



Overview

Catheters, wires and sheaths

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Think before you start

Type of study?

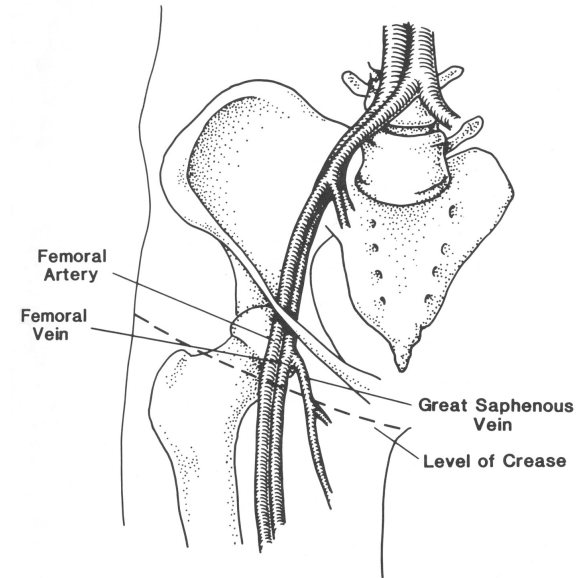
diagnostic

interventional































Both arterial and venous access needed?

On which side (left, right, groin, neck?)

Sheath, catheter, wire size and length?



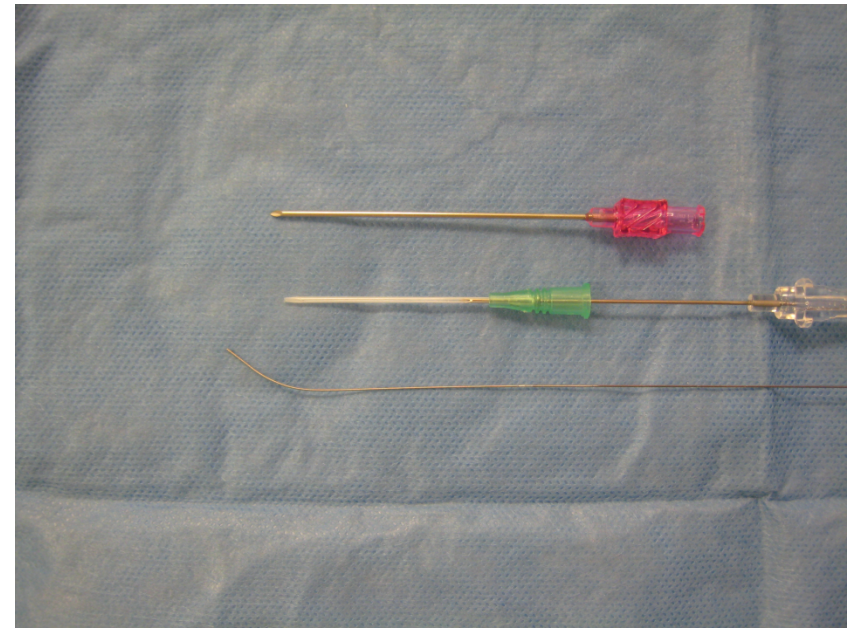
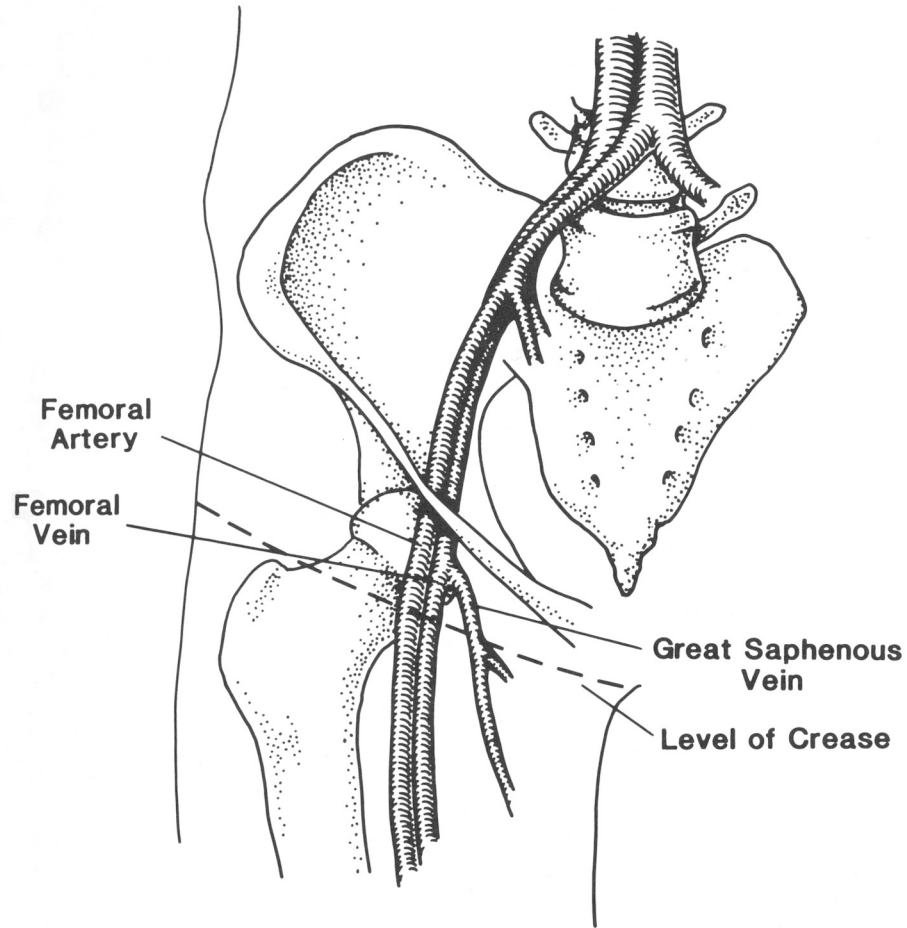
French scale (1 Fr = 0.33 mm)

