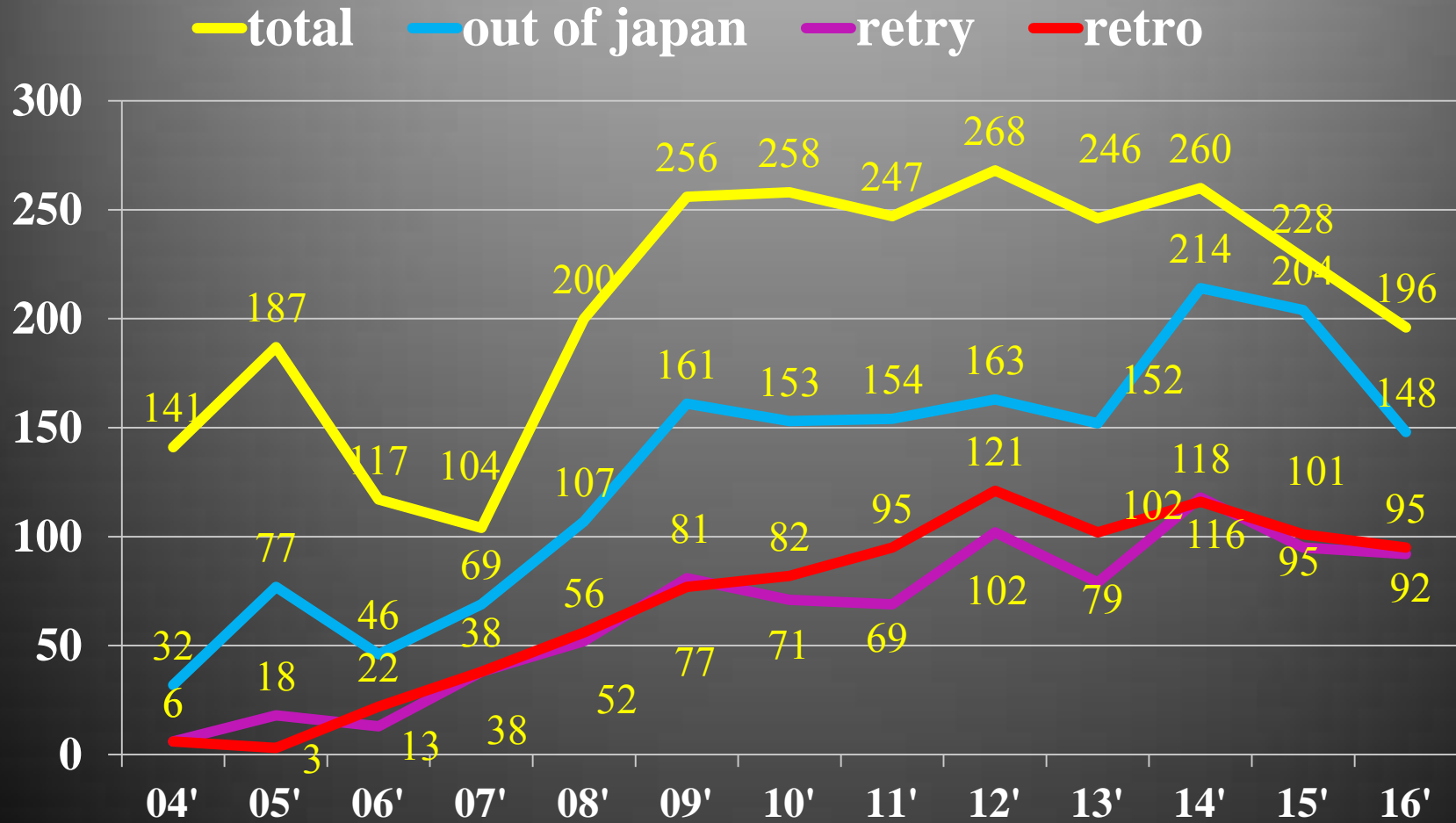


# How to choice collateral channel and crossing

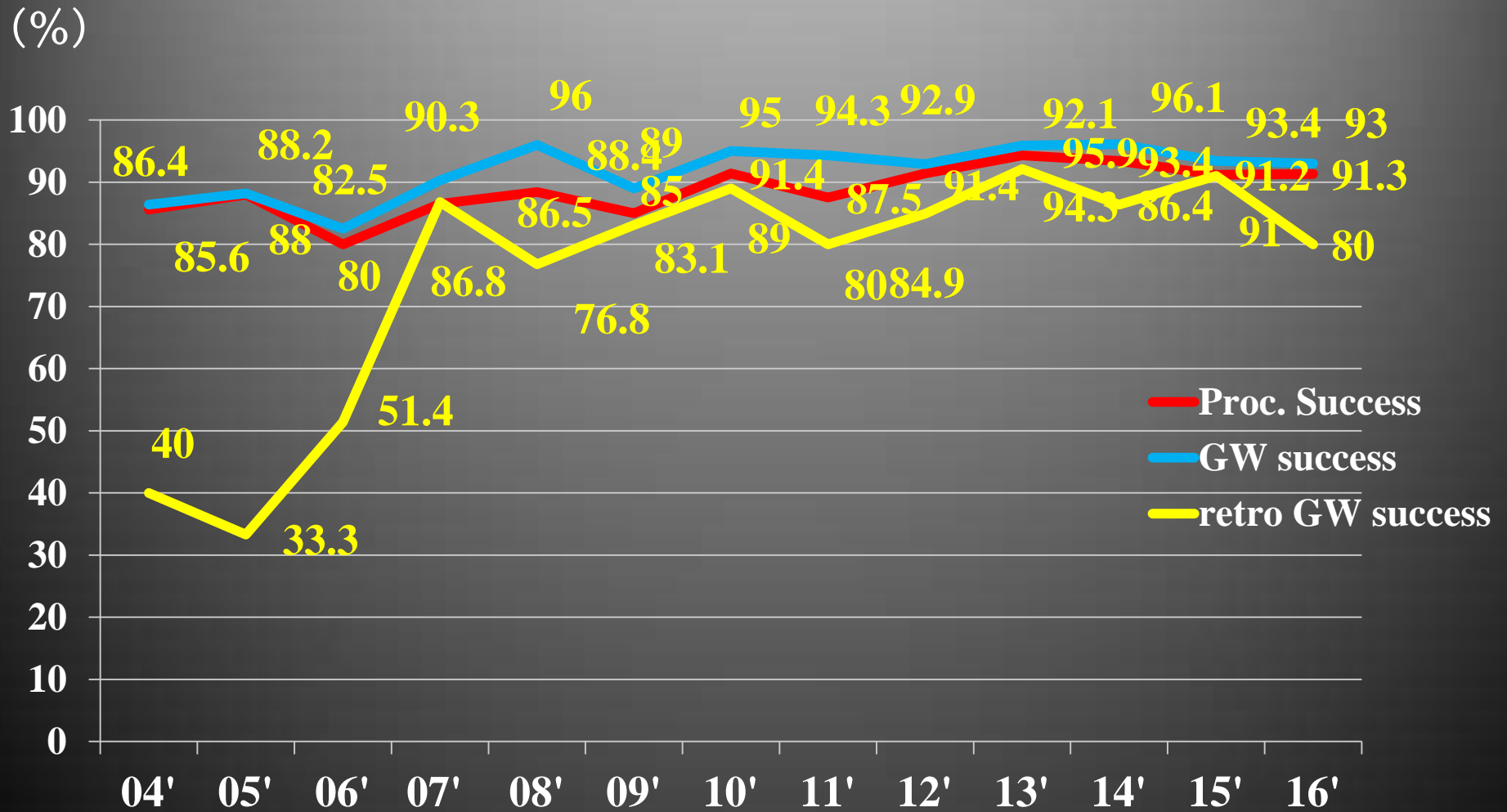
**Toshiya Muramatsu**

**Tokyo General Hospital**

# Number of CTO lesion



# Success rate and retrograde approach for CTO



# Benefit and Risk of Collateral way

	Septal	Epicardial
Straight	(++)	(-)
Risk of perforation	Small	Big
Risk of Tamponade	Small	Big
Visibility	Fair~Good	Good
Length	Moderate	Long

