CTO PCI up to date antegrade approach

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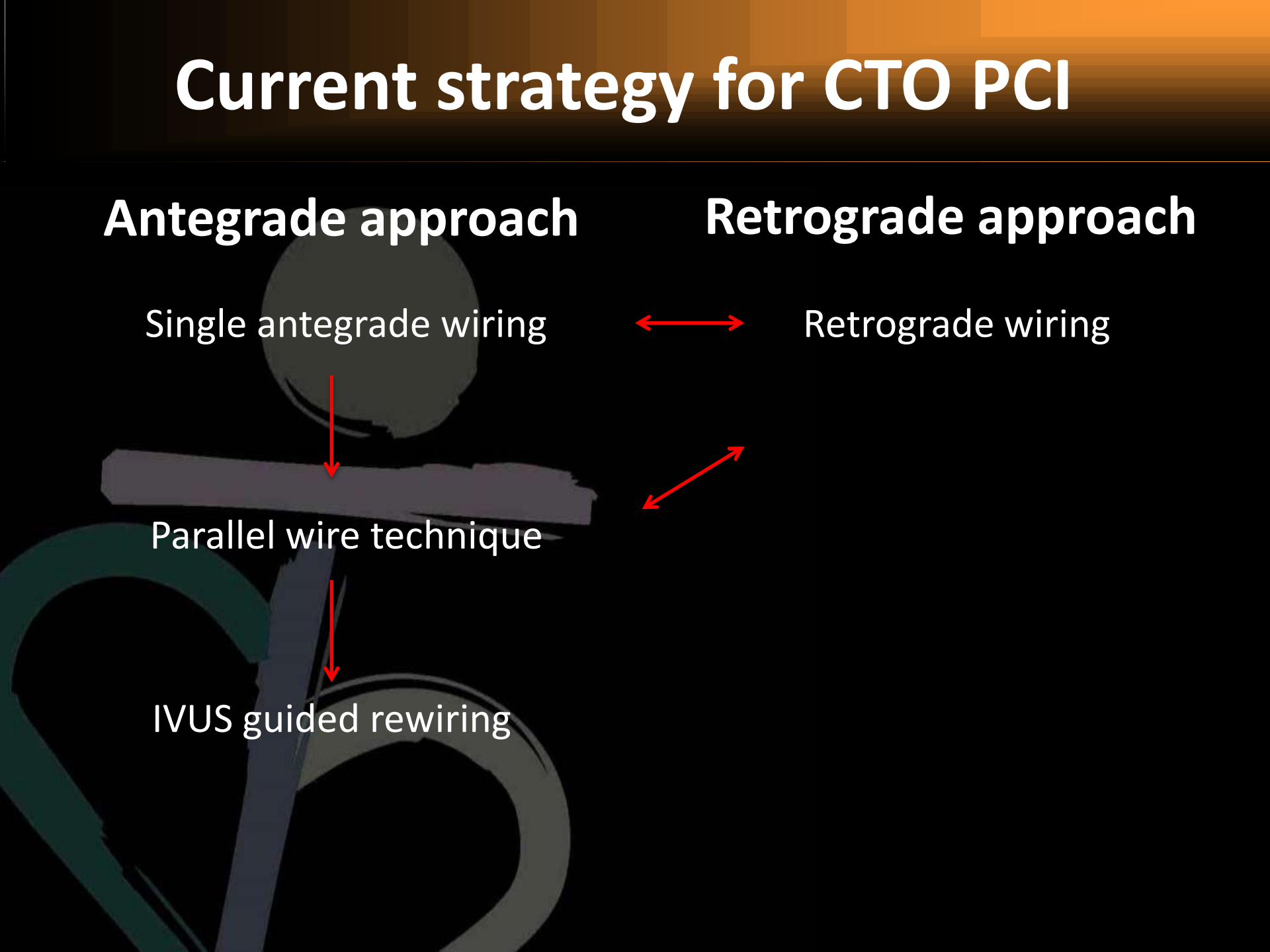
Challenge and Innovation

