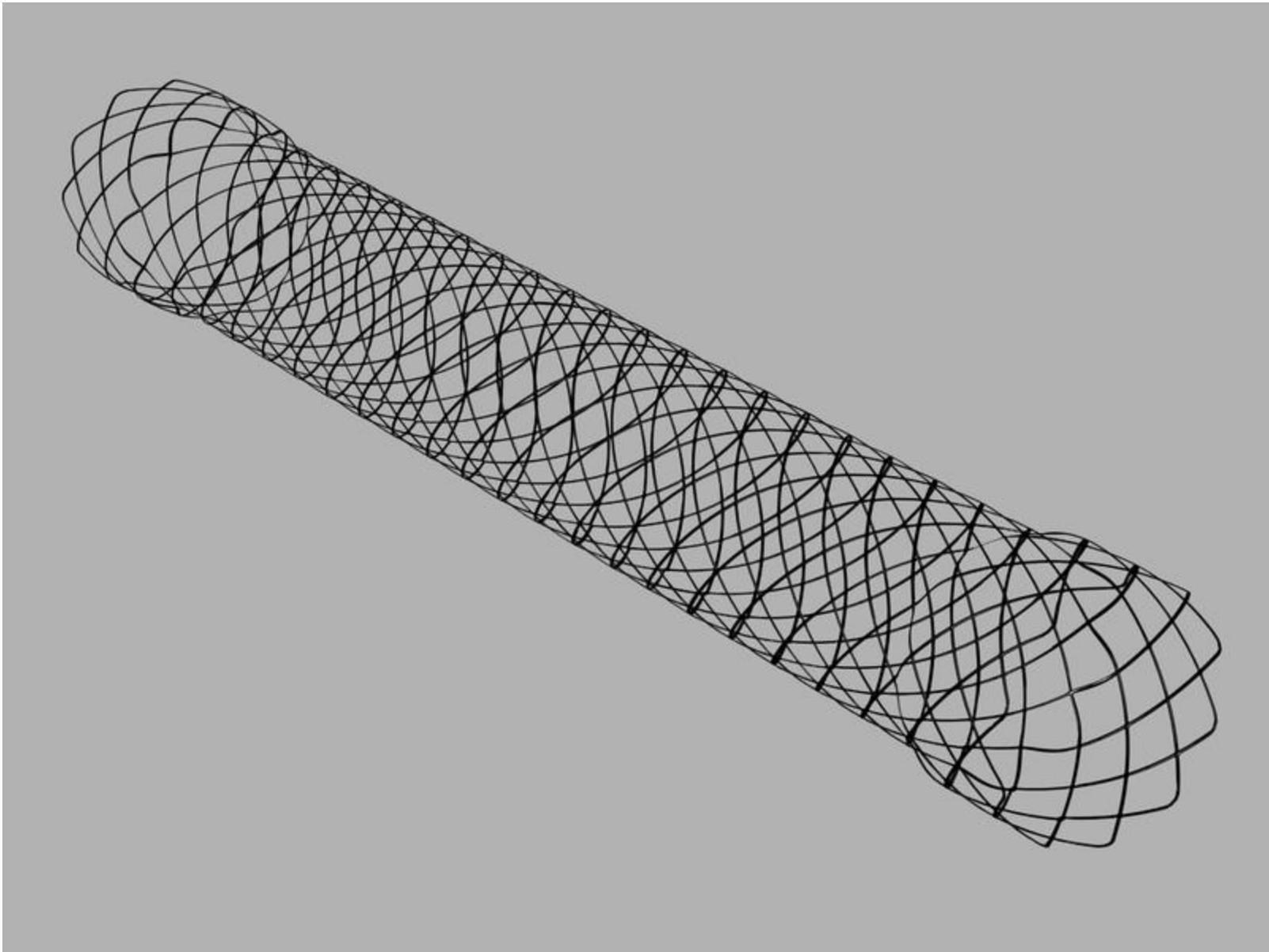
- FOR MALIGNANT STRICTURES
- CAN BE USED AS A SURGICAL “BRIDGE”
- REQUIRES 2 CM CLEARANCE FROM THE ANAL SPHINCTER
- ASCENDING AND TRANSVERSE COLON ARE ALSO POSSIBLE WITH ENDOSCOPIC ASSISTANCE

