



SUOH 03

A New Guidewire for Retrograde Channel Crossing

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Registry data 2012-2014

Case enrollment : 4,472 CTO-PCIs



122 cases were excluded due to insufficient case card information

Final subject for analysis:
4,350 CTO-PCIs

	Total	2012	2013	2014
CTO-PCIs	4,350	1,553	1,676	1,121
- Ante group	3,021	1,063	1,138	820
- Retro group	1,329 (31%)	490 (32%)	538 (32%)	301 (27%)

Retrograde procedure outcome (1)

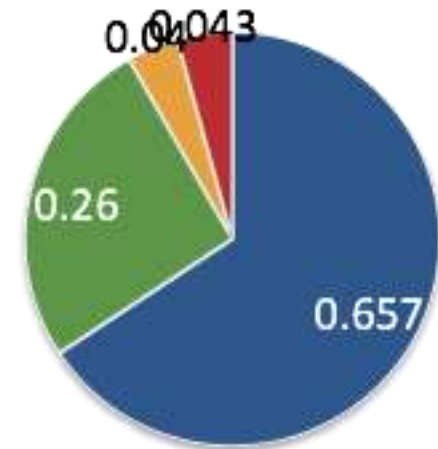
Retrograde procedure success

Retro group	Total (1329)	2012 (490)	2013 (538)	2014 (301)	P
<i>Retro overall</i>	69% (917)	69% (344)	66% (363)	68% (210)	0.0218

Reason of retrograde procedure failure (412)



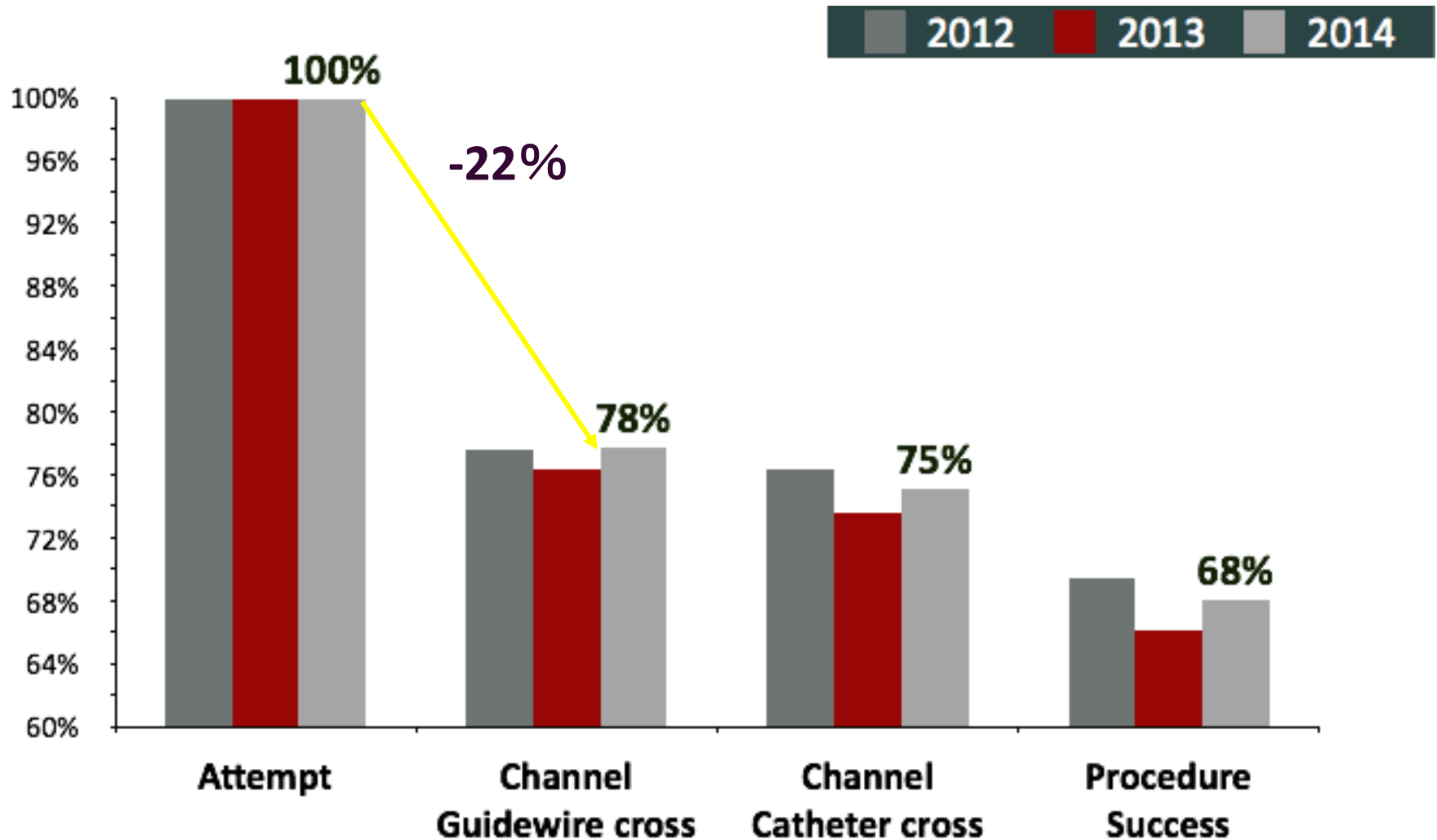
- Couldn't cross collateral channel
- Couldn't cross CTO by GW
- Couldn't cross CTO by any catheter
- Procedure discontinuation due to complication



Switched to antegrade approach ; 76% (313)



Retrograde procedure outcome (2)

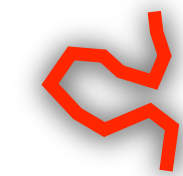




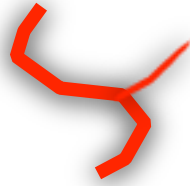
Collateral channel crossing is the first step of retrograde procedure and the main reason whether the procedure succeeds or not.

Why is the collateral channel crossing difficult?