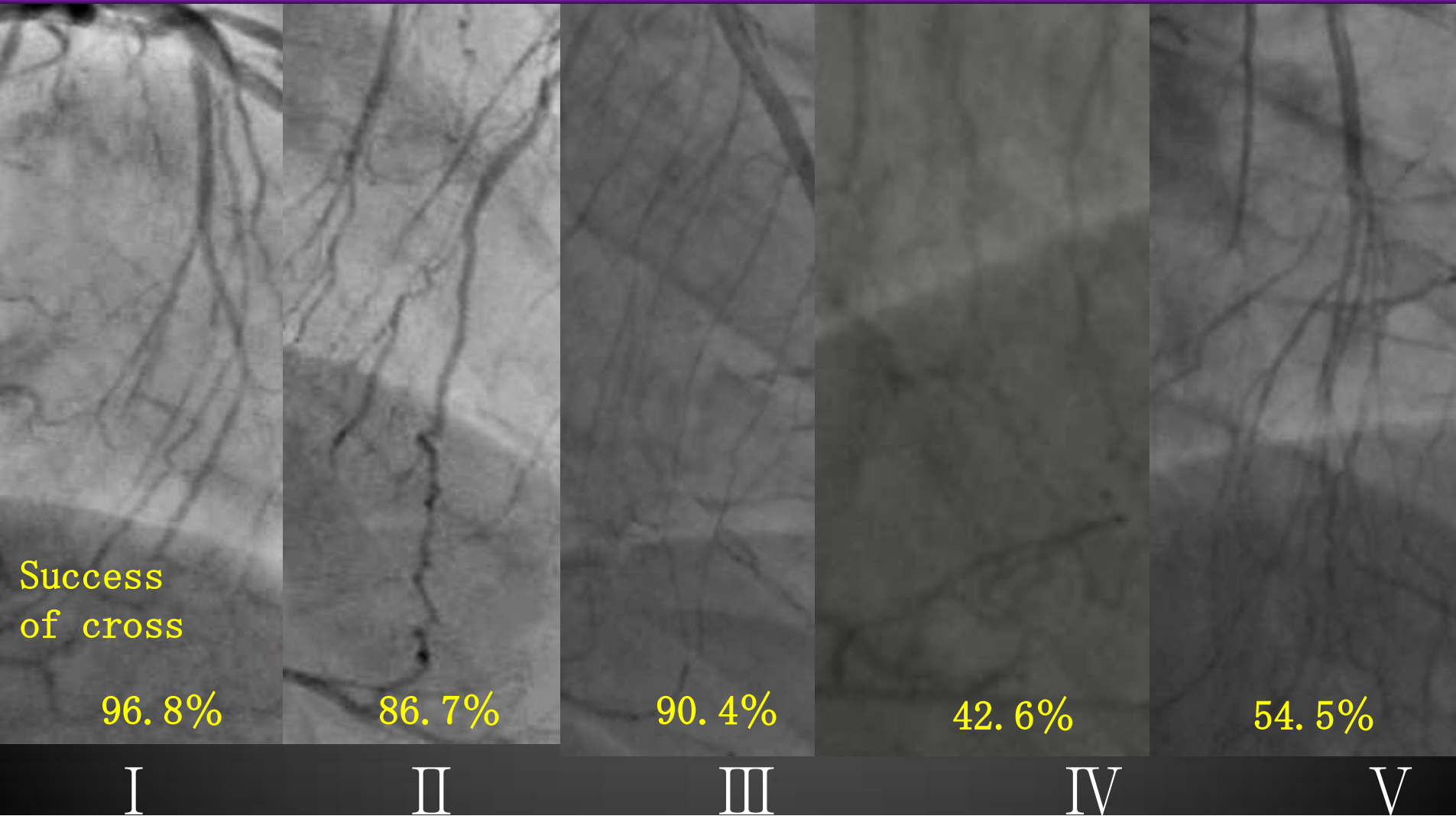
# Septal Channel

# Classification of septal collateral way



Channel bent	Channel size		V
