

TCTAP 2023

Stent Failure : Data from the Thai PCI Registry

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Disclosure

I do not have any potential conflict of interest

Pathologic stent failure (PSF) was defined as

- Stent thrombosis
- In-stent restenosis and in-stent chronic total occlusion (CTO)

Factors Influencing the Development of In-stent Restenosis

Pharmacological

- Drug resistance(DAPT)
- Hypersensitivity to drug
- Hypersensitivity to polymer

Biological

- Plasma proteolytic enzymes
- Matrix metalloproteinases

Patient

- DM
- Old age
- Female
- Genetic

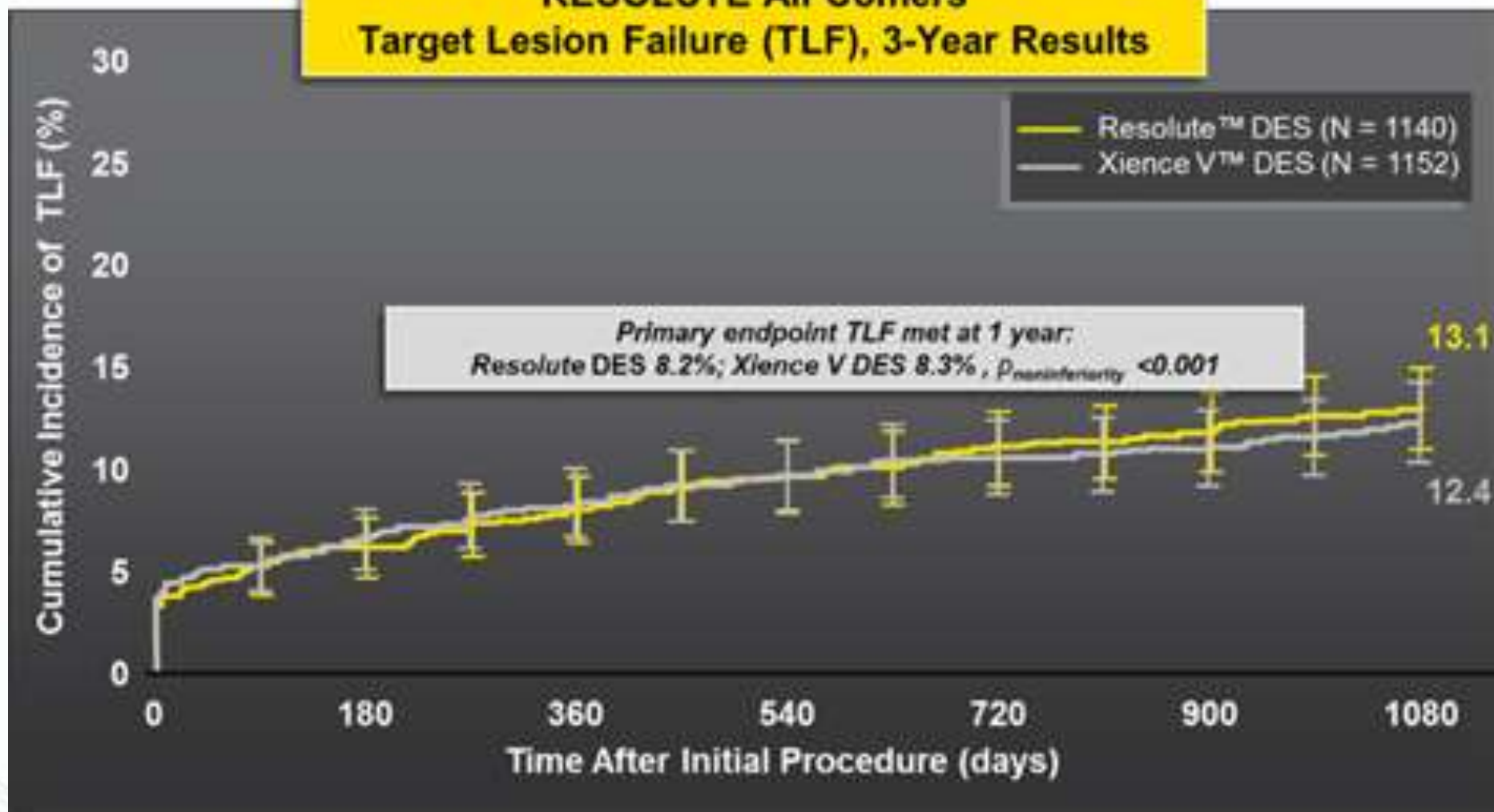
Mechanical

- Stent malapposition
- Stent underexpansion
- Edge trauma
- Geographical miss
- Stent fracture

