

Transradial approach for PCI

10-year experience

What have we learned?

Jean Fajadet

Clinique Pasteur, Toulouse, France

Transradial approach for PCI

Campeau L. et al. Percutaneous radial artery approach for coronary angiography.

Cathet. Cardiovascular Diagn. 1989;16,3-7.

Kiemeneij F. et al. The radial artery : a safe artery site for coronary stenting.

Circulation 1993;88:Suppl.I-587.

TRA for PCI: 10-year experience

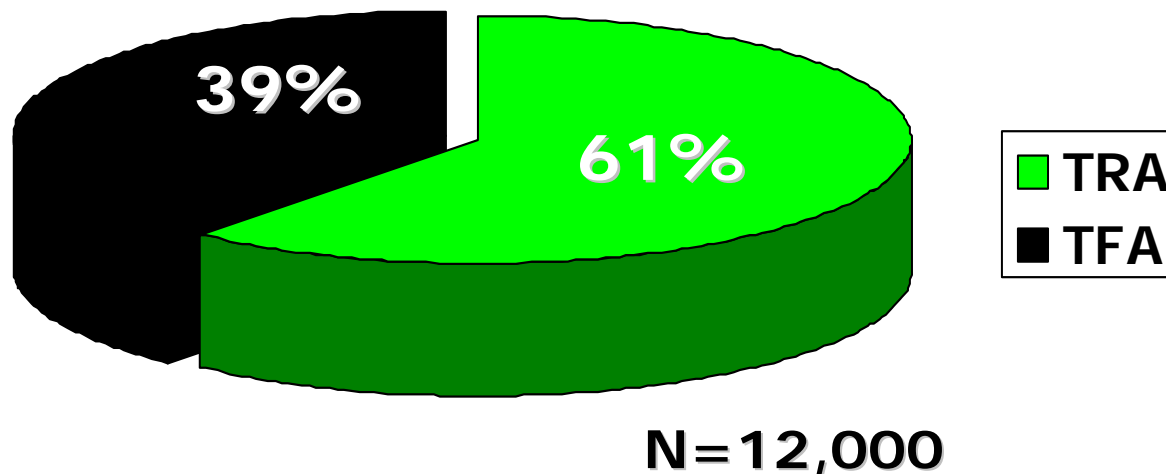
What have we learned?

1. Feasible in routine practice

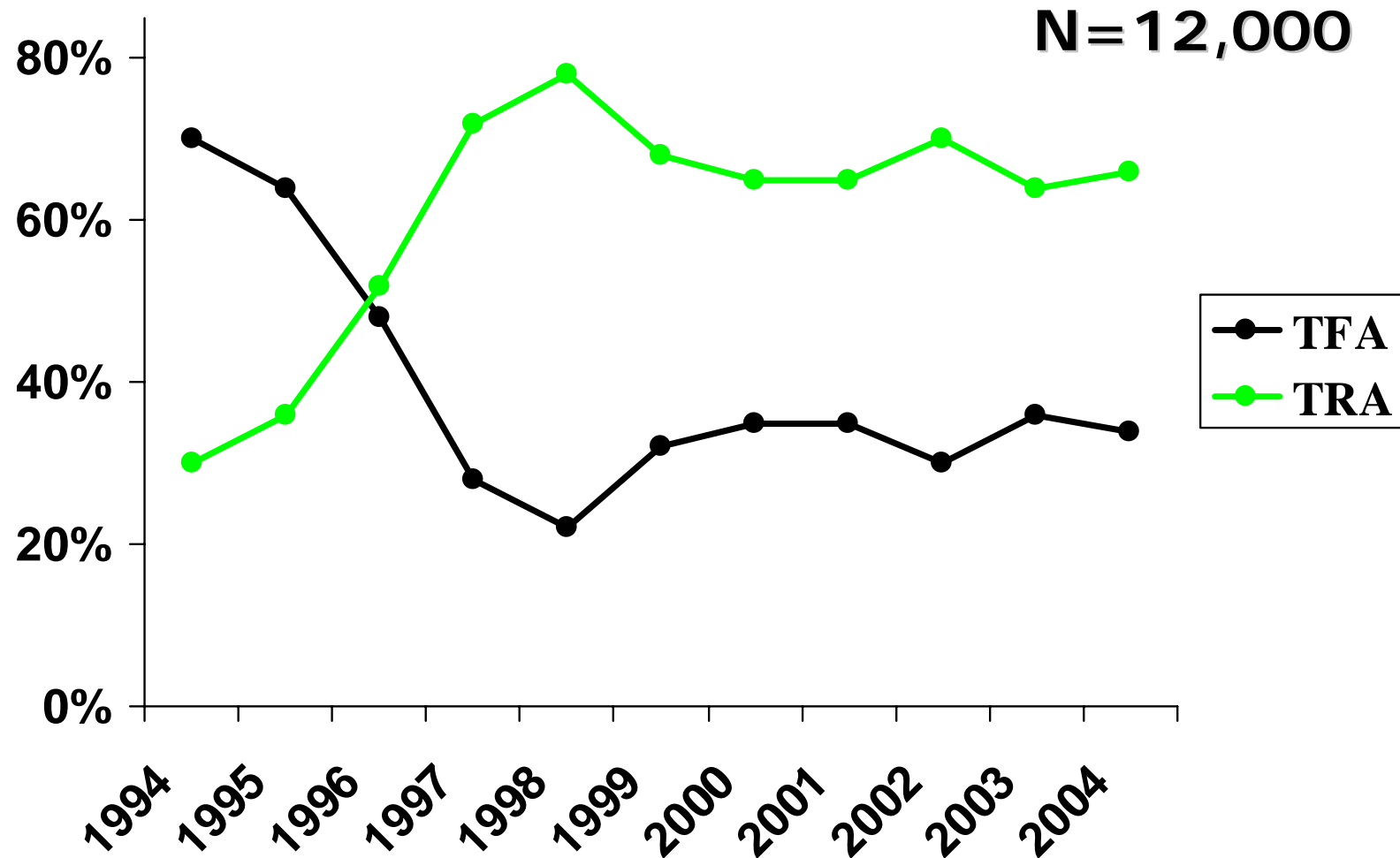
TRA for PCI: 10-year experience

February 1994 - May 2004

19,674 Interventional procedures



TRA for PCI: 10-year experience



TRA for PCI: 10-year experience

What have we learned?

1. Feasible in routine practice
2. **Very low access site complication rate**

TRA for PCI: 10-year experience

- **Access site complications**

Hematoma:	<0.5%
Pseudo aneurysm:	<0.1%
AV fistula	<0.1%
Surgical repair	<0.1%
Blood transfusion:	=0
Radial artery thrombosis	≈5%

RADIAL ARTERY OCCLUSION: Incidence related to sheath size

Sheath size	Occlusion	
4 & 5 French	4 / 115	3.5 %
6 French	67 / 1389	4.9 %
7 & 8 French	8 / 107	7.5 %

ACCESS STUDY

%	6F Radial	6F Brachial	6F Femoral	p
Successfull coronary canulation	93	95.7	99.7	<0.001
PTCA success	91.7	90.7	90.7	NS
Entry site complication	0	2.3	2.0	0.035

What have we learned?

1. Feasible in routine practice
2. Very low access site complication rate
3. **Early ambulation and early discharge**
→ improve of patient comfort

TRA for PCI: 10-year experience

What have we learned?

1. Feasible in routine practice
2. Very low access site complication rate
3. Early ambulation and early discharge
→ improve of patient comfort
4. **More difficult than femoral approach: Learning curve**

What have we learned?

Technically more difficult:

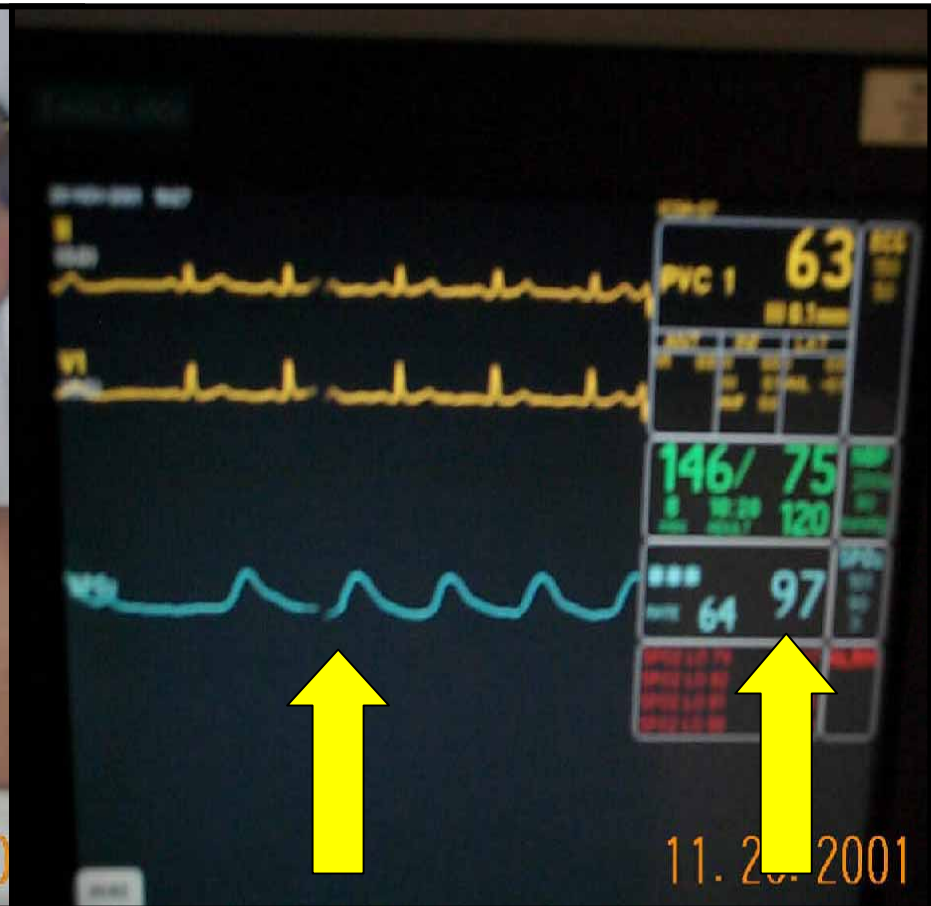
- . Puncture
- . Anatomical difficulties
- . Selective catheterization of coronary ostia
- . Support with guiding catheter

What have we learned?