	1mm<	1mm>	
90 degree>	I	III	
90 degree<	II	IV	

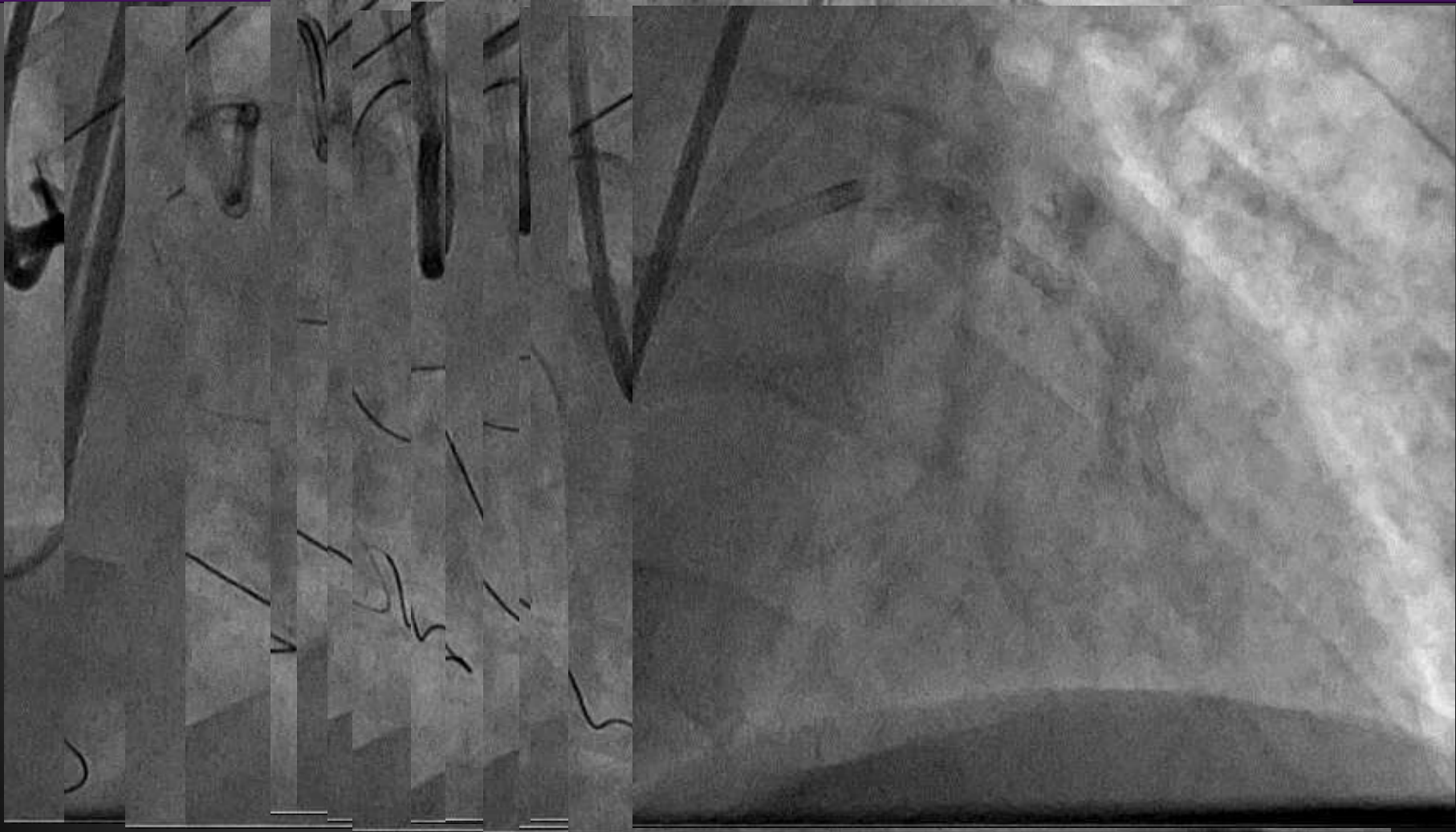
# Classification of septal collateral way



