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# From Predilation to Debulking: What, When and Why to Add More Upon Plane DCB

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# Disclosure

Speaker name:

Gunnar Tepe

I have the following potential conflicts of interest to report:

- Consulting and or study support: Bard, BBraun, Biotronic, Medtronic, Spectranetics

# Is There Any Role for Pre-Dilatation?

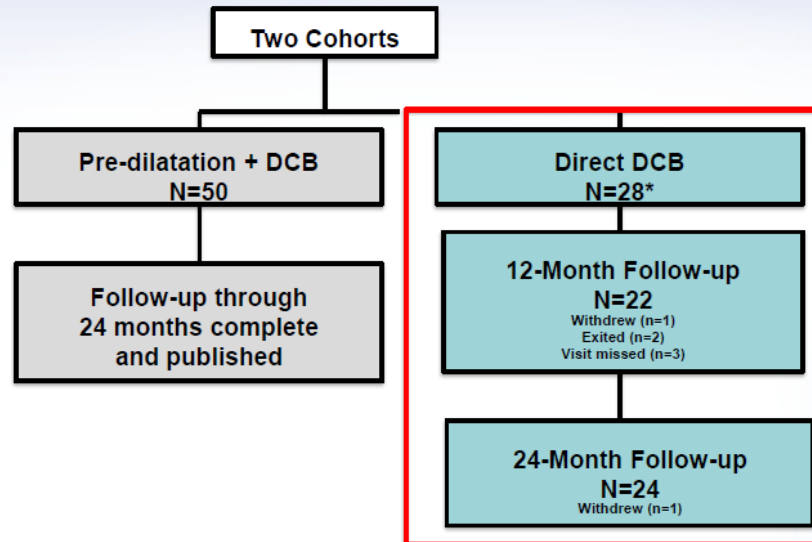
Thunder: 0% predilatation  
Pacifier: 14% predilatation  
In.Pact SFA: 96.4% predilatation