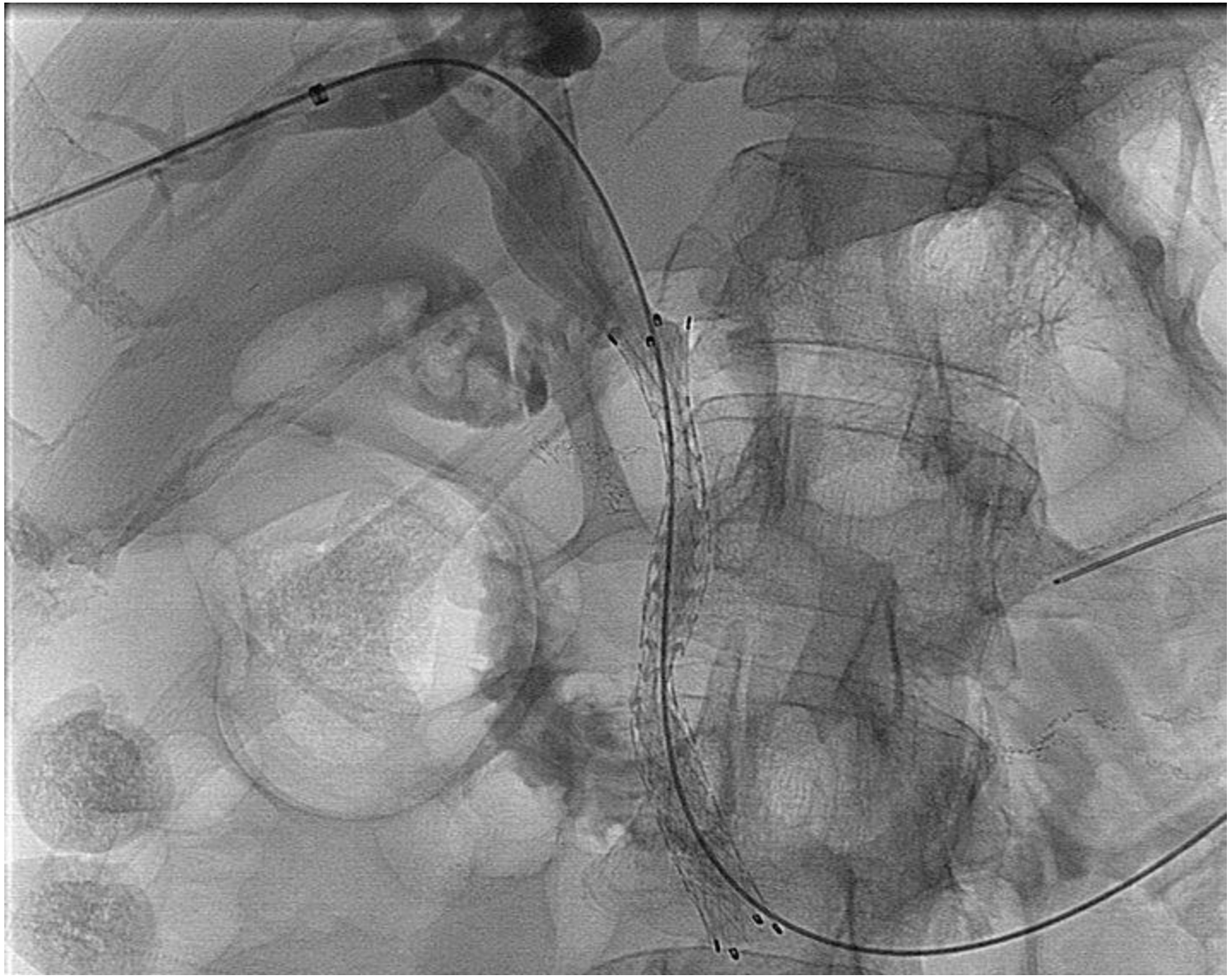




# BILIARY STENTING

- FOR MALIGNANT STRICTURES
- SIMILAR TO PERCUTANEOUS DRAINAGE ONLY A STENT IS USED
- NO BAG OR CATHETER







# RADIOFREQUENCY ABLATION

- CAN BE CURATIVE OR PALLIATIVE
- FOR NON-OPERABLE MALIGNANT DISEASE OR A SURGICAL ALTERNATIVE FOR BENIGN DISEASE
- LESIONS CAN BE BIOPSIED AT THE TIME OF THE PROCEDURE IF NECESSARY
- CAN BE PERFORMED UNDER CT OR US GUIDANCE

