

Medtronic



# Save the date

**21 & 22 MAY 2026**  
(overnight included - Mdeon requested)

**Invitation to the Medtronic  
Embolization Workshop**

Limited places available

Date: 21 & 22 May 2026

Time: 00:00 - 00:00

Location: ORSI (Proefhoevestraat 12, 9090 Merelbeke-Melle)

Medtronic



## Advanced Embolization Workshop

DAY 1

### Agenda - 21 MAY

| TIME          | TOPIC                                                                                                                                          | MODERATOR                           |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 11:00 - 11:30 | Arrival & badge reception                                                                                                                      |                                     |
| 12:00 - 13:00 | Networking lunch                                                                                                                               |                                     |
| 13:00 - 13:15 | Welcome & workshop introduction                                                                                                                | Medtronic                           |
| 13:15 - 13:45 | Course objectives and program & faculty introduction                                                                                           | Medtronic                           |
| 13:45 - 14:45 | Embolization solutions in practice:<br>Medtronic's embolic technologies, indications and use                                                   | Dr. Lely                            |
| 14:45 - 15:00 | Embolization 101:<br>From imaging to agent selection                                                                                           |                                     |
| 15:00 - 15:30 | Coffee break                                                                                                                                   |                                     |
| 15:30 - 16:30 | Pre-EVAR Internal Iliac Artery embolization:<br>Techniques, pitfalls, and case-based decision-making                                           | Dr. Kerzmann                        |
| 16:30 - 17:00 | Endoleak management after EVAR:<br>Prevention, treatment and complex case discussion                                                           | Dr. Van den Eynde<br>& Dr. Kerzmann |
| 17:00 - 17:30 | Endovascular management of isolated Iliac Artery<br>Aneurysms (IAA) and Visceral Artery Aneurysms (VAA)                                        | Dr. Maene                           |
| 17:30 - 18:30 | Latrogenic and postoperative bleeding complications                                                                                            |                                     |
| 18:30 - 19:00 | Multidisciplinary discussion of upcoming complex embolization cases                                                                            | Dr. Maene                           |
| 19:00 - 19:30 | Treatment strategy, embolic selection, and procedural planning                                                                                 |                                     |
| 19:30 - 22:00 | Transfer to "Pillows" hotel (shuttle bus)<br>Meet in the hotel lobby & walk together to the restaurant<br>Diner at Domestica restaurant, Ghent |                                     |

\*\*12 spots available    \*\*Accreditation requested    \*\*\* Mdeon approval requested  
Please note that the agenda may be subject to change.

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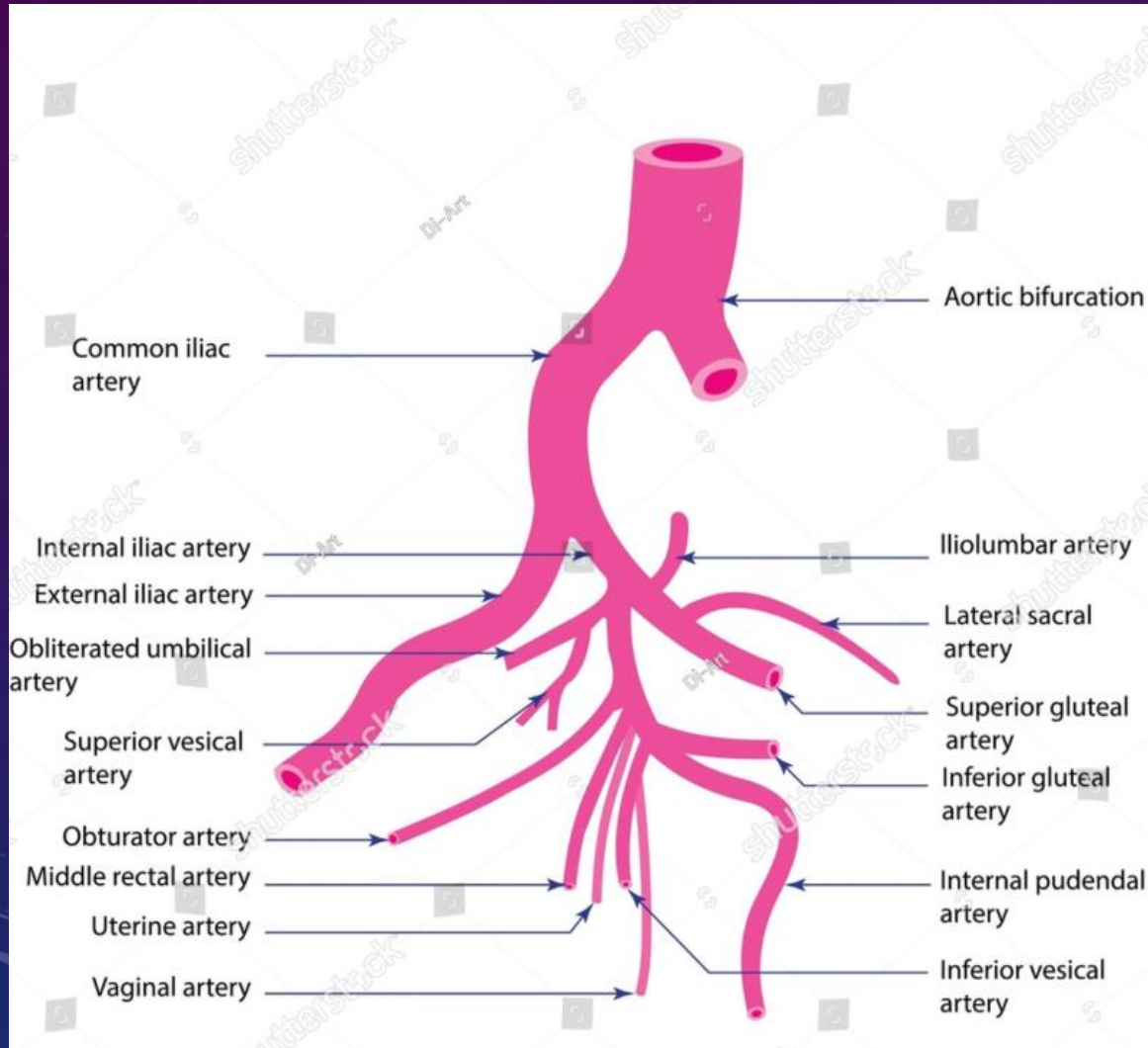
# PRE-EVAR ILIAC ARTERY EMBOLIZATION