in	.223	.21	.197	.184	.17	.158	.144	.131	.118	.105	.092	.079	.066	.053	.039
mm	5.7	5.3	5.0	4.7	4.3	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.67	1.35	1
Fr	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
															
															
Fr	18	19	20	22	24	26	28	30	32	34					
mm	6.0	6.3	6.7	7.3	8.0	8.7	9.3	10.0	10.7	11.3					
in	.236	.249	.263	.288	.315	.341	.367	.393	.419	.445					

CREGANNA
MEDICAL DEVICES

French Catheter Scale

Sheaths (introducers)



Sheaths

Sizes 3-6 F

(1F=0.33 mm)

Length

Short 5-7 cm

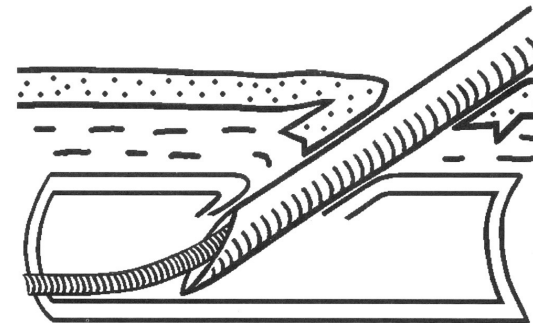
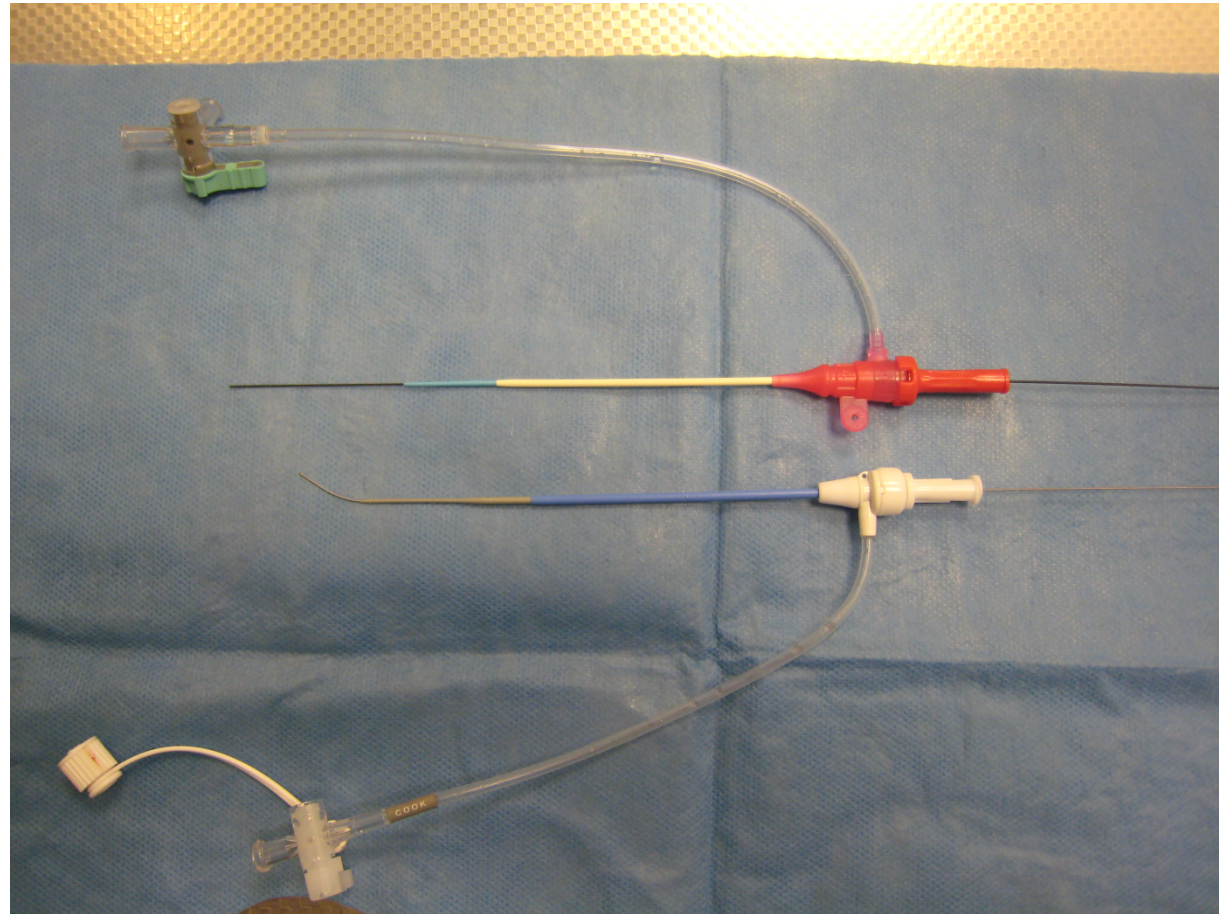
Long

Type sheath

Hydrophilic?

Heamostatic valve type

Needle for access



Long sheaths for interventions

Transseptal puncture

Duct, ASD and VSD closure

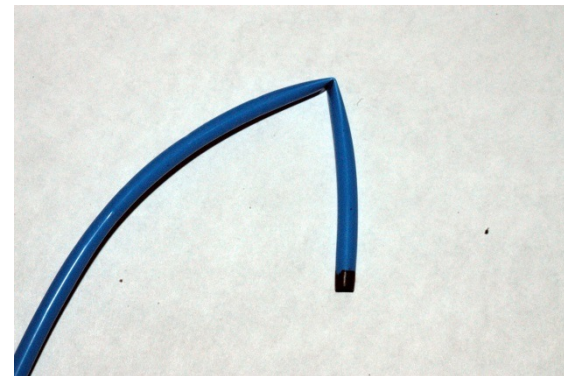
Stenting AP, Aorta,

Stenting pre-PPVI

Long (70-80 cm)

Large (6-14 French)

Braided to prevent kinking



Which sheath to chose?

Get familiar with one or two brands

Veins are bigger then arteries

Veins may collaps (filling status)

Arteries may get a spasm

Start with a small sheath

Baby fr 4 (3)

