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Universitätsklinikum
des Saarlandes

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Prostata-EMBOLISATION

– Technik und Fallstricke –

Patientenselektion

LUTS (lower urinary tract symptoms)

- *Obstruktive Blasenentleerungsstörung:*
 - ✓ *Symptomatische*
 - ✓ *Benigne Prostatahyperplasie BPH*
- ✓ *Ausschluss Prostatakarzinom*

Klinische Zielgrößen

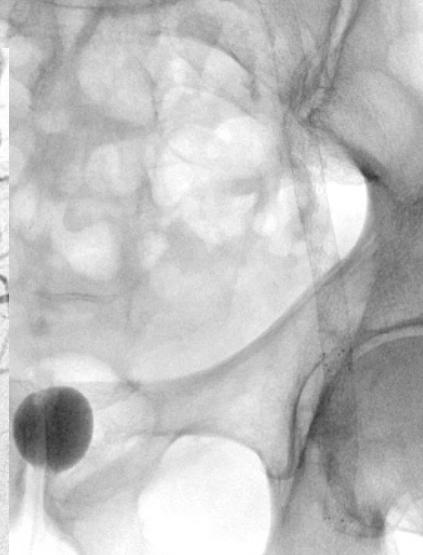
- *IPSS (International Prostate Symptom Score)*
- *Lebensqualität (Quality of Life QoL)*
- *IIEF-5 (International Index of Erectile Function)*
- *Restharn*
- *Uroflowmetrie, Prostatavolumen, PSA*

Vorbereitung

- *Fachurologische Untersuchung*
- *Sonographie/TRUS*
- *MRT Prostata (alternativ CT)*
- *Aufklärung! (Fehlembolisation, Zeit)*

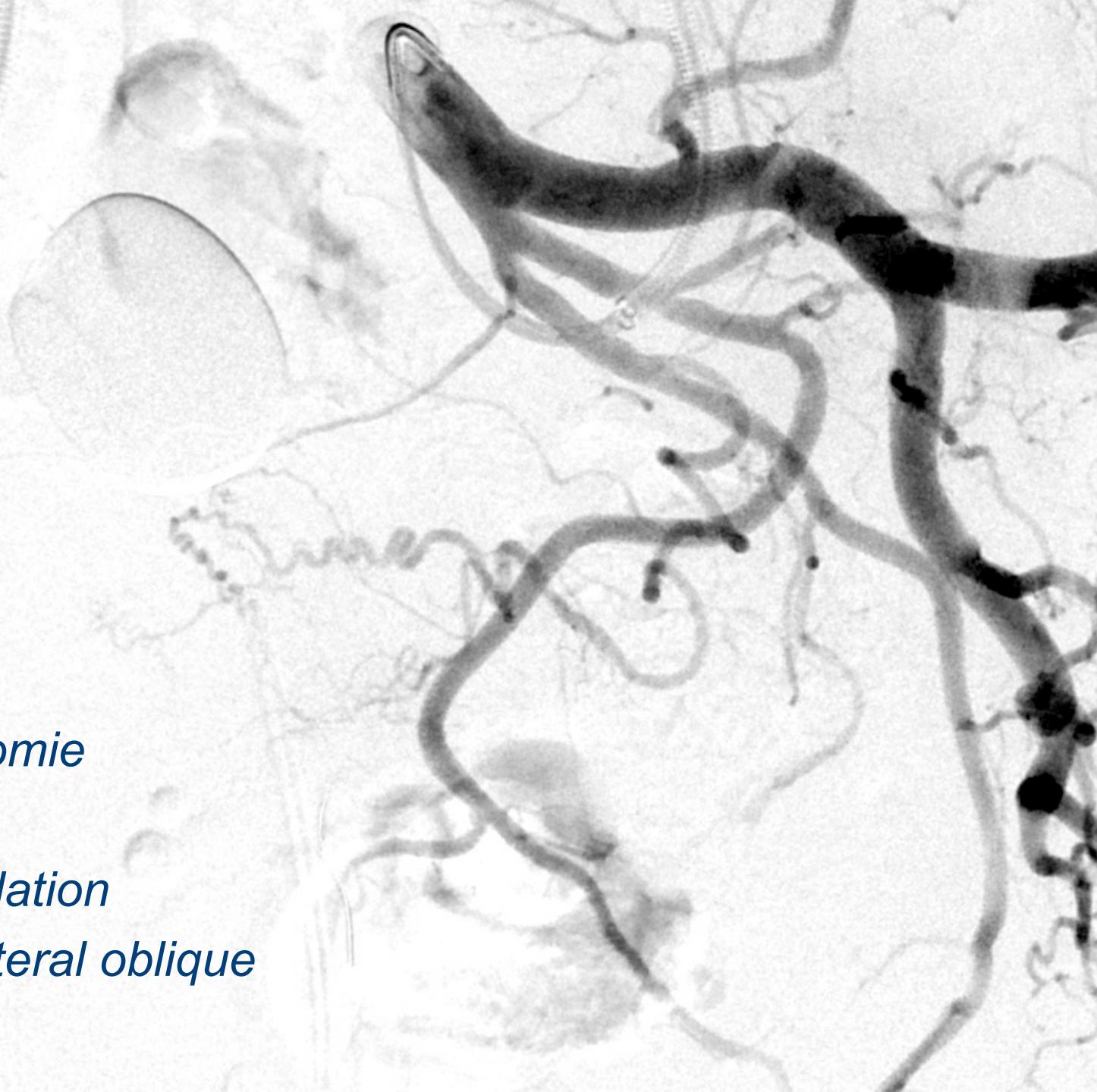
Embolisation

- *Blasenkatheter (14F) mit Kontrastmittel*
- *Koaxial-Kathetersystem
(5F Schleuse)*
Führ-Katheter 4/5F (ACN, Vertebralis, Berenstein, VanSchie 3, ...)
Mikrokatheter 2(2,4)F (Terumo Progreat + GT, Merit Sumitomo SwiftNinja)
- *Embolisationsmaterial*
- *Dyna-CT (optional)*
- *Geduld & Zeit!*

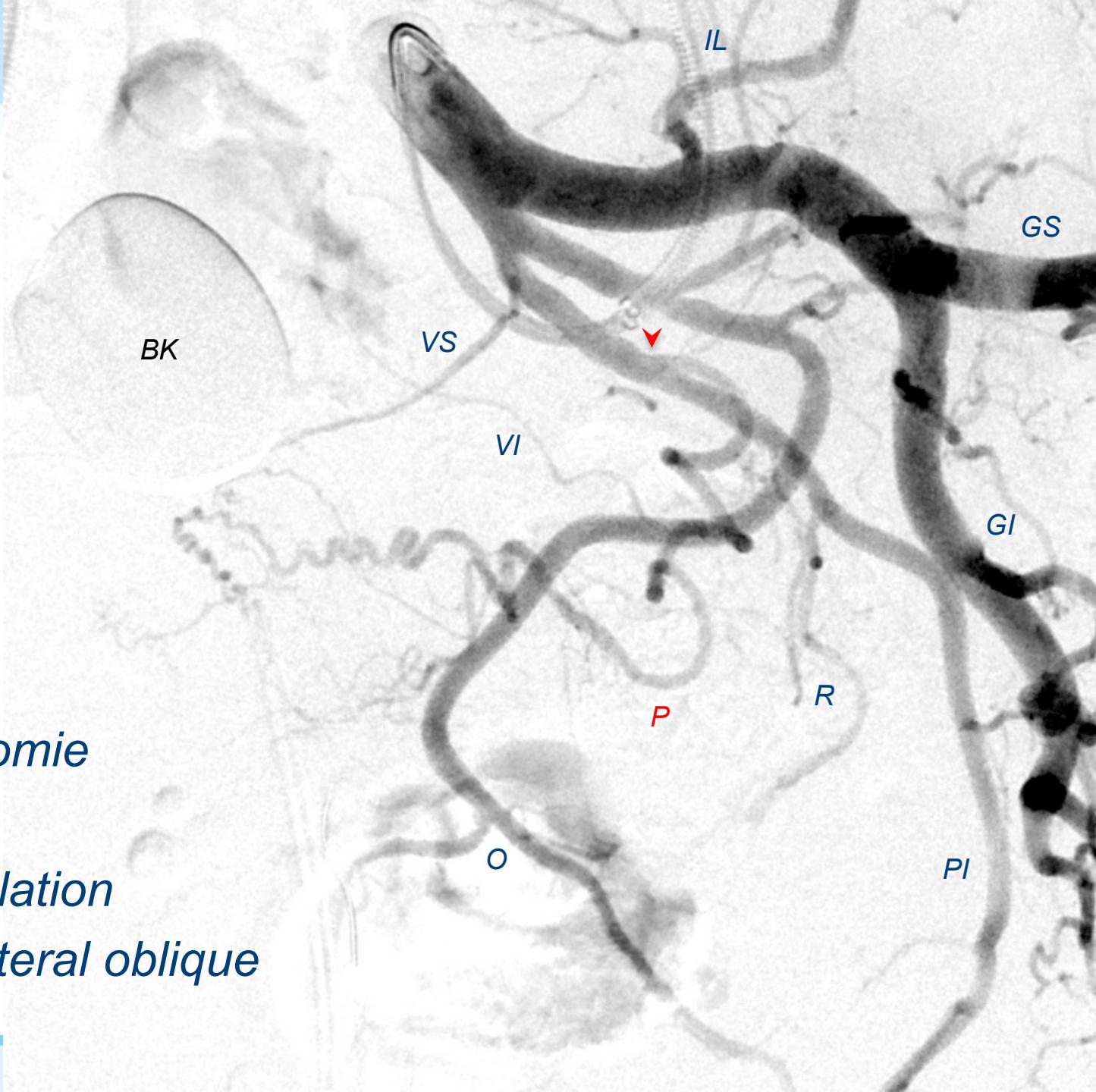


Anatomie

*Angulation
ipsilateral oblique*



LAO 35°



Anatomie

Angulation
ipsilateral oblique

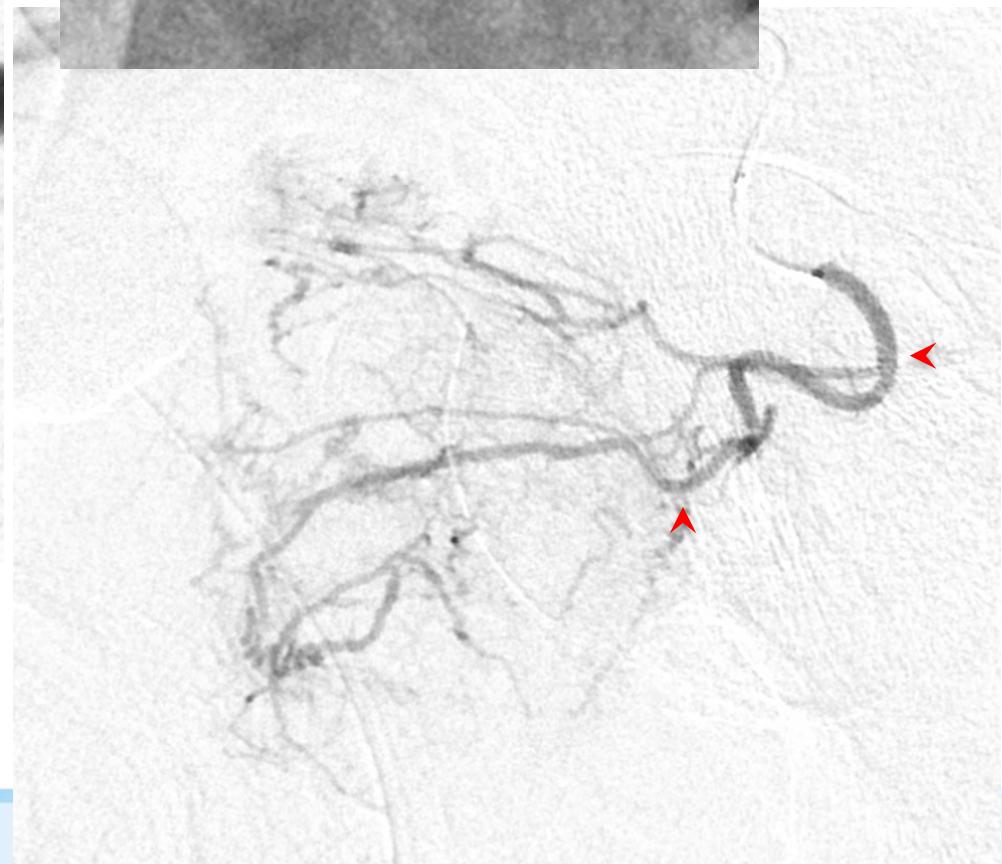
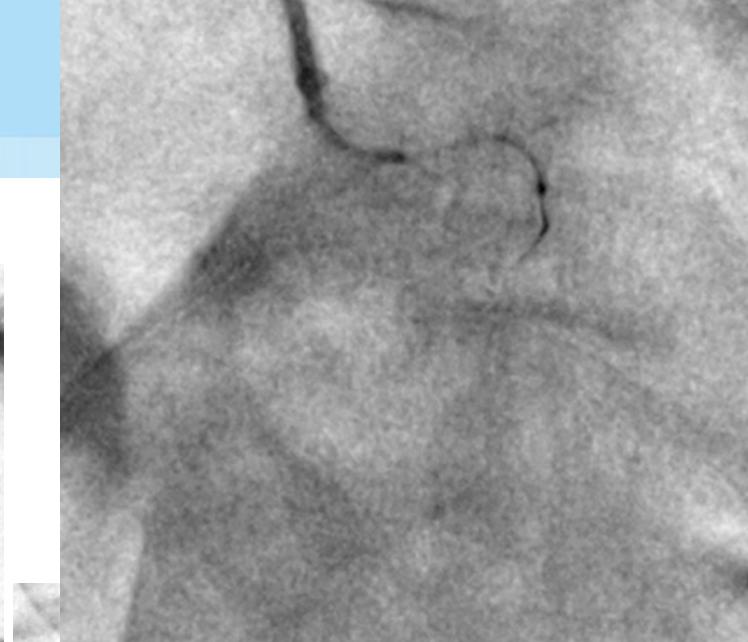
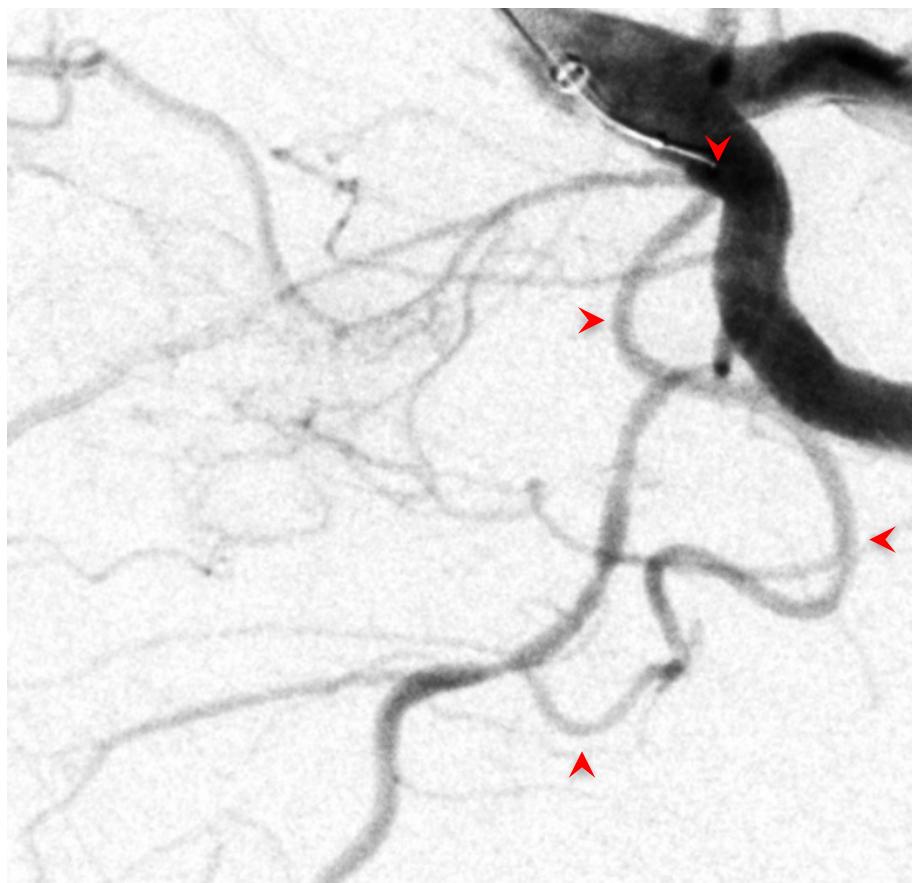
LAO 35°