ARNAUD KERZMANN, MD, FEBVS



ORSI, May 21-22, 2026

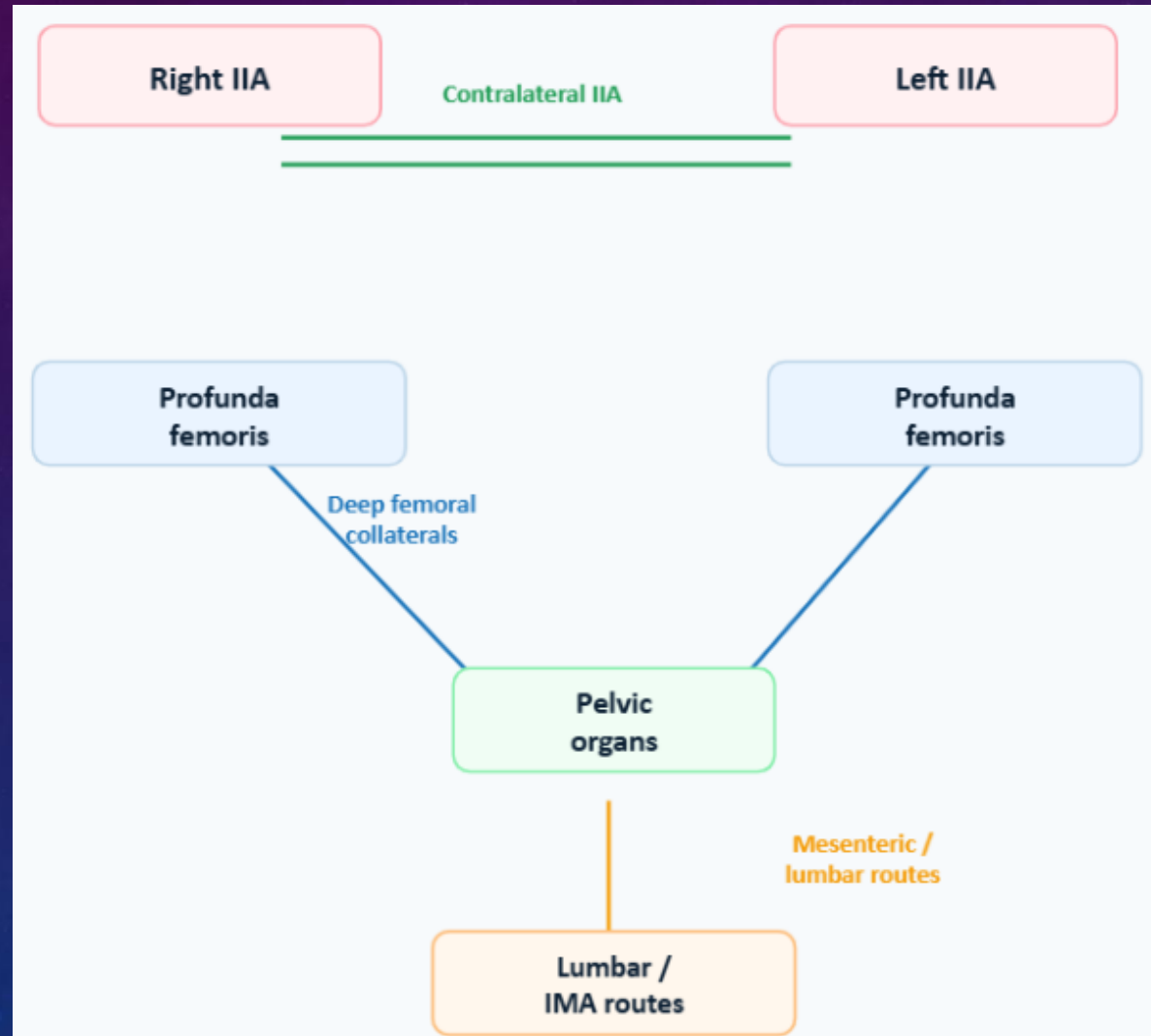
# ILIAC ANATOMY



the internal iliac artery supports :

- gluteal muscles
- rectum and colon
- genitourinary organs
- spinal collateral network

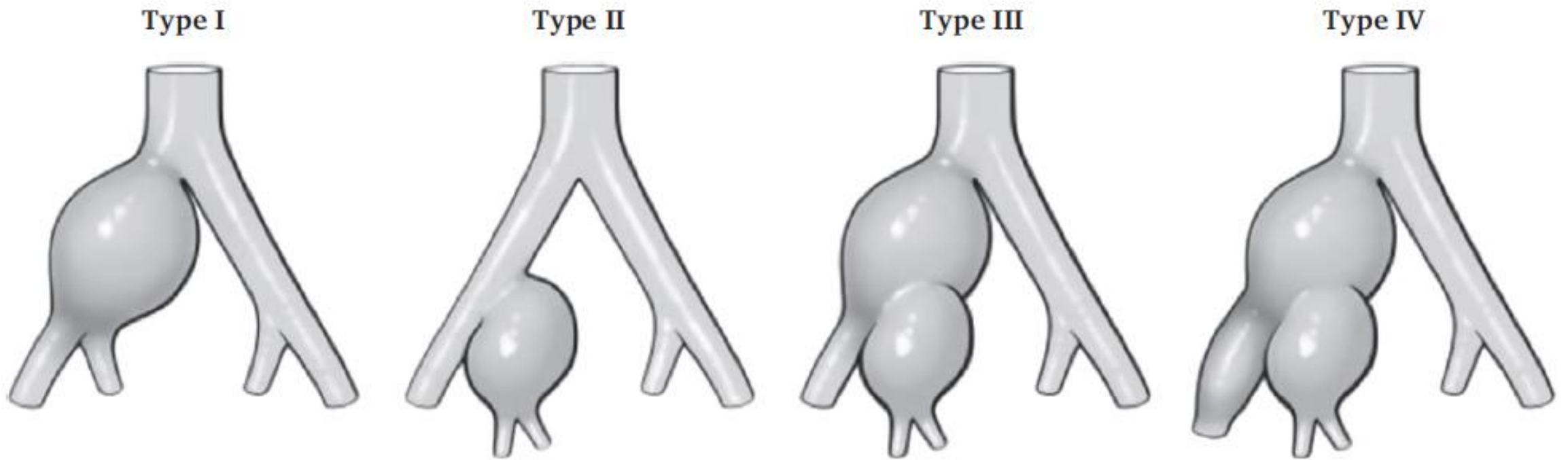
# ILIAC ANATOMY



# ILIAC ANEURYSMS

- definition of iliac artery aneurysm : dilation of the vessel to more than 1.5 times its normal diameter
- up to 40% of iliac aneurysms occur in association with aortic aneurysms
- less than 2% of aorto-iliac aneurysms are isolated iliac aneurysms
- they involve either the common or internal iliac arteries
- external iliac artery aneurysms are extremely rare

# ILIAC ANEURYSMS



**Figure 11.** Isolated iliac artery aneurysm classification by Reber *et al.*<sup>1069</sup> Permission to reproduce granted from Springer Nature.

