Boston Scientific ELEMENT Drug-Eluting Stent Program

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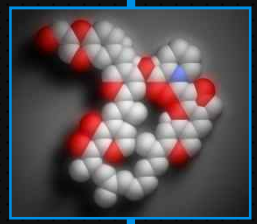
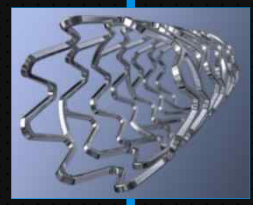
Chief Medical Officer
Senior Vice President
Boston Scientific Corporation

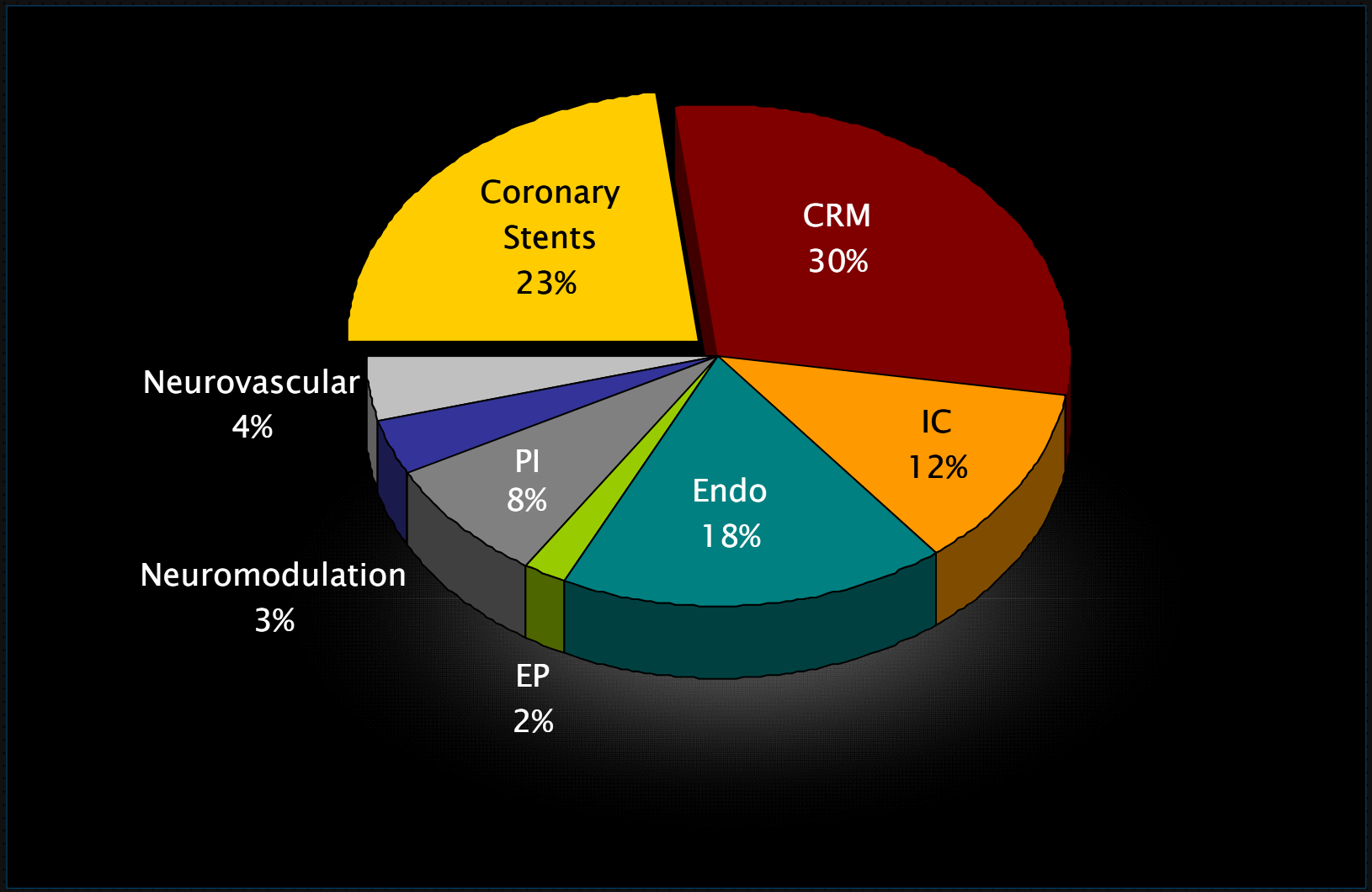