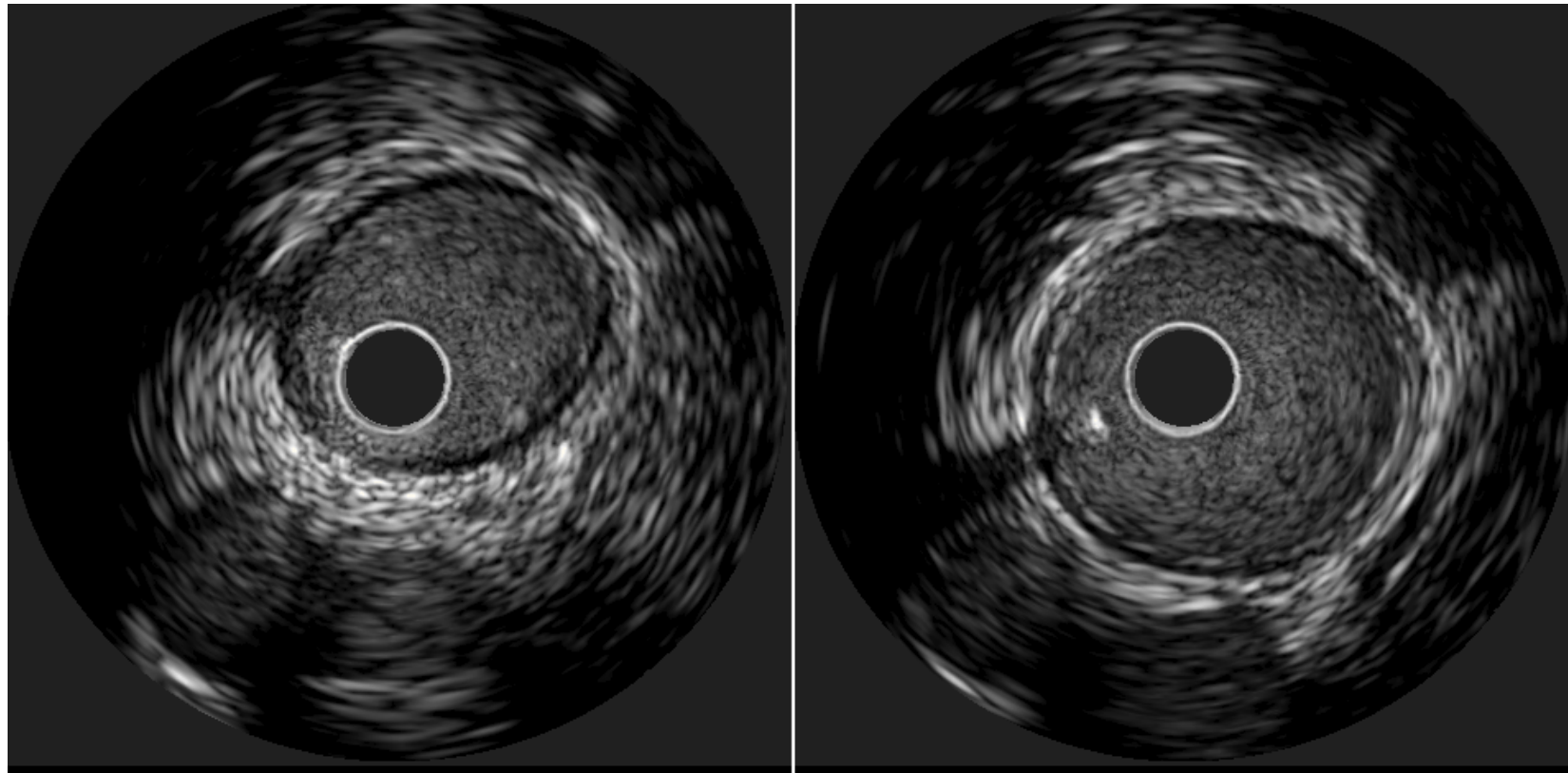
ALLEN TEST



Phlesmography



Radial Artery IVUS: Effect of intra-arterial Verapamil

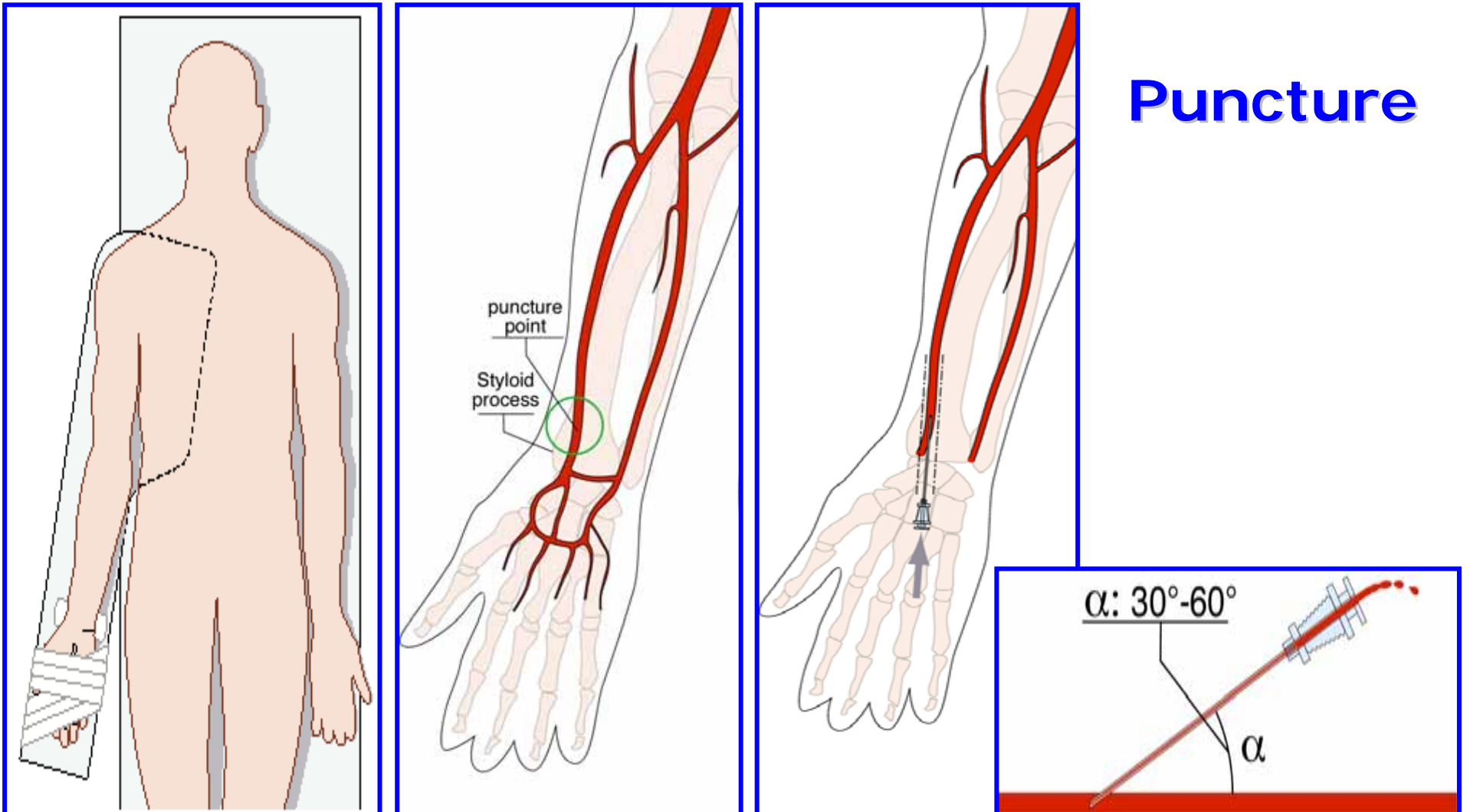


Baseline

Post 3mg Verapamil

What have we learned?

Puncture



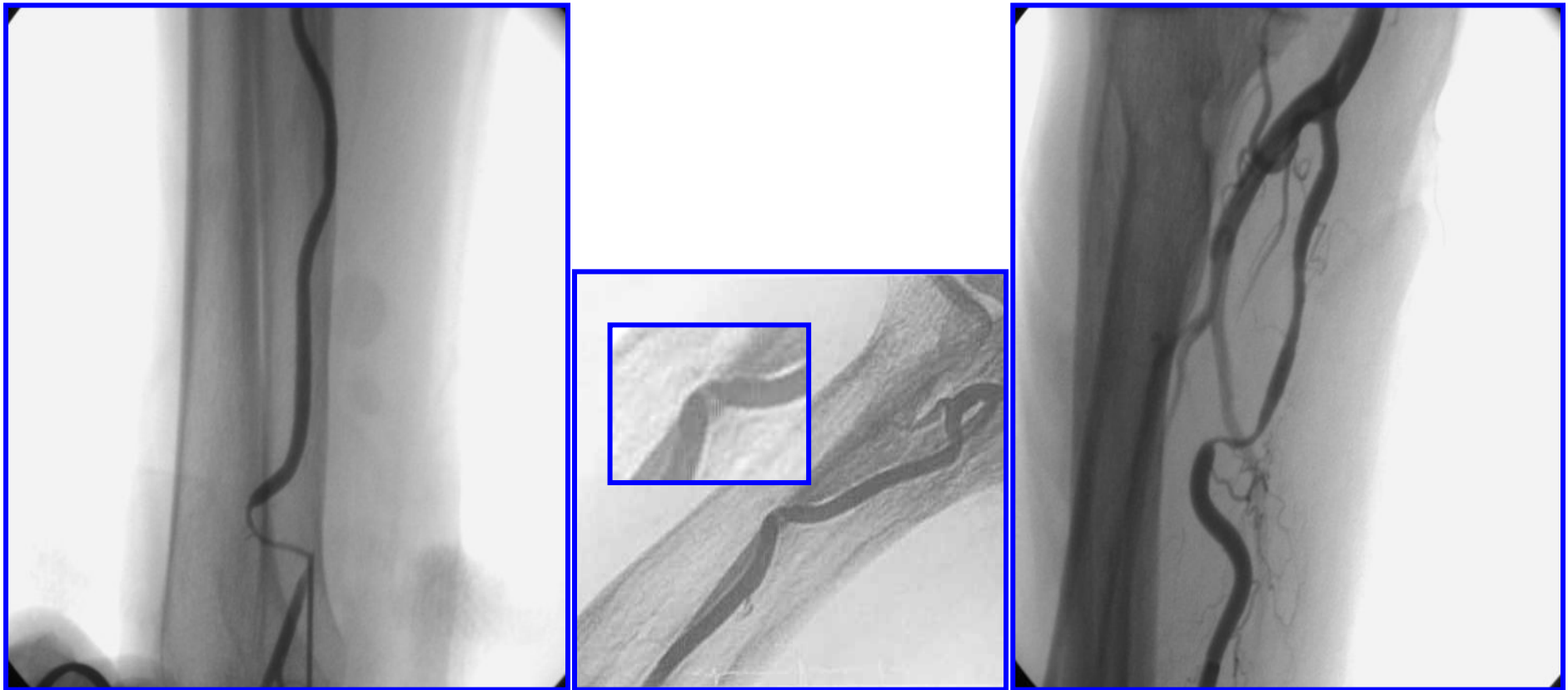
What have we learned?