Child fr 5

Adult fr 6



Guide wires

End: Soft or stiff, Straight, J-tipped,

Stiffnes: Floppy-standard-stiff-extra stiff

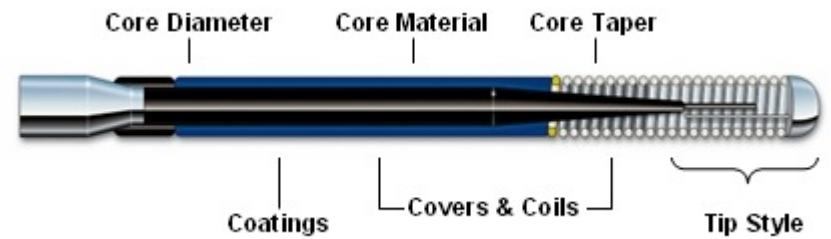
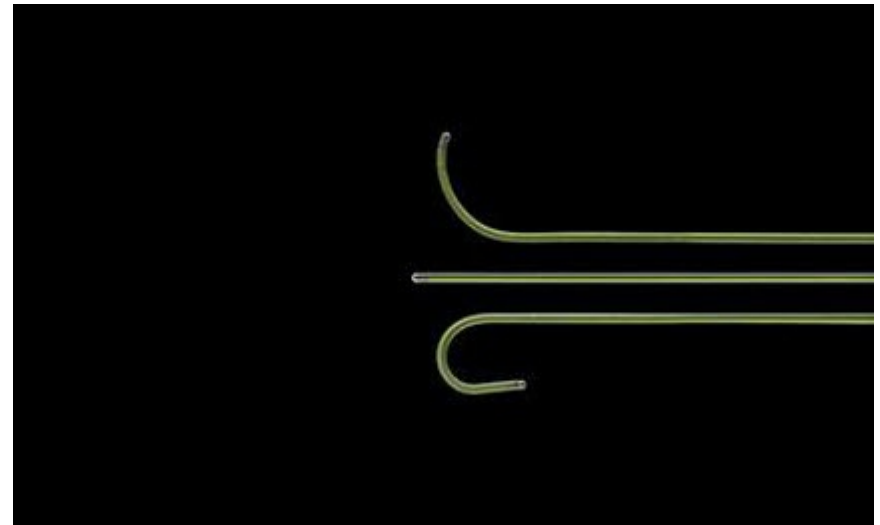
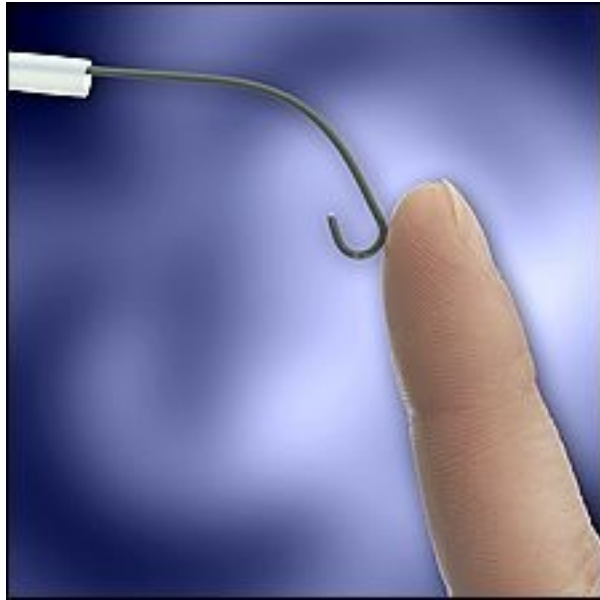
Diameter: (inch): 0.014” – 0.038”

Length: Standard (140 cm) or exchange (260 cm)

