APPAC
ACTUALISATIONS ET PERSPECTIVES EN PATHOLOGIE CARDIOVASCULAIRE

Choix du cathéter en coronarographie diagnostique et en angioplastie

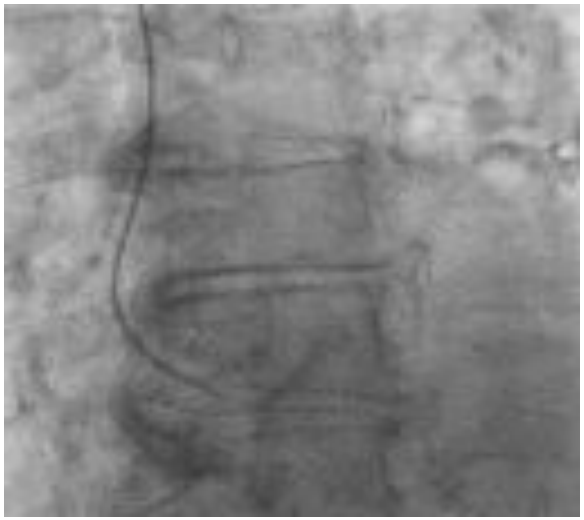
17h30-18h30 //Ateliers Salles de sous-commissions

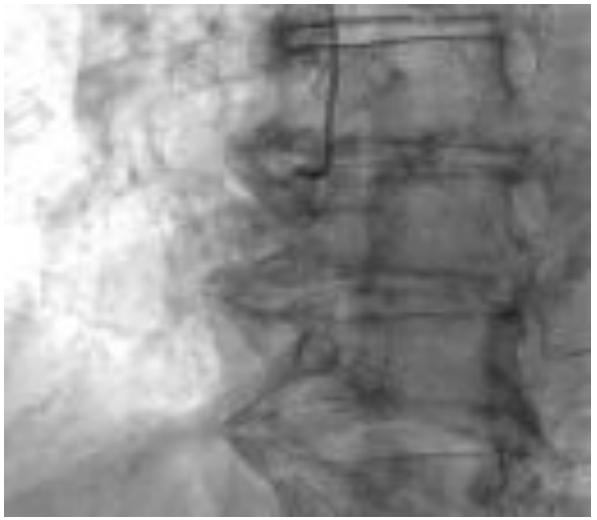
Cordis

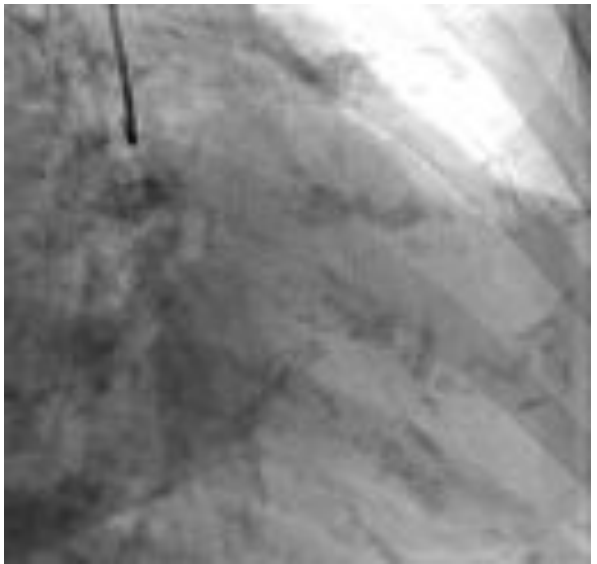
Le choix du cathéter guide, élément essentiel pour réussir son angioplastie.

B. FAURIE (Grenoble) – M. GODIN (Rouen)

Une seule sonde : Rapidité -efficacité

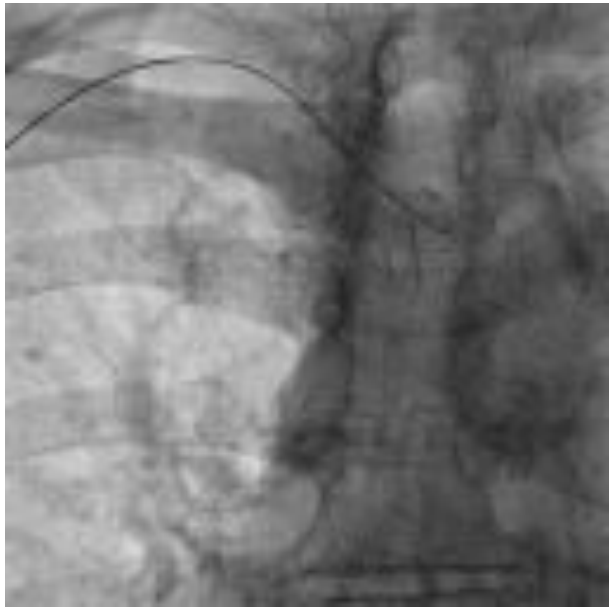


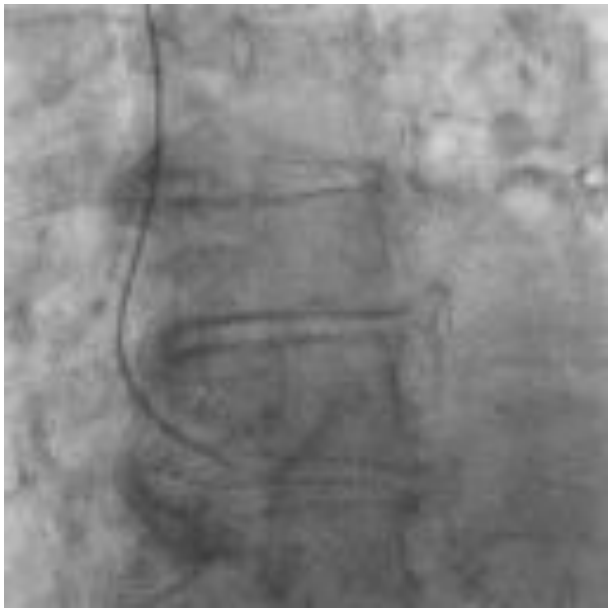




Coronarographie diagnostique

- Voie radiale
- Une seule sonde
- Connaître sa sonde : rapidité et efficacité
  - Diminuer risque de spasme

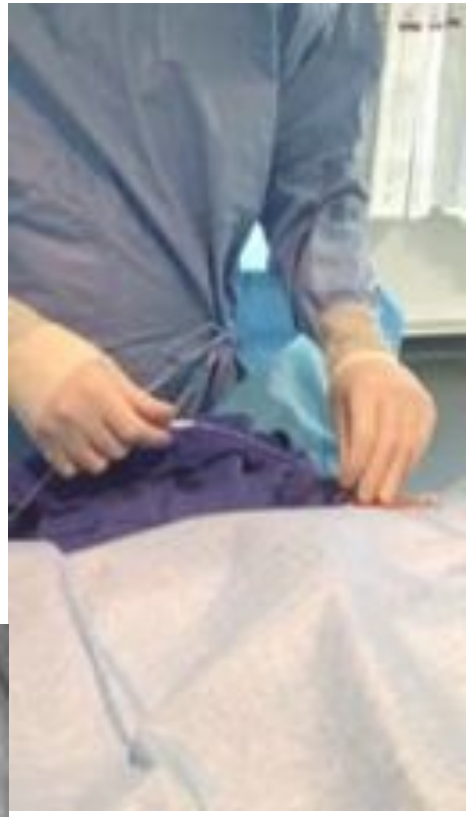


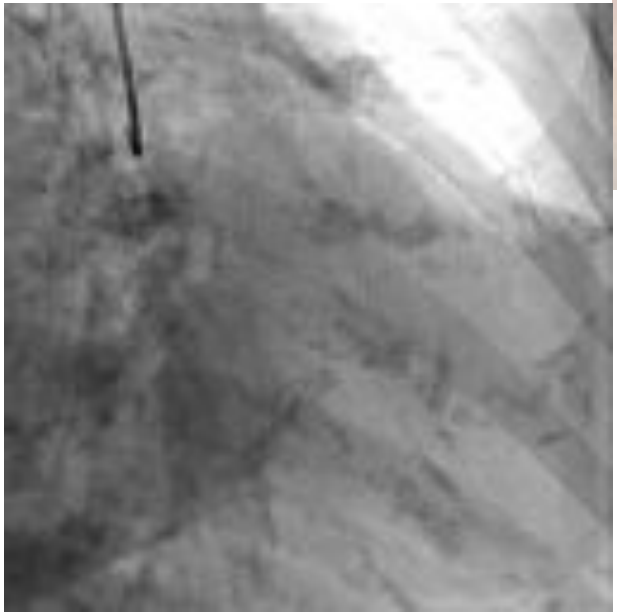


Torque horaire forcé

Maintien de la sonde superTorque (rigidité+++)