# RADIOFREQUENCY ABLATION

- LIVER
  - HCC
  - SOLITARY/LIMITED BURDEN METASTATIC
- KIDNEY
  - RCC
  - SMALL SOLID MASSES
- LUNG
  - PRIMARY BRONCHOGENIC CARCINOMA
  - SOLITARY/LIMITED BURDEN METASTATIC
- MSK
  - OSTEIOD OSTEOMAS
  - METASTATIC DISEASE
  - CAN BE COMBINED WITH CEMENTOPLASTY



# RCC



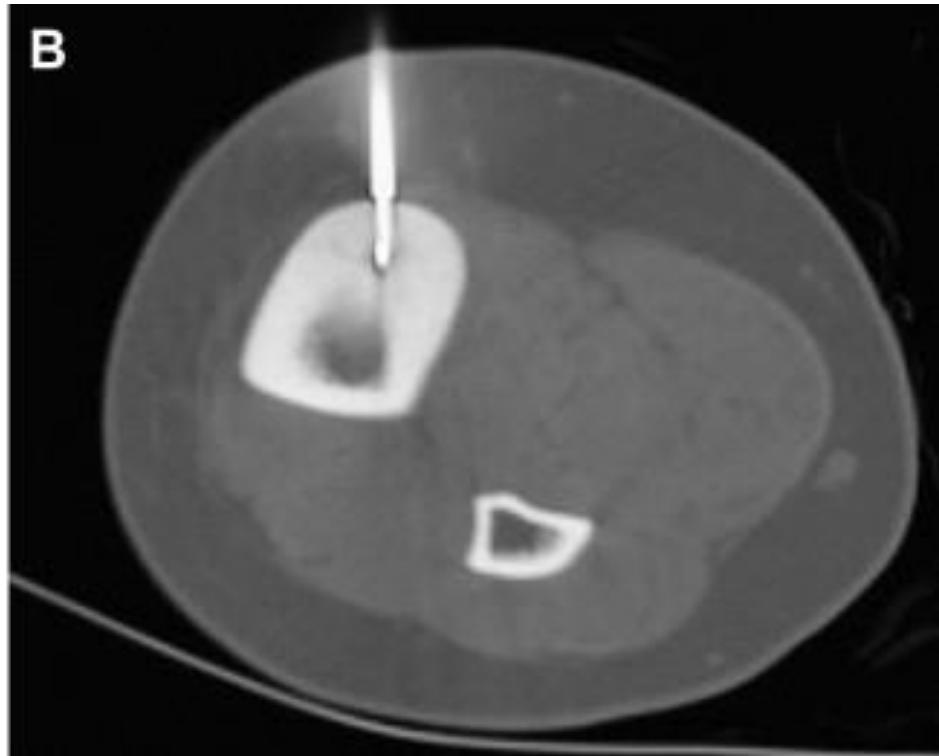
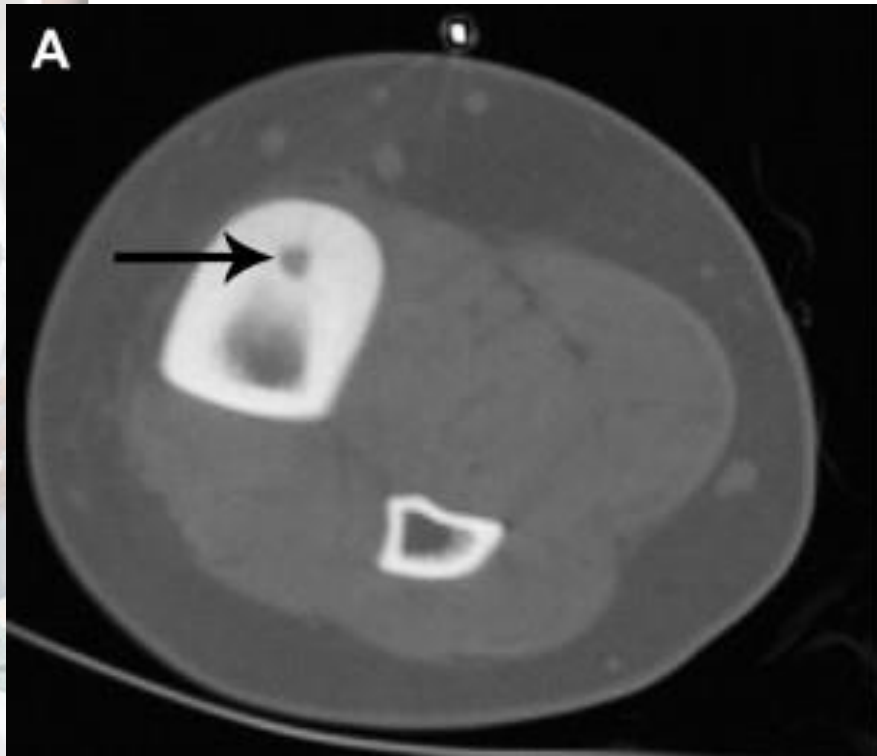
# HCC