# TREATMENT INDICATION

## Recommendation 135

Changed

Patients with an iliac artery aneurysm (common iliac artery, internal iliac artery, and external iliac artery, or combination thereof) should be considered for elective repair at a diameter of  $\geq 40$  mm.

| Class | Level | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ToE |
|-------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Ila   | C     | Charisis <i>et al.</i> (2021), <sup>826</sup><br>Laine <i>et al.</i> (2017), <sup>1065</sup><br>Krupski <i>et al.</i> (1998), <sup>1066</sup><br>Chaer <i>et al.</i> (2008), <sup>1072</sup><br>Steenberge <i>et al.</i> (2022), <sup>1077</sup><br>Huang <i>et al.</i> (2008), <sup>1079</sup><br>Jalalzadeh <i>et al.</i> (2020), <sup>1081</sup><br>Fossaceca <i>et al.</i> (2015), <sup>1083</sup><br>Kasirajan <i>et al.</i> (1998), <sup>1084</sup><br>Kobe <i>et al.</i> (2018) <sup>1085</sup> |     |

# TREATMENT COMPLICATIONS

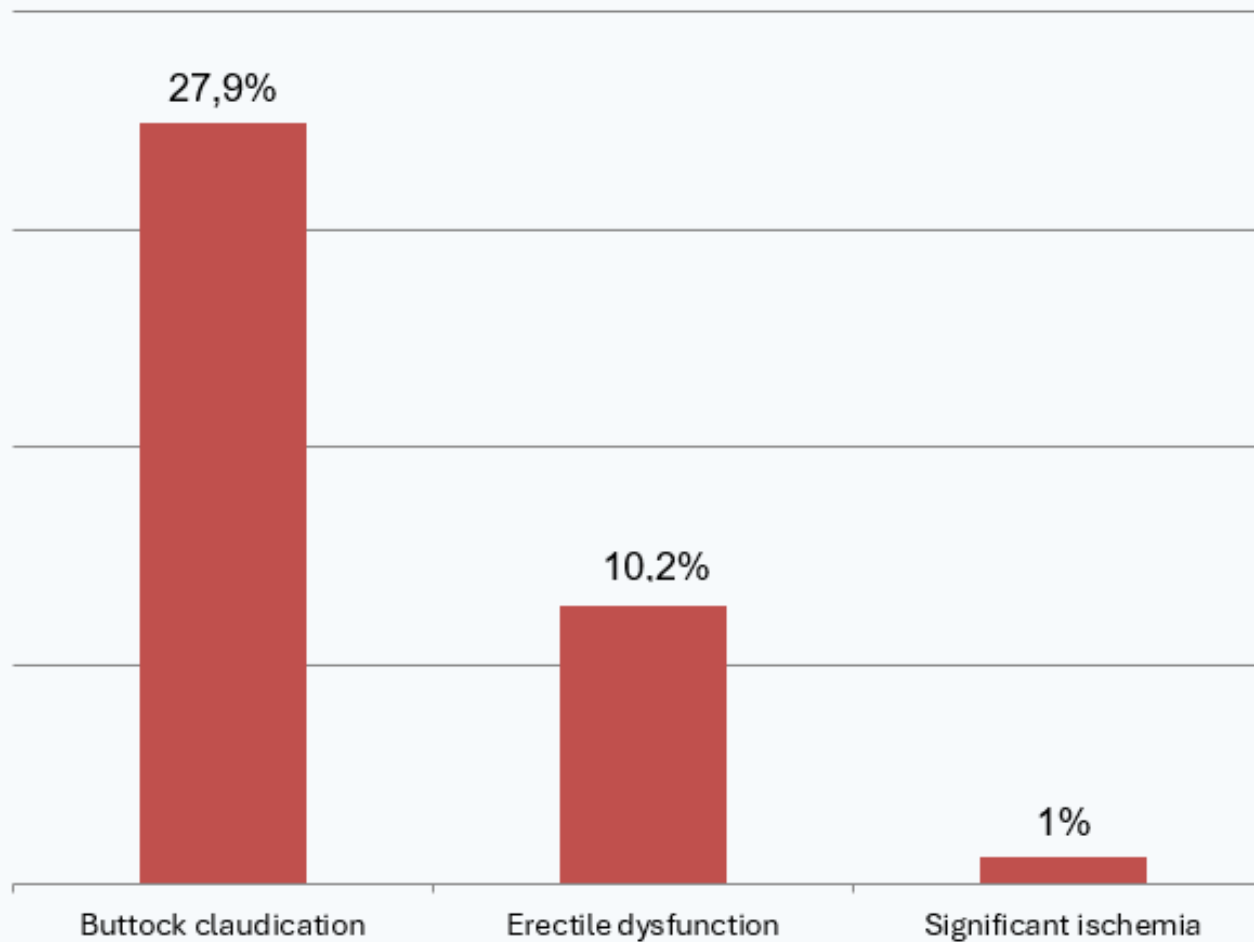
- buttock claudication → 28%
- erectile dysfunction
- bowel ischemia
- pelvic necrosis
- spinal cord ischemia



these complications are more frequent with bilateral internal iliac arteries occlusion

# TREATMENT COMPLICATIONS

Reported after IIA exclusion before/with EVAR



# PATIENT SELECTION: WHO IS AT HIGHER ISCHEMIC RISK?

- contralateral IIA occlusion or severe stenosis
  - previous pelvic irradiation or major pelvic surgery
  - occlusive disease of deep femoral artery
  - poor mesenteric collateral reserve or prior colectomy
  - extensive aortic coverage / thoracoabdominal repair context
  - bilateral IIA interruption planned
  - male patient concerned about sexual function
  - frailty: low reserve to tolerate pelvic ischemia
- high-risk profile = preserve, stage, or reconsider the treatment strategy

