EUROPEAN HEART HOUSE
Coronary Physiology in the
Catheterization Laboratory (9th Edition)
Thursday, April 23 – Saturday, April 25, 2015

Boston Scientific: Designing the pressure guidewire for contemporary PCI scenarios

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Potential conflicts of interest

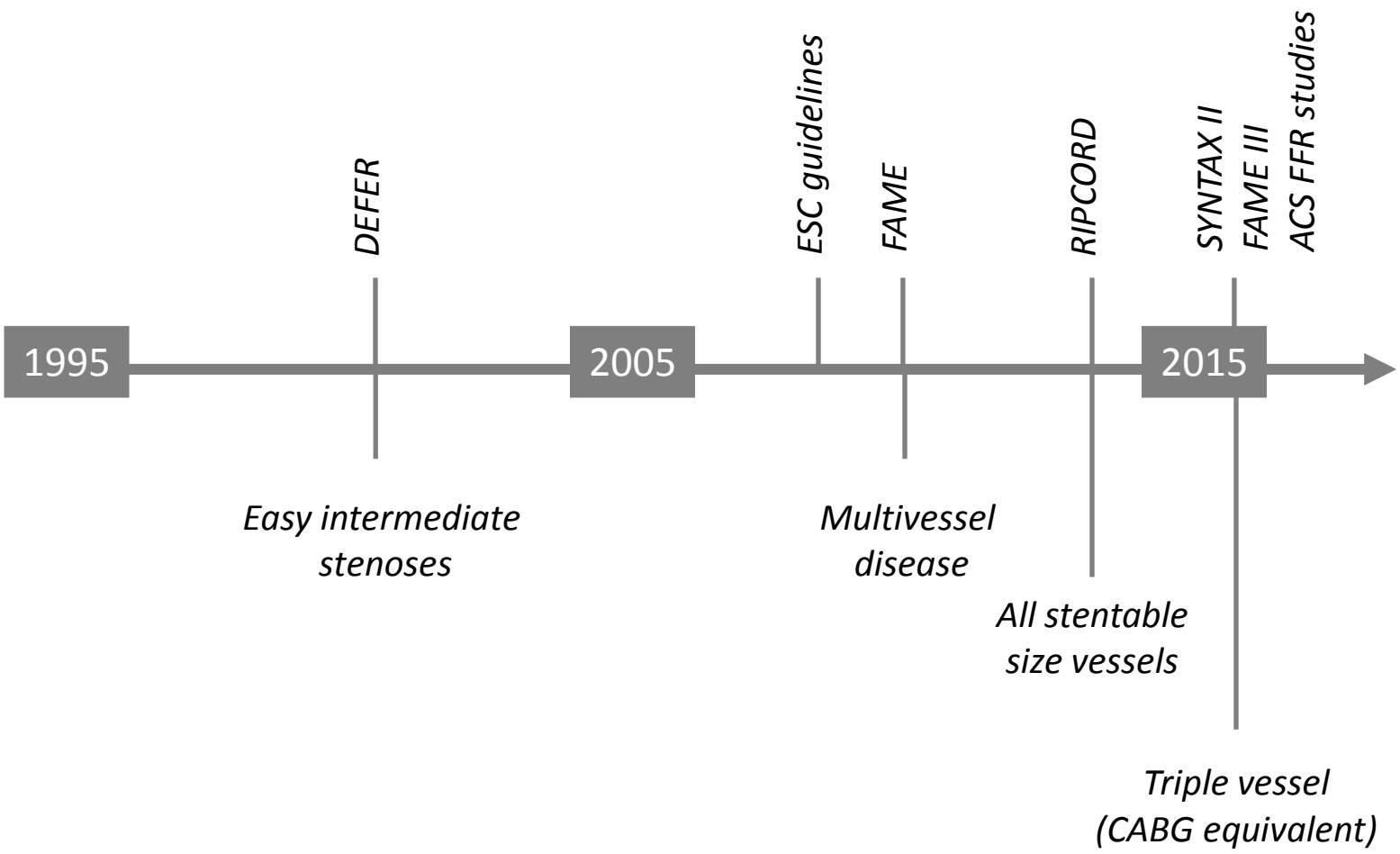
Speaker's name: Javier Escaned

☑ **I have the following potential conflicts of interest regarding the topics of this presentation:**

