

Managing Carotid Access from Straight - Forward to Complex



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Disclosure Statement of Financial Interest

I, Bernhard Reimers DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.



Access to the common carotid artery

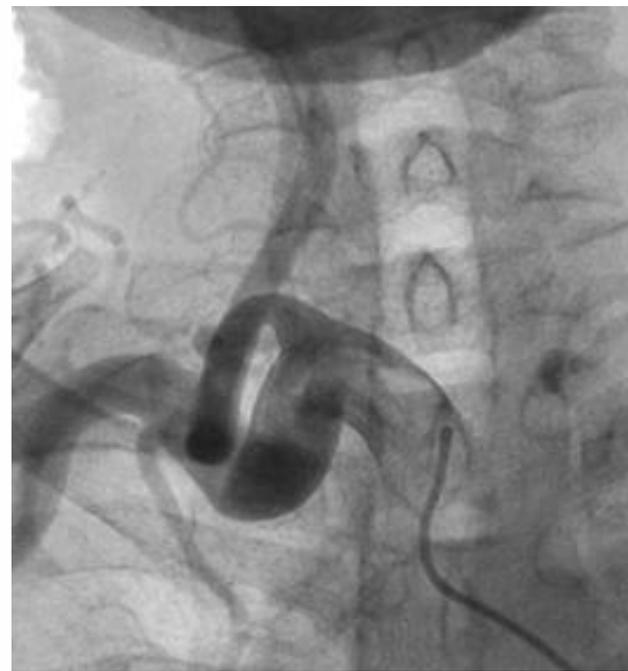
Before you start:

- double check antiplatelet therapy
- give heparin (100U/kg)



Arch & access to CCA related complications

**CAPTURE registry: 20% of neurologic events were contralateral.
That means that at least 40% of events are arch or access related.**

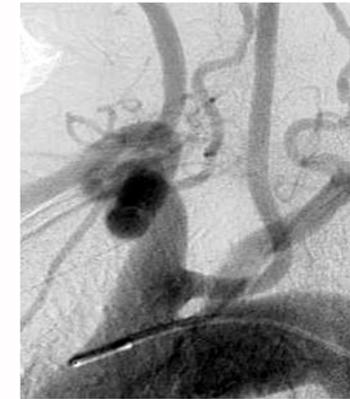


Before you start, how to evaluate the access?

- Previous CT/MRI imaging



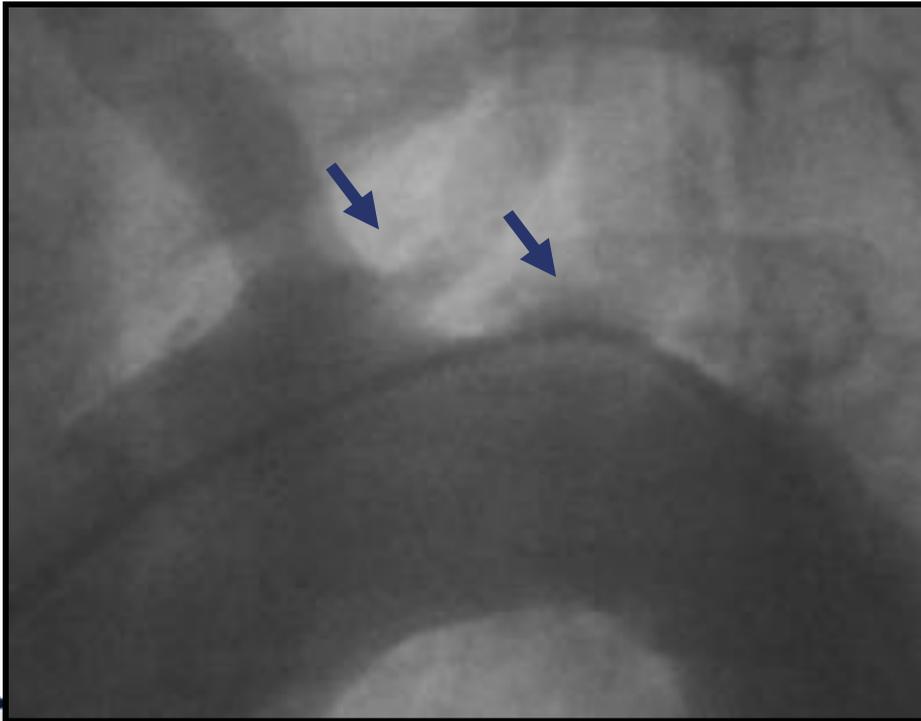
- Arch angiography



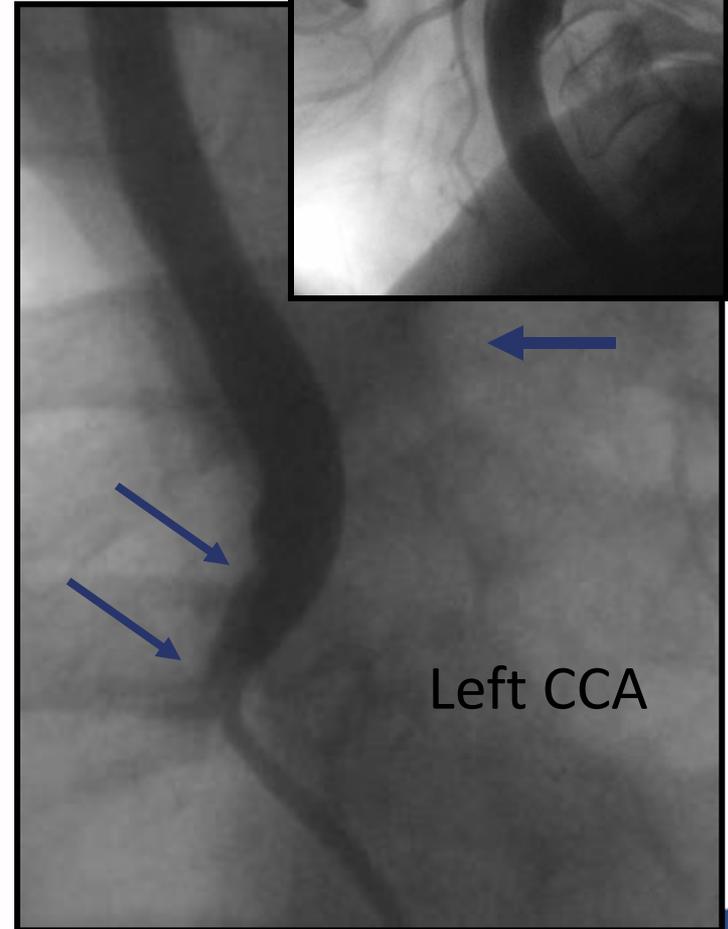
- During selective diagnostic angiography
(if difficult = difficult arch)



Diagnostic Angiogram



Disease in the origin of both the LCCA and the LScA



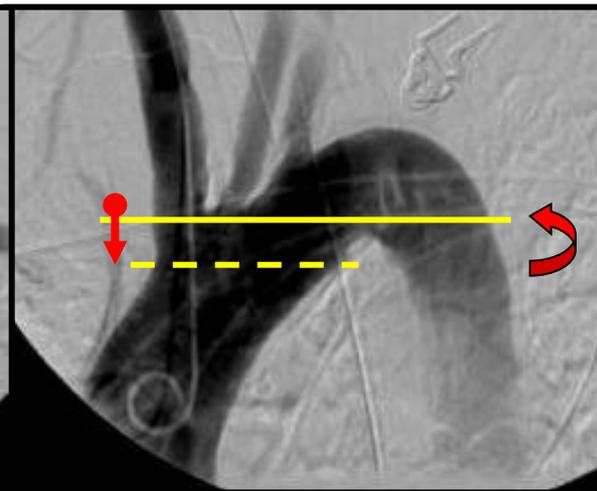
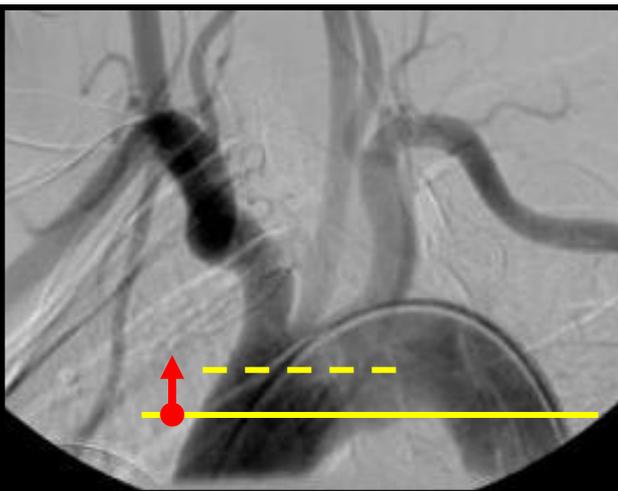
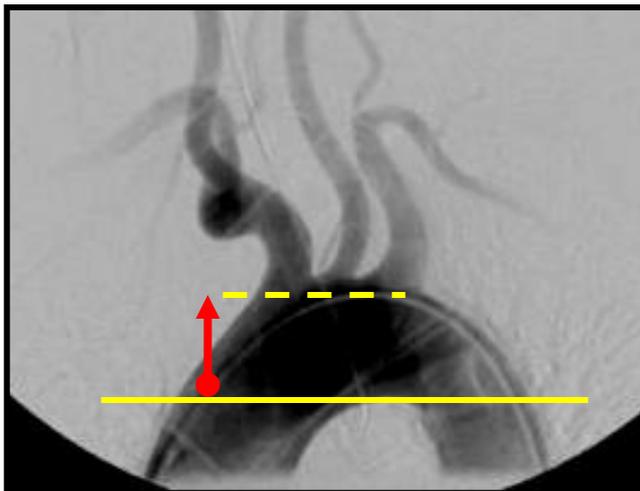
CCA engagement