# Epicardial Channel



# *Toutous RV to LAD channel*



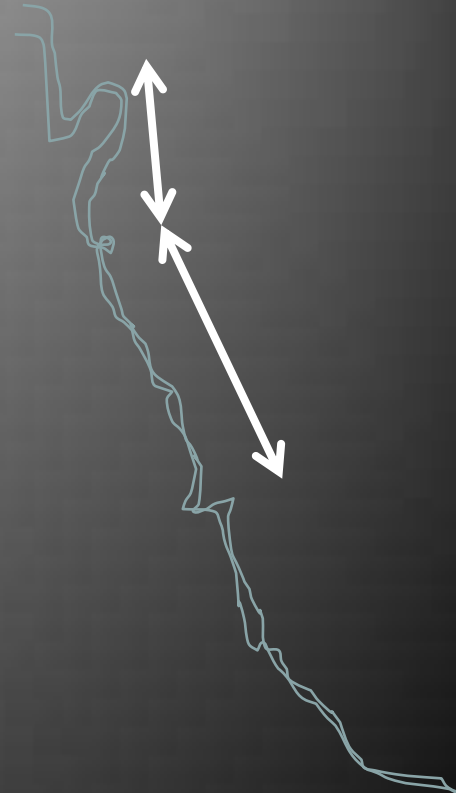
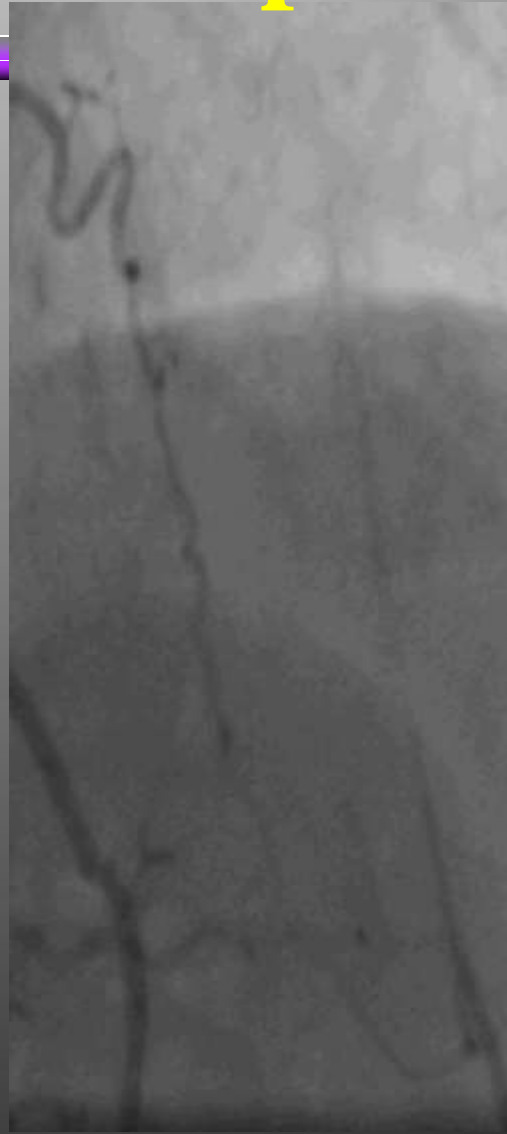
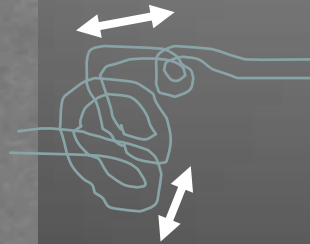
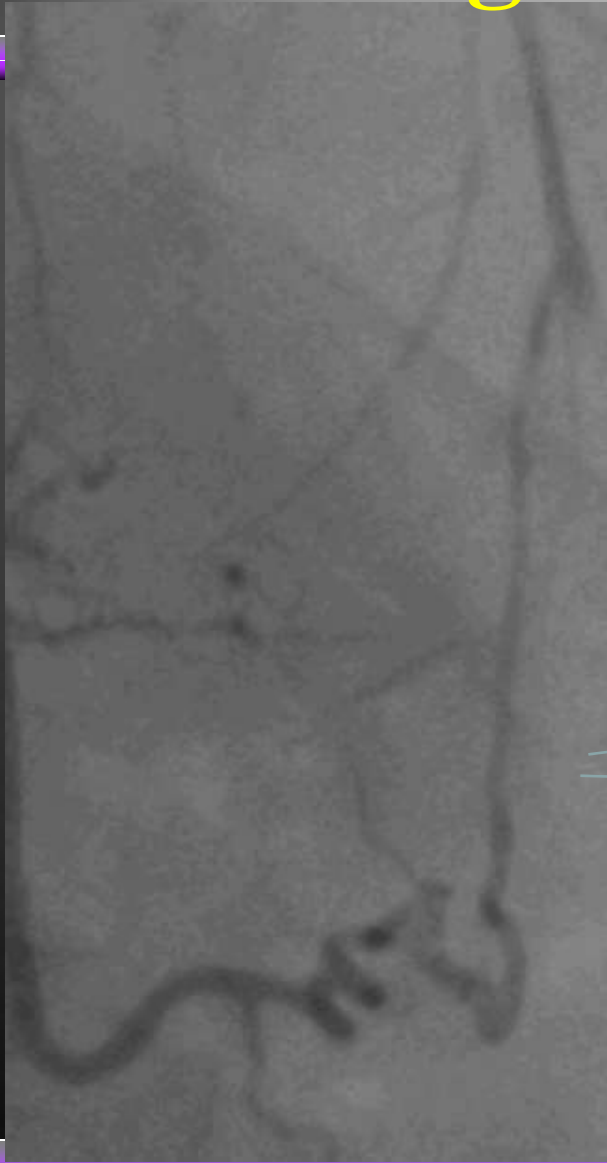
*Tokyo General Hospital*