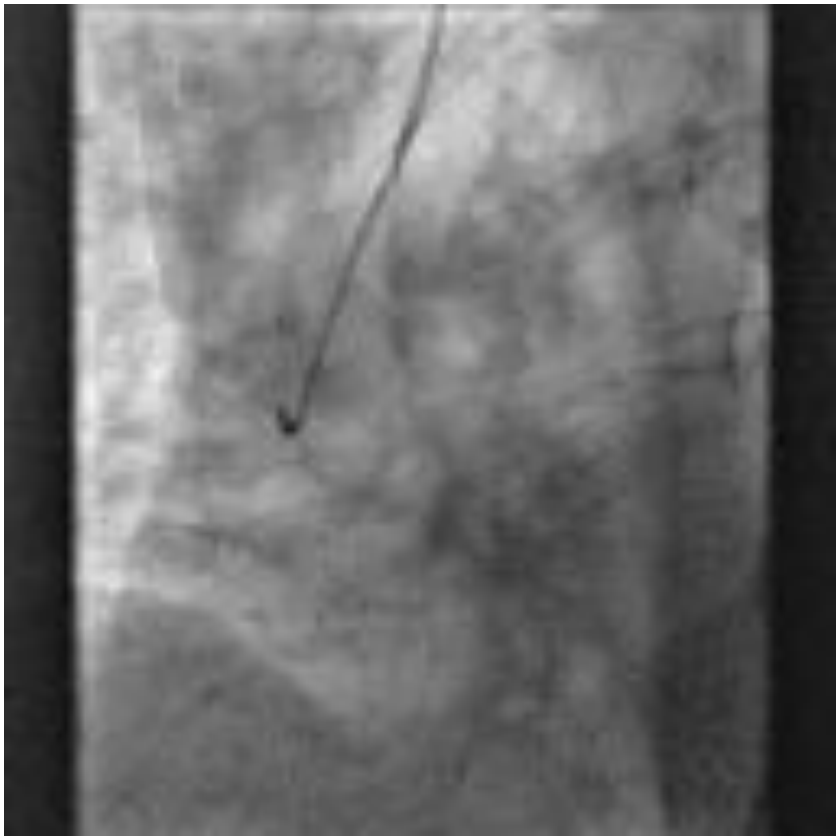
Torque anti-horaire

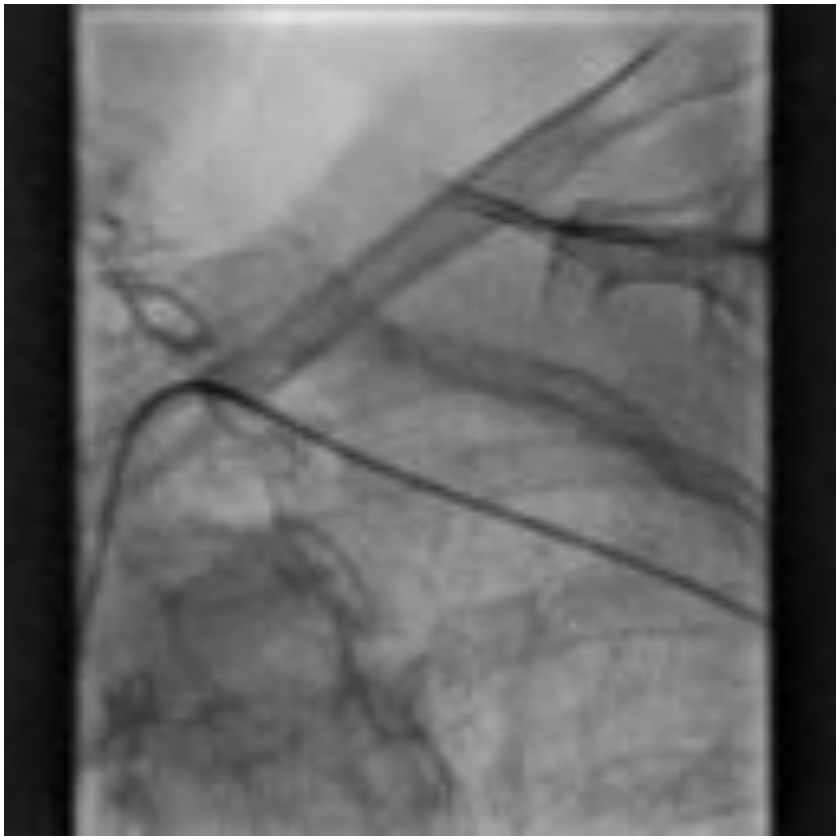




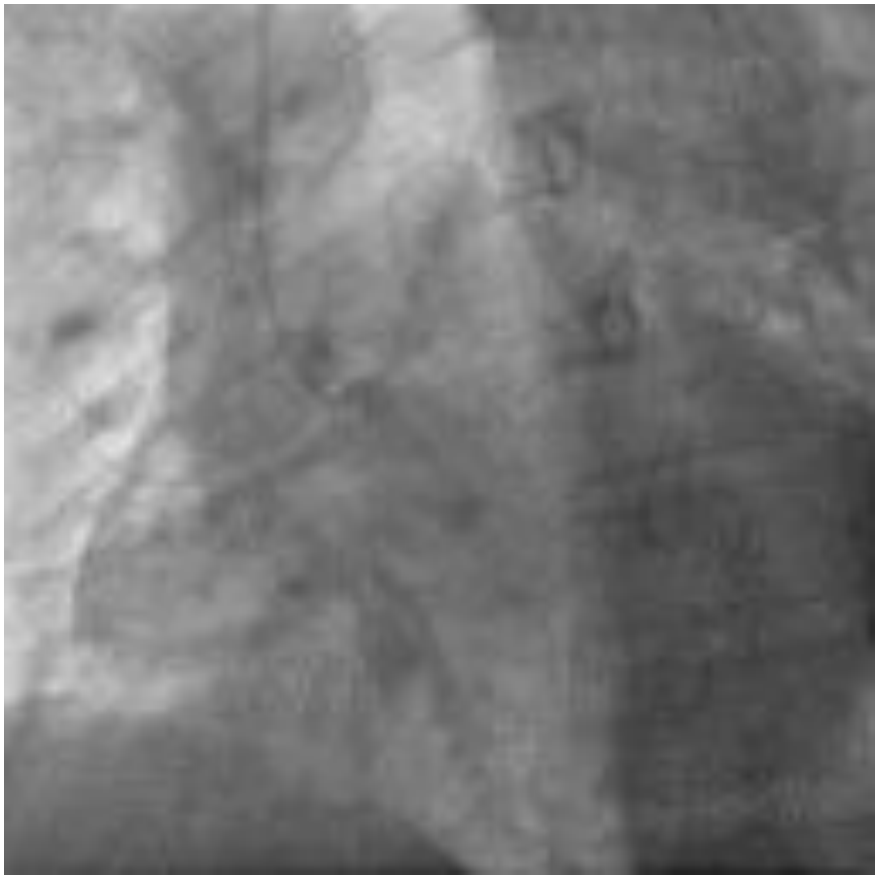
Légère traction pour co-axialité

En radiale gauche ?





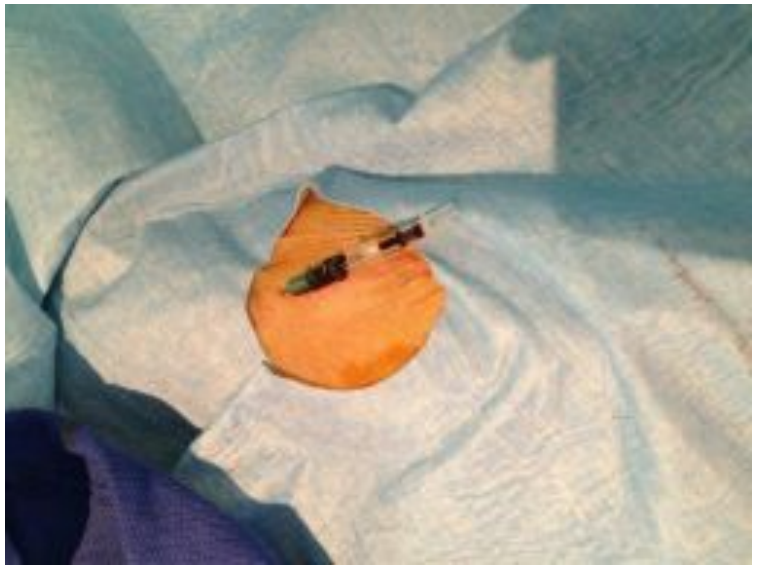
Attention : sonde rigide, guide en place et torque modéré



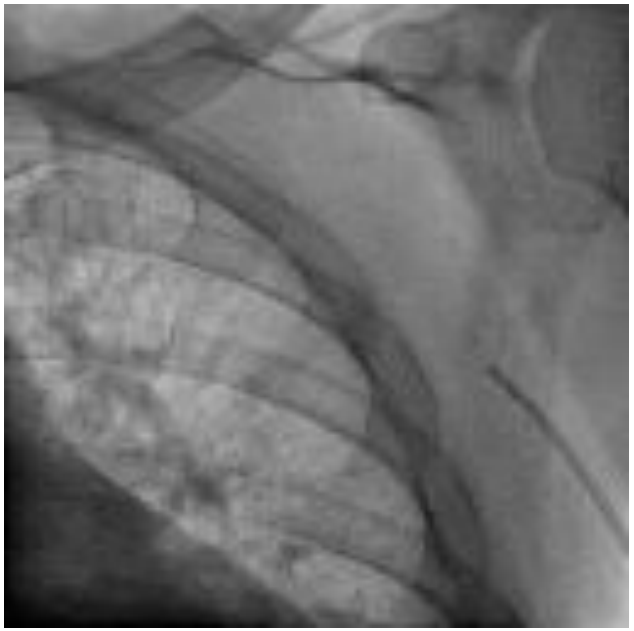
Le Kt complet par radiale/basilique

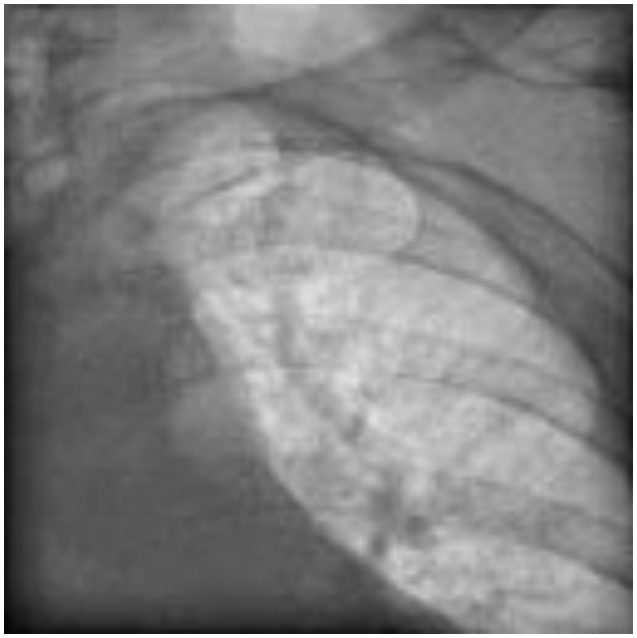
- **<u>Basilique</u>**
  - Avantages : - simplicité ponction
    - facilité de progression dans cœur
    - limitation du risque hémorragique
    - limitation des rayons X/fémorale (femme enceinte)
    - lever immédiat (HDJ)