SFA

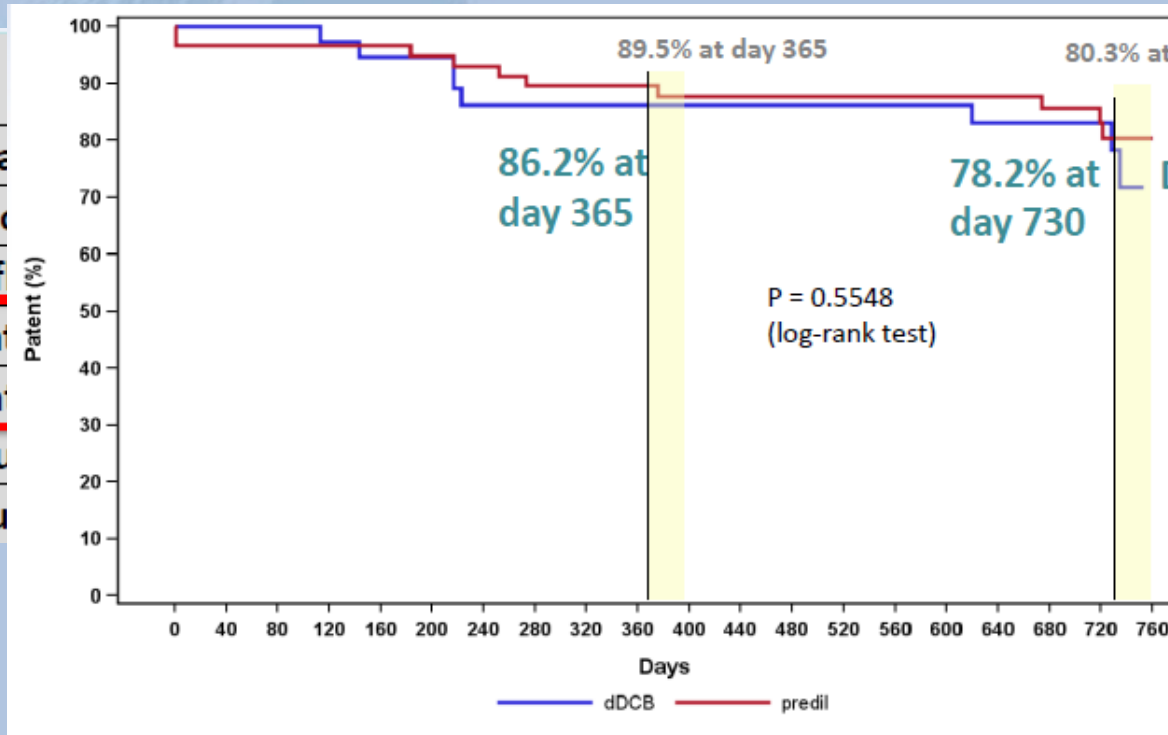
Good results

## ILLUMENATE FIH Study Design

100% of expected patients followed at 2 years



# Is There Any Role for Pre-Dilatation?



- Protect DCB surface especially in occlusions
- Potentially reduce need for post-dil + stent
- BUT: not mandatory to enhance efficacy + risk: mismatch

# Is There Any Role for Pre-Dilatation?

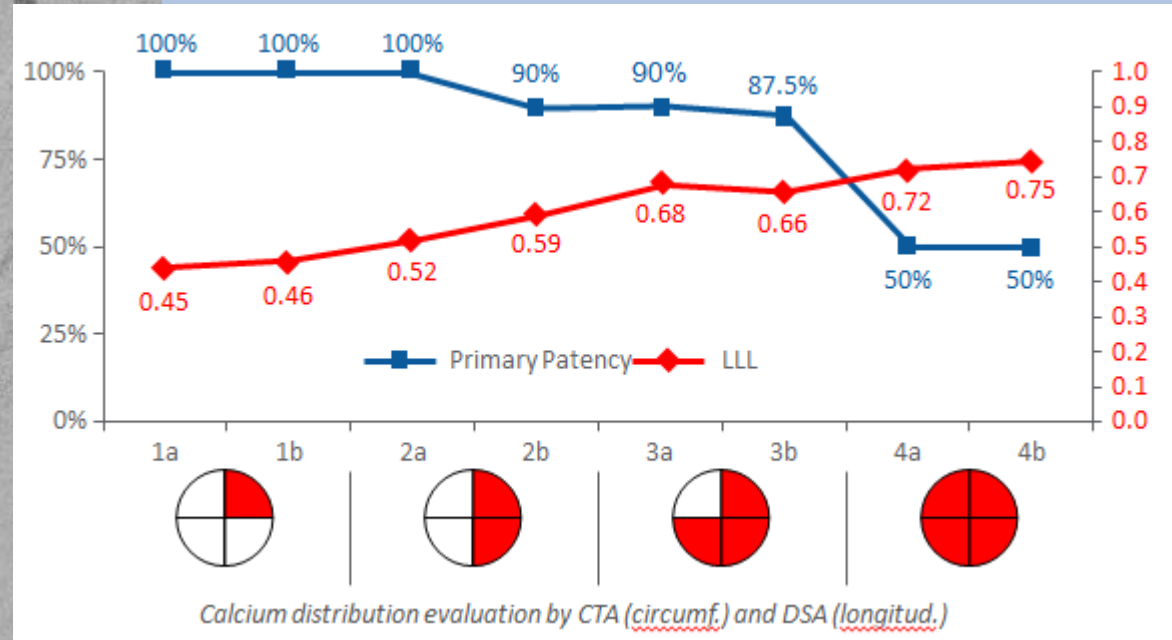
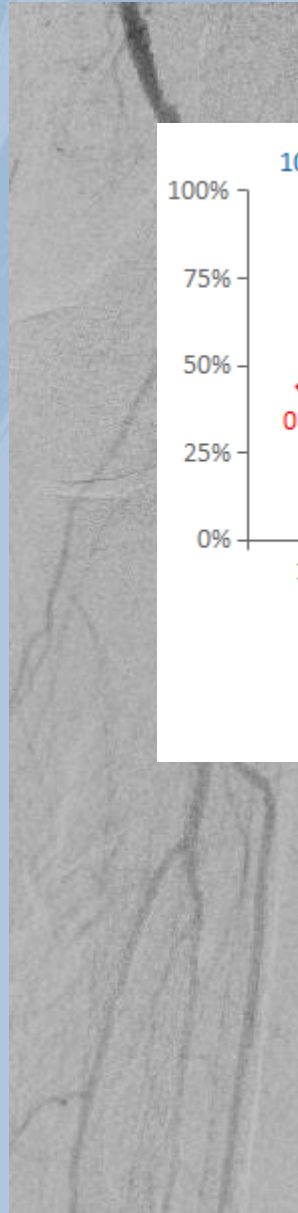


- 0.014 wire + non hydrophilic surface of DCBs: need of pre-dilatation for DCB placement
- In case of diffuse calcium: vessel preparation for better drug uptake?