Types of Aortic Arch

I

II

III



**JR
Berenstein
AR mod.**

**Simmons
AR mod.
Hockey-stick
IM**

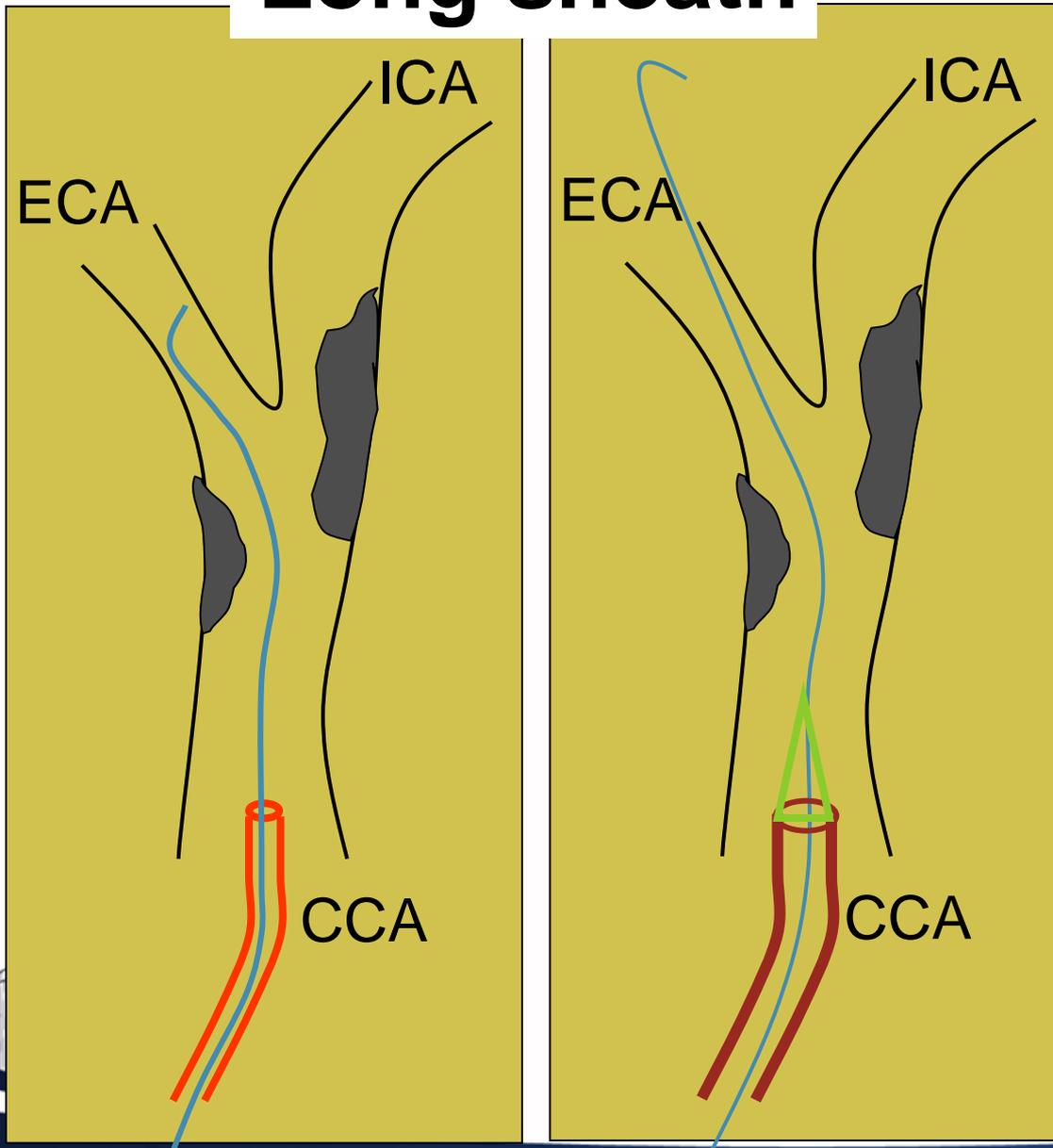
**Simmons
Hockey-stick
IM**

Long sheath
Guiding cath.

Long sheath
Guiding cath.

Guiding cath.

Long sheath

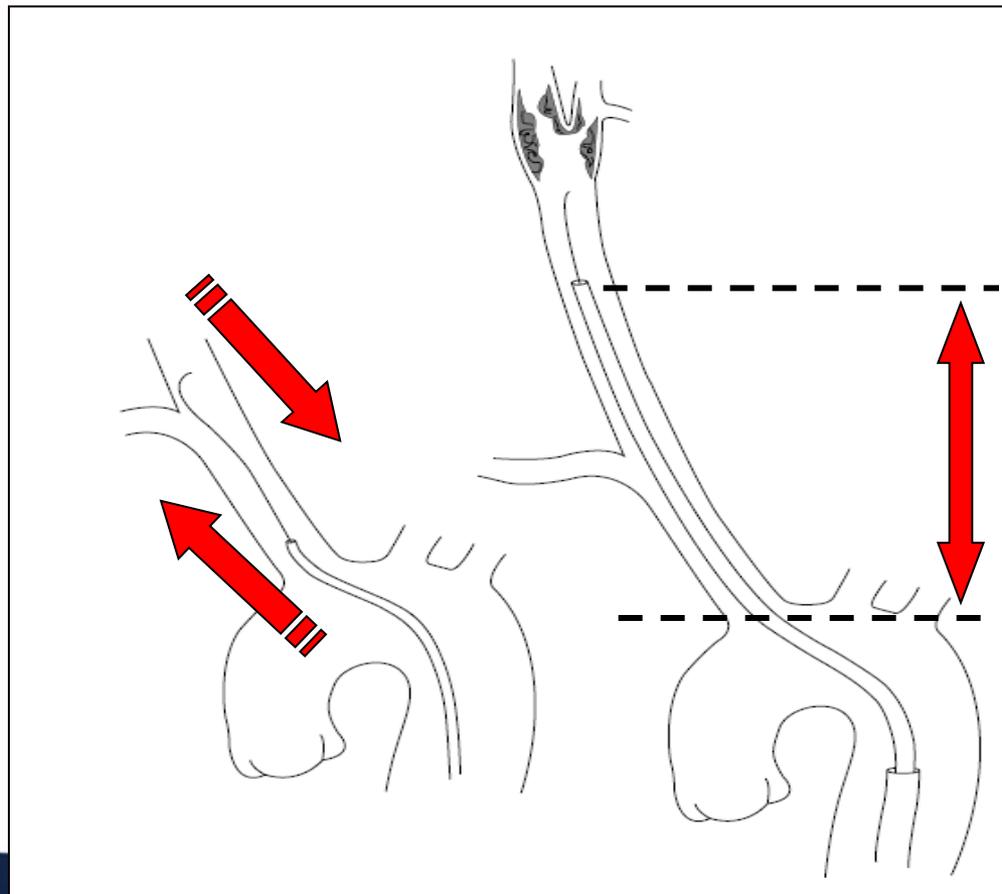


**Advancement
of sheath on
0.035" support
wire positioned
in the ECA**



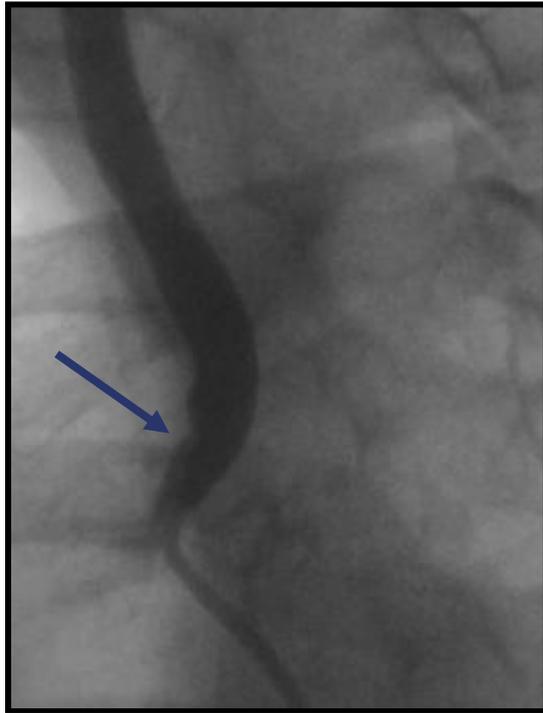
CCA engagement using 4-5 F diagnostic catheters and soft 0.035 J-tip hydrophylic wires (terumo)

“Push and Pull” Technique



'Telescopic technique' (1)

For delicate arch-CCA transition or disease/absence of bifurcation



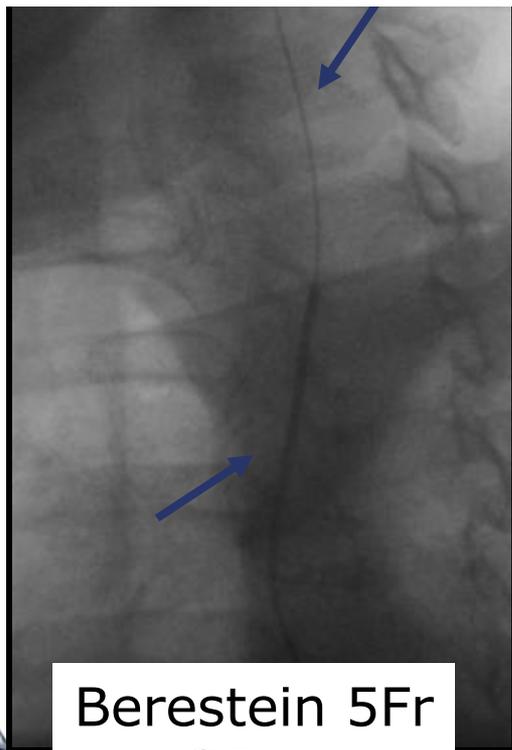
ECA
occlusion



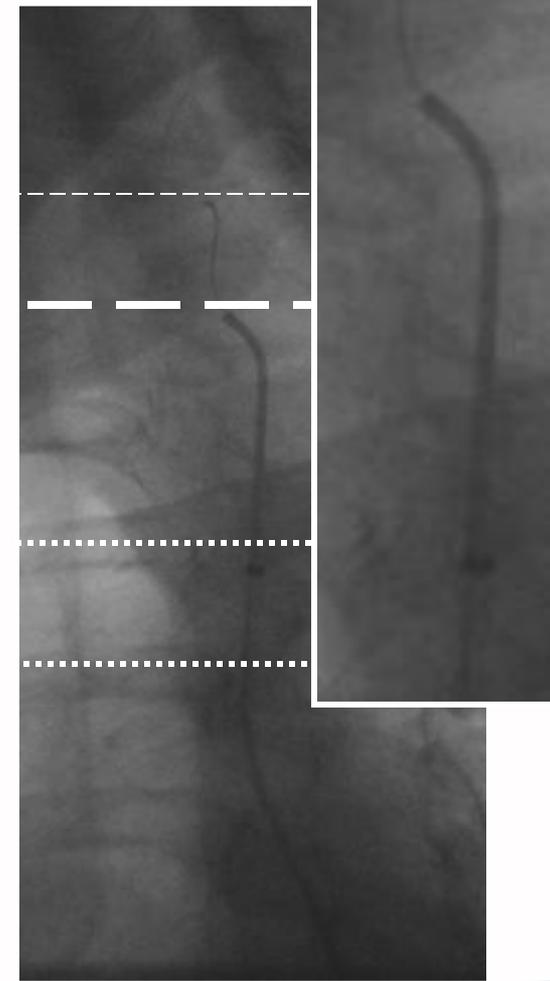
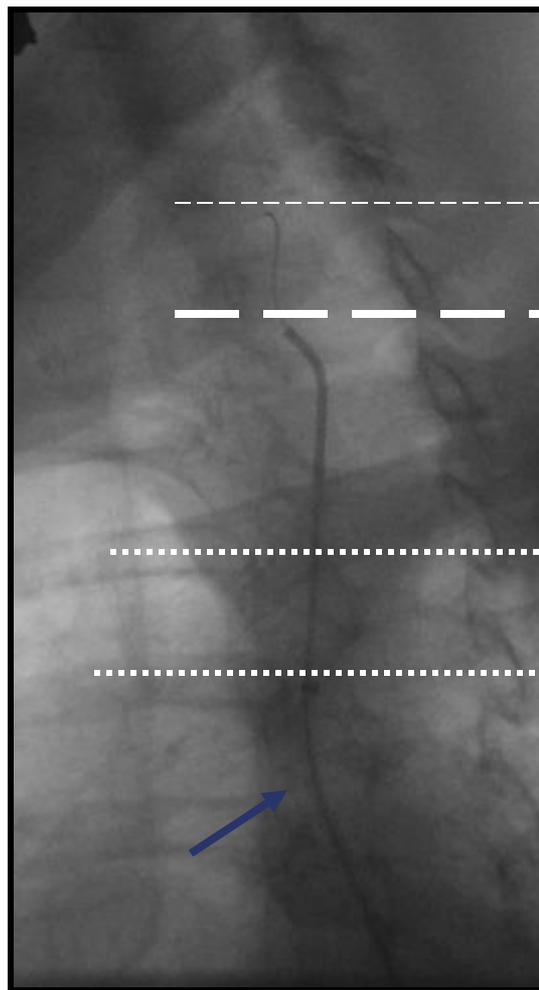
'Telescopic technique' (2)