Speaker at educational events and consultancies:

Boston Scientific, St Jude Medical, Volcano Corporation

20 years of fractional flow reserve



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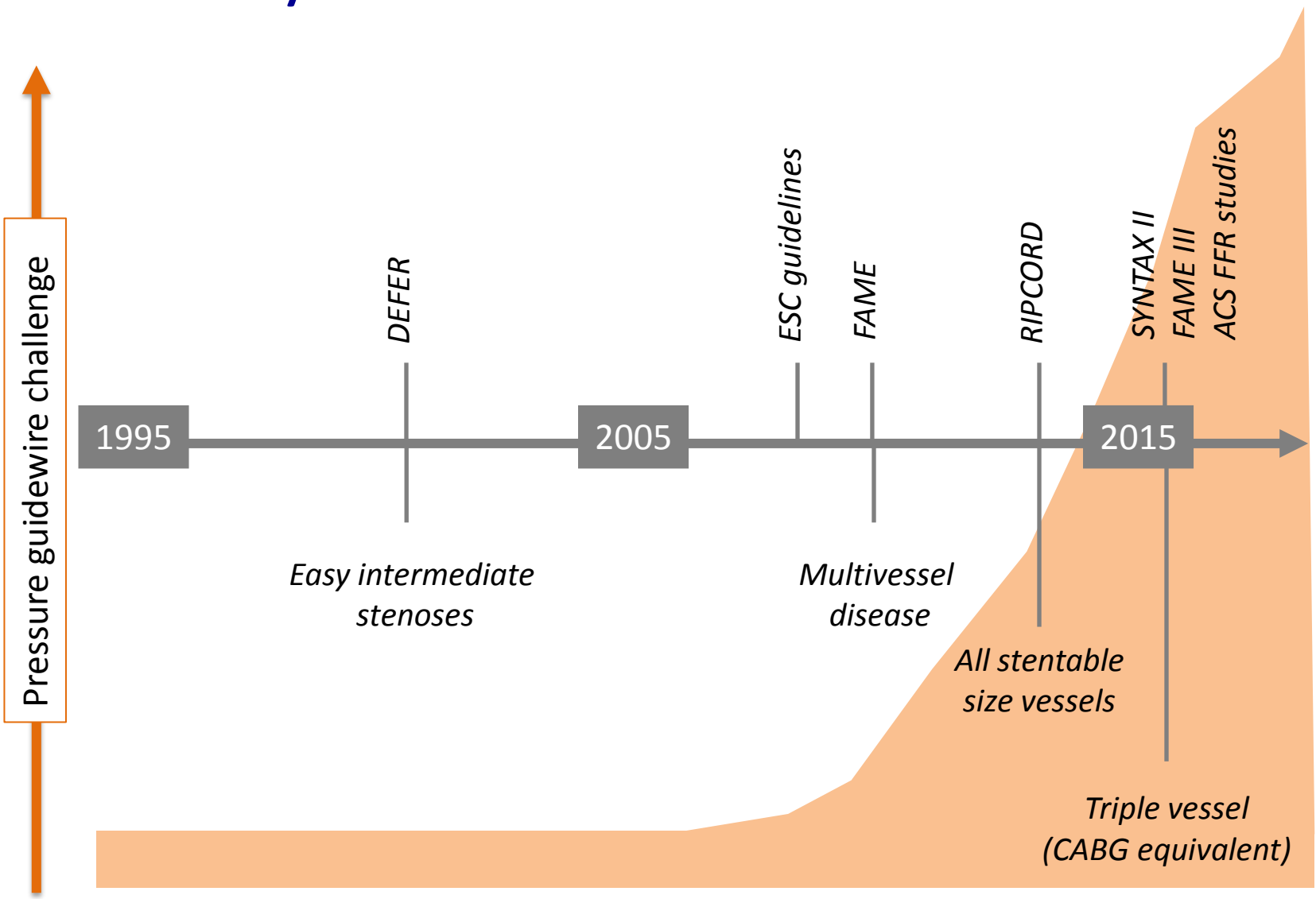

Intracoronary pressure measurements in complex PCI scenarios

PAST

- Interrogation of single, intermediate severity stenosis.
- Stable patients.
- Pressure wire rarely used as PCI wire in complex cases
- FFR and imaging (IVUS) considered as alternative tools.

