

CAIR Case of the Month

Case Courtesy of Drs S. Bansal, V. Kotha and E. Herget
University of Calgary



UNIVERSITY OF
CALGARY

54M with penile and scrotal squamous cell cancer

- Anticoagulated for prior PE
- Scrotal flap reconstruction surgery complicated by local hematoma
- Anticoagulation discontinued; OR for hematoma evacuation
 - IVC Filter inserted pre-operatively



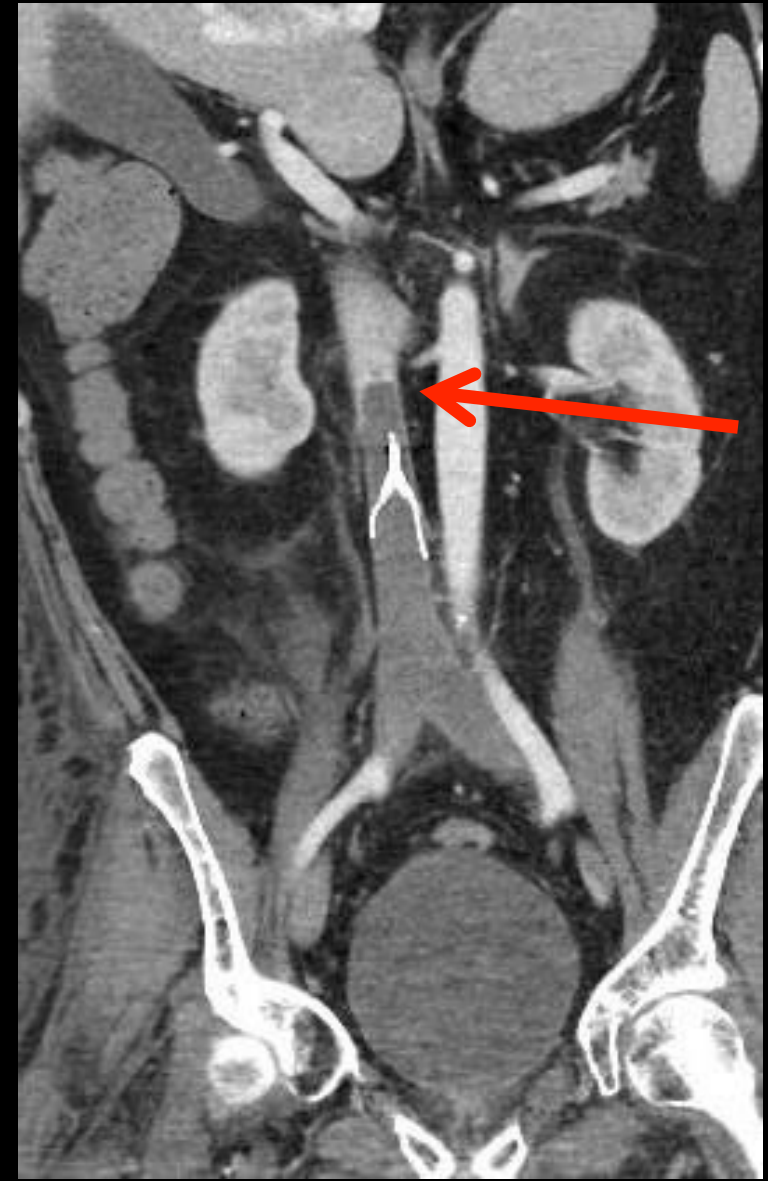
54M with penile and scrotal squamous cell cancer

- 2 weeks later presents with extensive bilateral leg swelling
- Unable to ambulate





