

CTO : Quand commencer ? Quand s'arrêter ?  
La CTO Responsable

# Le matériel à connaître

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Toulouse



# Cathéters guide

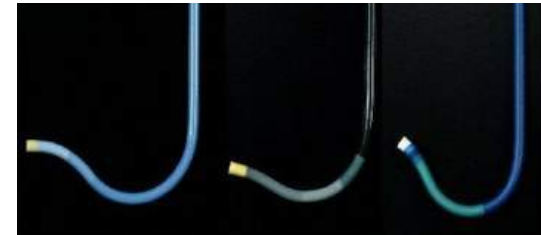
Avec support passif suffisant:

- Coronaire droite: AL 0.75, AL 1...
- Circonflexe: EBU, AL2...
- IVA: EBU,...

Parfois avec trous latéraux.

Extension de cathéter:

- Monorail: Guideliner<sup>®</sup>, Guidezilla<sup>®</sup>
- Coaxial: Mother-in-child Heartrail II<sup>®</sup>



# Microcathéters

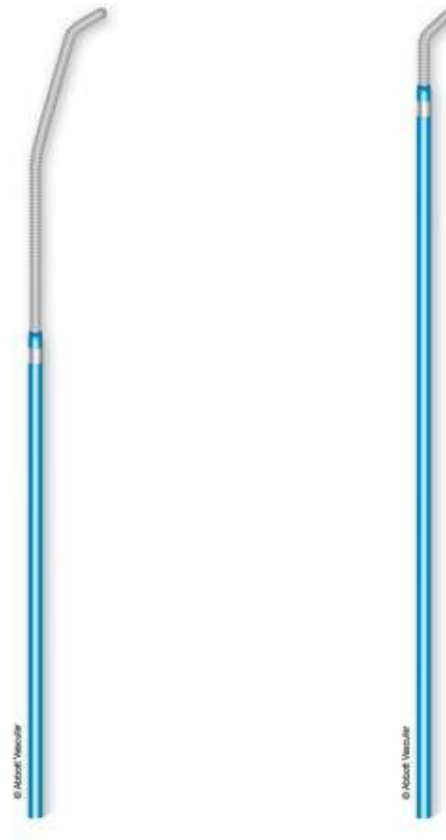
- 130-150 cm
- Finecross<sup>®</sup> (Terumo)
- Supercross<sup>®</sup> (Vascular Solution)
- Valet<sup>®</sup> (Volcano)
- Corsair<sup>®</sup>, Asahi (septal channel dilatator)



# Microcathéters

## Occlusions chroniques

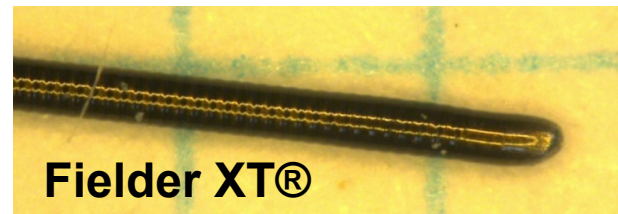
### Guide et microcathéter



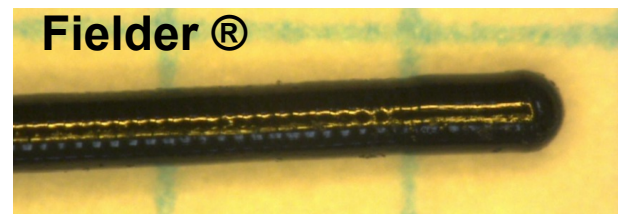
# Guides de franchissement

- Approche « soft » : ( <3g, guide peu rigide)
  - ➔ Fielder XT<sup>®</sup>, Asahi (0,8g): effilé polymérique hydrophile
  - ➔ Cross-IT 100XT (1,7g), Pilot 50 (1,5g), Pilot HT150 (2,7g), Pilot HT 200 (4,1g) (Abbott).