PRESENT

- Interrogation of all potential PCI targets irrespective of stenosis severity.
- Stable and ACS patients.
- Use of pressure wire as a PCI workhorse wire.
- FFR and imaging envisaged as synergic tools in diagnosis and treatment.

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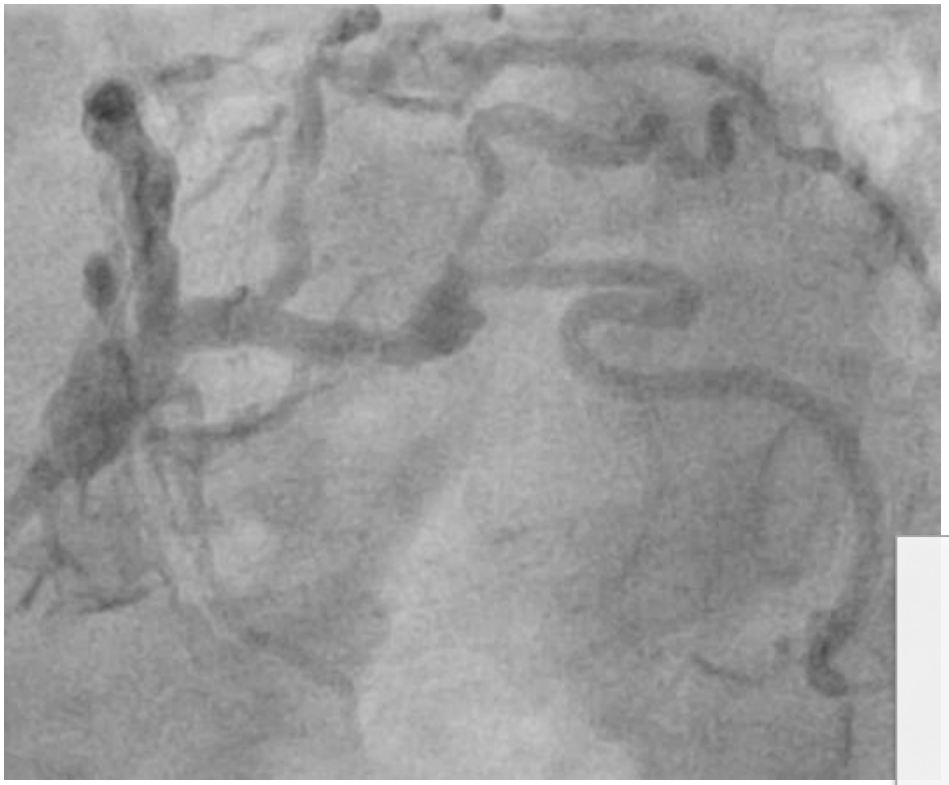
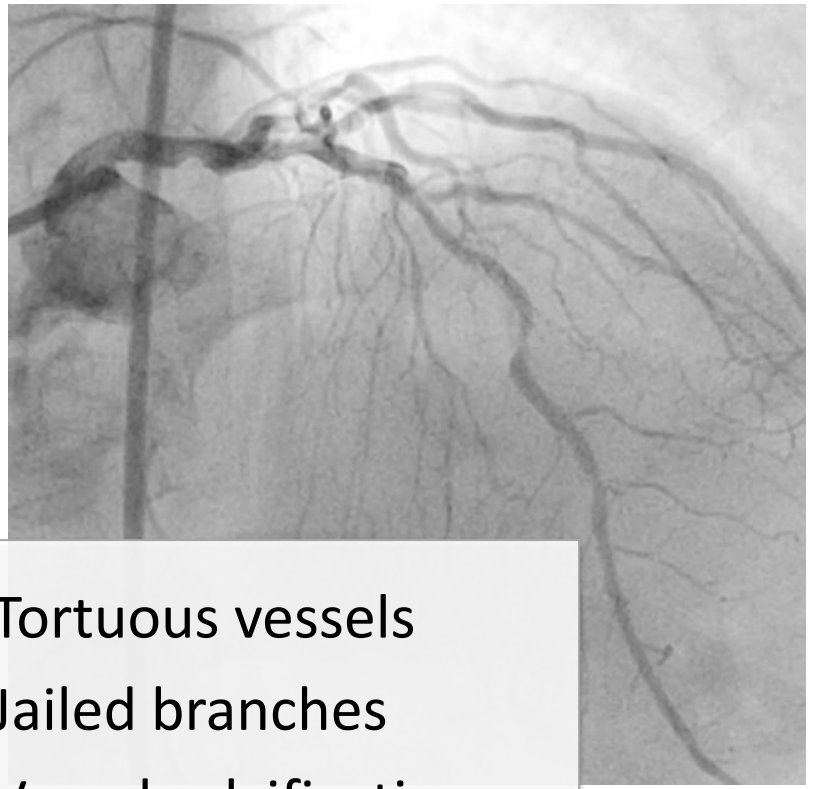
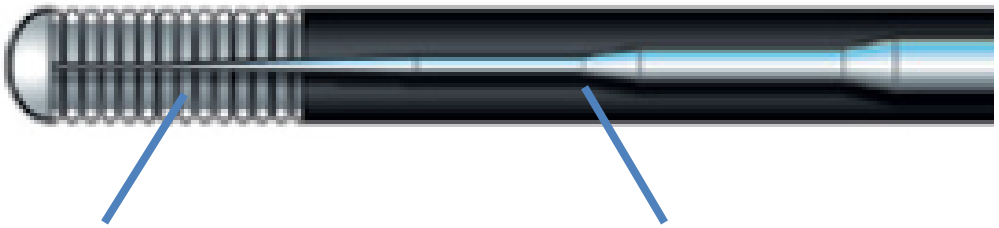