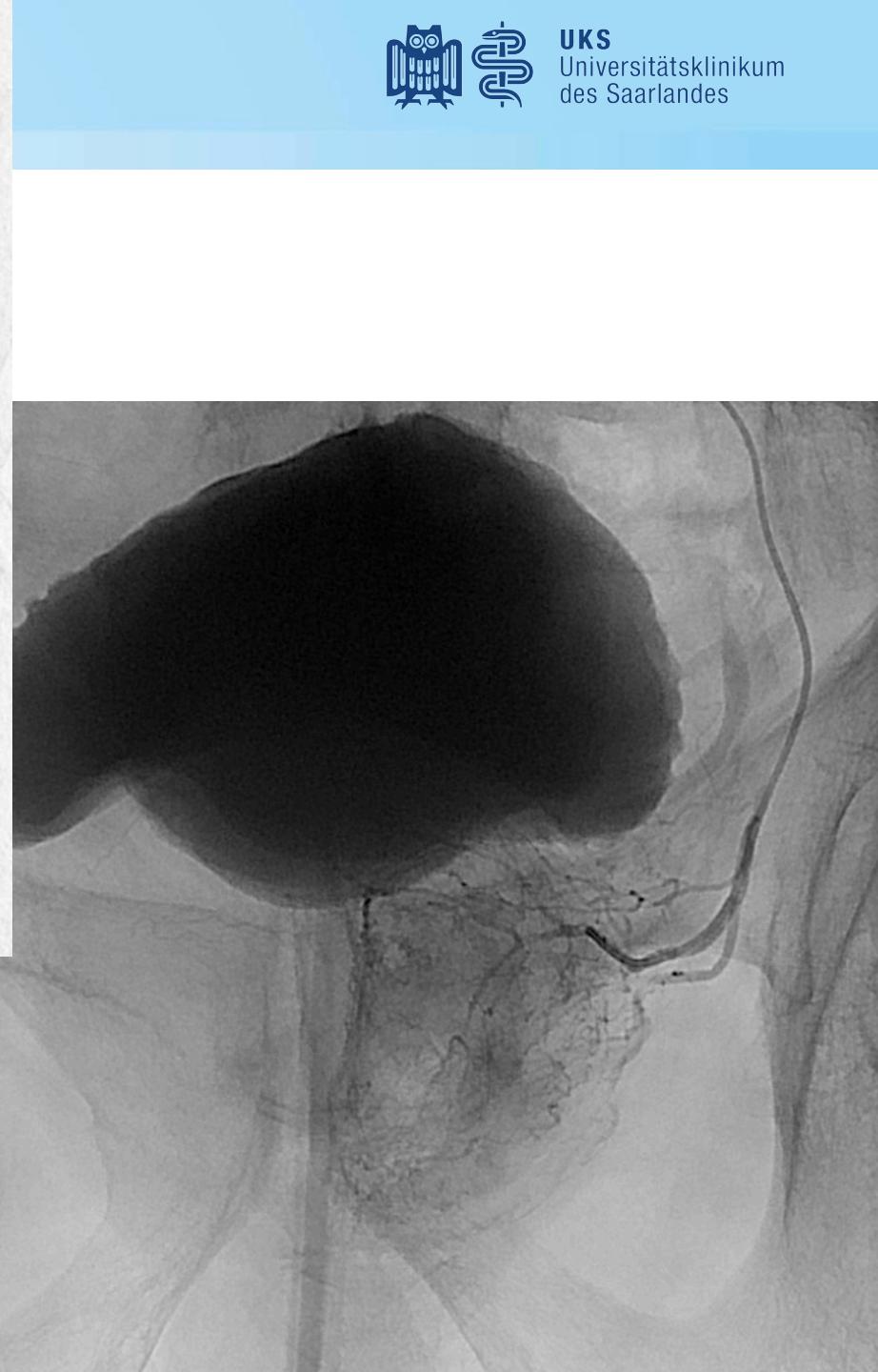
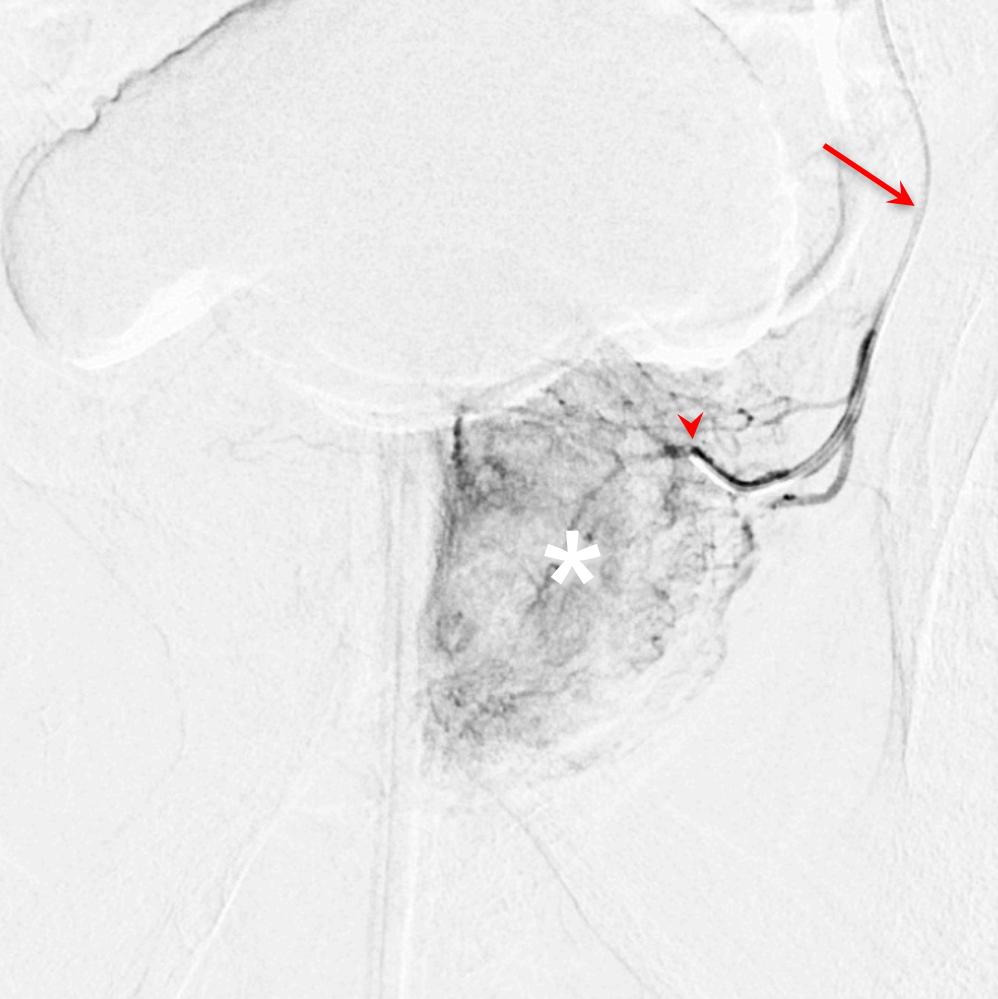


Angulation ipsilateral oblique RAO 35°



RAO 35°





ZWEITE EBENE!

Angulation kudo-kranial ca. 10°



Angulation kaudo-kranial -10°



1. Sondierung



3. Embolisation



2. selektiv



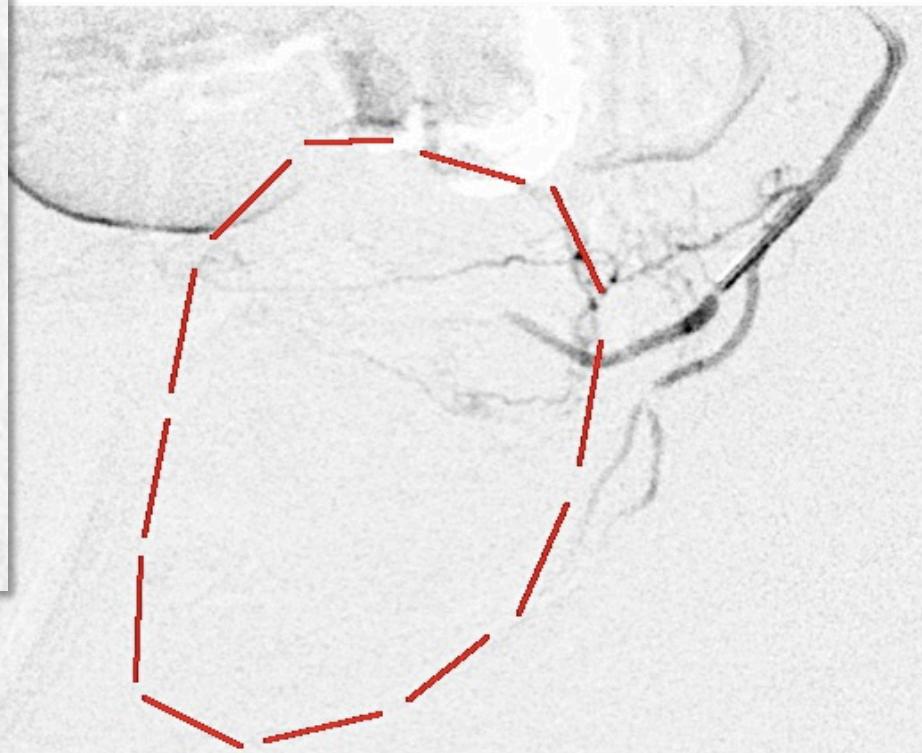
4. Endpunkt Stase



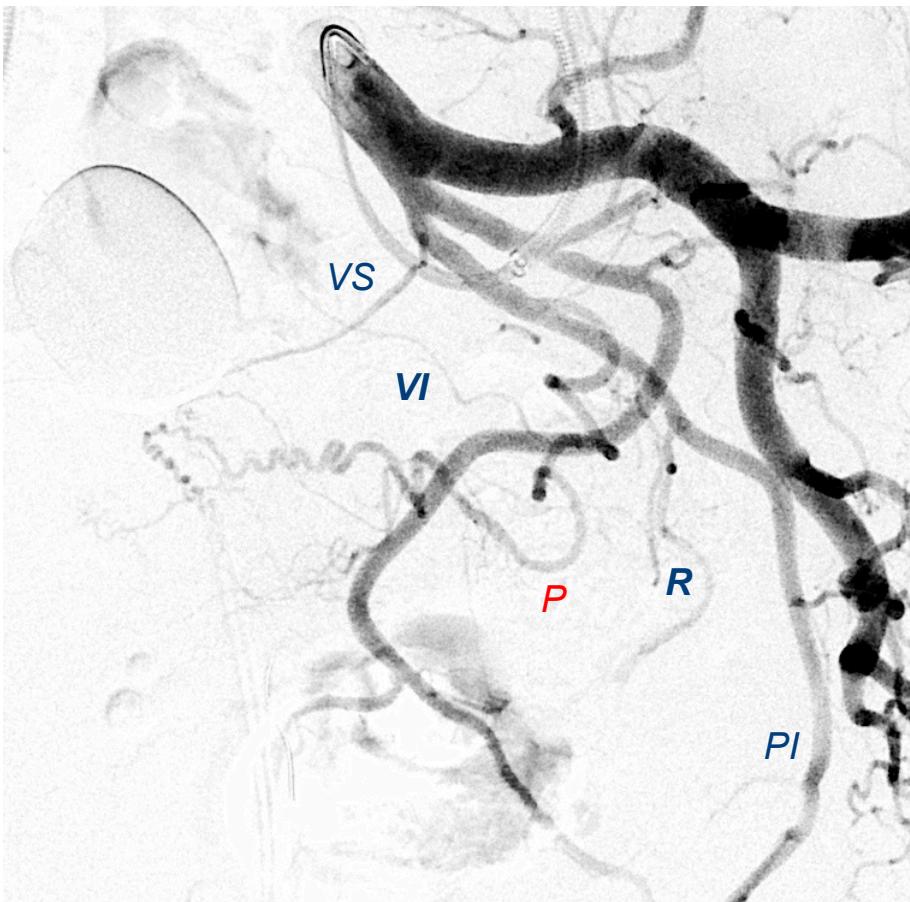


Vor Embolisation

Endpunkt: vollständige Stase



Nach Embolisation

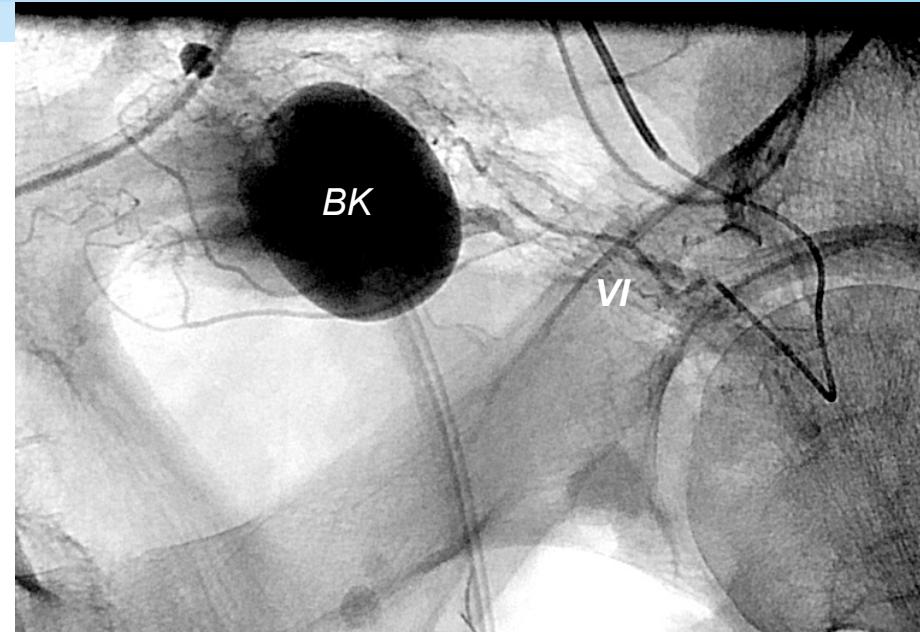


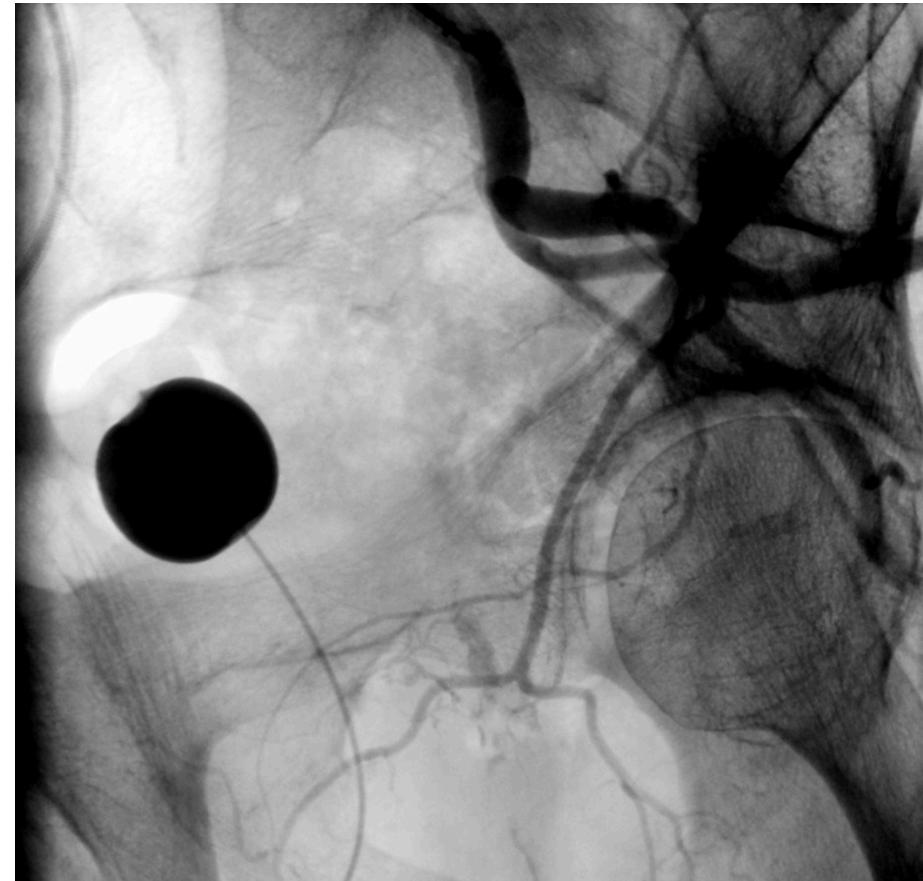
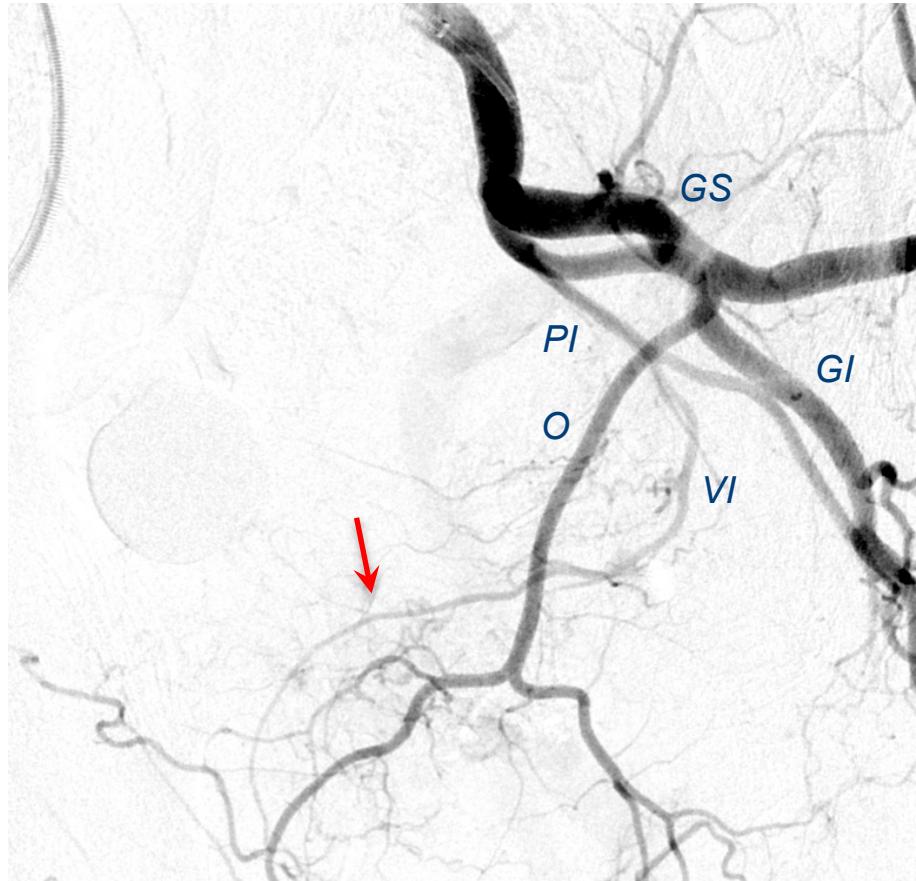
CAVE:

Fehlembolisation

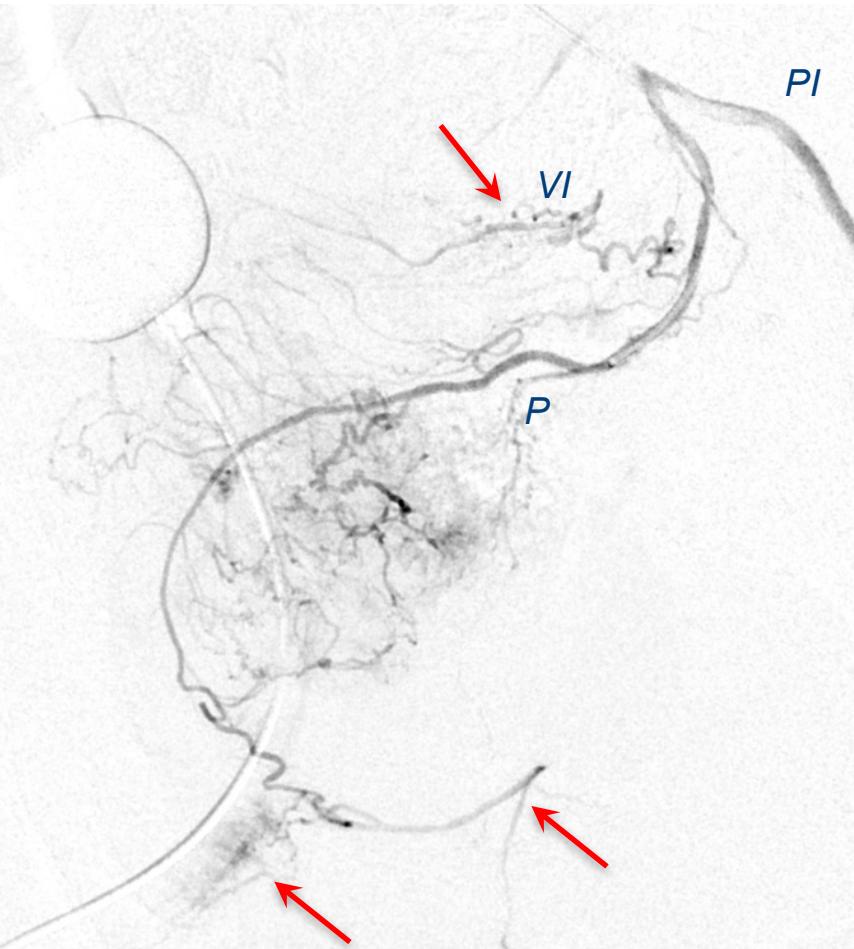
A. vesicalis inferior (VI)

A. rectalis inf. (R)



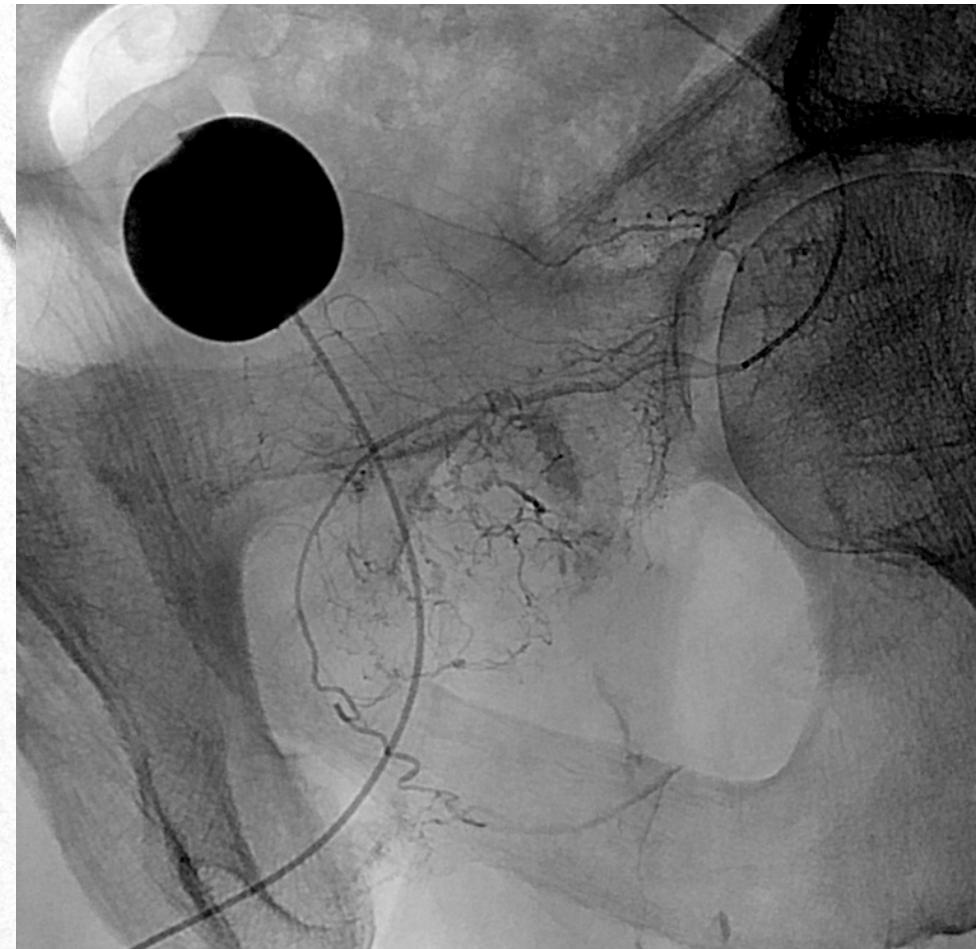


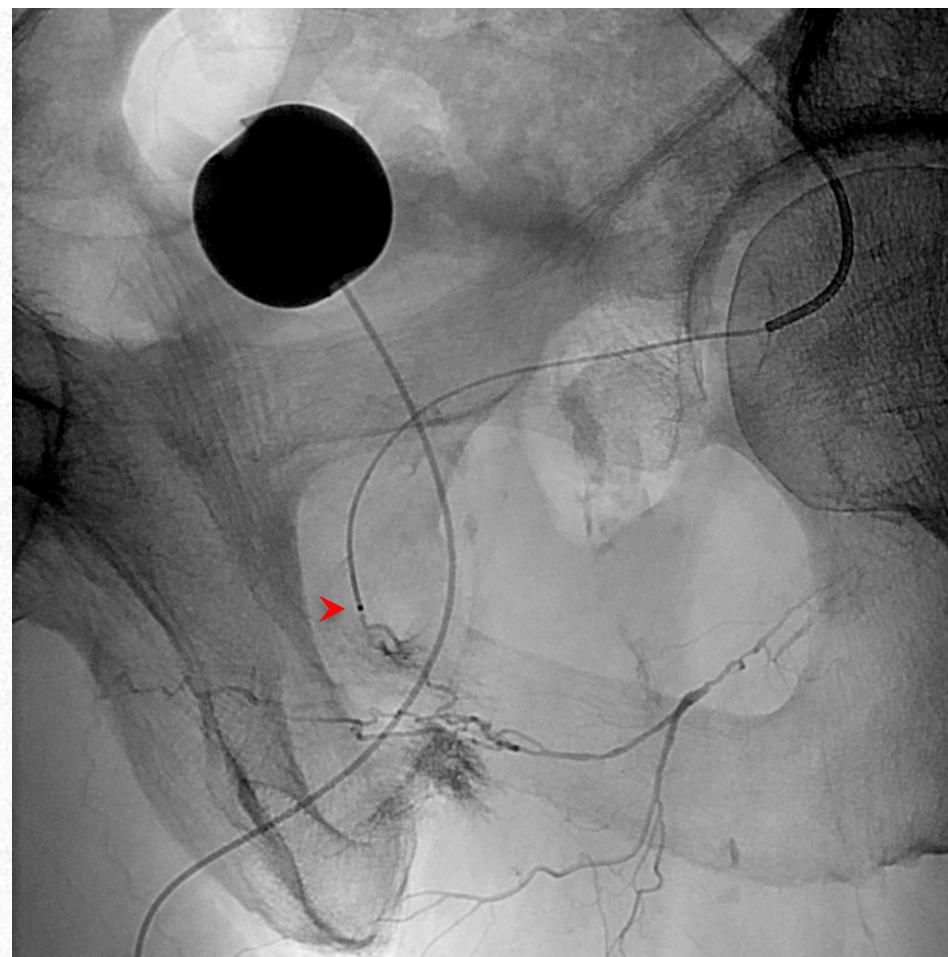
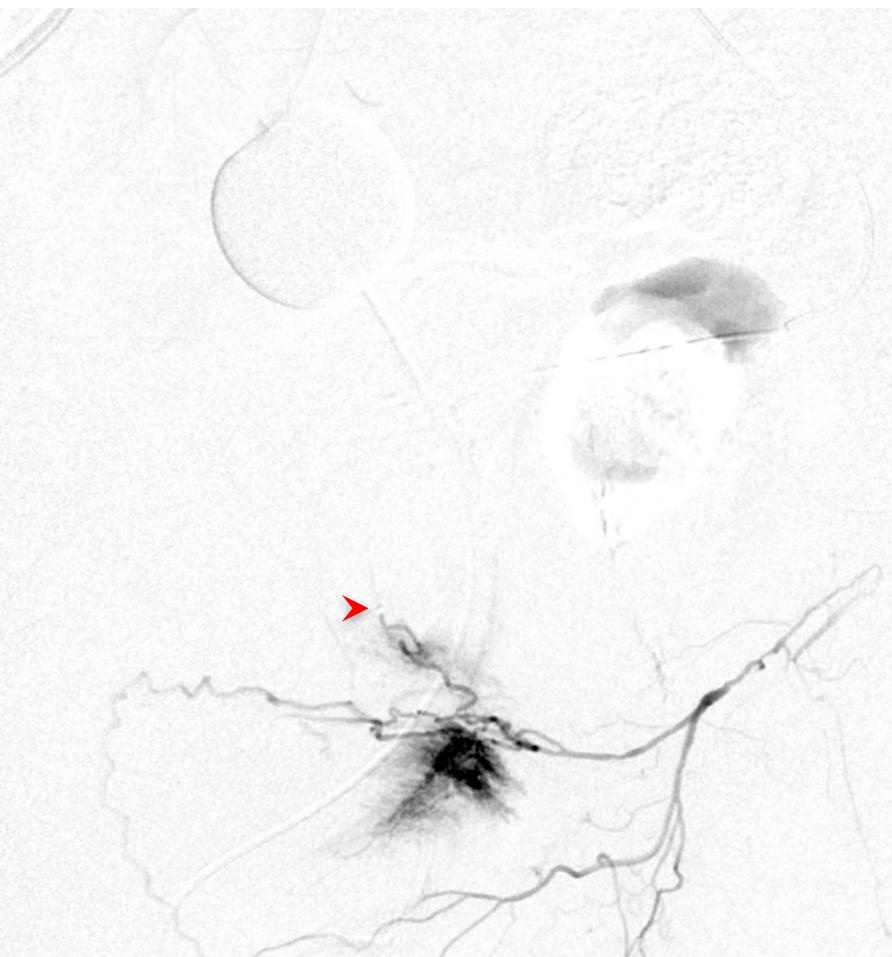
CAVE: Fehlembolisation Kollateralen penil, perineal