Not necessary to touch bifurcation

Terumo
Hydrophilic
wire 0.035"

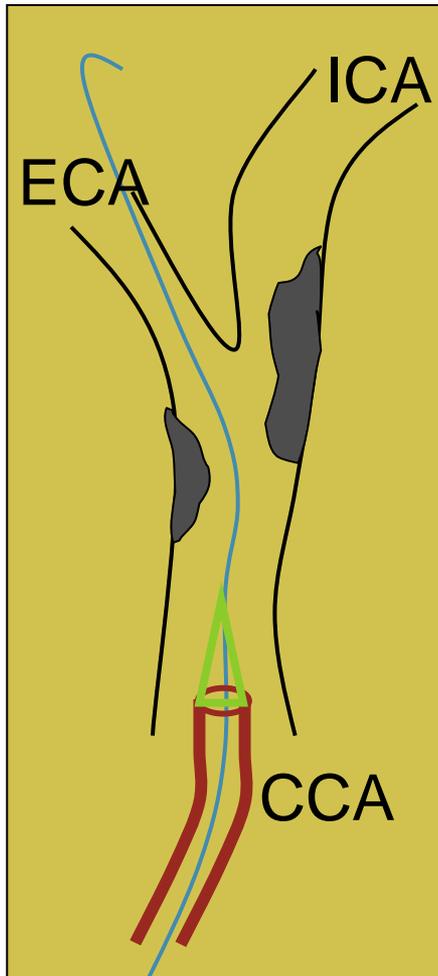


Berestein 5Fr
125 cm



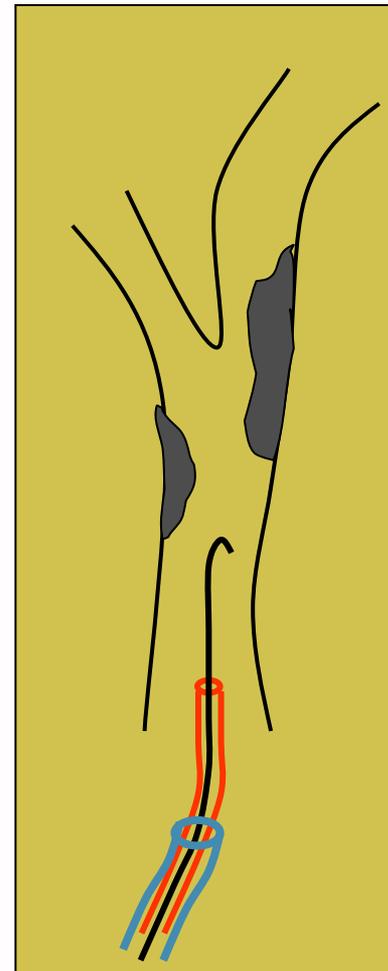
Shuttle 6Fr (90cm) hydrophilic sheath

Long sheath technique



0.035" support wire

vs



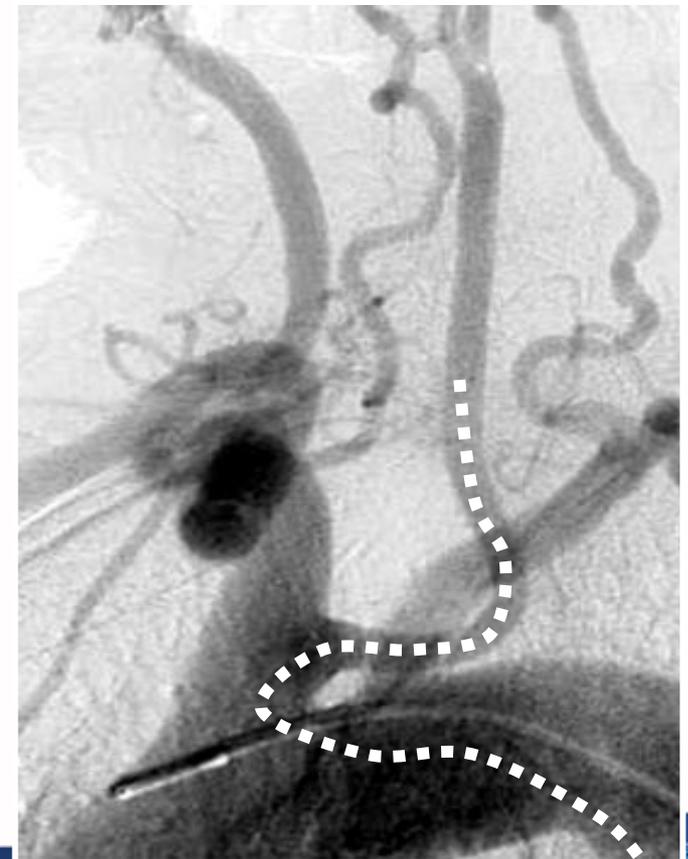
telescope

Requires
125cm,
5F,
diagnostic
catheters
(JR4, Vert,
..)

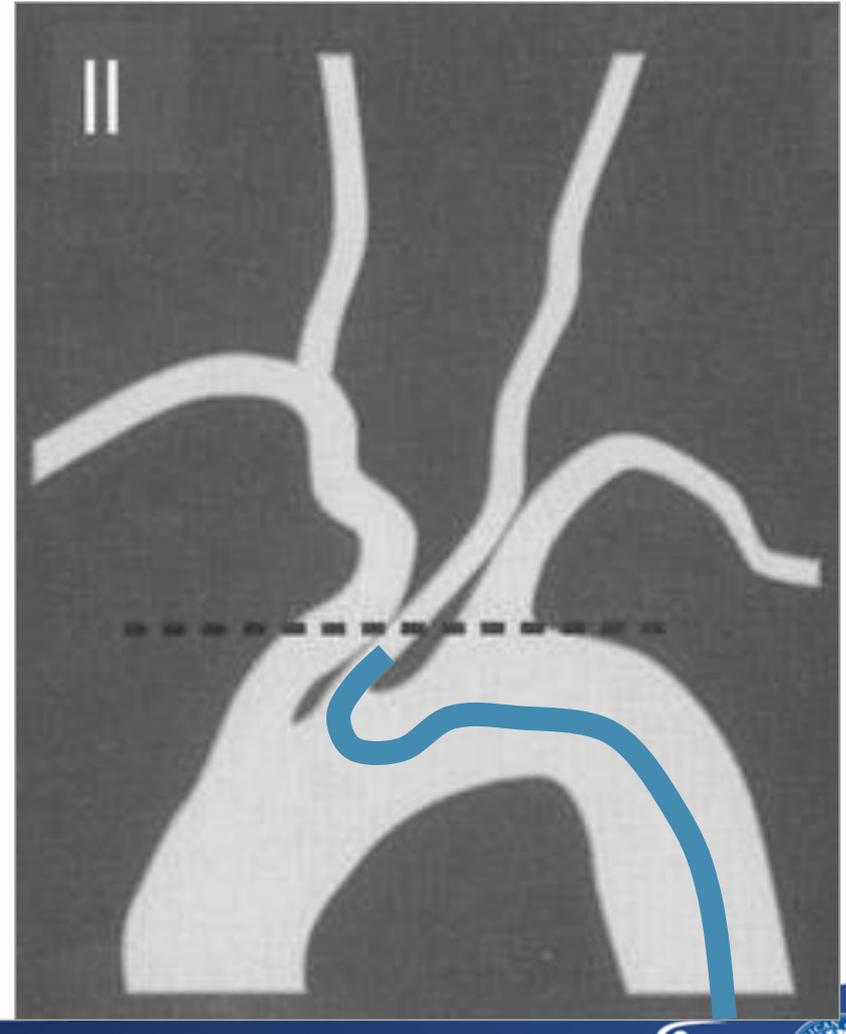
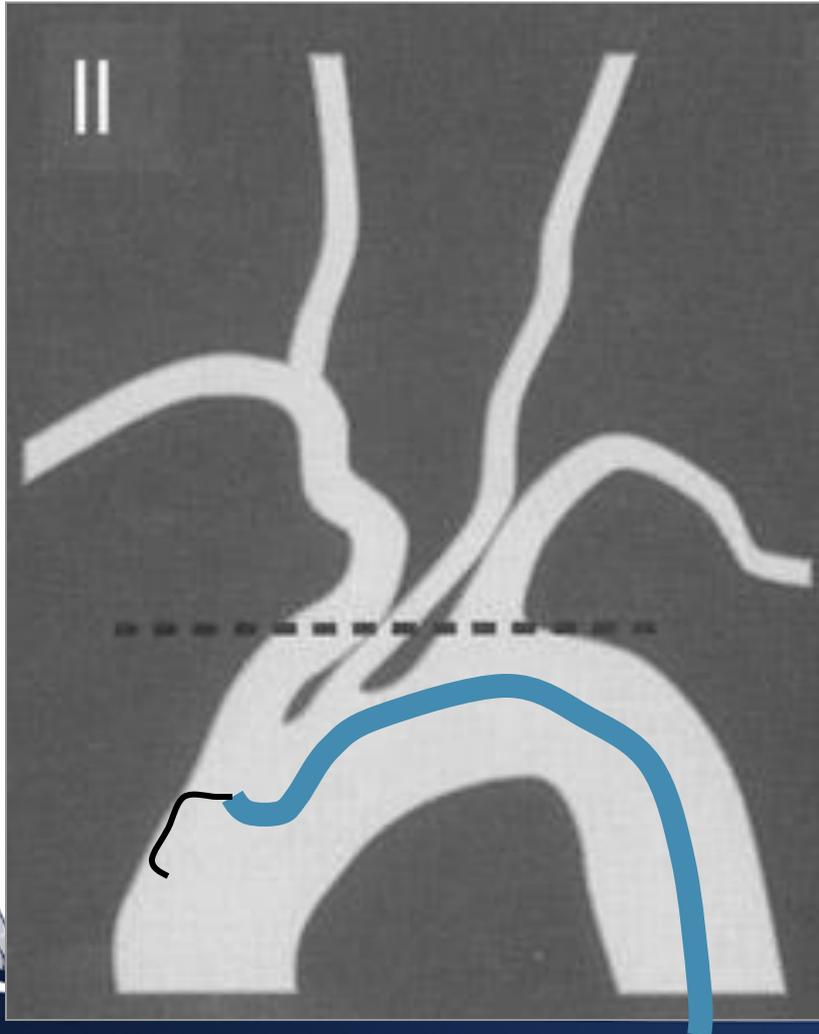


Difficult access

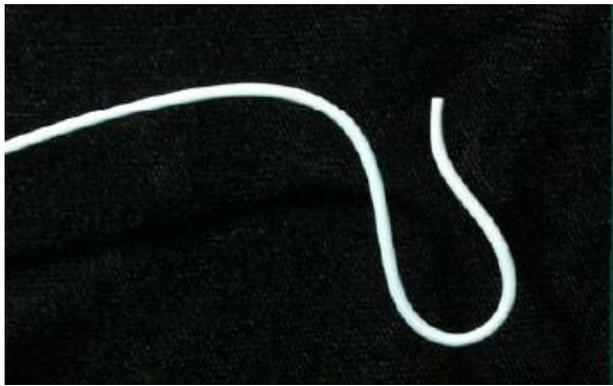
Guiding Catheters (7-8 Fr)