Guide effilé (0.009’’)



Guide conventionnel (0,014’’)



# Guides de franchissement

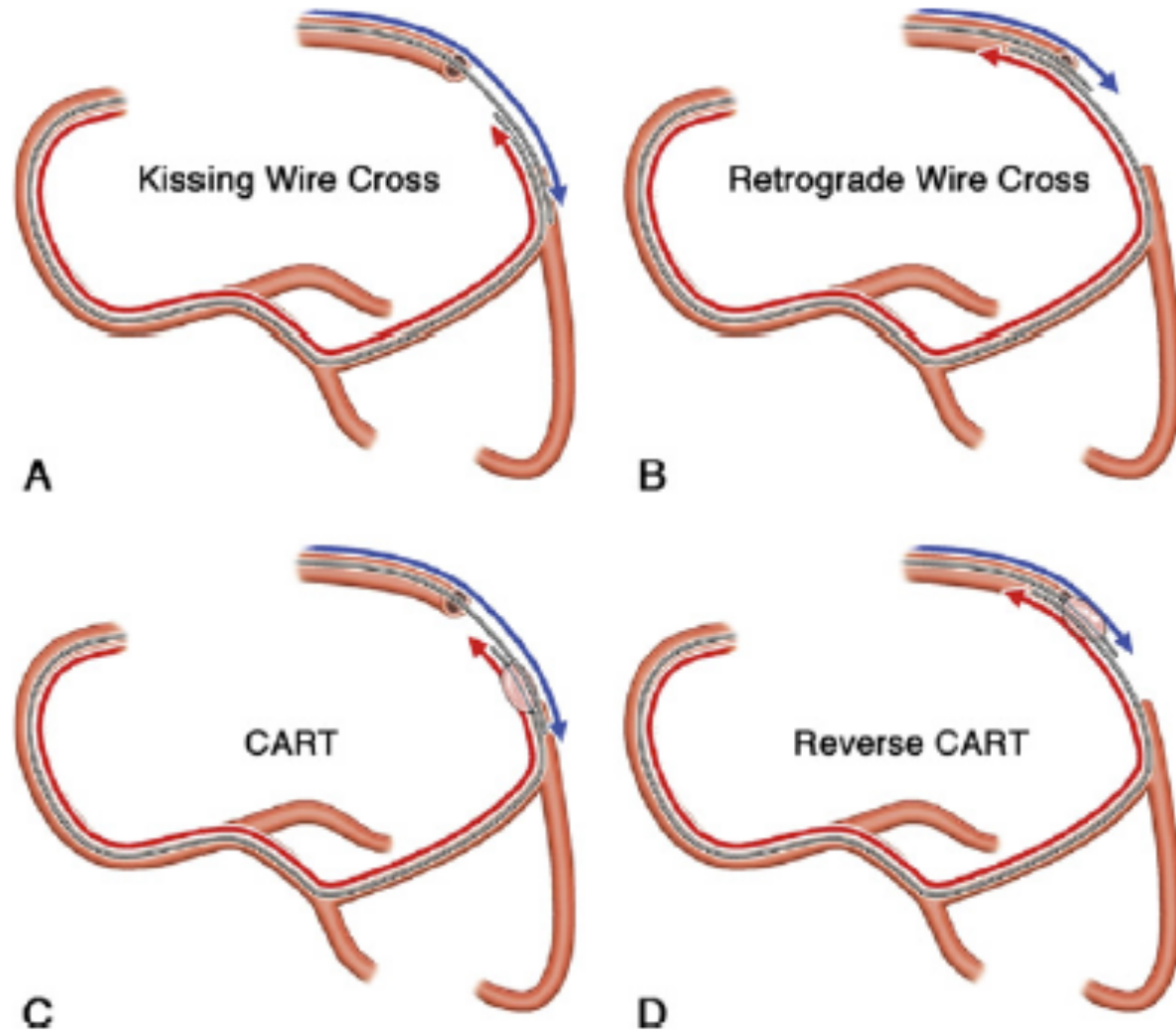
## Guides rigides, « stiff »

- **Rigidité en gramme** = force nécessaire appliquée au niveau de la partie proximale afin d'obtenir une déflexion de 2mm de l'extrémité distale du guide
- **Guides rigides 0,014'' (= 0,36 mm):**
  - Miracle® (Asahi): 3g, 6g, 12g
  - Progress® (Abbott) 40 (4.8g), 80 (9.7g), 120 (13.9g)
  - Persuader® (Medtronic) 3g, 6g, 9g
- **Guides rigides à extrémité distale effilée 0,009''**
  - Confianza® 9 (9g), Pro (9g) , Pro 12 (12g), Pro8-20 (20g). Asahi
  - Progress® 140T (12.5g), 200T (13.3g). Abbott