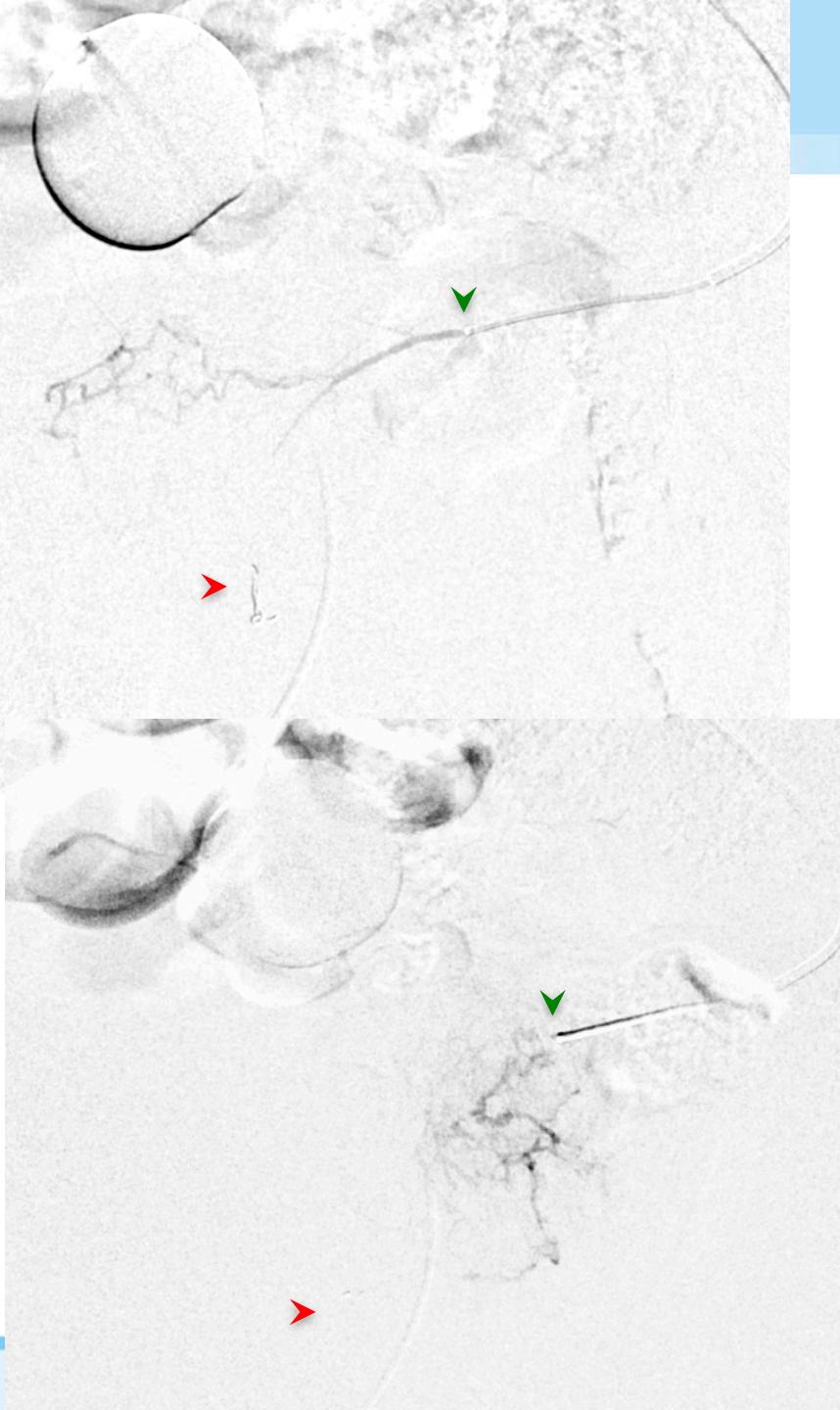


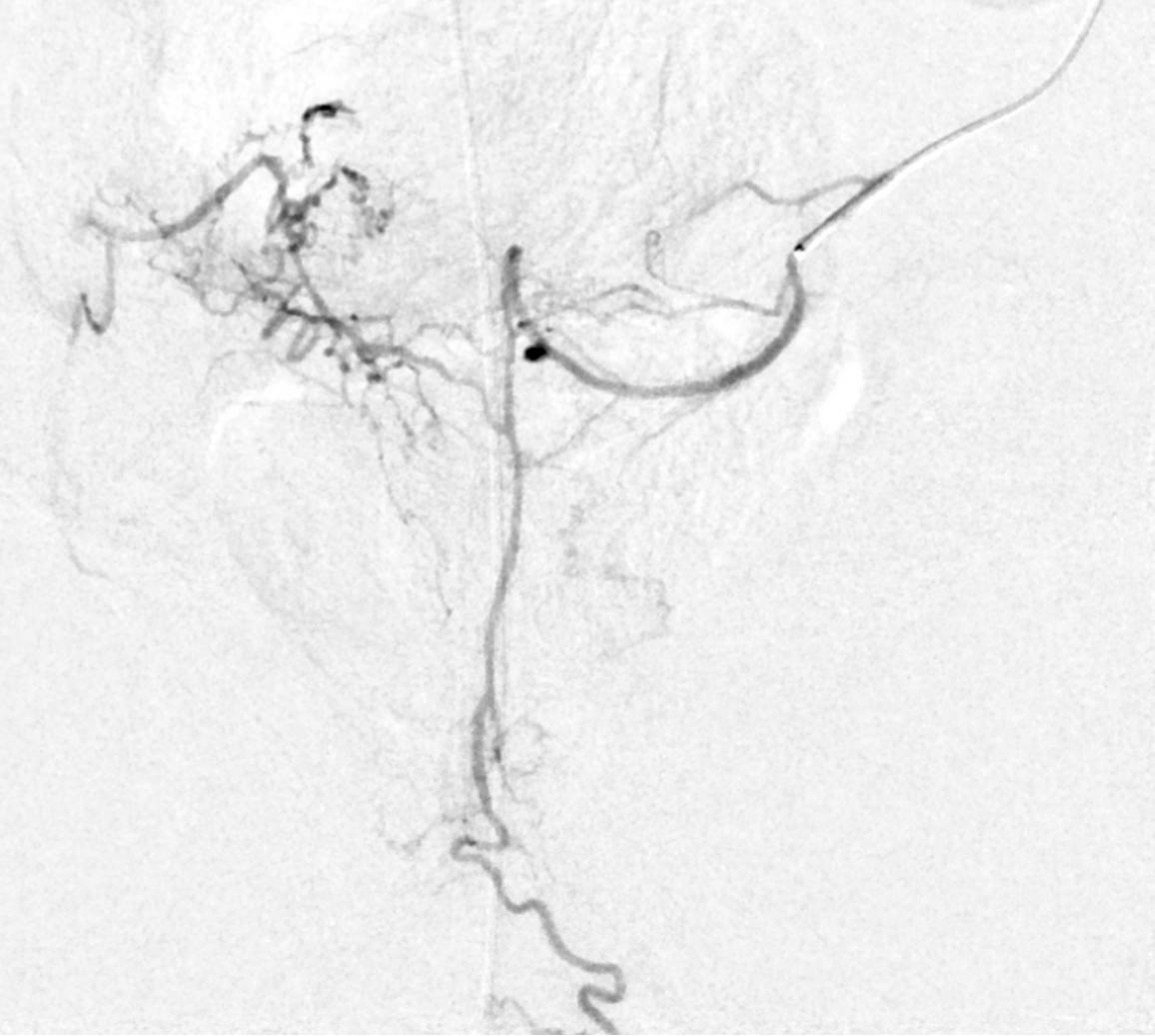
CAVE: Fehlembolisation

Kollateralen penil, perineal



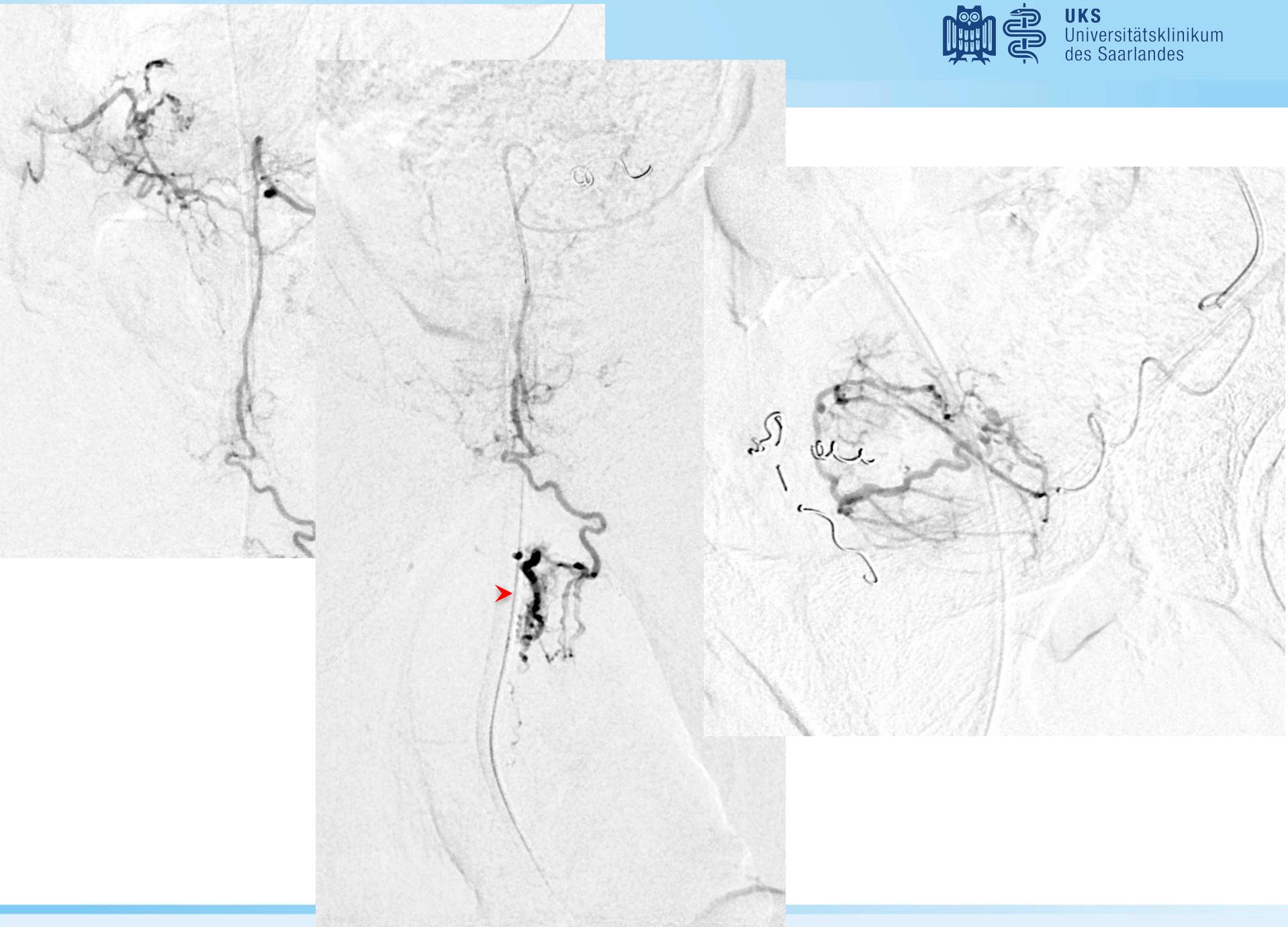


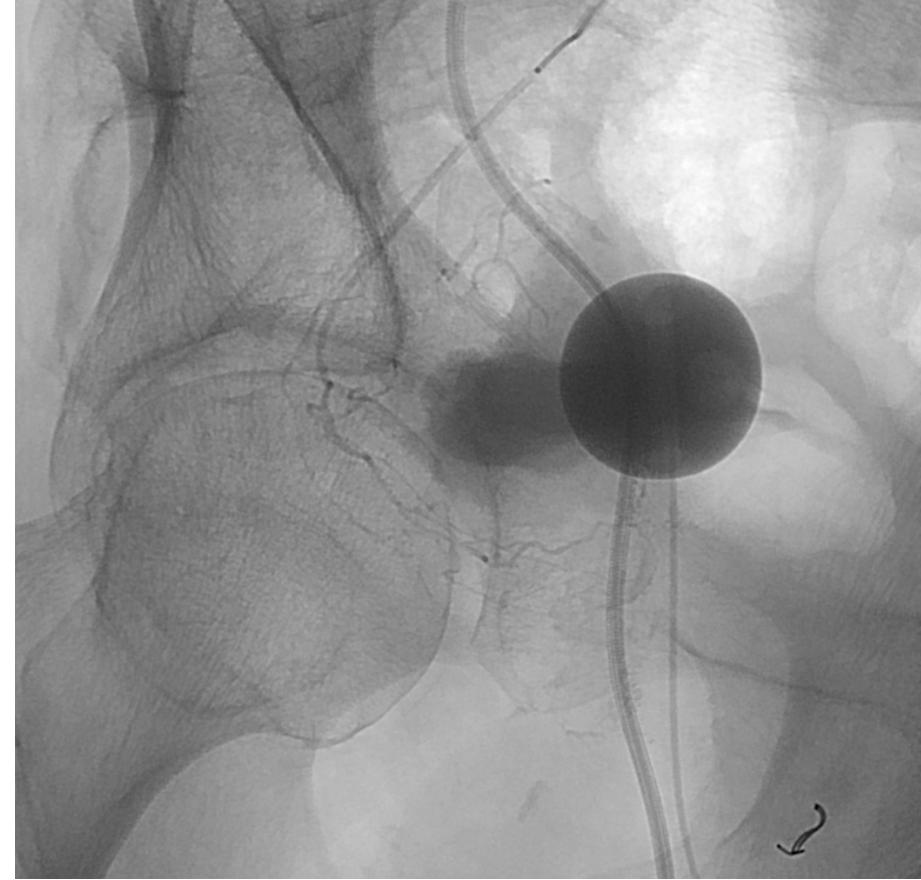




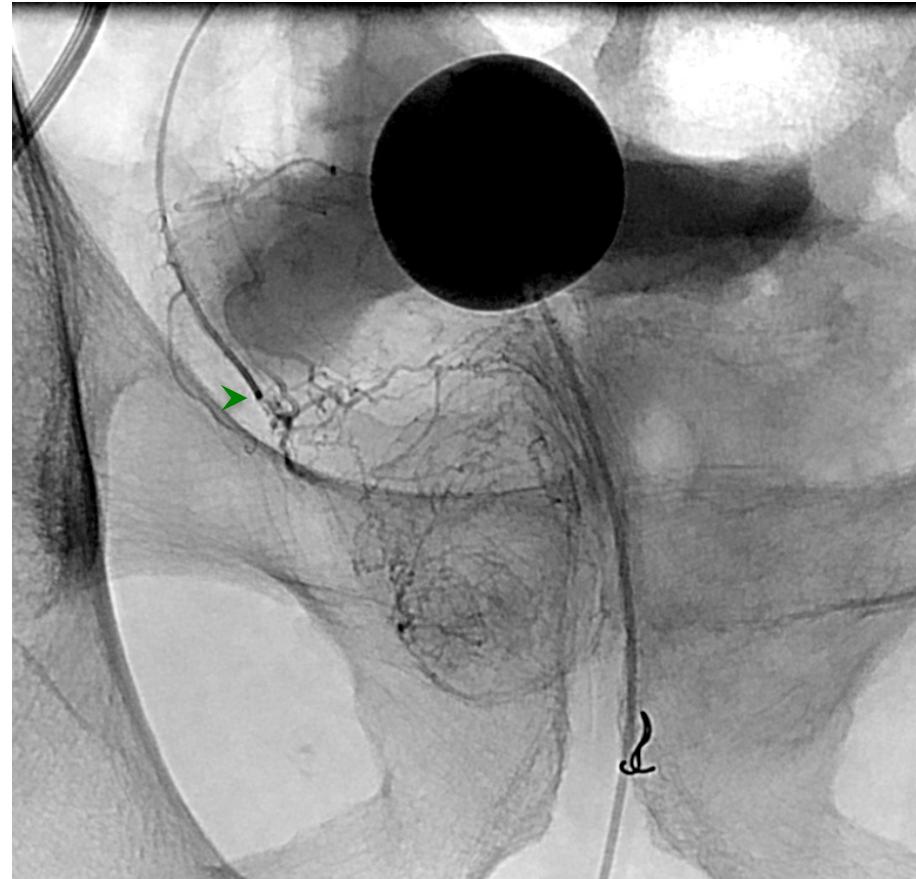
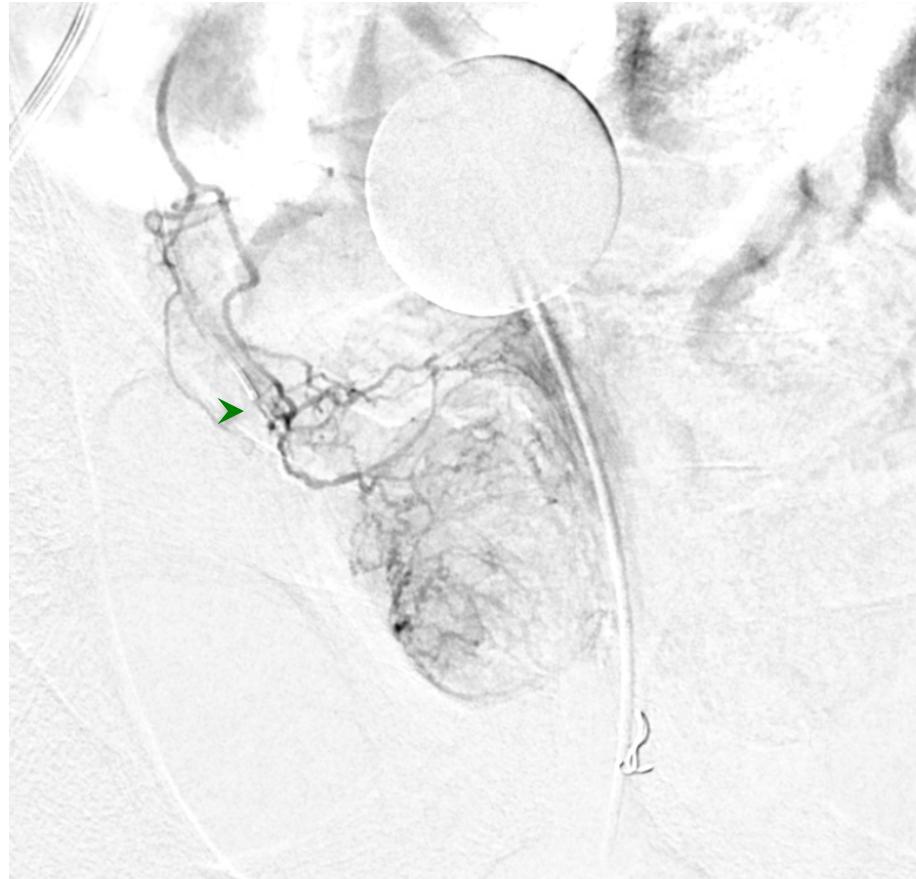
*Intraprostatische
Kollaterale*