Radial artery puncture

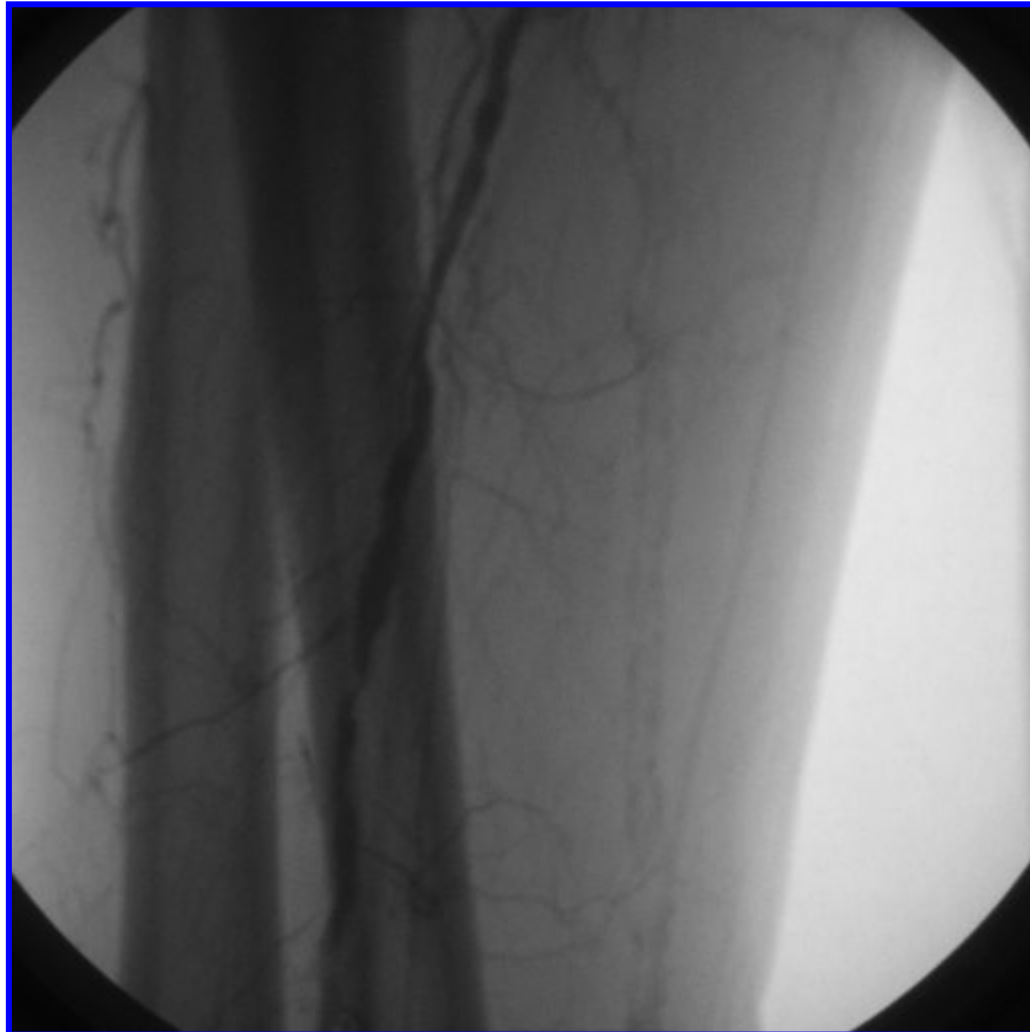
- . Open needle + + +
- . Arrow needle
- . Venous canula

***THE FIRST HIT
IS THE BEST
ONE***

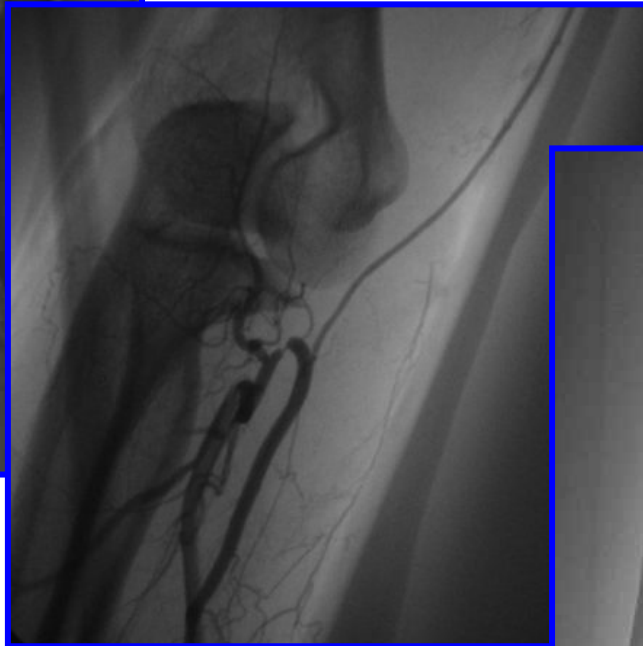
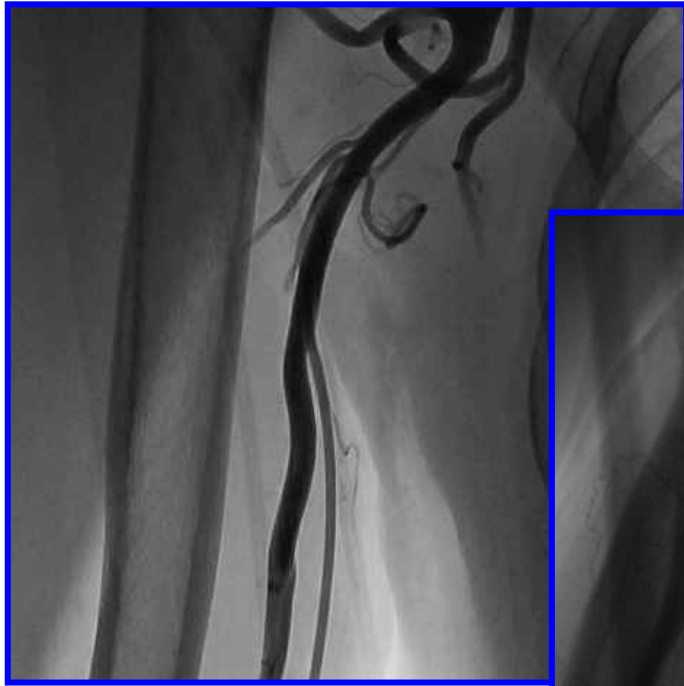
Radial artery spasm



Radial & Ulnar calcifications



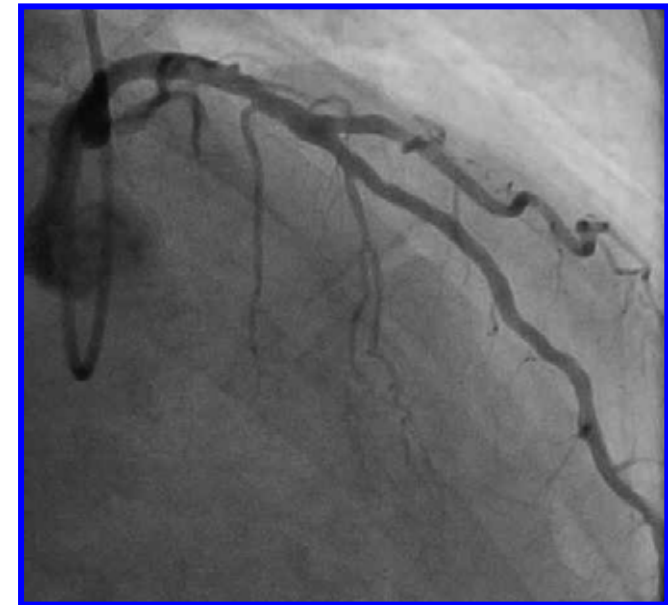
Complex radial artery anatomy



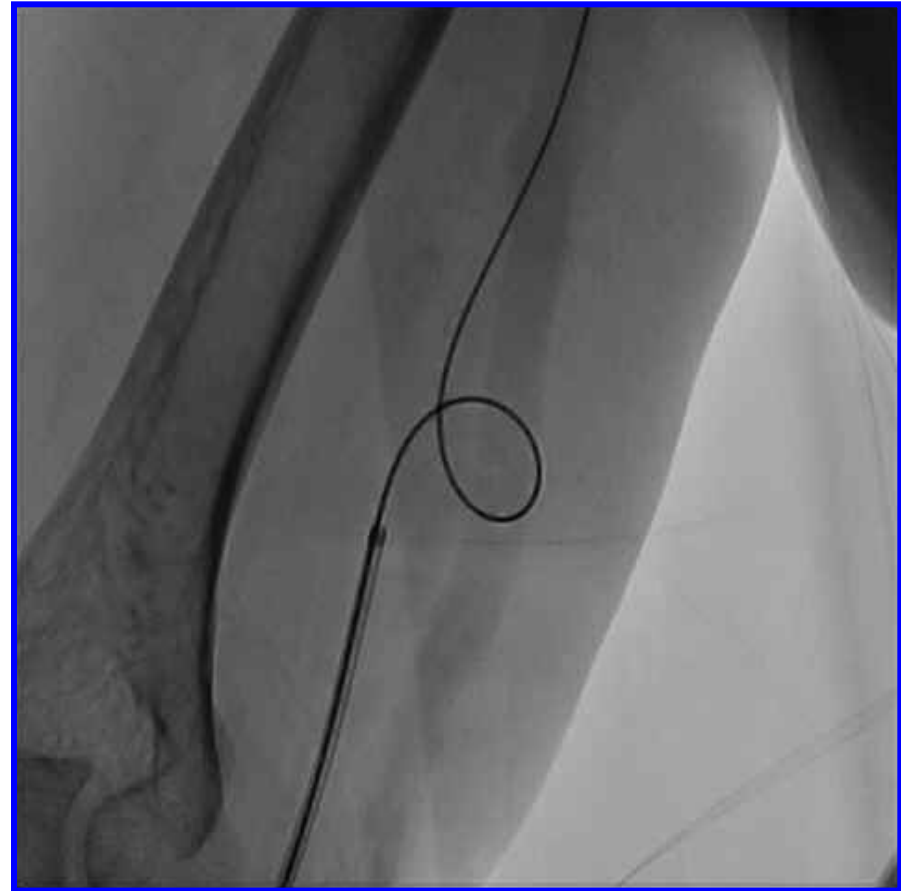
Radial artery loop



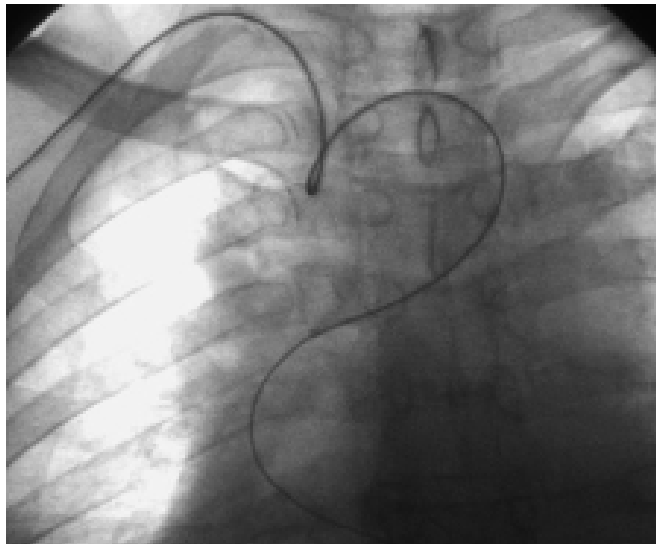
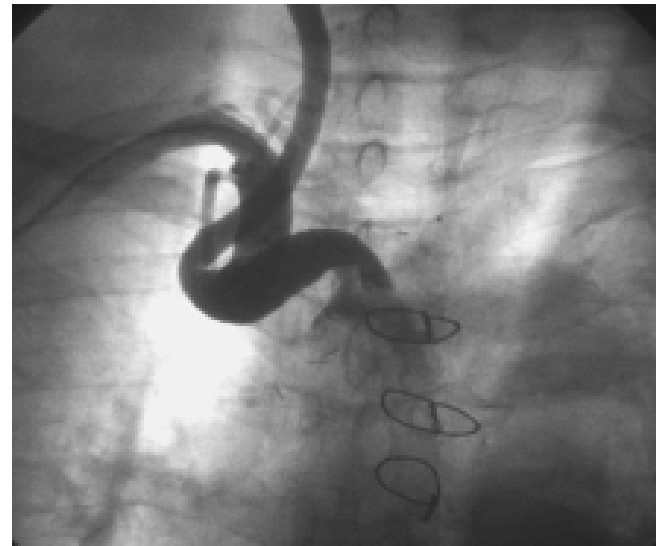
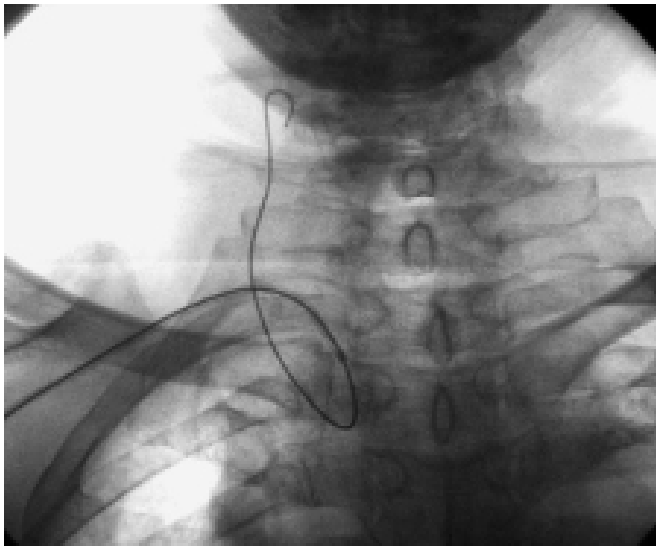
Radial artery loop