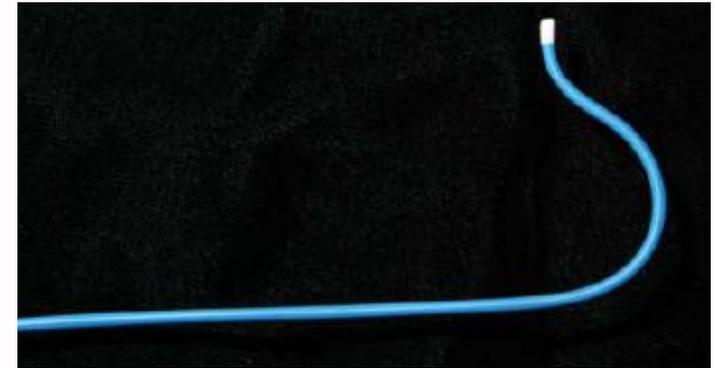
No touch technique



How to reach... with Guiding catheters



Vitek



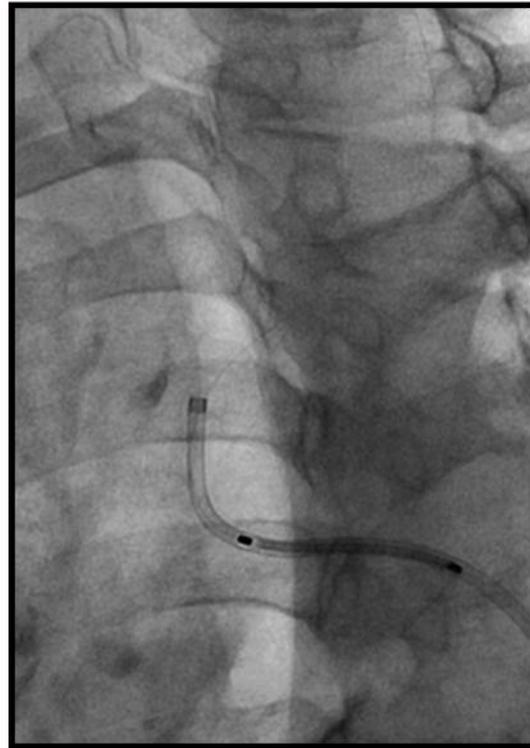
Amplatz



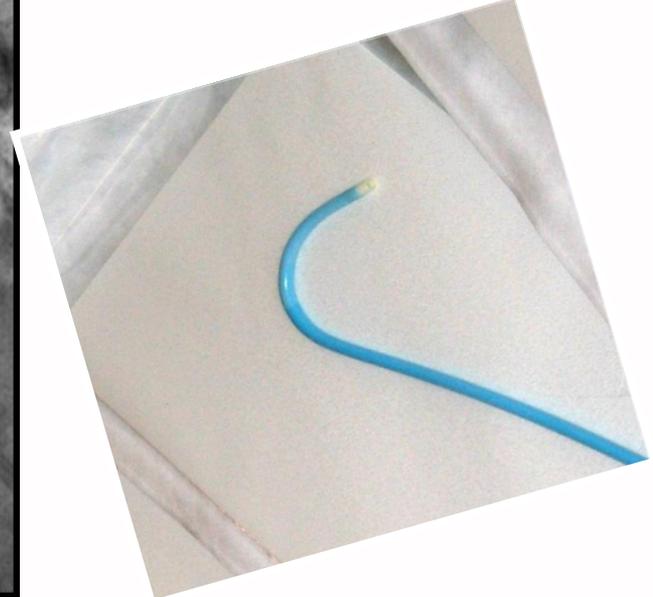
Simmons



8 F guiding cath: Parked in the arch, don't advance into CCA

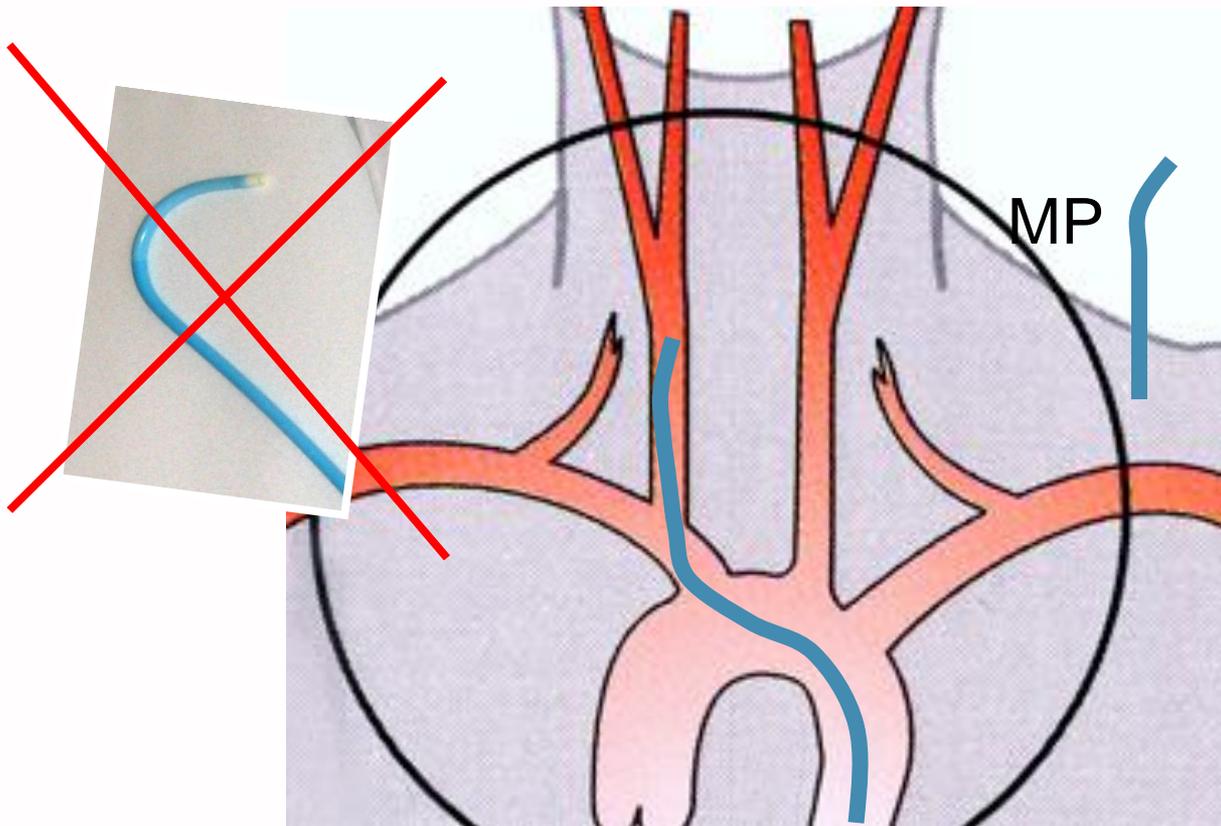


Hockey stick
Simmons



Pro: quick and easy

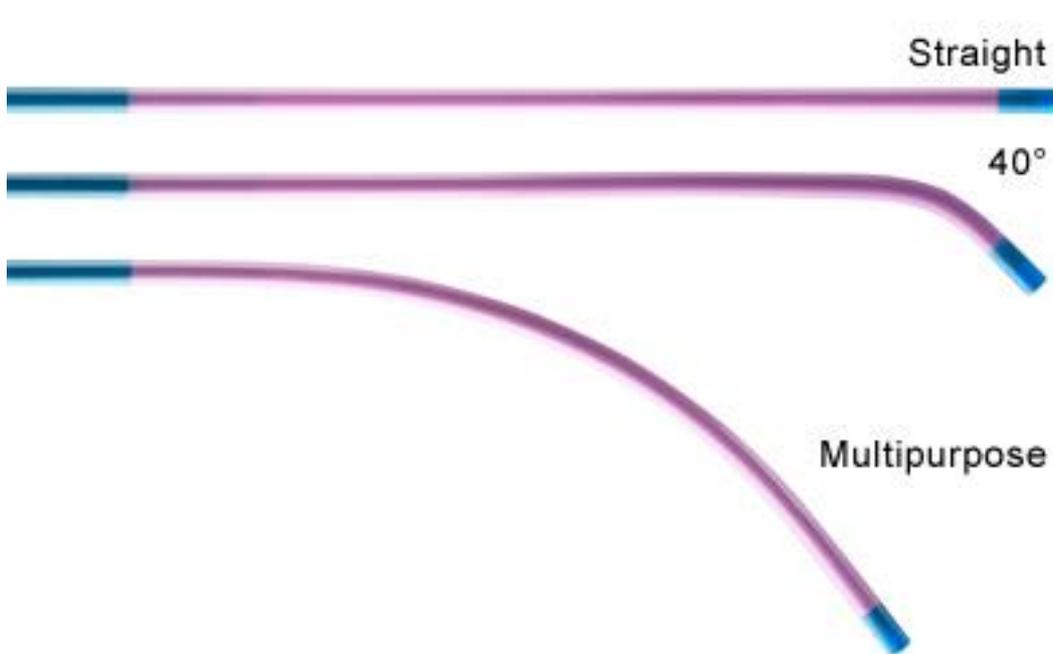
Con: 8F, not so much support, arch manipulation



**I discourage deep engagement of
guiding catheters**

**if you want deep engagement use very,
very soft tip catheters**

Special soft, small curve 7-8 F guiding catheters + telescope



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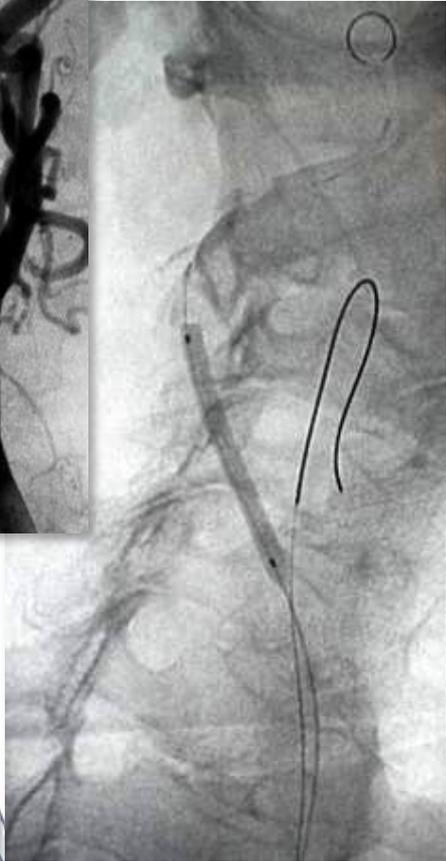
TCT2011