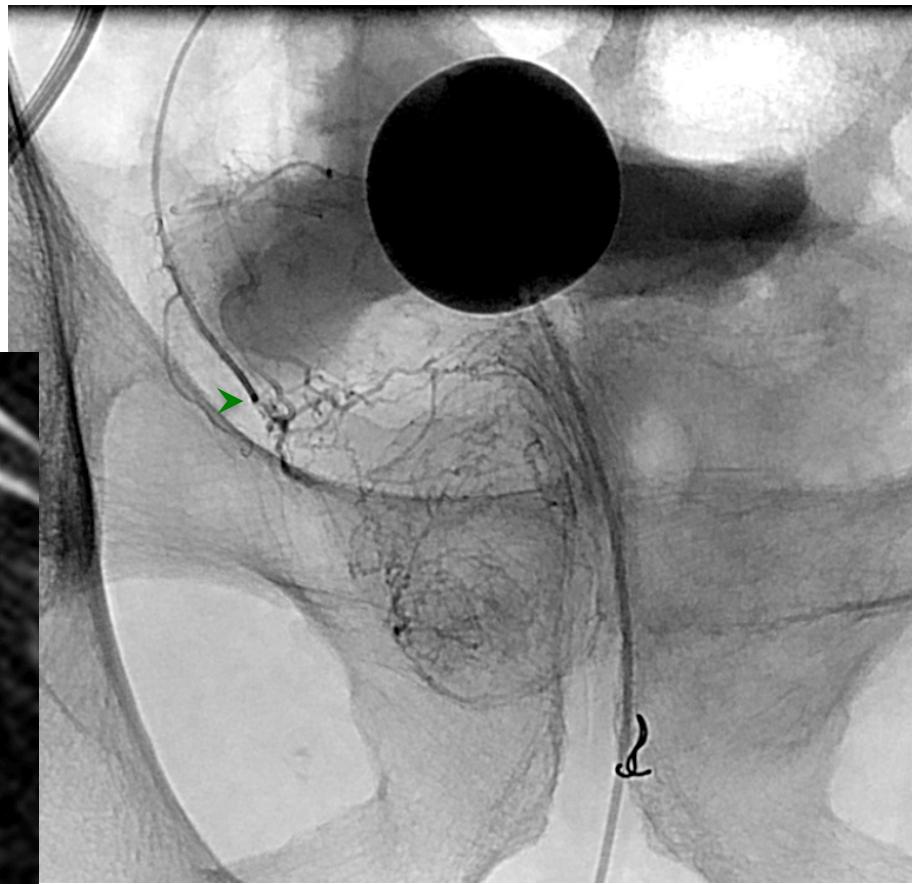
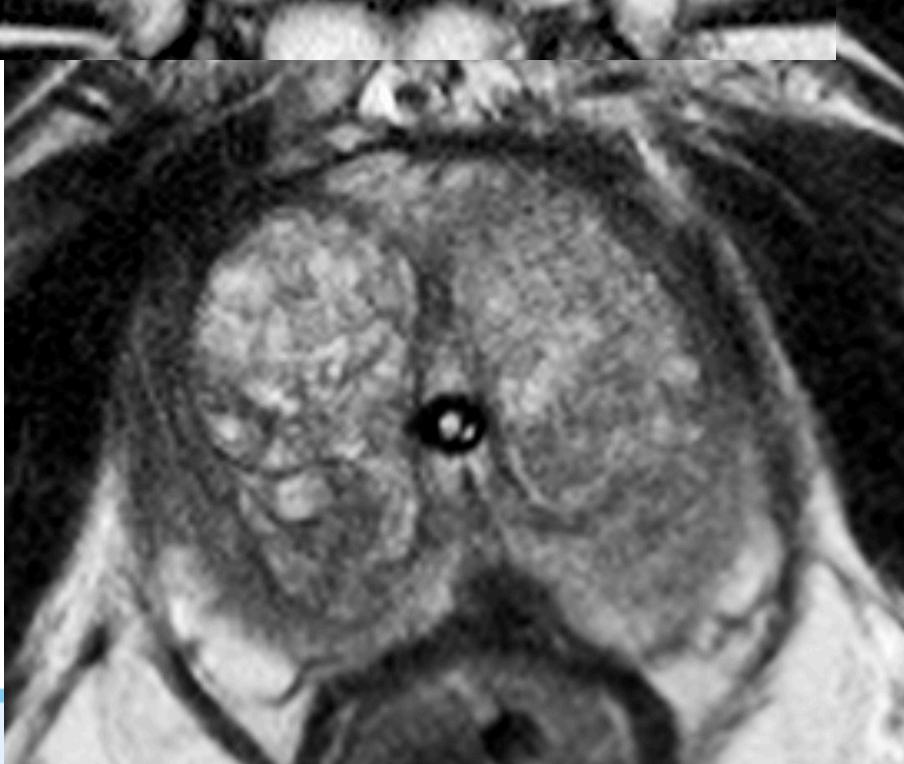
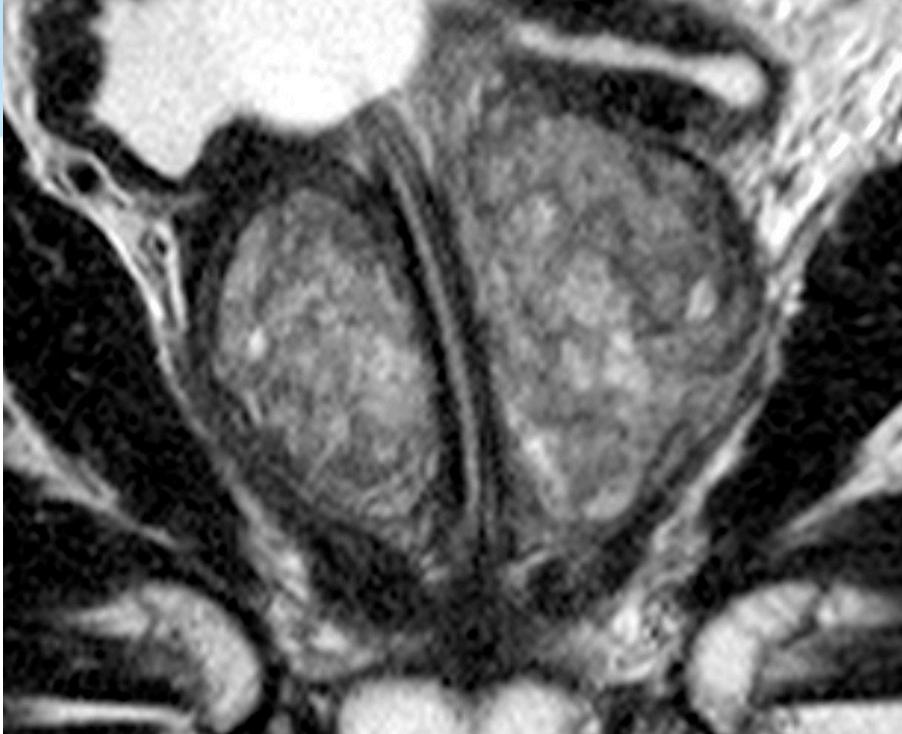
*CAVE:
Penile Fehlembolisation*



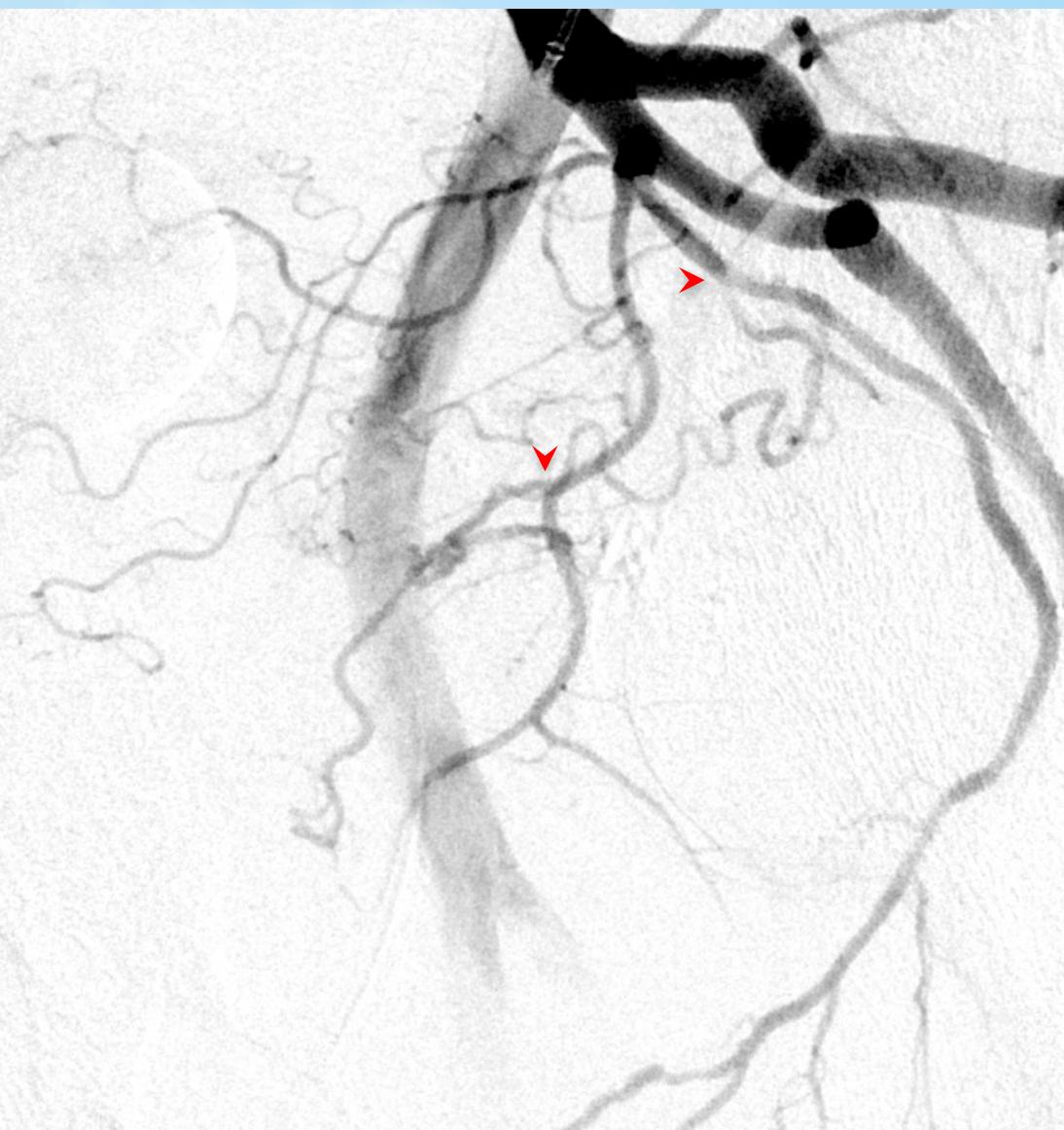


Ziel: Selektive Embolisation

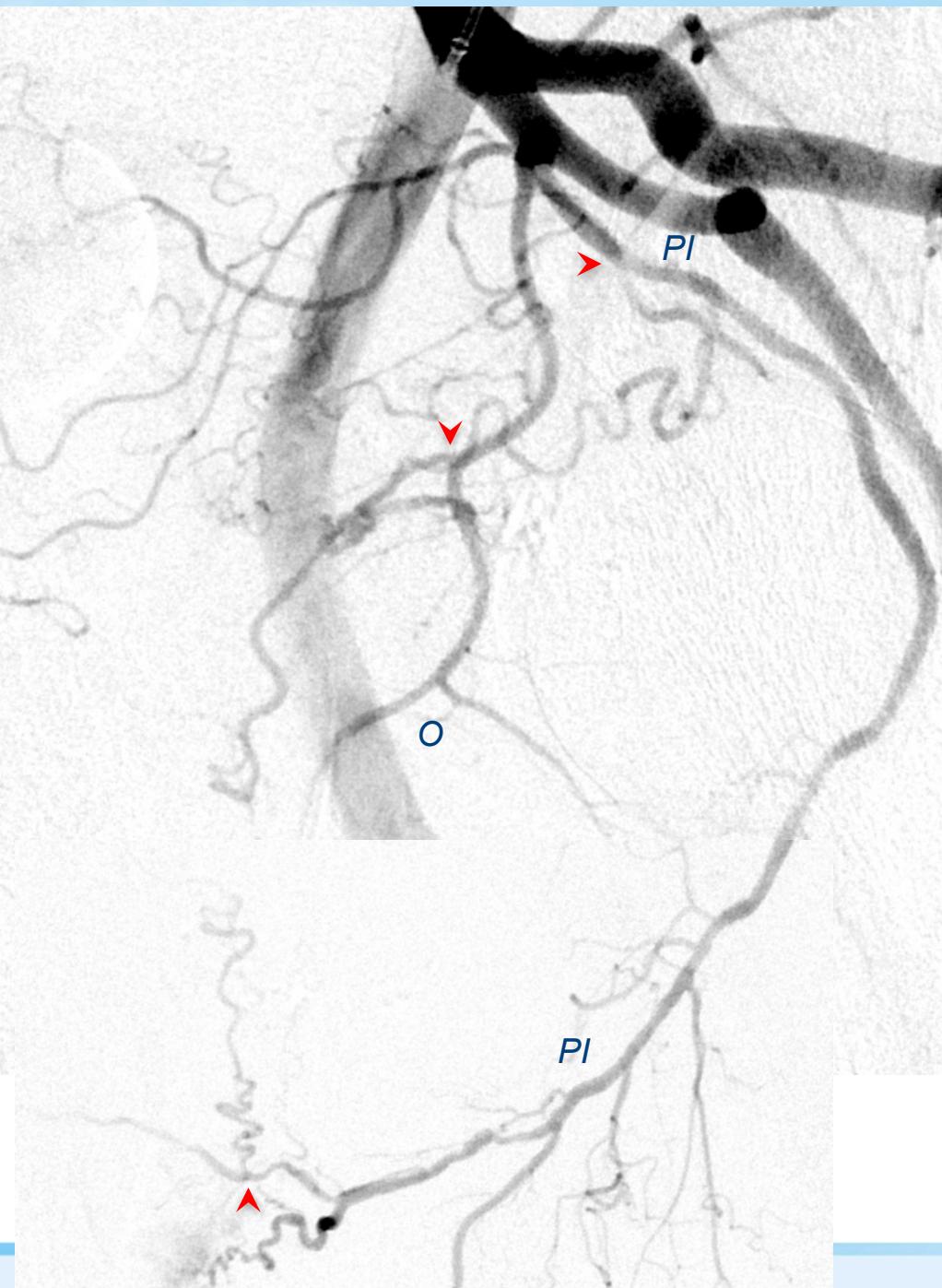




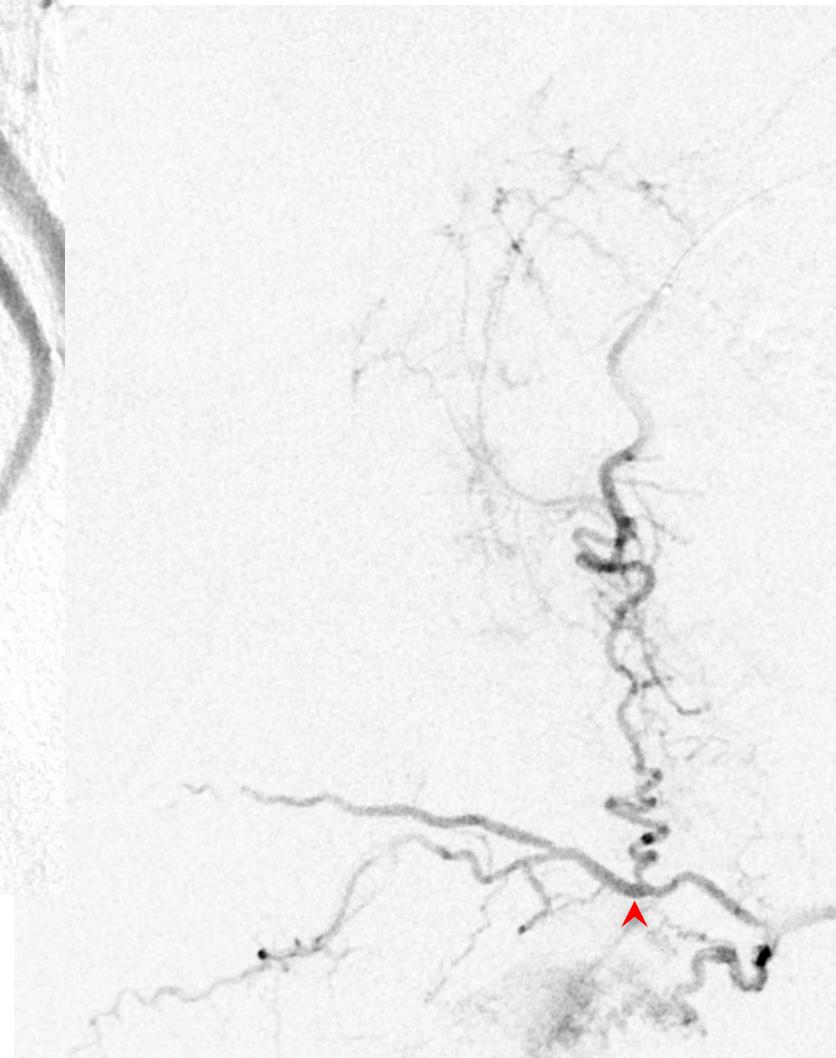
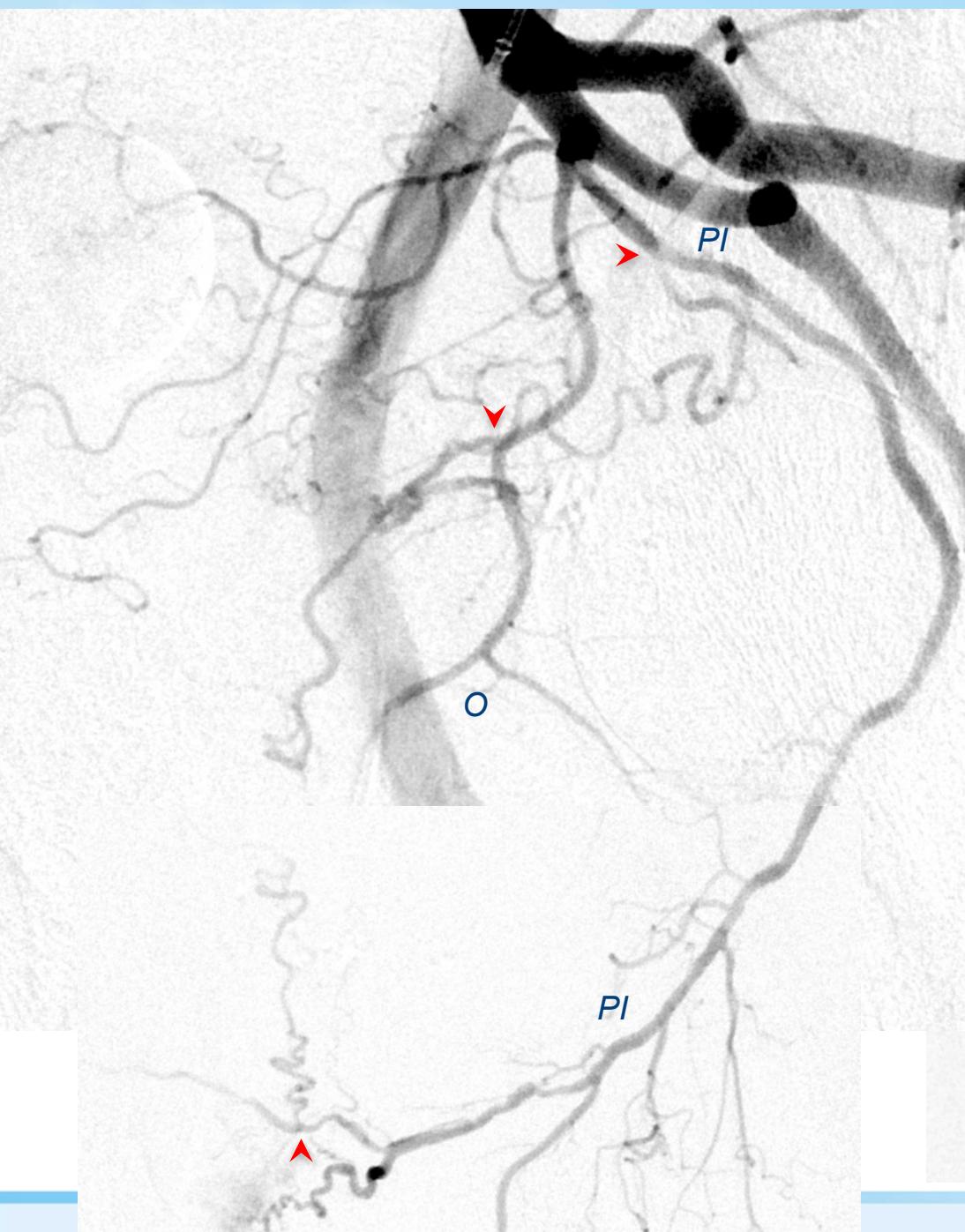
*Transitional- & Zentral-Zone!
→ subvesikale Obstruktion*

