

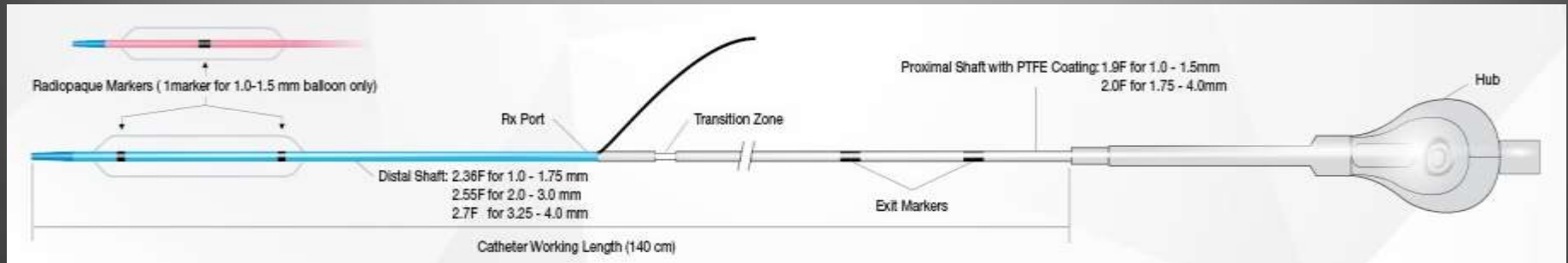
---

# Case of challenging CTO

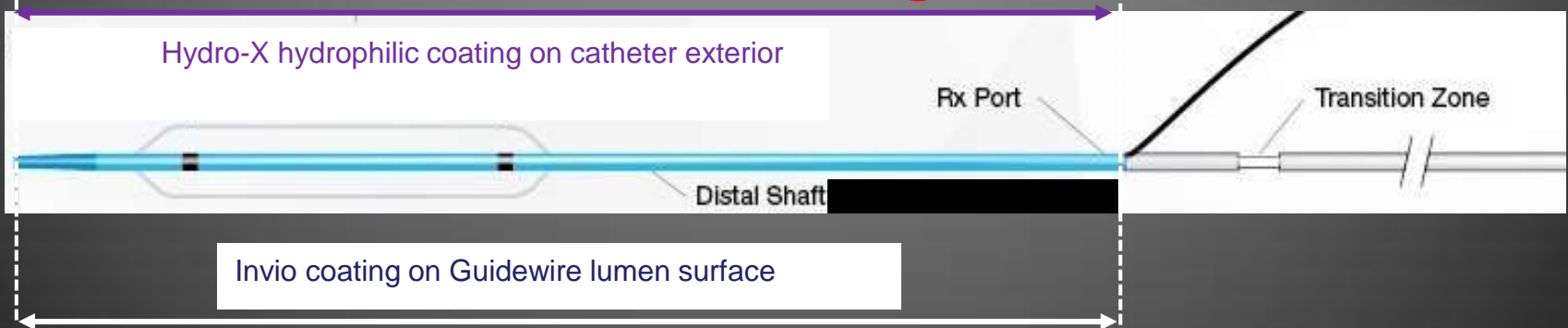
**Toshiya Muramatsu**

**Tokyo