# Guides: liste non exhaustive

Guide	Fabriquant	Rigidité de l'extrémité (g)	Diamètre de l'extrémité (in)	Pouvoir de pénétration (kg/in <sup>2</sup> )
HT PILOT 150	Abbott	2,7	0,014''	18
FIELDER XT	Asahi	1,2g	0,009''	19
Cross-It 100XT	Abbott	1.7g	0.0105''	20
HT PILOT 200	Abbott	4,1	0,014''	27
MiracleBros 3	Asahi	3.9g	0.0125''	32
MiracleBros 4.5	Asahi	4.4g	0.0125''	36
PROGRESS 40	Abbott	4.8g	0.012''	40
Cross-It 200XT	Abbott	4.7g	0.0105''	54
Cross-It 300XT	Abbott	6.2g	0.0105''	72
MiracleBros 6	Asahi	8.8g	0.0125''	72
PROGRESS 80	Abbott	9.7g	0.012''	80
Cross-It 400XT	Abbott	8.7g	0.0105''	101
MiracleBros 12	Asahi	13.0g	0.0125''	106
PROGRESS 120	Abbott	13.9g	0.012''	120
Confianza 9	Asahi	8.6g	0.009''	135
PROGRESS 140T	Abbott	12.5g	0.0105''	140
Confianza Pro	Asahi	9.3g	0.009''	146
Confianza Pro 12	Asahi	12.4g	0.009''	195
PROGRESS 200T	Abbott	13.3g	0.009''	200

# Guides et abords rétrogrades



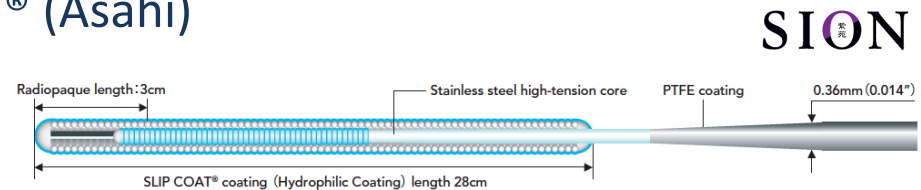


# Guides et abords rétrogrades

- Franchissement de collatérales:

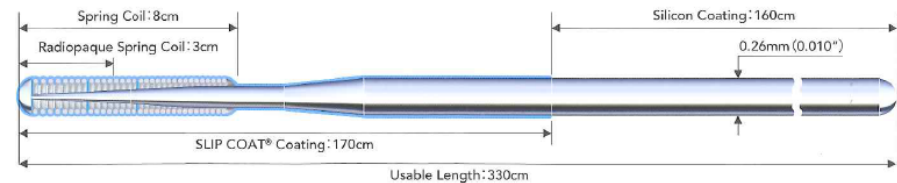
- ➔ Septales, épocardiques:

- Sion<sup>®</sup>, Fielder FC<sup>®</sup>, Fielder XT<sup>®</sup> (Asahi)
    - Whisper LS<sup>®</sup> (Abbott)



- ➔ Externalisation:

- RG3<sup>®</sup>, Asahi: hydrophile, 330 cm, 0,010'' (0.26mm)
    - Rotawire<sup>®</sup>, Boston SC



# Ballons

- **Ballons de franchissement (petit diamètre):**
  - Emerge flex, push<sup>®</sup> (Boston SC): 1.2 mm
  - Mini Treck<sup>®</sup> (Abbott): 1.2 mm
  - Tazuna<sup>®</sup> (Terumo): 1.25mm
  - Across CTO<sup>®</sup> (Acrostak): 1.1 mm
  - NIC NANO<sup>®</sup> (SIS medical ): 0.85mm
  - Falcon<sup>®</sup> (Invatec): 1mm
  - ...