Current strategy for CTO PCI



Antegrade approach

Single antegrade wiring

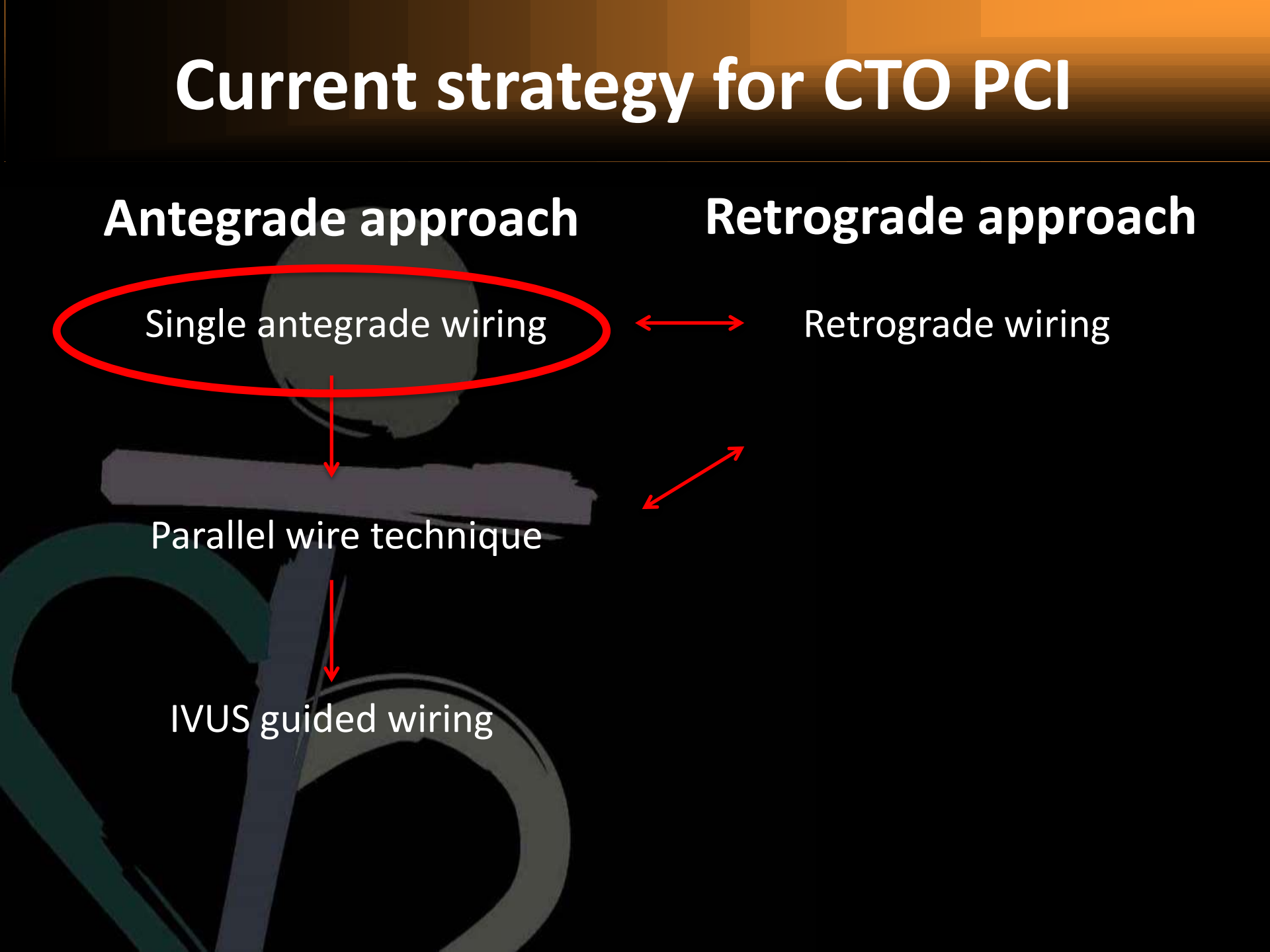
Parallel wire technique

IVUS guided rewiring

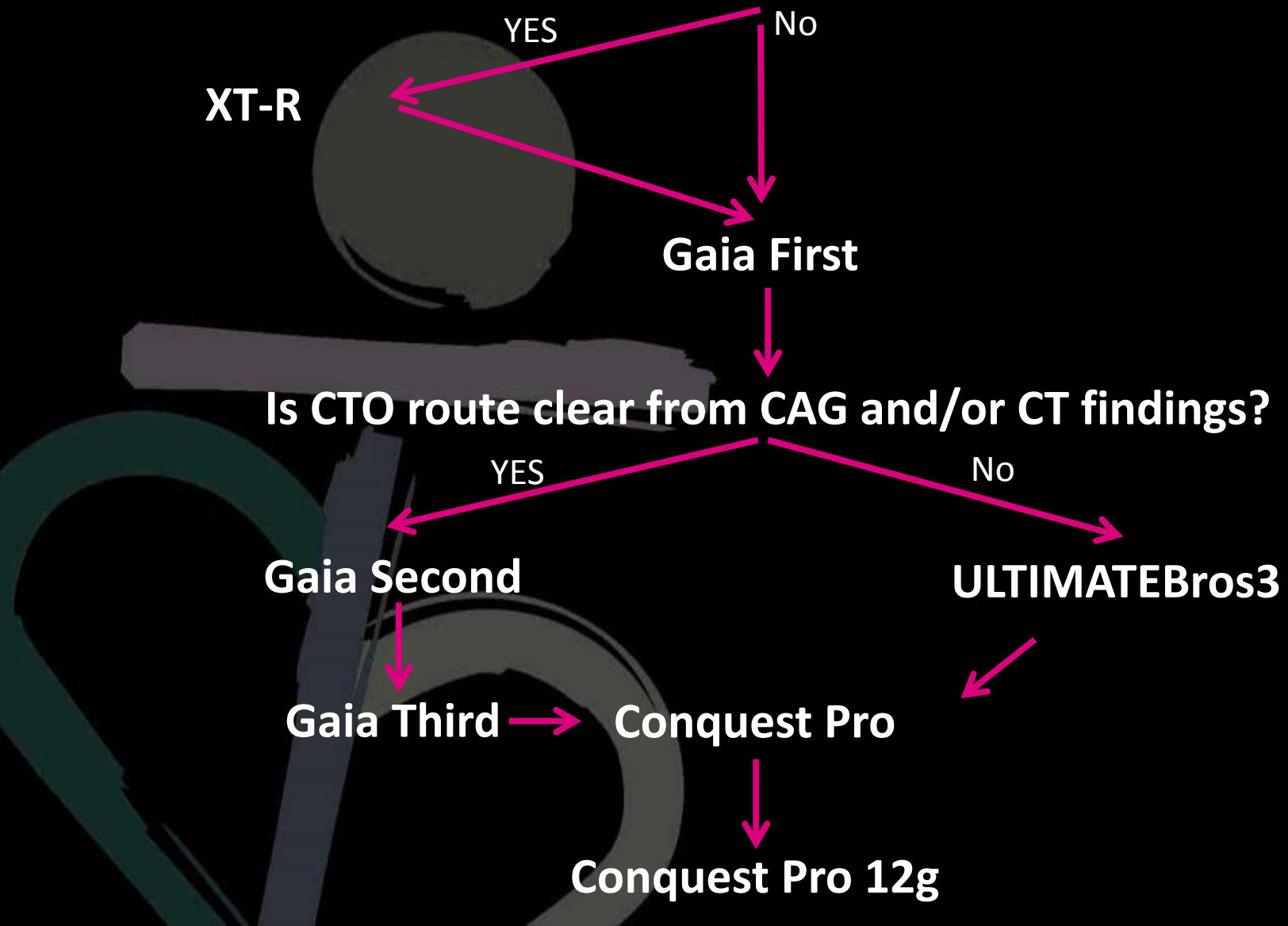
