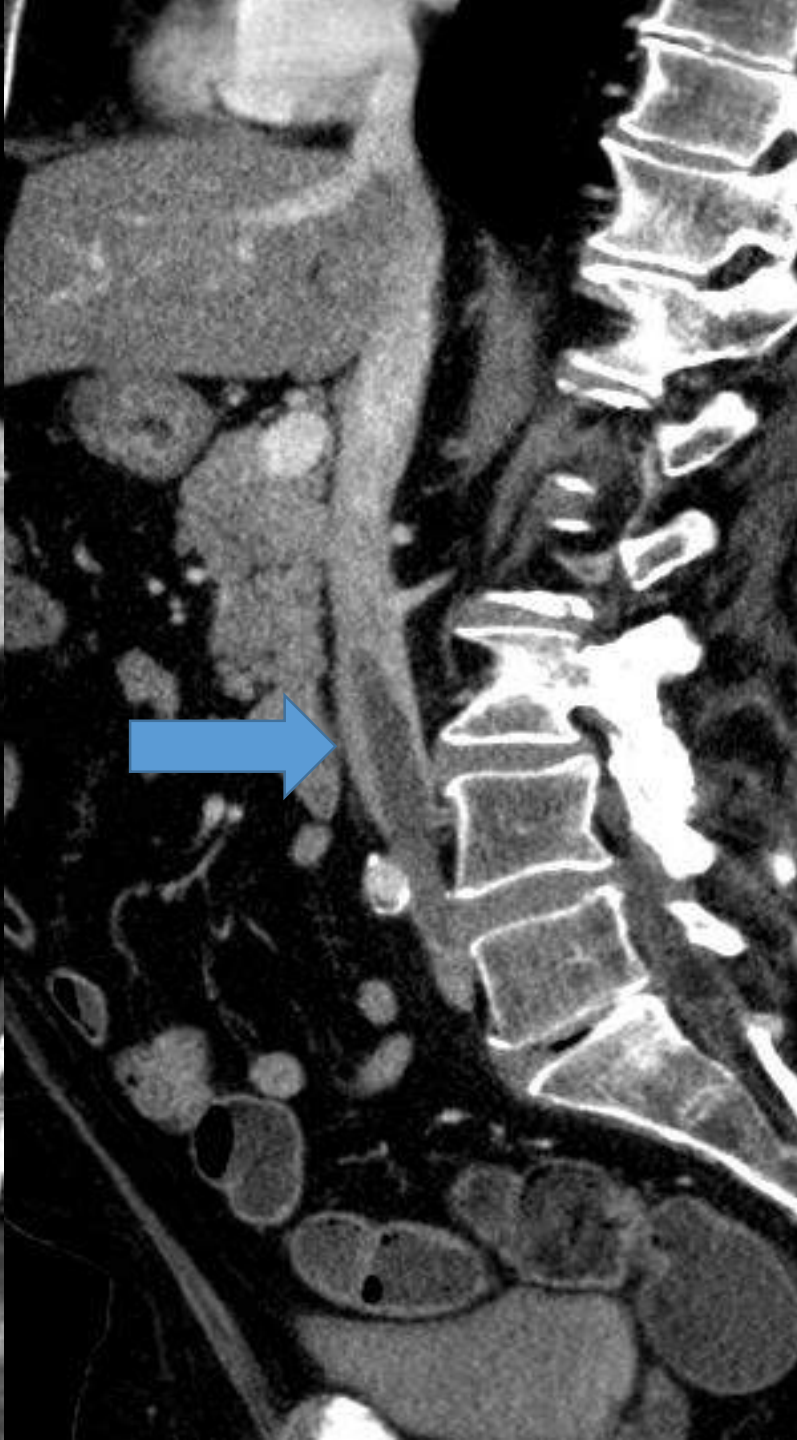
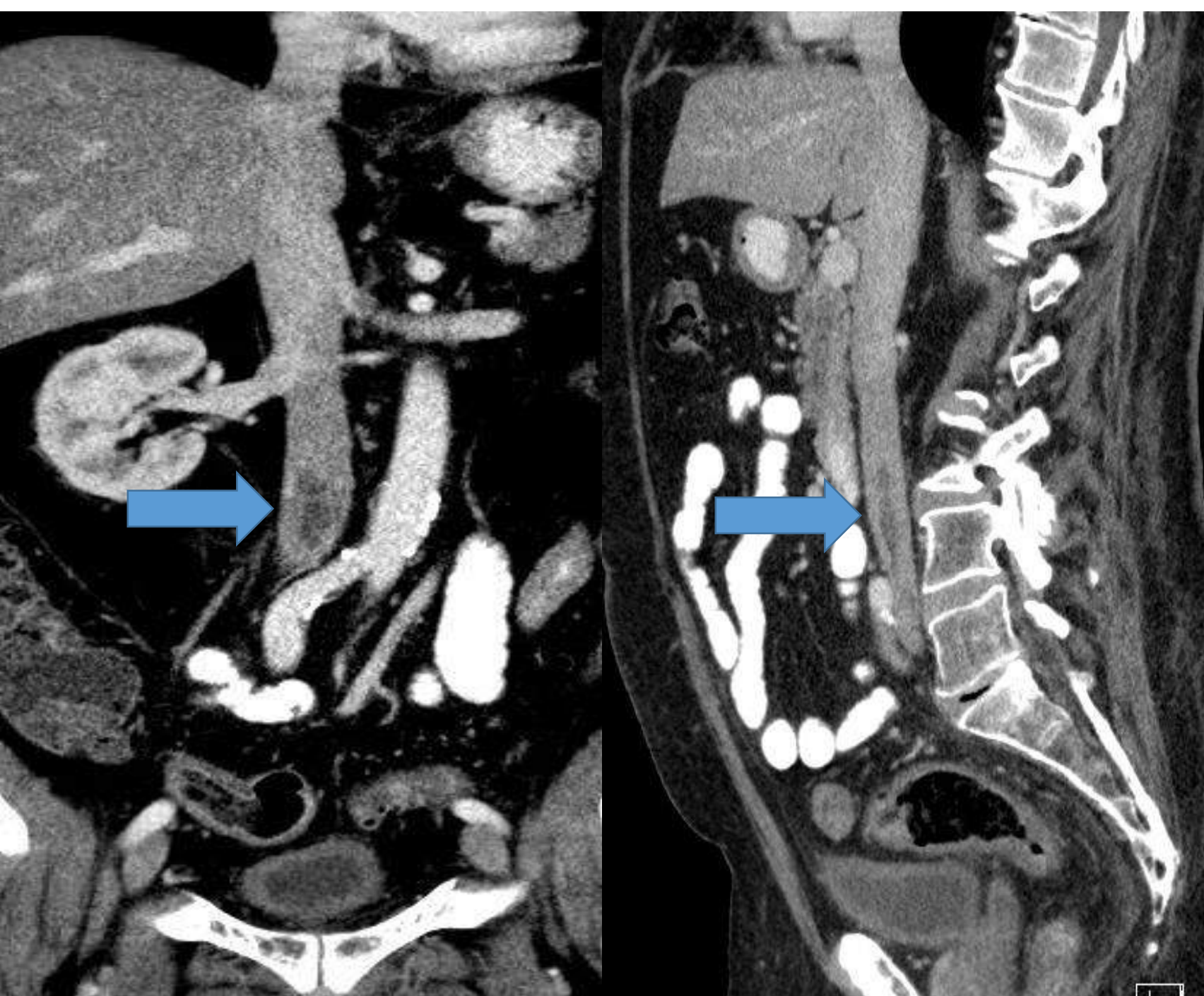


