

# PERVIDEO I Registry

## The Moxy Drug-Coated PTCA Balloon Catheter for the Treatment of In-Stent Restenosis within Bare Metal Stents

Clinical Trials.gov: NCT00916279

**Laura Mauri, MD, MSc on behalf of the  
PERVIDEO I Investigators  
Brigham & Women's Hospital, Harvard Medical School, Boston, MA**



# Disclosure Statement of Financial Interest

Within the past 12 months, I or my spouse/partner have had a financial Interest/arrangement or affiliation with the organization(s) listed below

## Affiliation/Financial Relationship

## Company

Grant/ Research Support: Abbott, Boston Scientific, Bristol Myers Squibb/sanofi-aventis, Cordis, Eli Lilly/Daiichii Sankyo, Lutonix, Medtronic, (to institution)

Consulting Fees/Honoraria: Cordis



# PERVIDEO I Design

<b>Design</b>	Prospective Registry
<b>Objective</b>	Assess angiographic and clinical outcomes after treatment of ISR of a prior BMS in the native coronary system with the Moxy Balloon
<b>Patients/Sites</b>	41 Patients Enrolled at 7 Sites
<b>Endpoints</b>	Angiographic, IVUS (n=20), & Clinical
<b>Antiplatelets</b>	6 Months
<b>Follow-Up</b>	Clinical: 1, 6, 12 & 24M Angiographic: 6M IVUS: 6M
<b>CRO/Core Labs/Safety</b>	Cardialysis BV (Rotterdam, NL)



# MOXY™

DRUG COATED BALLOON



- Low drug-load balloon with 2 $\mu$ g per mm<sup>2</sup> of paclitaxel
- Hydrophilic, highly transfer-efficient drug carrier from IV-approved list
- Formulation designed to balance optimize drug retention during transit and drug uptake during inflation
- Robust, uniform coating

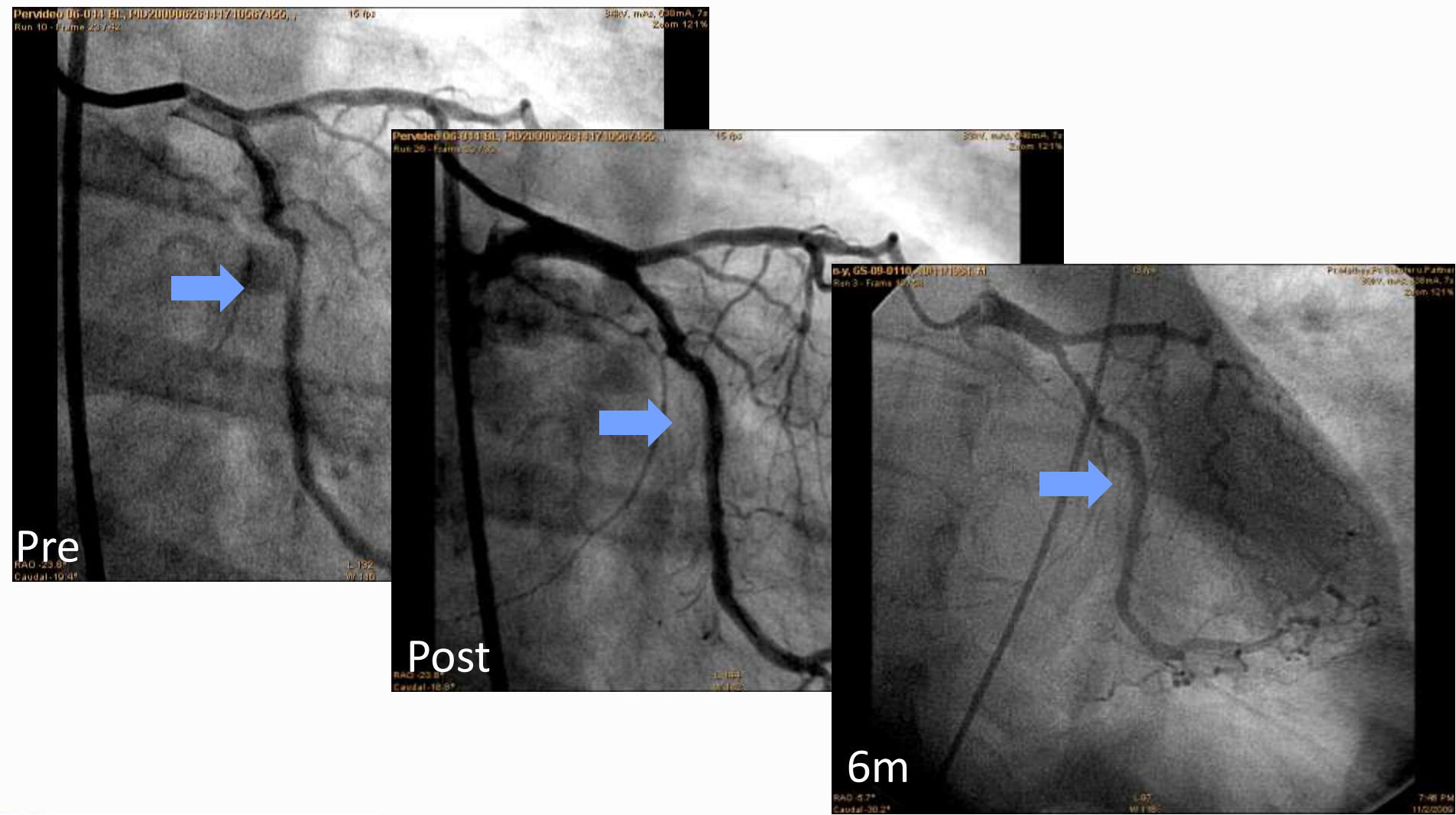
# PERVIDEO | Centers

INVESTIGATORS	LOCATION	ENROLLMENT
Prof. Dr. med. Detlef Mathey*	Germany	26
Dr. Holger Eggebrecht	Germany	4
Dr. Helge Moellmann	Germany	4
Dr. Karel Koch	Netherlands	2
Prof. Gerhard Schuler	Germany	2
Dr. Benno Rensing	Netherlands	2
Prof. William Wijns	Belgium	1