# TREATMENT COMPLICATIONS

## Recommendation 137

Unchanged

Preserving blood flow to at least one internal iliac artery during open surgical and endovascular repair of iliac artery aneurysms is recommended.

| Class | Level | References                                                                                           | ToE |
|-------|-------|------------------------------------------------------------------------------------------------------|-----|
| I     | C     | Bosanquet <i>et al.</i> (2017), <sup>782</sup><br>Jean-Baptiste <i>et al.</i> (2014) <sup>1100</sup> |     |

# ENDOVASCULAR TREATMENT

- embolization of the internal iliac artery and stentgraft coverage extending from the common to the external iliac artery
- infrarenal aorta and contralateral iliac artery endovascular repair often necessary to obtain a proper proximal seal
- side branch techniques preserving internal iliac artery patency = IBDs

# ENDOVASCULAR TREATMENT : IBD

- most common anatomical factor limiting the use of IBDs : aneurysmal internal iliac aneurysm
- anatomy
- fitness
- patient's wishes

## Recommendation 136

Changed

The choice of surgical technique for iliac artery aneurysm repair should be considered based on individual patient and lesion characteristics.

| Class | Level | References                                                                                                                                                                                                                                       | ToE |
|-------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Ila   | B     | Buck <i>et al.</i> (2015), <sup>1086</sup><br>Yang <i>et al.</i> (2020), <sup>1089</sup><br>Illuminati <i>et al.</i> (2009), <sup>1090</sup><br>Giaquinta <i>et al.</i> (2018), <sup>1091</sup><br>Kouvelos <i>et al.</i> (2016) <sup>1093</sup> |     |

# ILIAC EMBOLIZATION

- unsuitable anatomy
- unfit patient
- Locations :
  - aorto-mono-iliac repair
  - internal iliac artery
  - internal iliac artery side branches

# EMBOLIZATION TYPES



## coils

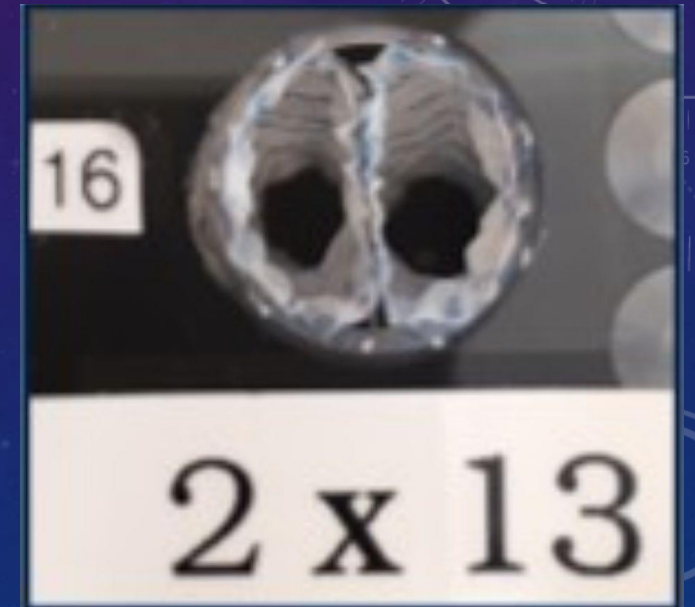
- flexible
- works in smaller artery
- tortuous anatomy
- detachable or pushable
- risk of distal branch packing

## plugs

- fast
- controlled proximal occlusion
- useful for larger IIA main stems
- normal or micro
- need of landing length and oversizing

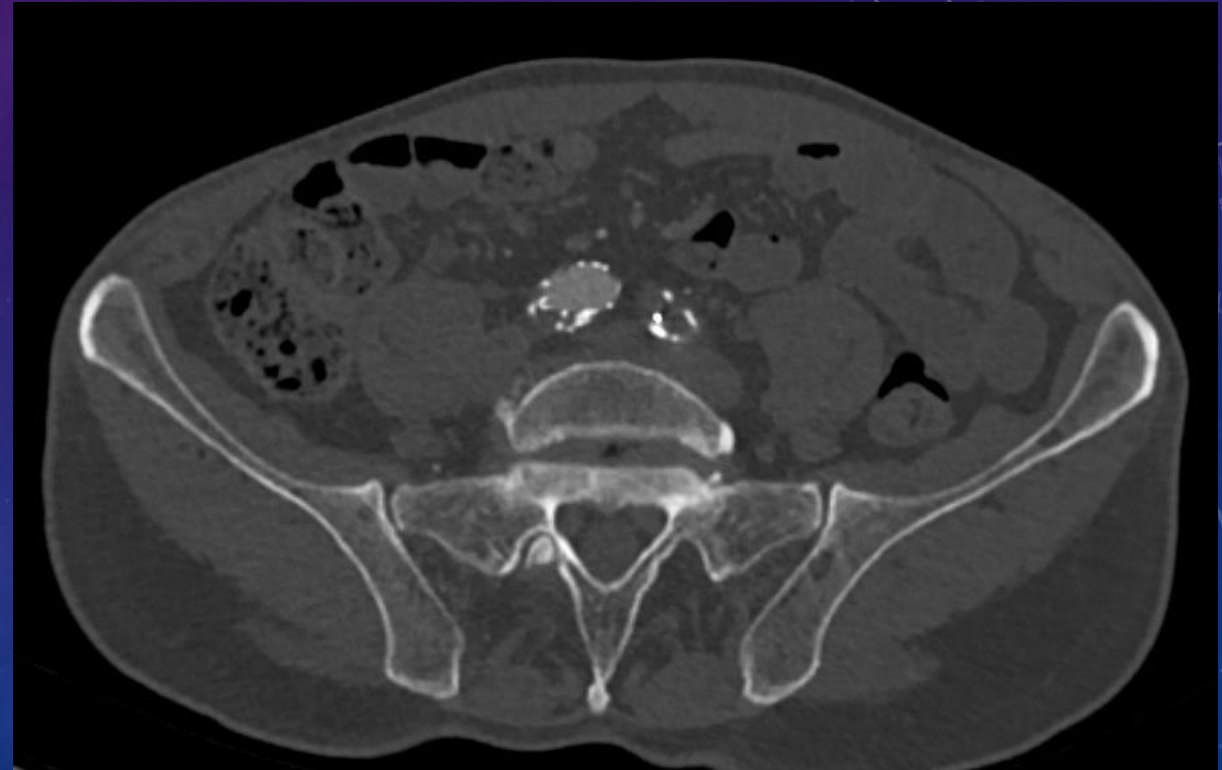
# AORTO-MONO-ILIAC REPAIR

- EVAR with aortic bifurcation too narrow
  - embolization of the contralateral common iliac artery
- long sheath, plug adapted to the vessel diameter and protected deployment