Guider Softip™ XF Guide Catheters

CARDIOVASCULAR
RESEARCH FOUNDATION
a passion for innovation



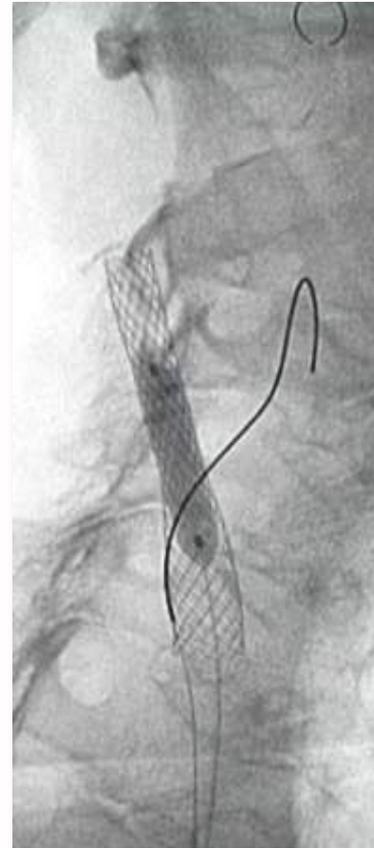
Simple Trick to increase guiding catheter support. “buddy wire” in the external carotid artery



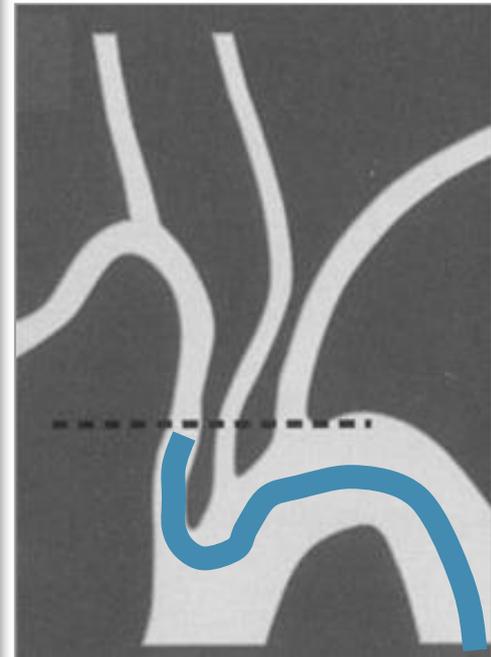
Pre dilatation



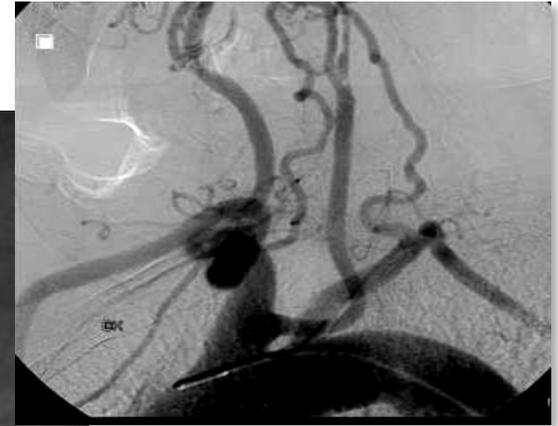
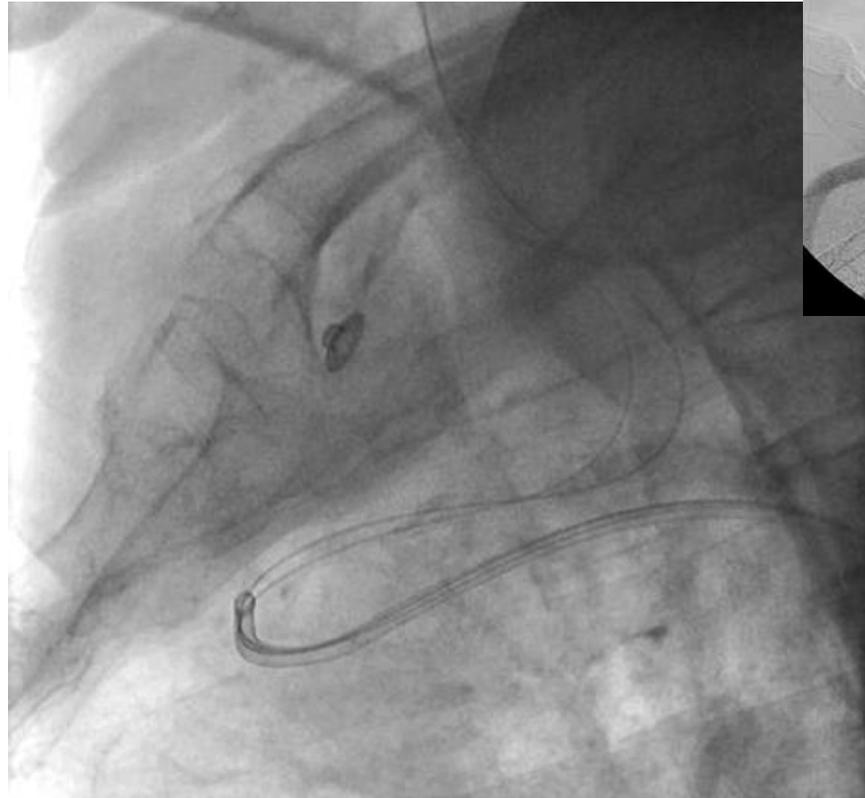
Stenting



Post dilatation

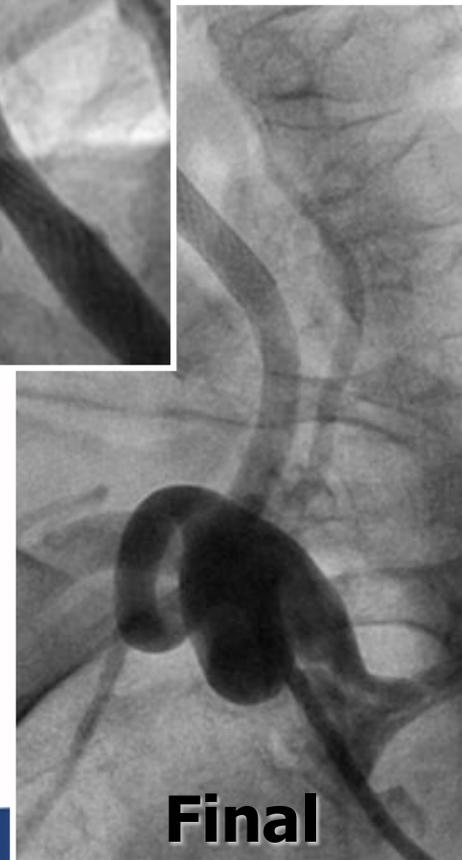
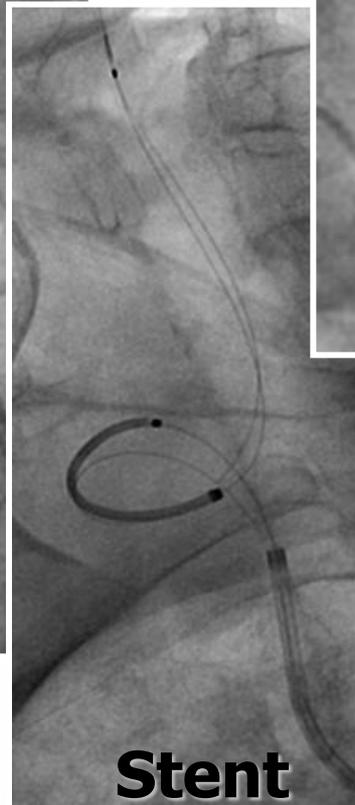
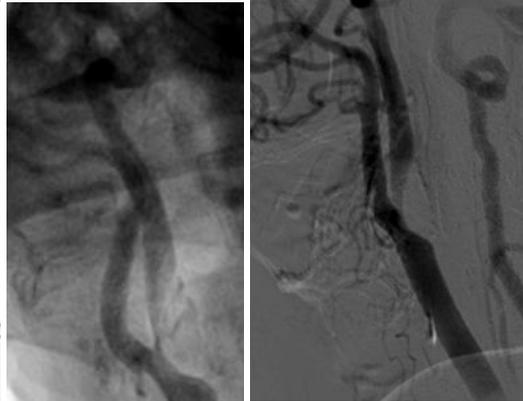
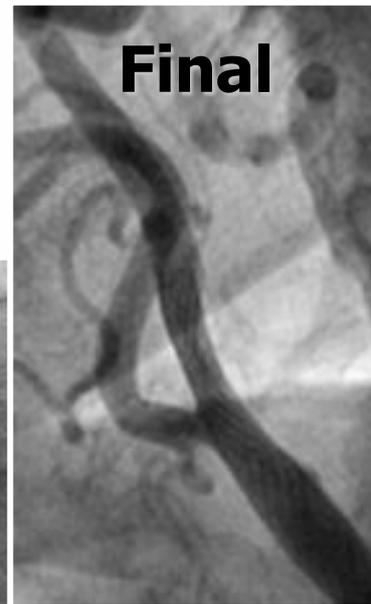
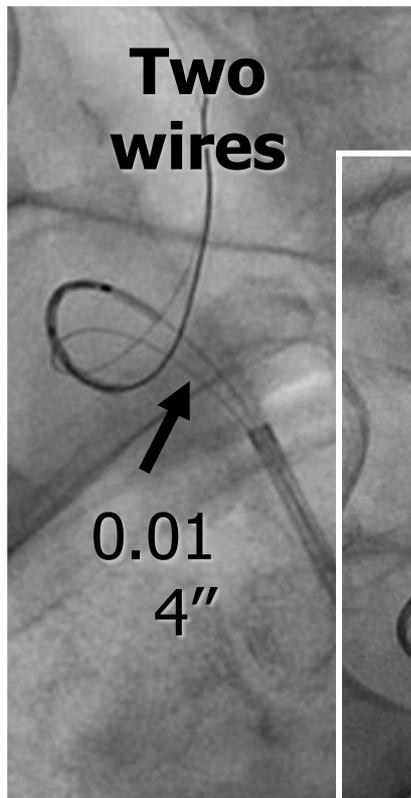