ANGIOPLASTY SUMMIT
TCTAP2010
April 28~30, 2010
Seoul, Korea

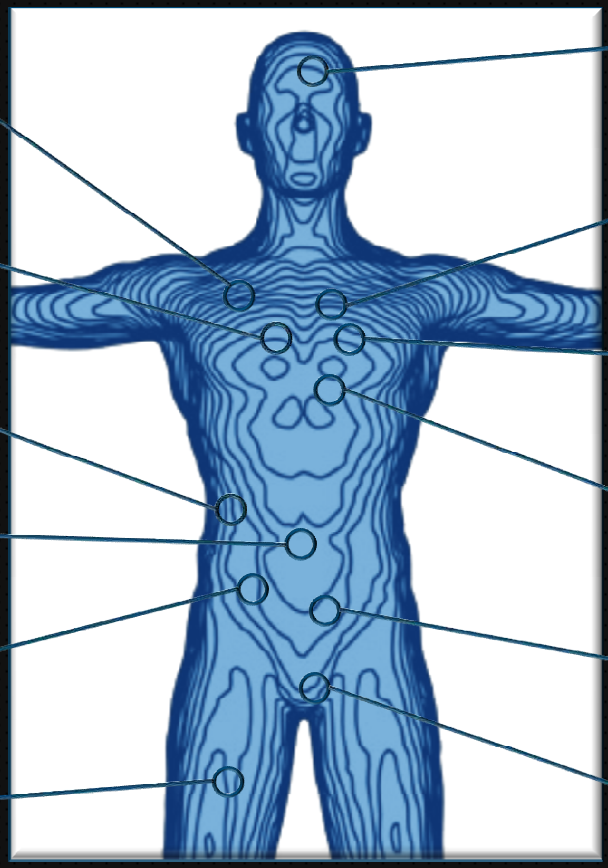
Boston Scientific

BSC Core Business



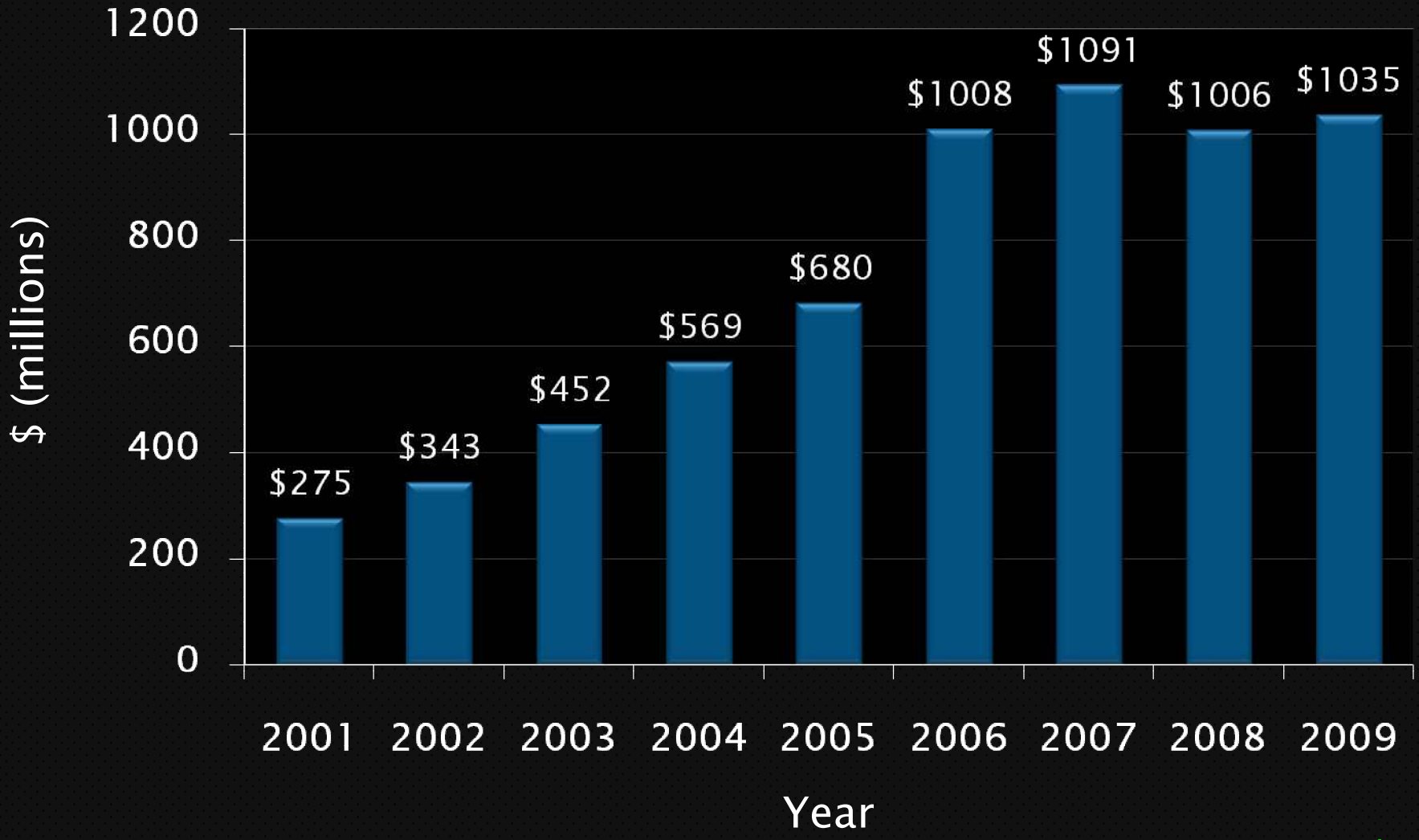
Source: BSC Internal Data

Boston Scientific – Advancing patient care across a broad range of medical specialties