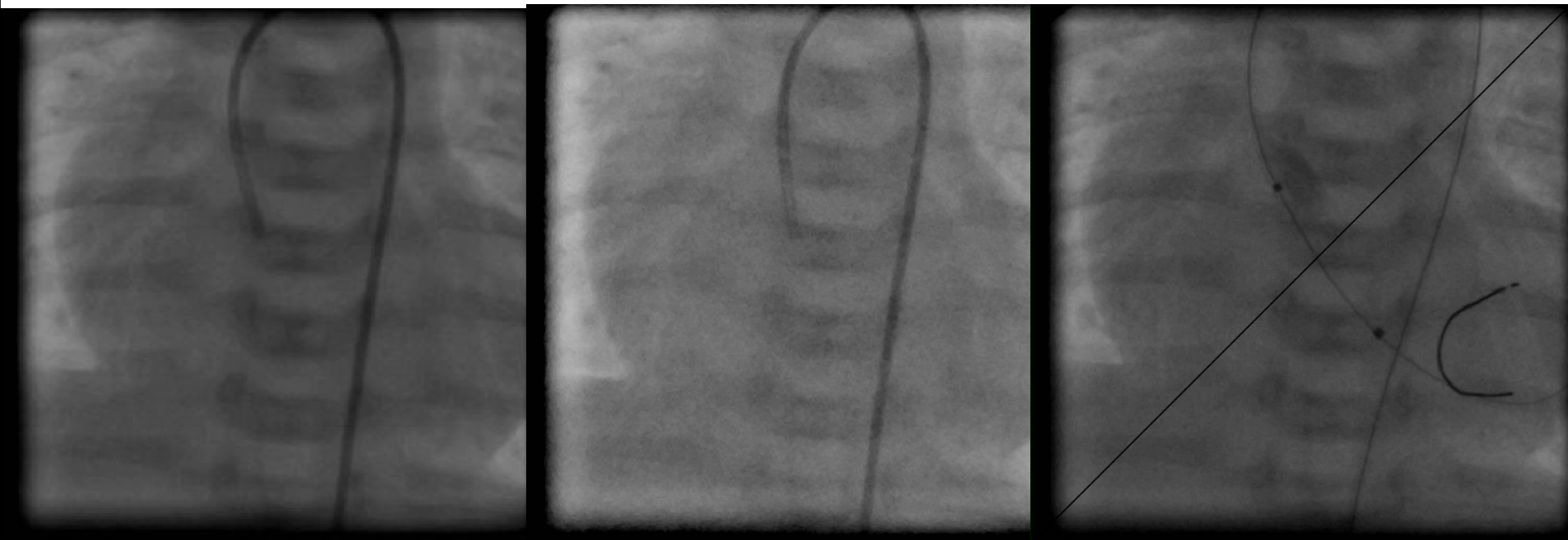
Hydrophilic or not



Wire tip

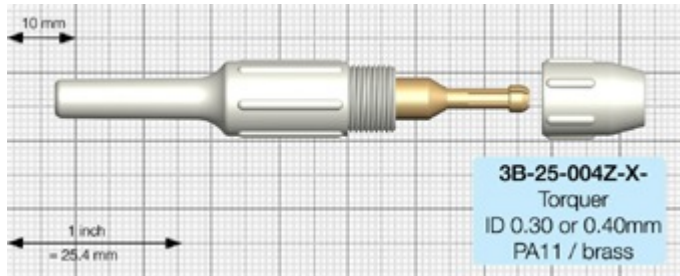


Crossing aortic valve with terumo wire

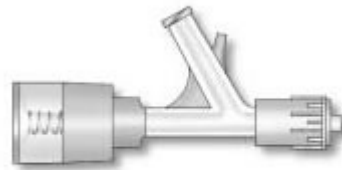


Useful tools on/with wires

Wire torquer



Co-pilot



Catheters

What is the goal?

Pressure measurement

Wedge pressure (distal hole)

Angiography multiple side holes

What is the sheath size?