Retrograde approach

Retrograde wiring

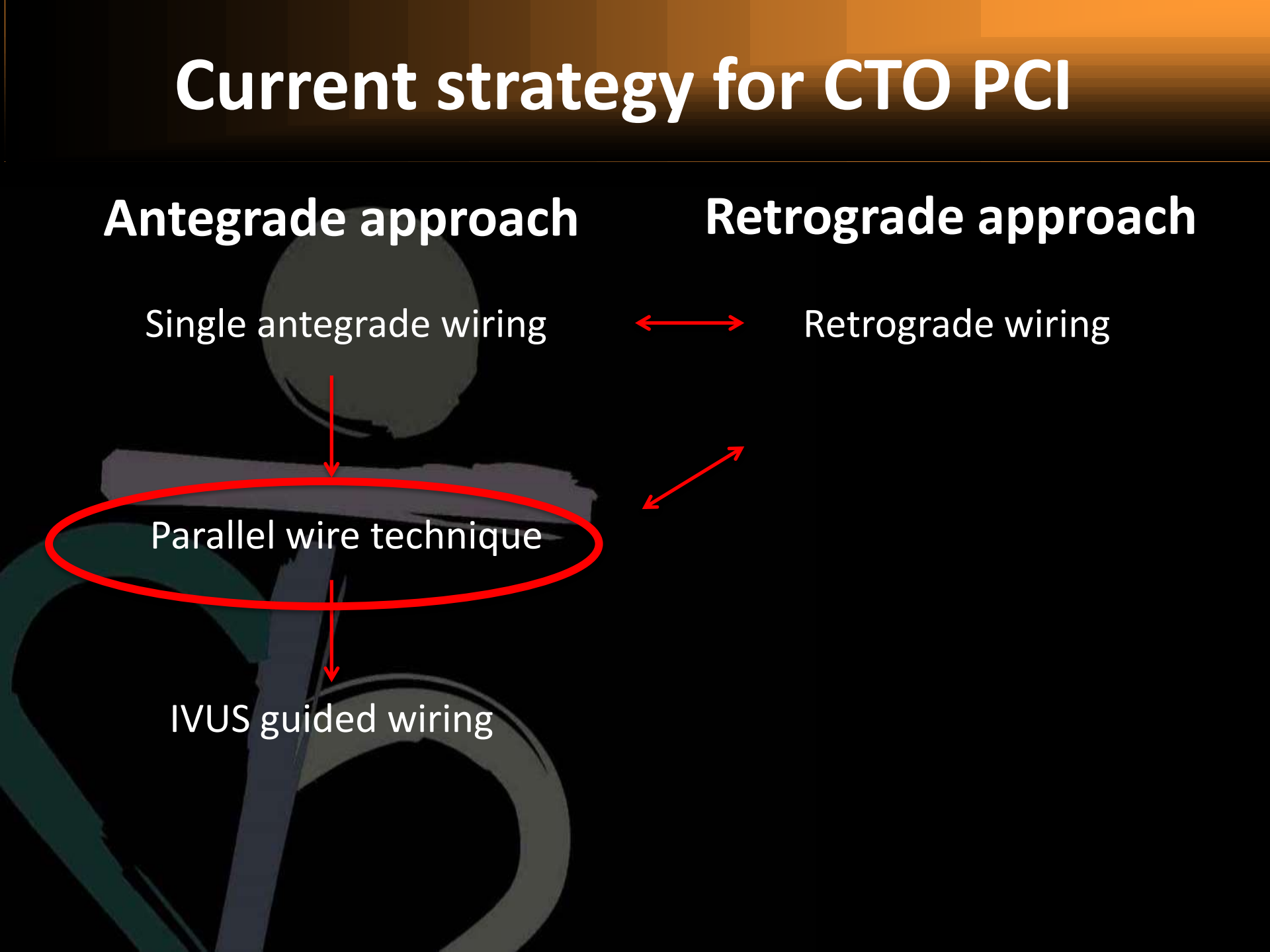
Current strategy for CTO PCI



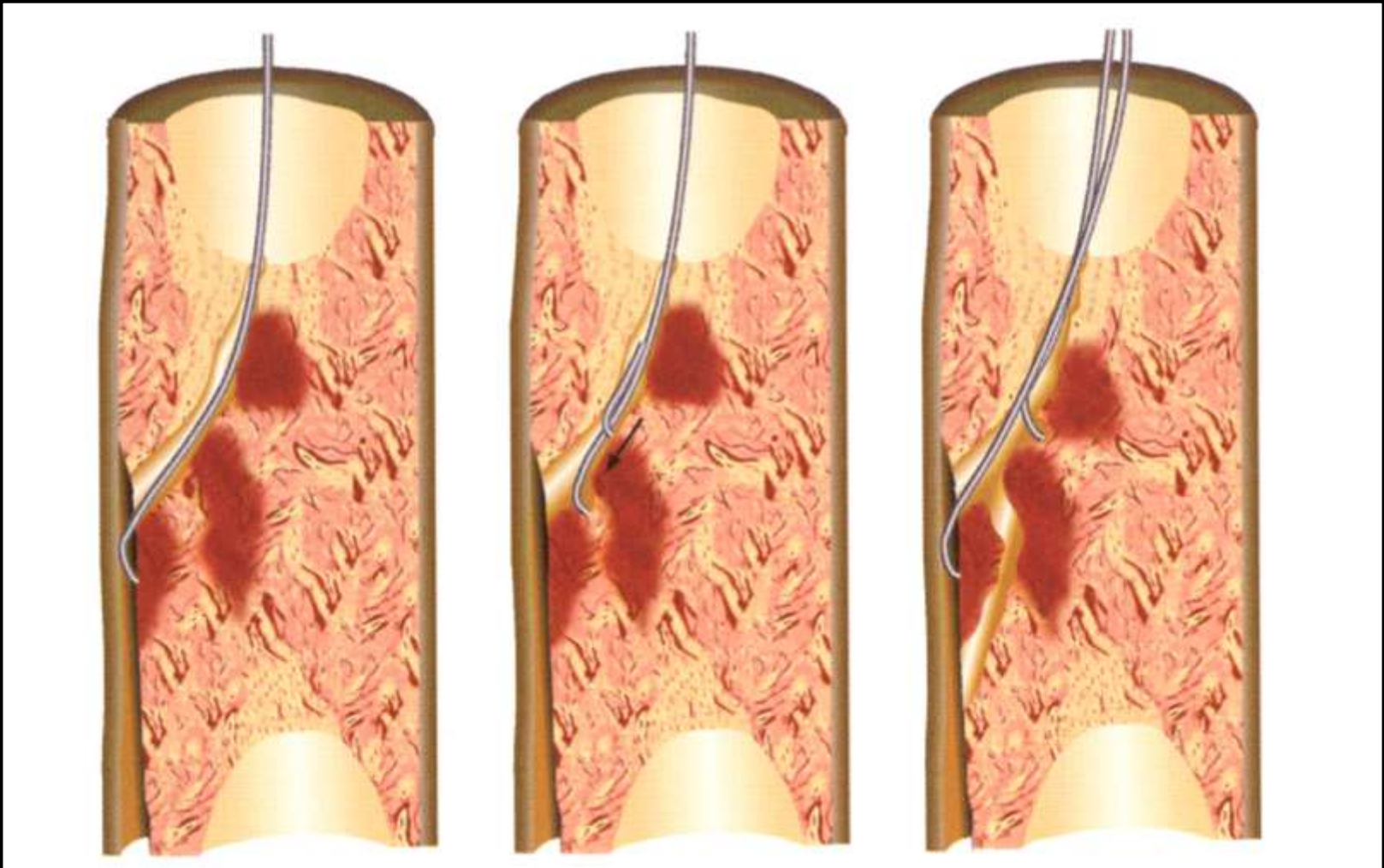
How to escalate CTO GW in antegrade appoarch