# Calcification



# Calcification



- Atherectomy
- Cutting Balloon
- Schockwave

# Atherectomy – Definitive AR

## General and Angiographic Criteria Assessment



Covid  
SilverHawk  
TurboHawk™  
plaque excis



Baseline

Directional  
Atherectomy

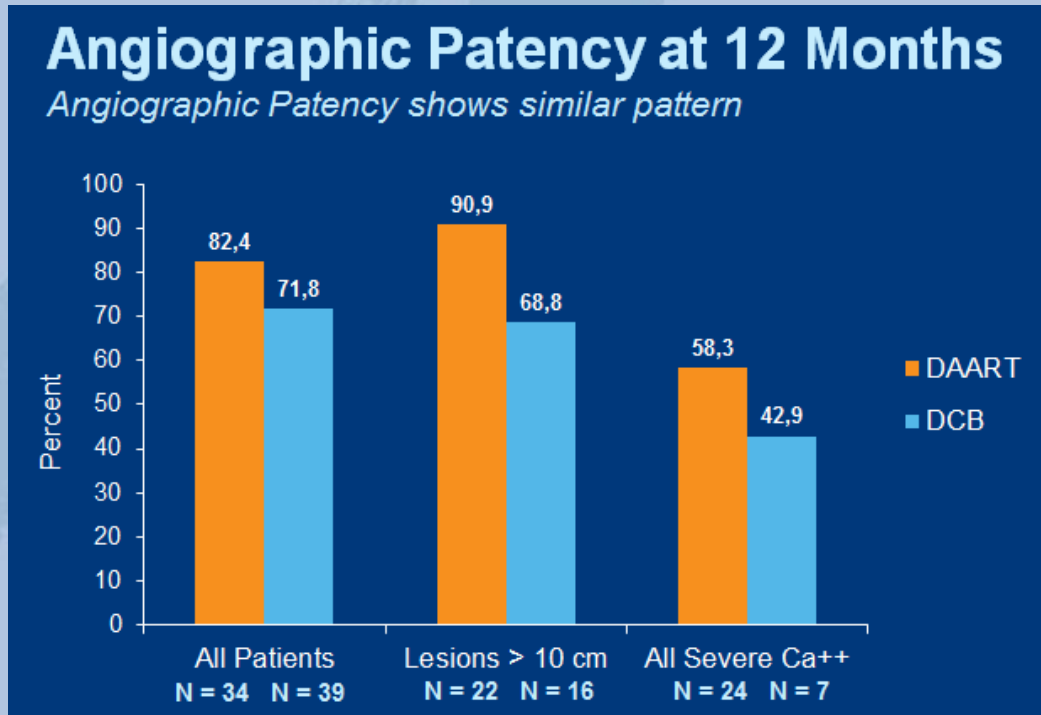
Post-DA

DCB

Final  
Result



# Atherectomy – Definitive AR



## Possible Reasons:

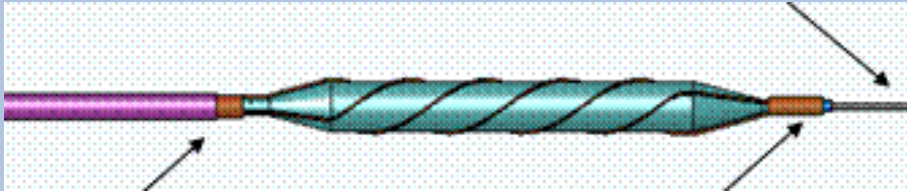
1. Study design

2. Device considerations

- Tissue of drug uptake cut away
- Other devices (like orbital) better address Calcium?