# AORTO-MONO-ILIAC REPAIR

plug



# INTERNAL ILIAC ARTERY

- too short common iliac artery
- too narrow iliac bifurcation
- absence of distal sealing zone into the internal iliac artery (internal iliac artery aneurysm)
- unfit patient who doesn't walk
- in cases of bilateral internal iliac artery occlusion, stage the treatment to allow collateral development

# INTERNAL ILIAC ARTERY : STAGED VS SAME-SESSION EMBOLIZATION

## Same-session

- one anesthetic / access episode
- lower logistical burden
- useful in urgent repair
- no interval rupture risk from delayed aneurysm exclusion
- more expensive

## staged

- may allow collateral development
- may reduce severity of bilateral pelvic ischemia
- useful when bilateral IIA interruption is unavoidable
- interval aneurysm rupture risk and second procedure burden

# INTERNAL ILIAC ARTERY

- ipsi- or contralateral long sheath
- microplug, plug or coils
- adapted to the vessel diameter and length
- as proximal as achievable

## Recommendation 138

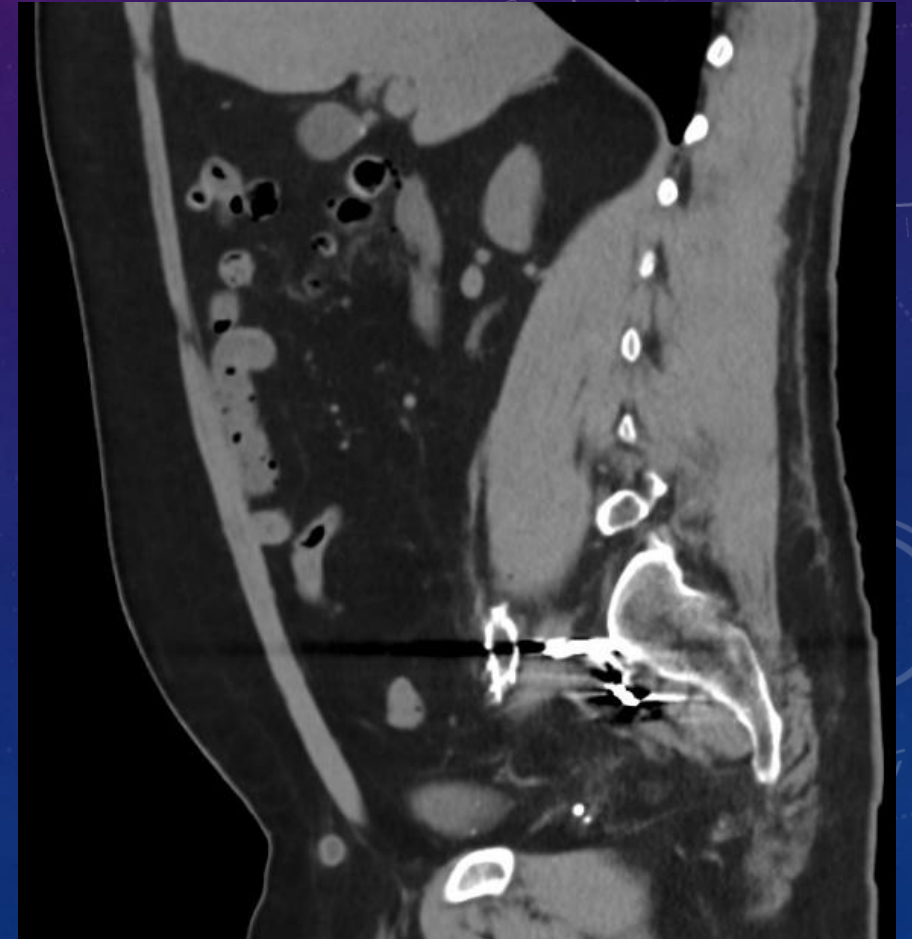
Unchanged

For patients undergoing common iliac artery aneurysm repair in whom internal iliac artery embolisation or ligation is necessary, occlusion of the proximal main stem of the vessel is recommended if technically feasible, to preserve the distal collateral circulation to the pelvis.

| Class | Level | References                                                                                           | ToE |
|-------|-------|------------------------------------------------------------------------------------------------------|-----|
| I     | C     | Jean-Baptiste <i>et al.</i> (2014), <sup>1100</sup><br>Bosanquet <i>et al.</i> (2017) <sup>782</sup> |     |