DVT from  
Metastatic rectal  
cancer

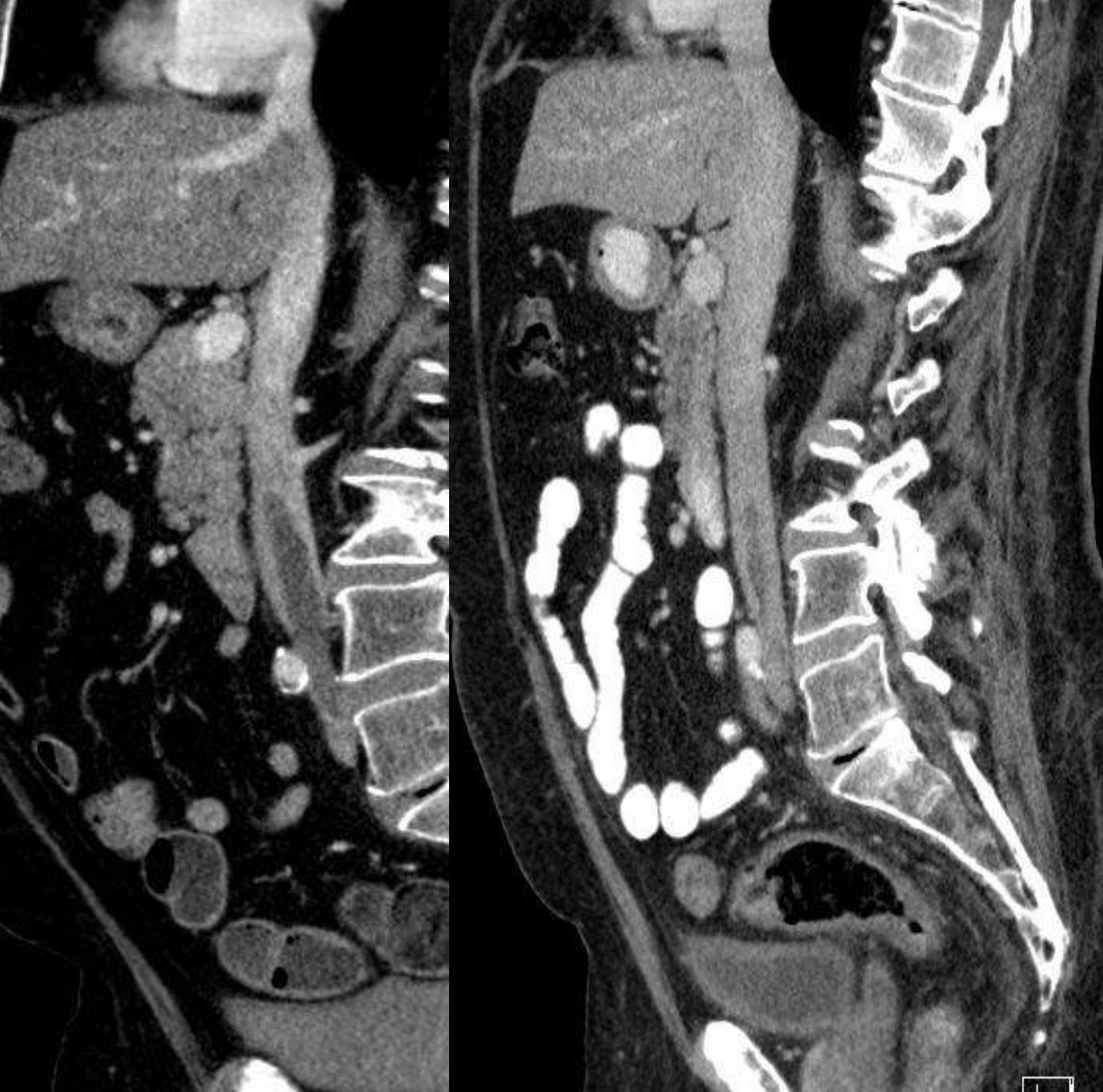
# IVC Clot





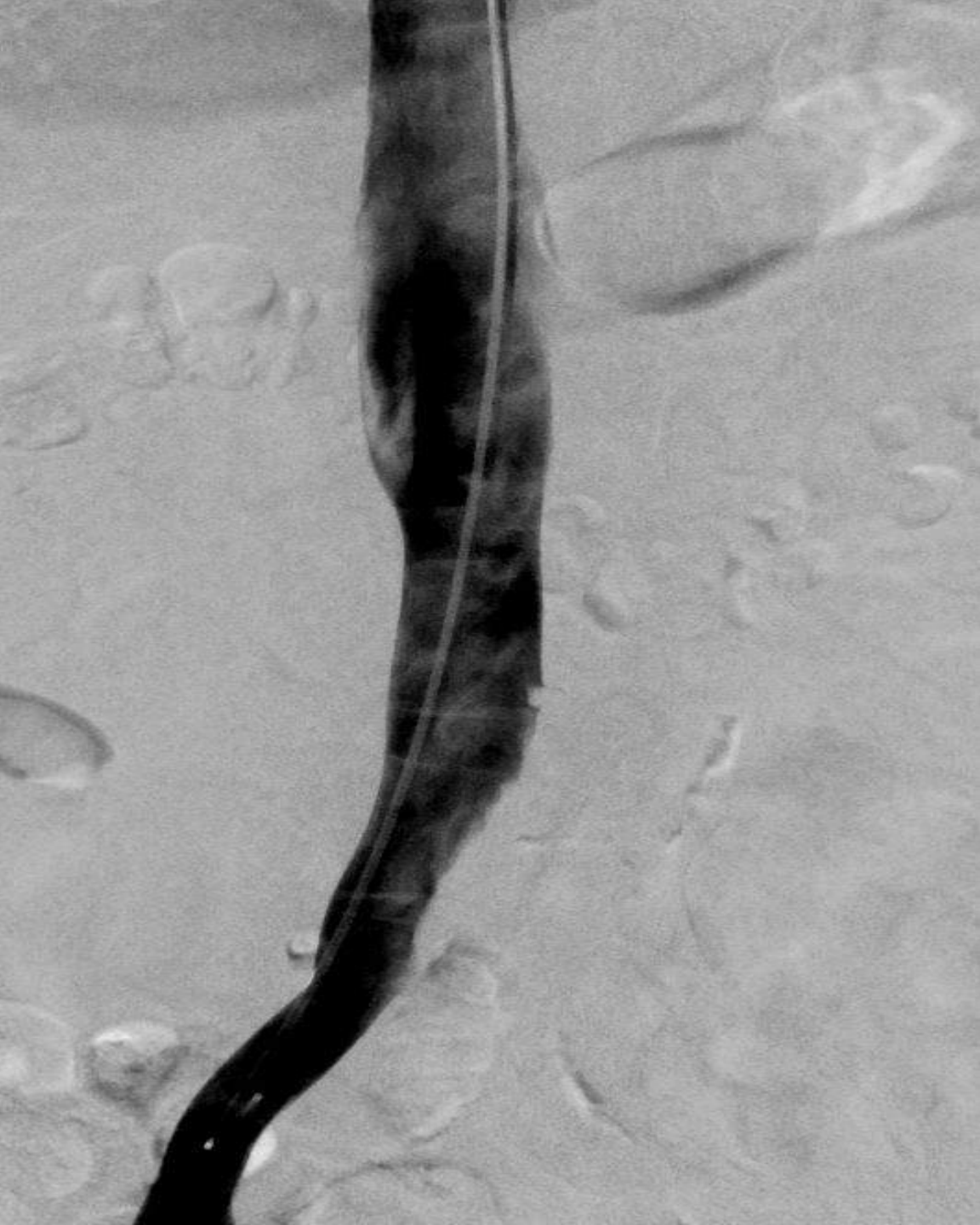
# IVC Clot

- 1 month post anti-coagulation
- Metastatic Rectal Cancer
- Request for IVC filter as a preplanning for surgery