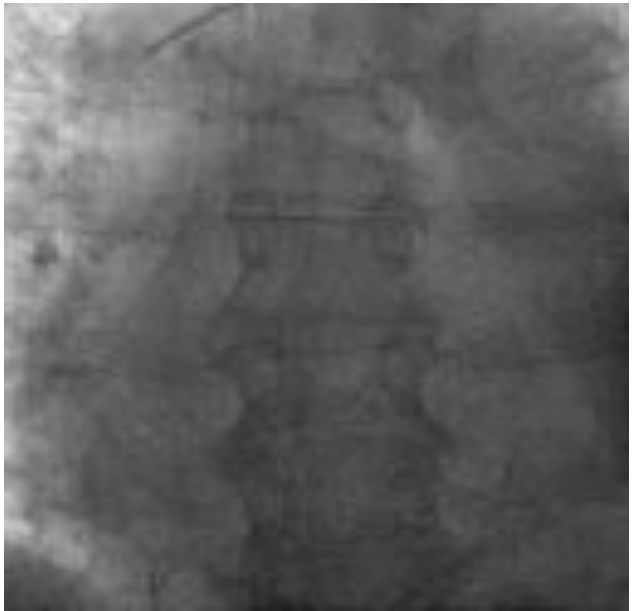
  - Inconvénients : Difficulté progression au niveau sous-clavière (guides, injections…)