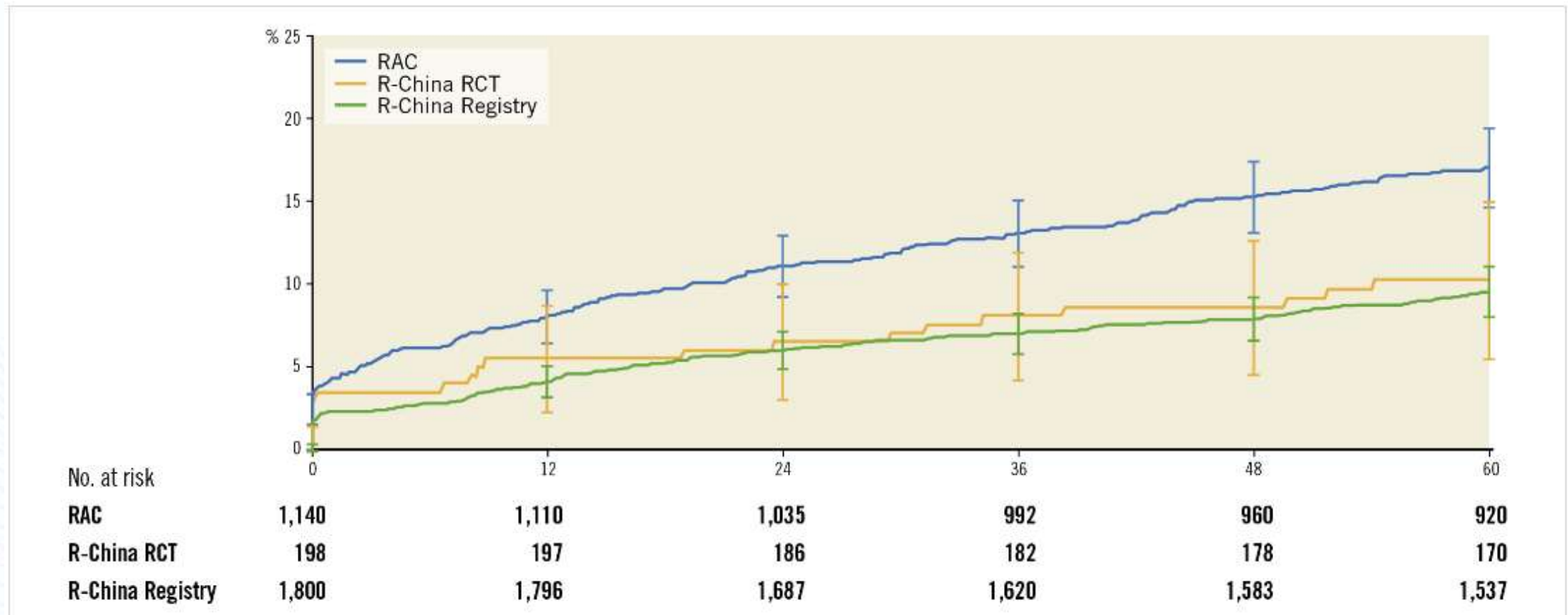
Lesion

- Type B/C
- Long > 20 mm
- Small vessel < 3 mm
- Calcified
- Bifurcation
- CTO
- Ostial or Tortuous segment