Two weeks after filter insertion

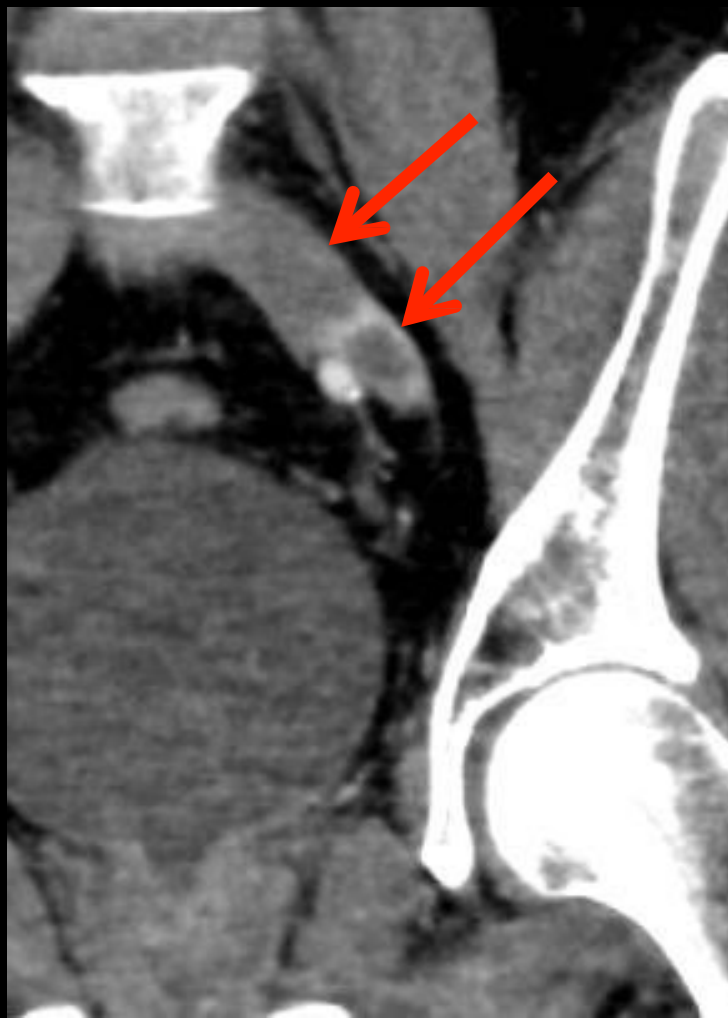


3 days later

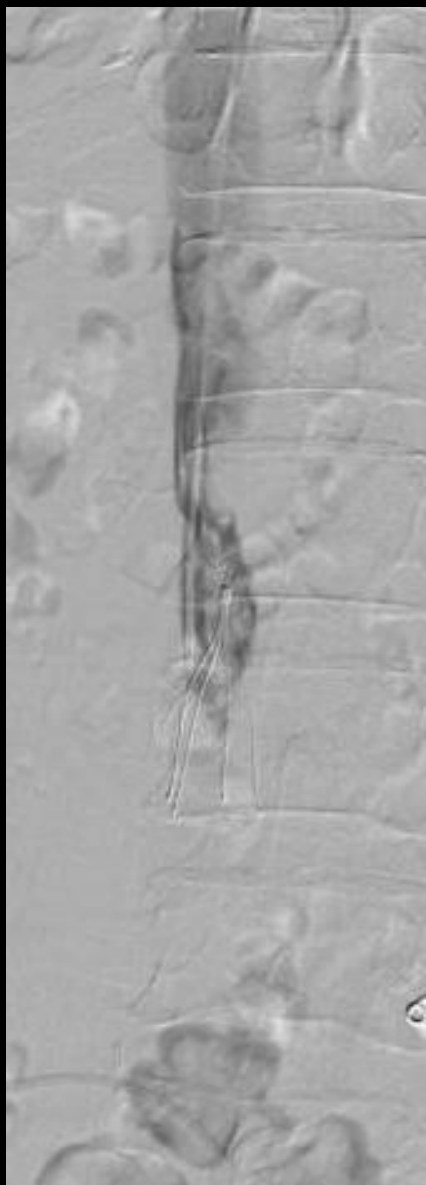
R Common Iliac



L Common Iliac



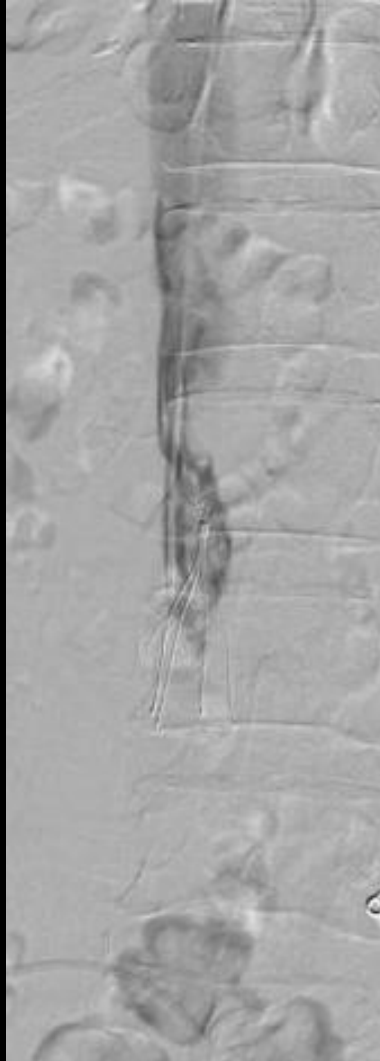
Venovenous Bypass Set-up and Filter Retrieval



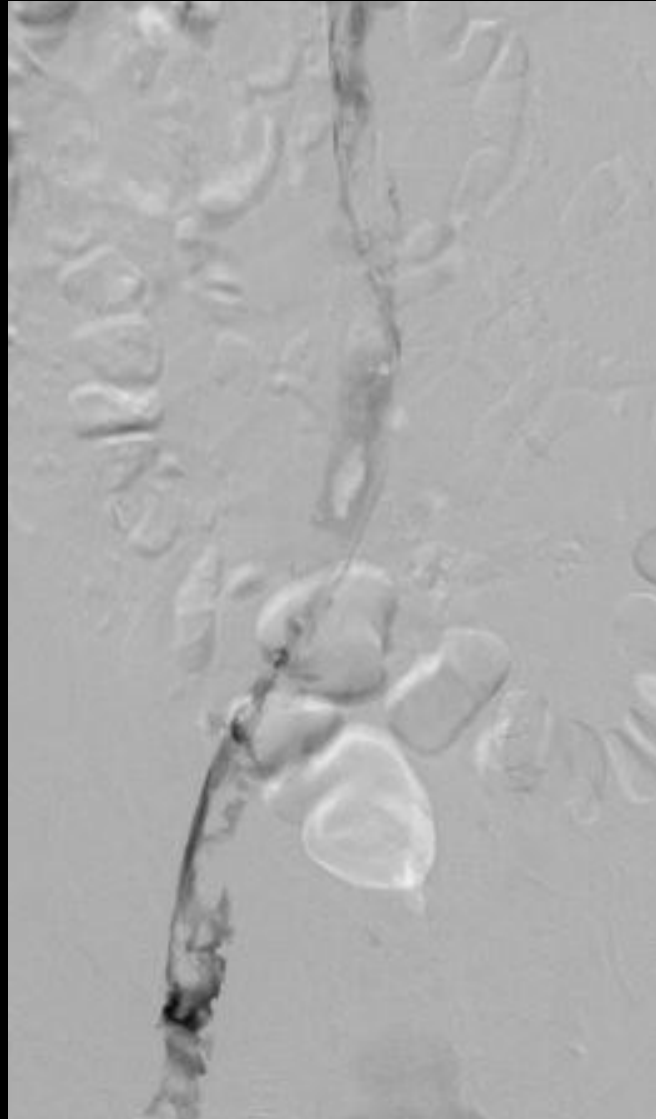
IVC Post Filter Retrieval and Clot Removal