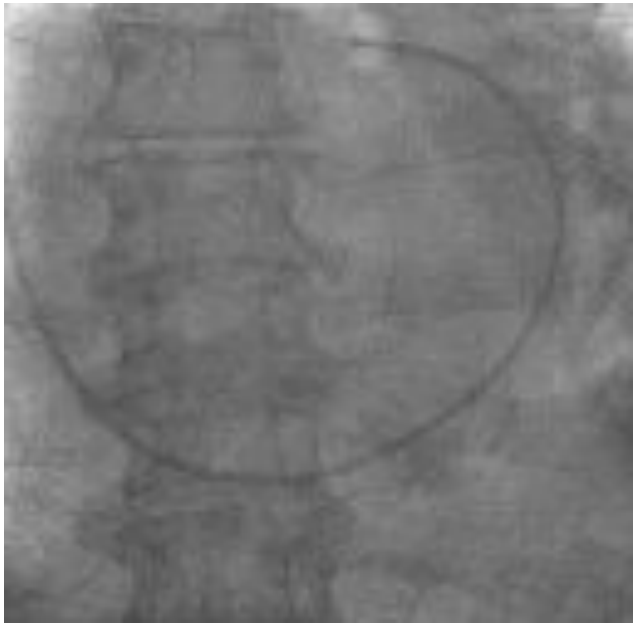


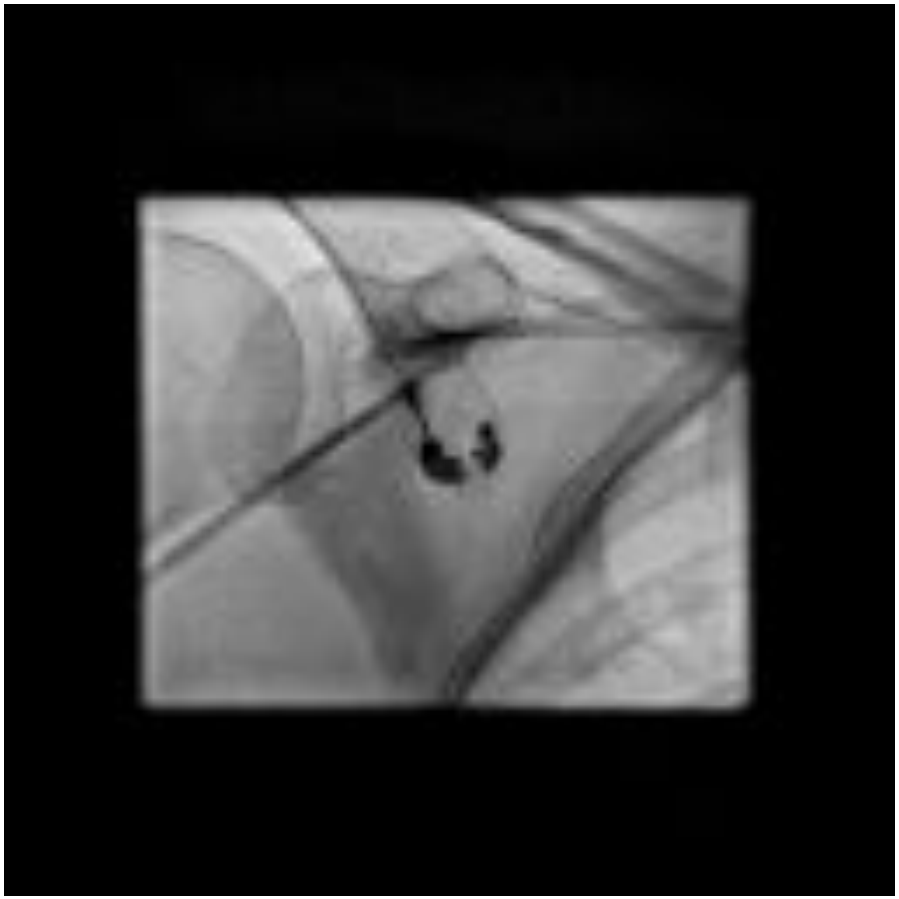
Passage kt et gonflage ballon à 50cm

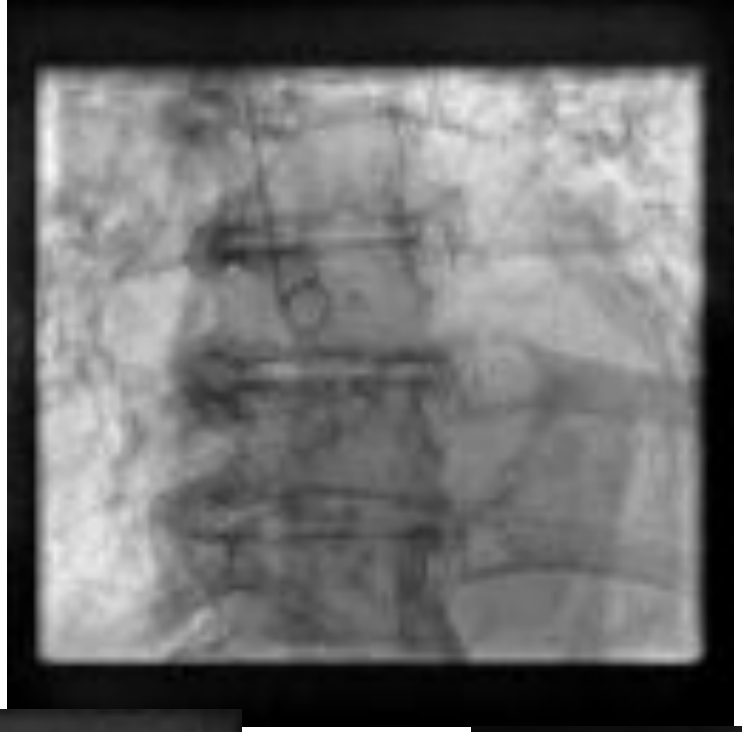


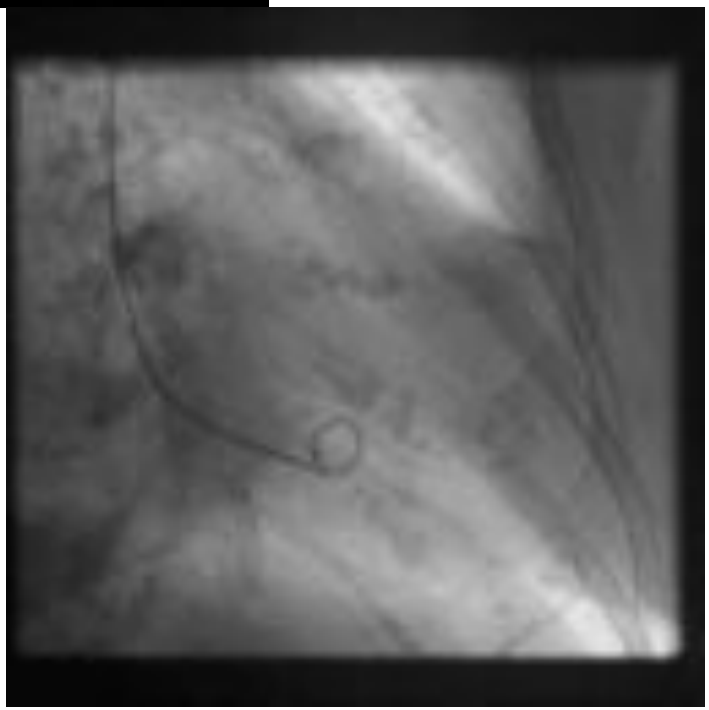




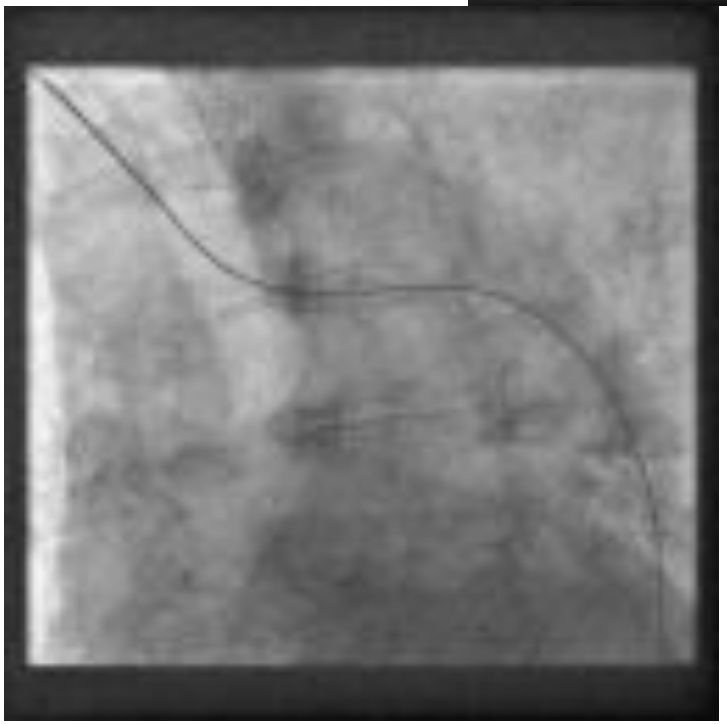


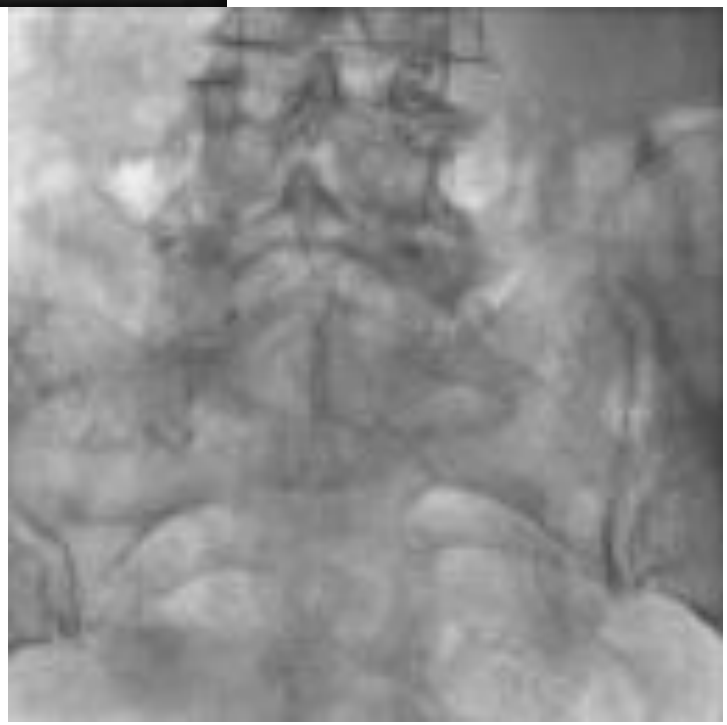






Pigtail longue 125 cm





Coronarographie diagnostique

- Cas complexes

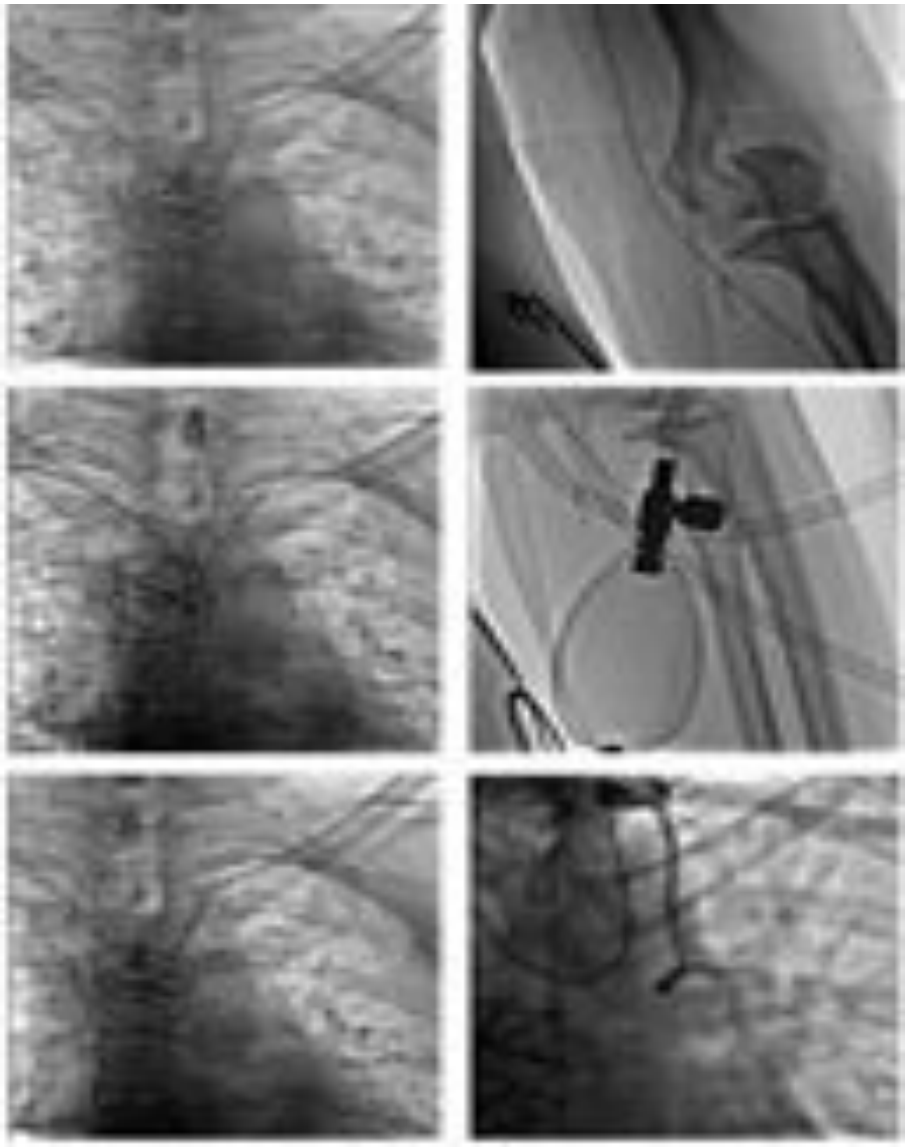
- Radiale droite-mamaire gauche…

Catheterization and Cardiovascular Interventions 80:316–320 (2012)

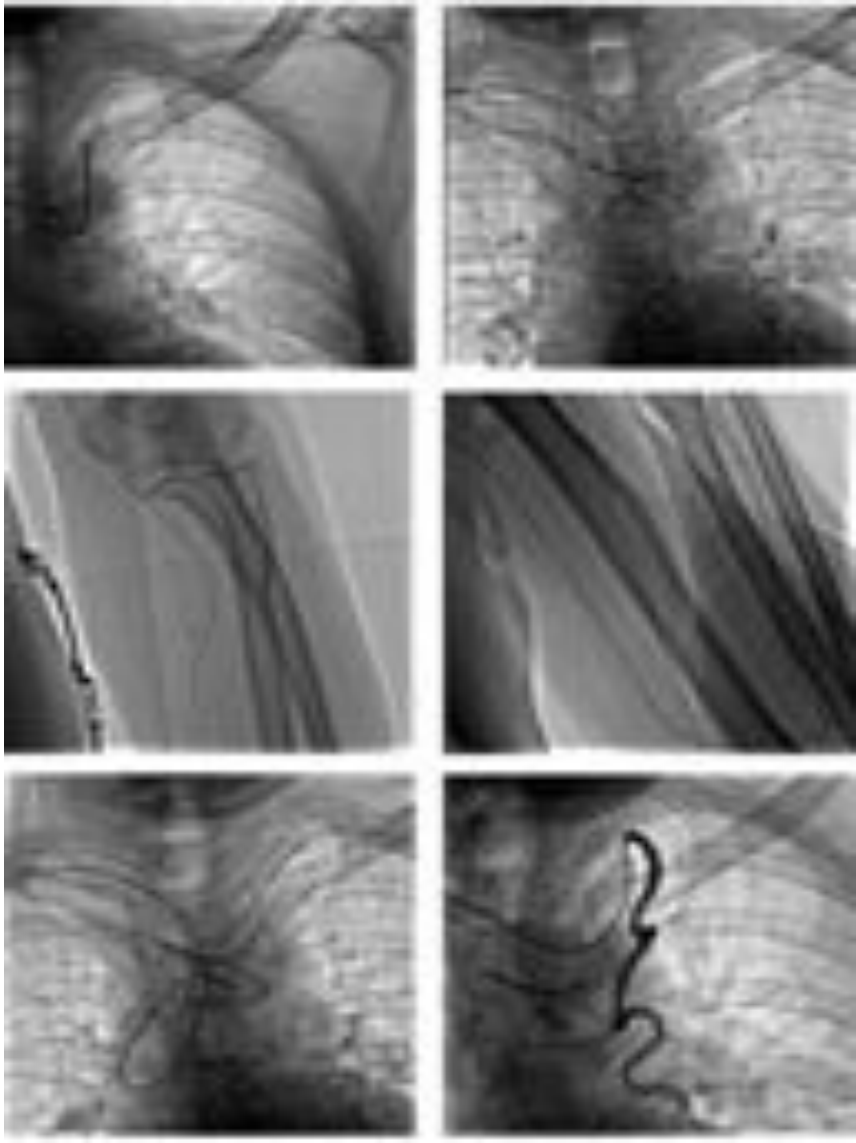
Cannulating LIMA Graft Using Right Transradial Approach: Two Simple and Innovative Techniques

Tejas Patel,[1,2*] MD, FACC, FSCAI, Sanjay Shah,[1,2] MD, and Tejan Patel,[3] MD, FACC, FSCAI

Brassard pression



Flexion du coude



Brassard pression

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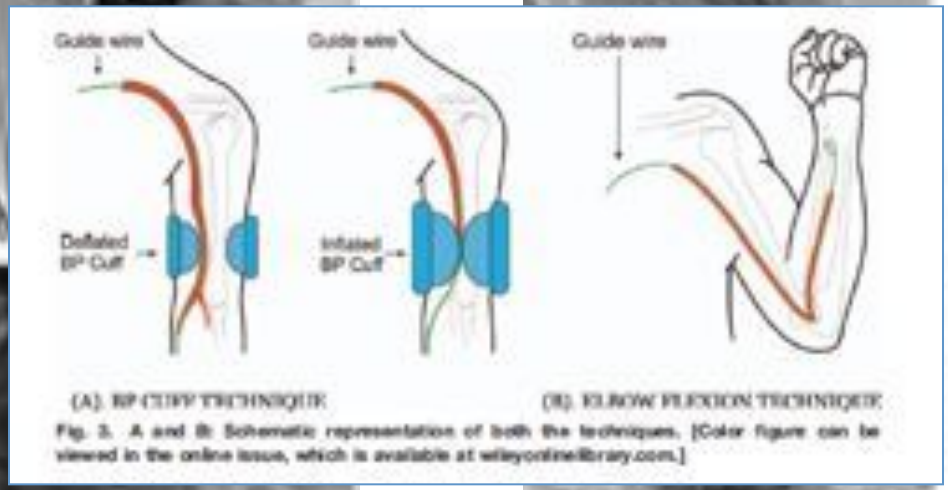


Fig. 3. A and B: Schematic representation of both the techniques. [Color figure can be viewed in the online issue, which is available at wileyonlinelibrary.com.]