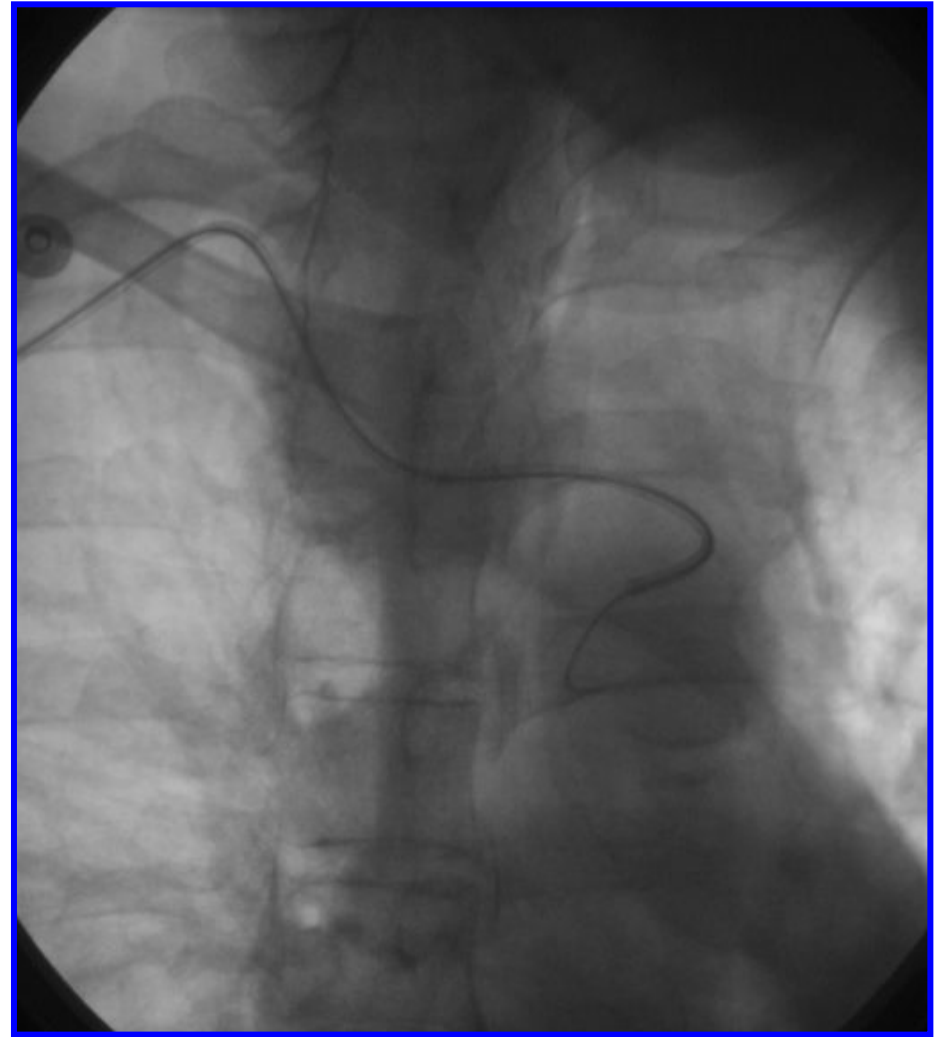
Brachial artery loop



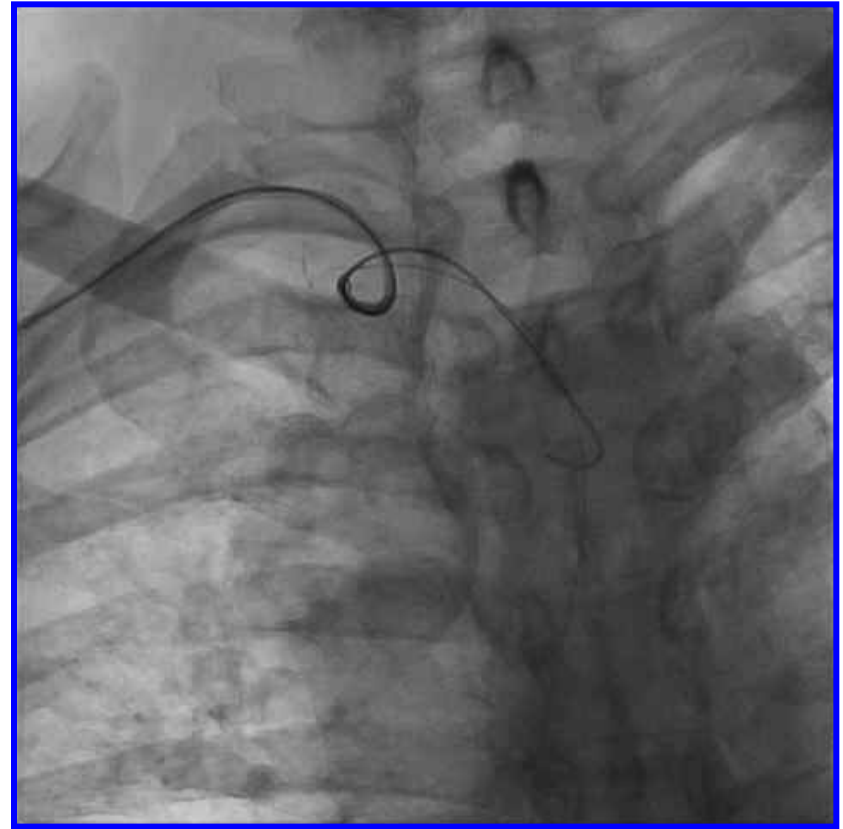
Complex artery anatomy



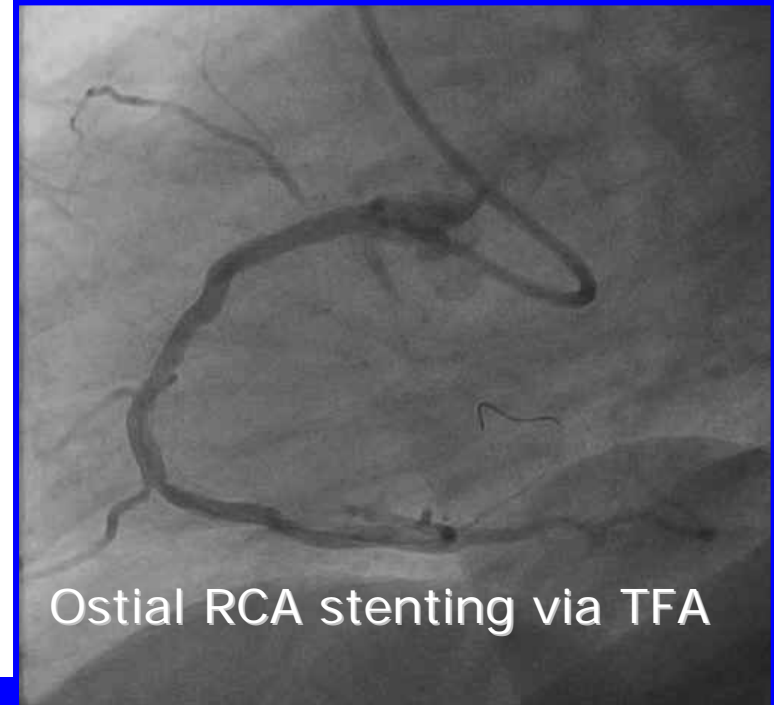
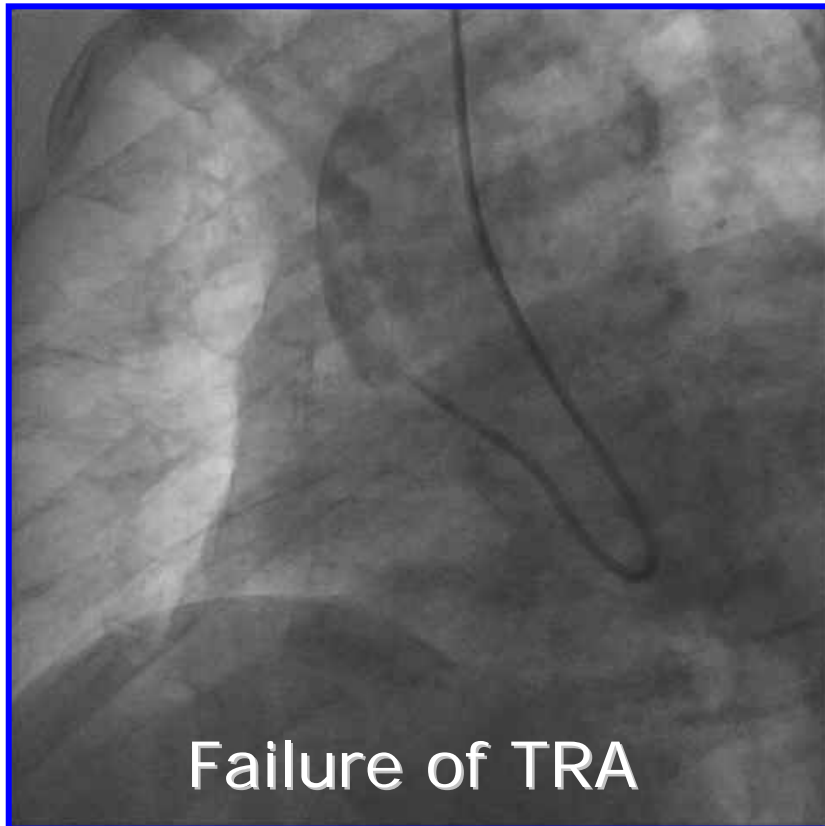
Complex artery anatomy