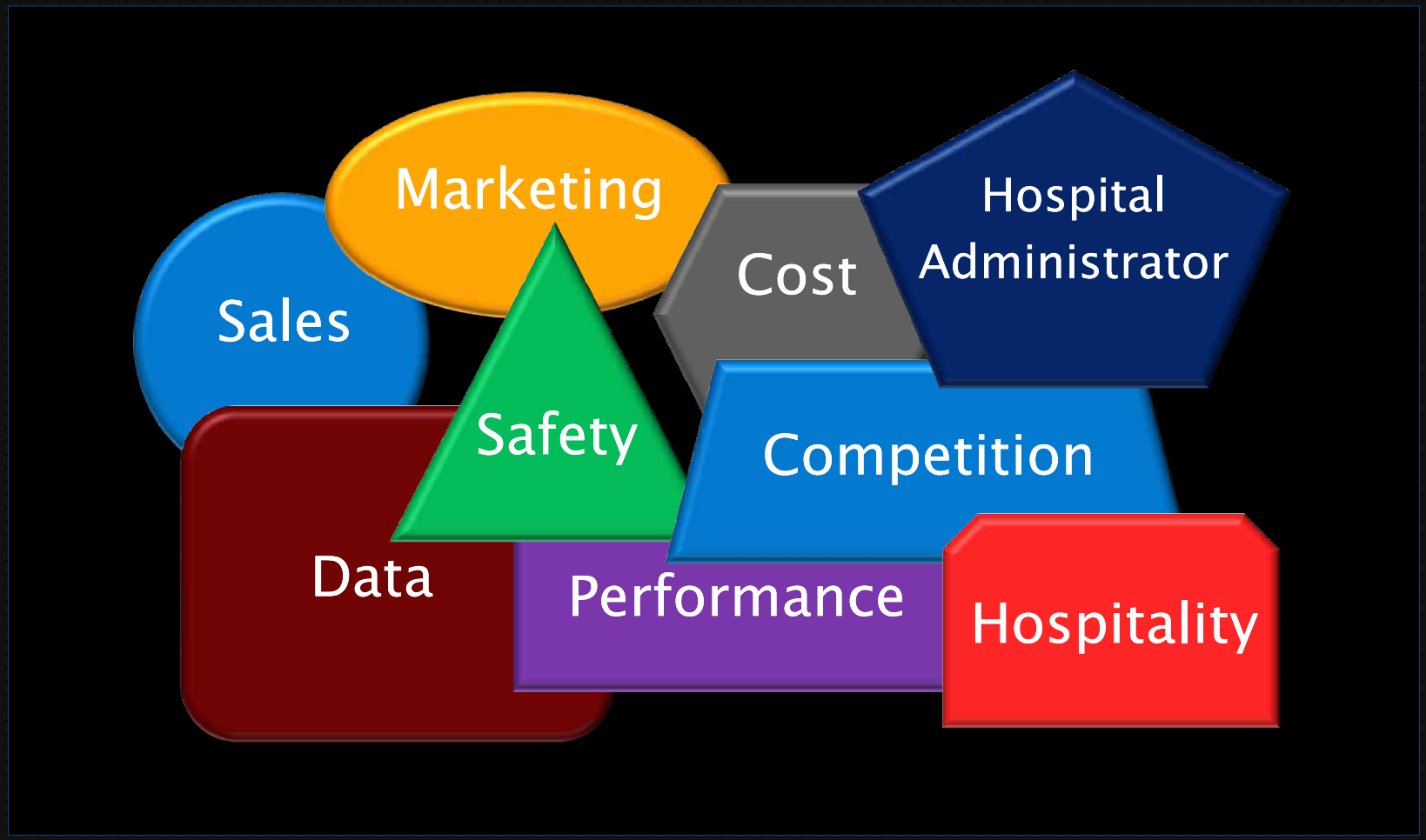
- INTERVENTIONAL RADIOLOGY
- INTERVENTIONAL CARDIOLOGY
- PAIN MANAGEMENT
- GASTROENTEROLOGY
- ONCOLOGY
- PERIPHERAL VASCULAR
- NEUROVASCULAR
- CARDIAC RHYTHM MANAGEMENT
- ELECTROPHYSIOLOGY
- INTERVENTIONAL BRONCHOSCOPY
- GYNECOLOGY
- UROLOGY