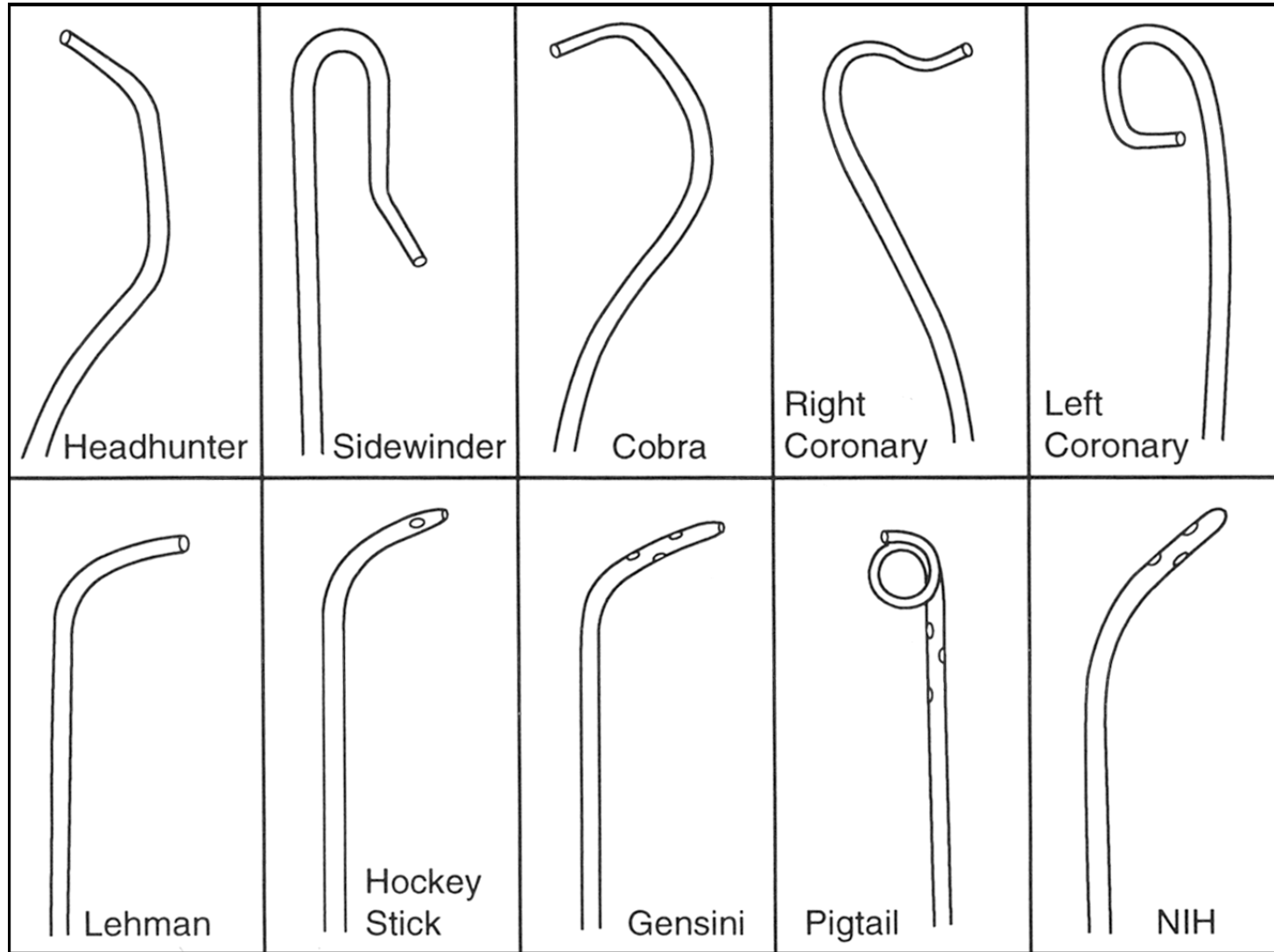
Not every 4F cath fits in a 4F sheath....

What is the size of the patient?