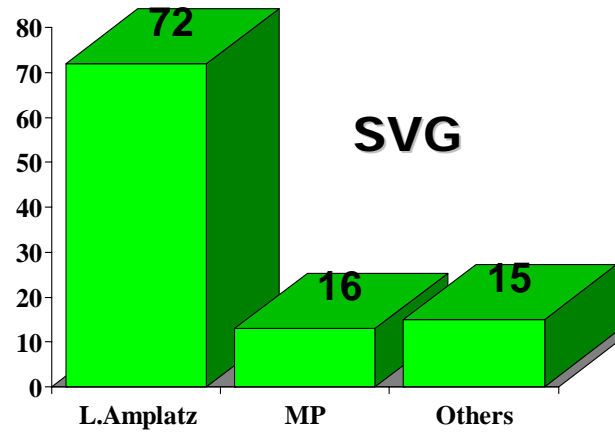
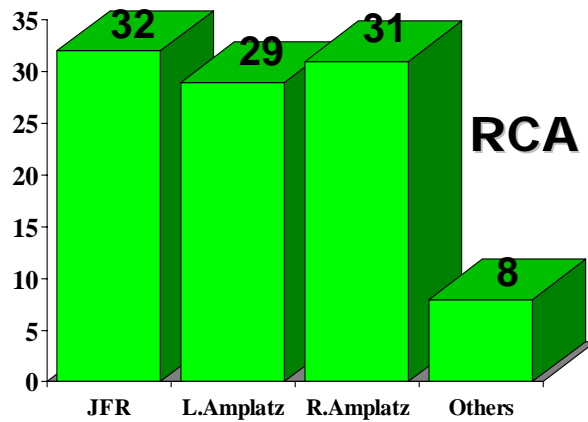
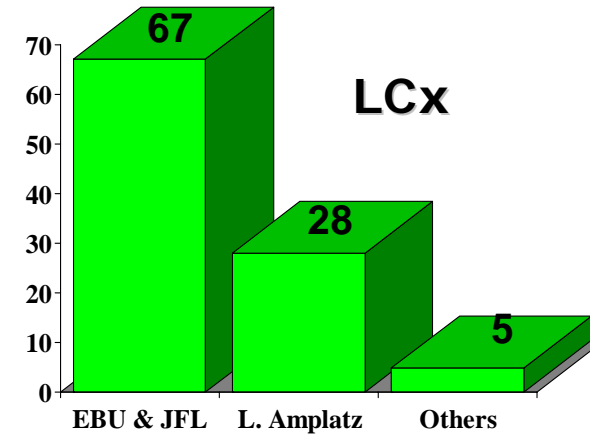
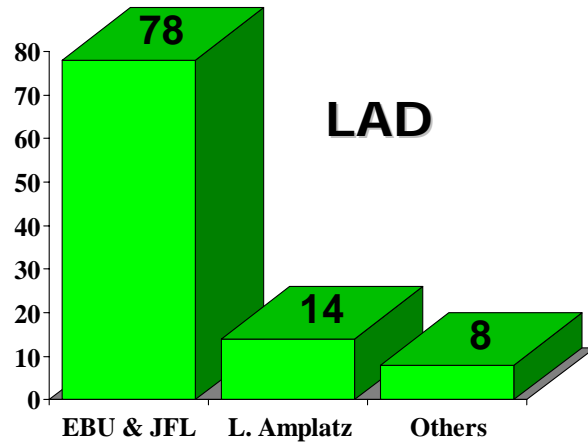
Complex artery anatomy