Current strategy for CTO PCI



Parallel wire technique

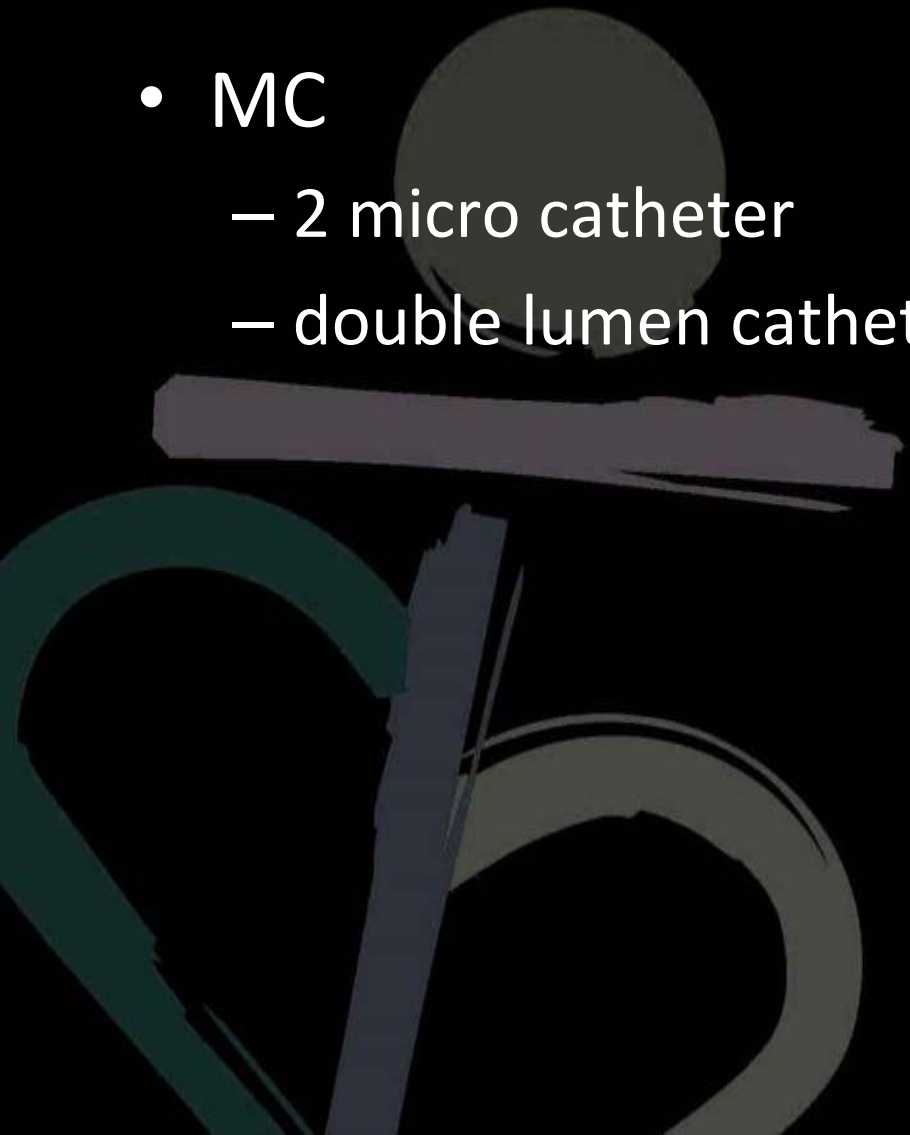


Parallel wire technique is used after 1st GW is advanced to non-ideal route. 1st GW is left and used as a landmark for 2nd GW. And then, wiring with 2nd GW attempts to get distal lumen.

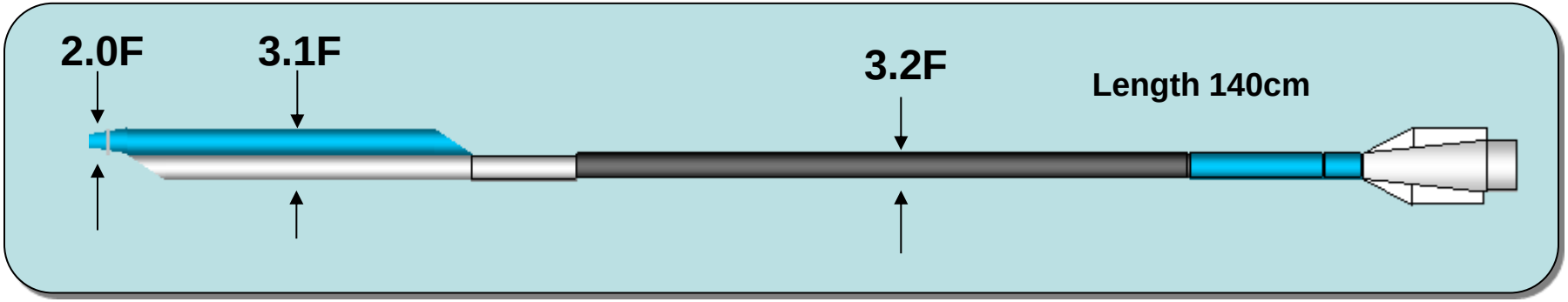
O.Katoh 3rd Seminor of Angioplasty of Chronic total occlus

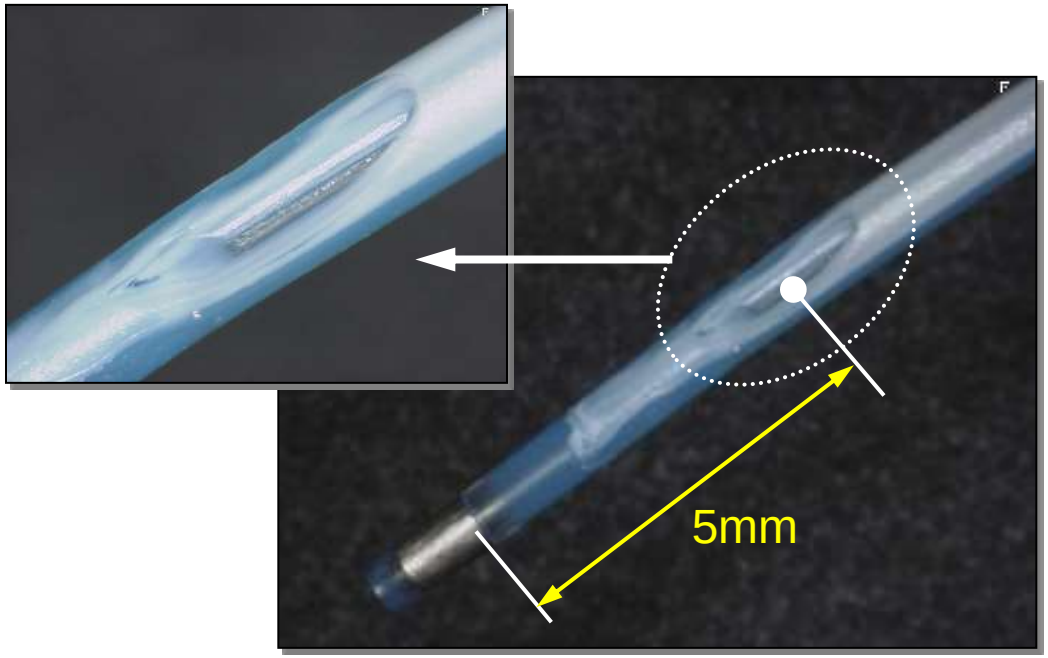
How to perform parallel wire technique

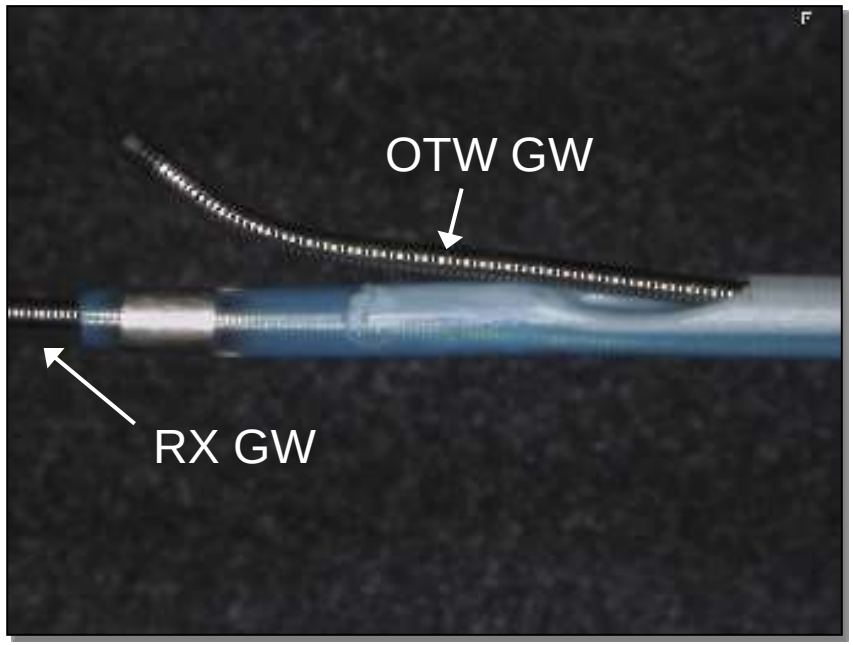
- MC
  - 2 micro catheter
  - double lumen catheter