# Case of sion black guidewire

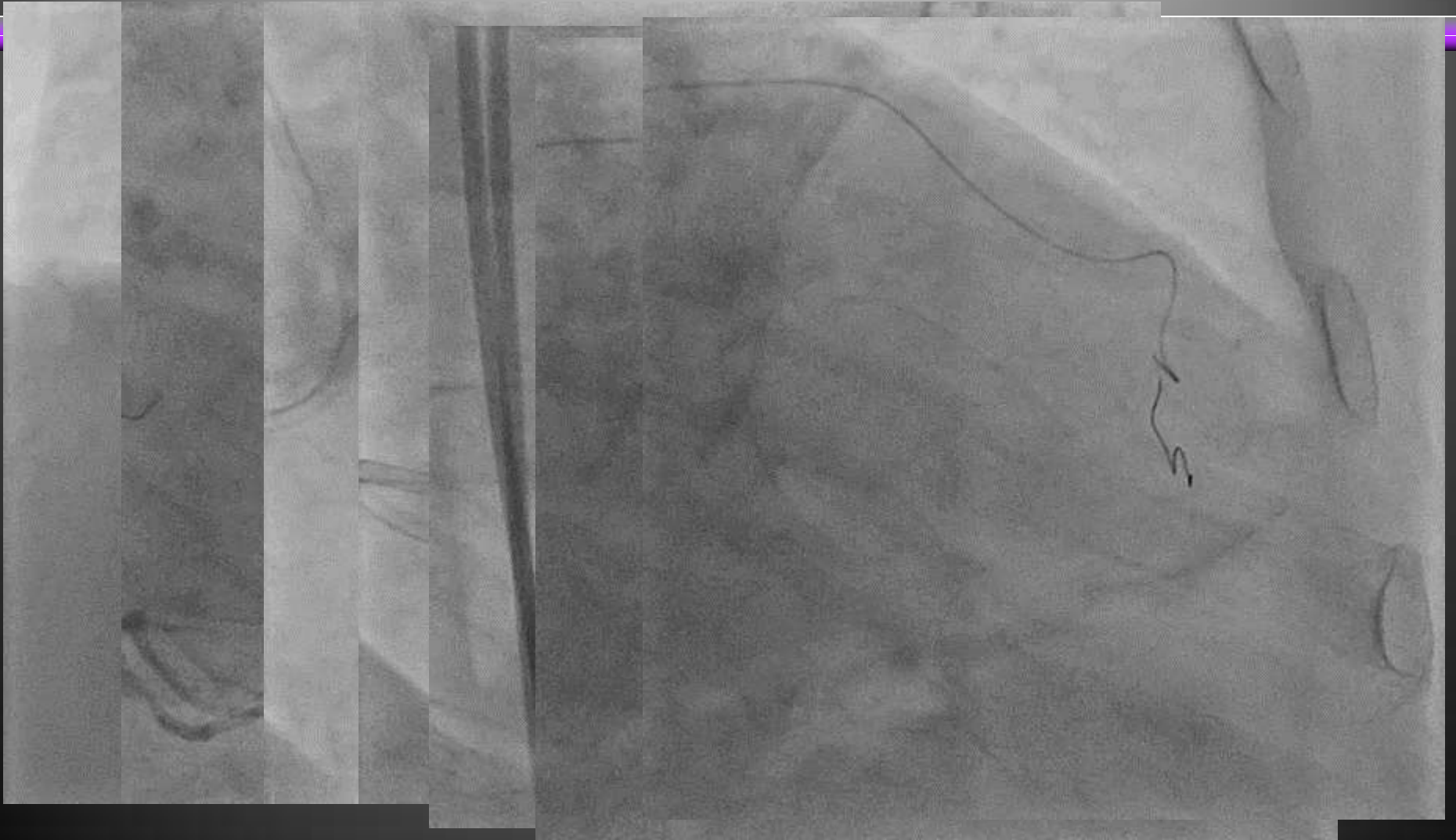