Complex artery anatomy

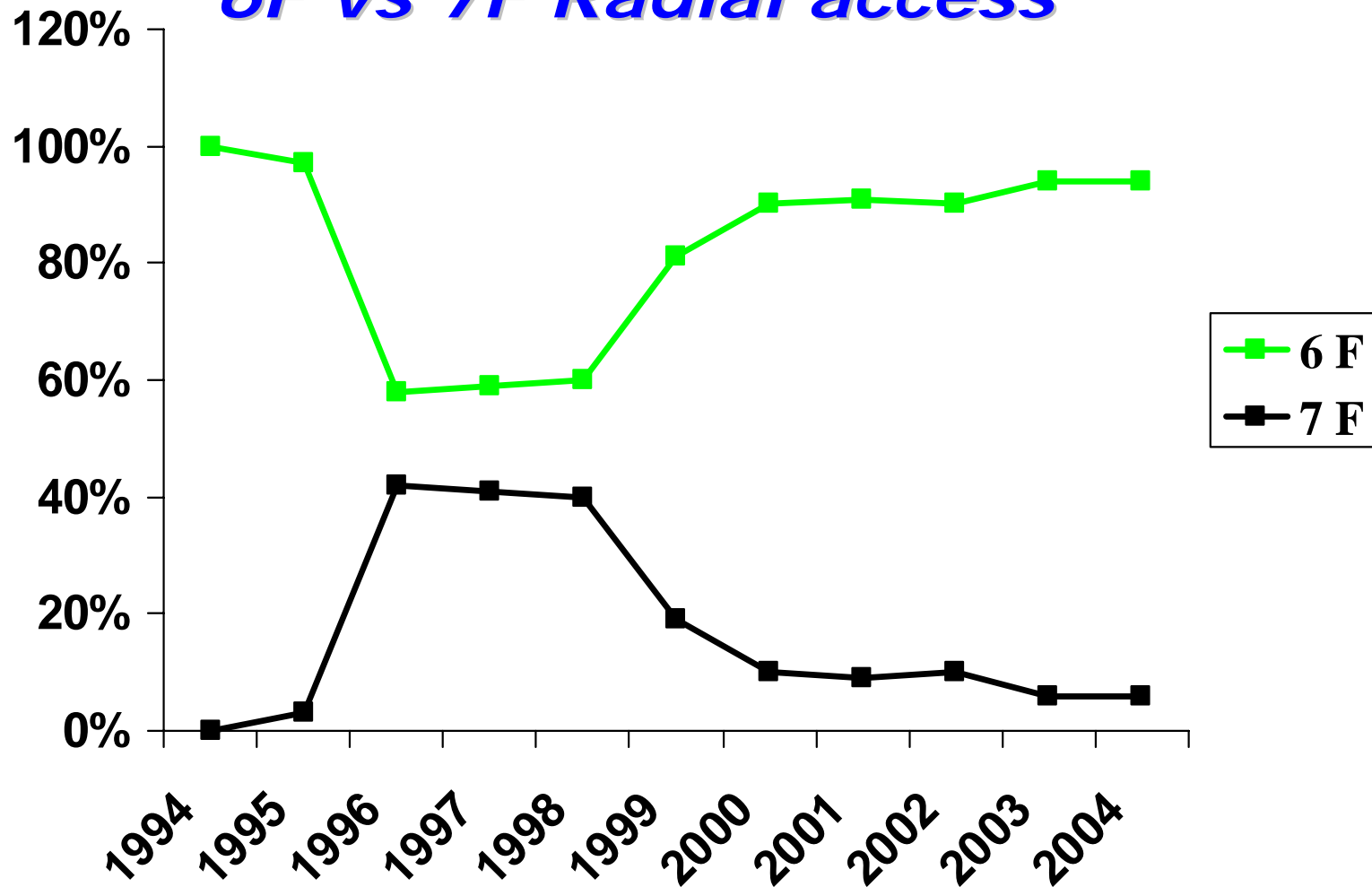


TRA/ Guiding catheters



TRA for PCI: 10-year experience

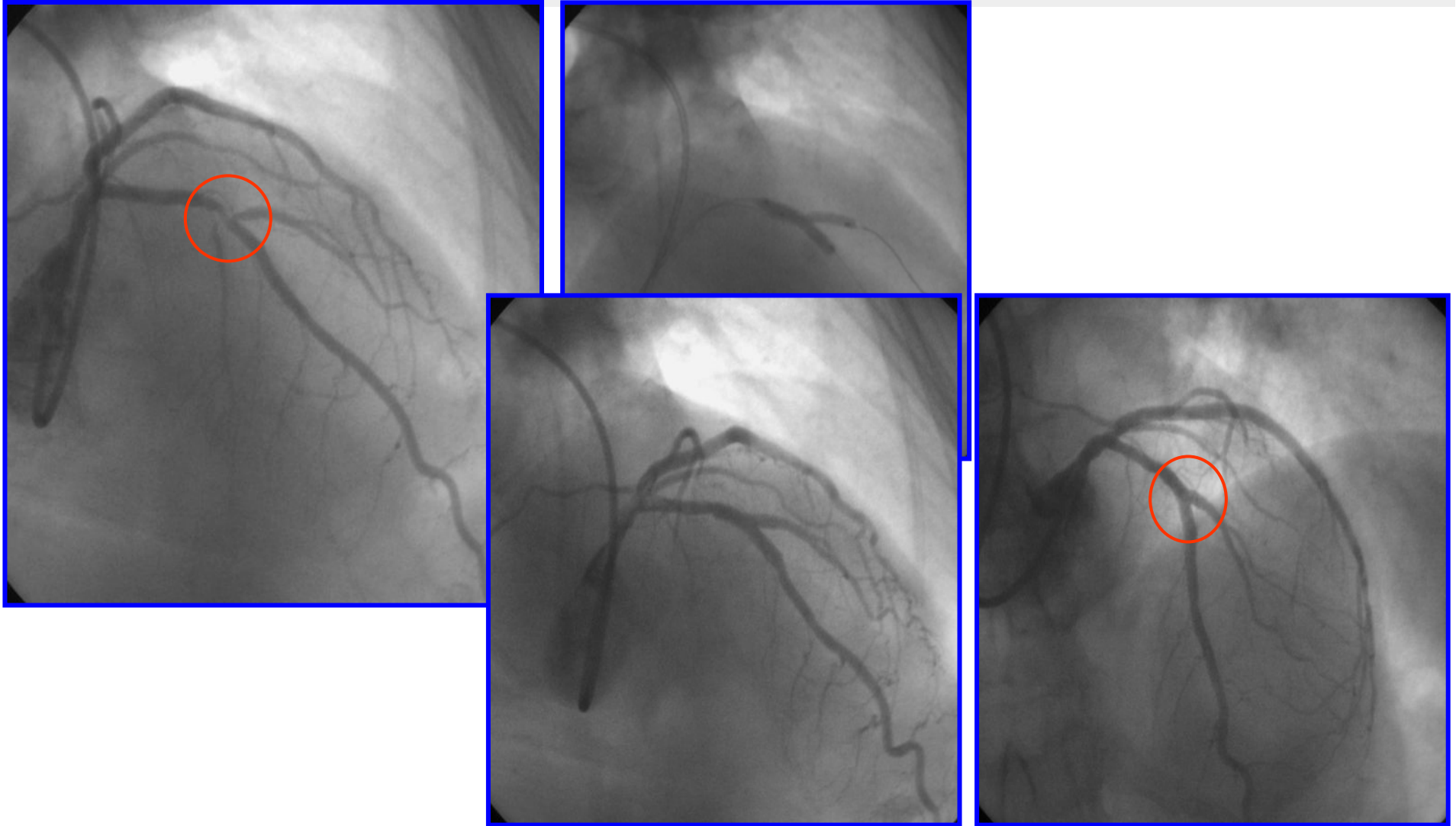
6F vs 7F Radial access



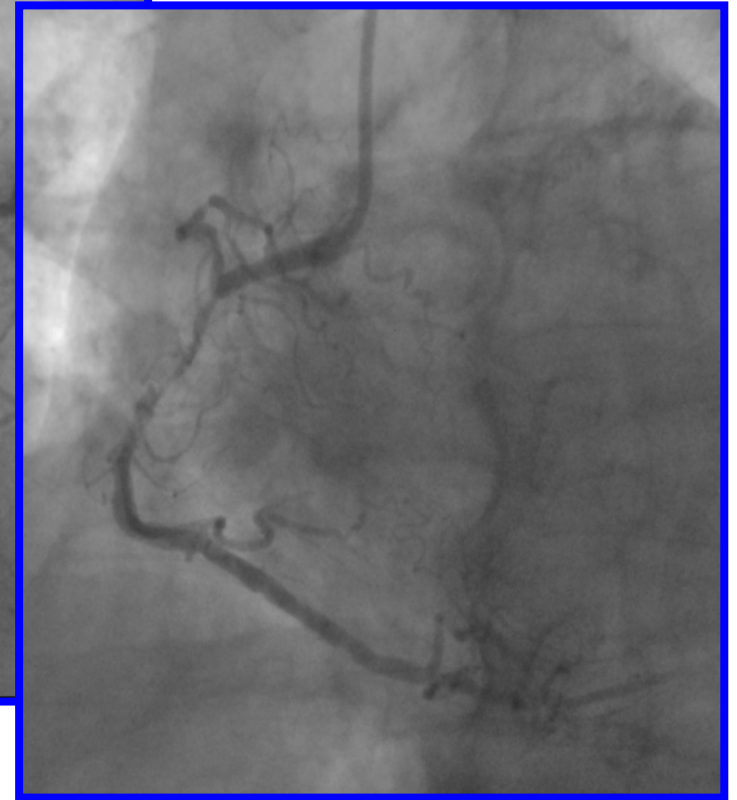
What have we learned?

1. Feasible in routine practice
2. Very low access site complication rate
3. Early ambulation and early discharge
 ————→ improve of patient comfort
4. More difficult than femoral approach: Learning curve
5. **No limitations for complex PCI**