Choose appropriate length for patient size

60-120 cm

Catheters

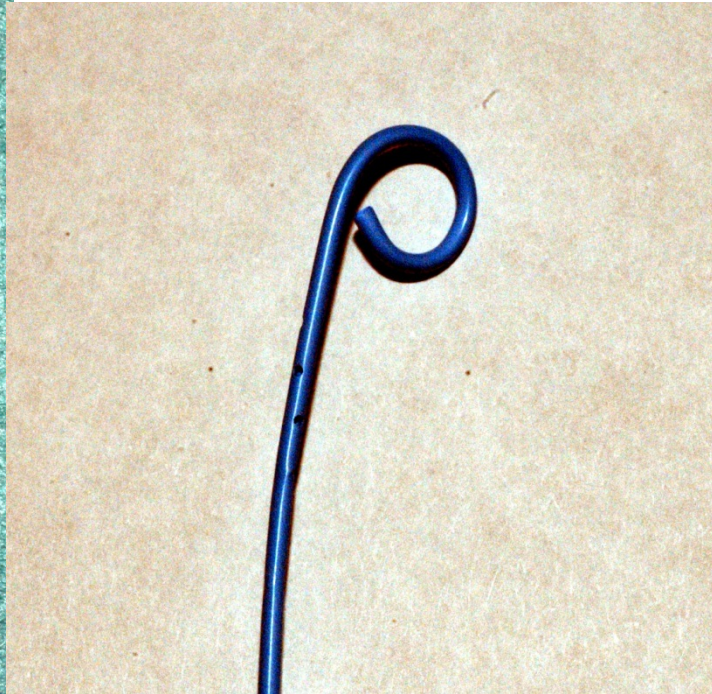


Angiographic catheters