Shaft Profile

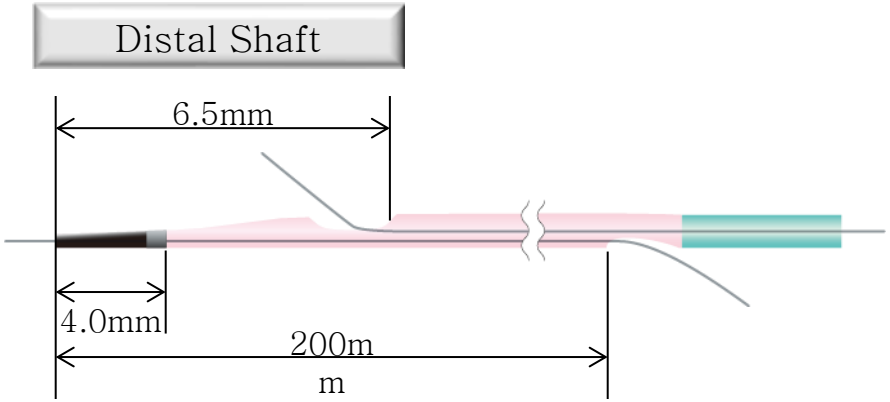


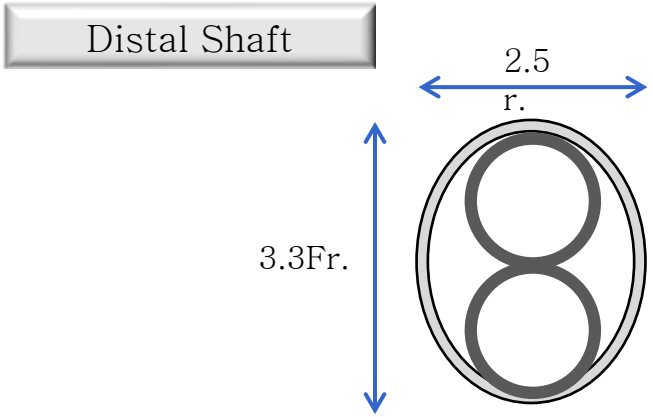




Basic structure

ASAHI SASUKE

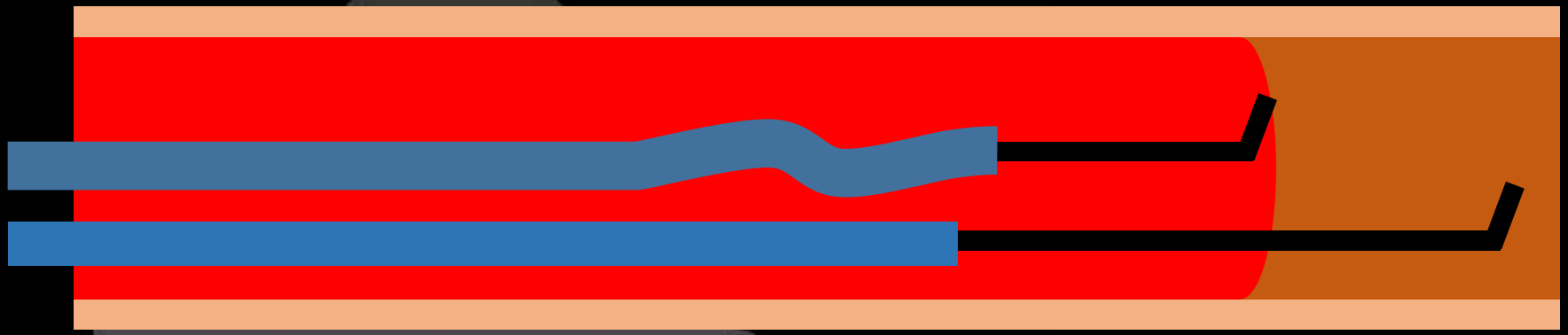




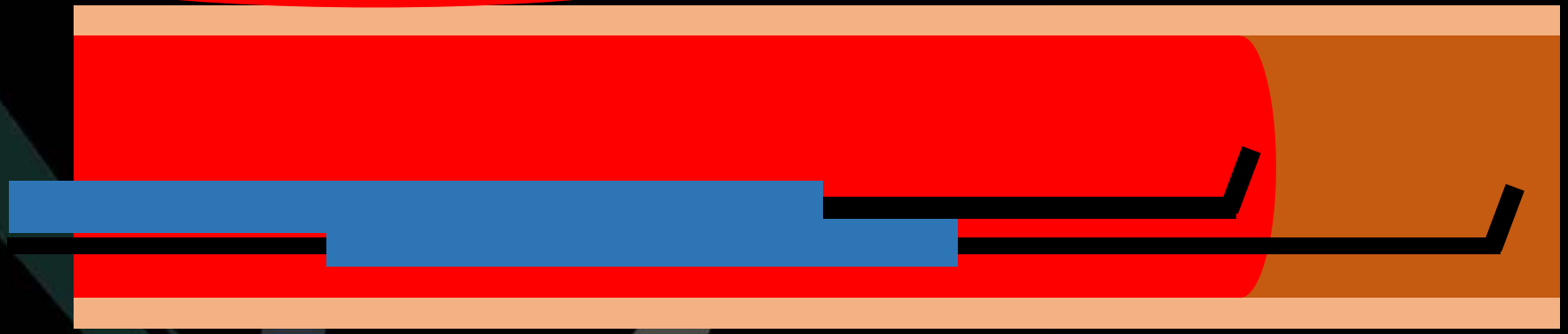
Outer Diameter			Inner Diameter		Usable Length	Recommended GW	Hydrophilic Coating Length
Tip	Distal	Proximal	Tip	Shaft			
2.3Fr. (0.75mm)	2.5Fr.-3.3Fr. (0.84mm-1.08mm)	3.2Fr. (1.05mm)	0.40mm (0.016inch)	0.43mm (0.017inch)	145cm	0.36mm (0.014inch)	38cm

Option of parallel wire technique

With 2 micro catheters(See-saw wire technique)