Buddy wire

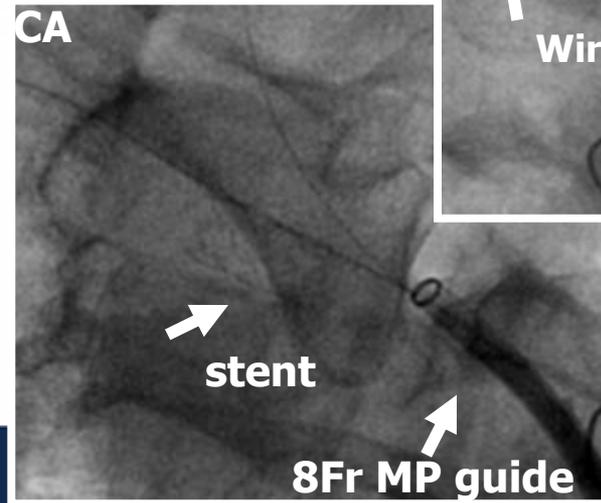
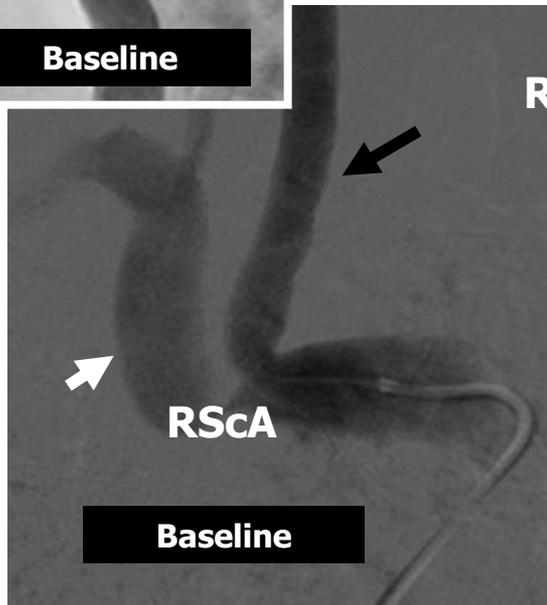
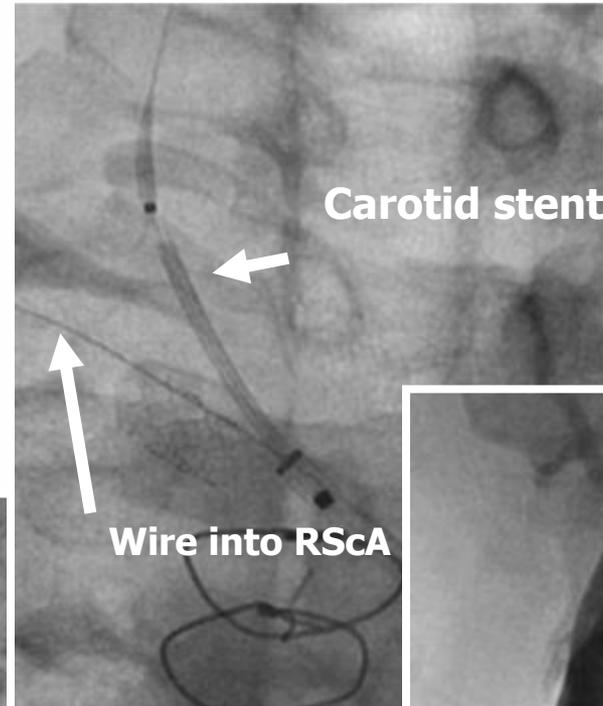
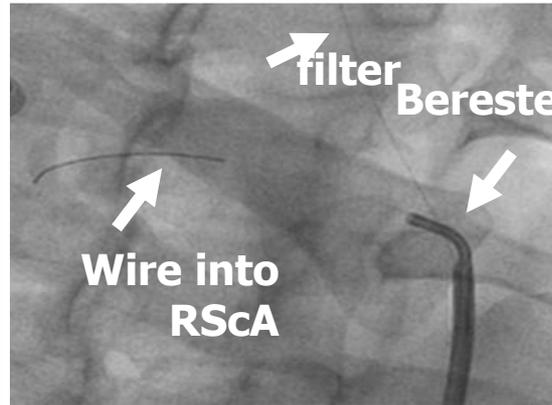


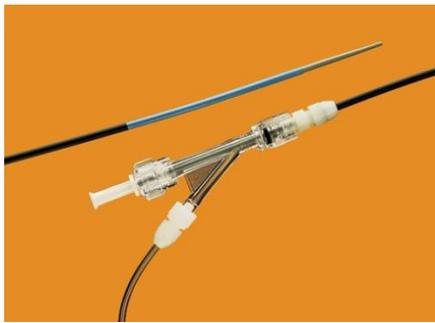
- to increase support of guide cath
- 0.014" support wire positioned before protection system wire

“Buddy-wire” in ICA; 8F hockey stick in anonymous trunk

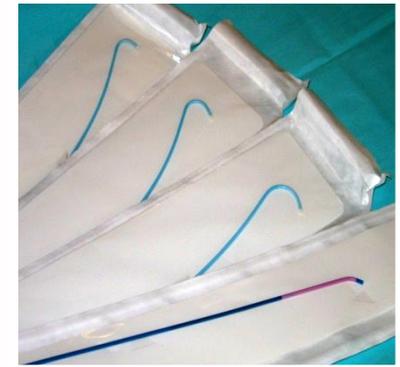


CCA engagement





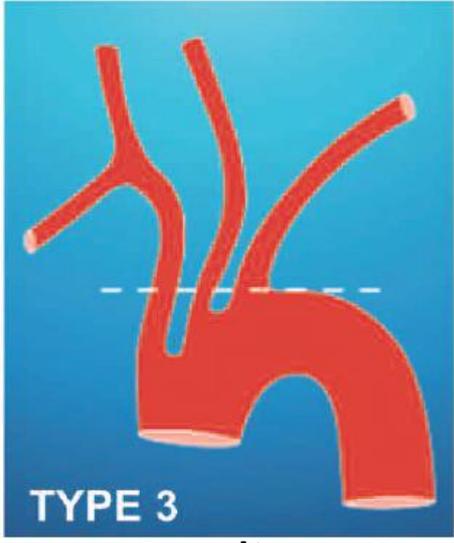
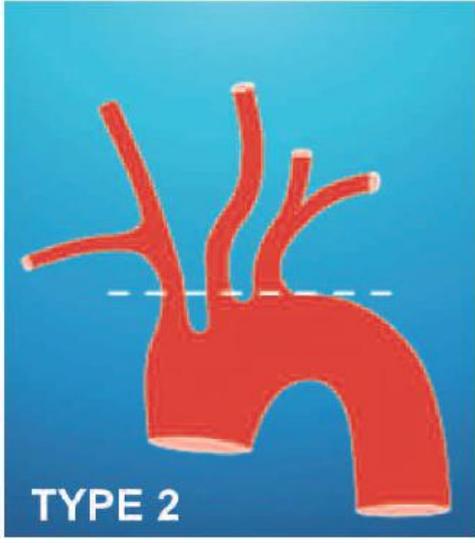
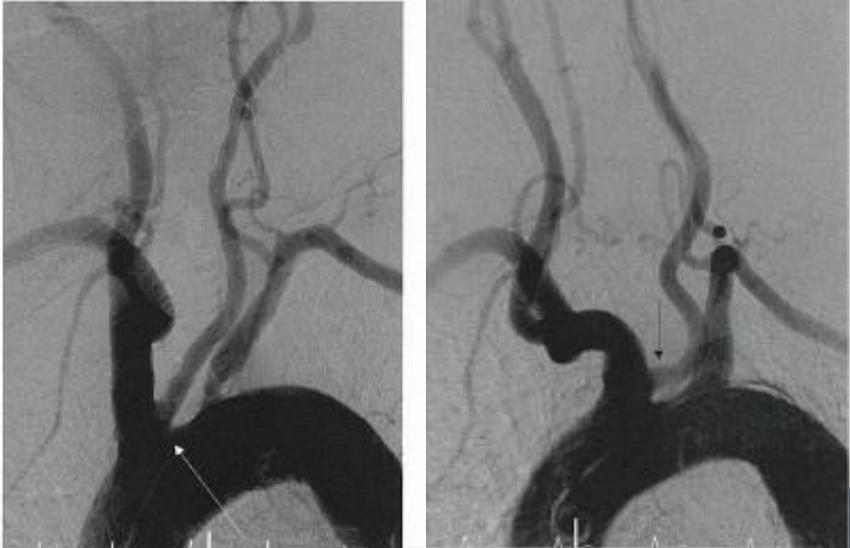
Long sheaths vs guiding catheters

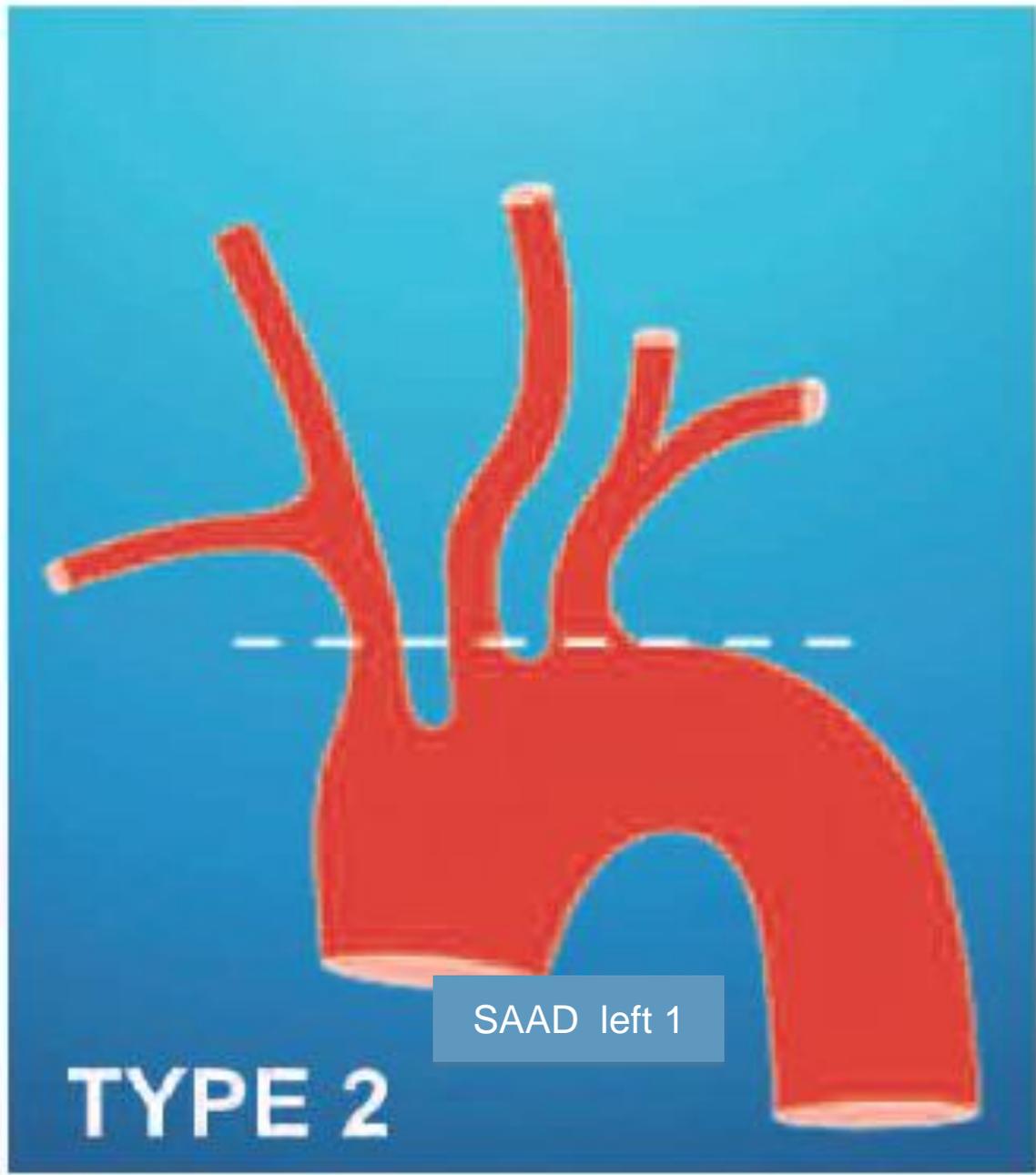


	Long sheath	Guide cath
diameter	6 F	7-8 F
stability	++	0
Ease of use; speed	0	+
Arch manipulation	++	0
Difficult access	0	++