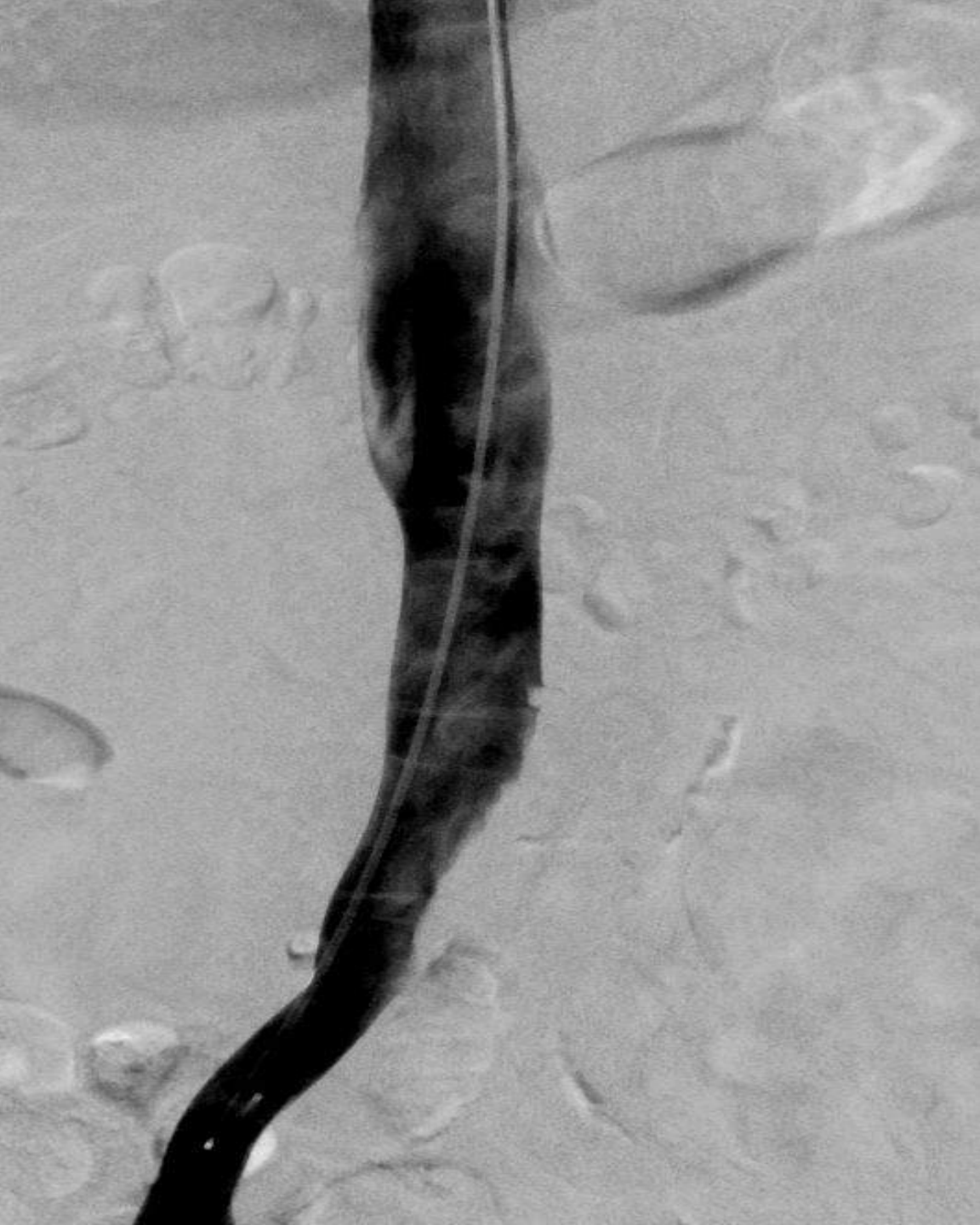
# Filter placement

- Supra or Infrarenal?
- Approach?