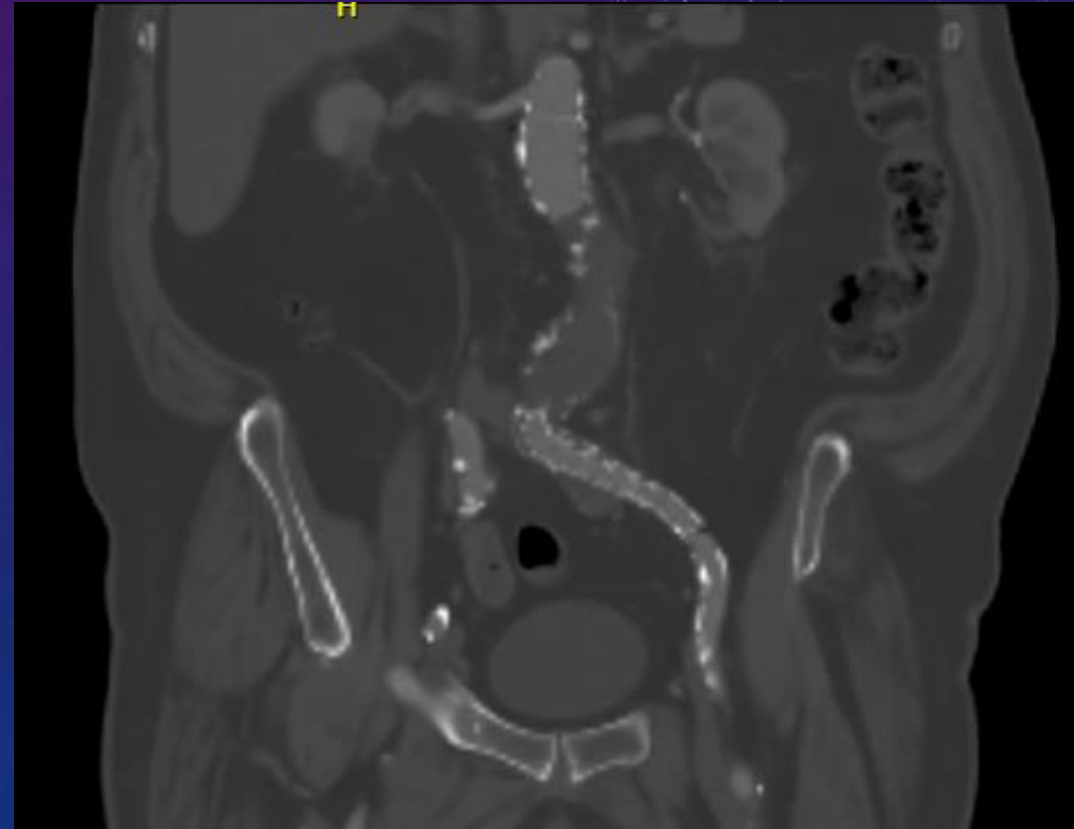
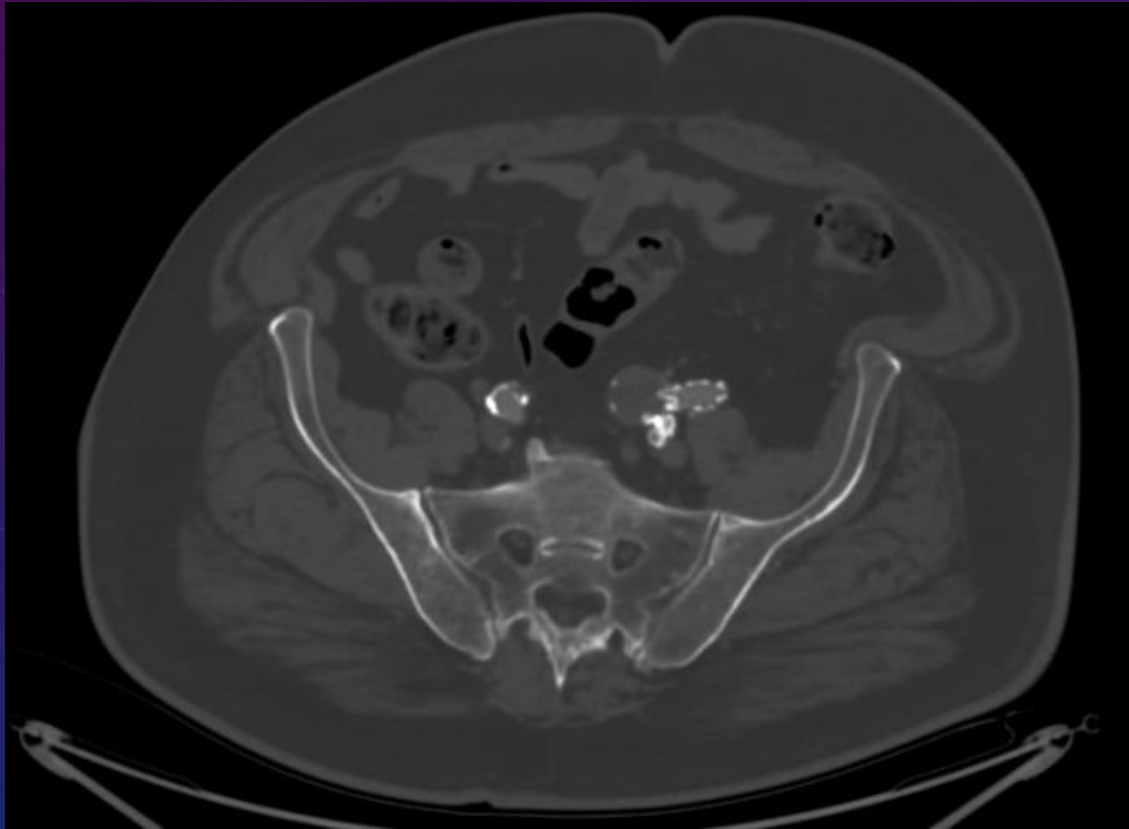
# INTERNAL ILIAC ARTERY