Several factors that affect collateral crossing



Tiny bend



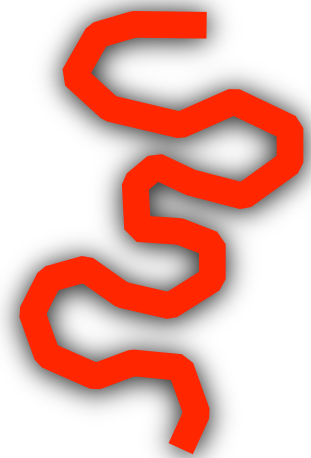
Small branch at the bend



Continuous tortuosity



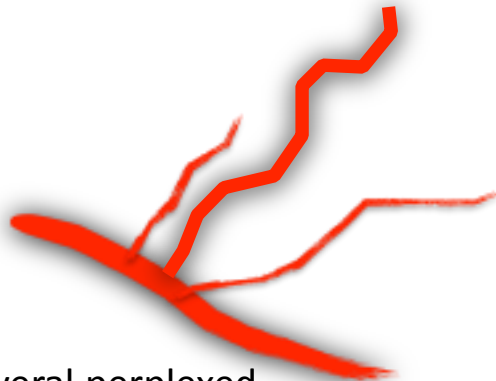
Invisible channel



Well developed channel

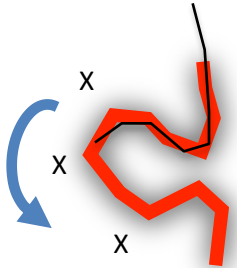


Acute bend between recipient artery and channel

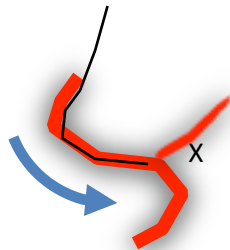


Several perplexed small branches at the origin of the channel

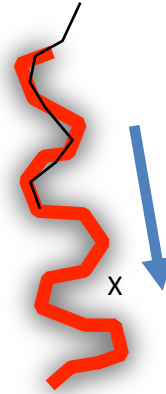
Understand the necessity of guide wire performance in each situation



- Tip flexibility
- Tip lubricity
- Push transmission



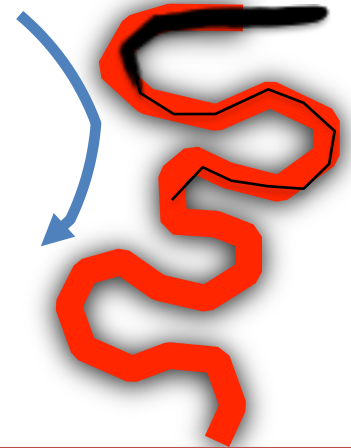
- Tip flexibility
- Torque ability
- appropriate tip curve



- Tip flexibility
- Tip lubricity
- Tiny tip curve



- Lower tip profile
- Tip lubricity



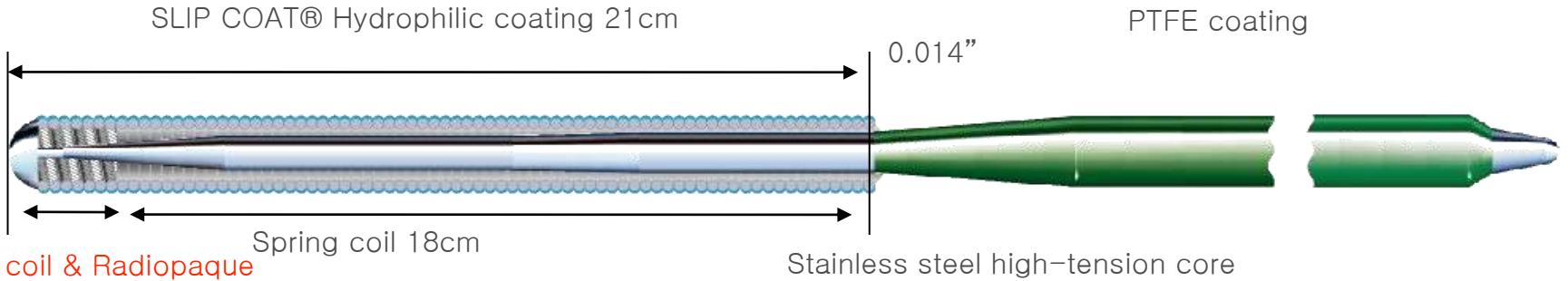
- Torque ability
- Lubricity
- Micro catheter assistance



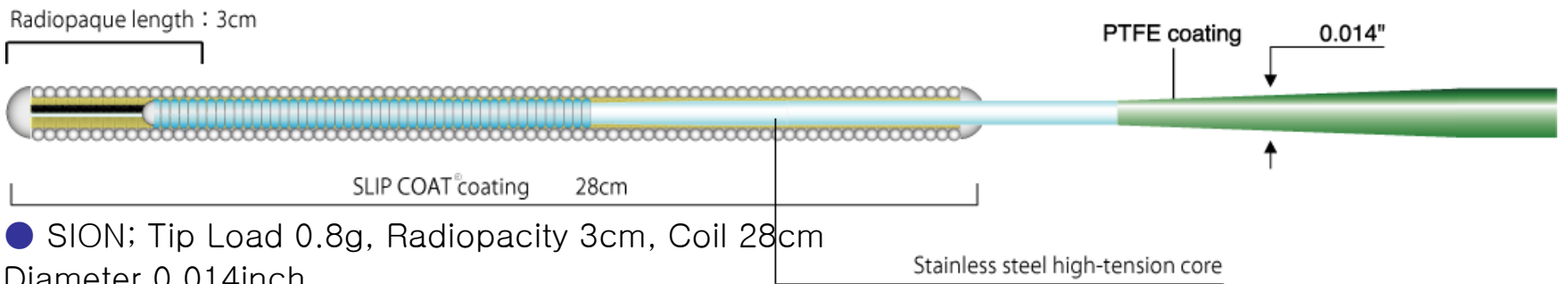
Stretching the collateral by the wire and micro catheter is important