Catheter d'angioplastie : la base

- Compenser le manque de support de radial par bonne connaissance anatomique et concept des sondes d'approche

Regardless of the specific catheter, 5 other factors determine backup support!

Factors:	Determinants :
1. Catheter size	Not relevant when comparing 6F catheters

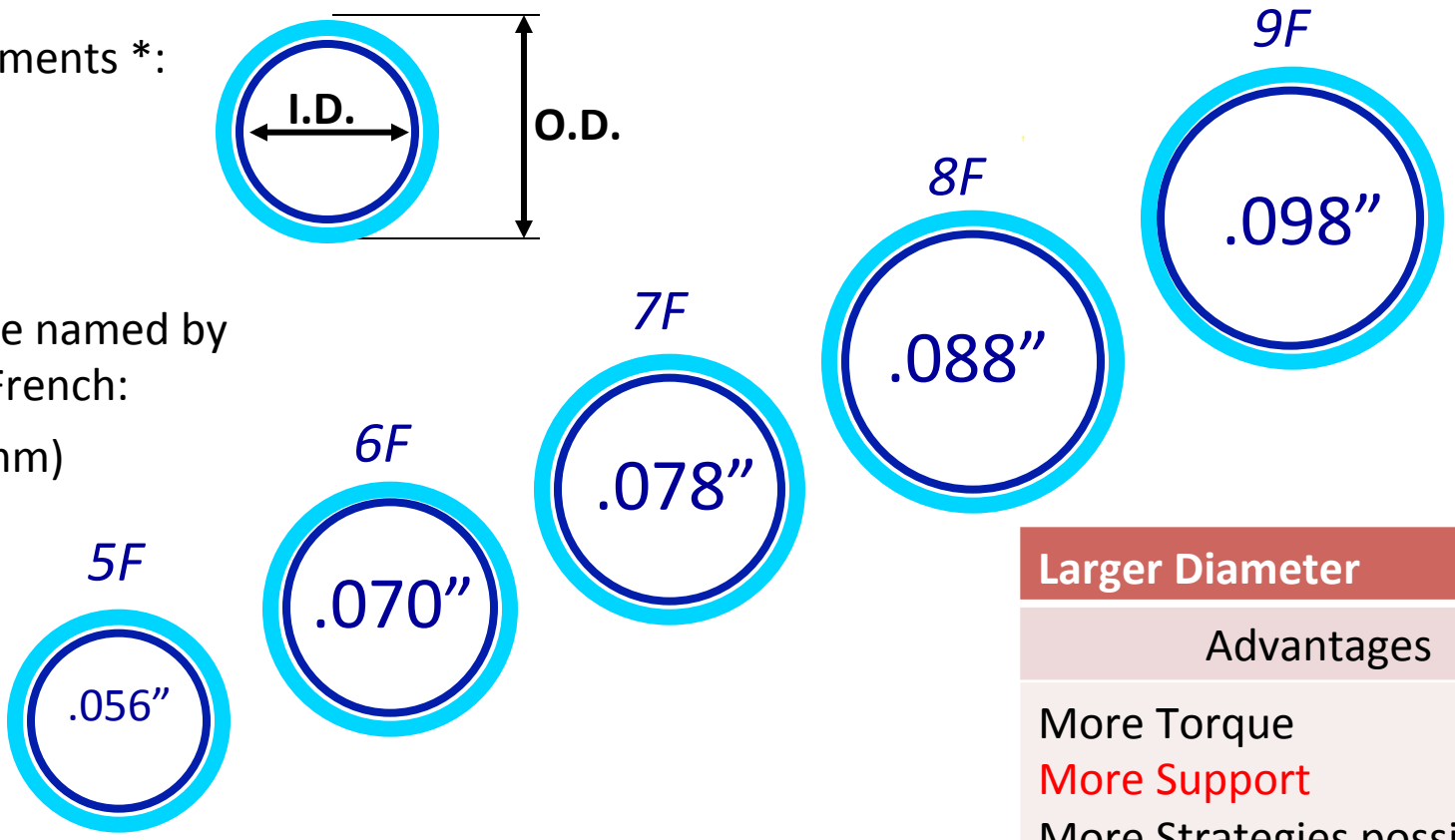
* Adapted from Percutaneous Interventional Cardiovascular Medicine - The PCR-EAPCI Textbook Volume II, 2012 – 978-2-913628-63-2

Catheter Size: Larger Diameter gives more support

Measurements *:

Catheters are named by their OD in French:

(1 ***F*** = 0.33 mm)



Larger Diameter
Advantages
More Torque More Support More Strategies possible
Disadvantages
Larger Puncture More contrast use

•Outer Diameter (OD) vs. Inner Diameter (ID) also known as Inner Lumen (IL)
•Note: ID referent to VISTA BRITE TIP® Guiding Catheter

Cordis ADROIT™ Guiding Catheter – 6F

Regardless of the specific catheter, 5 other factors determine backup support!

Factors:	Determinants :
1. Catheter size	Not relevant when comparing 6F catheters
2. Co-axial alignment with coronary arteries	A function of the shape in the anatomy

Shape

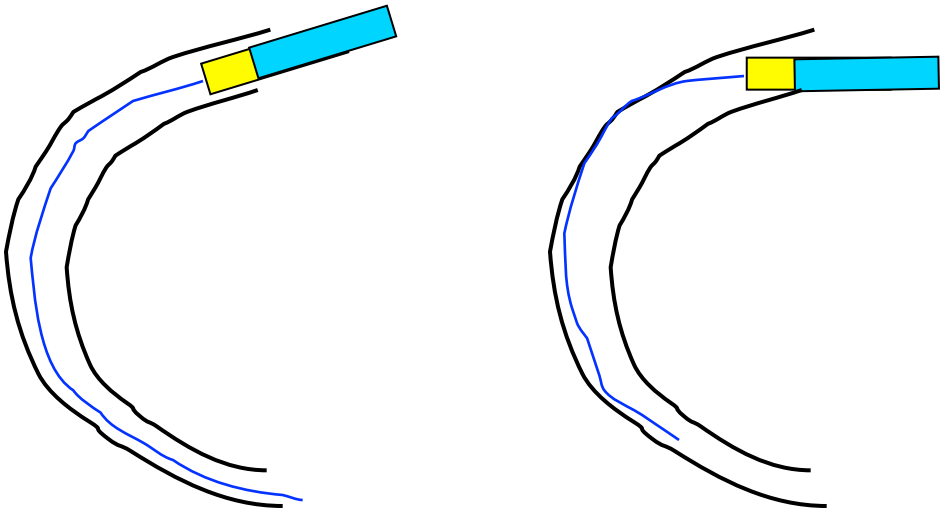
* Adapted from Percutaneous Interventional Cardiovascular Medicine - The PCR-EAPCI Textbook Volume II, 2012 – 978-2-913628-63-2

Coaxial Tip Alignment

- Why is this important?

  Coaxial or parallel alignment of the catheter will affect how well the guide catheter operates as a conduit

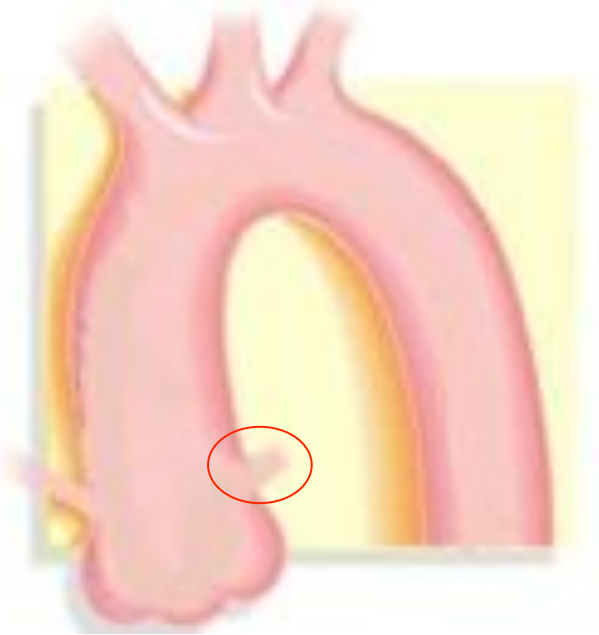
  Reduces risk of catheter induced trauma and optimizes support



Vessel "Take Off"