Research & Development Spend ($M)

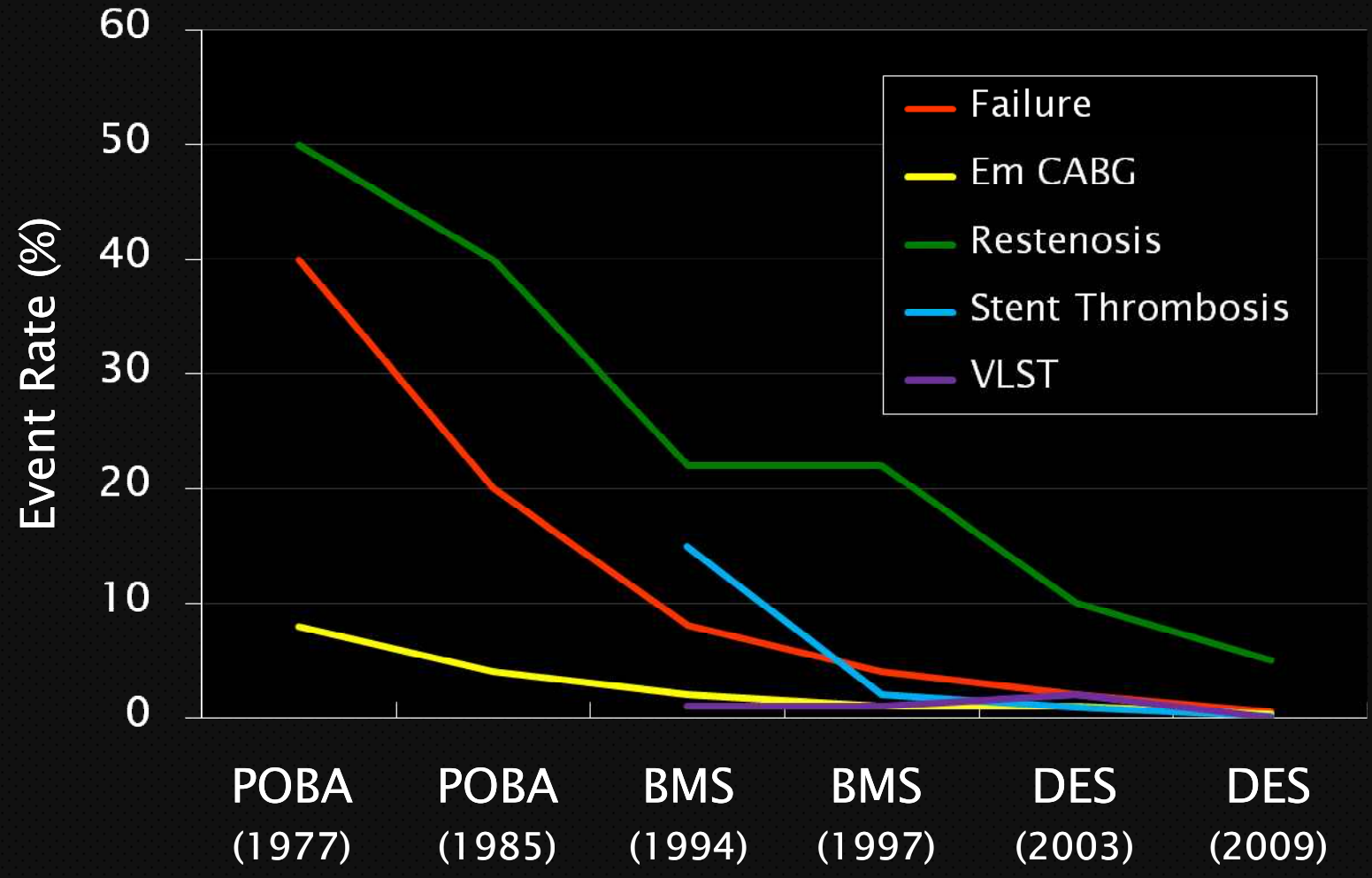


Source: BSC Internal Data

Why do Interventional Cardiologists use a particular Stent?