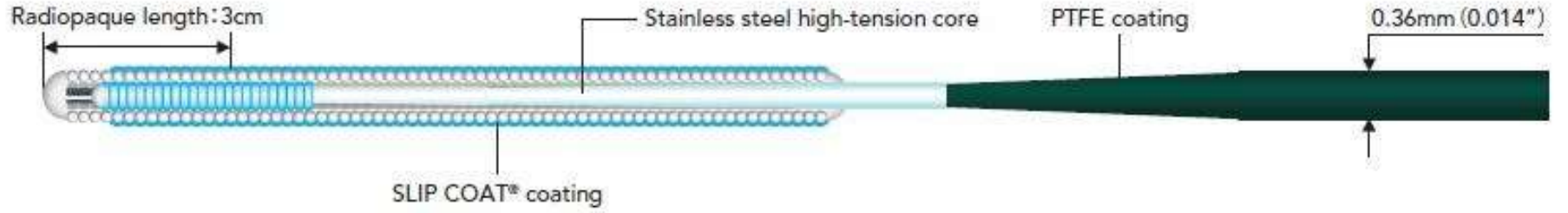
Guide wires for collateral crossing



● SUOH; Tip Load 0.5g, Coil 21cm, Diameter 0.014inch

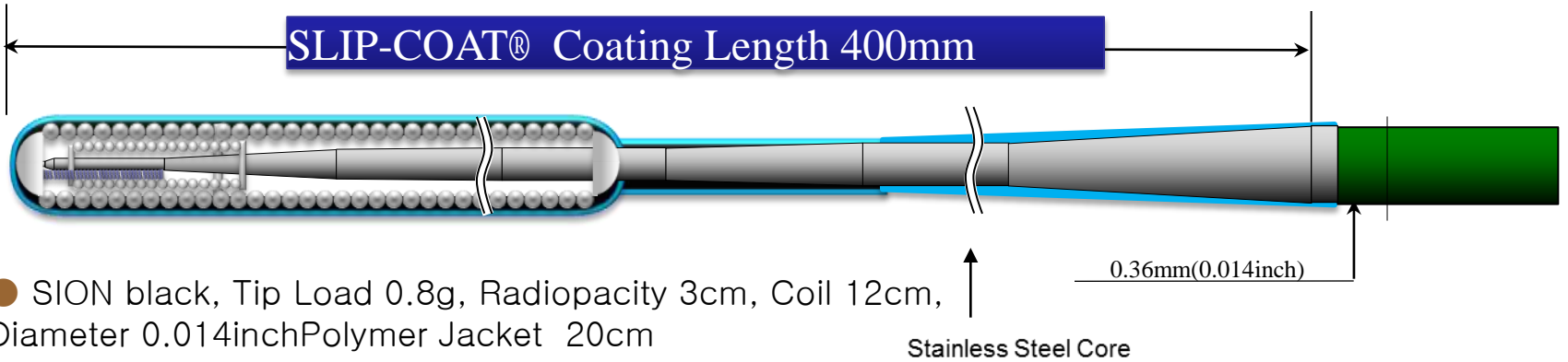


● SION; Tip Load 0.8g, Radiopacity 3cm, Coil 28cm
Diameter 0.014inch

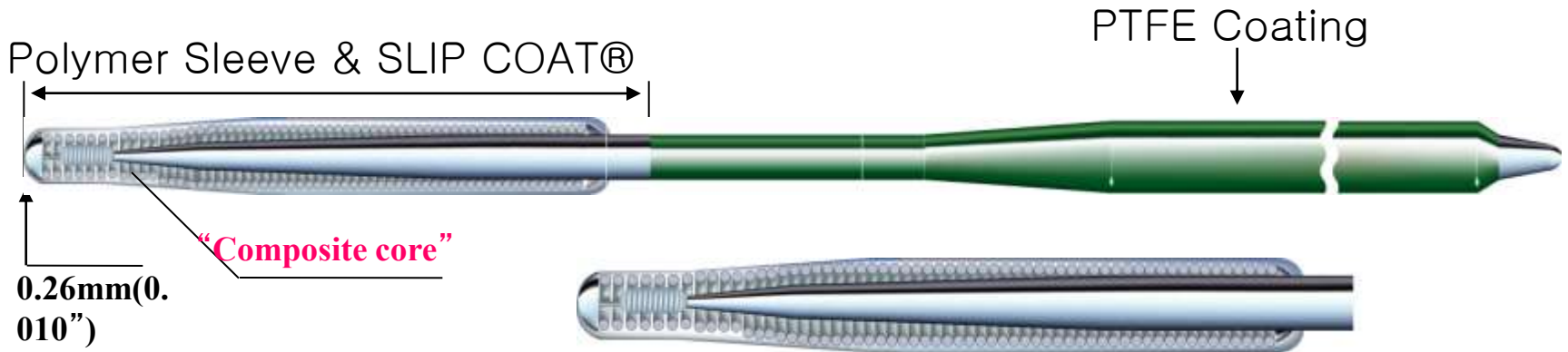


● SION blue; Tip Load 0.5g, Radiopacity 3cm, Coil 20cm
Diameter 0.014inch

Guide wires for collateral crossing



- SION black, Tip Load 0.8g, Radiopacity 3cm, Coil 12cm, Diameter 0.014inch Polymer Jacket 20cm Slip Coat 40cm



- Fielder XTR, Tip Load 0.6g, Radiopacity 16cm, Coil 16cm, Diameter 0.014inch, Tip diameter 0.010 inch Polymer Jacket



Retrograde relevant complications

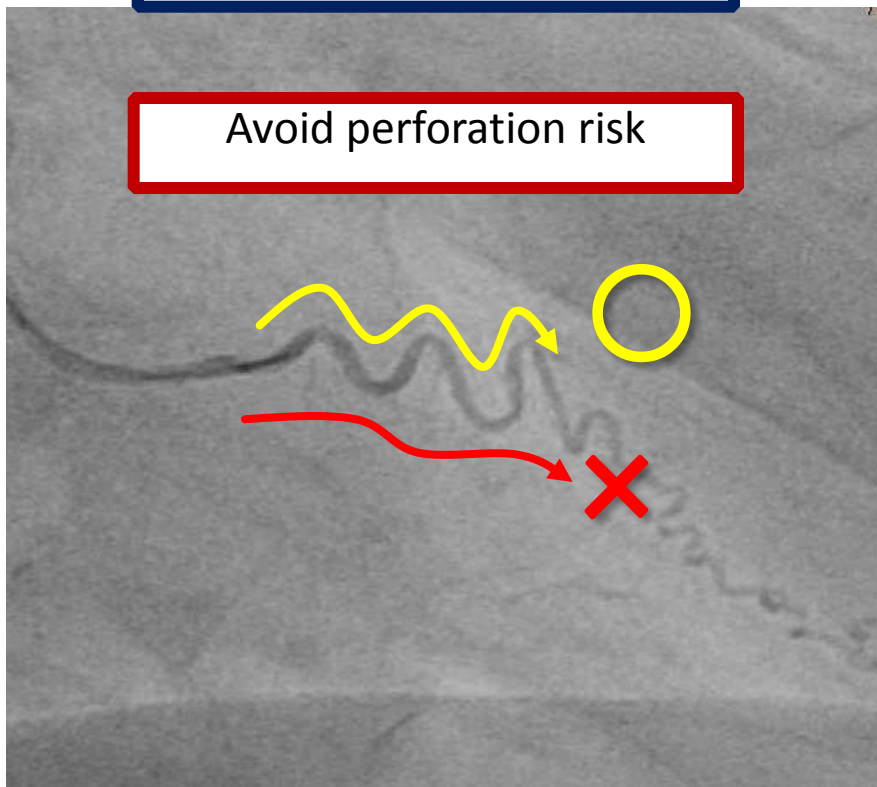
	2012 (490)	2013 (538)	2014 (281)	P
Retrograde approach relevant	11.4% (56)	8.9% (48)	7.8% (22)	<i>0.2040</i>
Channel injury	10.6% (52)	8.4% (45)	7.5% (21)	0.2703
Additional treatment required	4.1% (20)	3.0% (16)	2.5% (7)	0.4274
Cardiac tamponade	0.4% (2)	0.2% (1)	1.4% (4)	0.0623
Donor artery trouble	0.2% (1)	0.2% (1)	0.4% (1)	0.8803