# Matériels de franchissement

## Tornus (Abbott)

**TORNUS 2.1F**



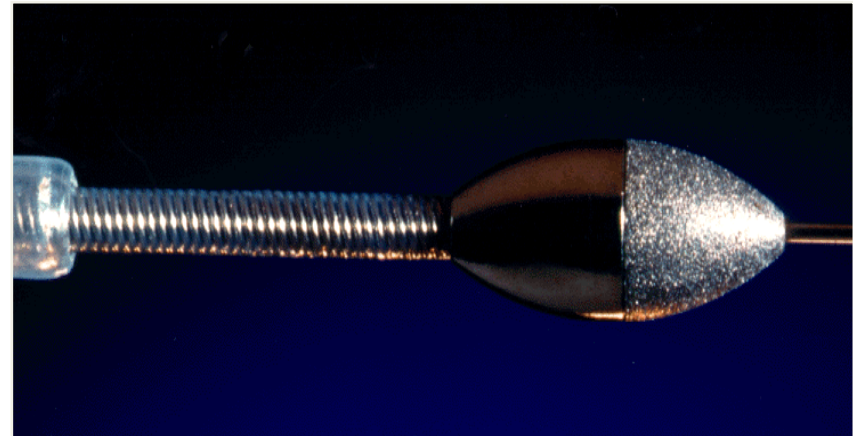
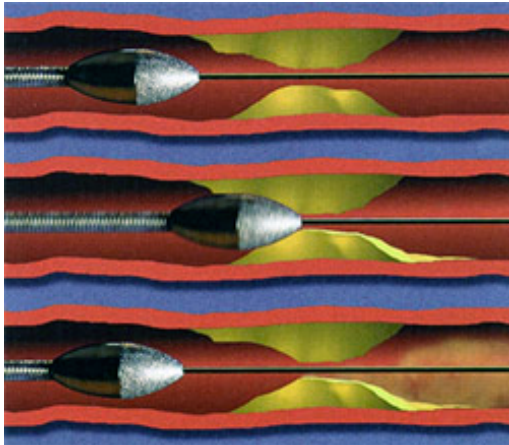
**TORNUS 2.6F**



# Matériels de franchissement

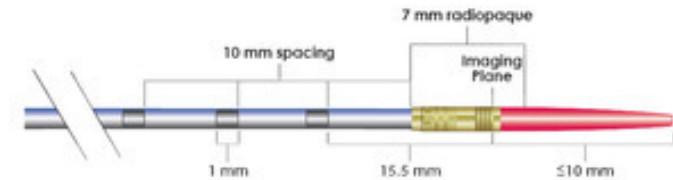
## Rotablator, Boston SC

Fraises: 1.25 – 2.5 mm



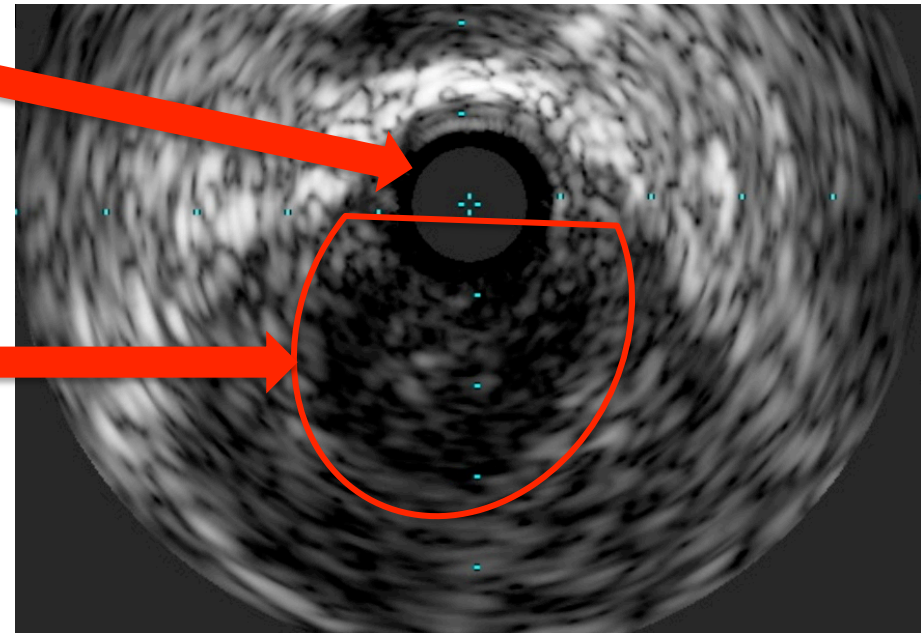
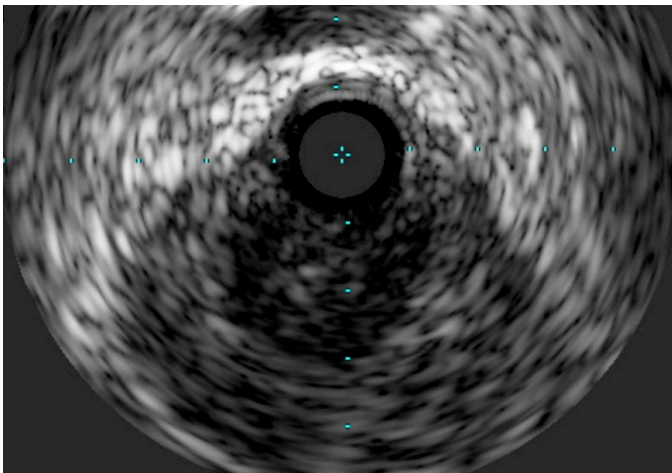
# Echographie endocoronaire