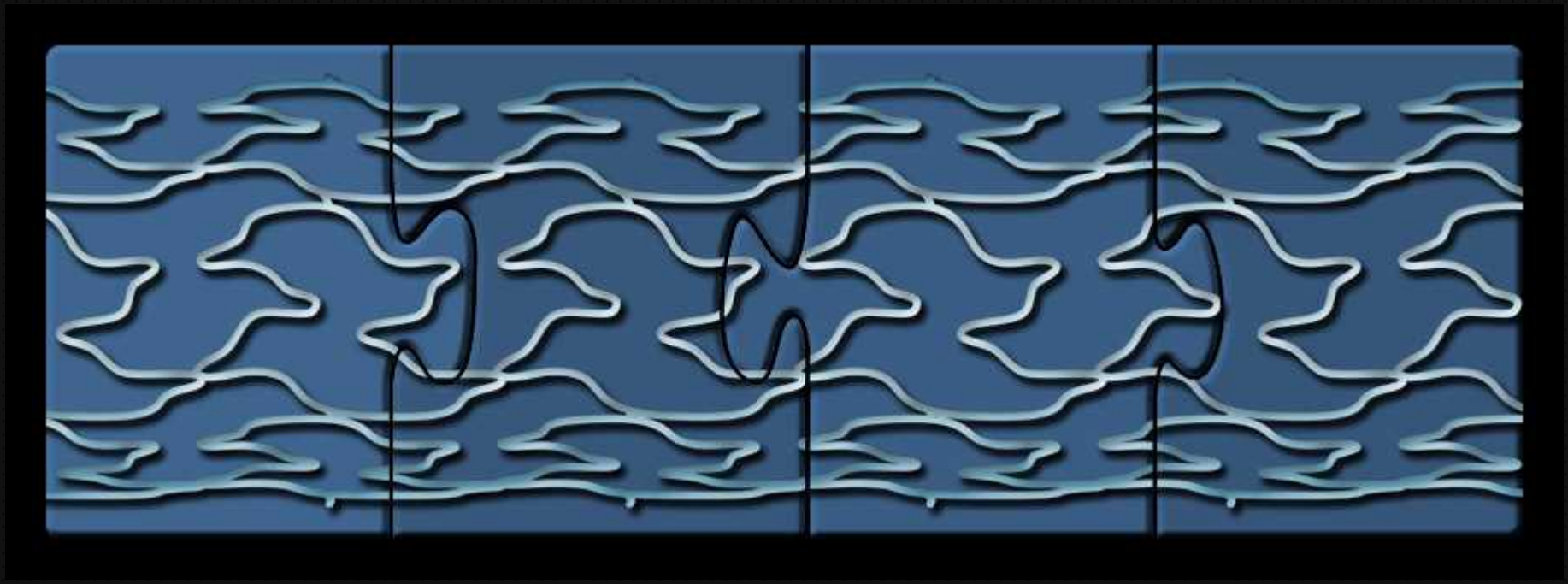


PCI Outcomes are Improving with Time



Modified from Don Baim (FDA Panel 2006)