Including minor events

GW suitable for collateral channel tracking

Not to damage the channel

Avoid perforation risk



To cross the channel

Need trackability in the tortuosity
=Tip flexibility

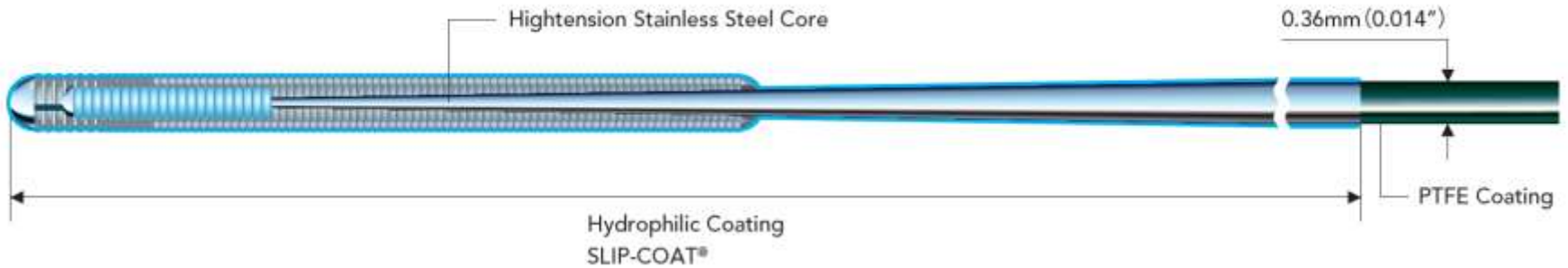
Control of contact resistance = Lubricity

Keep maneuverability = Torque

Maintain maneuverability = Tip durability

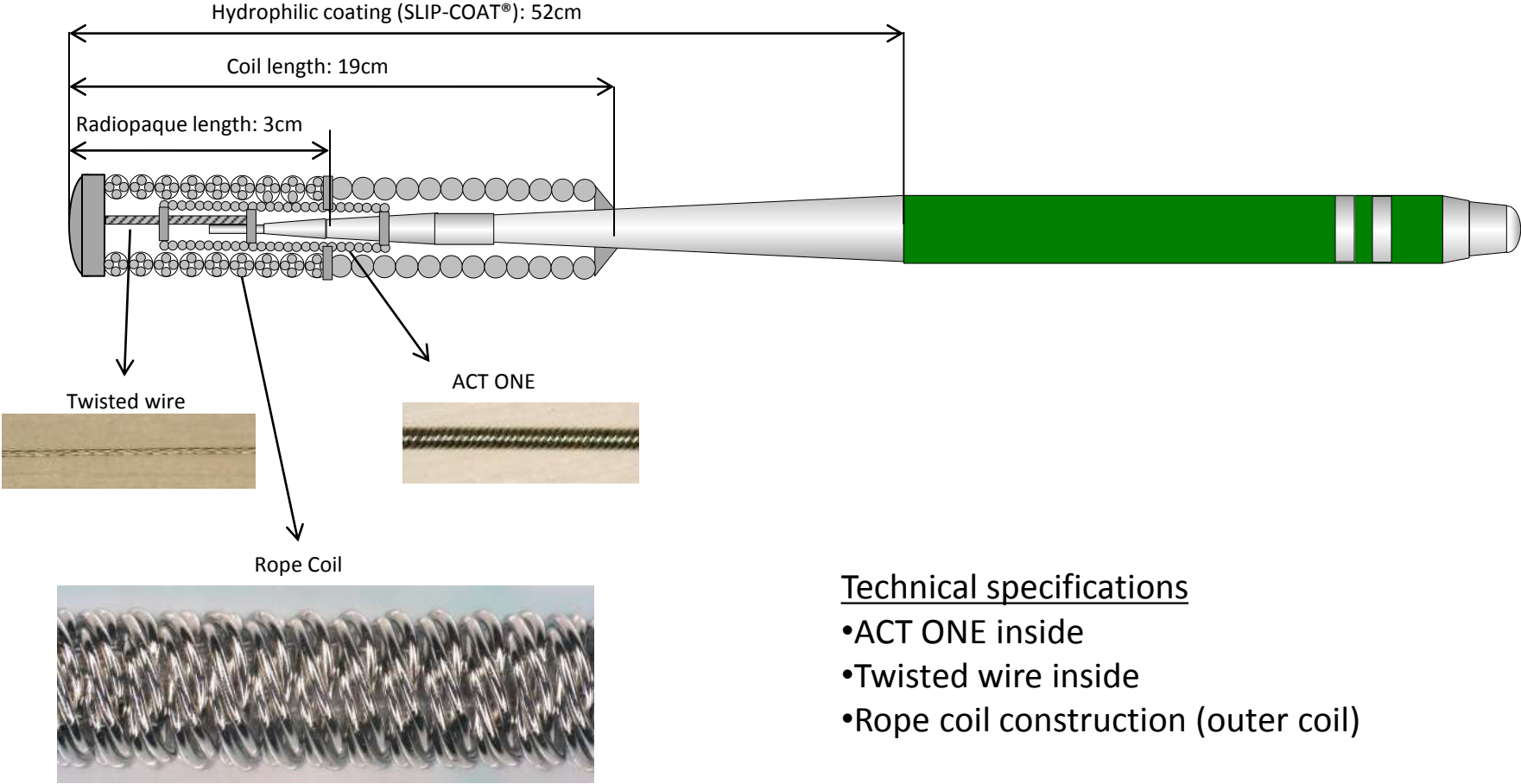
Won't cause deformation

SUOH 03



- Usable length : 190cm/300cm
- Hydrophilic coating length : 52cm
- Coil length : 19cm
- Radiopaque length : 3cm
- Tip Load : 0.3gf
- Tip Shape : Straight/ Pre-shape

SUOH 03



Technical specifications

- ACT ONE inside
- Twisted wire inside
- Rope coil construction (outer coil)

Coated with SLIP-COAT® coating.