General Hospital**

# Sapphire II PRO Balloon Schematic



## Exterior and Interior Balloon Coatings

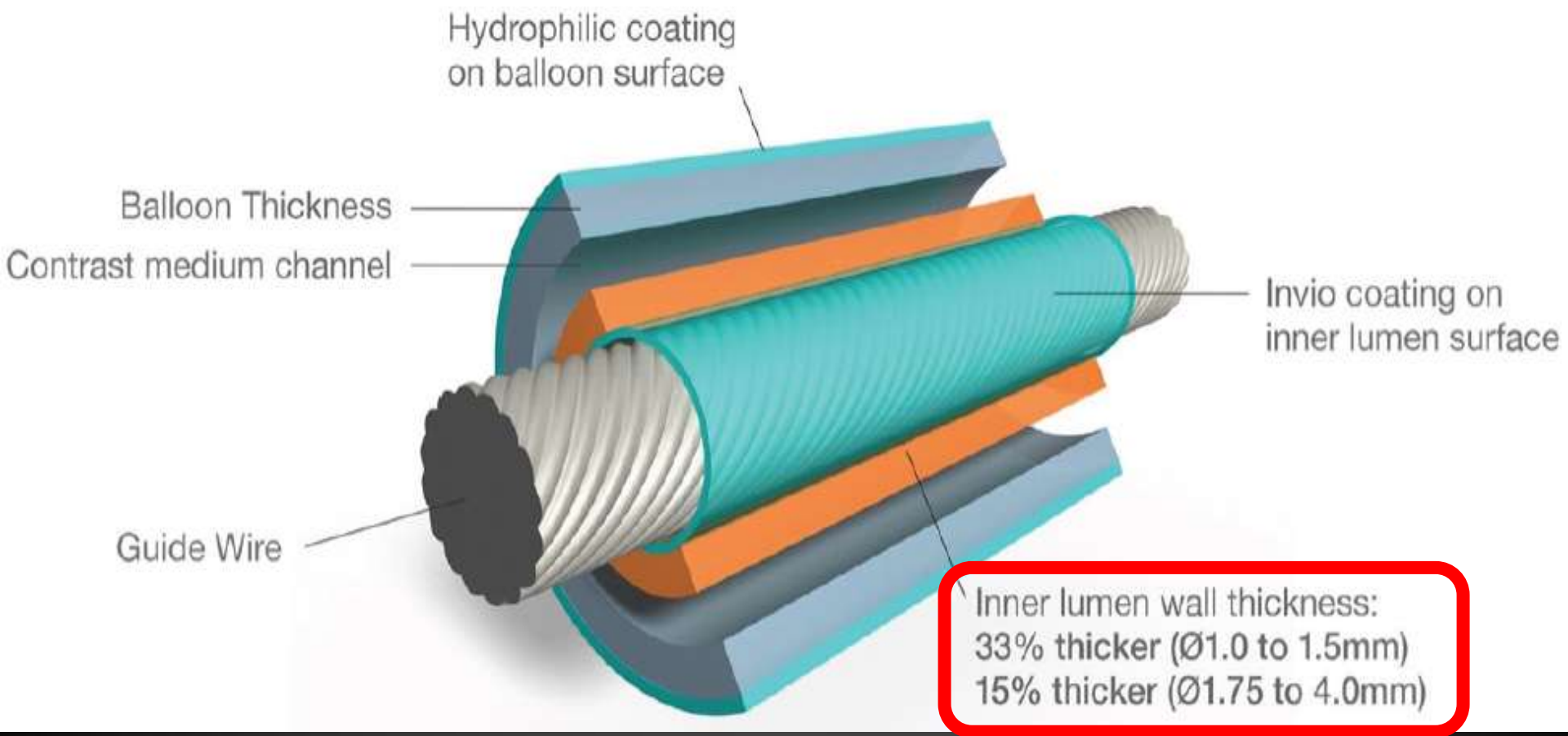