# Cutting Balloon

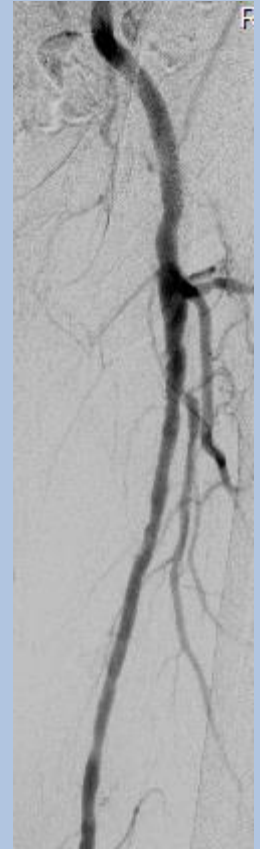
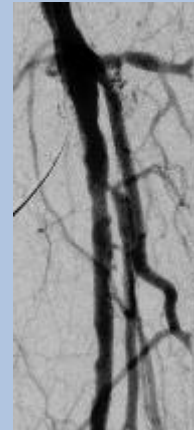
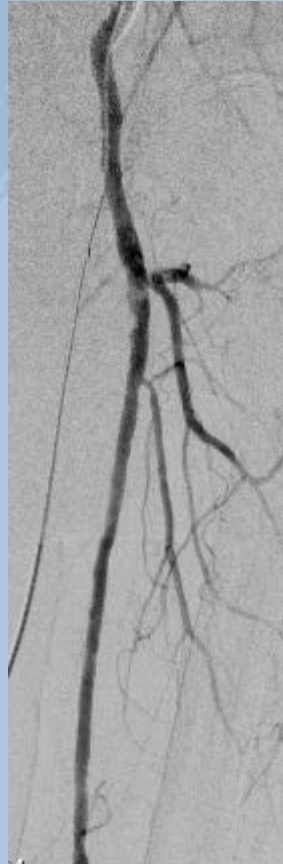
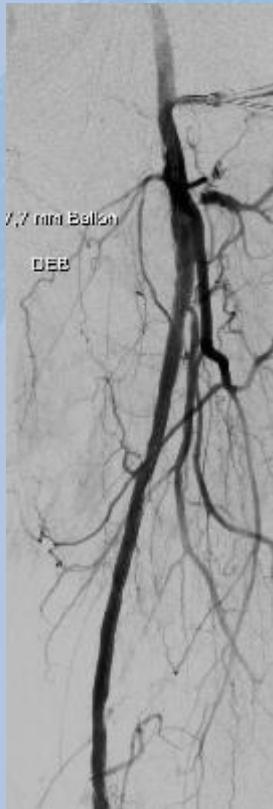
- **AngioScore**  
**Non-slip**  
**More opt. lumen expansion at lower balloon pres.**