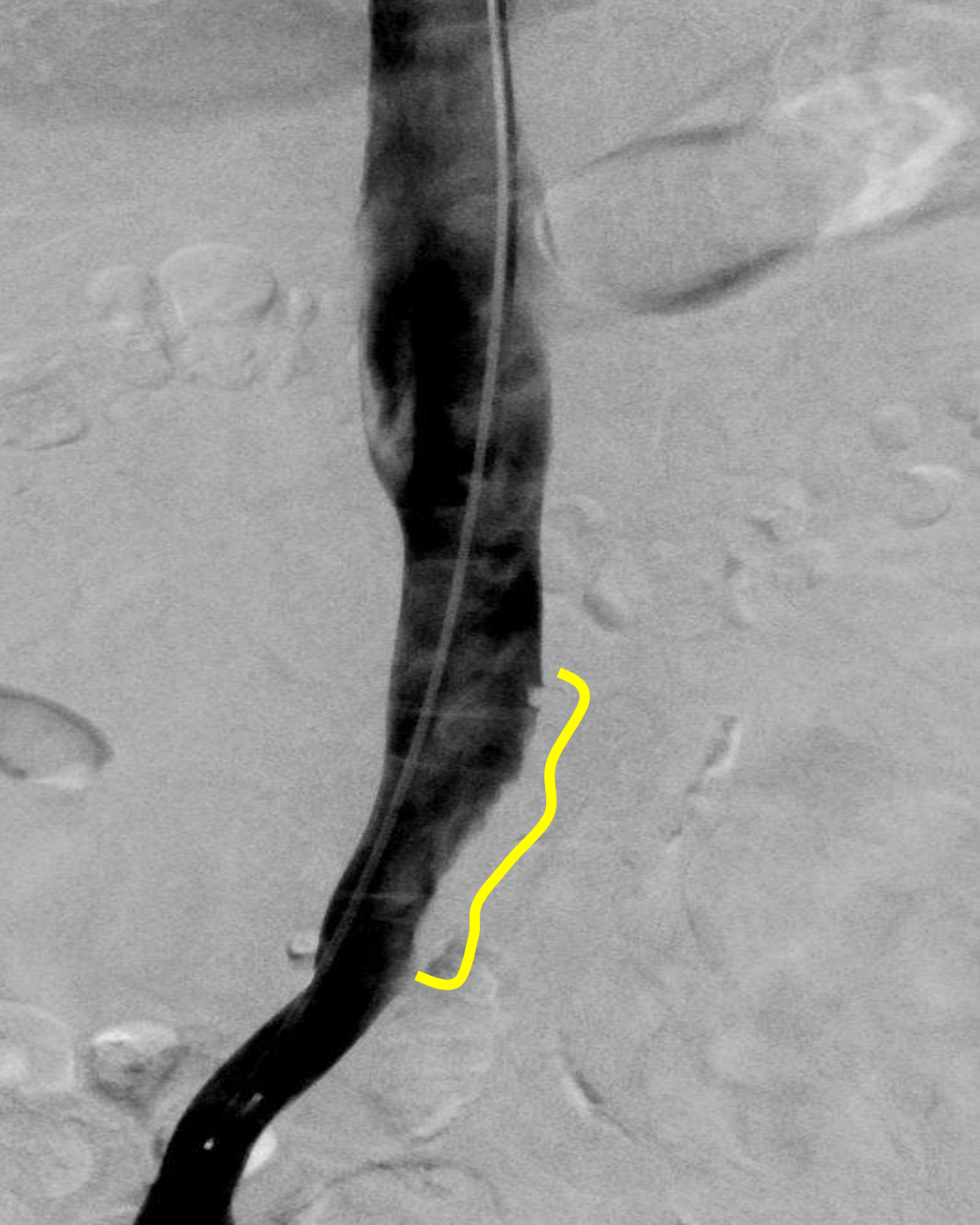
# Cavagram

- Jugular vein access
- Patent IVC
- **CLOT ??????**
- What's Misleading here?
- What's NEXT?



# Cavagram

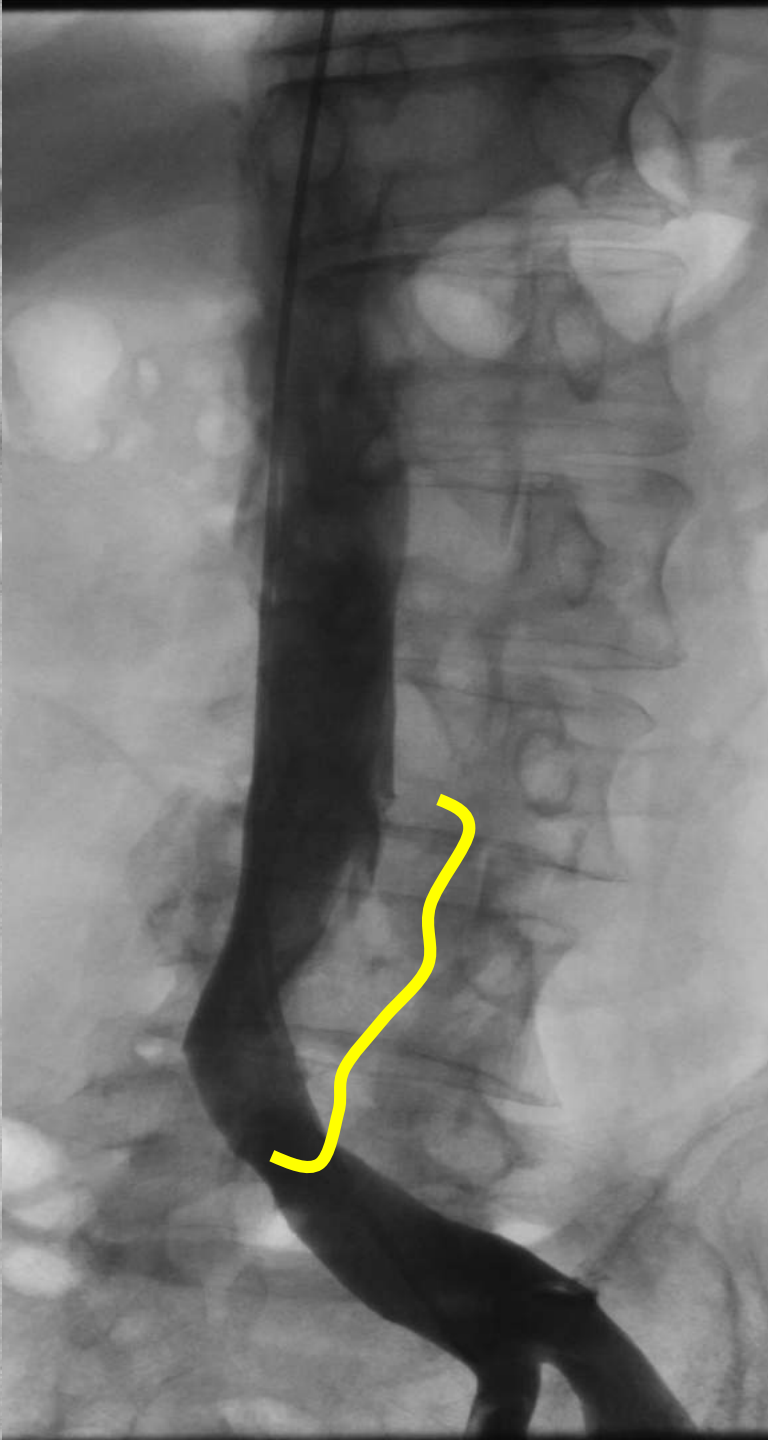