- Volcano, sonde électronique Egle eye
- Repérage d'un ostium: CTO en bifurcation sans moignon



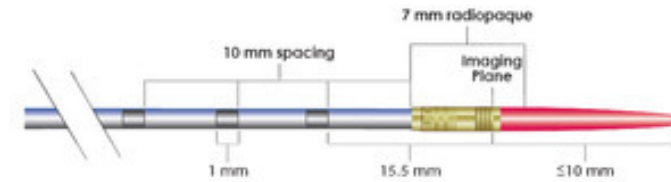
Sonde IVUS, branche fille

Chape fibreuse proximale  
Site d'occlusion



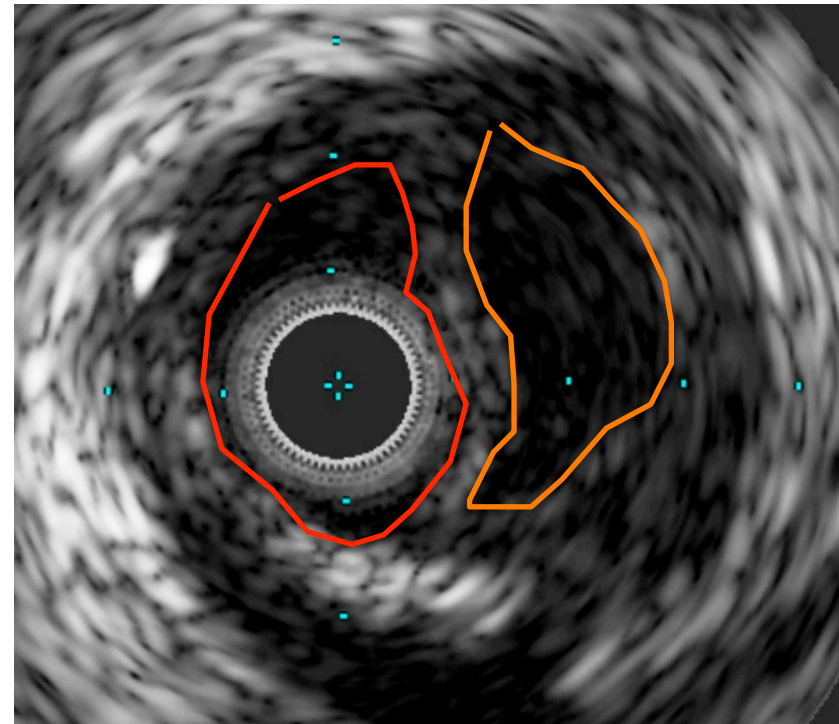
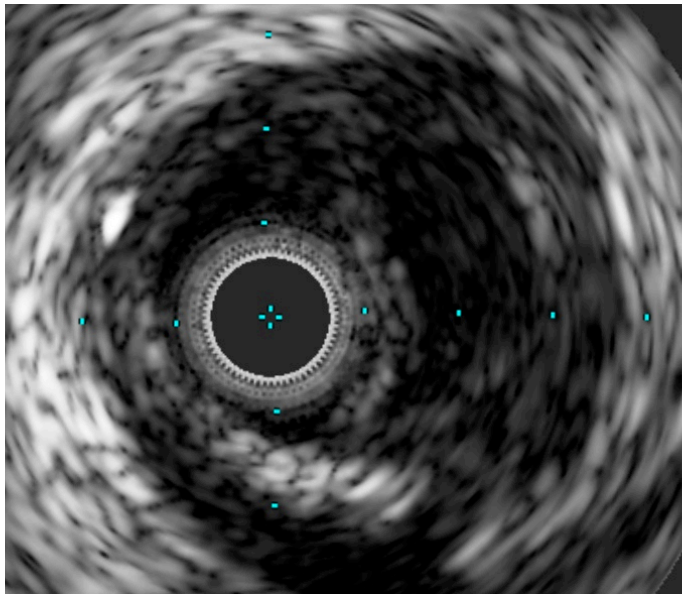
# Echographie endocoronaire