*This illustrates image of Rope coil design. Not indicate real product design.



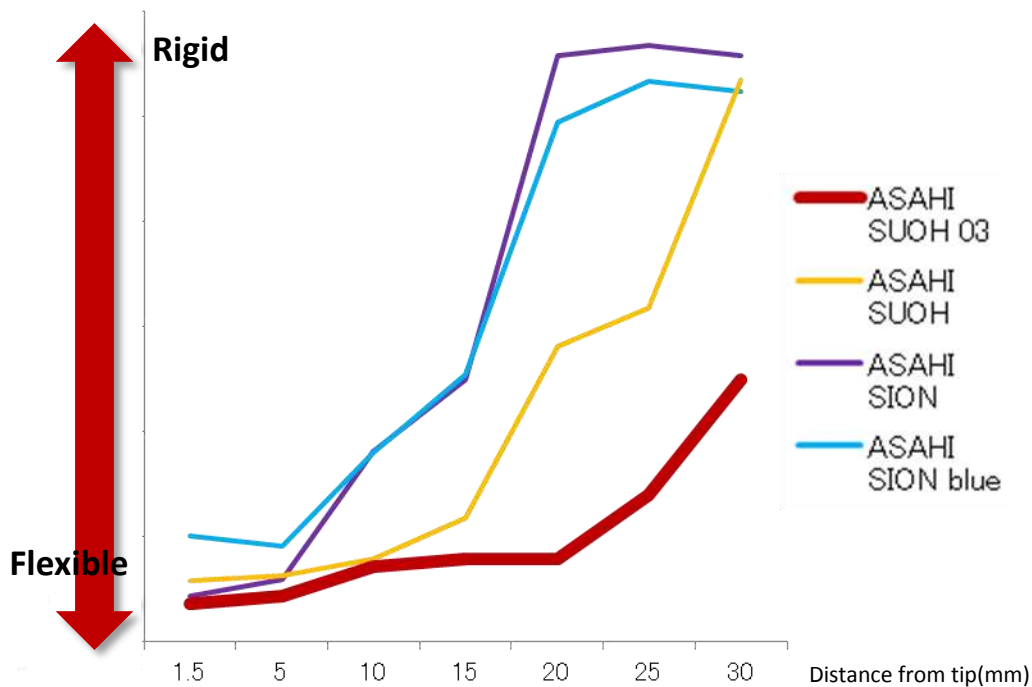
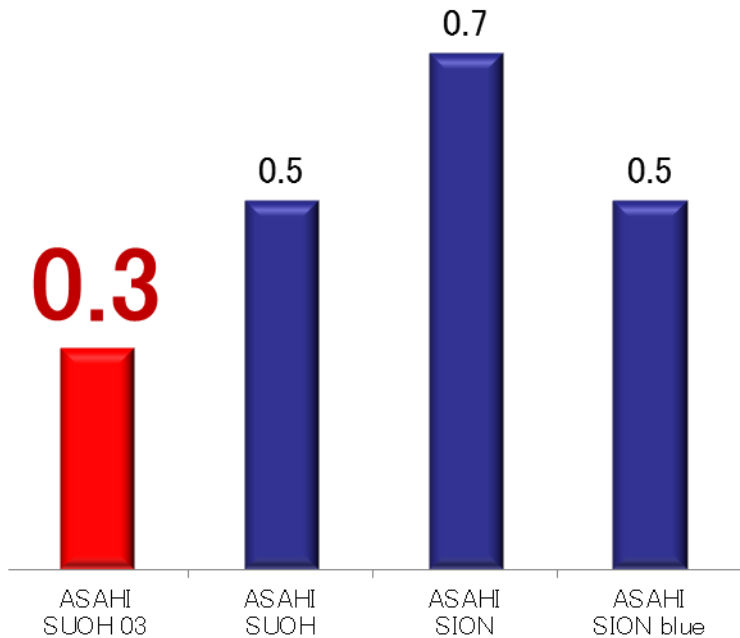
Tip Load