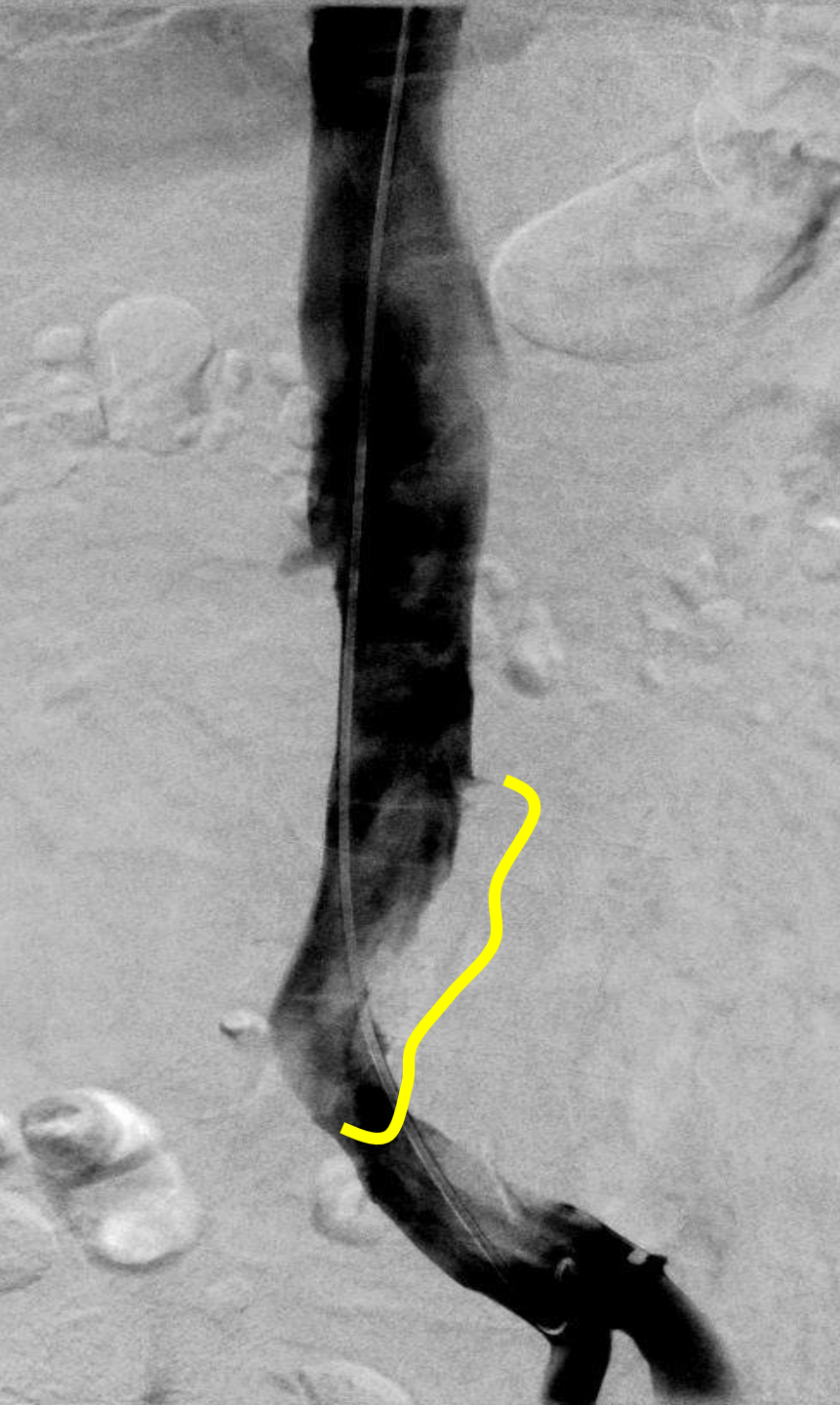
- What's Misleading here?
  - Wire in the Right Iliac vein
  - So What?
  - Observe closely
  - Look back at the CT images