IVC Post Filter Retrieval and Clot Removal



R Common Iliac



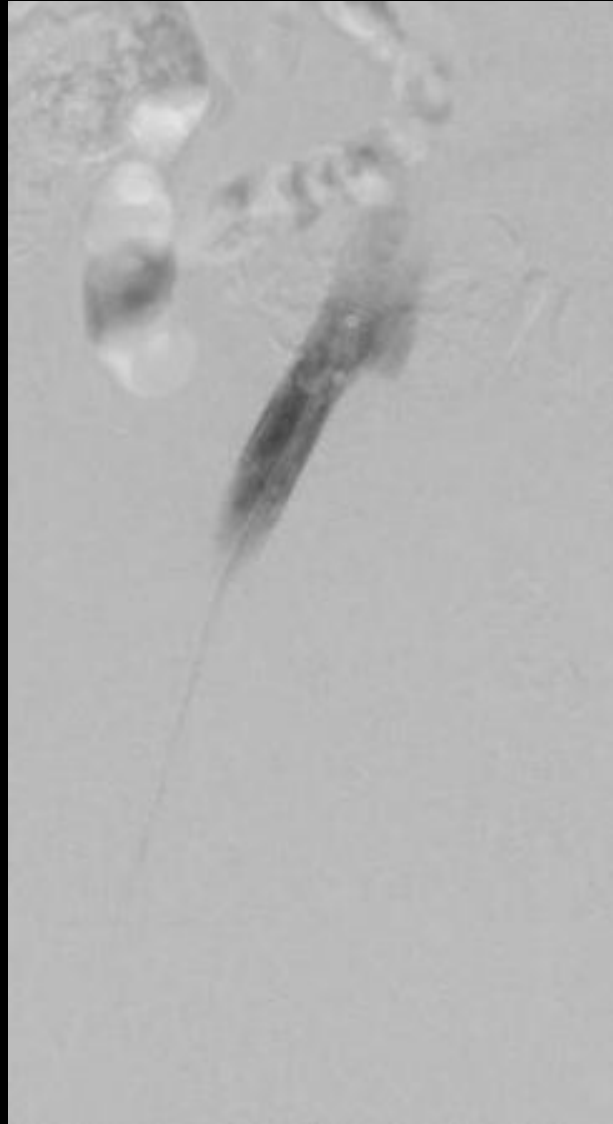
UNIVERSITY OF
CALGARY

Balloon Maceration

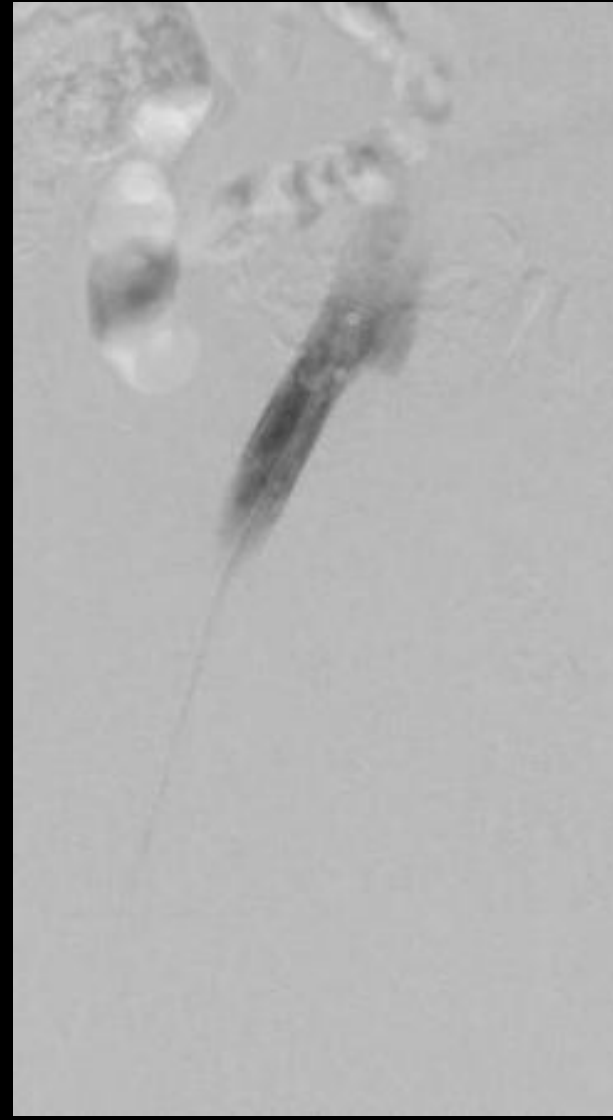
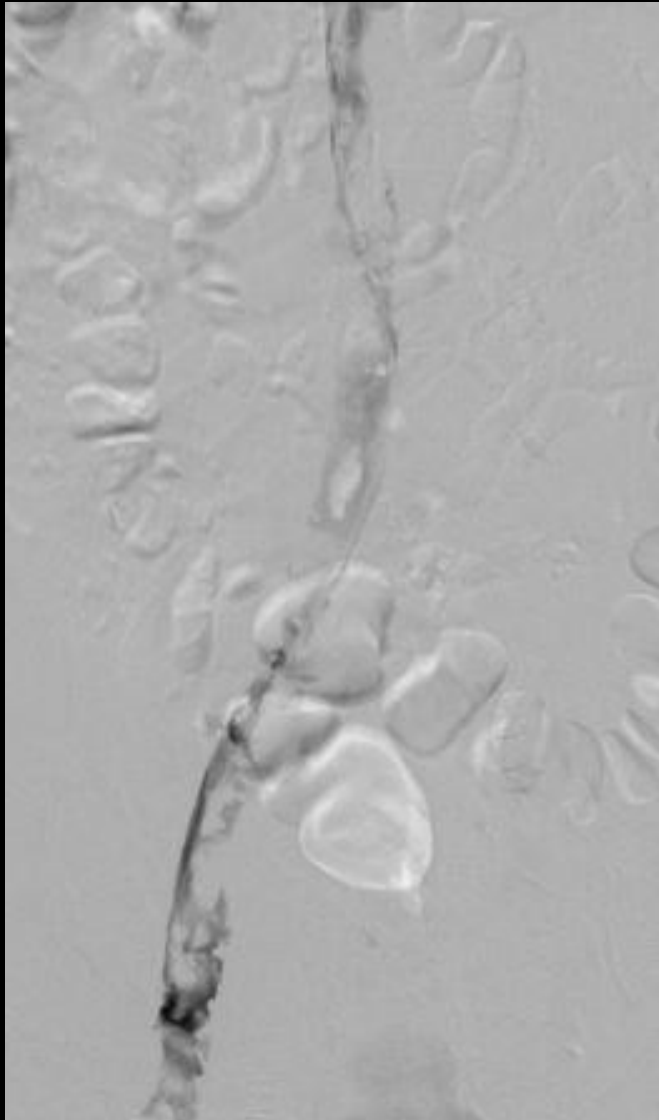
- Sequentially larger balloons (10-14 mm) to push thrombus towards bypass cannula