## Tip Length for Different Configurations



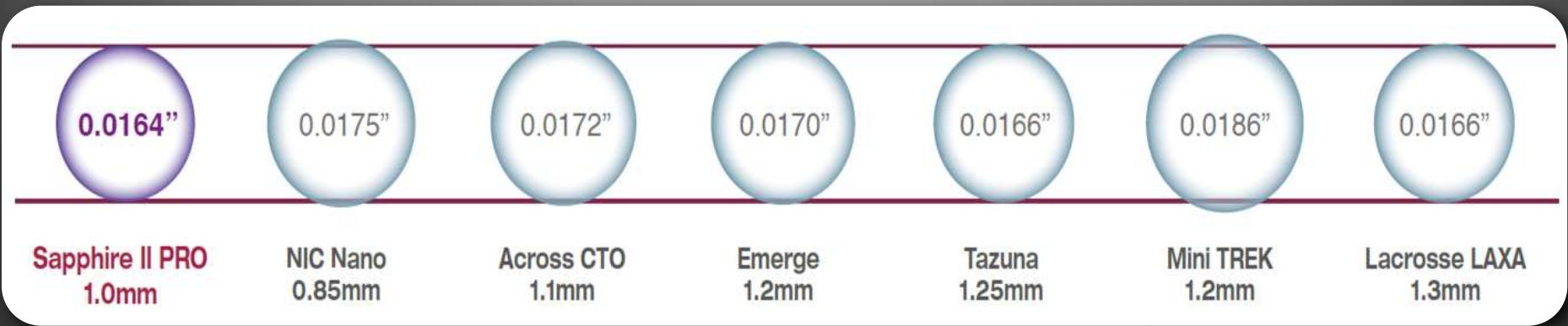
# Increased Inner Lumen Thickness

# vs. Sapphire