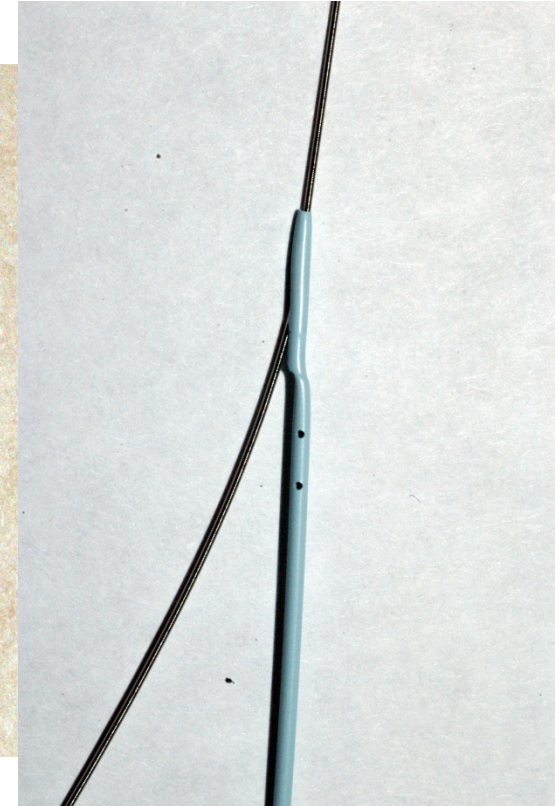
Berman angio



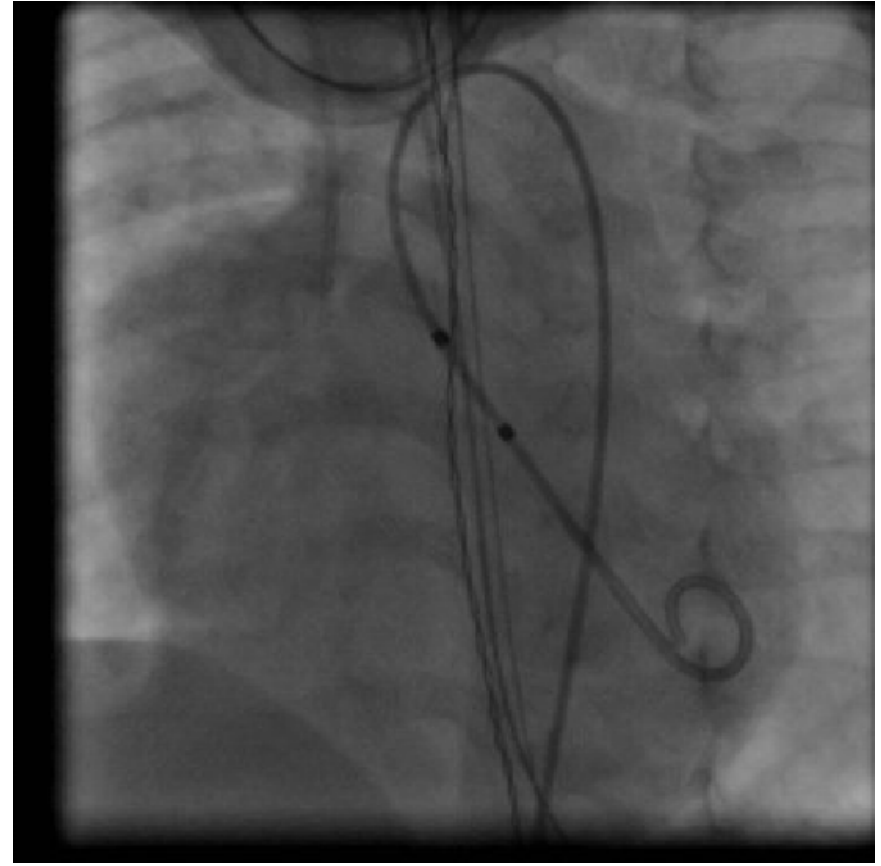
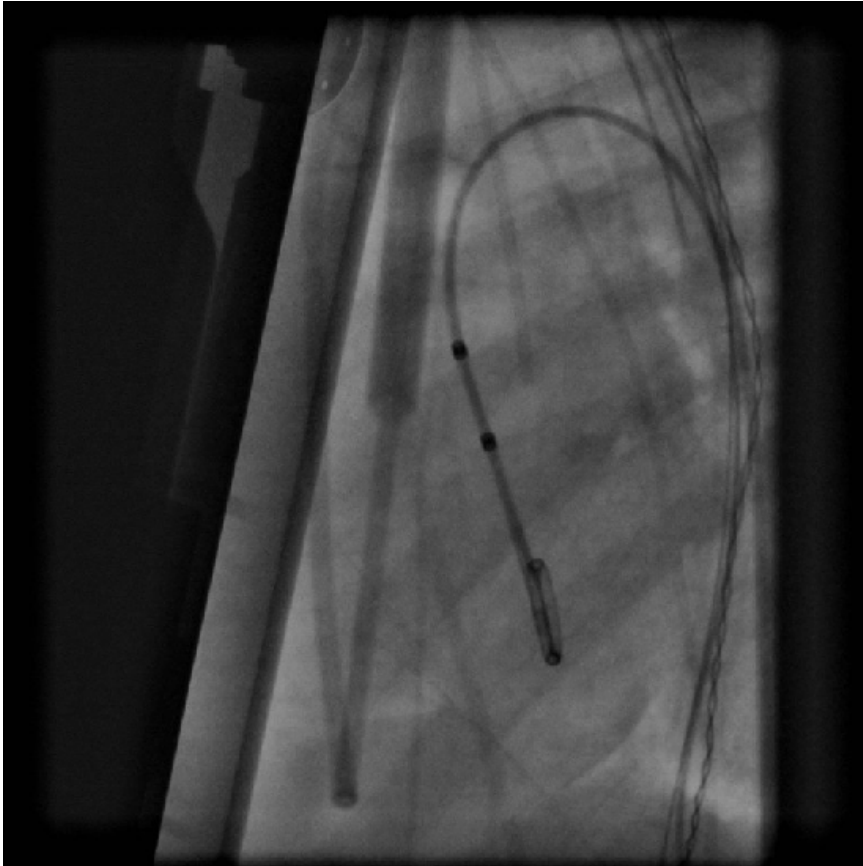
Pigtail