# Cavagram

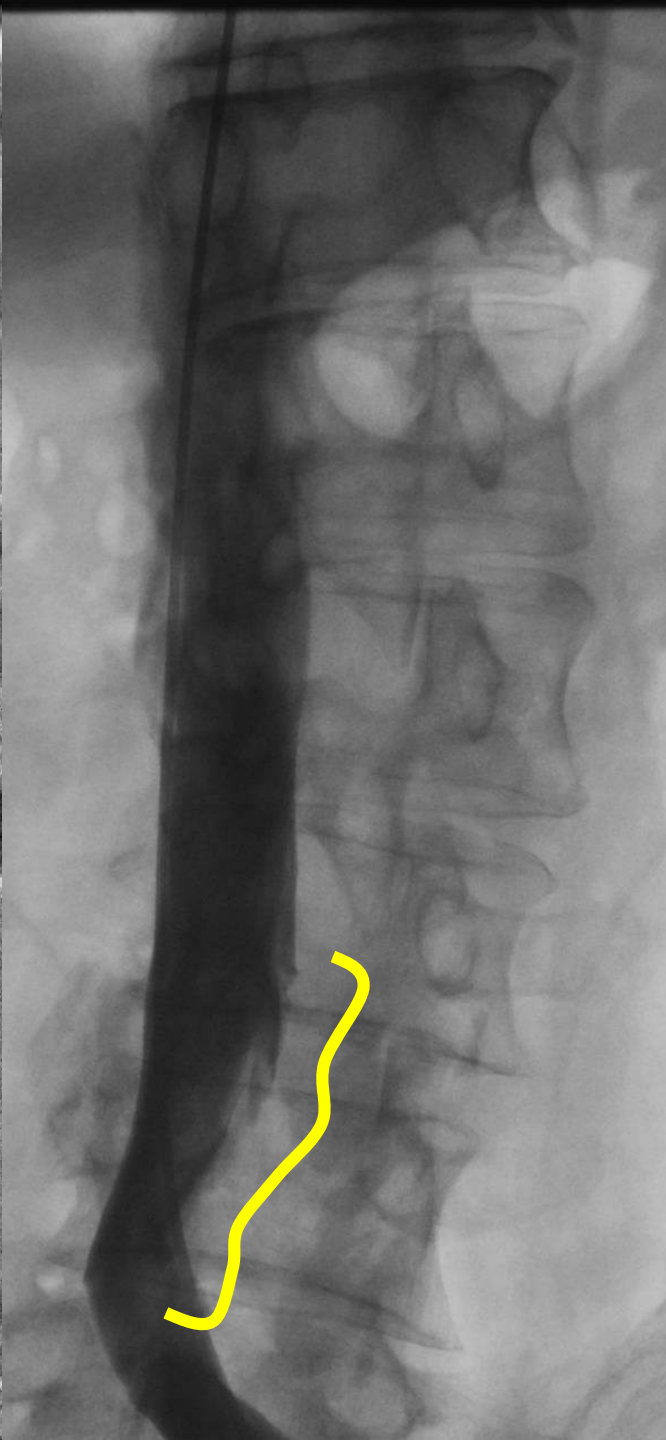
- Irregular edges
- What's Next?
  - Repeat Cavagram with catheter in the left iliac vein