With double lumen catheter



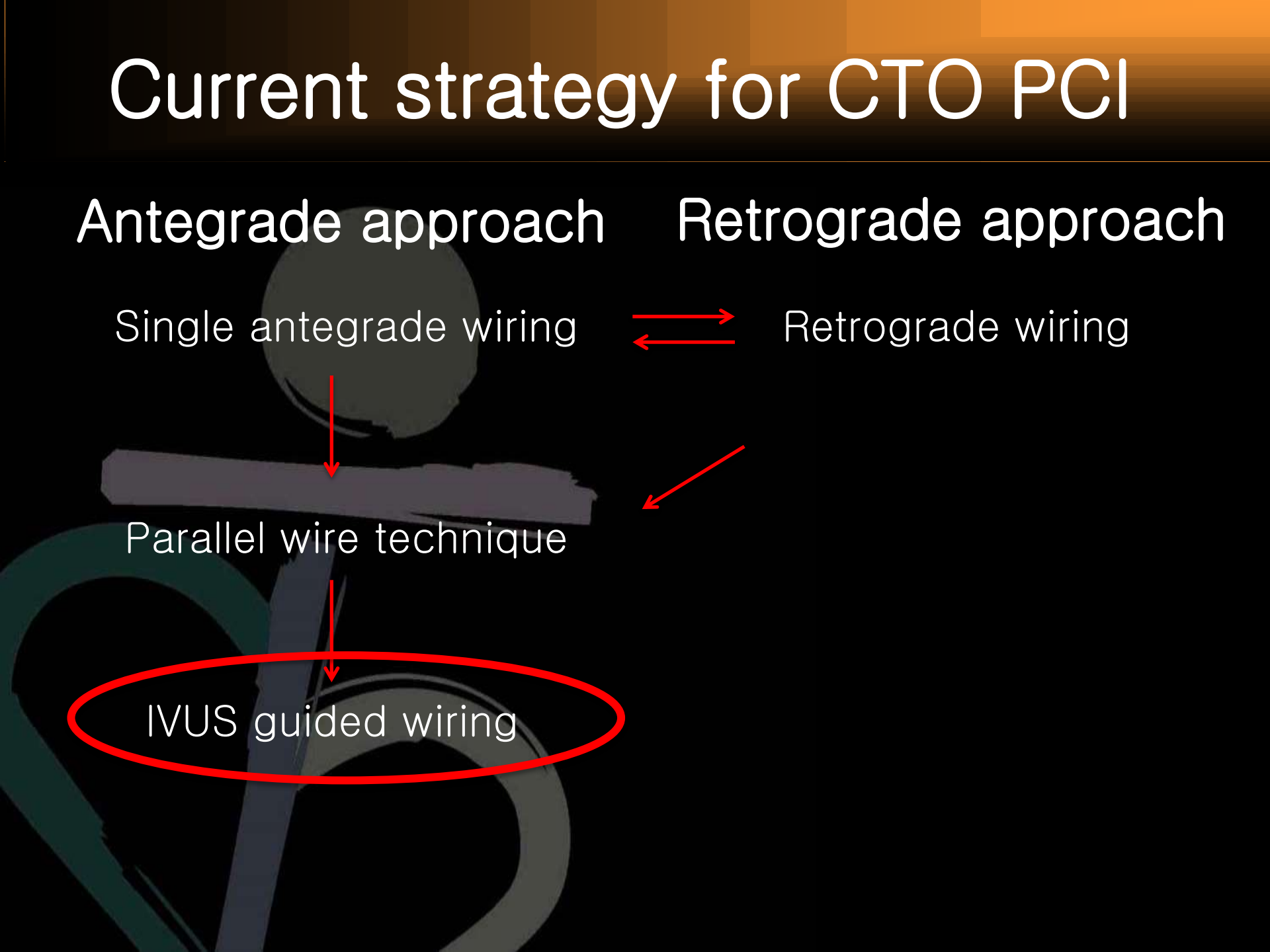
How to perform parallel wire technique

- MC
  - 2 micro catheter
  - double lumen catheter
- GW selection
  - Gaia 2nd /Conquest Pro