# PULMONARY TUMORS



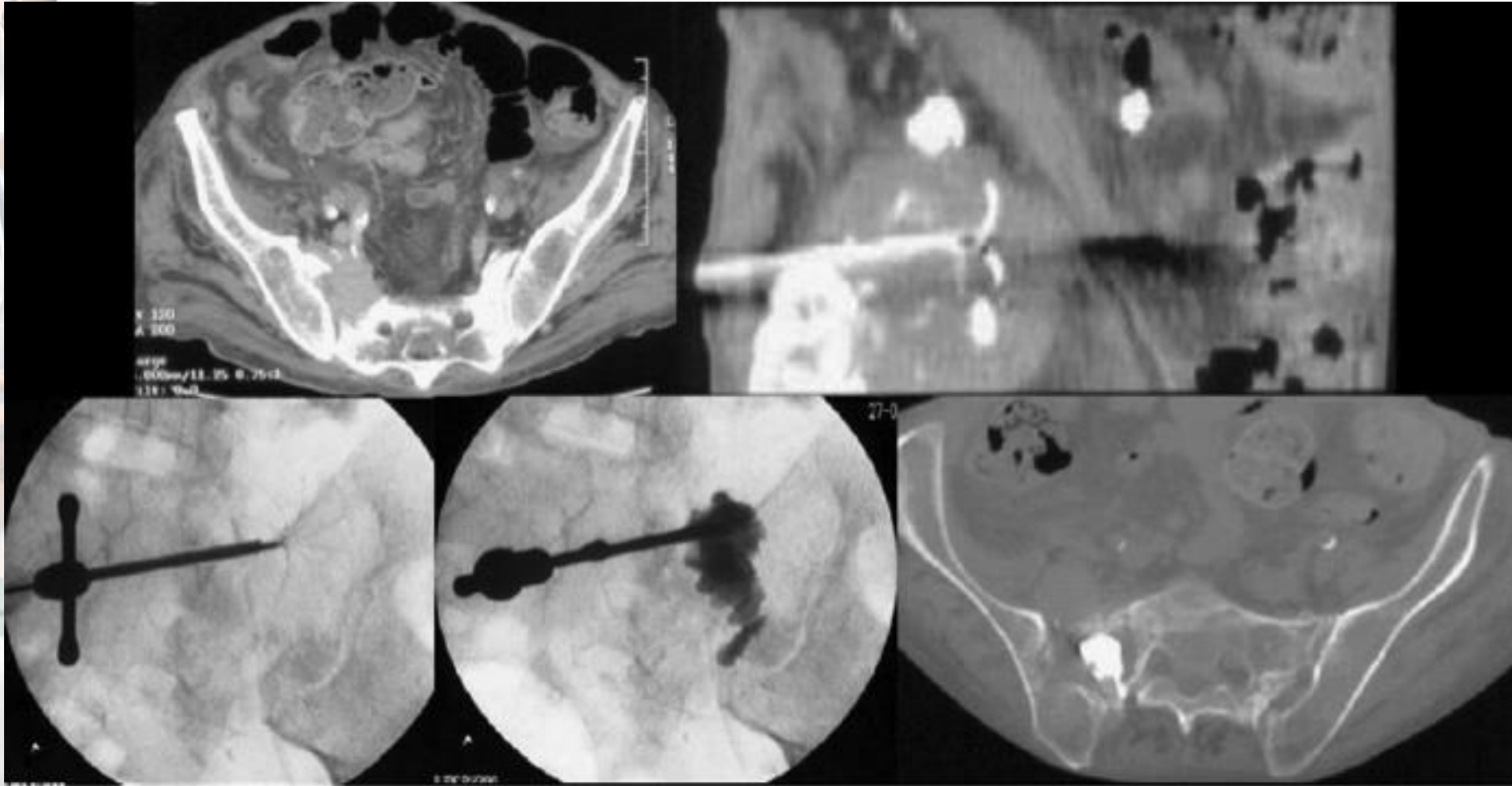
# OSTEOID OSTEOMA



# SPINAL METASTASIS



# RFA + CEMENTOPLASTY



# TRANSARTERIAL CHEMOEMBOLIZATION

- CURRENTLY OFFERED AT HSC
  - COULD BE PERFORMED AT WMRH
  - USES BASIC IR EQUIPMENT AND SKILL