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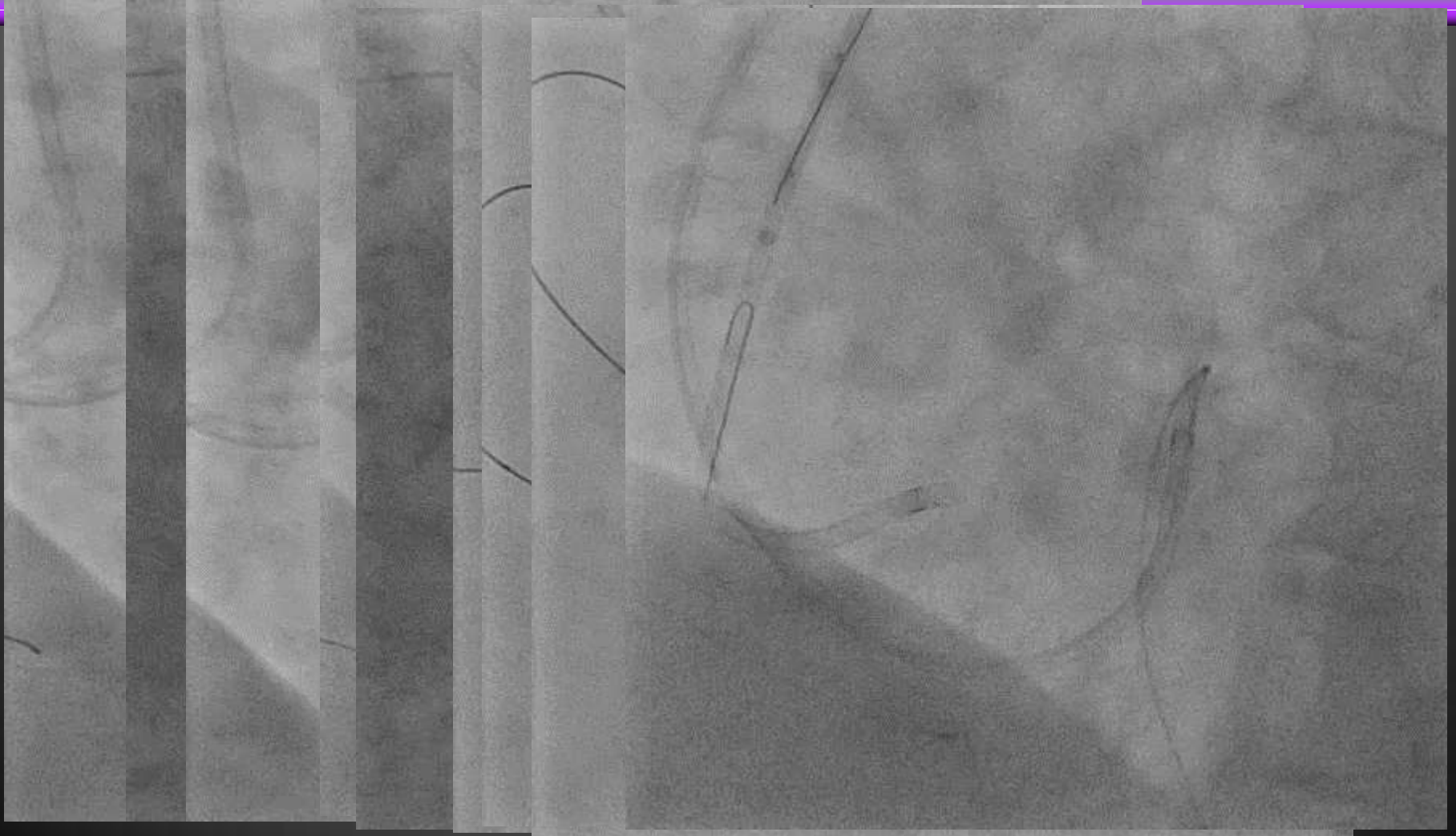
# Straight part of importance