RESOLUTE All Comers Target Lesion Failure (TLF), 3-Year Results



Cumulative incidence up to 5 years after Resolute DES implantation of TLF



Clinical and safety outcomes at 5 years

Secondary endpoint	Cumulative incidence (N=1,701)
TLF	9.8% (167)
Cardiac death	3.5% (59)
Non-cardiac death	3.1% (52)
TVMI	3.2% (54)
Cardiac death or TVMI	6.1% (103)
TLR	4.6% (78)
TVR	5.8% (98)
Very late stent thrombosis (definite/probable)*	0.5% (9)
Significant bleeding complications	2.2% (38)

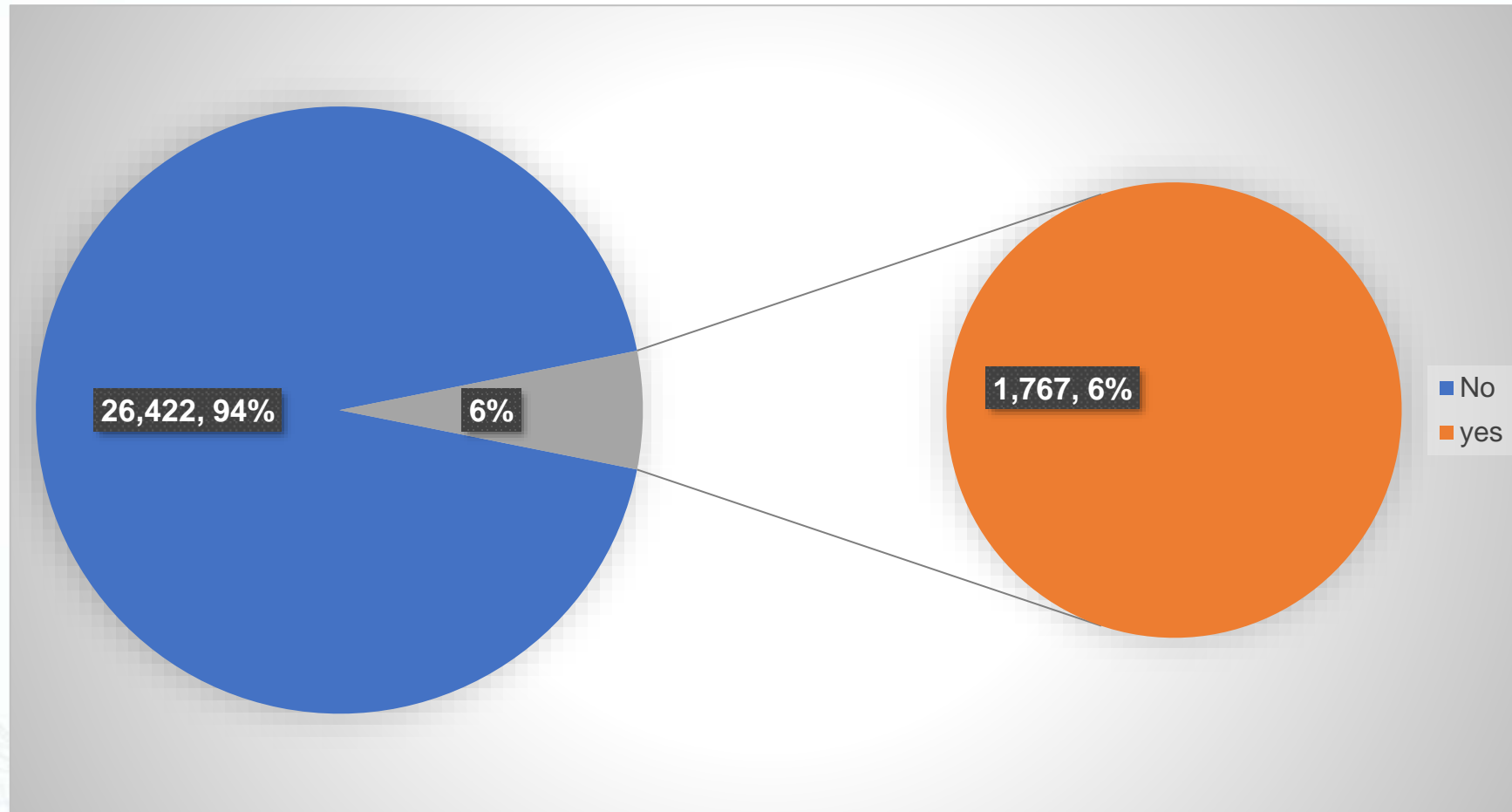
Data presented as % (n). *Academic Research Consortium (ARC) definition. TLF: target lesion failure; TLR: target lesion revascularisation; TVMI: target vessel myocardial infarction; TVR: target vessel revascularisation