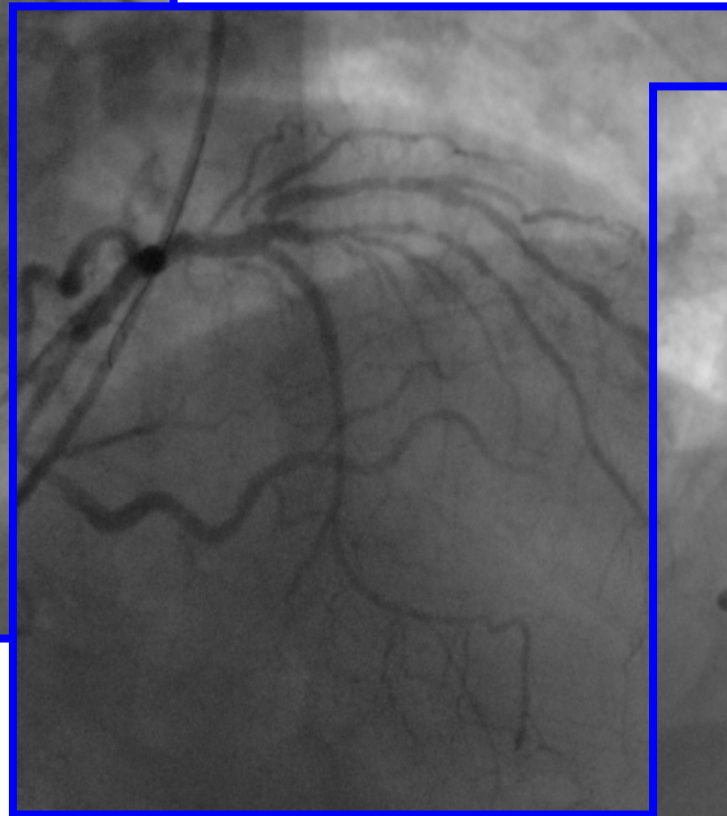
Bifurcation Stenting via TRA



MVD diabetic patient treated with DES

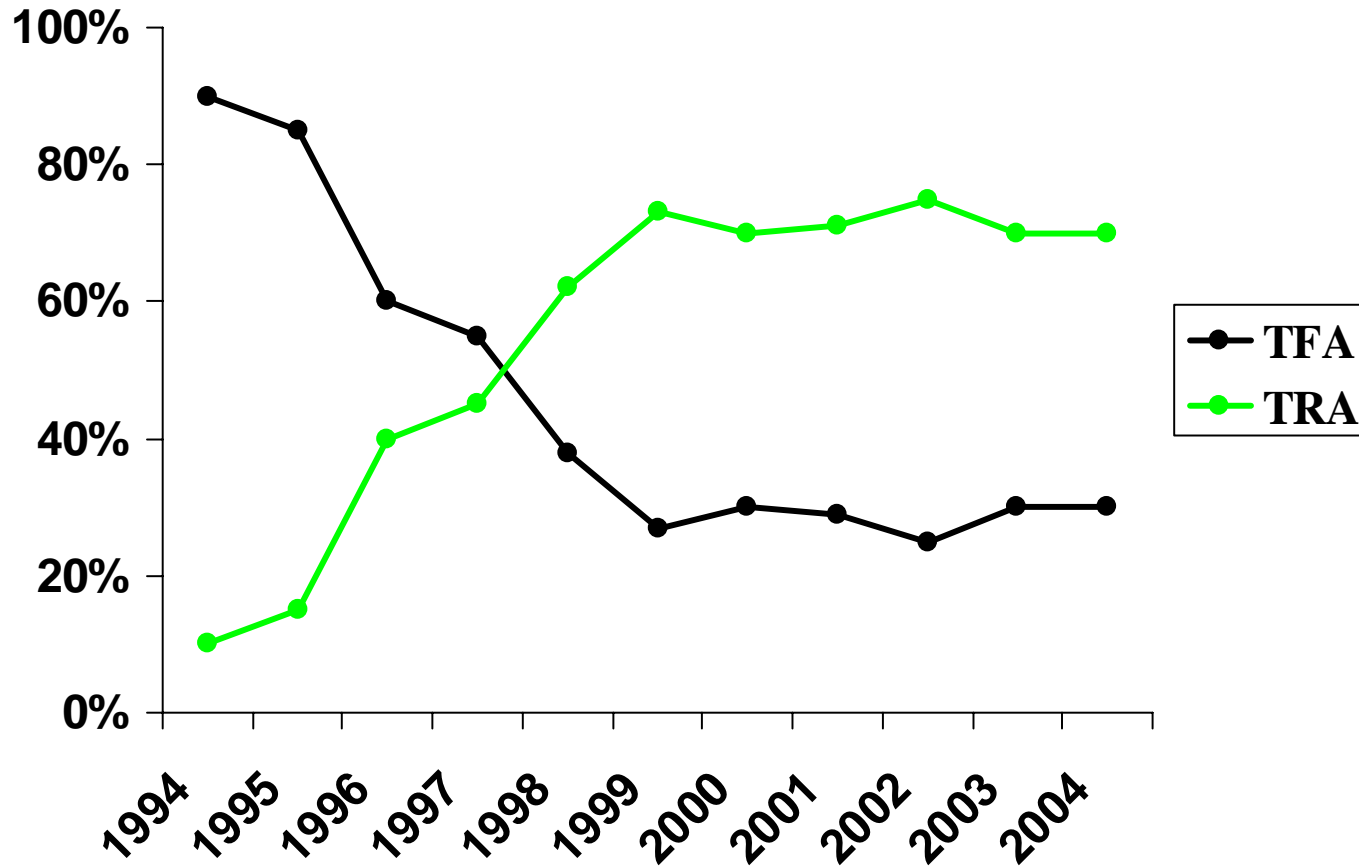


MVD diabetic patient treated with DES

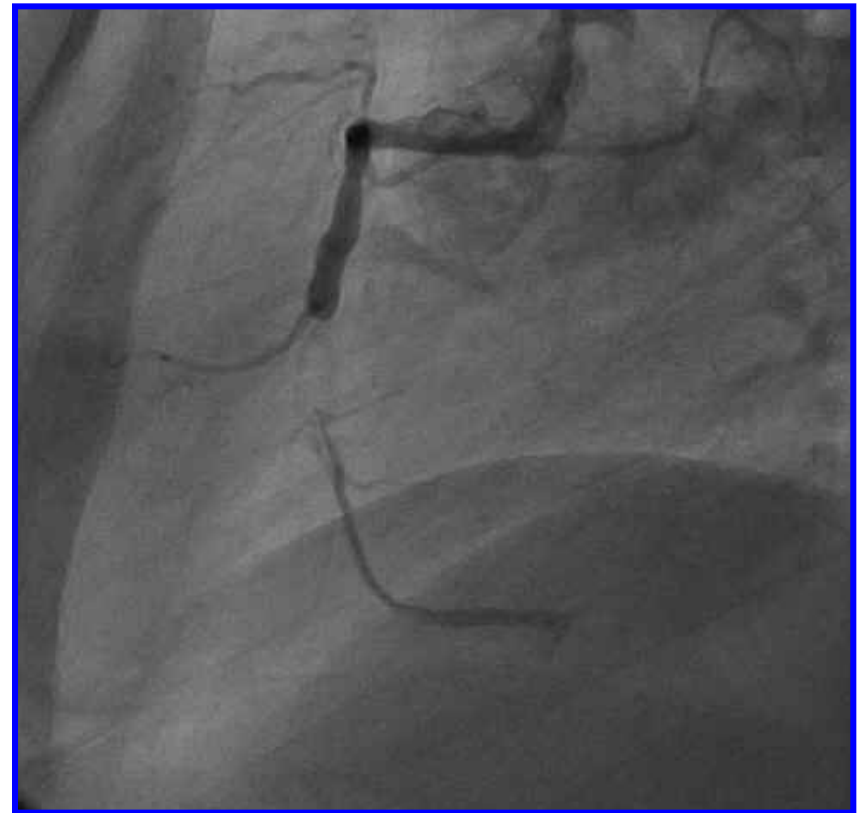


TRA for PCI: 10 year experience

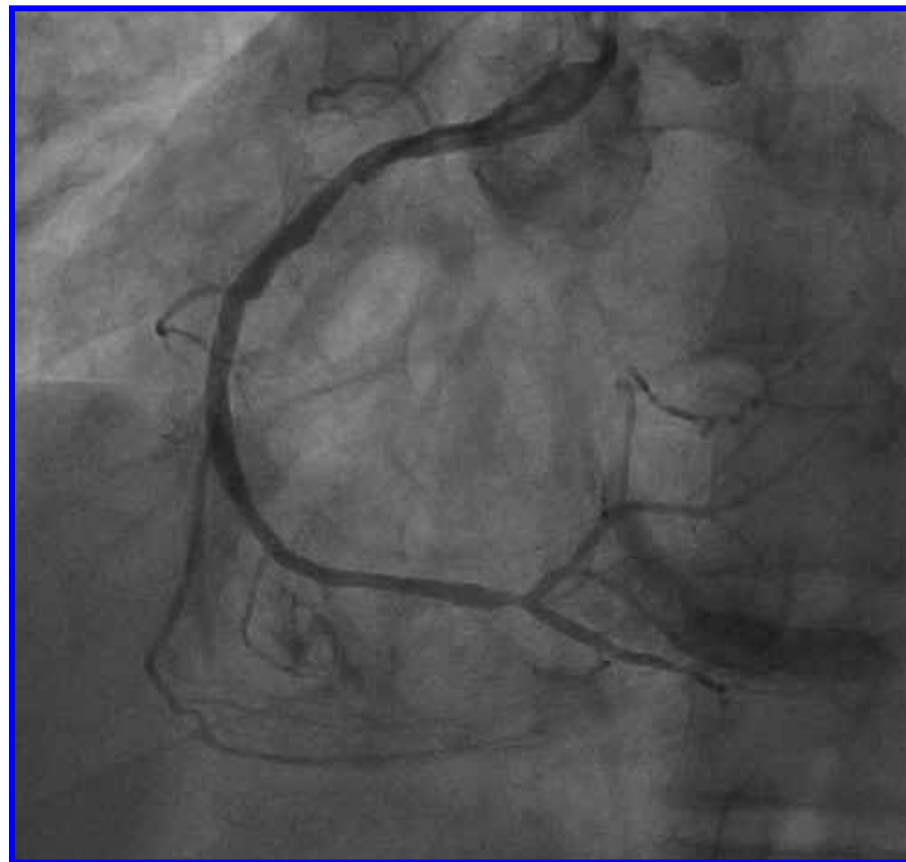
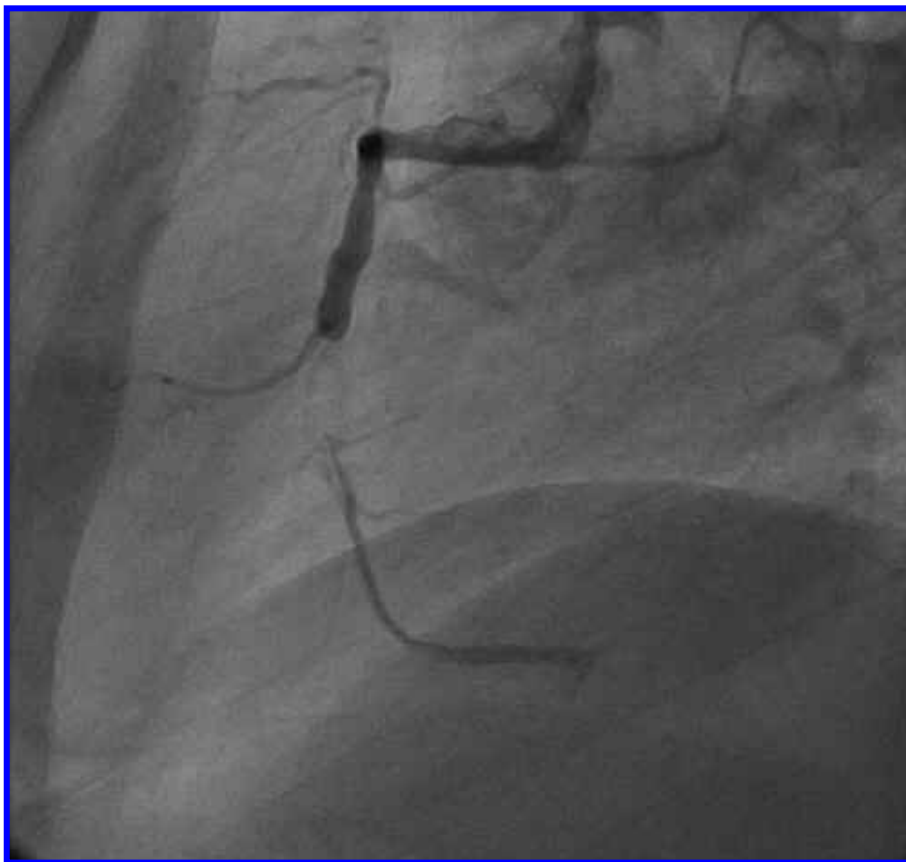
MVD



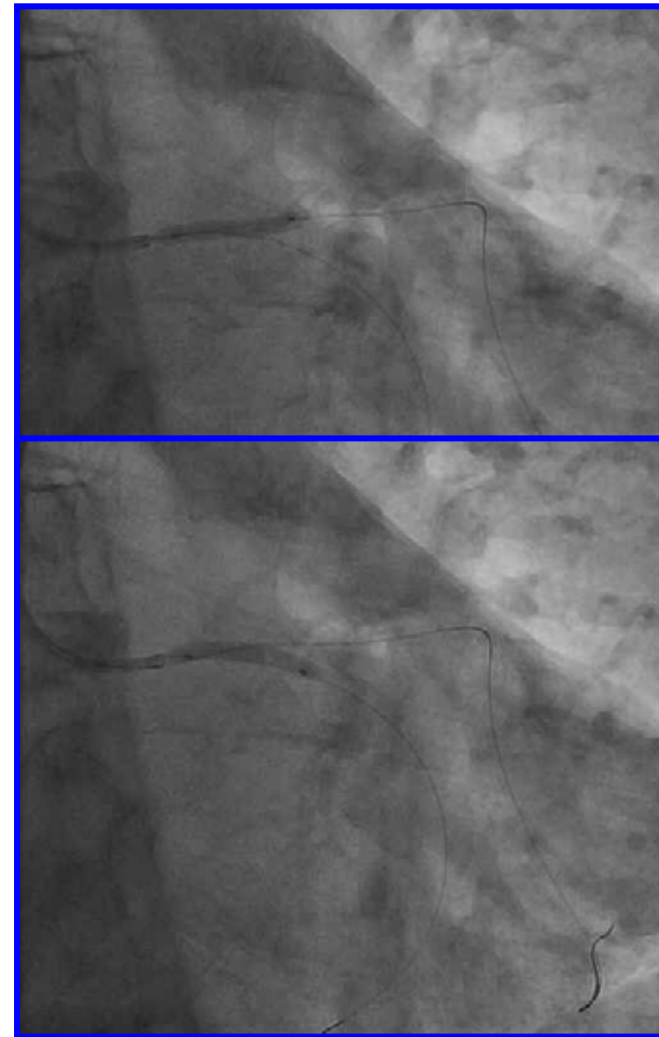
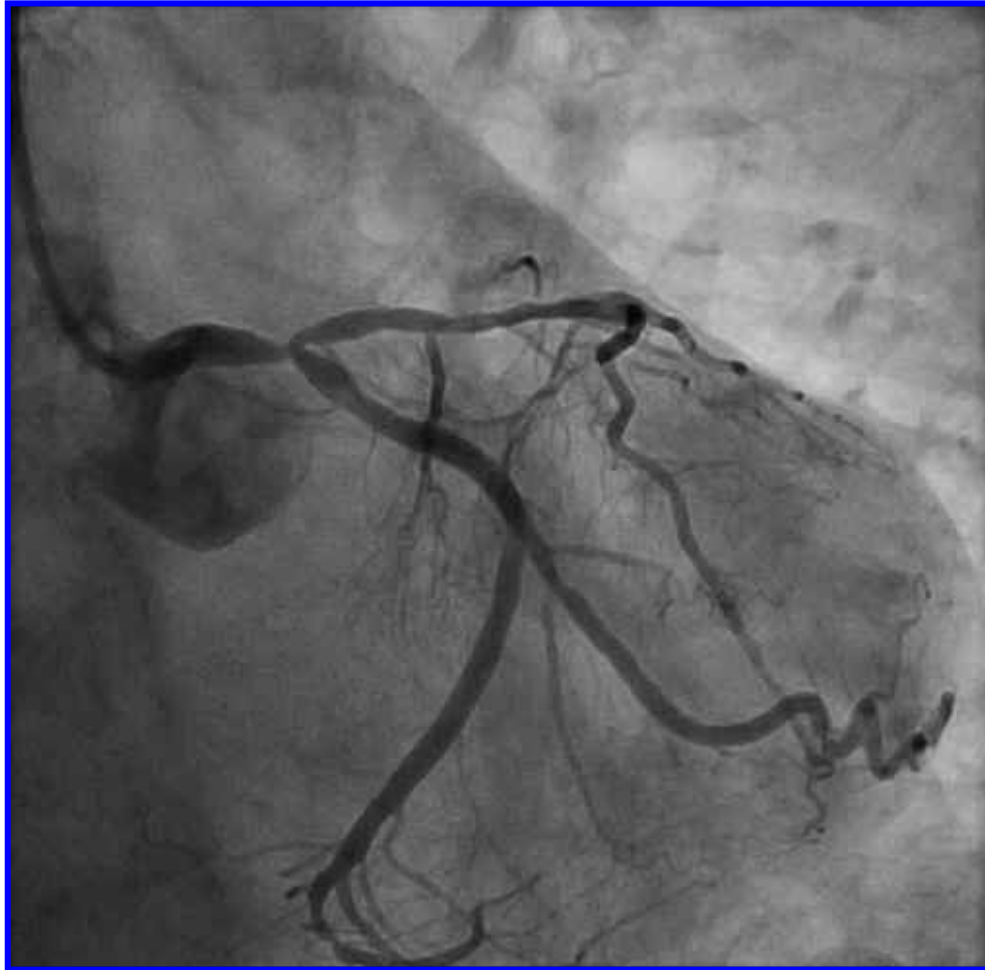
68 y.o. male, EF=52%, 2VD: OM stenosis + RCA total occlusion



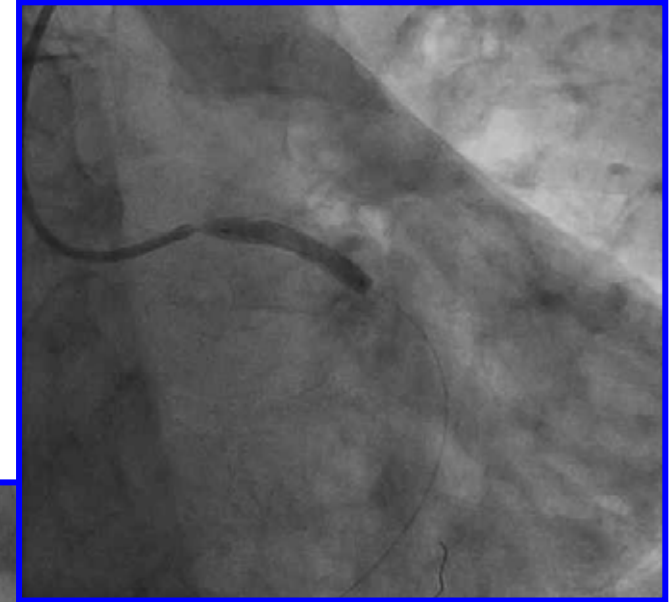
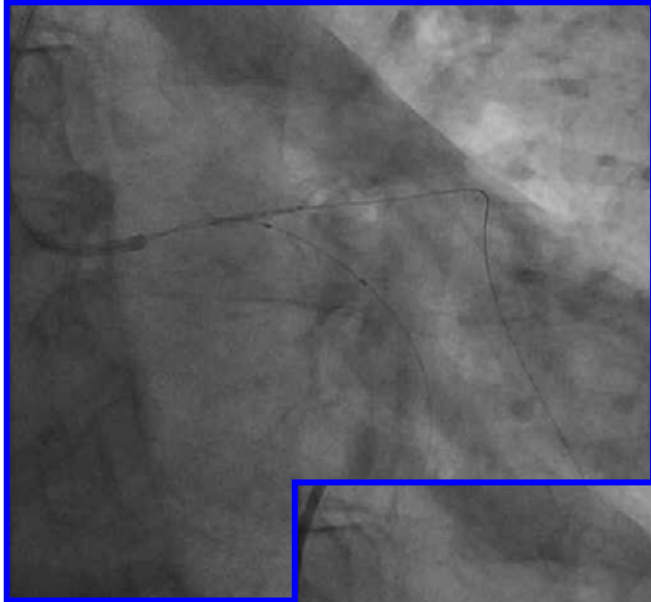