R Common Iliac Post Balloon Maceration

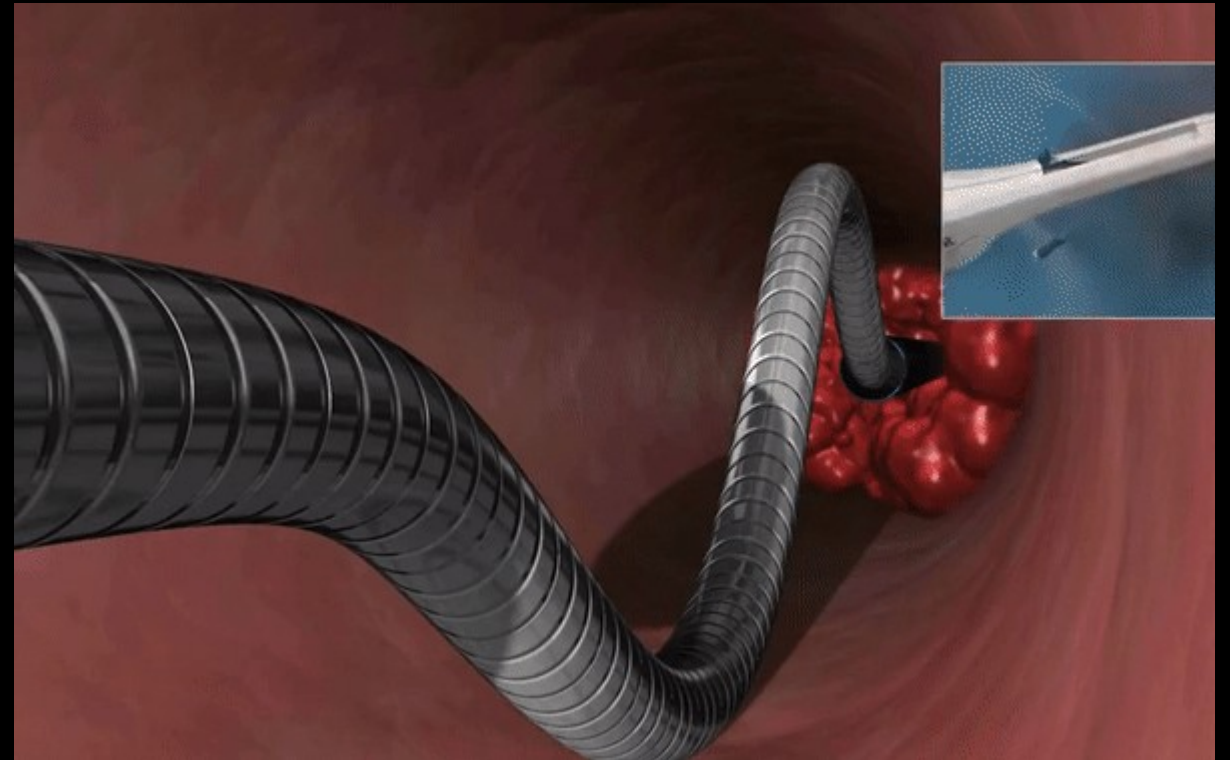


R Common Iliac Pre and Post Balloon Maceration



Rotational Thrombectomy

- Initial plan to use rotational thrombectomy
 - Creates very fine particles
 - Clogs perfusion filter