- Tortuous vessels
- Jailed branches
- Vessel calcification
- Multivessel disease
- …

Traditional PCI wire structure



Tip

- Shapeability
- Steerability
- Torque

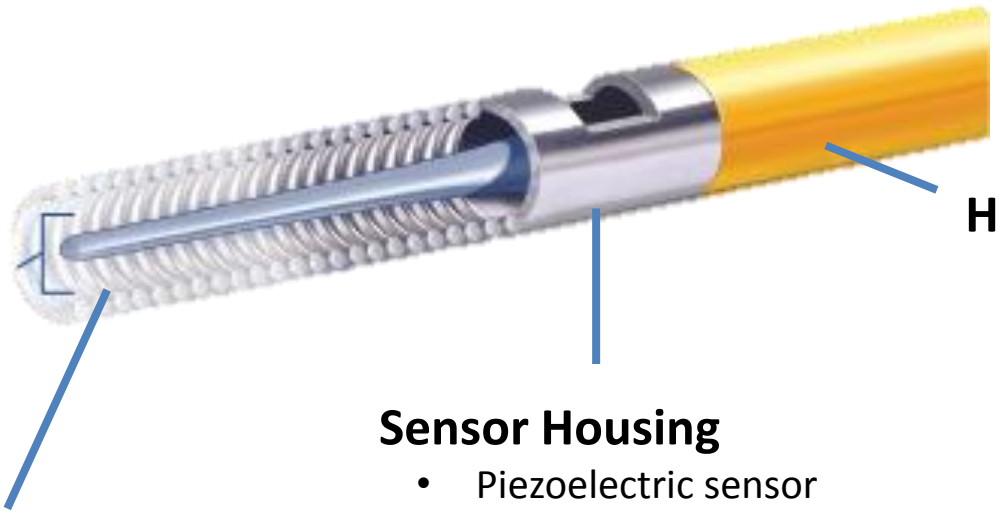
Wire core

- Stability
- Integrity
- Torque
- Rail support

Key performance features

- Smooth transition from distal to proximal ends
- Torque transmitted via wire core
- Rail support via wire core