coils



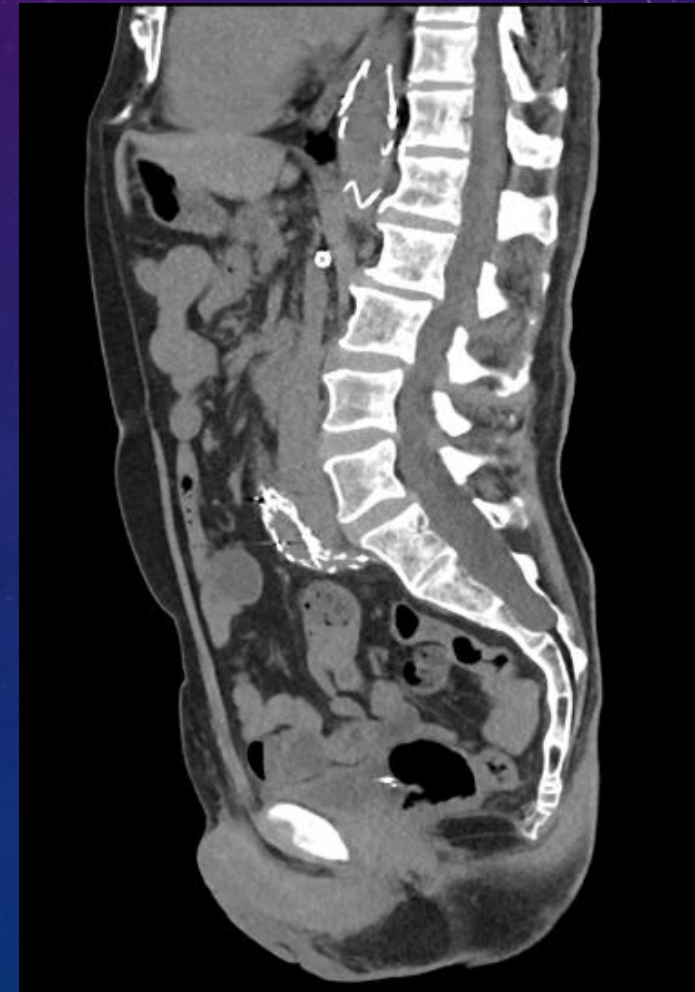
# INTERNAL ILIAC ARTERY

plug

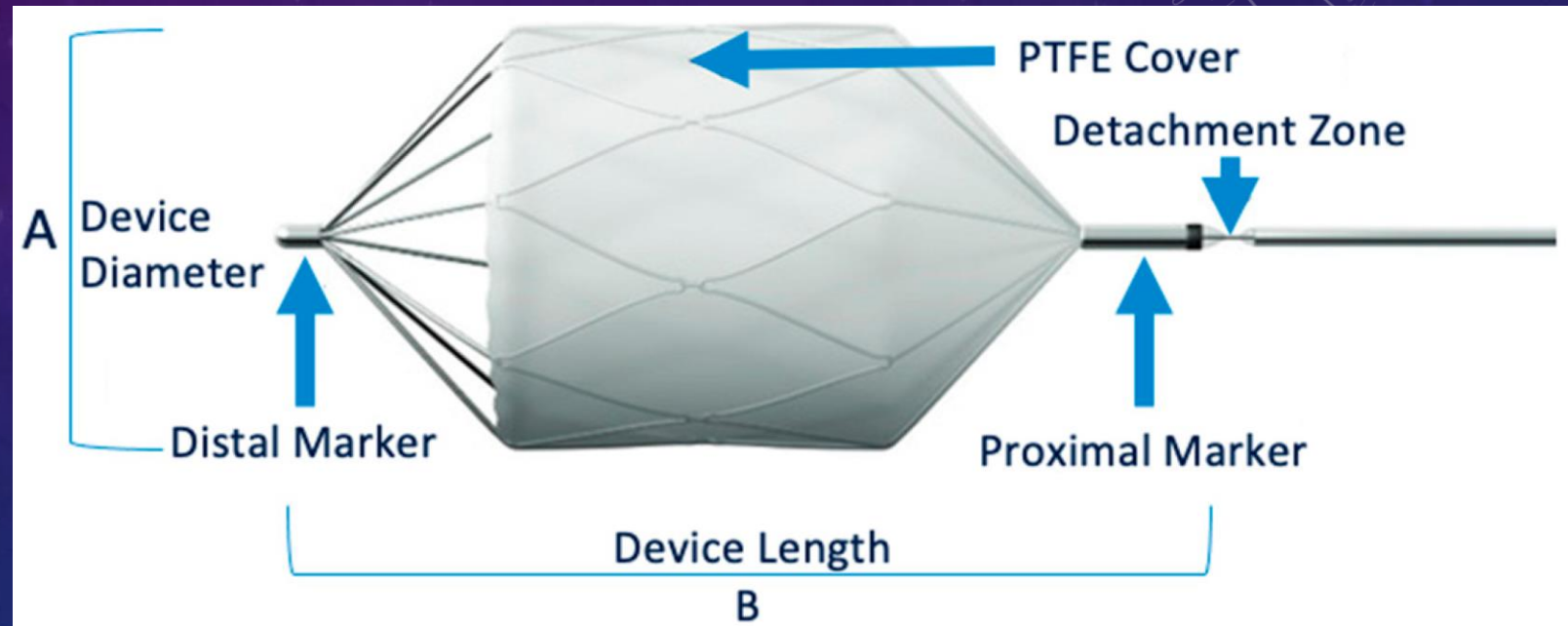
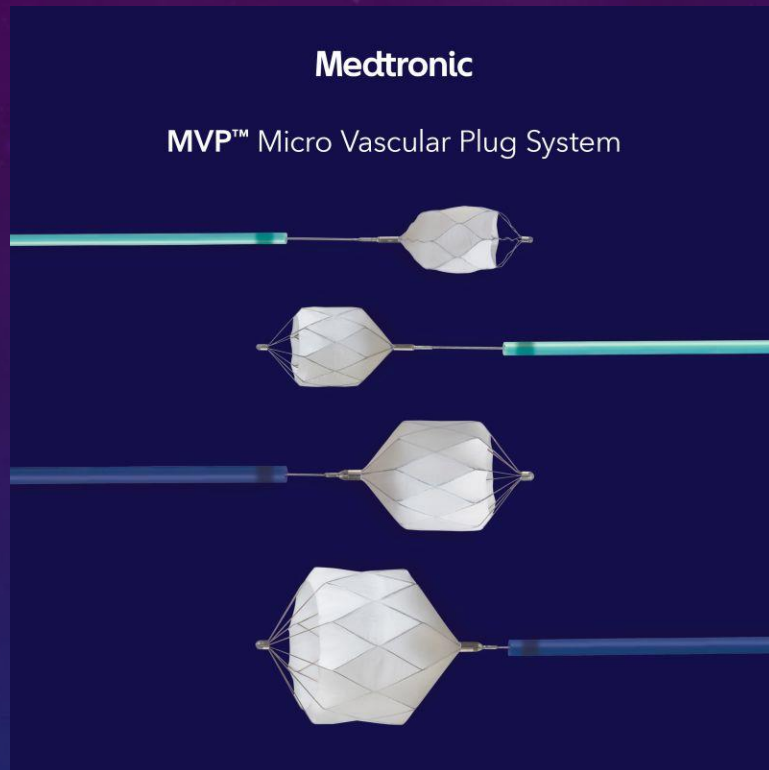


# INTERNAL ILIAC ARTERY

microplug



# MICROPLUGS



# MICROPLUGS



| Catalog Number | Target Vessel Diameter (mm) | Unconstrained Length (mm) | Maximum Constrained Length (mm) | Unconstrained Device Diameter (mm) | Minimum Recommended Delivery Catheter Inner Diameter |
|----------------|-----------------------------|---------------------------|---------------------------------|------------------------------------|------------------------------------------------------|
| MVP-3Q         | 1.5 – 3.0                   | 12                        | 15                              | 5.3                                | 0.021 inches                                         |
| MVP-5Q         | 3.0 – 5.0                   | 12                        | 16                              | 6.5                                | 0.027 inches                                         |
| MVP-7Q         | 5.0 – 7.0                   | 16                        | 18.4                            | 9.2                                | 4-French                                             |
| MVP-9Q         | 7.0 – 9.0                   | 18                        | 23.4                            | 13.0                               | 5-French                                             |