Requirements of the ideal DES

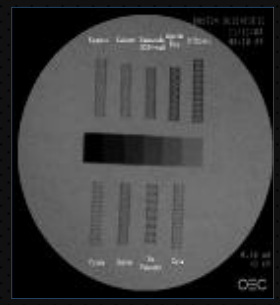


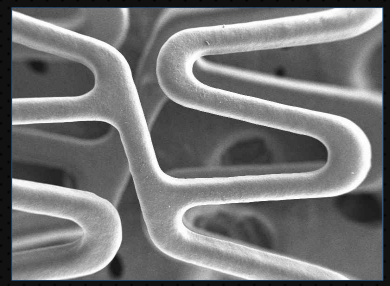
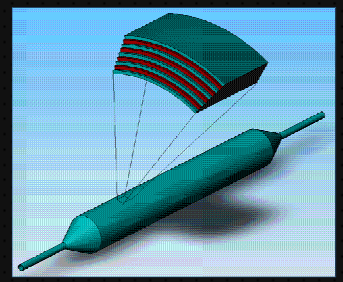
Efficacy Safety Deliverability Cost

Element Stent Platform

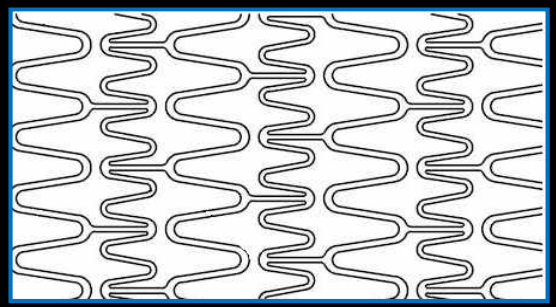
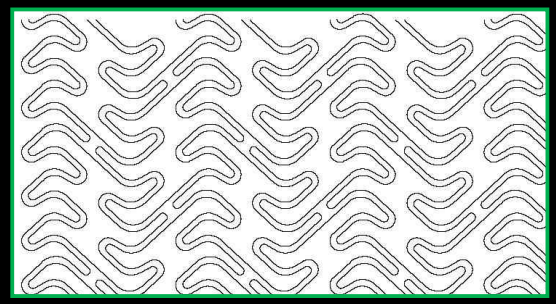
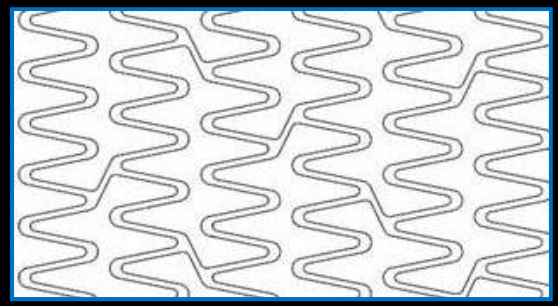
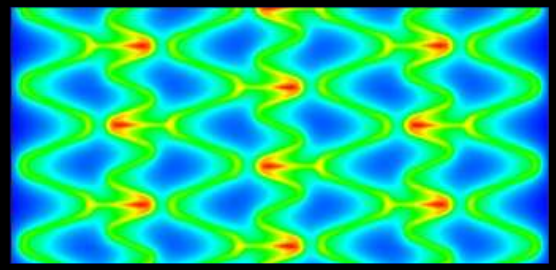
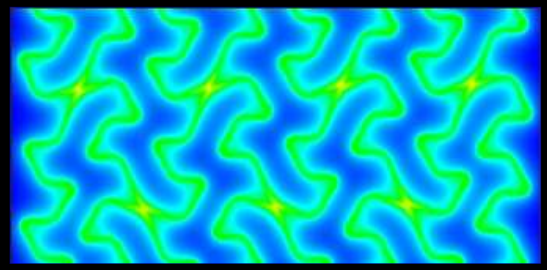
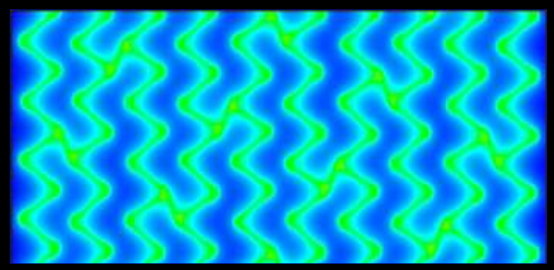
- Geometry designed for drug delivery
  - Four stent models
  - Consistent surface-to-artery ratios
- Apex™ balloon
  - Bi-component balloon
  - Multilayer
- Platinum Chromium Alloy
  - Thin struts
  - Radio-opaque
  - Low recoil
  - High radial strength