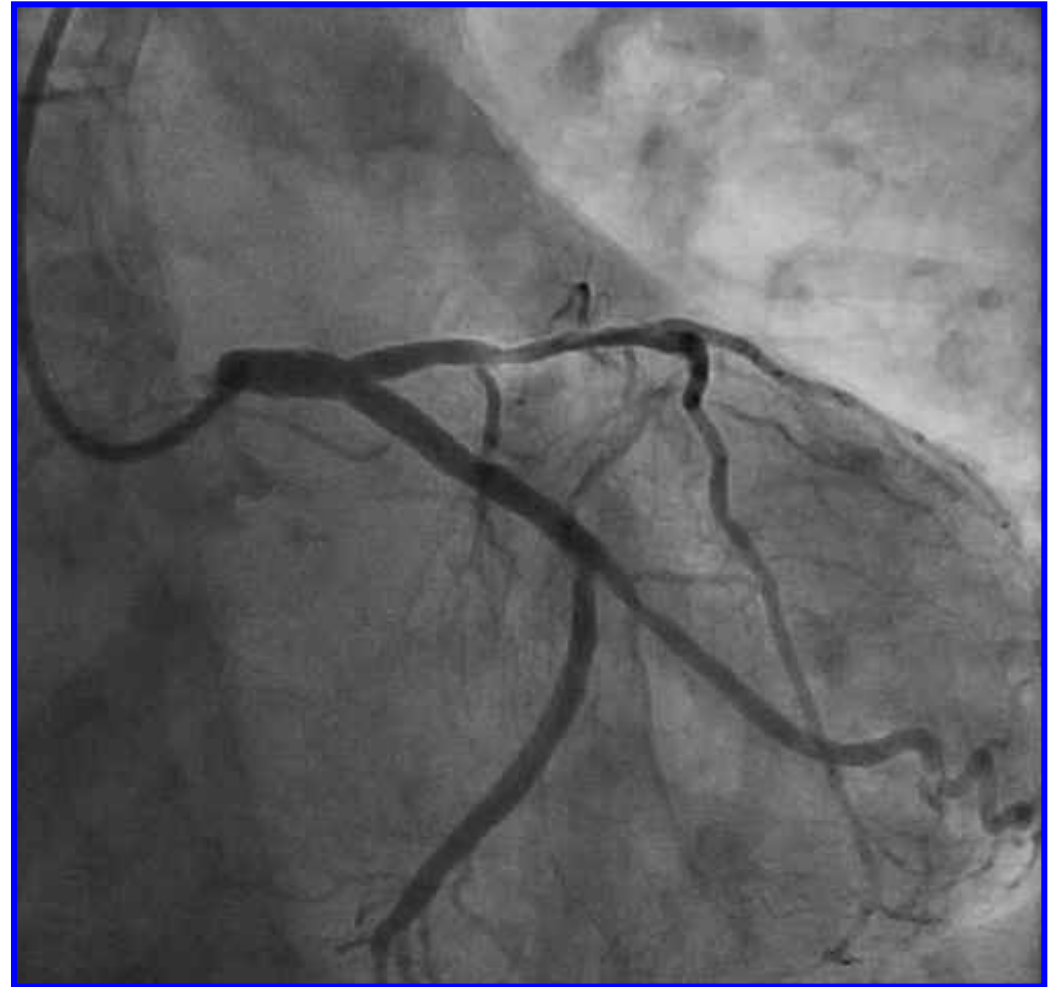
Distal LM stenting Crush/ 6F/ TRA



Distal LM stenting Crush/ 6F/ TRA

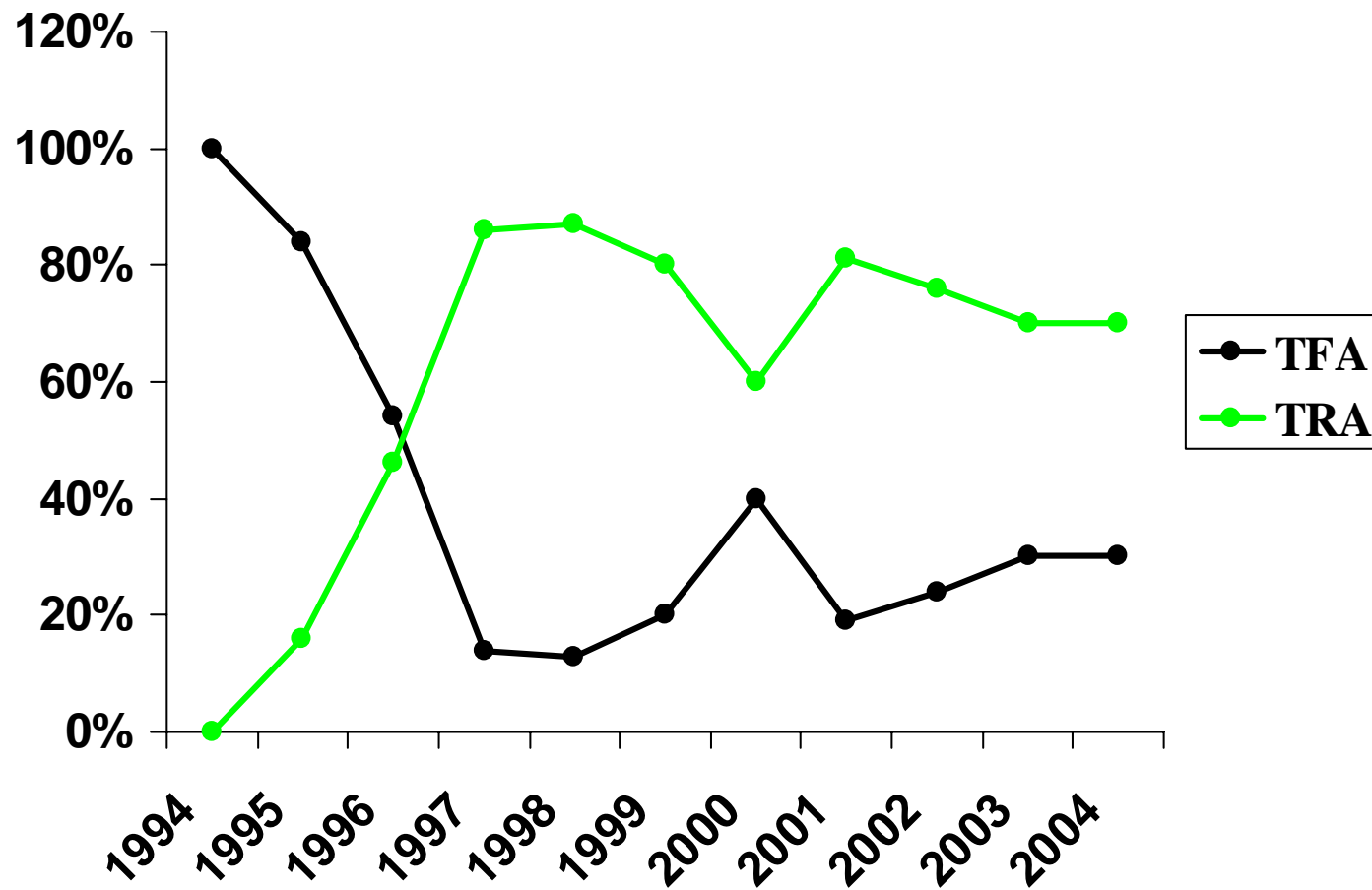


Distal LM stenting Crush/ 6F/ TRA

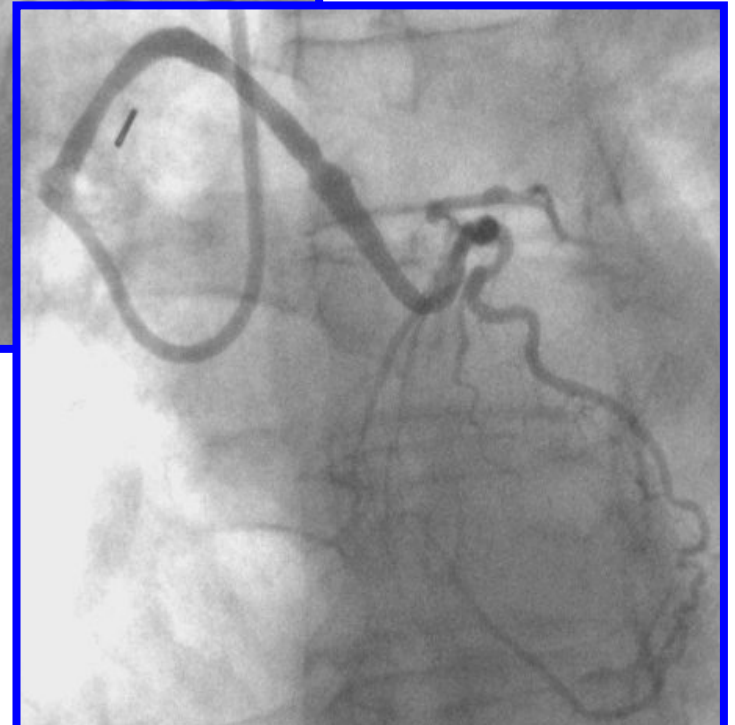
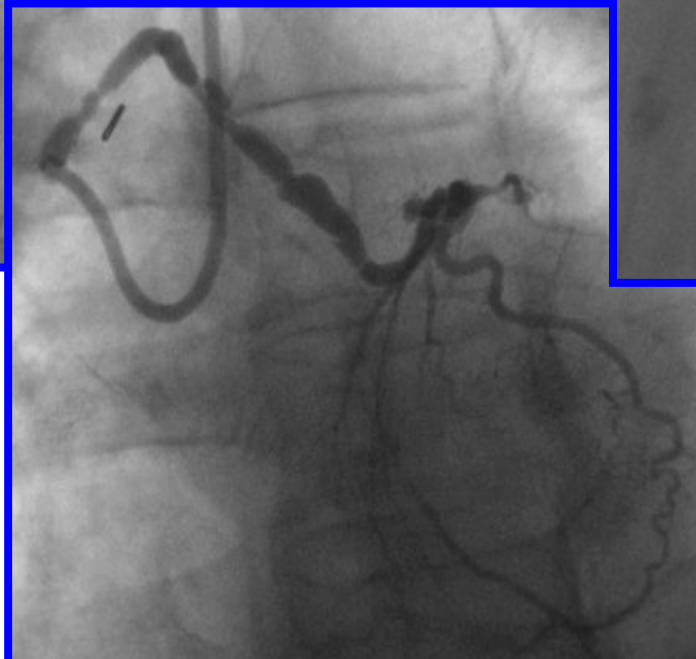


TRA for PCI: 10 year experience

Unprotected Left Main



Degenerated SVG



Conclusions

1. TRA is an elegant,, profitable and reliable technique.
2. TRA provides the lowest access site complication rate.
3. TRA improves the comfort of the patient.
4. TRA allows the use of most current devices and technical strategies.
5. TRA requires learning.