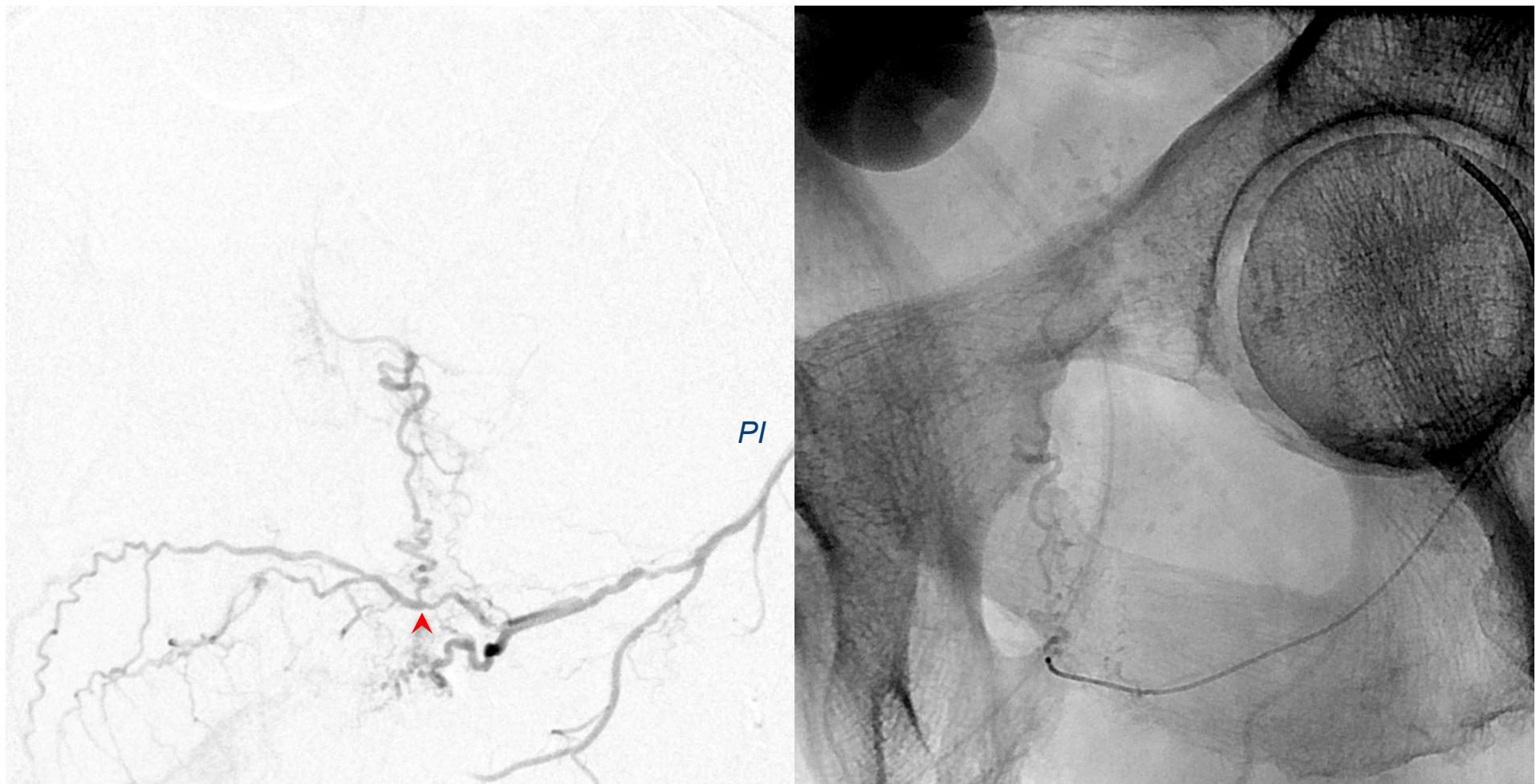


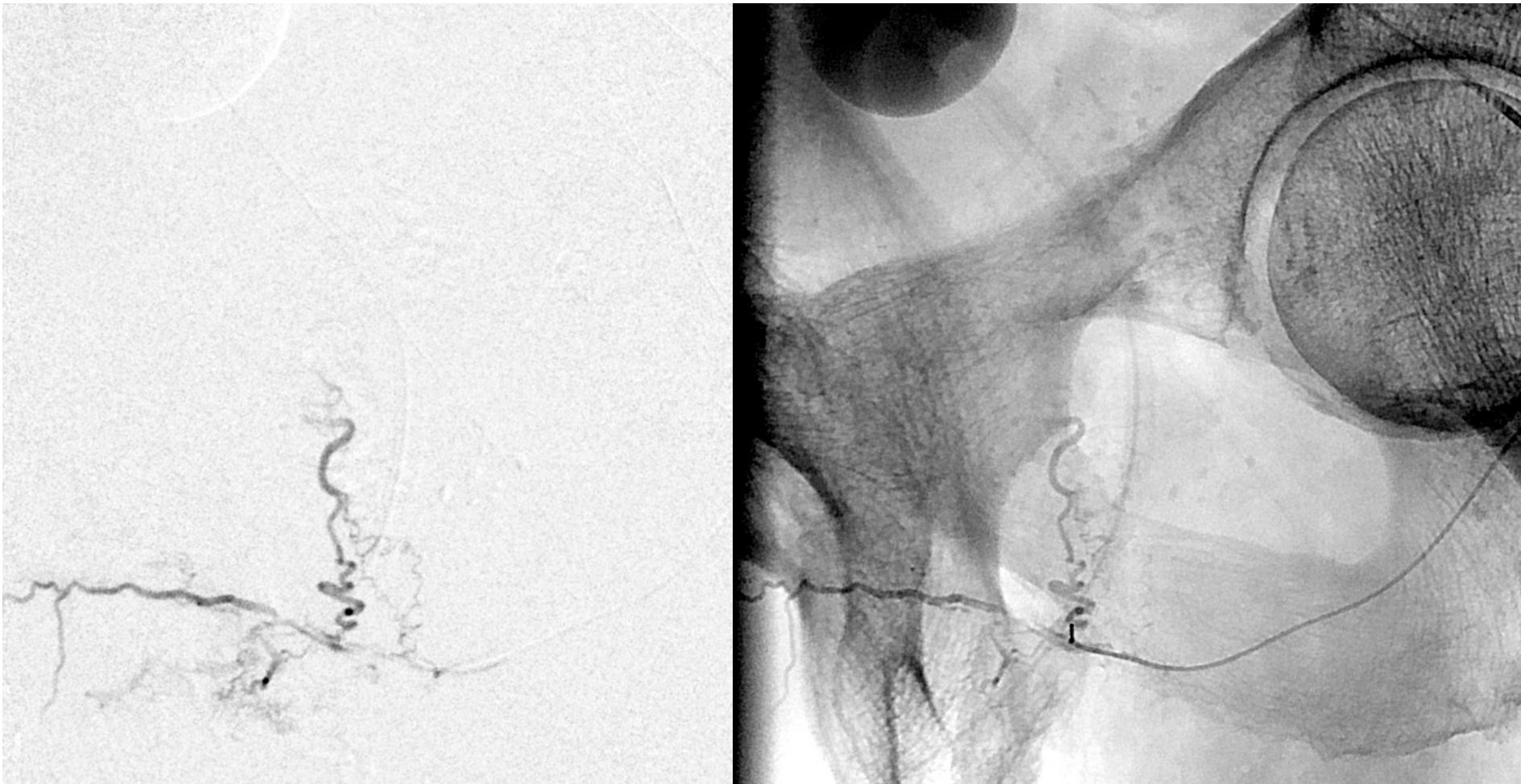
CAVE:
*Mehrfachversorgung
der Prostata*

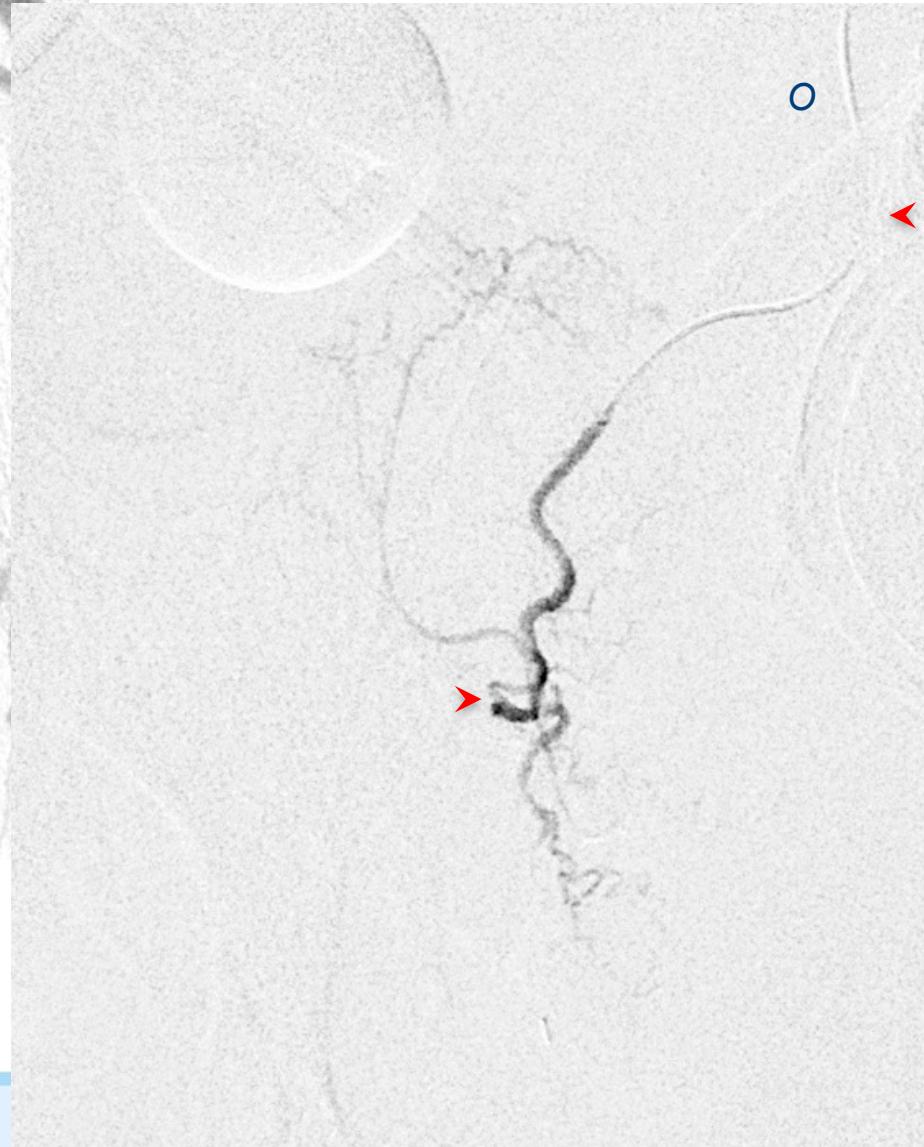
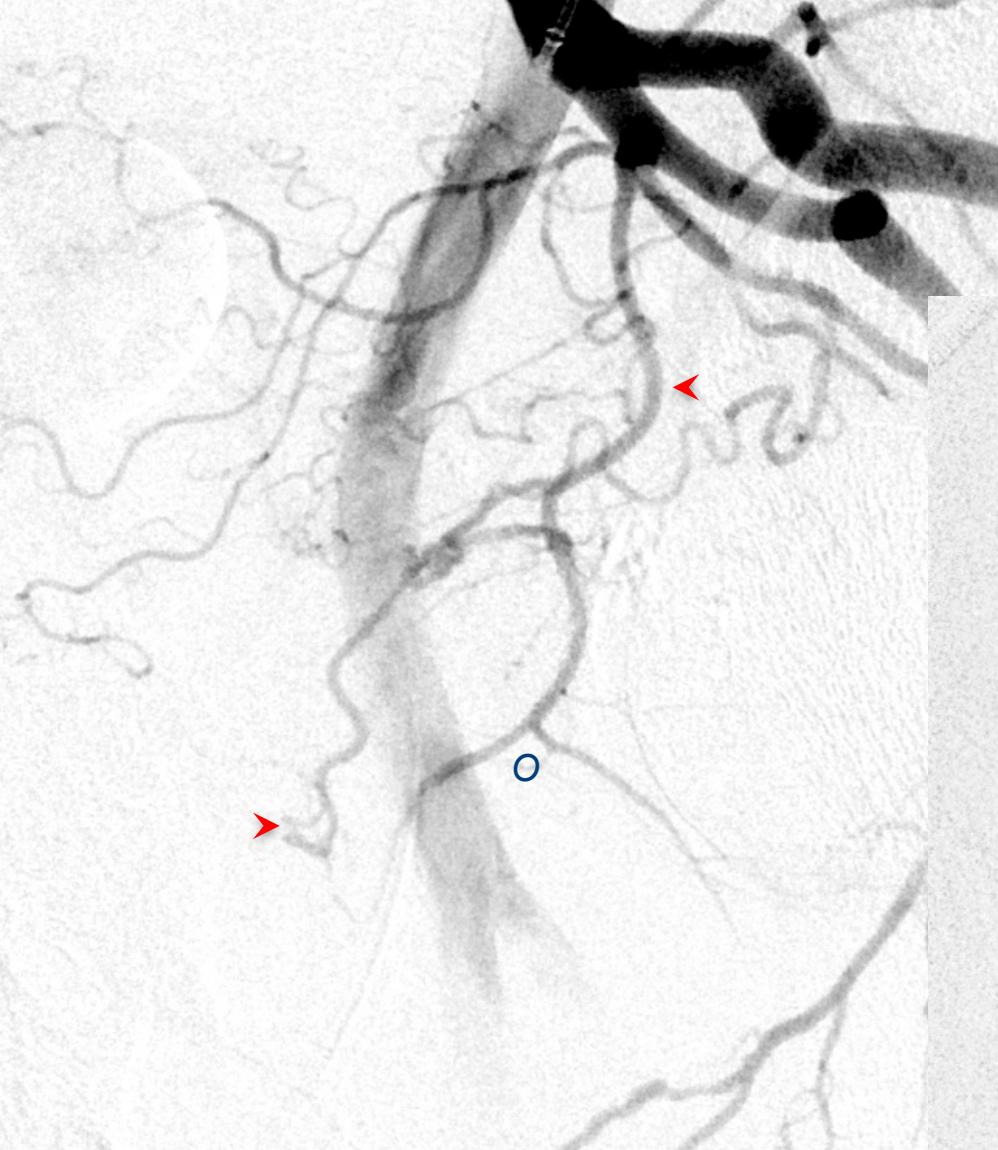