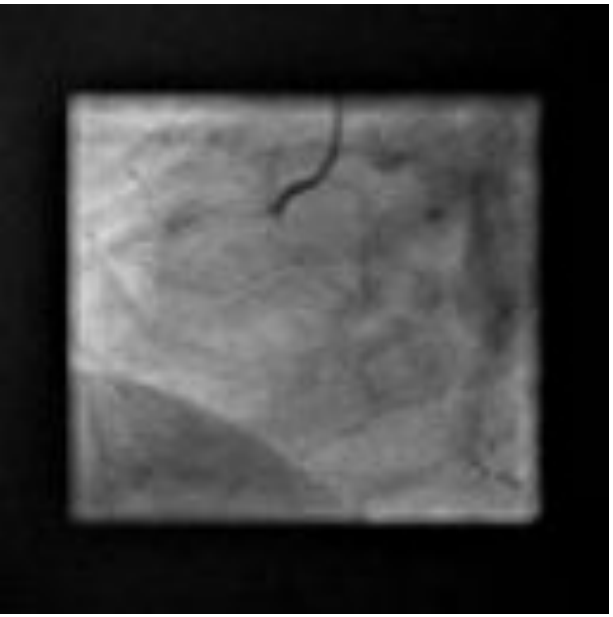
The angle that the Right Coronary Artery (RCA) or Left Coronary Artery (LCA) comes off the aorta

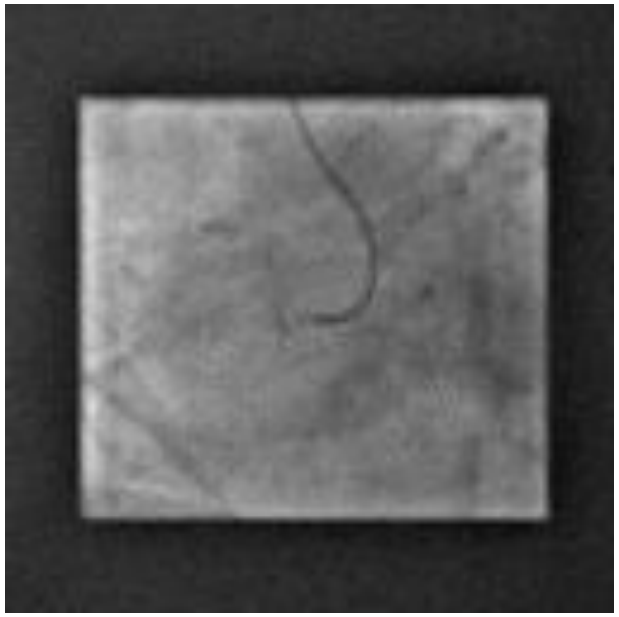
Superior, Inferior, Posterior, Anterior

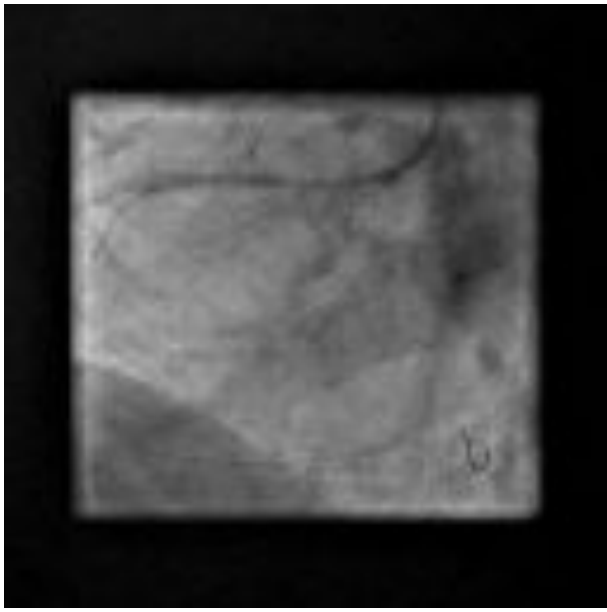


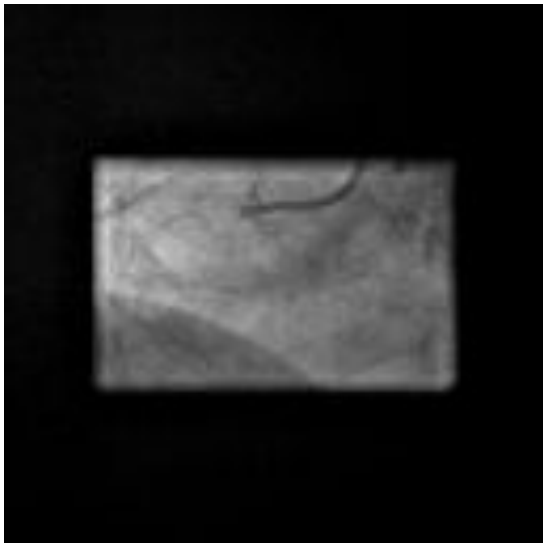
XBRCA

XBRAC

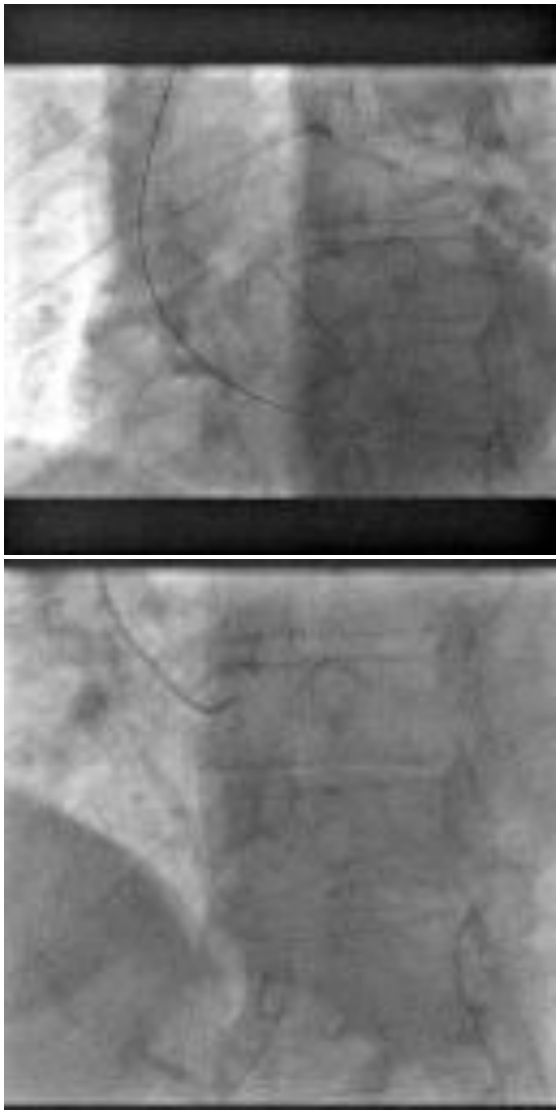


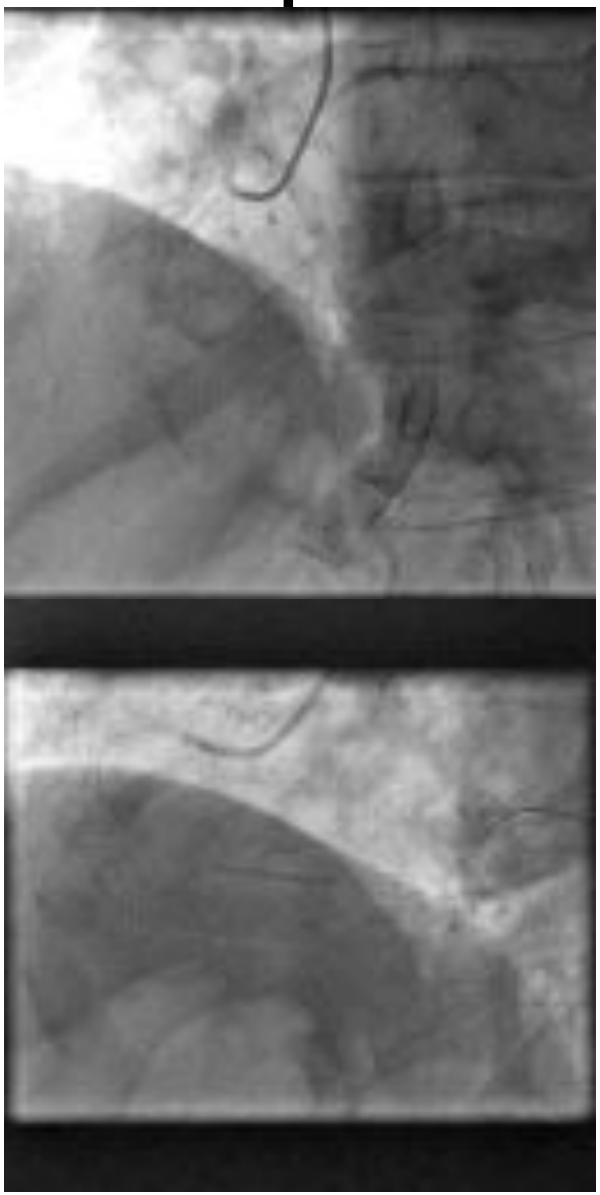






Coaxialité sonde gauche pour CD :





Regardless of the specific catheter, 5 other factors determine backup support!