- CHEMOTHERAPEUTIC AGENT ATTACHED TO EMBOLIC PARTICLES
  - DOXORUBICIN
  - IRINOTECAN
- CHEMOTHERAPY TARGETED TO ORGAN OF INTEREST
  - LIVER
  - BRAIN
- NEGLIGIBLE SYSTEMIC SIDE EFFECTS

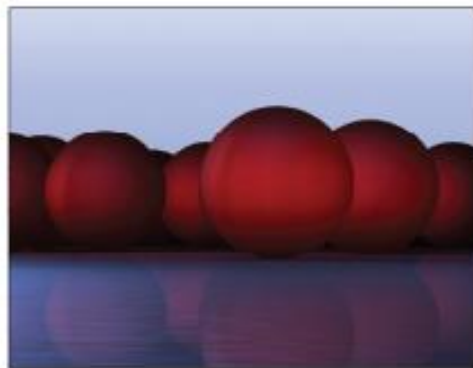


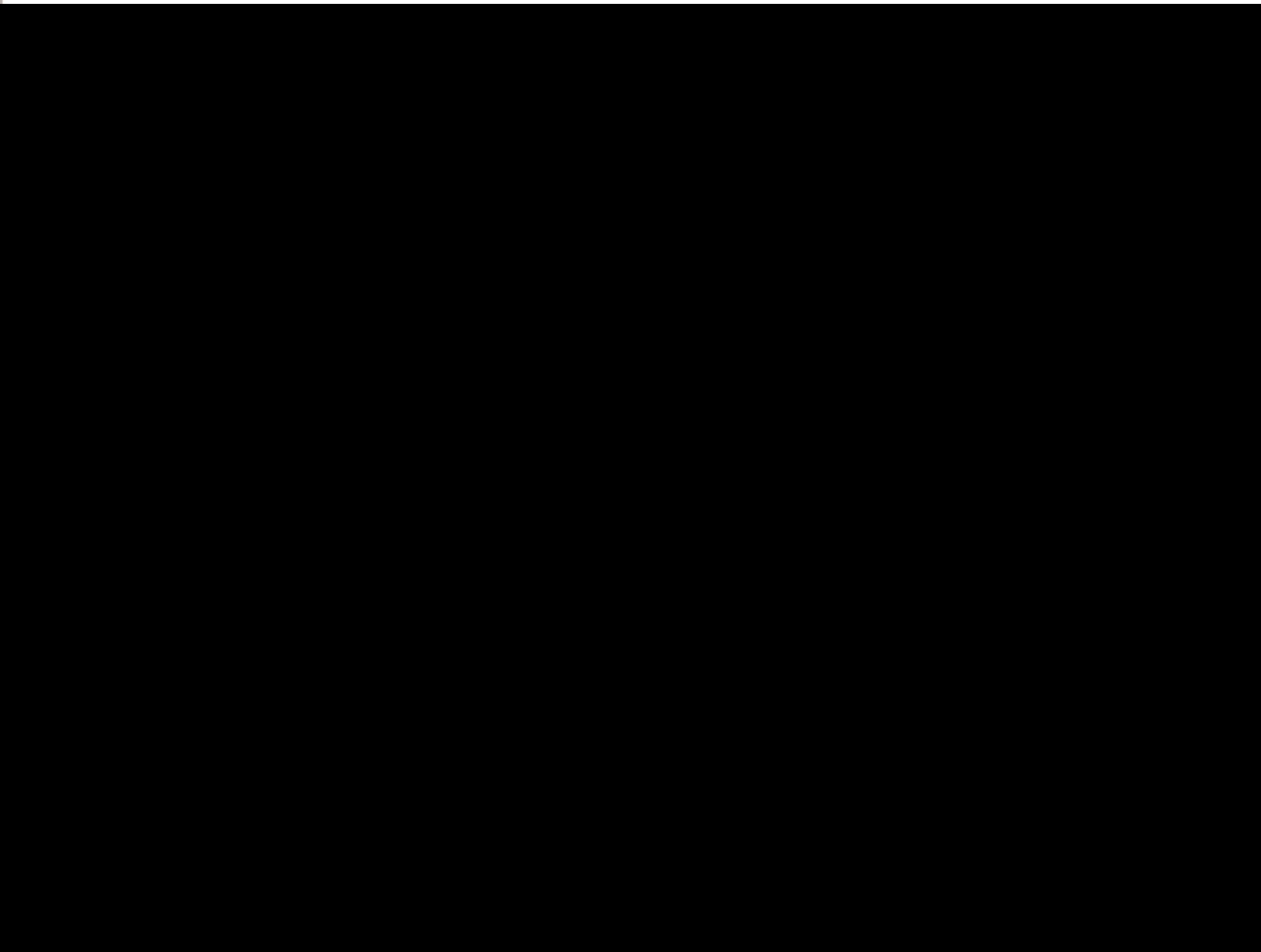
**DC Bead** Drug Eluting Bead  
500-700µm