Traditional FFR wire structure



Hollow Wire

* Hollow wire body for sensor connection

Sensor Housing

- Piezoelectric sensor
- Solid rigid housing
- Abrupt transitions proximal and distal to the sensor

Tip

- Separated from wire body by the sensor

Performance drawbacks

- Abrupt transitions around solid rigid housing
- Poor torque due to hollow wire body
- Drift sensitive piezoelectric sensor

Comet FFR Guidewire

Synergy's Laser-cut High Torque Sleeve

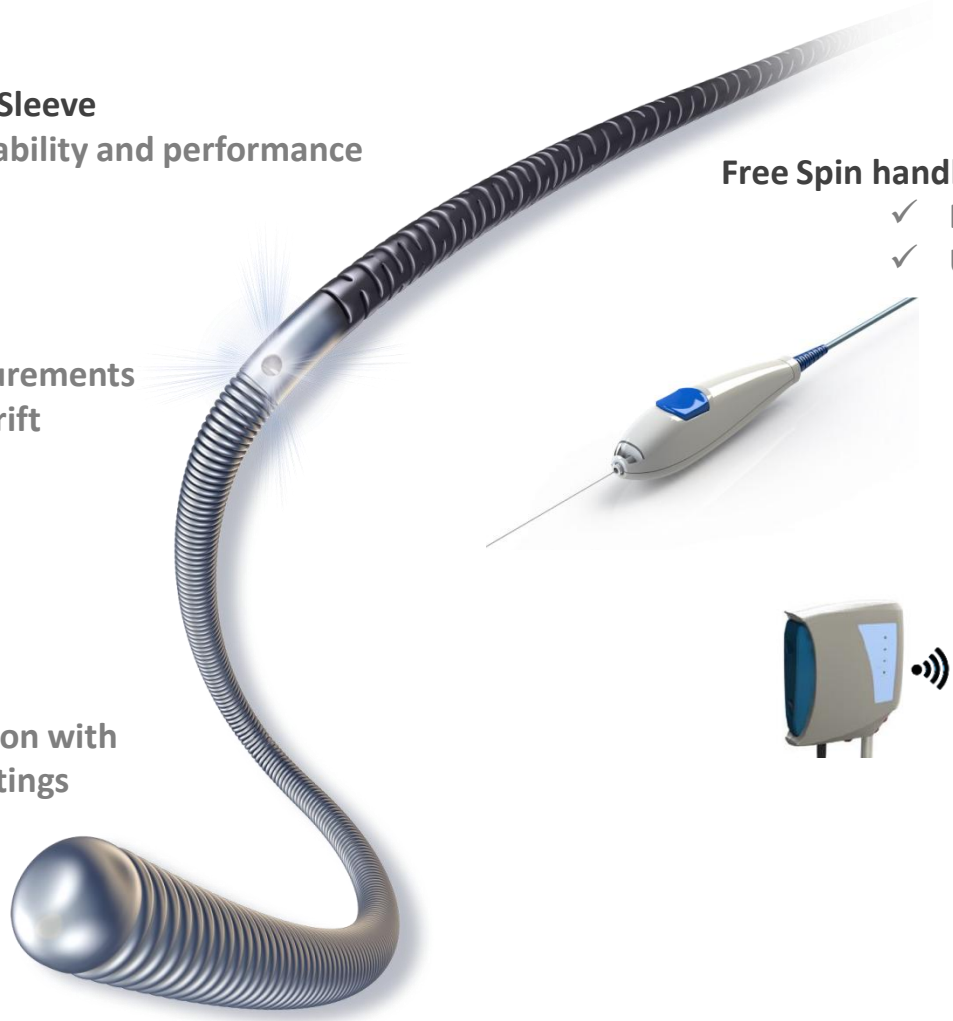
- ✓ Improved deliverability and performance