Factors:	Determinants :
1. Catheter size	Not relevant when comparing 6F catheters
2. Co-axial alignment with coronary arteries	A function of the shape in the anatomy
3. Deep-seating of catheter into the vessel ("Active Support")	A function of the operator behavior

Shape

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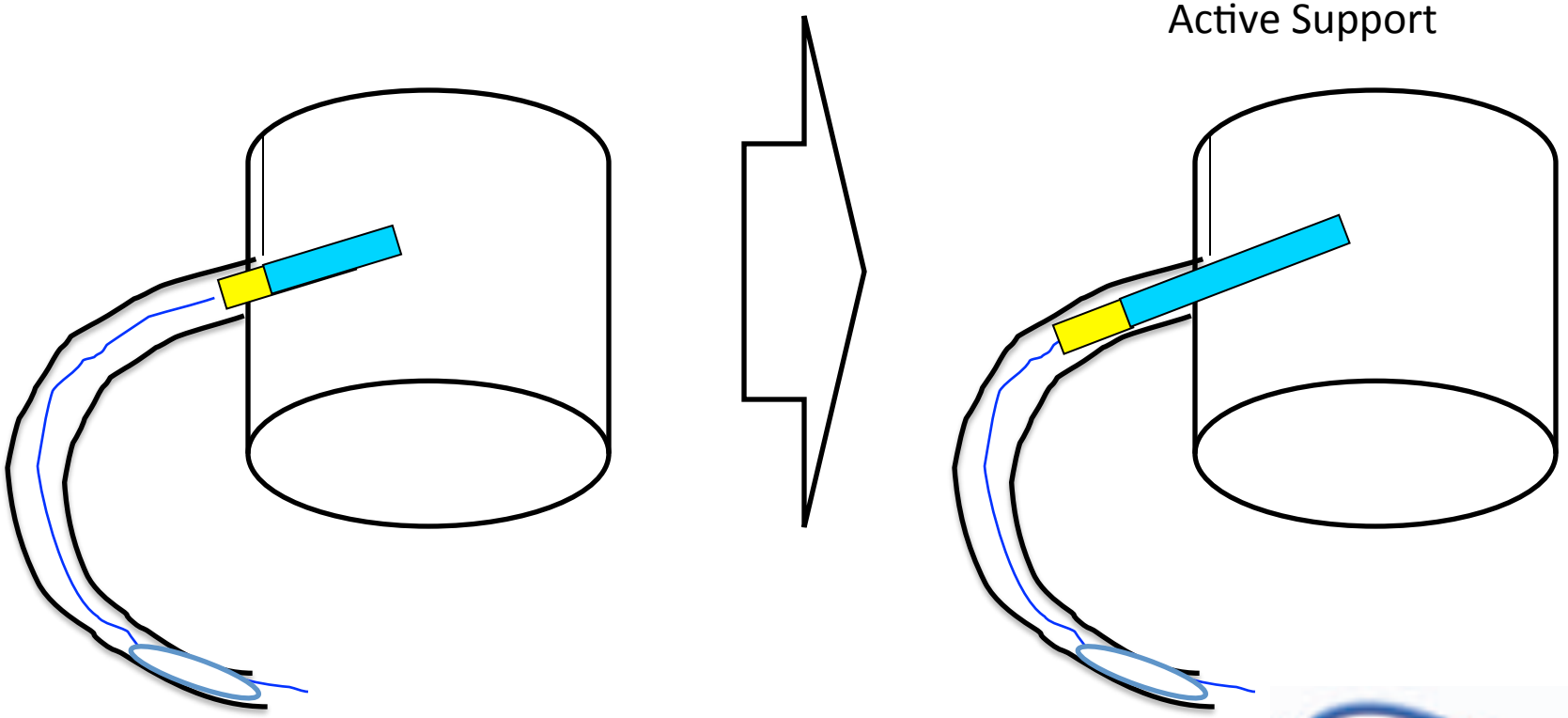
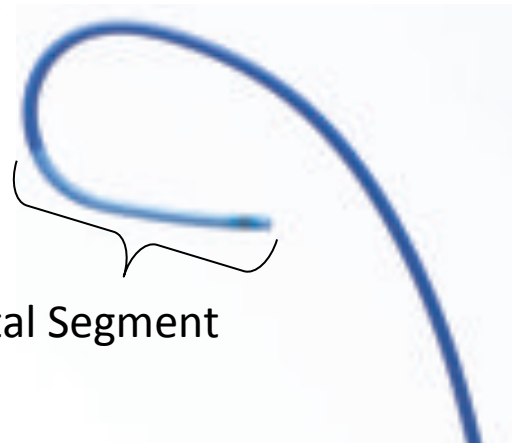
Deep-seating for active users

Passive Support

Deep-seating for Active Support



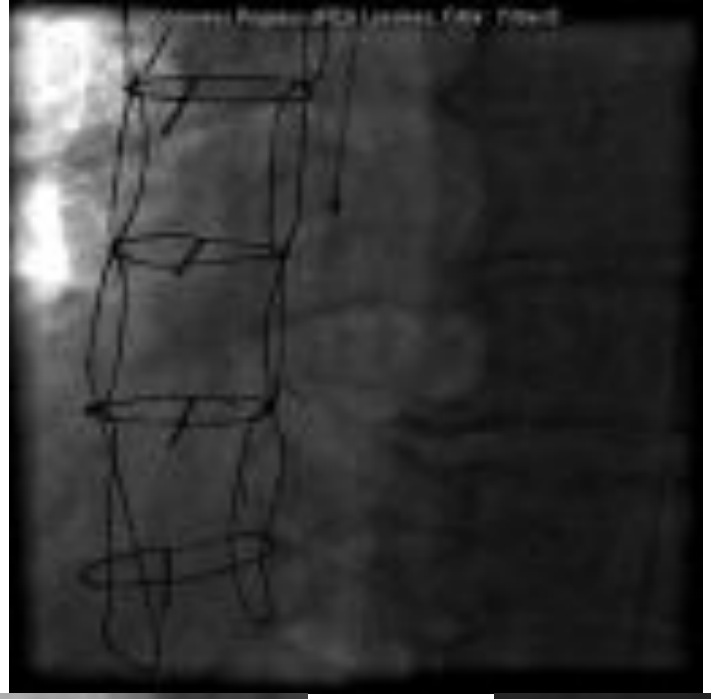
Physicians who deep seat their catheter, often prefer a softer catheter, so as to reduce the chance for ostial damage.



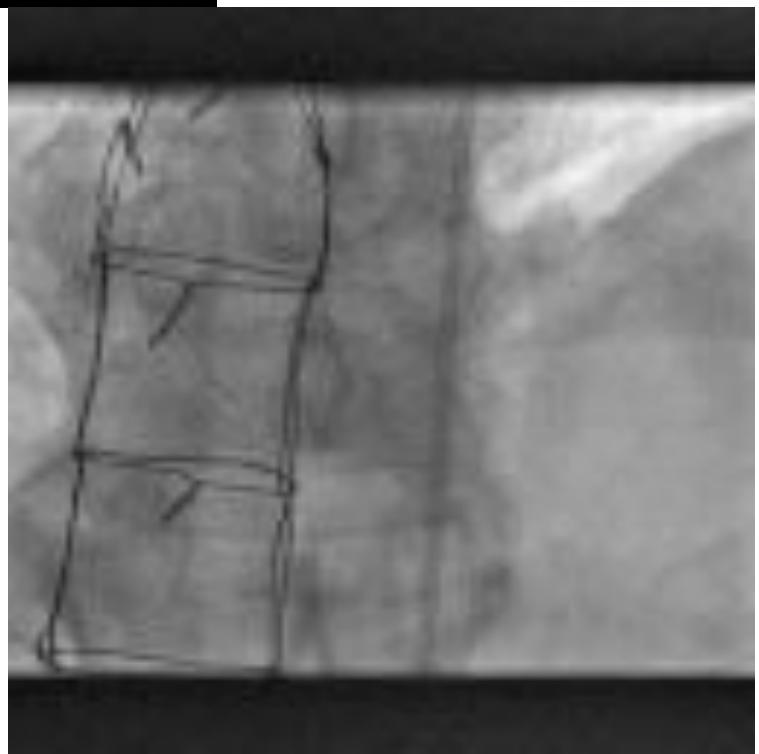
Distal Segment

Hockey stick
HS curve

TRANSRADIAL



FEMORAL



- JR4 intubation profonde
  - Torque horaire + avancer sonde
- AL 0.75 pour radiale droite

Regardless of the specific catheter, 5 other factors determine backup support!

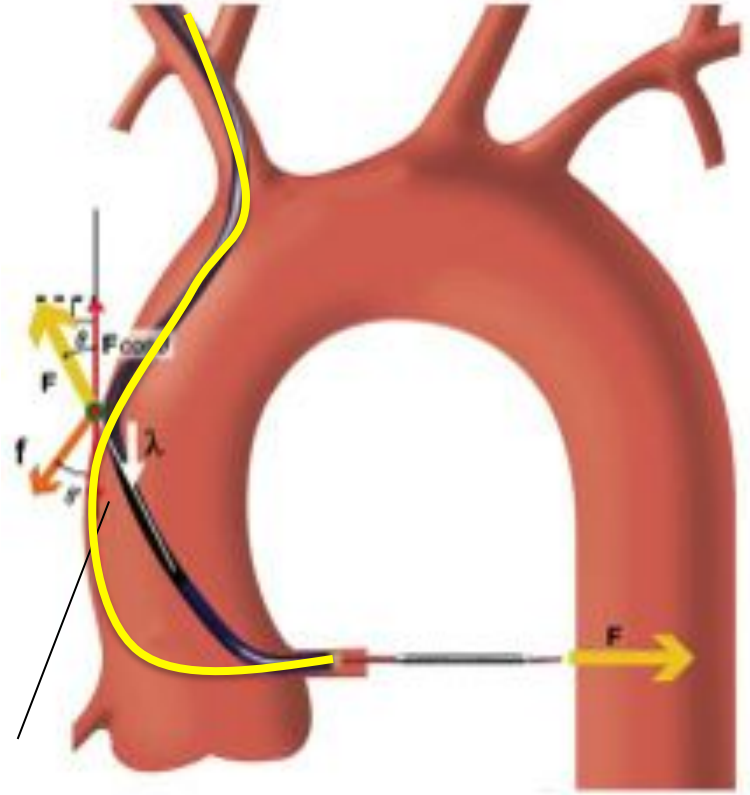
Factors:	Determinants :
1. Catheter size	Not relevant when comparing 6F catheters
Shape 2. Co-axial alignment with coronary arteries	A function of the shape in the anatomy
3. Deep-seating of catheter into the vessel (“Active Support”)	A function of the operator behavior
Shape 4. Angle of the catheter on the reverse side of the aorta	A function of the shape in the anatomy

* Adapted from Percutaneous Interventional Cardiovascular Medicine - The PCR-EAPCI Textbook Volume II, 2012 – 978-2-913628-63-2

Angle and Contact Area

The power equation at the point of catheter contact on the reverse side of the aorta: Shapes that provide more contact area and larger Theta angle give more support (yellow line)

Contact area



Angle of the catheter on the reverse side of the aorta

* **Adapted from Ikari et al. J Invasive Cardiol2005 ;17:636-41**

Regardless of the specific catheter, 5 other factors determine backup support!