# Cutting Balloon + DCB

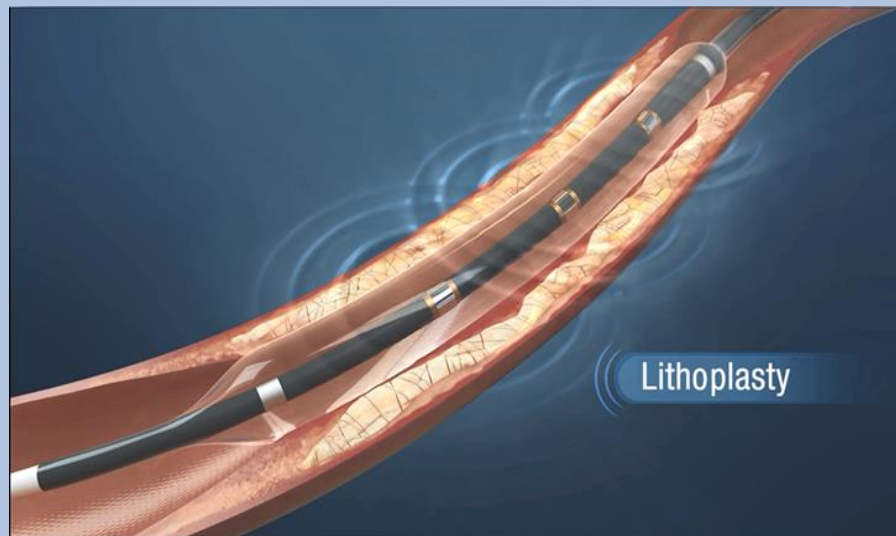


# Cutting Balloon + DCB, follow-up (6,12,18 mo)



LINC

# Schockwave

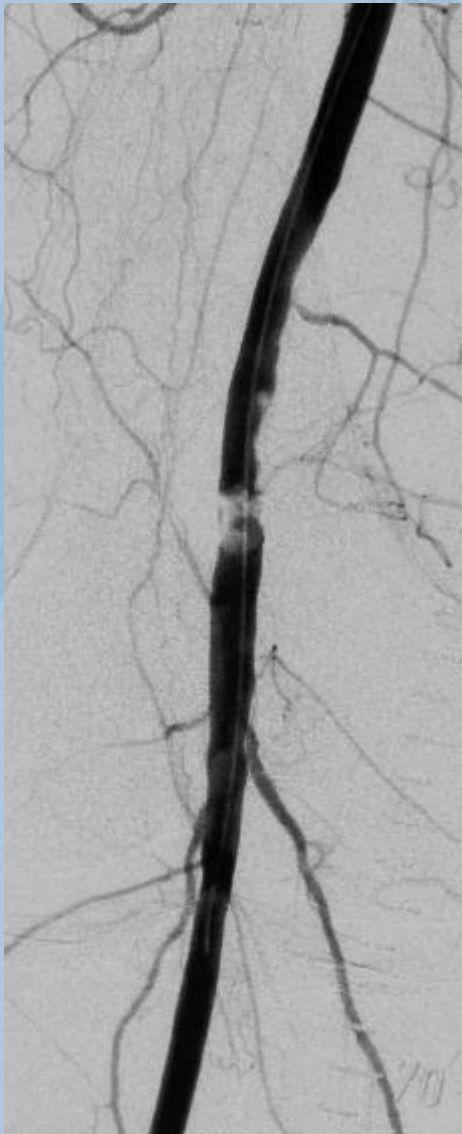


*Lithotripsy waves travel outside low pressure balloon,  
Disrupt deep, superficial calcium pre-dilation*

## Lithoplasty<sup>®</sup> for Vascular Therapy

- Familiar Balloon-based endovascular technique
- “Front-line” balloon strategy (.014”compatible)
- Ultra-low pressure
- Designed to:
  - Disrupt both deep & superficial calcium pre dilation
  - Normalize vessel wall compliance
  - Minimize effect on healthy tissue

# Schockwawe

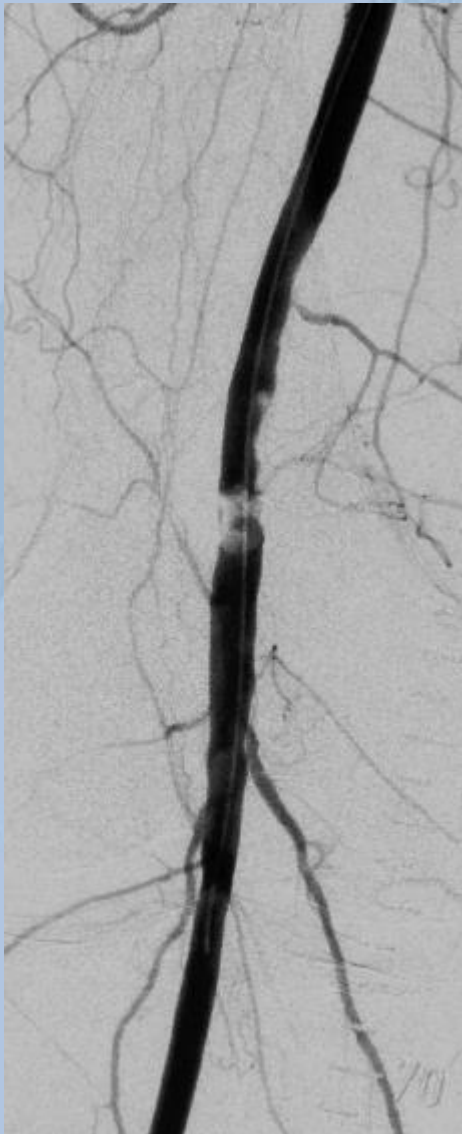




# Schockwawe



# Schockwawe





# DCB in Calcified Lesions

## Conclusion

- Use of DCBs in calcified lesions still a challenge
  - There is a role for vessel preparation - BUT
    - What is the best system?  
Hawk? Orbital? Cutting? Schockwave?
- Studies in calcified arteries with DCB as control group mandatory

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