**DC Bead** Drug Eluting Bead  
300-500µm

**DC Bead** Drug Eluting Bead  
100-300µm

**DC Bead** embolic Drug-Eluting Bead  
70-150µm



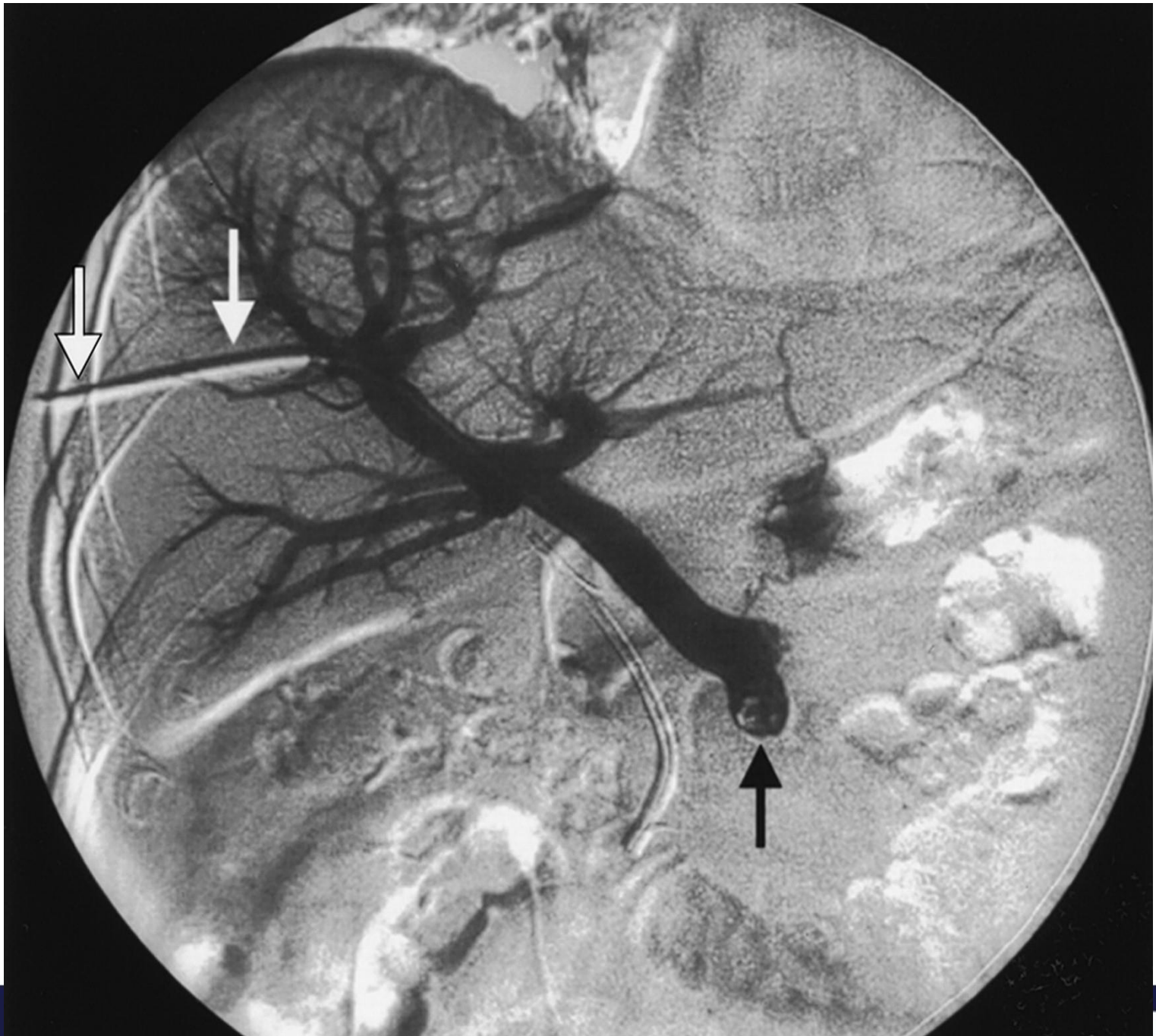


# TRANSARTERIAL RADIOEMBOLIZATION

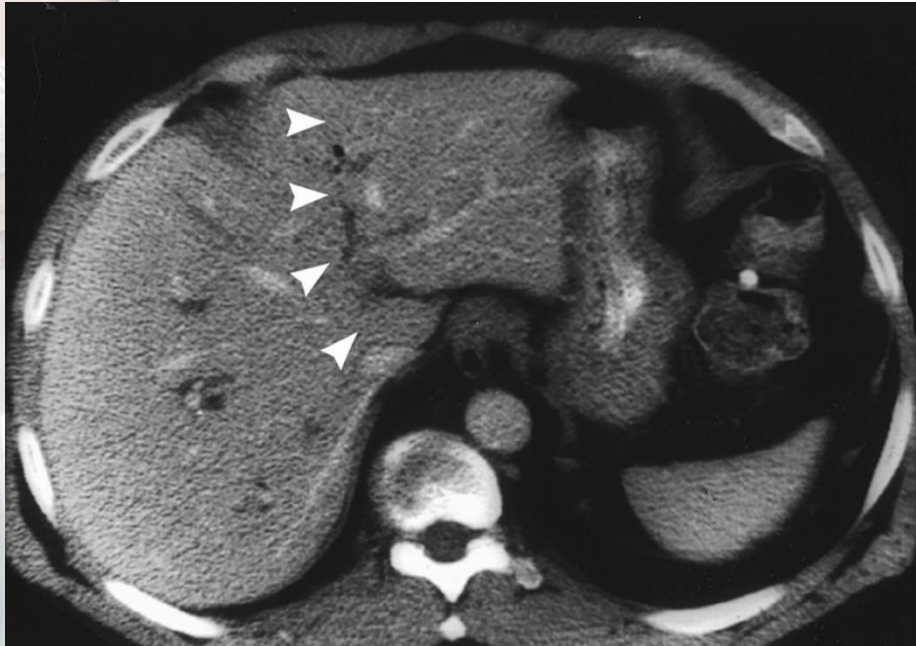
- NOT CURRENTLY OFFERED IN PROVINCE
  - COULD BE PERFORMED AT WMRH
  - USES BASIC IR EQUIPMENT AND SKILL
- RADIATION (Y-90) ATTACHED TO EMBOLIC PARTICLES
  - THERASPHERE
- RADIATION TARGETED TO ORGAN OF INTEREST
  - LIVER
- NEGLIGIBLE SYSTEMIC SIDE EFFECTS

# PORTAL VEIN EMBOLIZATION

- PERFORMED PRIOR TO SEGMENTAL HEPATECTOMY
- PORTAL VEIN BRANCHES TO PORTION OF LIVER BEING REMOVED ARE EMBOLIZED
- REMAINING PORTION OF LIVER HYPERTROPHIES







For more information please contact



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