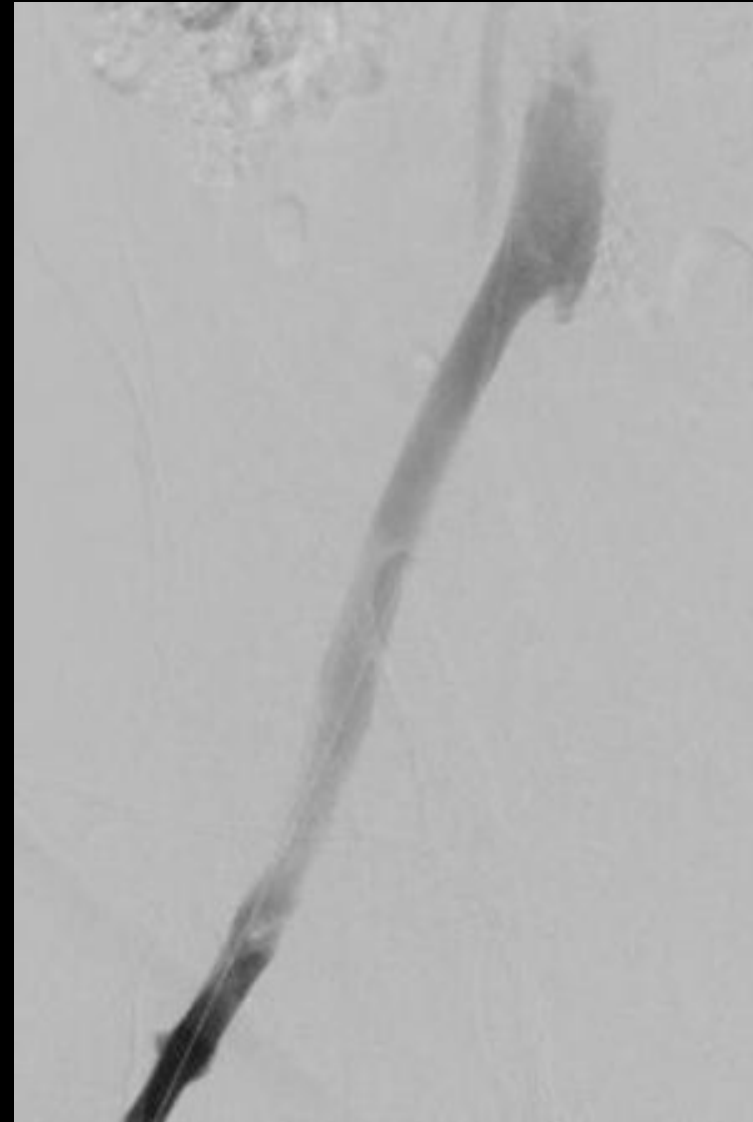
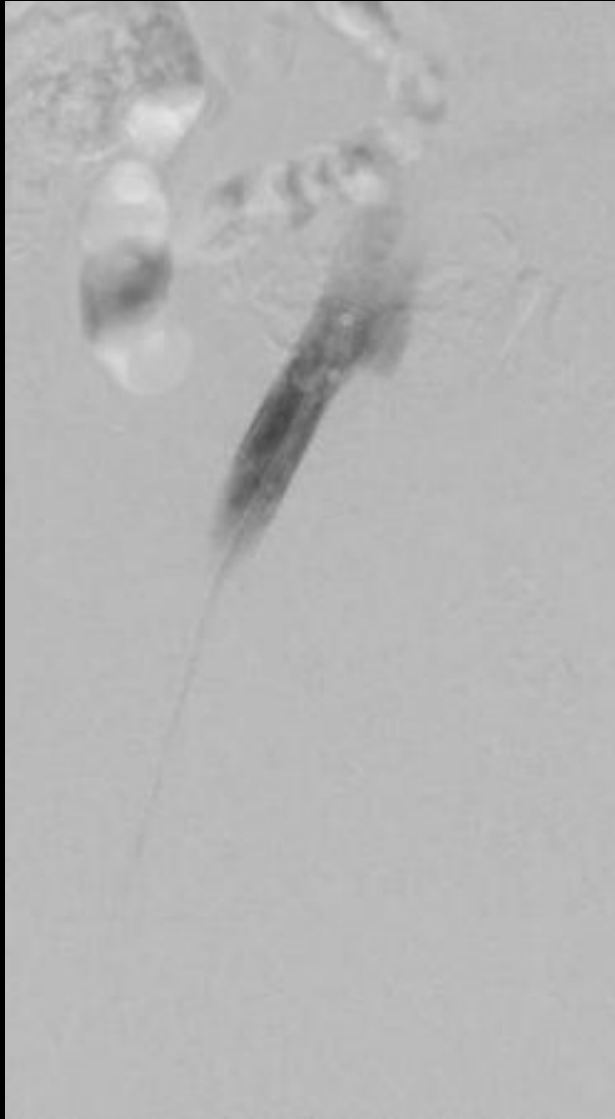


Pigtail Catheter Clot Fragmentation

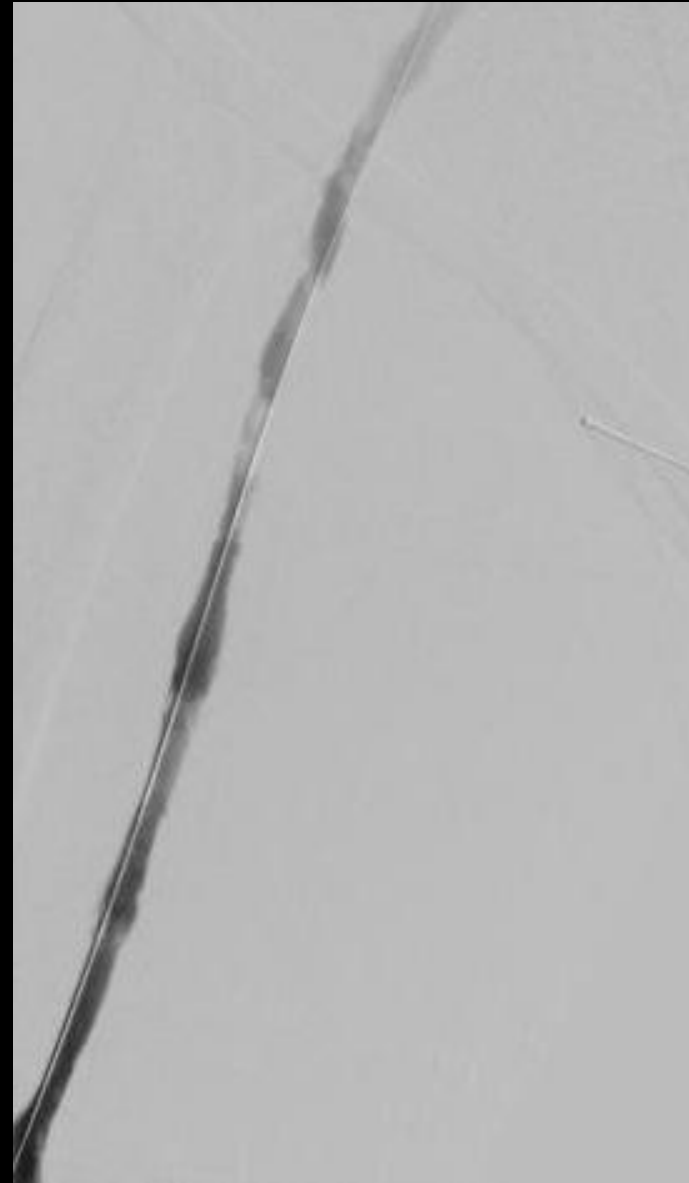
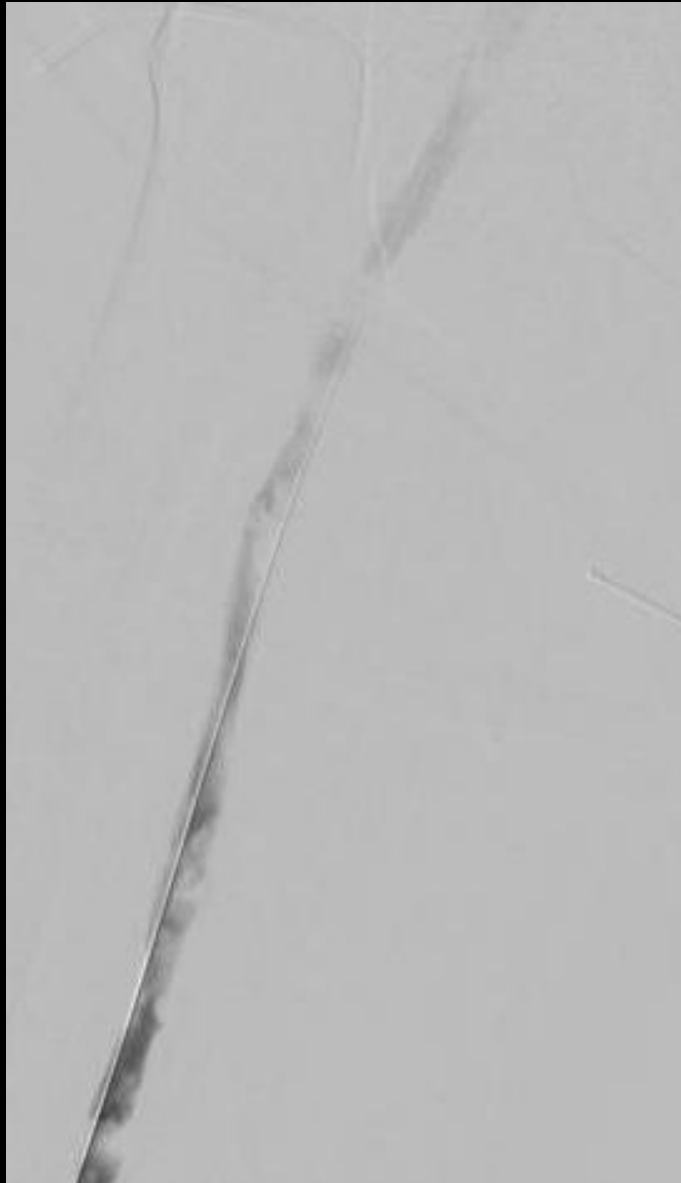
- Manual rotation
- Breaks up clot into large fragments
 - Easily collected by filter