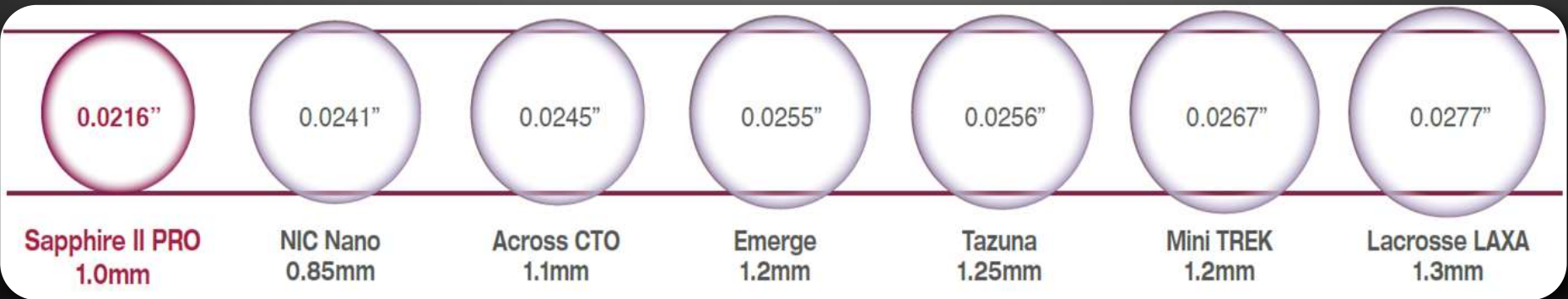


# Competitive Balloon Crossability

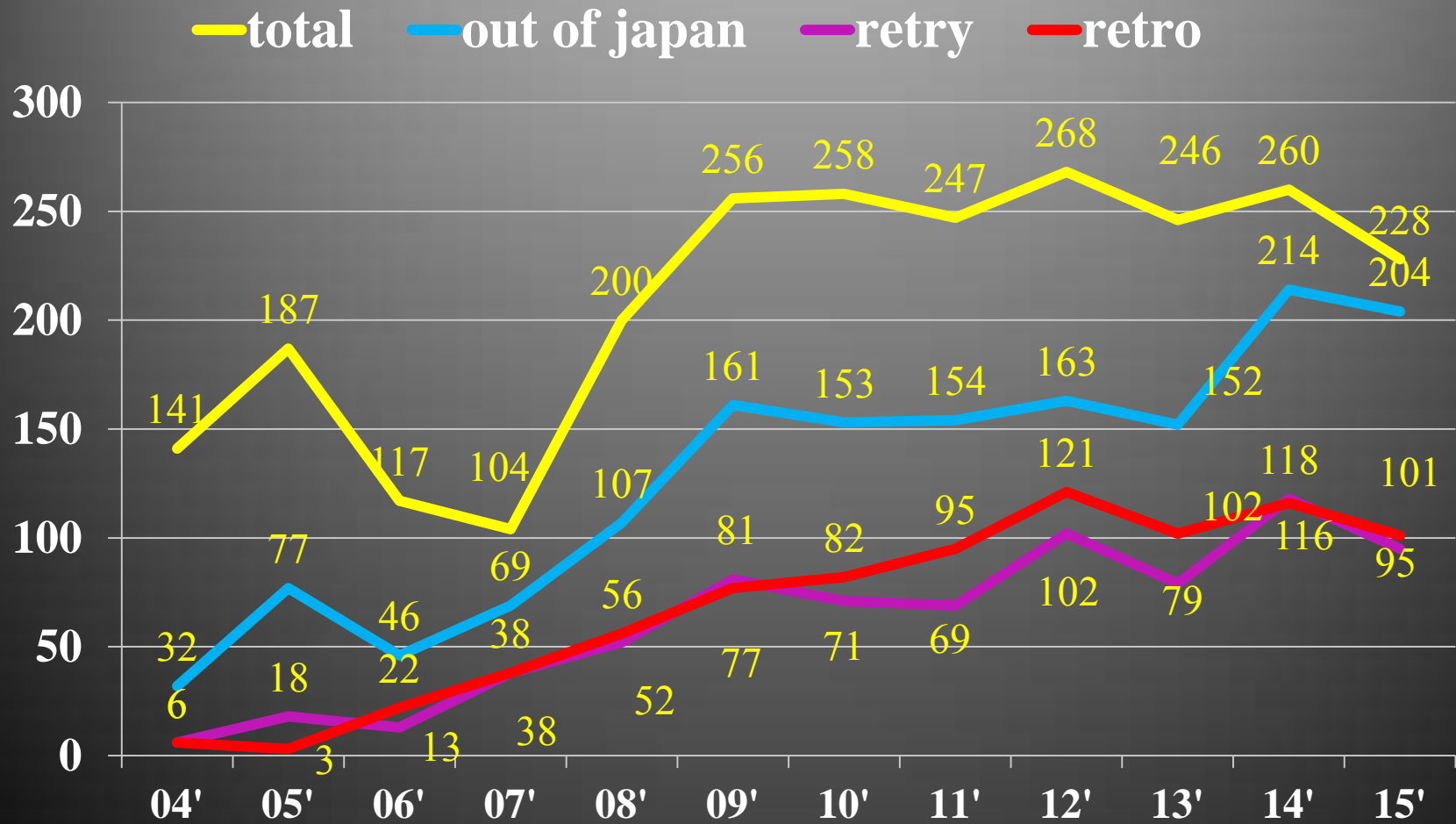
## Tip Entry Profile (1.0 - 1.5mm)