New tools maybe very helpful





SAAD left 1

TYPE 2





SAAD right

TYPE 3

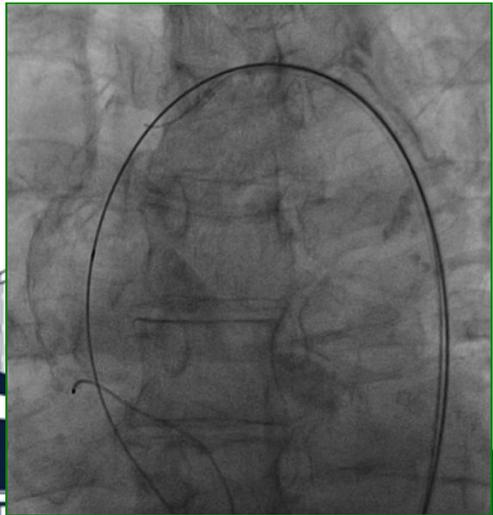
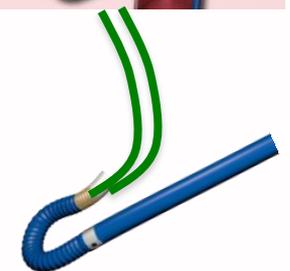
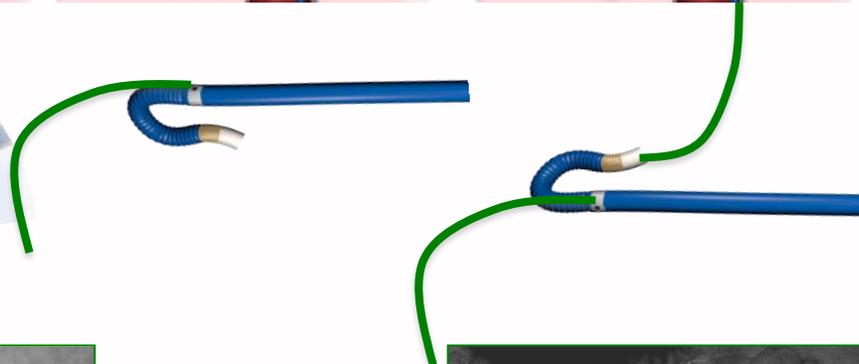
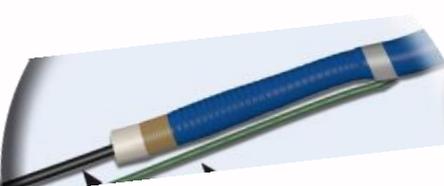
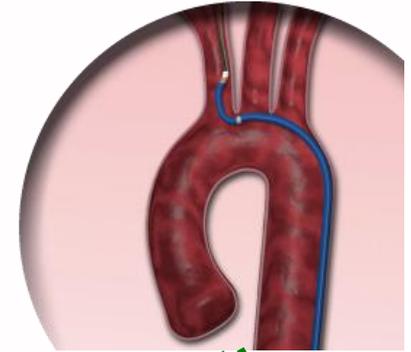
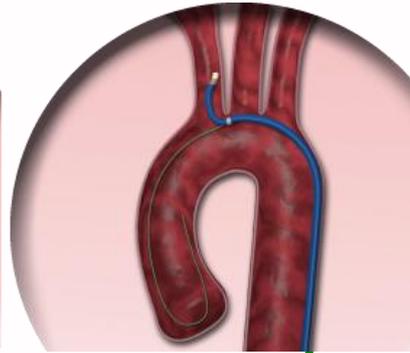
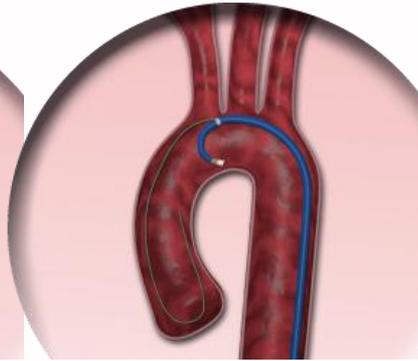
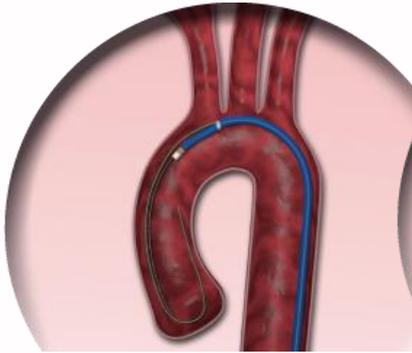


Position in arch
on both wires

Canulate CCA/BET

Wire CCA with first soft
and then support wires

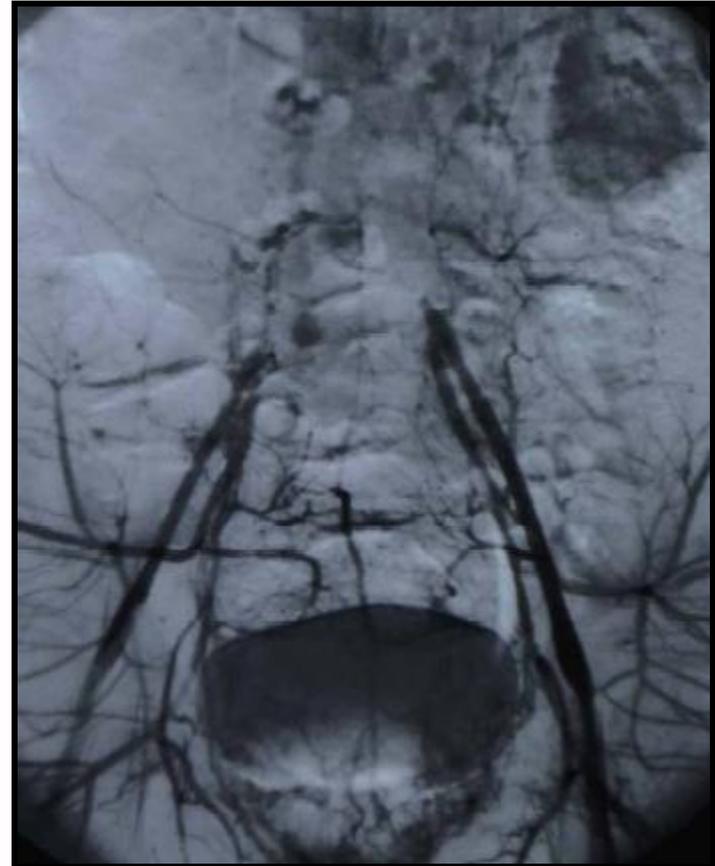
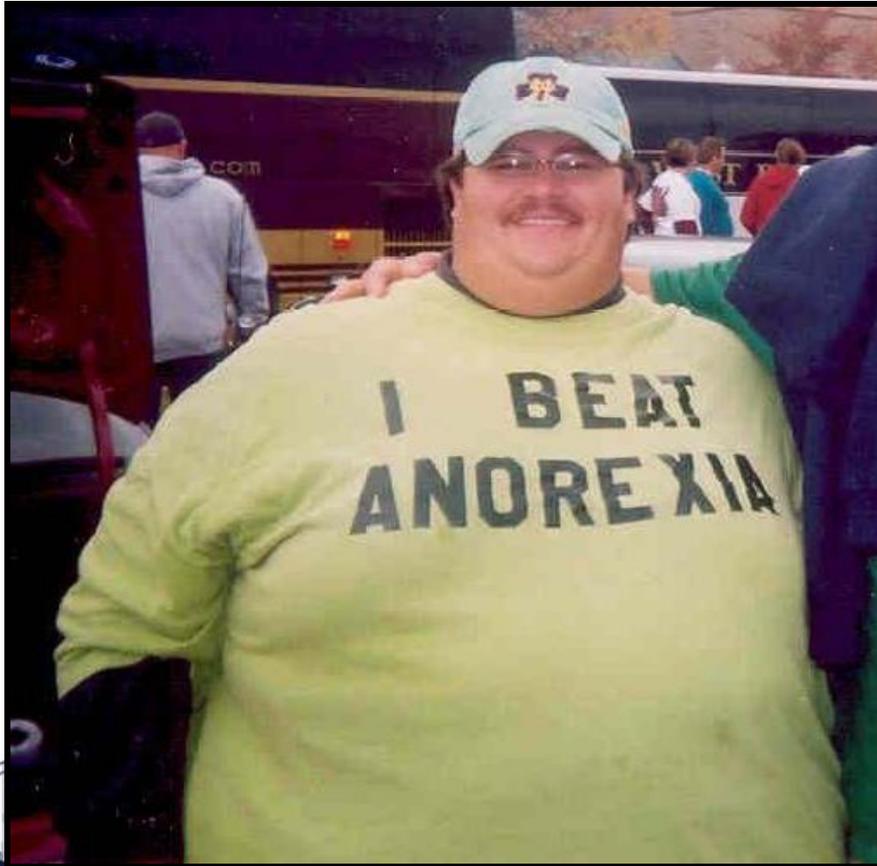
Advance on both wires