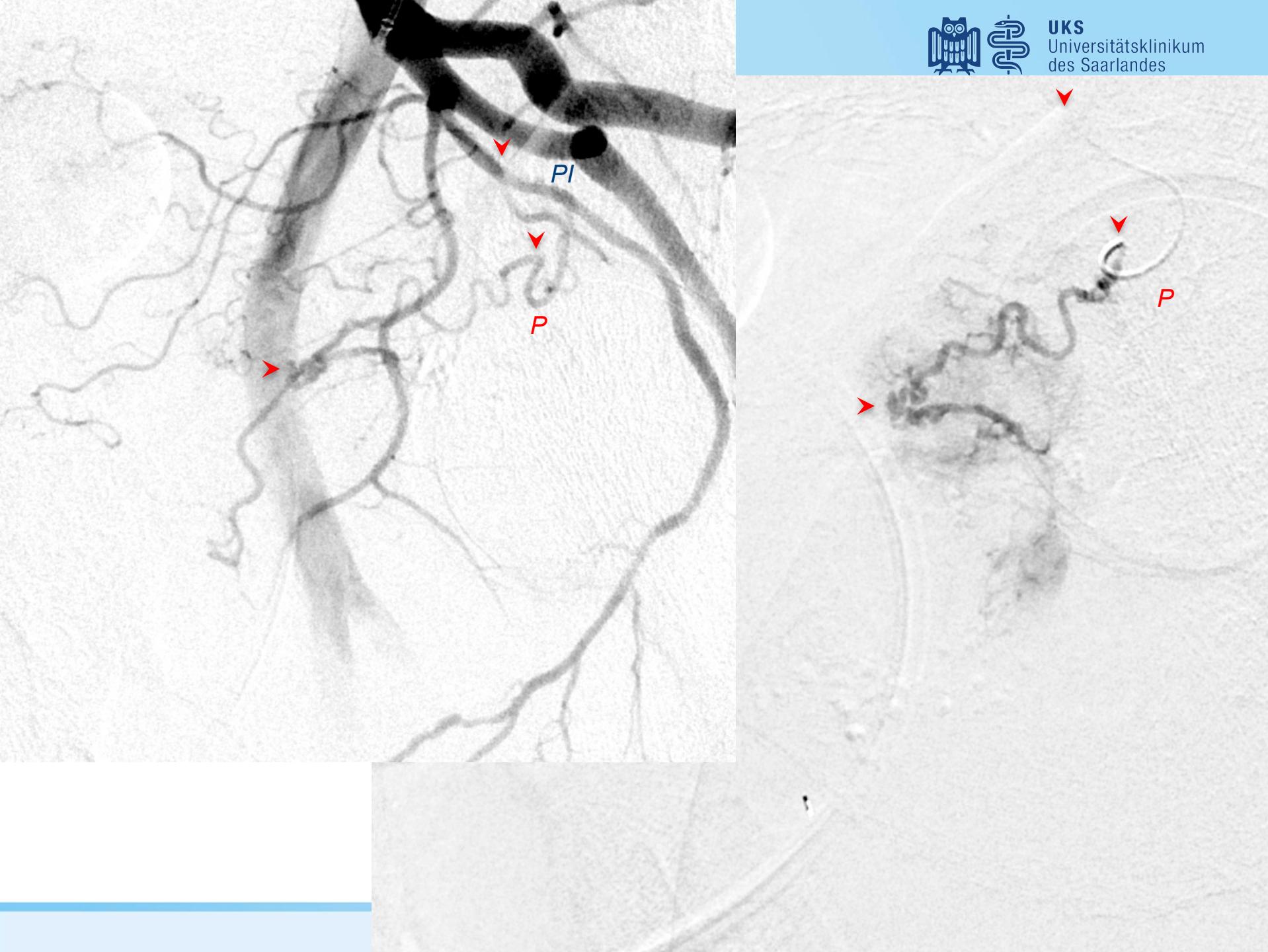
CAVE:
*Mehrfachversorgung
der Prostata*





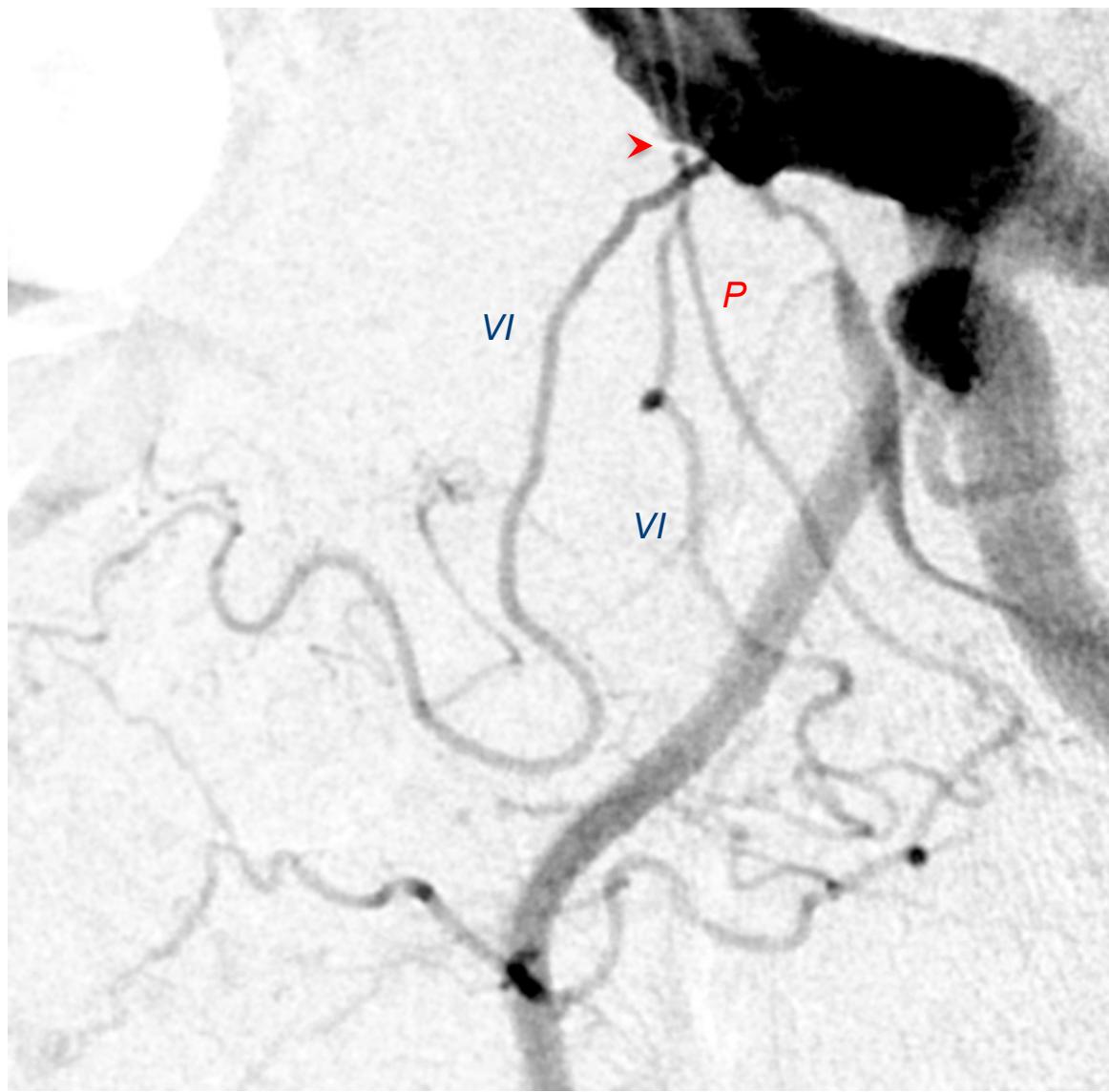


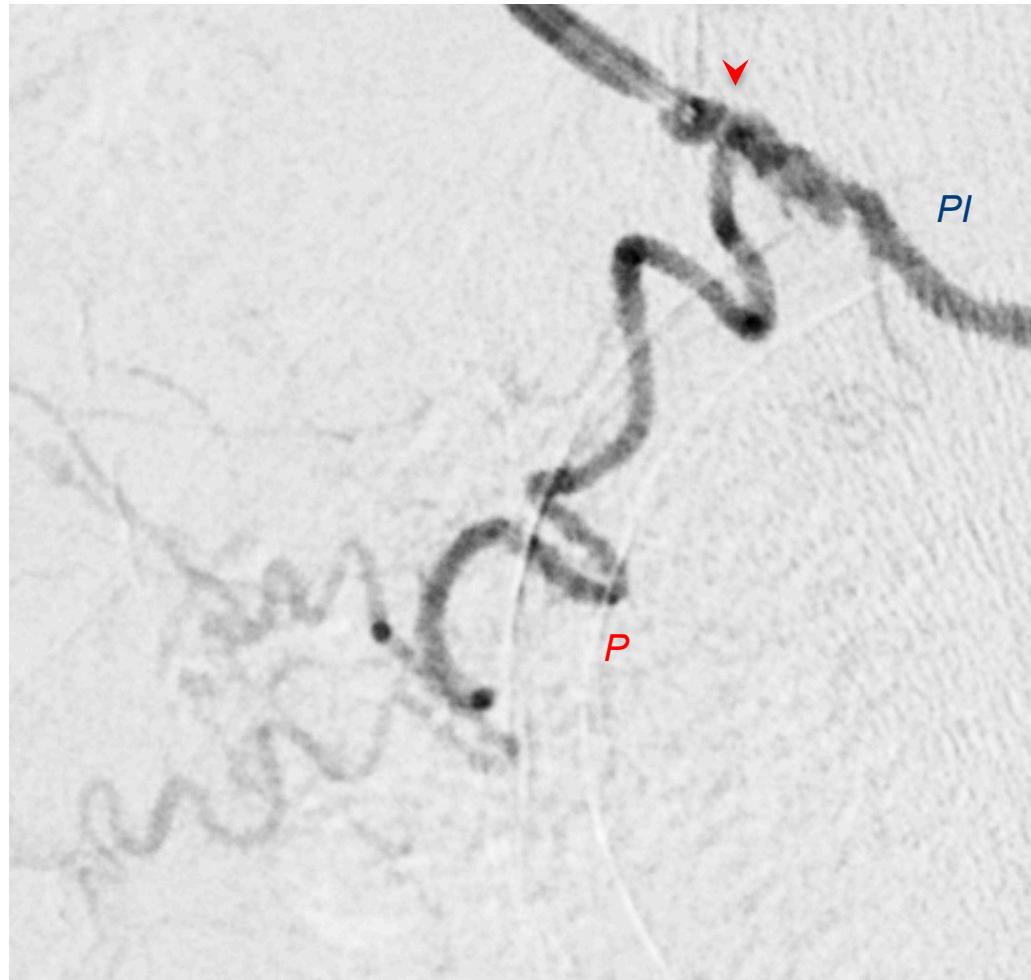






*Schwierige
Gefäßanatomie*

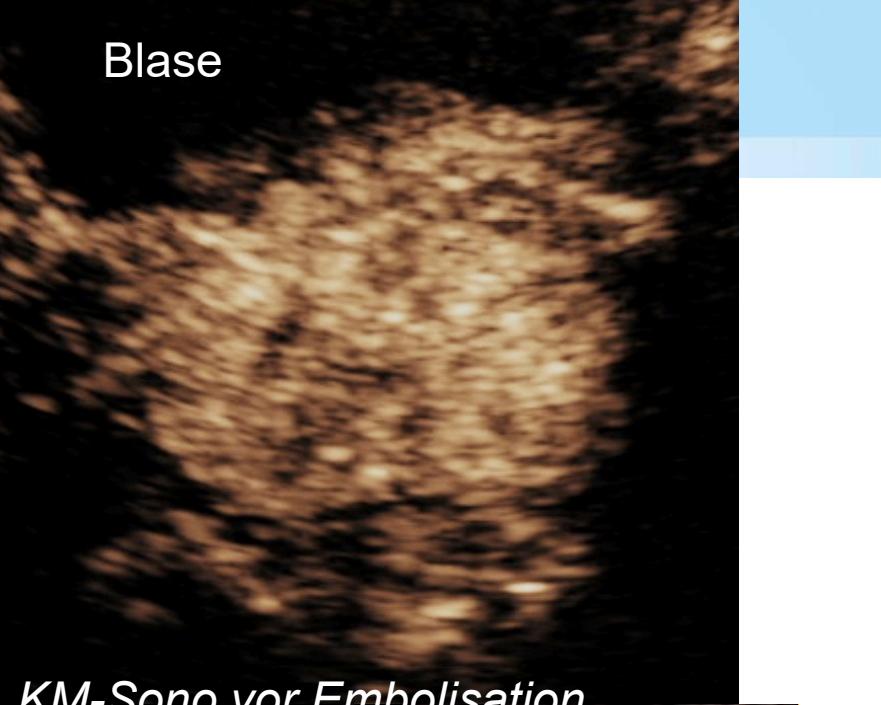




Nachsorge

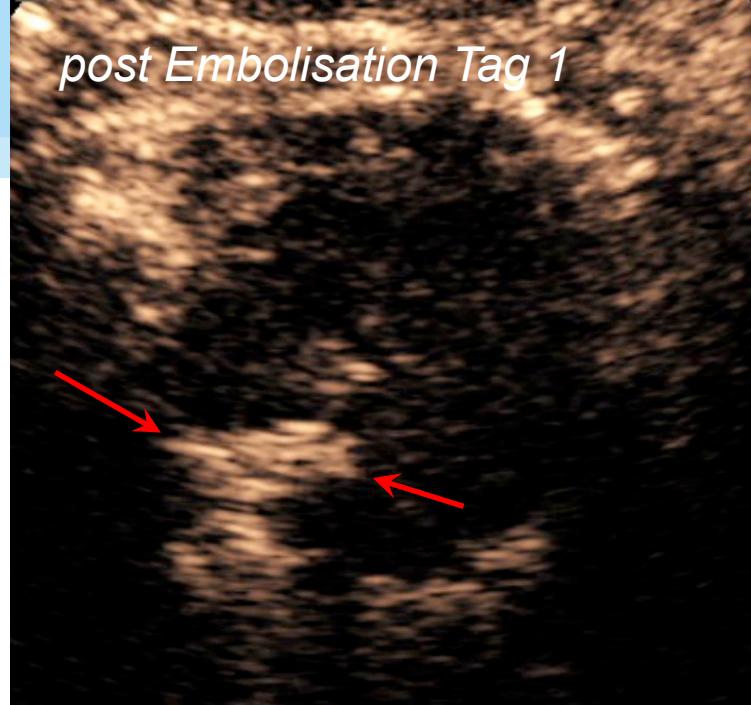
- *Blasenkatheter 1 Woche*
- *NSAR (z. B. Ibuprofen)*
- *Regelmäßige fachurologische Kontrolle*