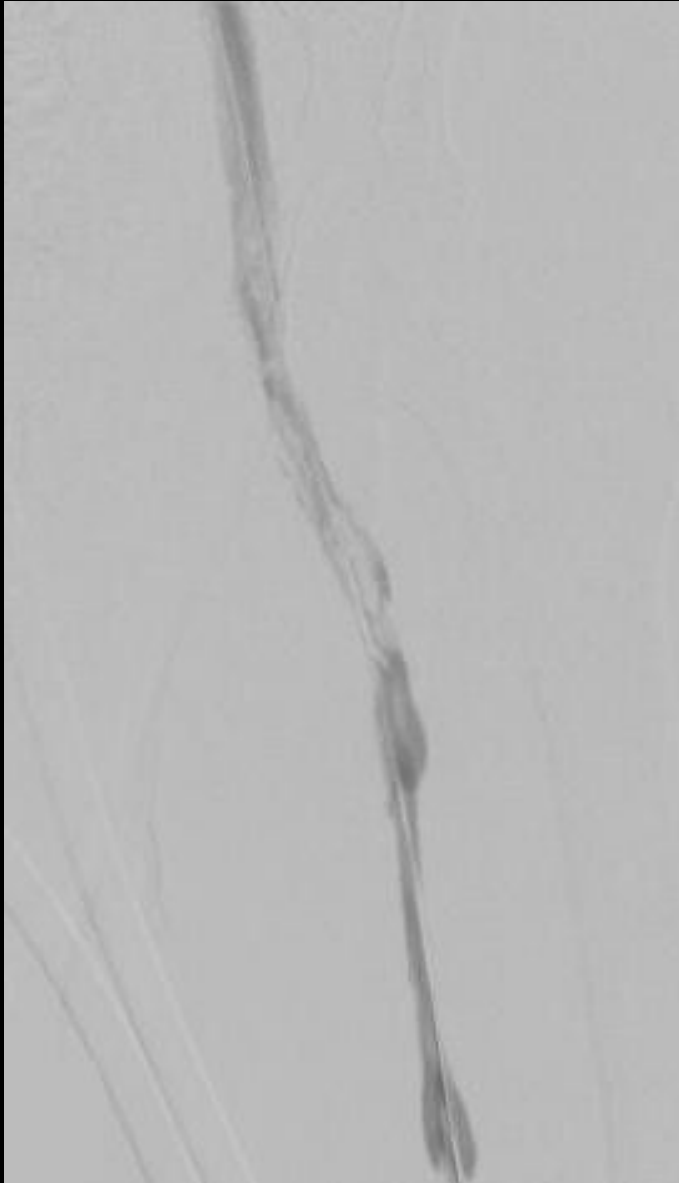
Post Pigtail Catheter Clot Fragmentation



Right Superficial and Common Femoral Veins



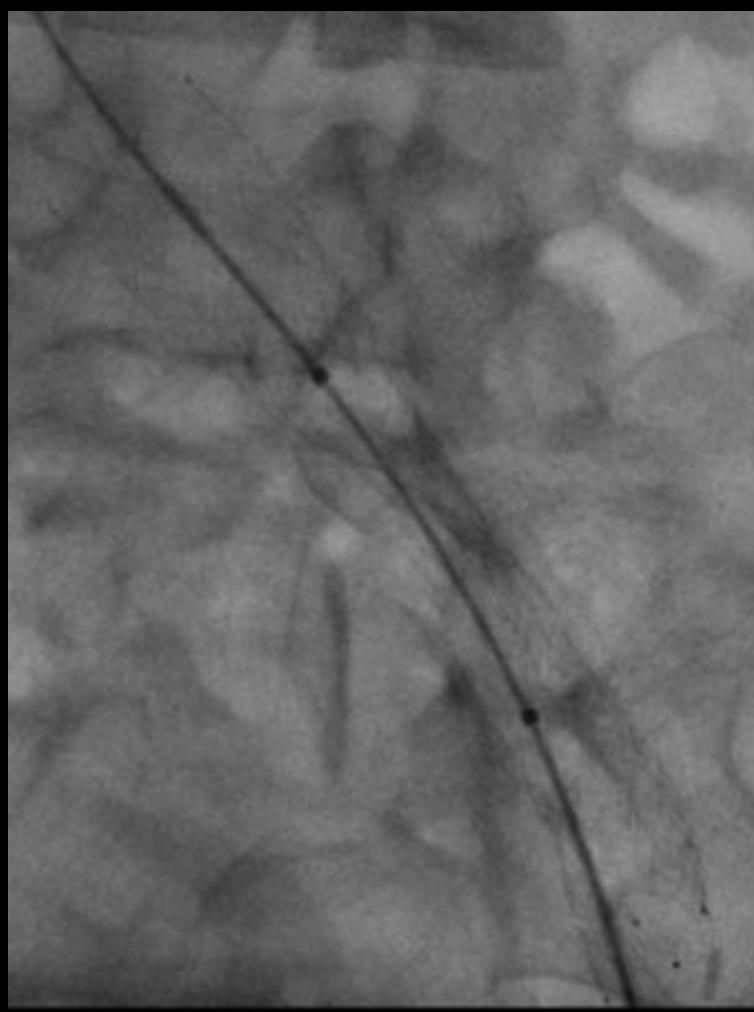
Left Superficial and Common Femoral Veins