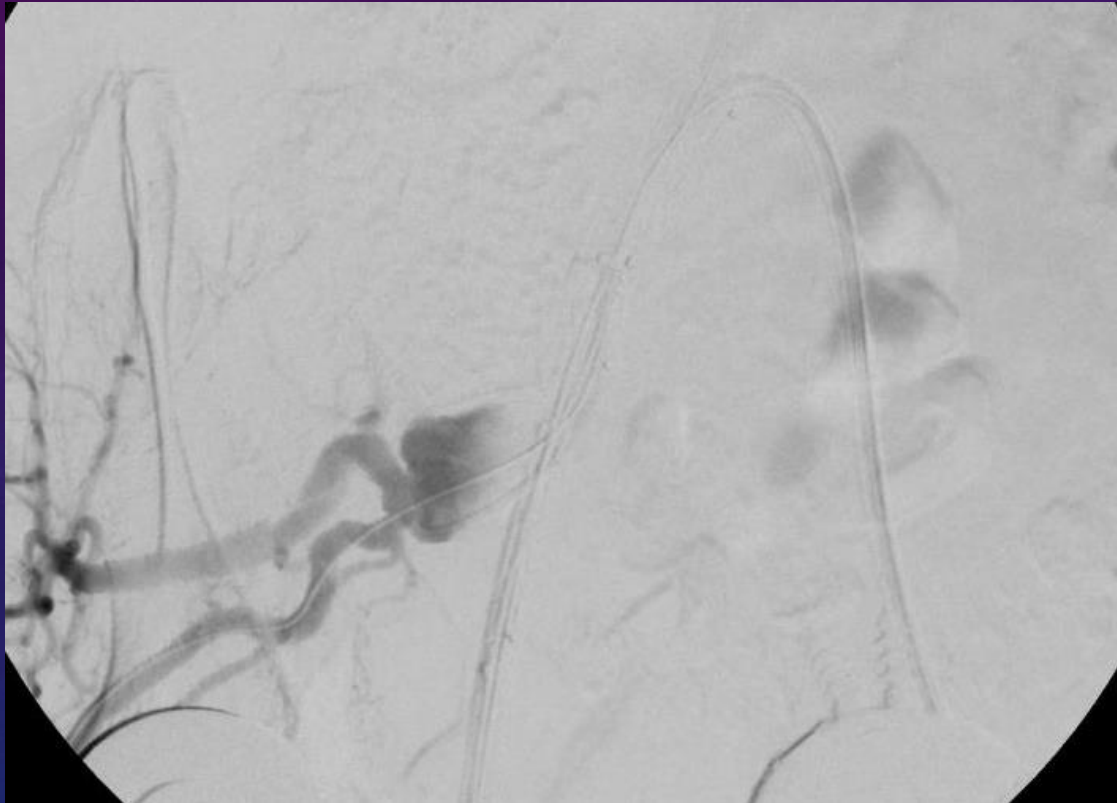
Listing of the characteristics of the four available sizes of the MVP.

# INTERNAL ILIAC ARTERY SIDE BRANCHES

- to get a better distal sealing zone
- to reduce the risk of type 2 endoleak
- to avoid the potential complications of internal iliac artery coverage
- ipsi- or contralateral long sheath into the internal iliac artery
- coils or microplug

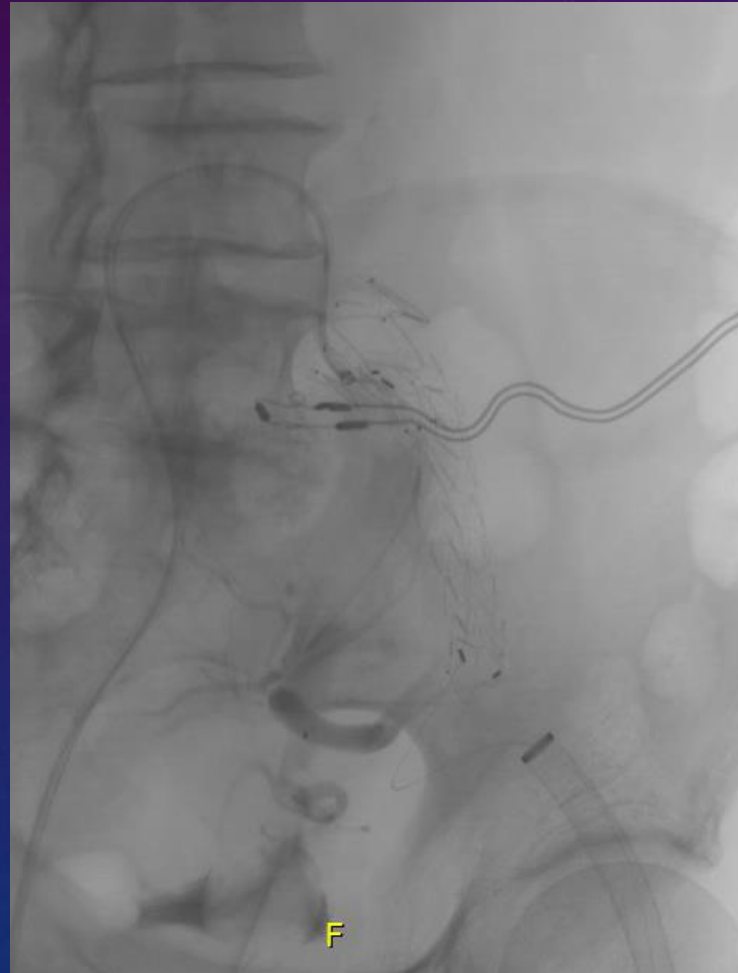
# INTERNAL ILIAC ARTERY SIDE BRANCHES

coils



# INTERNAL ILIAC ARTERY SIDE BRANCHES

microplug



# CONCLUSIONS

- planning and dedicated material are mandatory
- preserve pelvic perfusion whenever feasible
- when IIA sacrifice is necessary, occlude the proximal main stem
- avoid bilateral IIA interruption unless no safe alternative exists

# CONCLUSIONS

- common iliac artery → plug
- internal iliac artery → microplug
- internal iliac artery side branch → (detachable) coils

***Just do it .... yourself***