Current strategy for CTO PCI

Antegrade approach Retrograde approach

Single antegrade wiring ⇄ Retrograde wiring



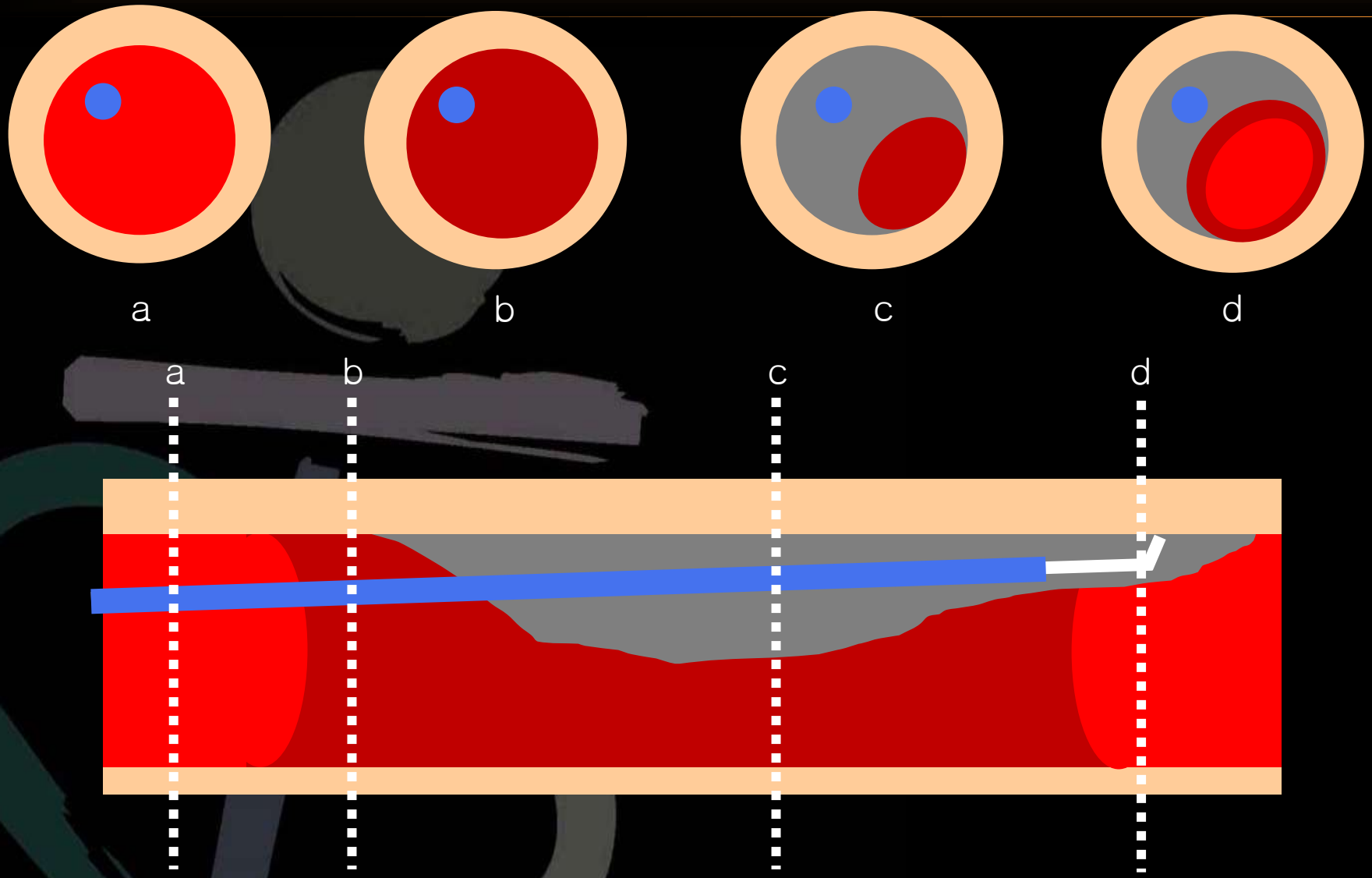
Parallel wire technique

IVUS guided wiring

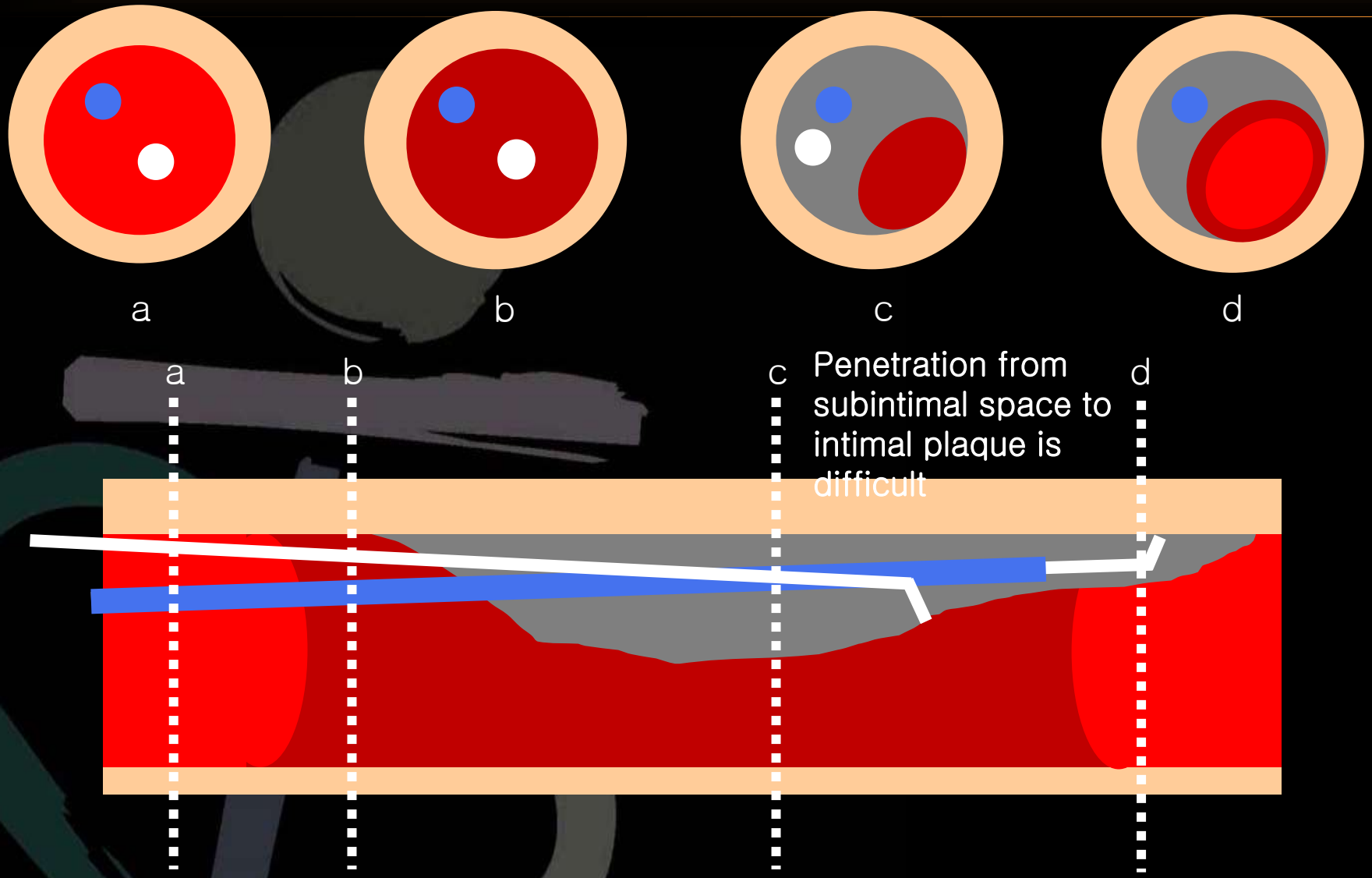
How to perform IVUS guided rewiring

- IVUS guided rewiring is a method to insert another GW into an intimal plaque using IVUS guidance.
- IVUS was inserted into a subintimal space using 1st GW.
- A entry point of 1st GW to subintimal space is detected using IVUS and rewiring using 2nd GW at proximal site of this entry point is performed(**rewiring point is not subintimal space but intimal plaque**).
- This method does not depend on vessel size of distal lumen.
- This method is usually used as the final strategy because IVUS has to be inserted into a subintimal space.
- 8Fr GC is required because IVUS and a micro catheter are inserted through GC at the same time.

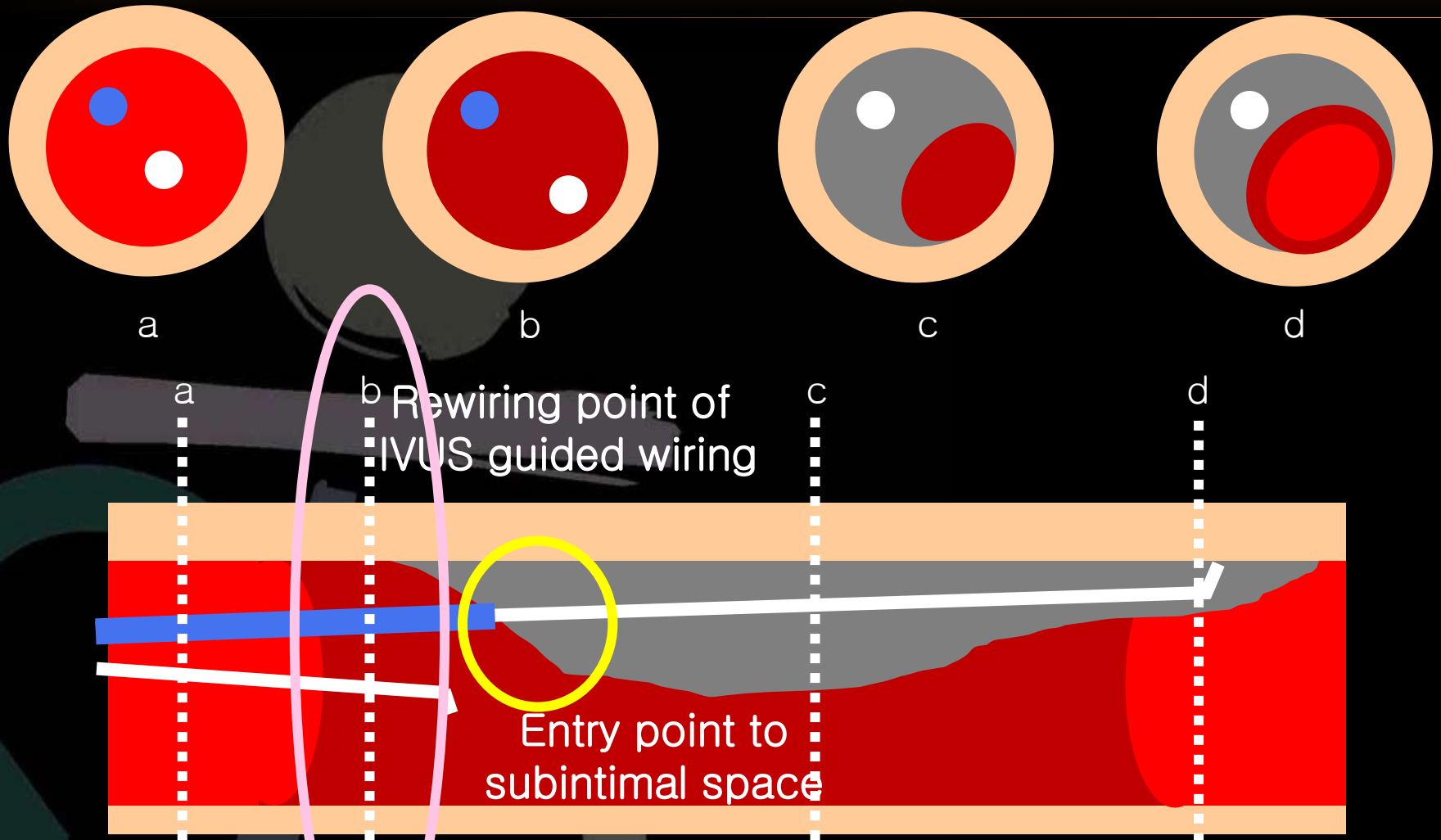
IVUS findings of failed antegrade wiring