- Volcano, sonde électronique Egle eye



- Compréhension de l'angioplastie: Vrai/ faux chenal

## Reverse CART





# Approche hybride

- Crossboss®

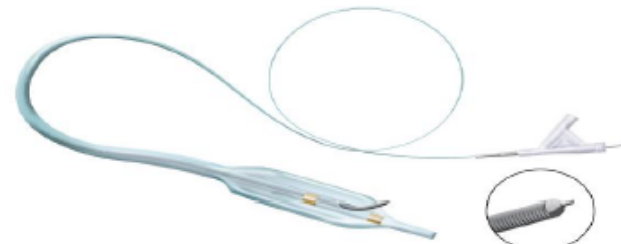


- Stingray®

CrossBoss® Catheter



Stingray® Catheter



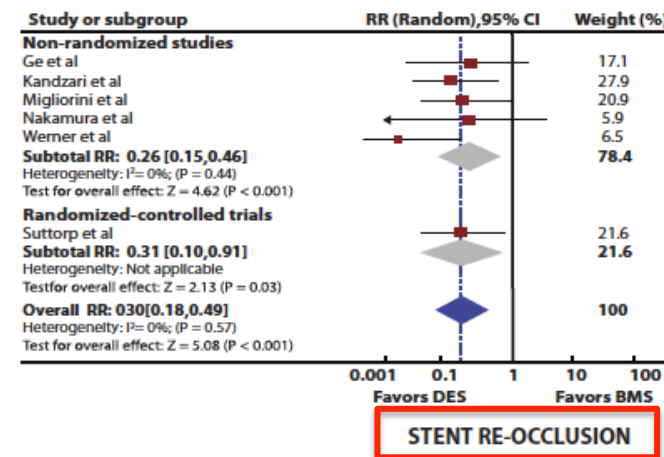
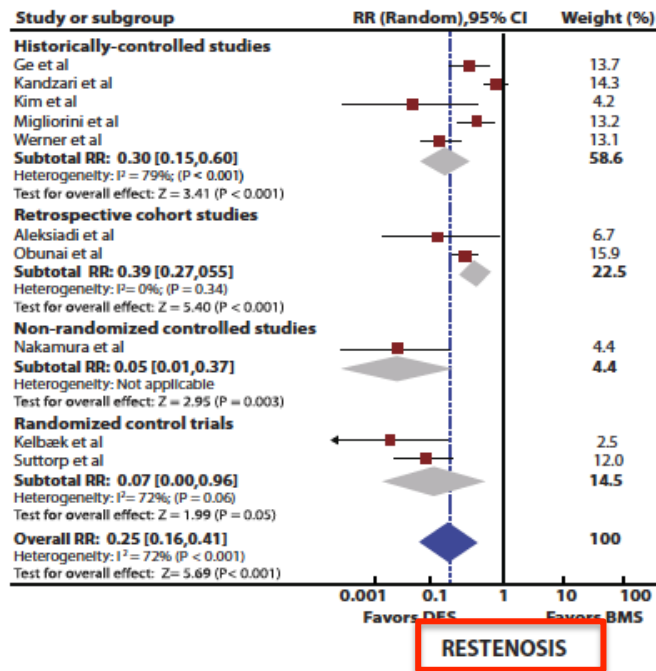
# Stents actifs

## Efficacy and Safety of Drug-Eluting Stents in Chronic Total Coronary Occlusion Recanalization

A Systematic Review and Meta-Analysis

Colmenarez *et al.*  
DES in CTO

JACC Vol. 55, No. 17, 2010  
April 27, 2010:1854-66





# Conclusion

- Nombreuses techniques et outils spécifiques
- Guides et microcathéters
- Stents actifs