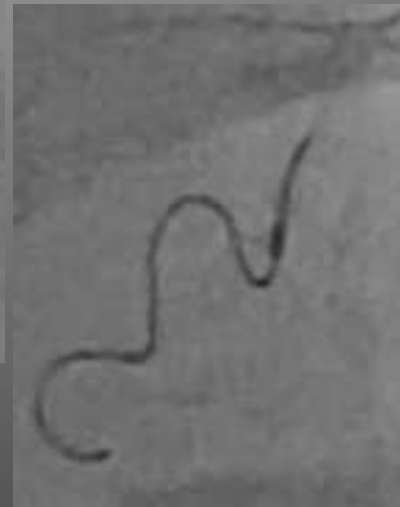
# Case of Suoh 03 GW+Caravell



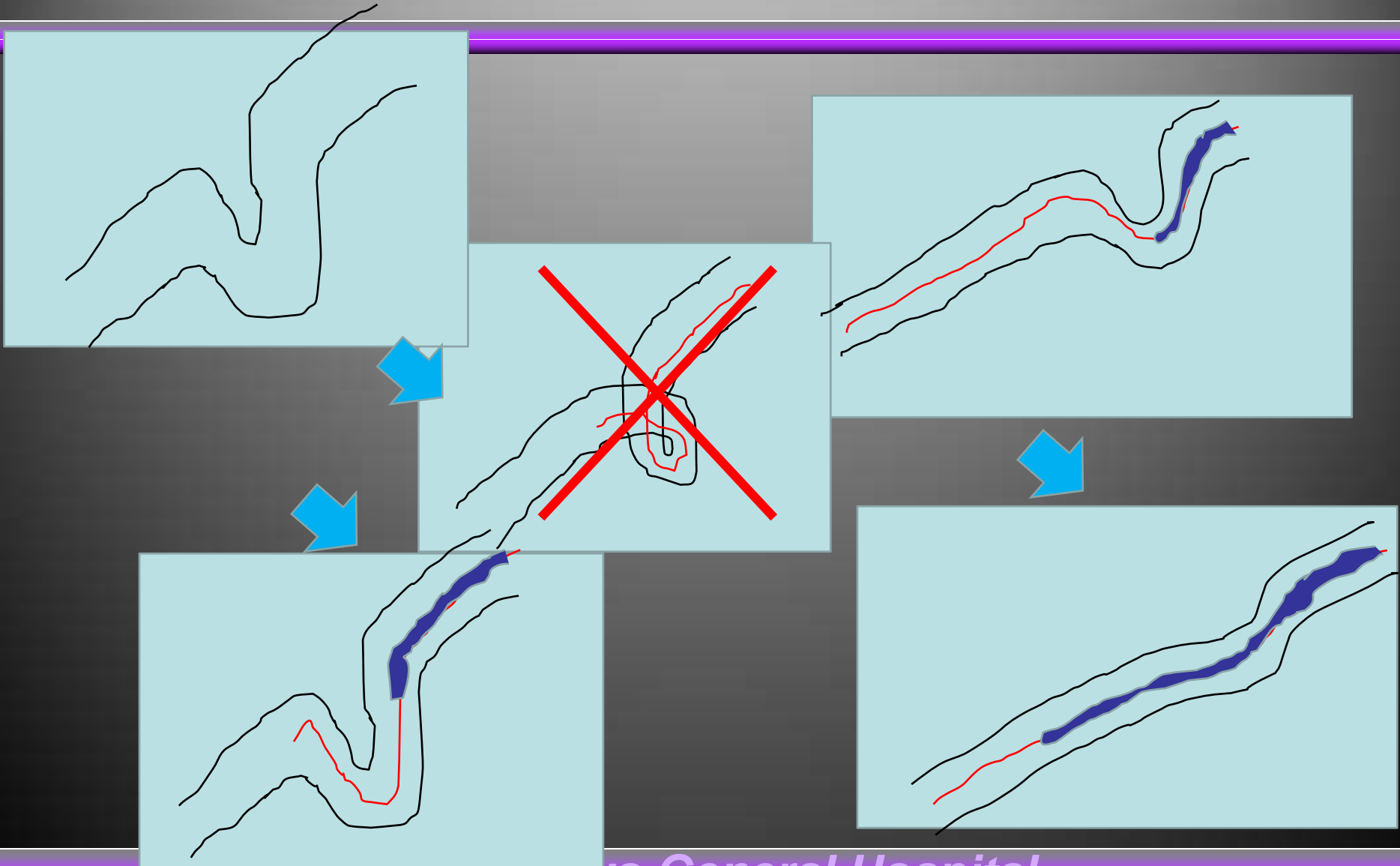
# Case of Suoh 03 GW+Caravell



# How to cross bent channel



# How to cross bent channel



# Conclusion

1. Use of epicardial channel is increasing year by year.
2. It is important to control guidewire according to watch angulation of collateral.
3. Small many angle make more difficult, small angled sharpening of GW may help to pass curve point.
4. Don't push strongly guidewire in the channel or blindly push, try to visualize the channel even during wire manipulation.
5. Soft small microcatheter is easy to cross tortuous channel and stretch channels angle.
6. Epicardial channel perforation may induce critical tamponade.