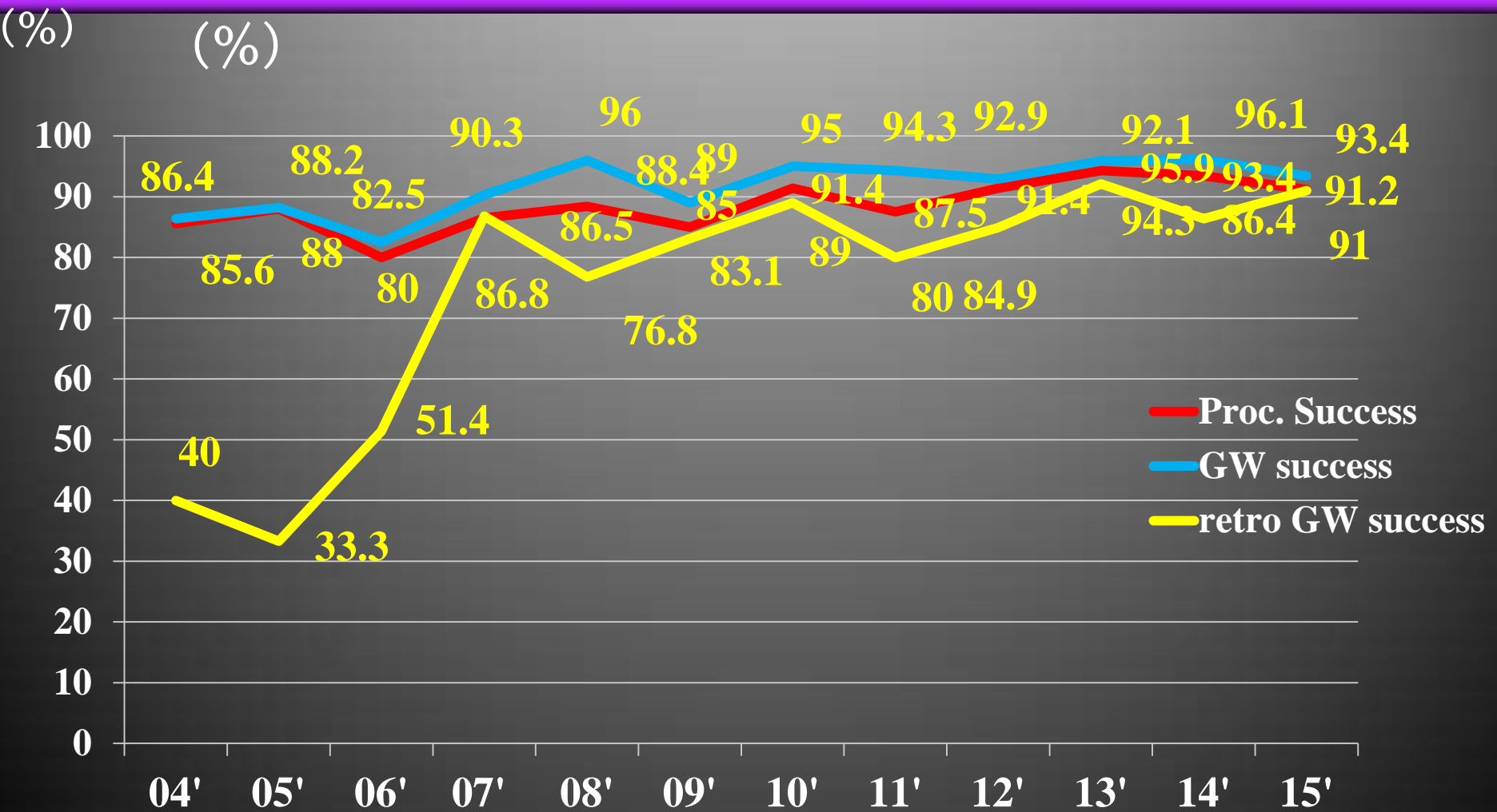
## Crossing Profile (1.0 - 1.5mm)