# Cavagram



- What's Misleading here?
  - Wire in the Right Iliac vein
  - So What?
  - Observe closely
  - Look back at the CT images

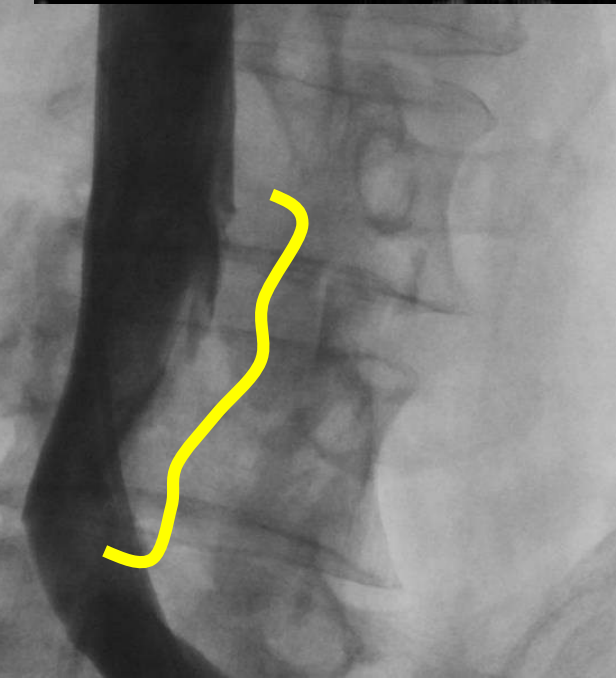
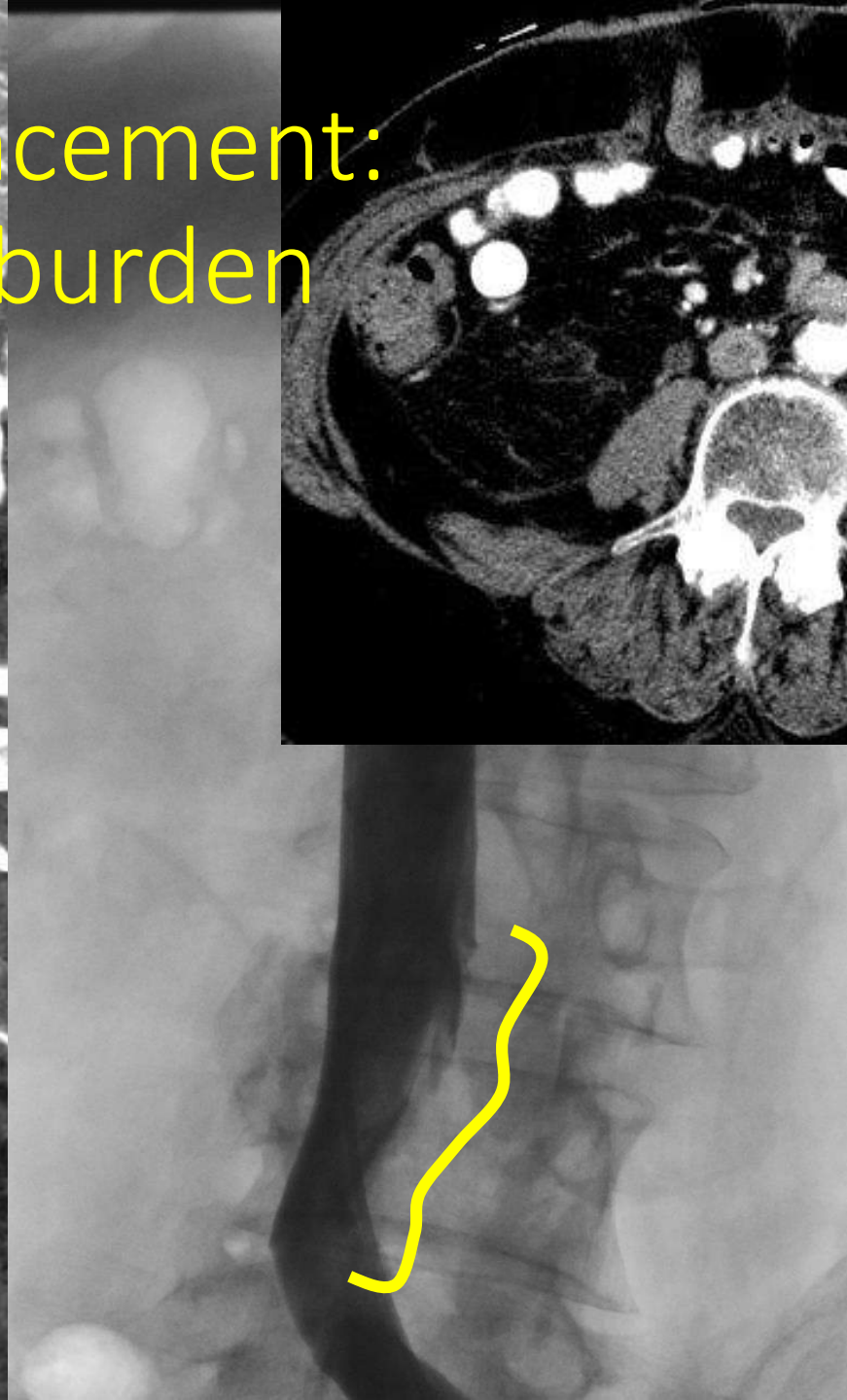
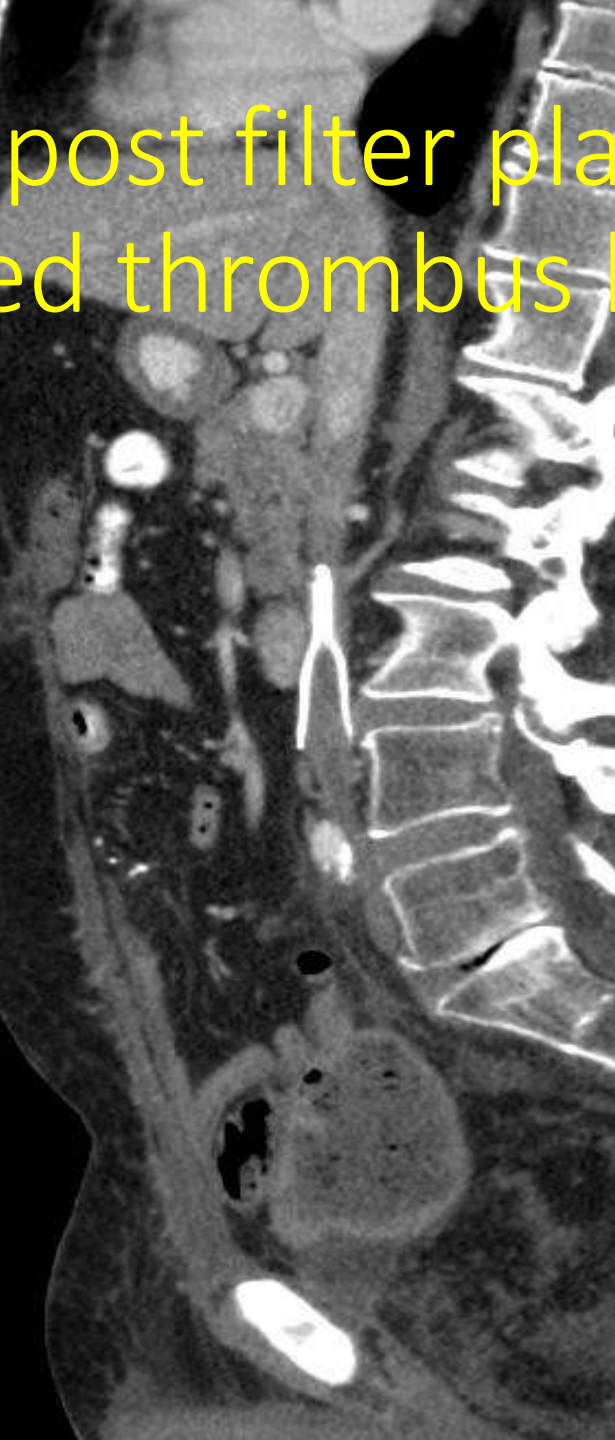