Optical Pressure Sensor

- ✓ Accurate measurements
- ✓ Less pressure drift

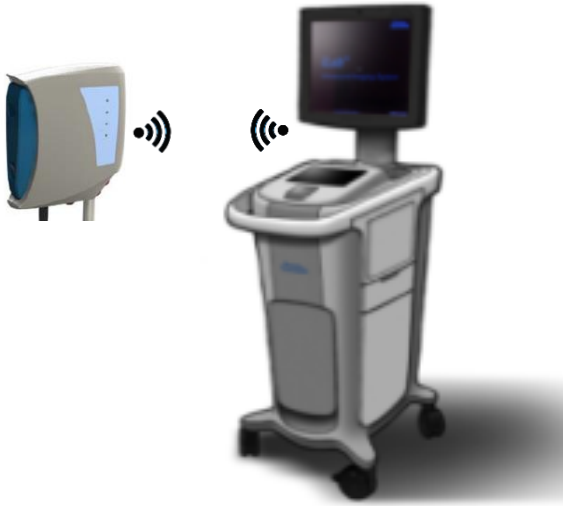
Asahi Tip and Coatings

- ✓ Better tip transition with performance coatings

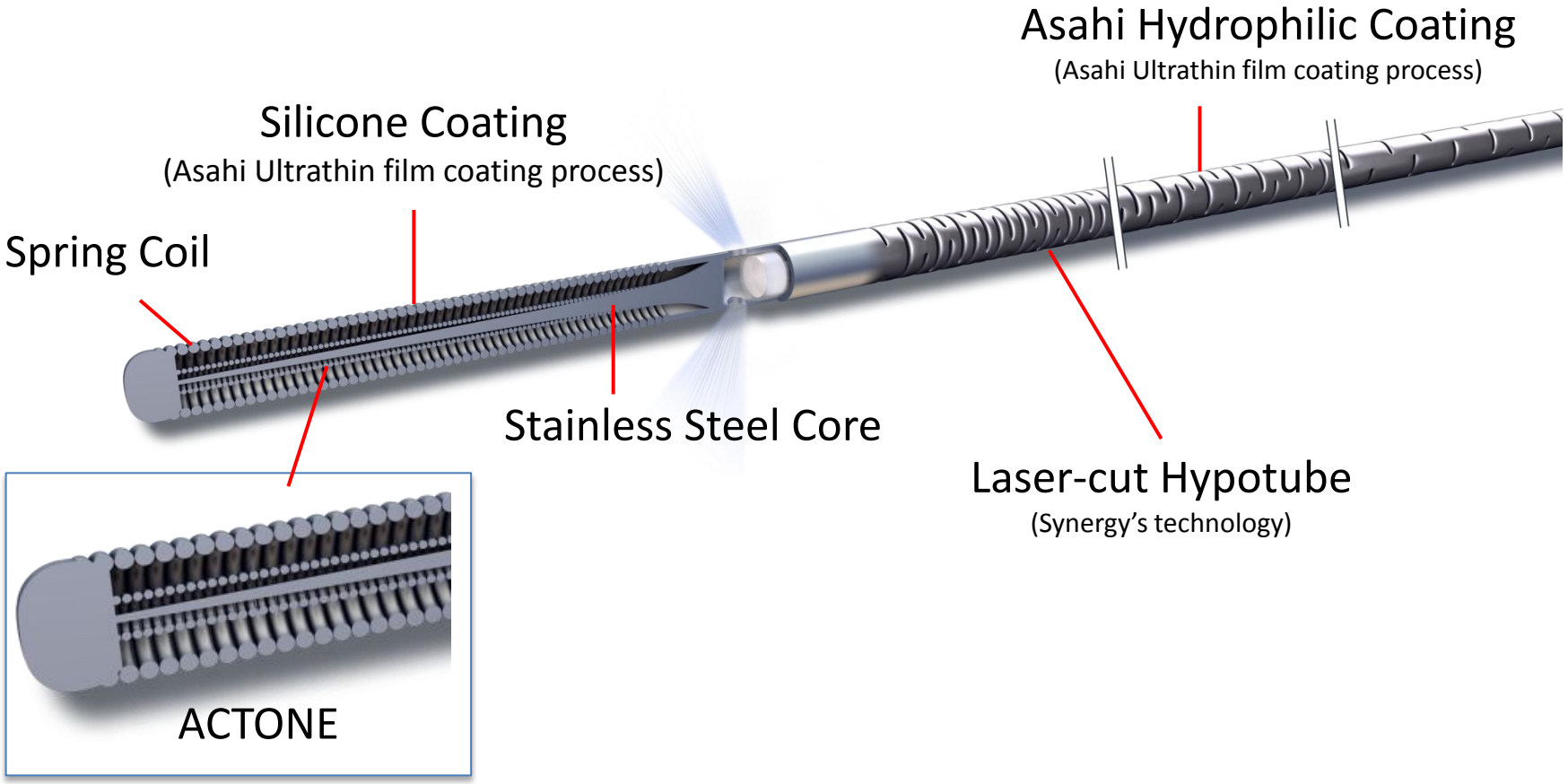


Free Spin handle, Wireless connection

- ✓ Easy lab integration
- ✓ Unrestricted performance



Asahi Tip with ACTONE / Dual-Coil Technology