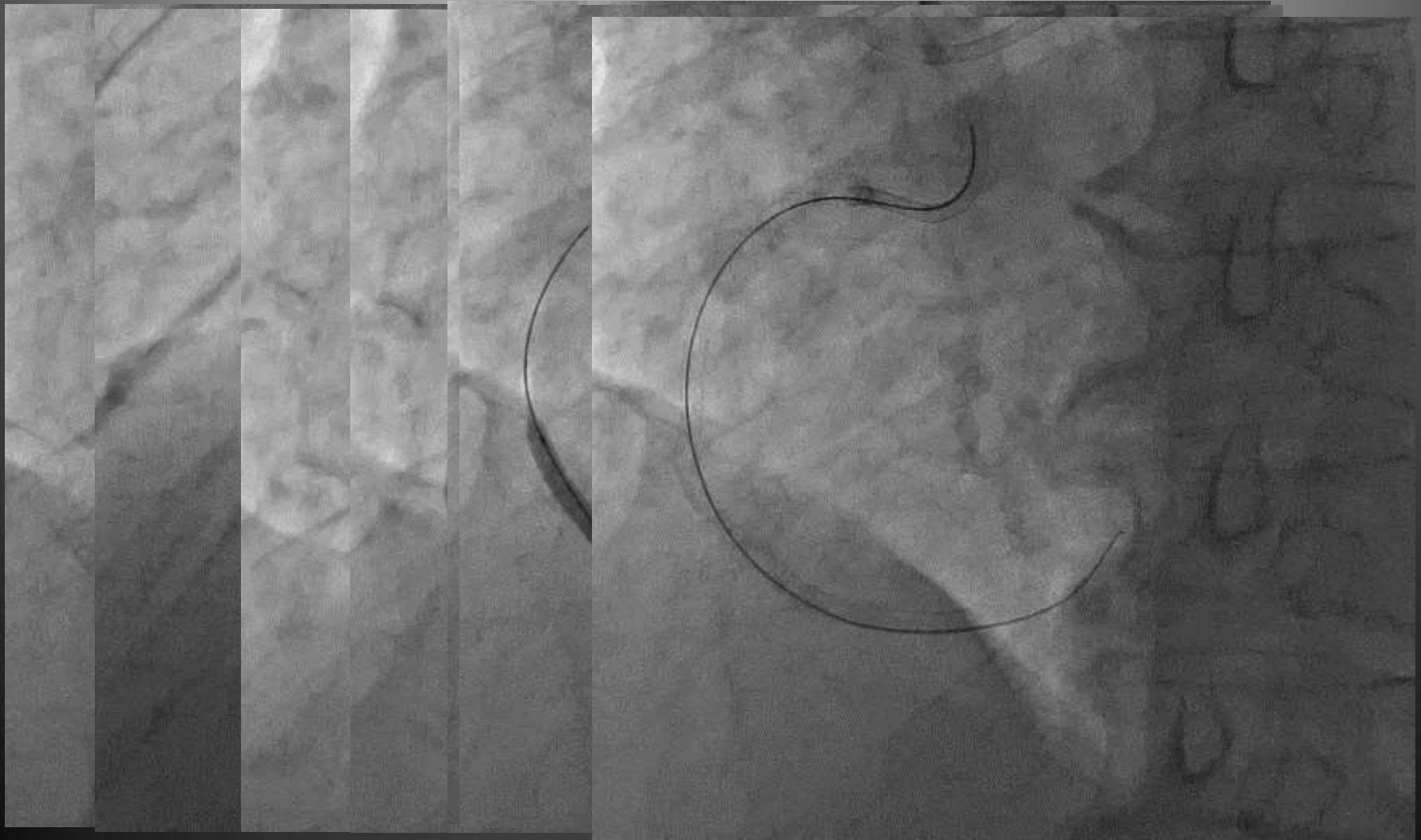
# Number of CTO lesion



# Success rate and retrograde approach for CTO



# Role of Good balloon catheter



# Role of Good balloon catheter





# Basic concept for retrograde approach

## 1<sup>st</sup> step

GW channel crossing

proper choice of channel

correct reading angiogram

Sion GW, Sion black GW, Suoh 03 GW

2<sup>nd</sup> step off course, learning curve

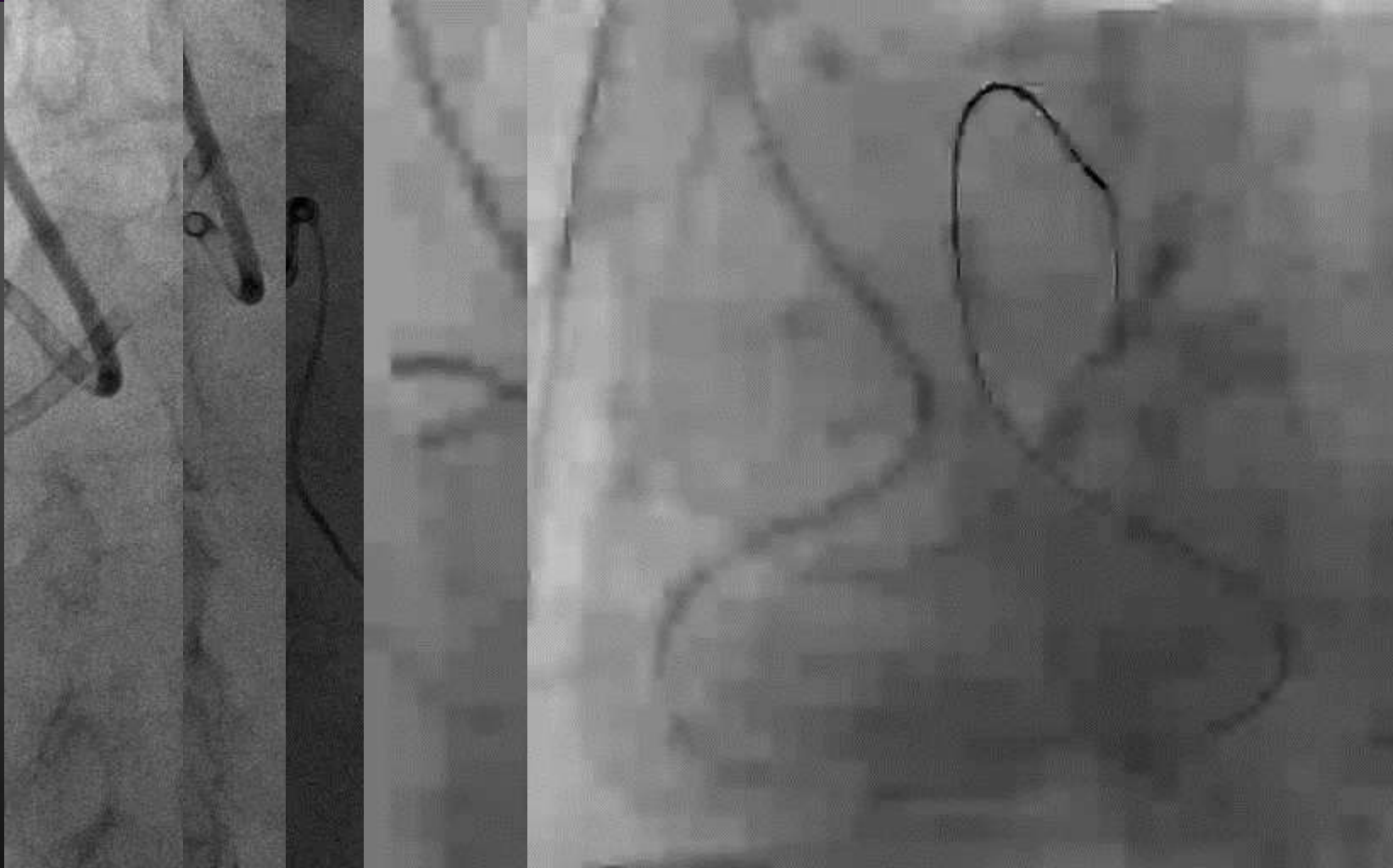
CTO crossing after channel pass through

Fielder XT → ultimate → conquest

retrograde GW crossing, KWT

Knuckle wire, r-CART

# Complex CTO combined with LMT



# Complex CTO combined with LMT



# Complex CTO combined with LMT



# Take home message

- **Recently, more complex PCI has increasing.**
- **High level skill and advanced tools will be needed more.**
- **Fundamentally, good performance balloon can support to make successs complex coronary intervention and save time, cost.**