# Cavagram

- Site of filter placement depends:
  - on the location of the clot
  - Space available for filter
- Infrarenal filter placed in this case (Operator's choice)

2 months post filter placement:  
- Decreased thrombus burden



# Suprarenal IVC filter

- Described as early as 1975
- Indications<sup>1</sup>
  - Infrarenal IVC narrowing (Intrinsic or extrinsic)
  - Iliocaval thrombus (extending to or above the level of the renal veins)
  - Renal vein thrombosis
  - Gonadal vein thrombosis
  - Vascular anomalies precluding placement of an infrarenal filter
    - IVC duplication
    - Low insertion of renal veins
    - Pregnancy, large pelvic masses and/or Small caliber IVC that may compress an infrarenal filter

Different patient

# Suprarenal IVC filter

- Concerns<sup>2,3,4,5</sup>:
  - Assumed to increase the risk of renal vein thrombosis
  - Relative instability due to larger diameter, shorter length, cardiac and respiratory reasons
- Preferred Infrarenal filter placement, because renal flow:
  - May prevent caval thrombosis superior to the filter
  - Decreased risk of renal vein thrombosis
- **Verdict on Suprarenal filters<sup>2,4,6,7</sup>:**
  - **No clinical evidence of increased renal vein thrombosis or instability as demonstrated in research**
  - **Preferred in appropriate clinical indications**

2. Kalva SP, Chlapoutaki C, Wicky S, et al. Suprarenal inferior vena cava filters: a 20-year single-center experience. *J Vasc Interv Radiol* 2008; 13:1041–1047.

3. Wieland A, Mehta A, Greenfield A, Wolf M. Temporary suprarenal inferior vena cava filter for renal biopsy in a patient with renal vein thrombosis. *Clin Nephrol* 2004; 62:239–241.

4. Orsini RA, Jarrell BE. Suprarenal placement of vena caval filters: indications, techniques, and results. *J Vasc Surg* 1984; 1:124–135.

5. Lemmon GW, Litscher LJ. Incomplete caval protection following suprarenal caval filter placement: a case report. *Angiology* 2000; 51:155–159.

6. Greenfield LJ, Cho KJ, Proctor MC, Sobel M, Shah S, Wingo J. Late results of suprarenal Greenfield vena cava filter placement. *Arch Surg* 1992; 127:969–973.

7. Athanasoulis CA, Kaufman JA, Halpern EF, Waltman AC, Geller SC, Fan CM. Inferior vena caval filters: review of a 26-year single-center clinical experience. *Radiology* 2000; 216:54–66.