Blase



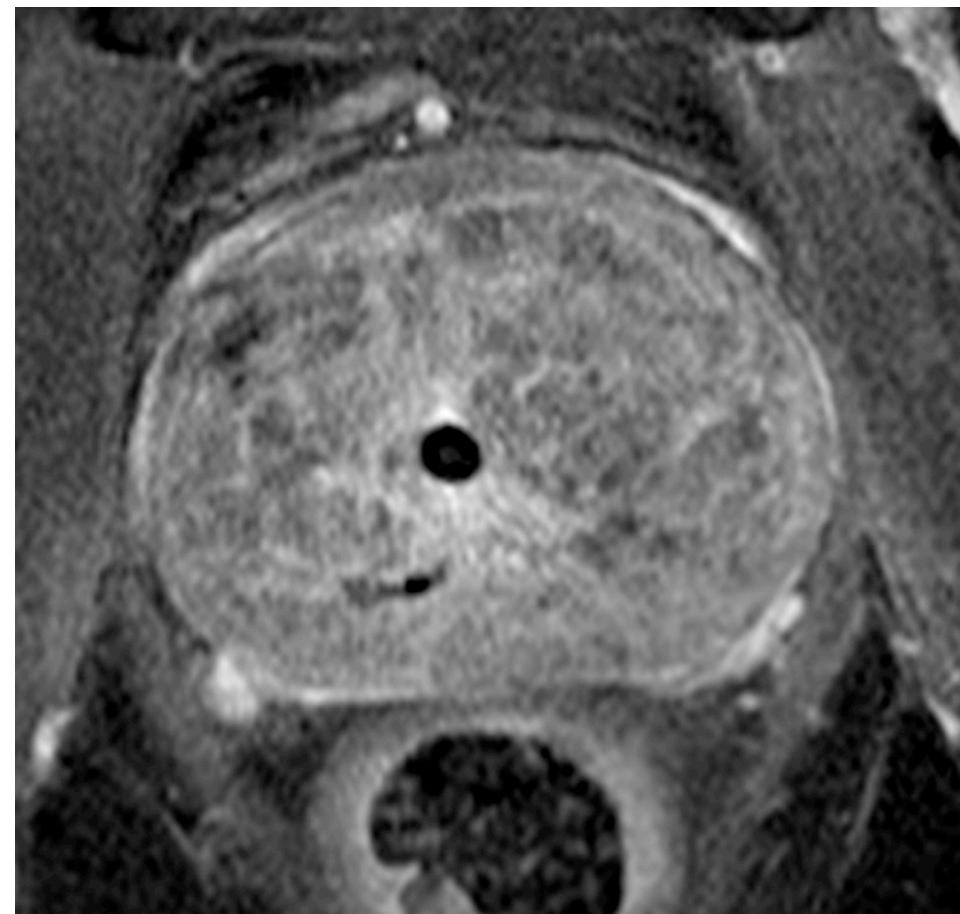
KM-Sono vor Embolisation

post Embolisation Tag 1

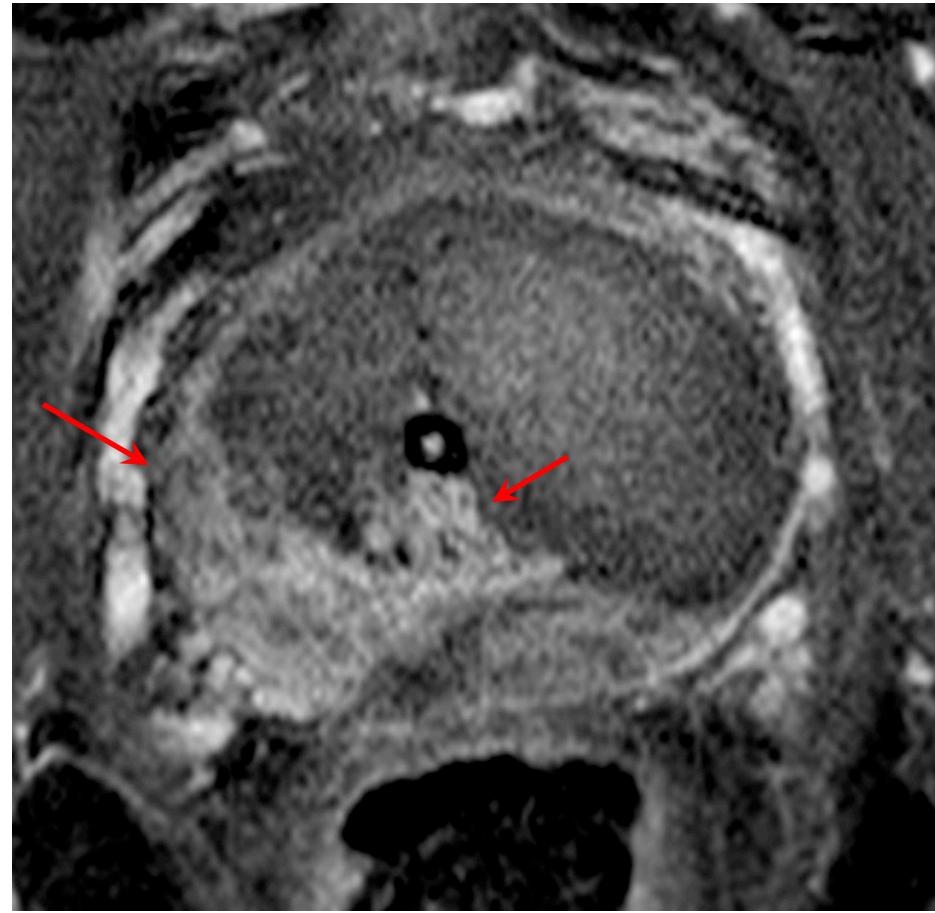


KM-Sono nach Embolisation

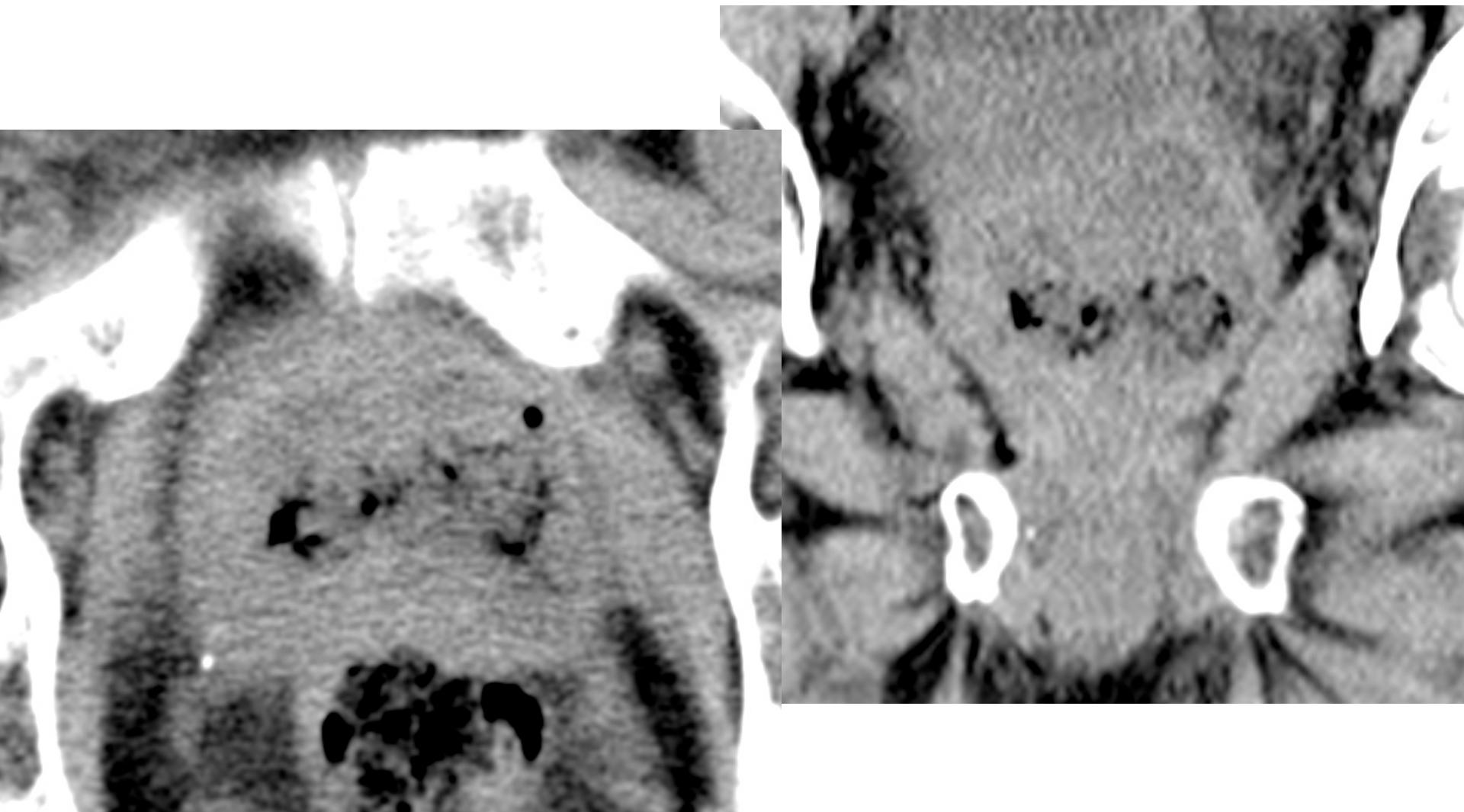


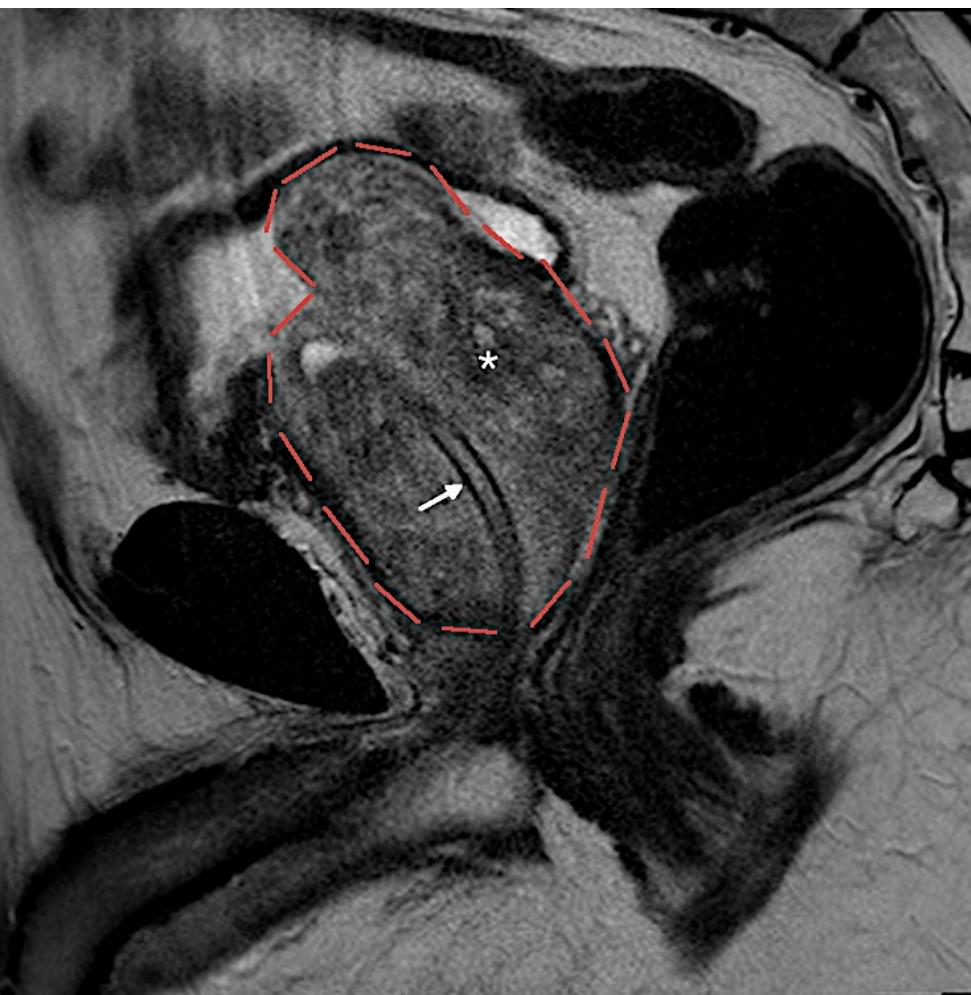


KM-MRT vor Embolisation

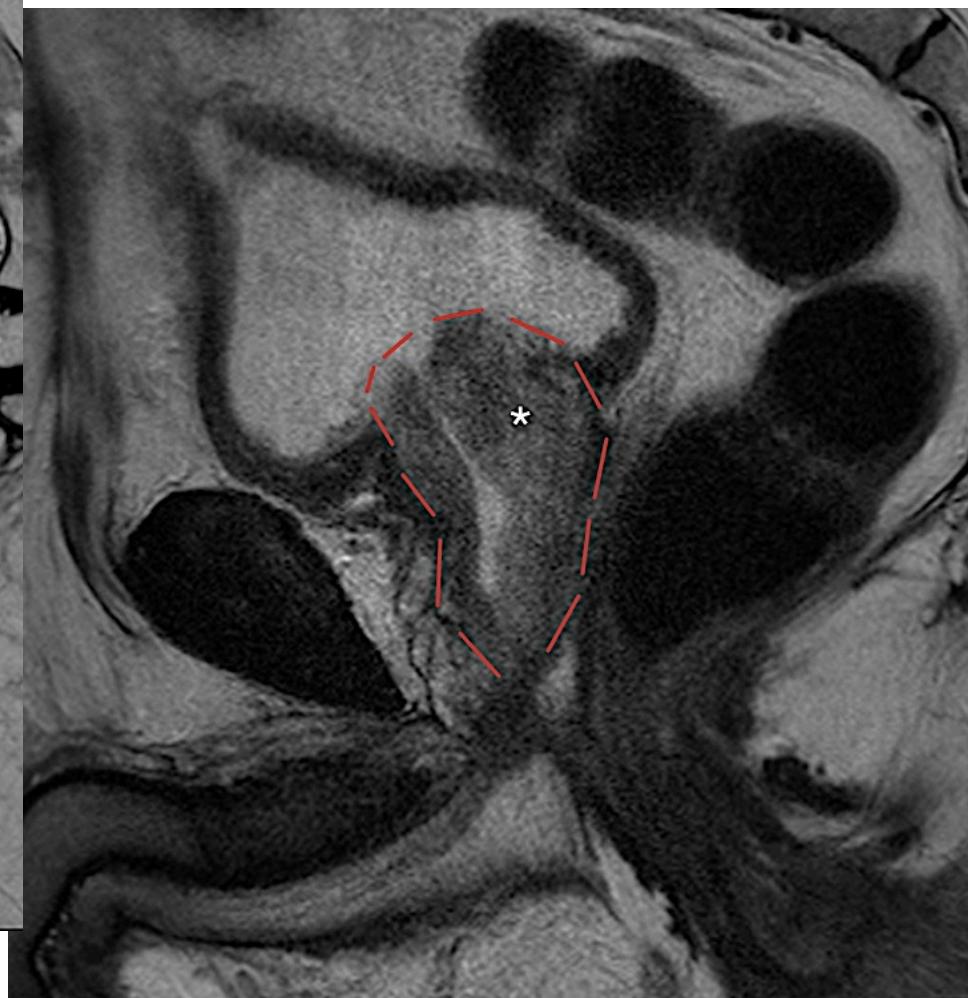


Nach Embolisation Tag 1

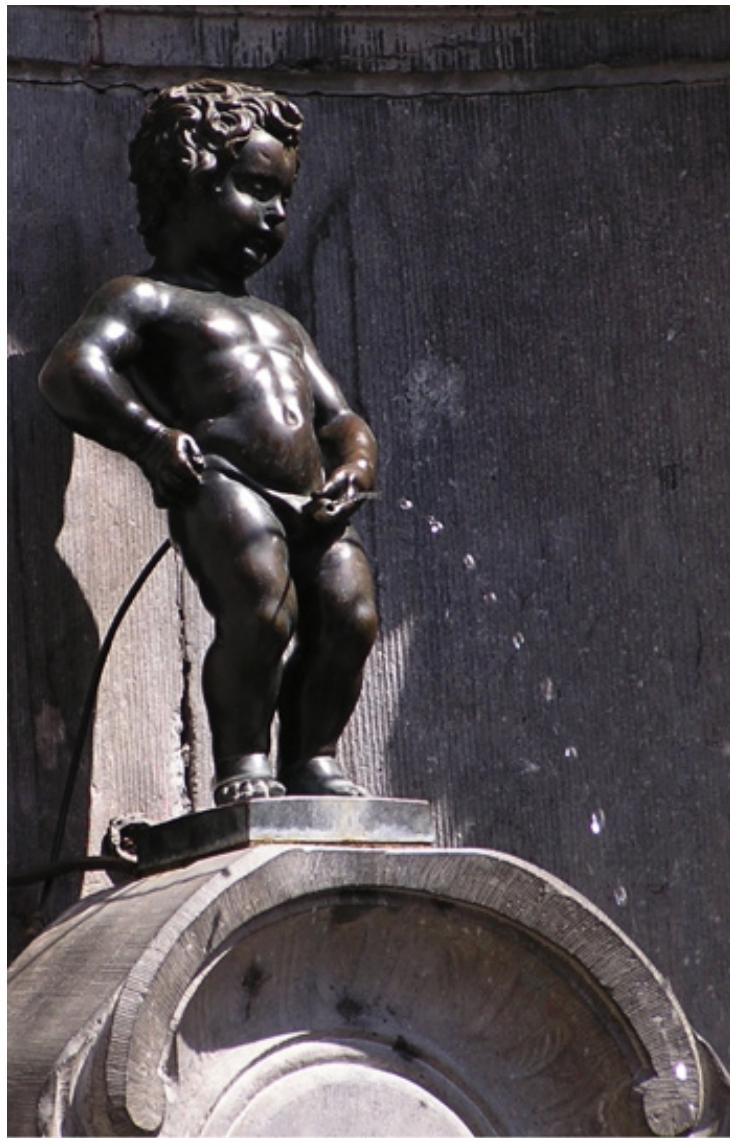




Vor Embolisation



Verlaufskontrolle 3 Monate



Manneken Pis
Brüssel



N = 25 Patienten	initial	3 Monate	Δ	p-Wert
<i>Prostata Volumen[ml]</i>				
<i>TRUS</i>	118 ± 42 (35 - 189)	73 ± 19 (35 - 102)	$-49\% \pm 9\%$ (36 - 65%)	
<i>CE-MRI</i>	135 ± 53 (36 - 224)	82 ± 41 (29 - 143)	$-44\% \pm 18\%$ (25 - 78%)	0.01
<i>PSA [ng/ml]</i>	10.1 ± 5.2	4.5 ± 3.0	$-64\% \pm 25\%$ (36 - 94%)	0.01
<i>Restharn [ml]</i>	192 ± 108	56 ± 44		0.04
<i>IPSS</i>	25 ± 8	12 ± 4		0.03
<i>Lebensqualität</i>	5 ± 1	1 ± 0.5		0.03
<i>Uroflowmetrie [ml/s]</i>	9 ± 1	14 ± 5		0.05

\pm Standardabweichung; Spannweite (Min. - Max.)



RCT Prostata-EMBOLisation vs. transvesikale Adenomektomie

„PIEMONTE“ ([#31052015](http://germanctr.de))

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