Post Balloon Maceration & Pigtail Thrombus Fragmentation

- Significant residual stenosis in left common iliac vein



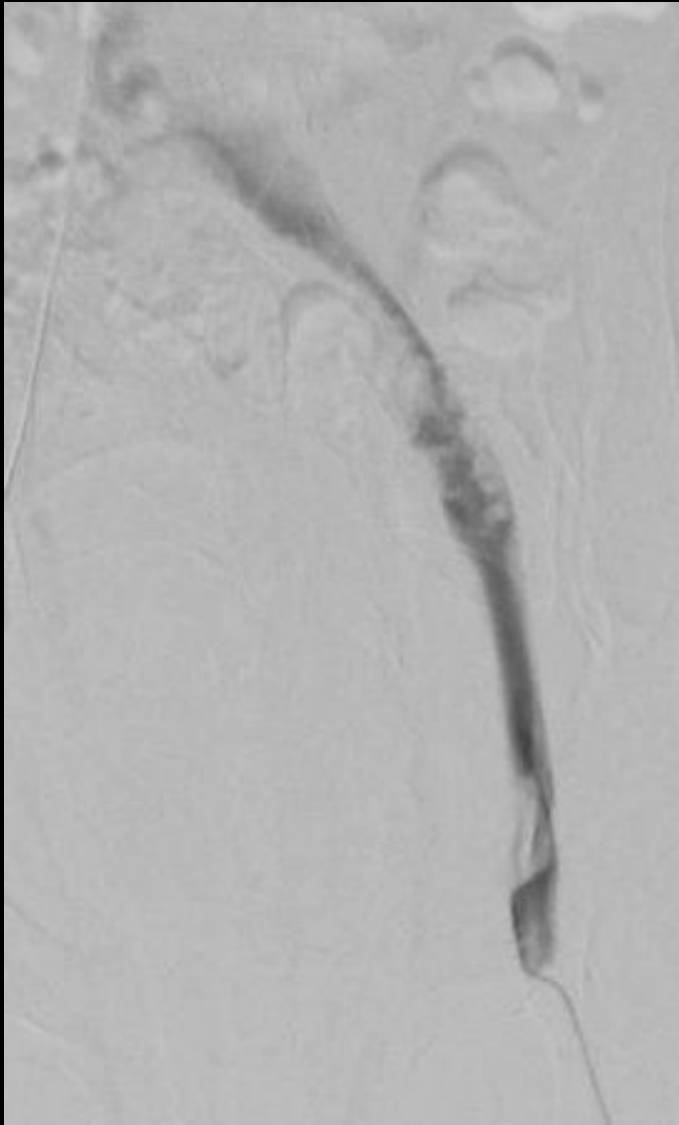


Post Stent



UNIVERSITY OF
CALGARY

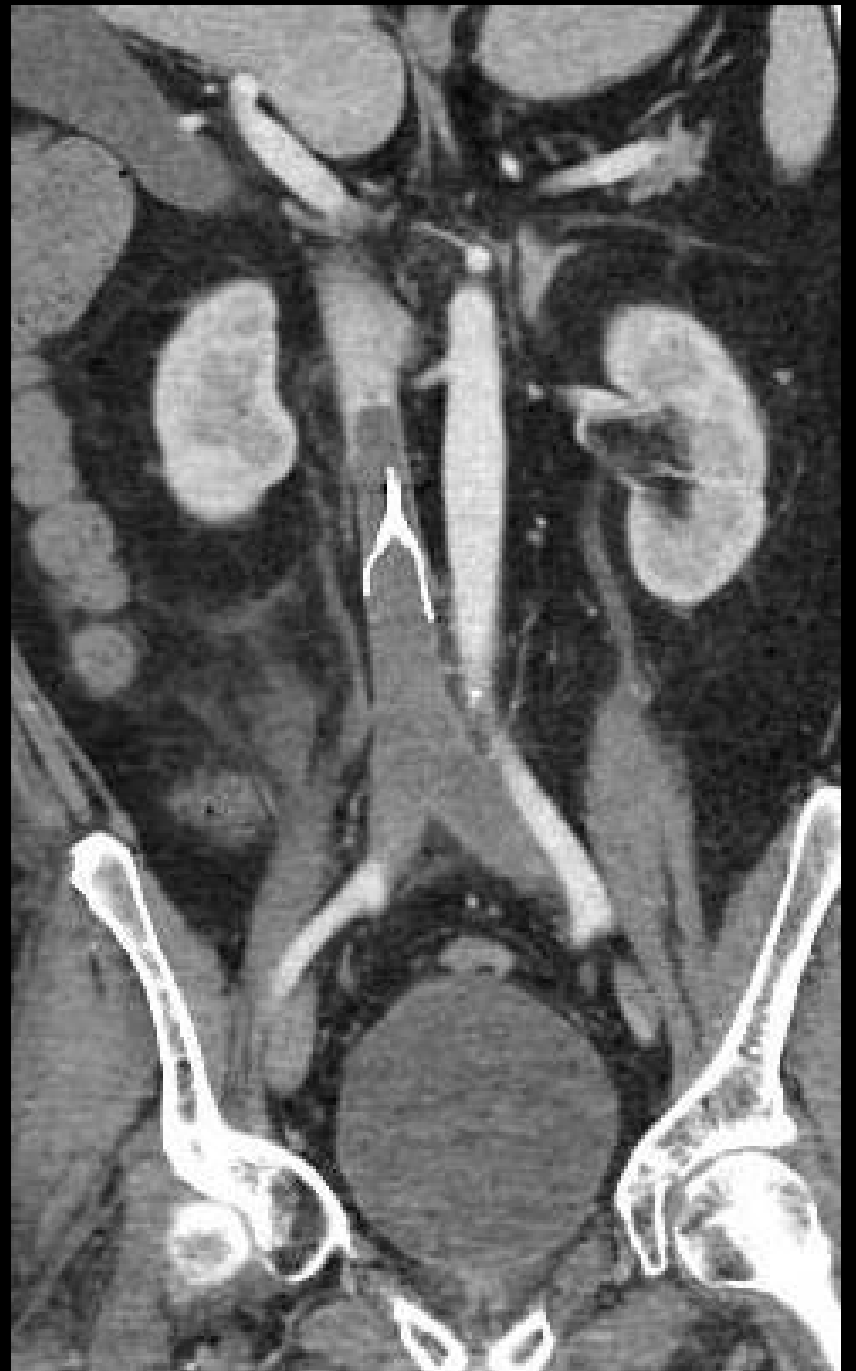
Post Stent



Before Iliocaval Thrombus



Iliocaval Thrombus



1 Year Follow Up



1 Year Follow Up

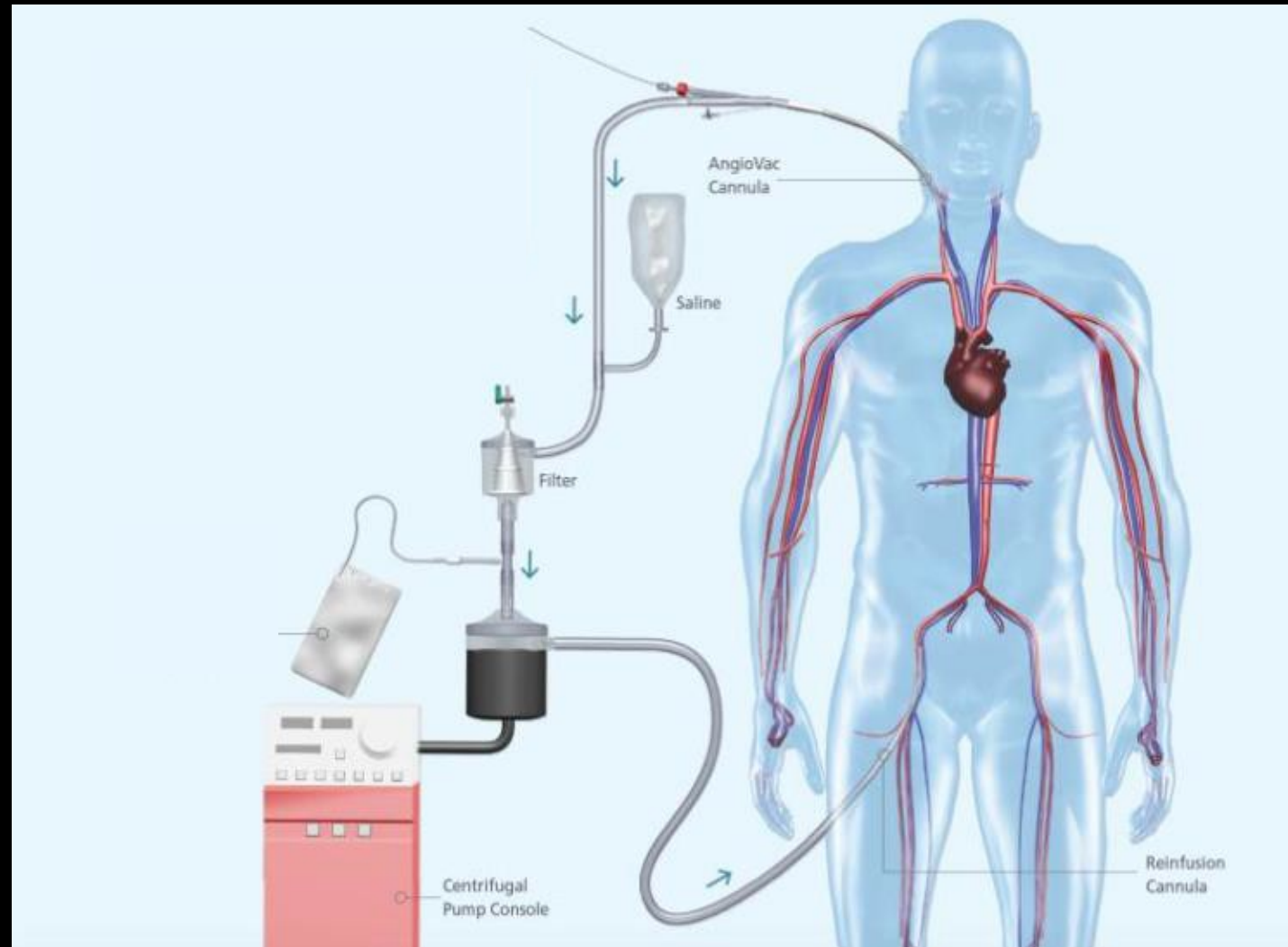




Pre-Event

1 Year Follow Up

Venovenous Bypass



Venovenous Bypass

- Typical set up involves blood leaving via internal jugular vein and returning via common iliac vein
 - Due to extensive clot we used bilateral IJ access
- Allows for safe clot break up while minimizing risk of pulmonary embolus

Venovenous Bypass

- Main uses:
 - Ileocaval clot removal
 - Atrial thrombus removal
 - Pulmonary embolus
 - Not well investigated
 - Difficult due to limited cannula maneuverability

Clot collected by filter