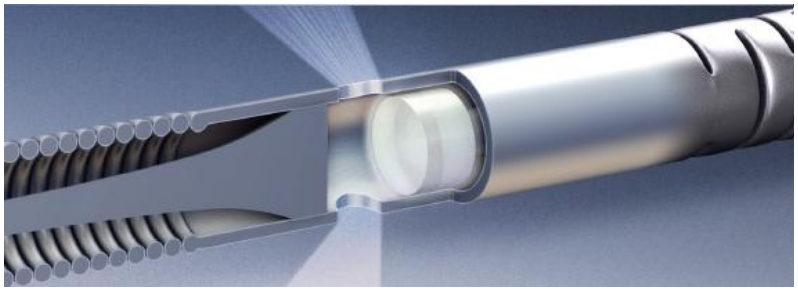


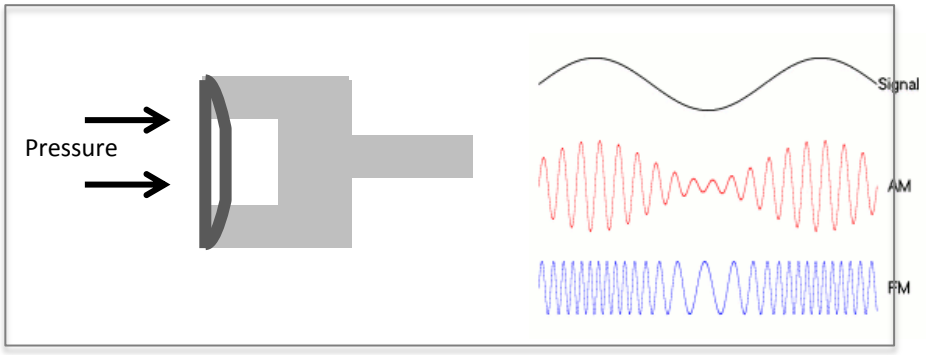
Key tip benefits

- Precise torque response
- Optimal tip flexibility and transition
- Durable tip-shape retention

Comet torqueability performance

Optical pressure sensor





- Less drift, better accuracy than piezoelectric technology
- Robust connection (less blood connection issues)