*\*Co-Principal Investigator*



# Angiographic Summary: Subject 6-14



# PERVIDEO I Endpoints

## Primary Endpoint:

- % Diameter Stenosis at 6 Months

## Major Secondary Endpoints:

- Late Lumen Loss
- Ischemia-Driven Target Lesion Revascularization
- Ischemia-Driven Target Vessel Revascularization
- Composite of Cardiac Death, MI, ID-TLR
- IVUS Endpoints



# PERVIDEO I Entry Criteria

- Major Inclusion

- Single native BMS with ISR  $\geq$  60 days
- $\geq$ 50% and  $<$ 100% Stenosis
- RVD  $\geq$  2.5 and  $\leq$  3.25
- Length  $\leq$ 40 mm
- Treatment of  $\leq$ 2 non-study lesions allowed

- Exclusion

- MI/thrombolysis within 72 hrs
- DES ISR or Stent sandwich
- Planned use of adjunctive device(s)



# PERVIDEO I: Baseline Characteristics

	n = 41
Mean Age, yrs <i>SD</i>	64.4 11.0
Male Sex	31 (75.6%)
Diabetes	12 (29.3%)
Hypertension	38 (92.7%)
Hypercholesterolemia	30 (73.2%)
Stable Angina	39 (95.1%)
Smoking (previous and current)	25 (68.3%)
Previous MI	13 (31.7%)



# PERVIDEO I: Procedure Characteristics

Non-target(s) treated before target lesion	9 (22.0%)
Average # Moxy Balloons /subject	1.1
Average Transit Time	00:56±00:35 sec.
Average Inflation Time	00:57±00:18 sec.
Average Maximum Inflation Pressure, <i>mean (SD)</i>	11.4 ±(3.7)
Additional Post-Dilatation	3 (7.3%)
Bailout Stenting	2 (4.9%)
Clinical Device Success per Investigator	41 (100%)



# PERVIDEO I: Baseline QCA

Treatment Vessel	-LAD 13 (31.7%) -LCX 17 (41.5%) -RCA 11 (26.8%)	
Lesion Length, <i>median</i>	13.08 mm	
RVD, <i>median</i>	2.44 mm	
MLD	Pre: 0.86mm	Post: 1.72mm
% Diameter Stenosis, <i>mean</i>	Pre: 64.78%	Post: 25.23%
Procedural Thrombus/No Reflow	0 (0%)	
Geographic Miss	7 (18.05)	



# PERVIDEO I: Subject Disposition

**Enrolled Per Inclusion/Exclusion**

n = 41



**30 Day Follow-Up**

Clinical: n=41 (100%)



**6 Month Follow-Up**

Clinical: n = 39 (95%)

Angiography: n=39 (95%)

Analyzable IVUS: n=11/20 (55%)



# PERVIDEO I: 6 Month QCA

Angiographic Endpoints	PERVIDEO I n=39	
Reference Vessel Diameter (median)	2.44 mm	
Diameter Stenosis	Post 27.5%	6m 35.6%
% Change In Diameter Stenosis (paired data)	-	8.5%
In-Segment Late Lumen Loss	0.16±0.40 mm	



# PERVIDEO I: Clinical Endpoints

	Procedure to Discharge n=41	Discharge to 30 Days n=41	30 Days to 6 Months n=39
<b>Cardiac Death</b>	0%	0%	0%
<b>Myocardial Infarction</b>	0%	0%	0%
<b>Ischemia Driven-TLR</b>	-	-	2 (5.1%)*
<b>Ischemia Driven-TVR</b>	-	-	2 (5.1%)

*\*Both subjects with geographical miss related to bailout stenting.  
TLRs occurred at time of scheduled 6 month angiography.*



# PERVIDEO I: IVUS OUTCOMES

	Post- Index Procedure mean SD n=11	6 Months Post-Procedure mean SD n=11	$\Delta$
In-Stent Obstruction Volume (%)	20.15 8.16	22.89 6.67	2.74 1.49
In-Stent Minimal Lumen Area	2.16 0.22	2.09 0.19	-0.07 0.3



# PERVIDEO I in Context of Prior DCB for ISR Trials

Angiographic Endpoints	PERVIDEO I n=39		Paccocath ISR I&II n=54	PEPCAD II n=66	
Reference Vessel Diameter (mean)	2.44 mm		2.94 mm	2.85 mm	
Diameter Stenosis	Post 27.5%	6m 35.6 %	-	Pre 19.5%	Post 29.4%
% Change In Diameter Stenosis (paired data)	8.5%		-	9.9%	
In-Segment Late Lumen Loss	0.16±0.40 mm		0.11±0.44mm	0.17±0.42mm	



# The PERVIDEO I Registry

## Conclusions

- Good results in difficult population (ISR, with mean RVD 2.4)
- Demonstrated biological effect
  - Very low LLL and small change in % diameter stenosis at 6 months
- Established safety and feasibility through 6 months
  - No embolization or thrombus reported
- Even better results may be possible with improved acute gain
- Future ISR trial warranted