IVUS guided rewiring is not reentry method

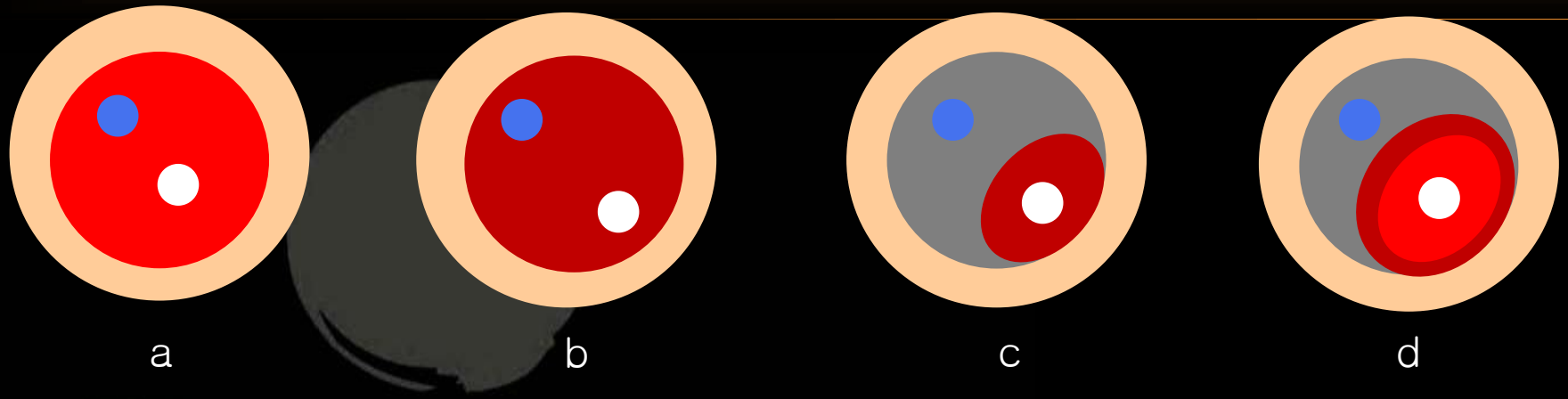


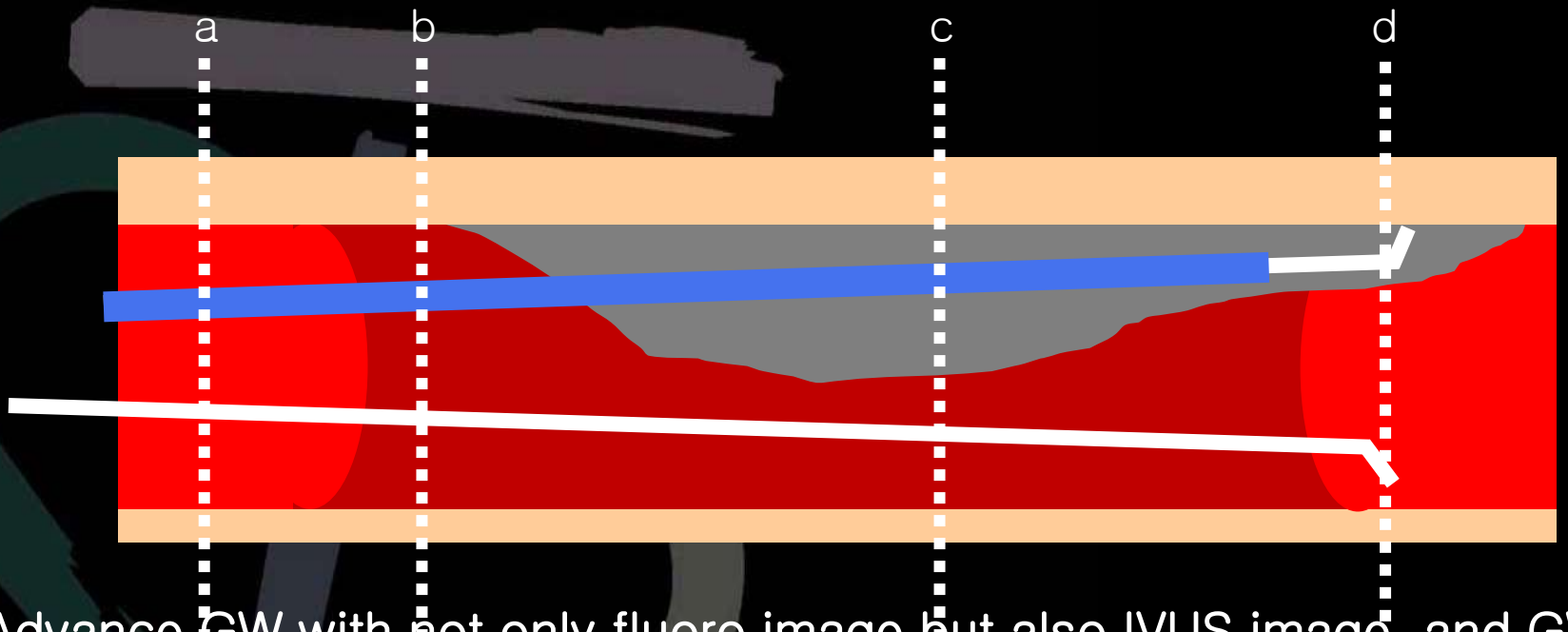
How to perform IVUS guided rewiring



To advance GW into intimal plaque, rewiring must be done in intimal plac
Role of IVUS is to identify entry point of 1st GW to subintimal space.
Rewiring starts at proximal site of this entry point based on IVUS findings

How to perform IVUS guided rewiring





Advance GW with not only fluoro image but also IVUS image, and GW can get distal true lumen through intimal plaque.

Summary

- Antegrade approach consist of following 3 steps
  - Single antegrade wiring
  - Parallel wire technique
  - IVUS guided rewiring
- Single antegrade wiring
  - GW selection
    - Microchannel XT-R
    - Route is clear Gaia series, CP series
    - Route is not clear Gaia1st, UB3, CP series
- Parallel wire technique
  - Use of double lumen catheter
  - GW selection Gaia 2nd/Conquest Pro
- IVUS guided rewiring is the last resort in antegrade CTO PCI
  - Concept of IVUS guided wiring is not reentry but rewiring


Thank you for
your attention
Challenge and
Innovation