Nationwide Thai PCI Registry

- During 2018-2019, consecutive PCI patients were enrolled and followed up for 1 year.
- Among the 39 hospitals participated, there were 22,741 patients included in this registry

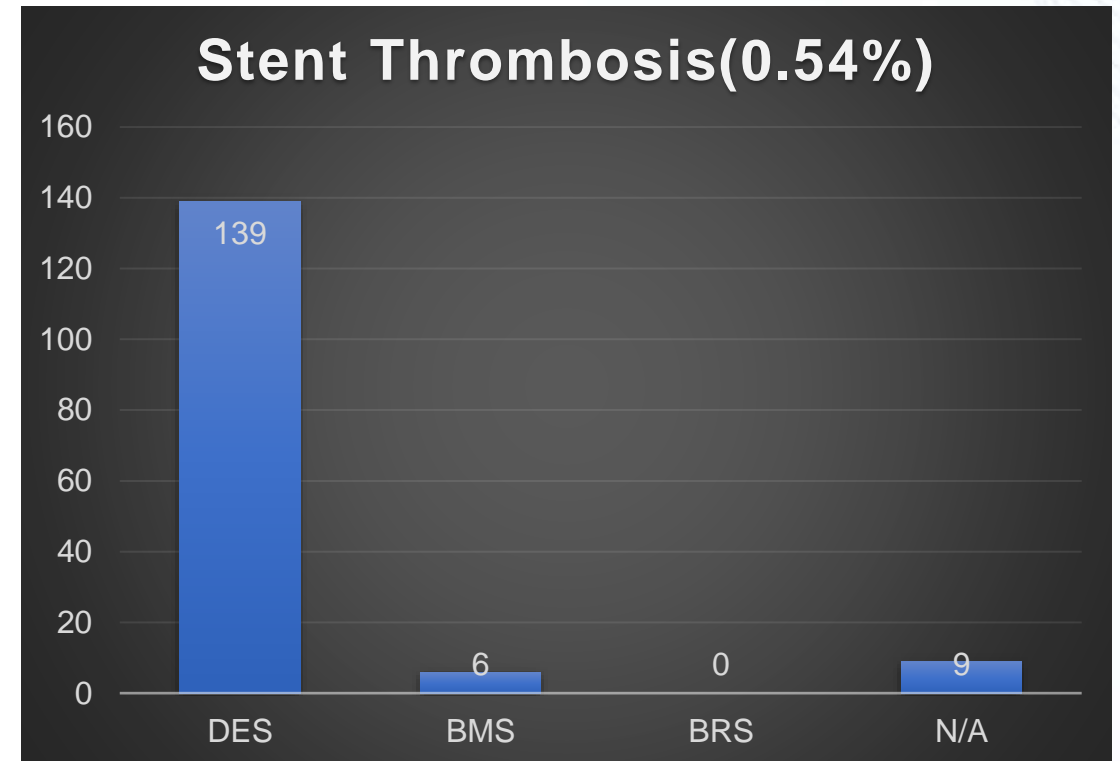
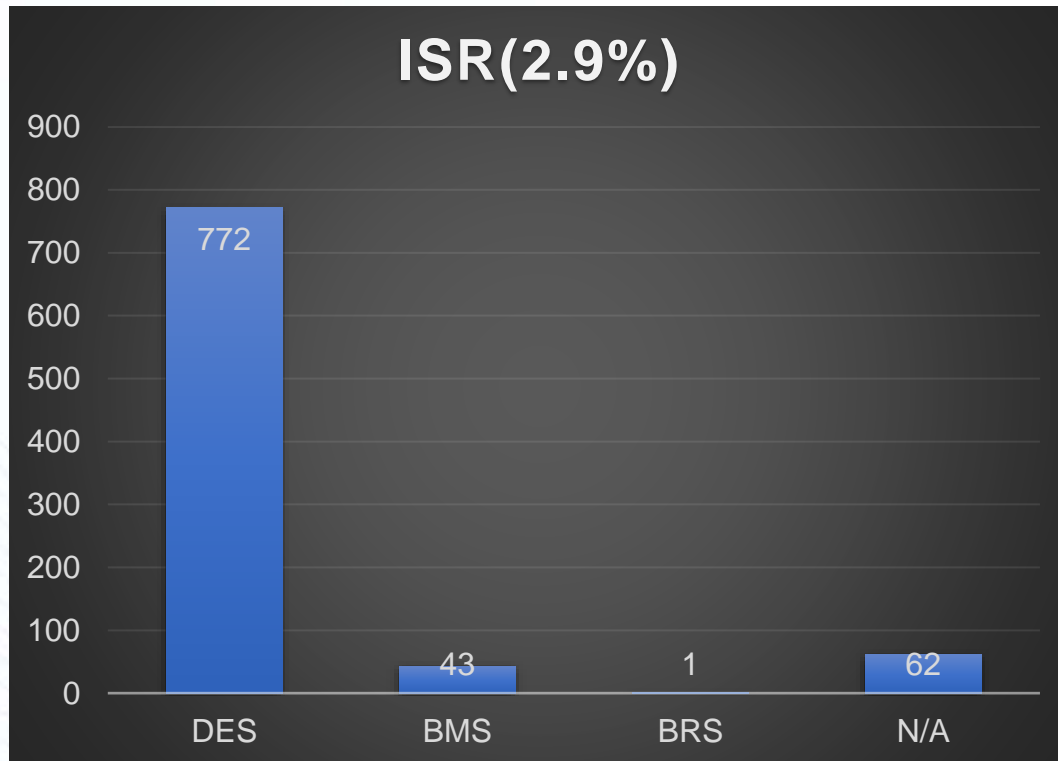
Previously treated lesions (1,767)