Piton
8F catheter,
Medtronic
Invatec

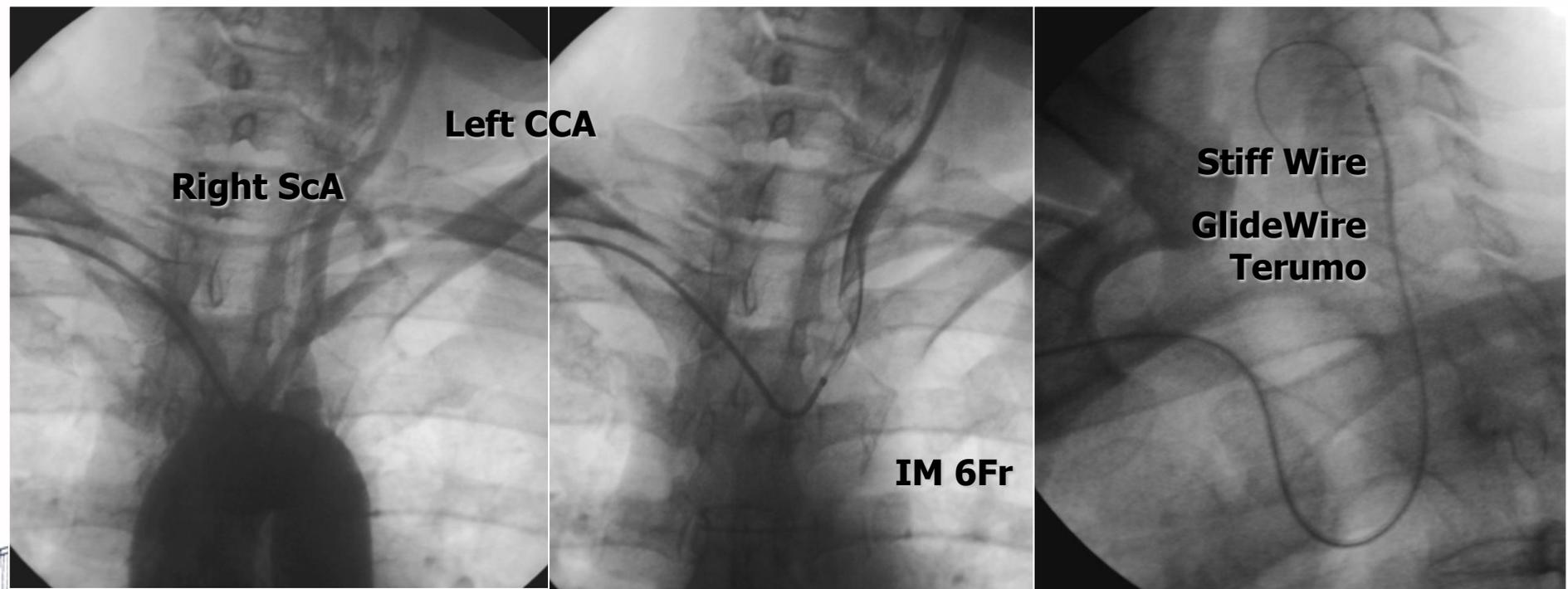


From difficult to impossible



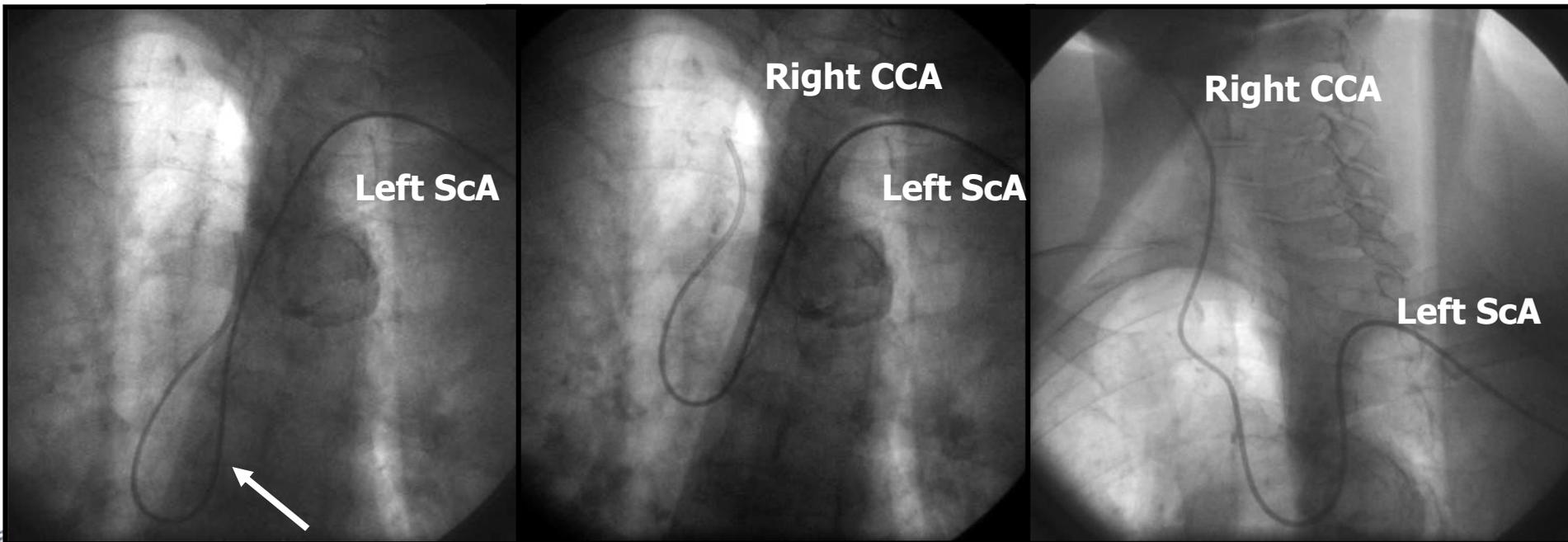
Brachial/radial approach

“Right to Left approach”



Brachial Approach

“Left to Right approach”

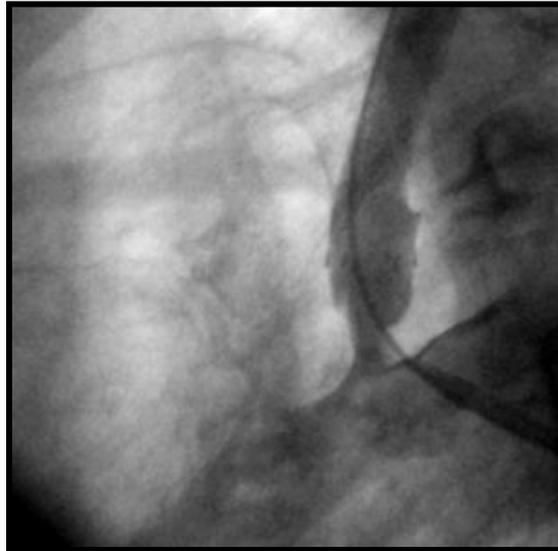


CCA access complications

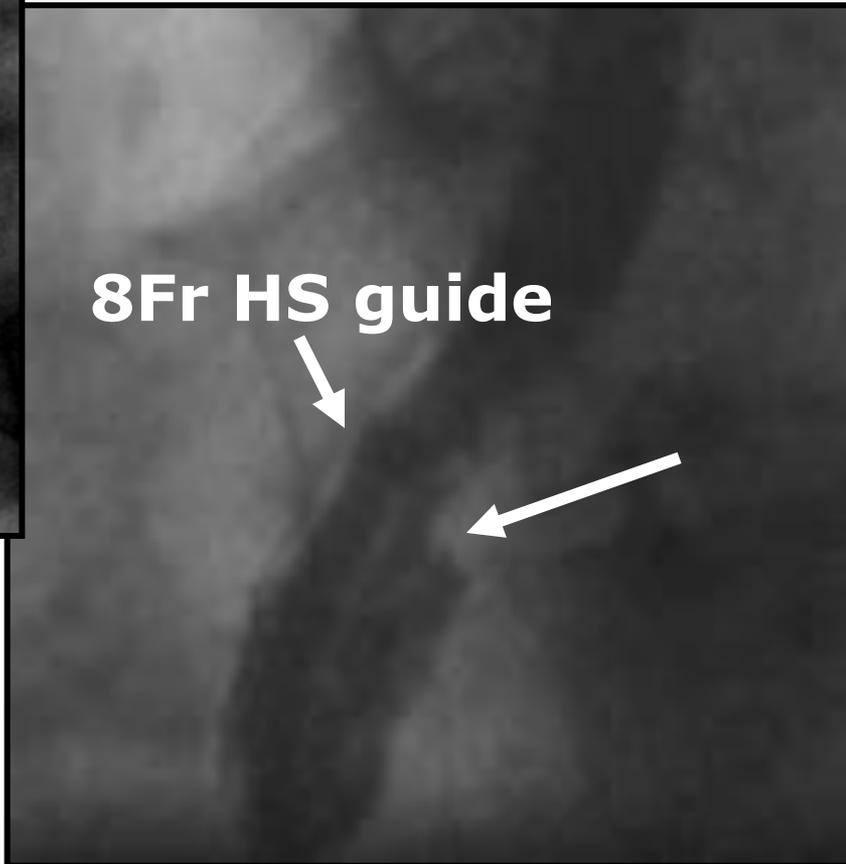


"Proximal site" Complications

Dissection of the CCA



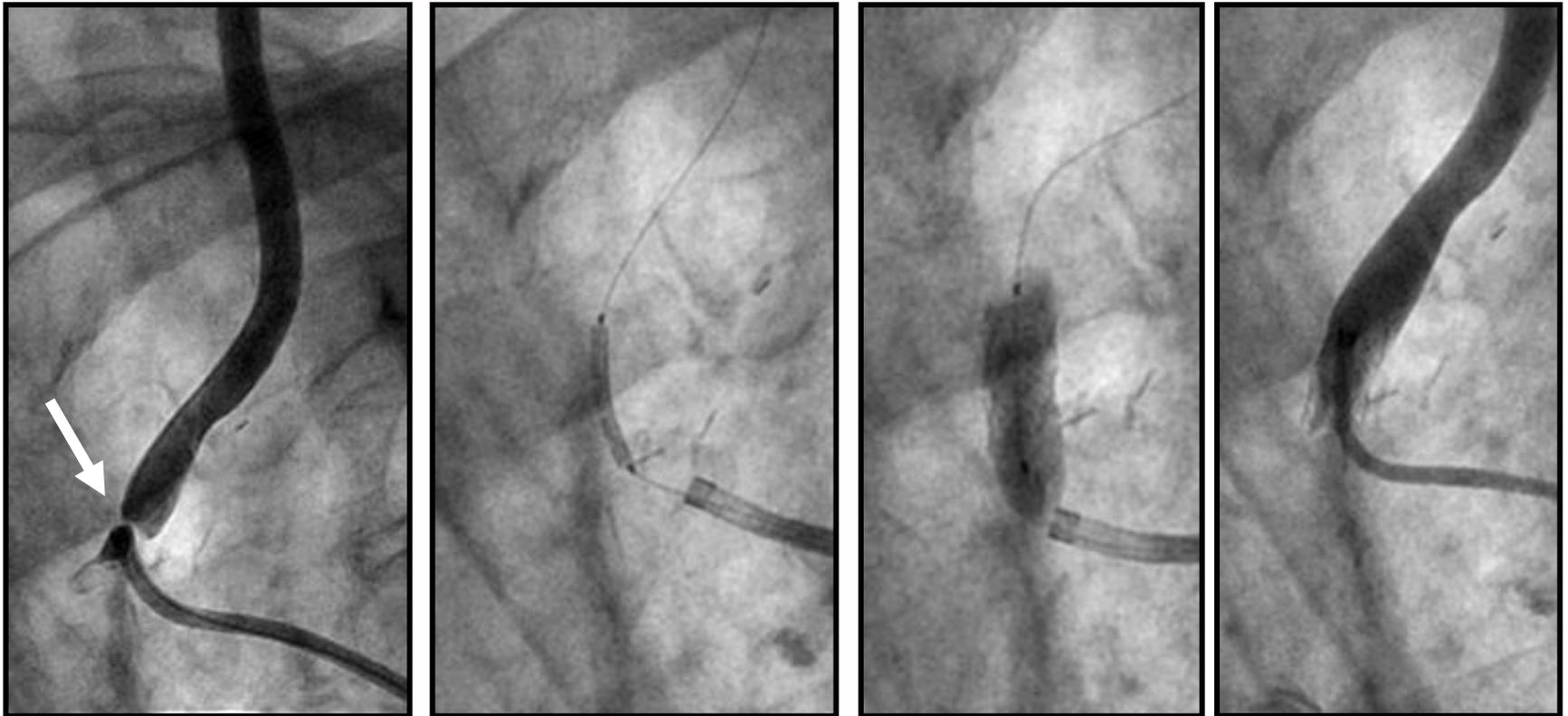
**Atheromatous
origin of the CCA**



8Fr HS guide



"Proximal site" Complications -Handling-

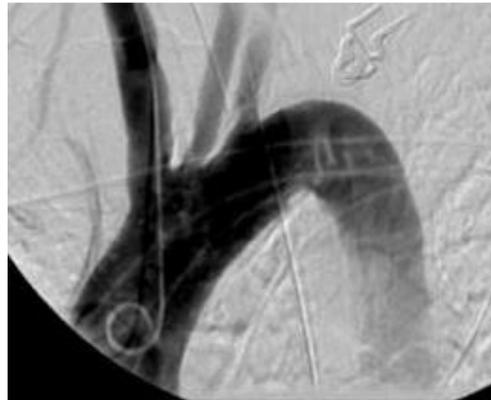


**Treatment of iatrogenic dissection of the LCCA
with stenting**

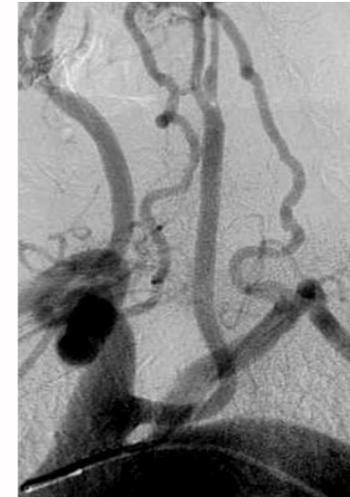
Conclusions: From easy to complex



Straight - forward



difficult



complex

..... all roads lead to Rome