The softest tip 0.3 g in ASAHI GW

Tip Flexibility

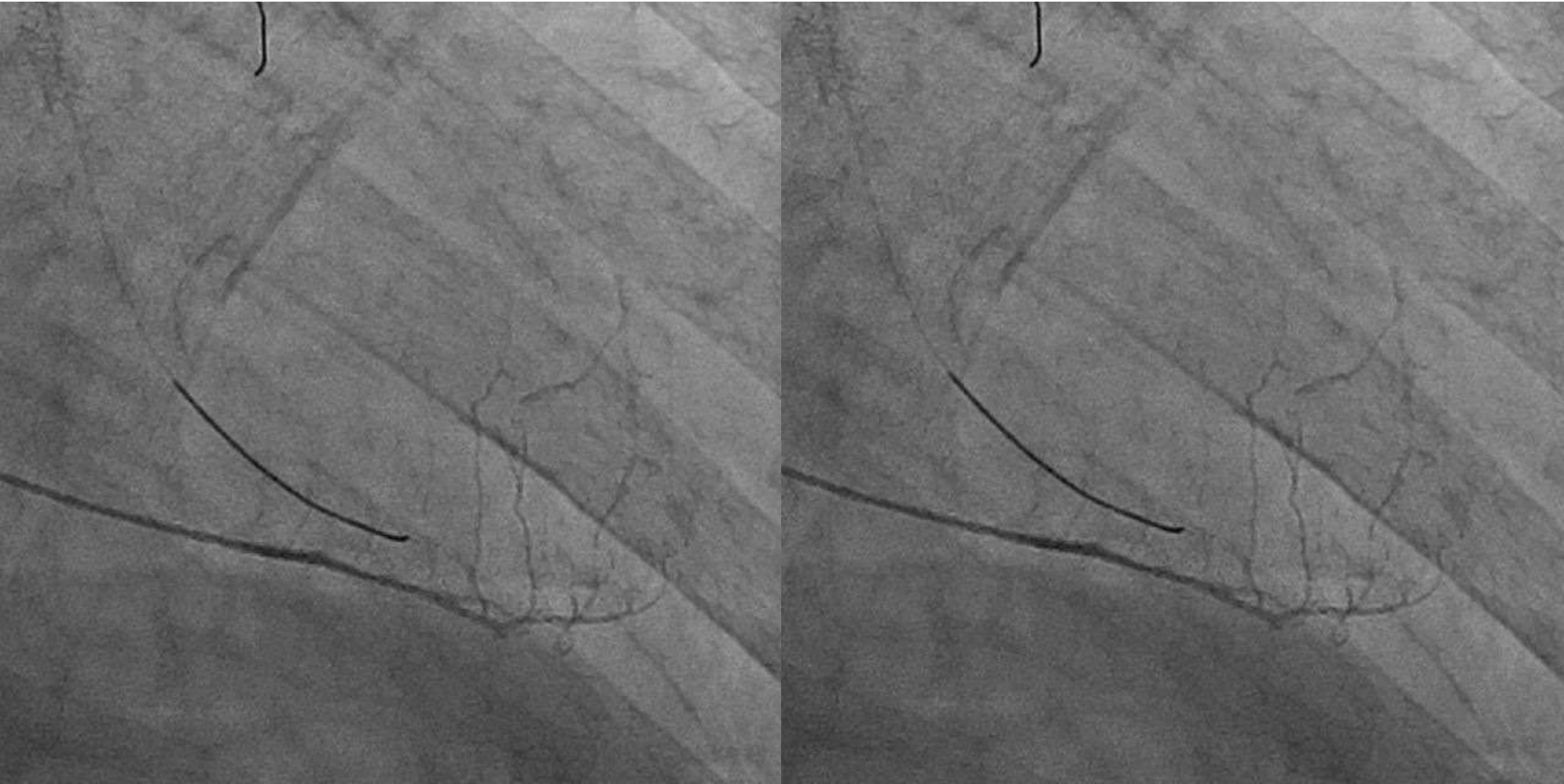
Better trackability and crossability in severe tortuosity due to the flexibility of whole radiopaque area.

Tip Load(gf)