(Total number of lesion = 28,246)



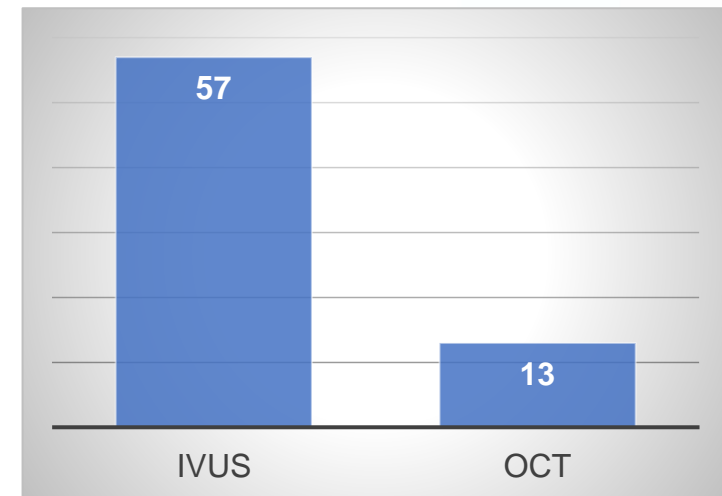
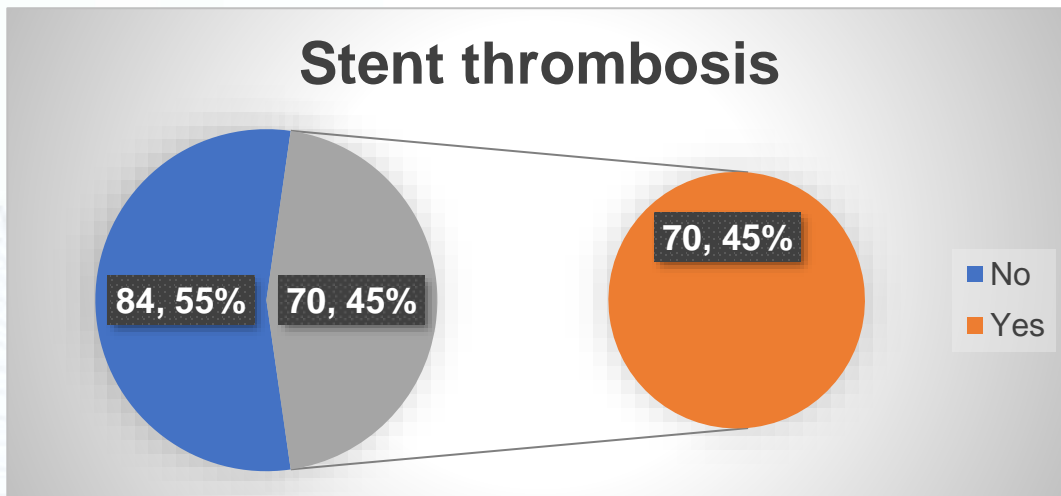
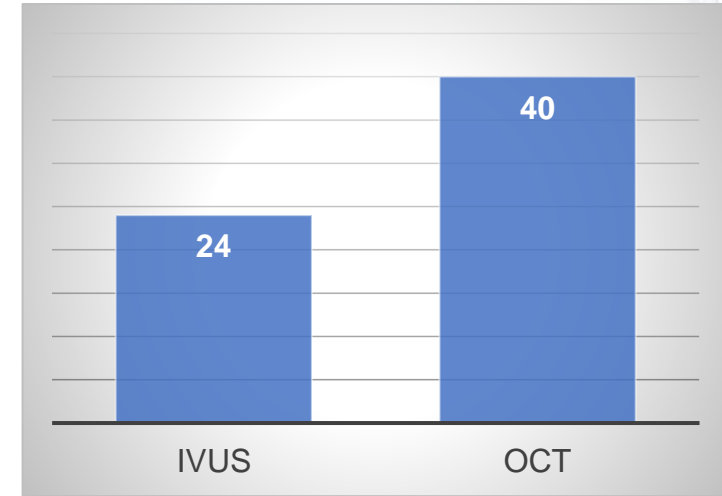
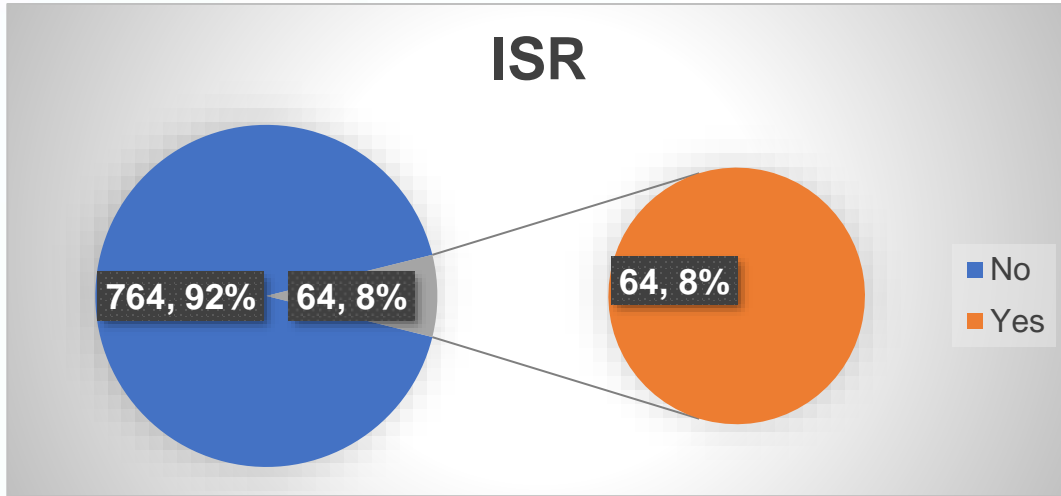
N. Sansanayudh. et al.

Prevalence stent failure



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Imaging-guided PCI



Conclusion

- There is a clear unmet need for stent failure after PCI with DES
- Anticipate at least 10% of cases due to ISR over time
- PCI optimization with imaging-guided (IVUS & OCT) can be minimized
specific causes of ST/ISR