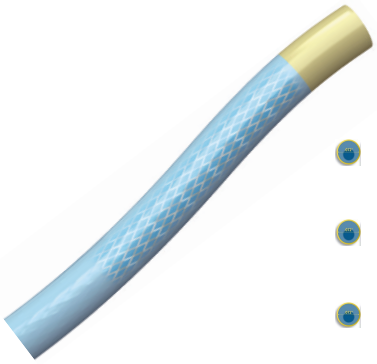
	Factors:	Determinants :
	1. Catheter size	Not relevant when comparing 6F catheters
Shape	2. Co-axial alignment with coronary arteries	A function of the shape in the anatomy
	3. Deep-seating of catheter into the vessel (“Active Support”)	A function of the operator behavior
Shape	4. Angle of the catheter on the reverse side of the aorta	A function of the shape in the anatomy
Shape	5. Contact area	A function of the shape in the anatomy
	6. Catheter Materials	A function of the GC brand

* Adapted from Percutaneous Interventional Cardiovascular Medicine - The PCR-EAPCI Textbook Volume II, 2012 – 978-2-913628-63-2

Cordis **VISTA BRITE TIP®**
Cathéter Guide

- Conçu pour apporter support et performance
- Du 5F au 9F
- Large gamme de courbures
- Longueurs 90 -100 – 125 cm

Cordis **ADROIT™**
Cathéter Guide – 6F



- Une très large lumière
- Un support optimisé
- Large gamme de courbures
- Longueurs 90 -100 – 125 cm

Engineered with

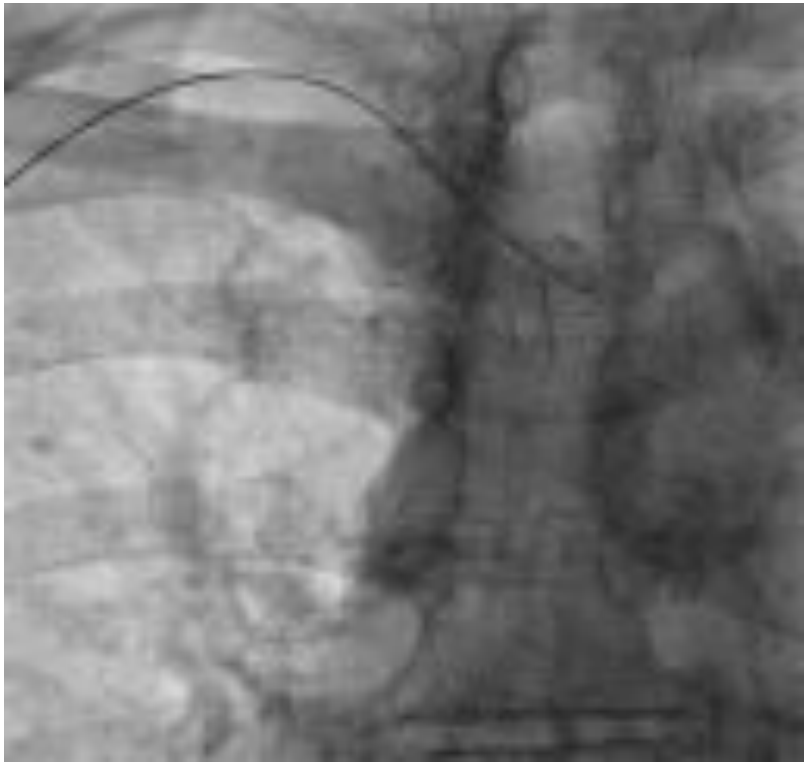
INNOVATIVE HYBRID BRAIDED WIRE TECHNOLOGY

Shape Comparison

	Reference	Medtronic	Cordis	Boston Scientific	Terumo
Femoral LCA	JL4	EBU 3.5-3.75	XB3.25-3.5 XBC3.25-3.5 XBLAD4	VL3.5 Q4	BL3.5
Femoral RCA	JR4	RBU 3.5	XBRCA XBR	ART3.5	
Radial LCA	JL3.5	EBU 3.5-3.75	JFL RB XB3.25-3.5 XBC3.25-3.5 XBLAD4	Muta Left 4 Kimmy VL3.5	Ikari Left 3.5
Radial RCA	JR4	MAC3.5 RRAD	RRAD6 (XB) JFR Barbeau RB	Muta Right 2 Kimmy	Ikari Right 1.5 Ikari Left 4

* Adapted from Percutaneous Interventional Cardiovascular Medicine - The PCR-EAPCI Textbook Volume II, 2012 – 978-2-913628-63-2

Guide dans Kt avec valve



Sheathless femoral

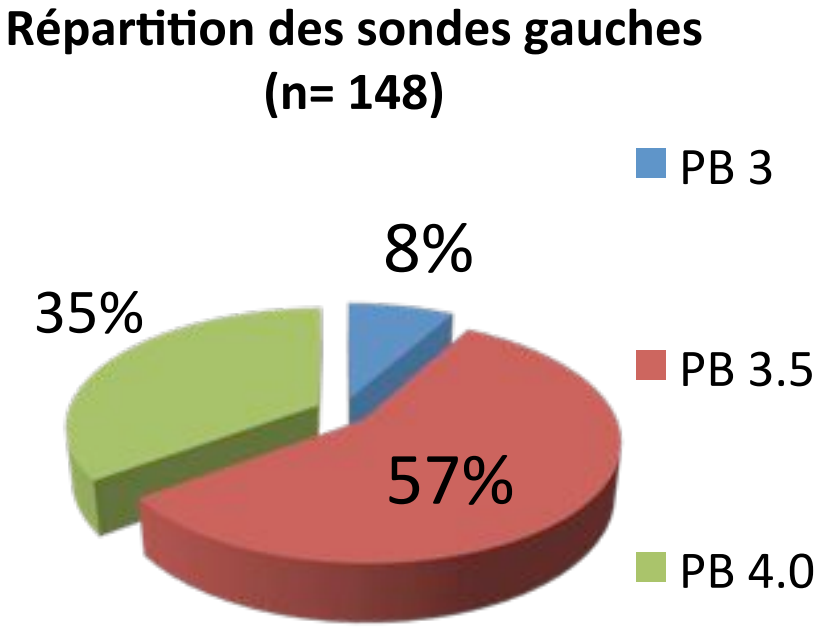
- Support
- Orientation avec introducteur

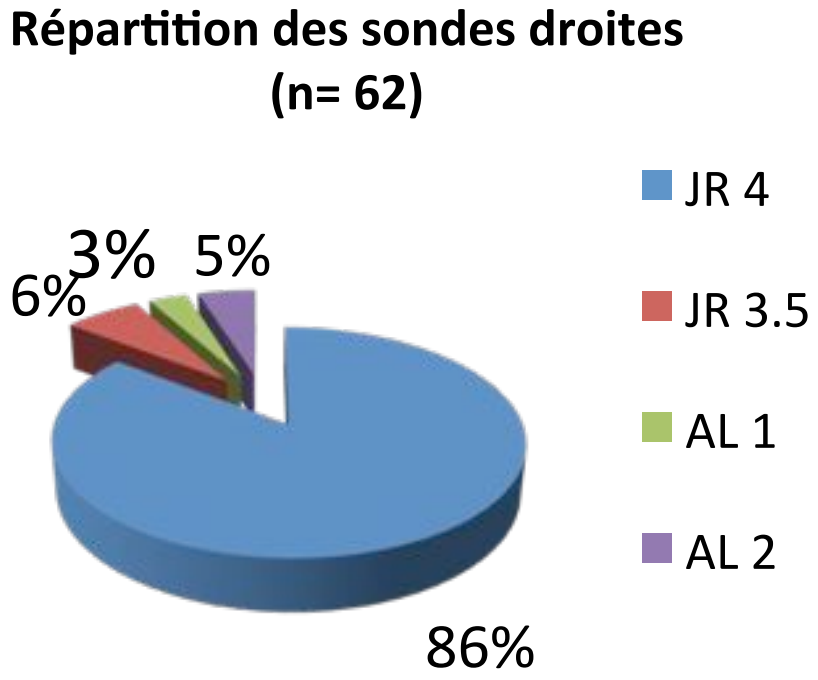
Expérience Clinique St hilaire

Number of patients	202
Number of catheters	225
Homolateral switch for inadequate sizing	16
Appropriate switch for right and left PCI	7
Number of appropriately used catheters	209 (225 – 16)
Number of right-used catheters	62
Number of left-used catheters	147
First catheterization attempt success rate	2O9/225 = 93%

Courtesy J.Berland

Distribution des Sheathless finalement opérationnels (n= 210)





RESULTATS DE L'ANGIOPLATIE

- SUCCES DE LA PROCEDURE avec SHEATHLESS
  98,5 %.
- 291 Stents Implantés : 209 Réseau Gauche (4 TC)
  82 Coronaire Droite
- Durée de la procédure : 36 ± 22 min.

- Dosimétrie: Scopie : 10,9 ± 6.5 min
  Air Karma : 1434 ± 1136 mGy

SECURITE du SHEATHLESS

- COMPRESSION MANUELLE : 100 %
- TEMPS DE COMPRESSION : 5.2 ± 2.4 min
- COMPLICATIONS HEMORRAGIQUES MAJEURES Dont Transfusions : 0
- COMPLICATIONS MINEURES : 3 (1.5 %)

  Barc 2 Hématomes : 2

  Faux anévrisme Thrombosé J 4 : 1

COMPARAISON DES COUTS DE PROCEDURE

	Femorale 6F	Sheathless	Radiale 6F
INTRO	14,35	0	16,15
KT guide	41,50	83,72	41,50
Fermeture	130	0	12
Total	168,88 €	83,72 €	69,65 €
Economie/pts :		- 85, 15 €	- 14,02 €
200 Pts :		17 000€	2800 €