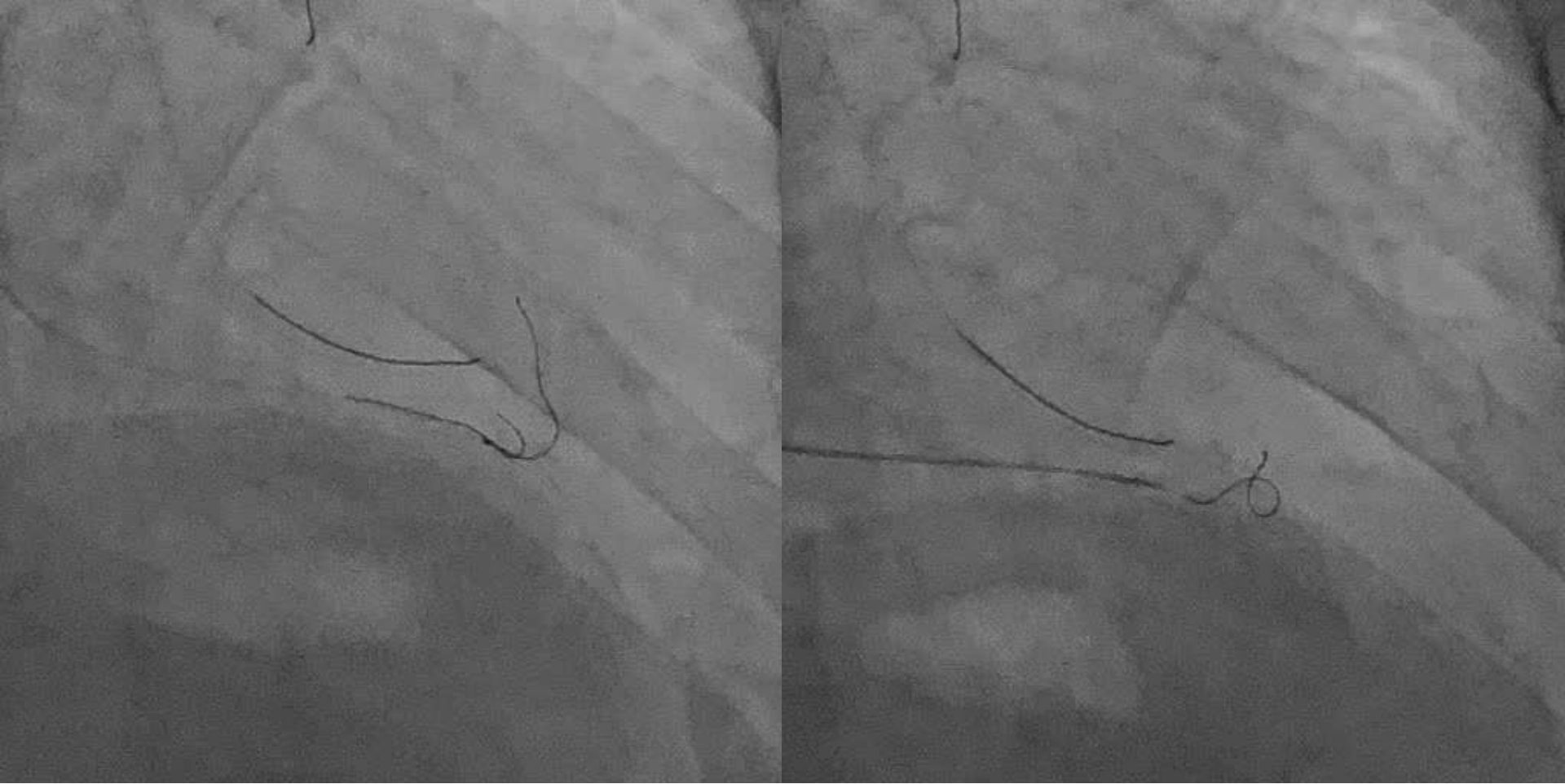


Epicardial channel selection



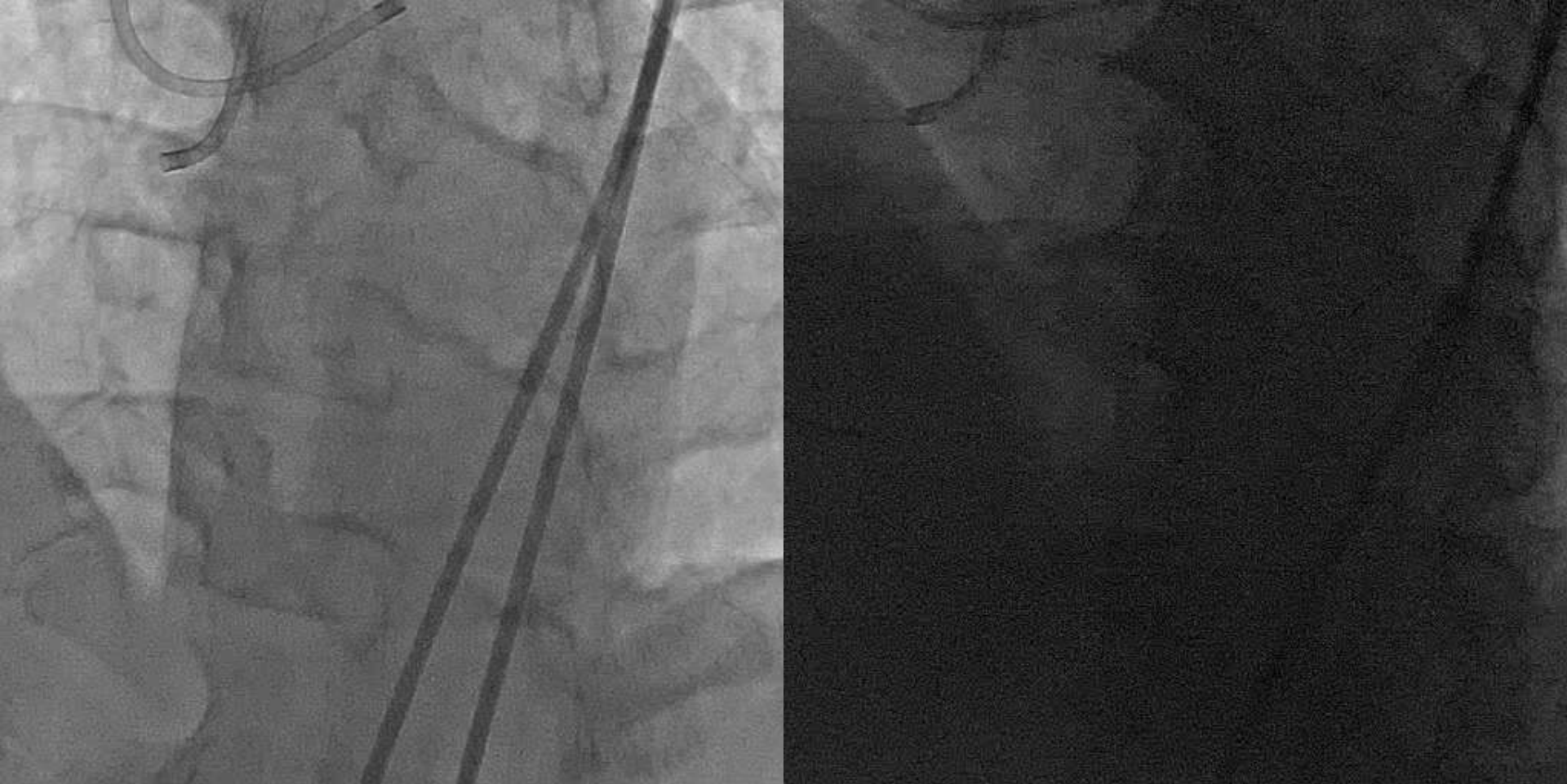


Epicardial channel selection



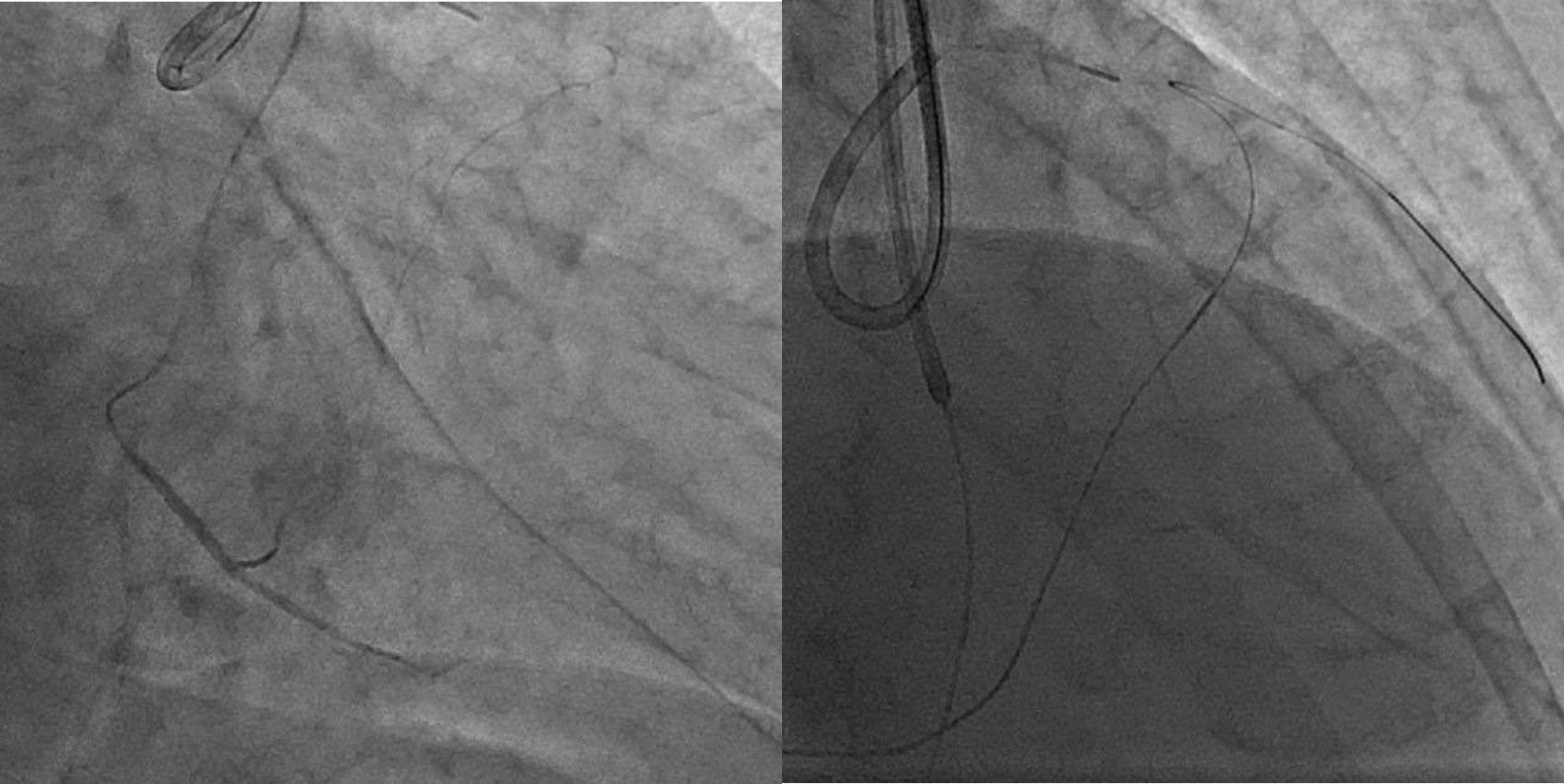


Tortuous epicardial channel





Very tiny curved septal channel

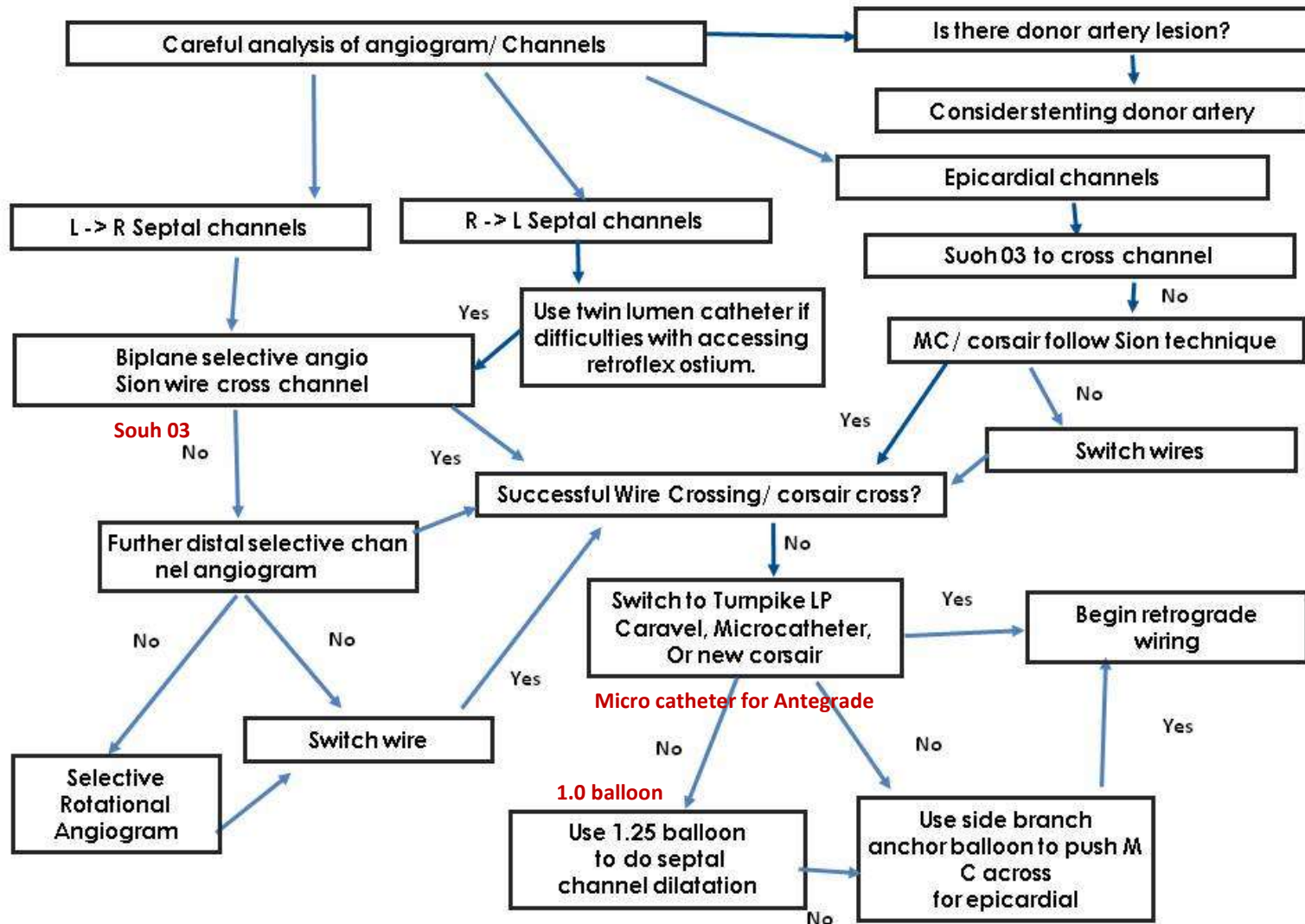


Tortuous epicardial channel



Retrograde approach algorithm

For Simplifying the procedure and equipment



Retrograde channel crossing

Guide wire selection for complex channel

Crossing septal channel, a guide wire with good maneuverability is needed. The frontline wire is **SION**. However, usage of **SUOH03** is increasing because of its improved maneuverability and flexibility.

Crossing epicardial channel, guide wire with tip flexibility is need to avoid vessel injury. Therefore, the frontline wire is now **SUOH03**.

Anatomy	Recommendable GW	
	Septal	Epicardial
Continuous tortuosity	1. SION = 2. SUOH 03 3. XT-R	1. SUOH 03 2. SION 3. XT-R(if a small vessel) SION black(if a large vessel)
Small side branch At a bend of the artery	1. SION = 2. SUOH 03 3. XT-R(if a small vessel) SION black(if a large vessel)	1. SUOH 03 2. SION 3. XT-R(if a small vessel) SION black(if a large vessel)
Acute bend	1. SUOH 03 2. SION 3. SION black	1. SUOH 03 2. SION 3. SION black
Crossing invisible channel	1. XT-R 2. SION black 3. SION	Don't touch



Messages

The most important factor that affect retrograde procedural success is whether the channel could be stretched by the wire and/or the micro catheter.

SUOH 03 has very floppy tip profile, therefore less traumatic. Channel injury is less frequent and success rate seems to be improved even through the channel became to be complex.