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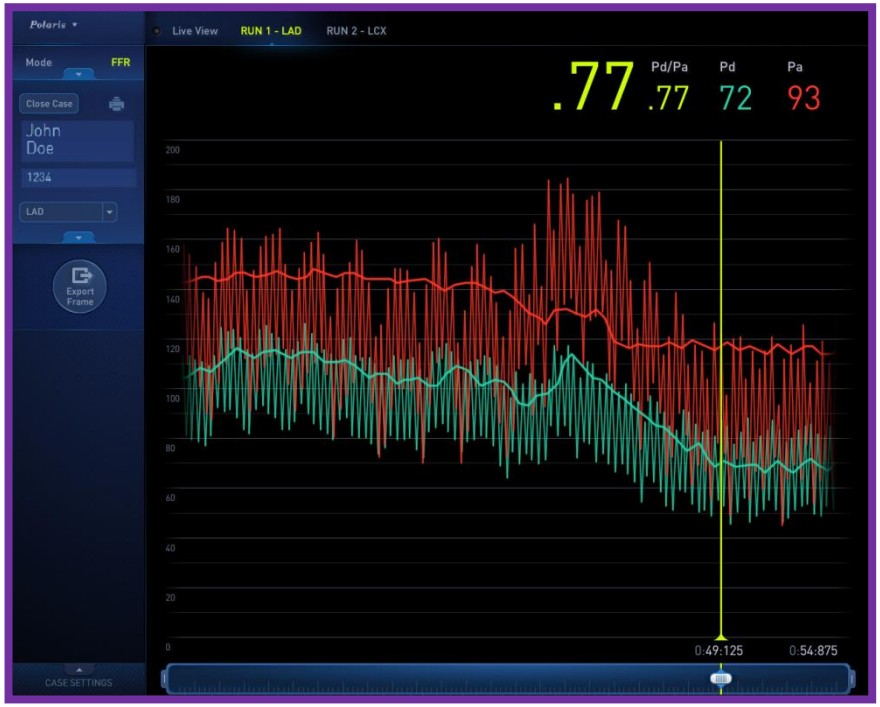
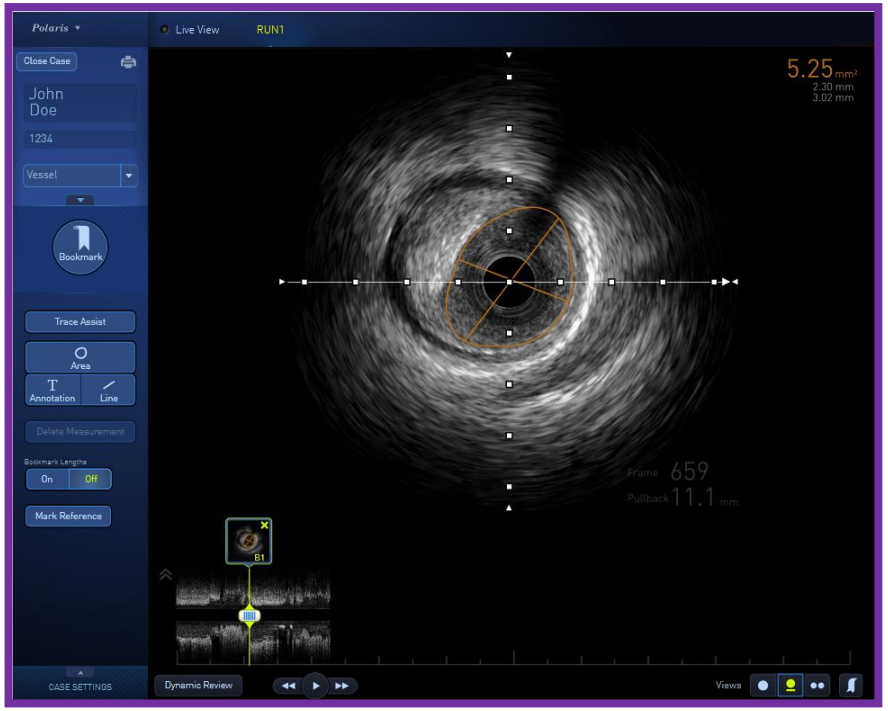
iLab POLARIS Multi-Modality System





- Intuitive software that decreases procedure time
- Hardware that simplifies the procedure
- Complete family of IVUS catheters on multi-modality FFR system
- FFR wire on multi-modality IVUS system

Thank you for your attention