Multitrack

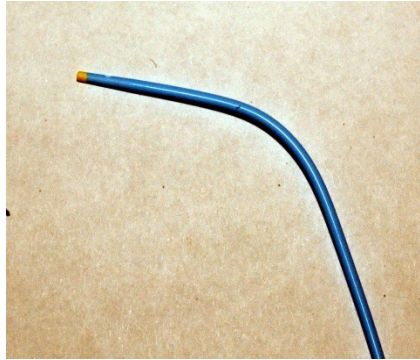


Pigtail catheter with calibration marker

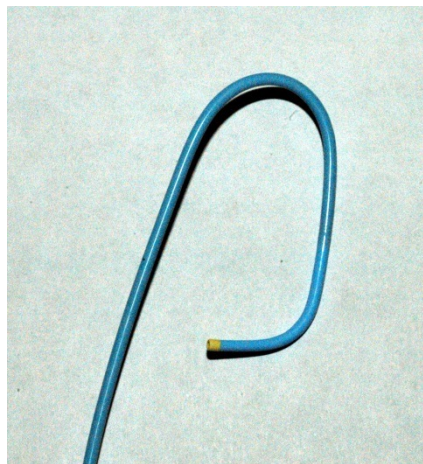


End-hole catheters

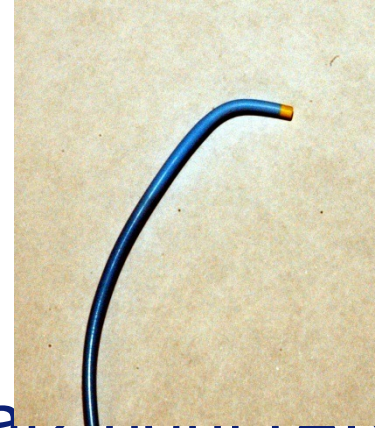
Multi purpose (MP)



Judkins left (JR)



Judkins right (JR)



Amplatz right (AR)



Wire and catheter properties

Trackability

Navigation through tortuous routes

Pushability

Pushing power well transmitted from proximal to distal

Torque control

Proximal torsion = distal torsion

Crossability

Capable of passing narrowings

X-ray opacity



Take home

Wider range of catheter/wire/sheaths then in adult interventional cardiology

Get familiar with limited range of products