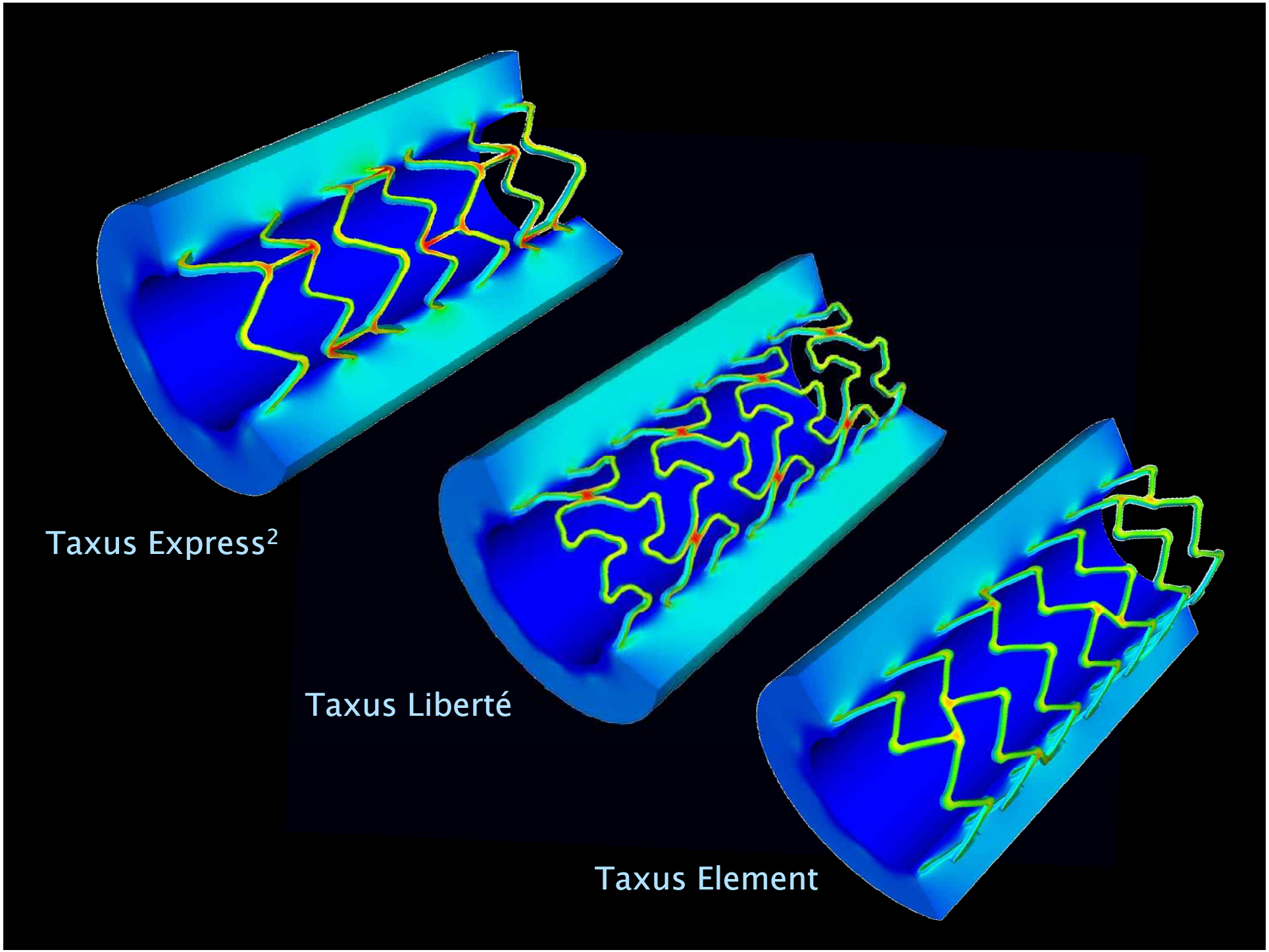


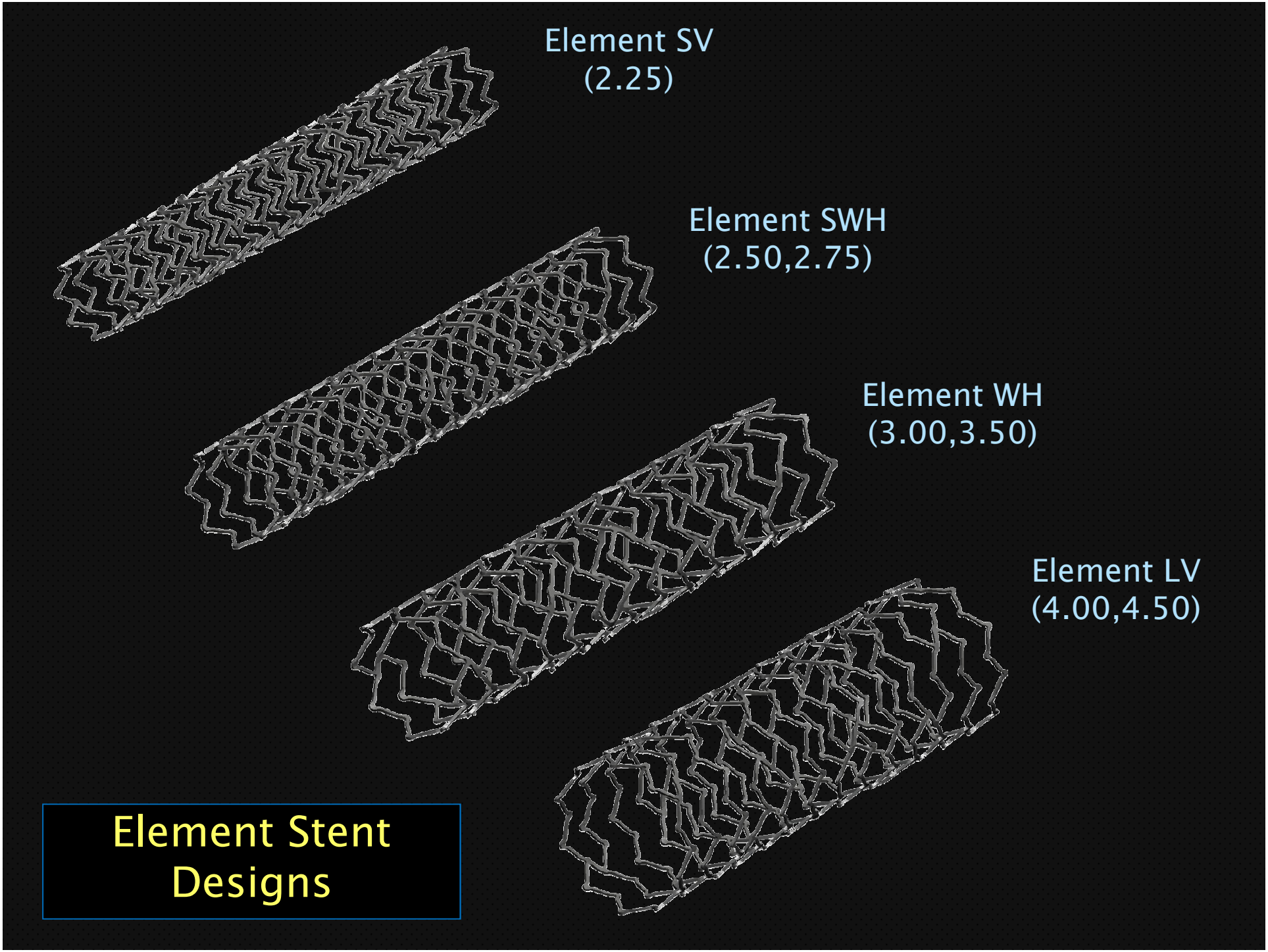



TAXUS Stent Design

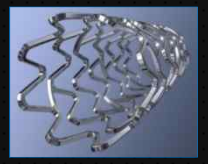
TAXUS Express	TAXUS Liberté	TAXUS Element
Diam: 2.25 – 5.0mm Stent Designs: 2 (WH + LV)	Diam: 2.25 – 5.0mm Stent Designs: 3 (SV + WH + LV)	Diam: 2.25 – 5.0mm Stent Designs: 4 (SV + SWH + WH + LV)
		
		

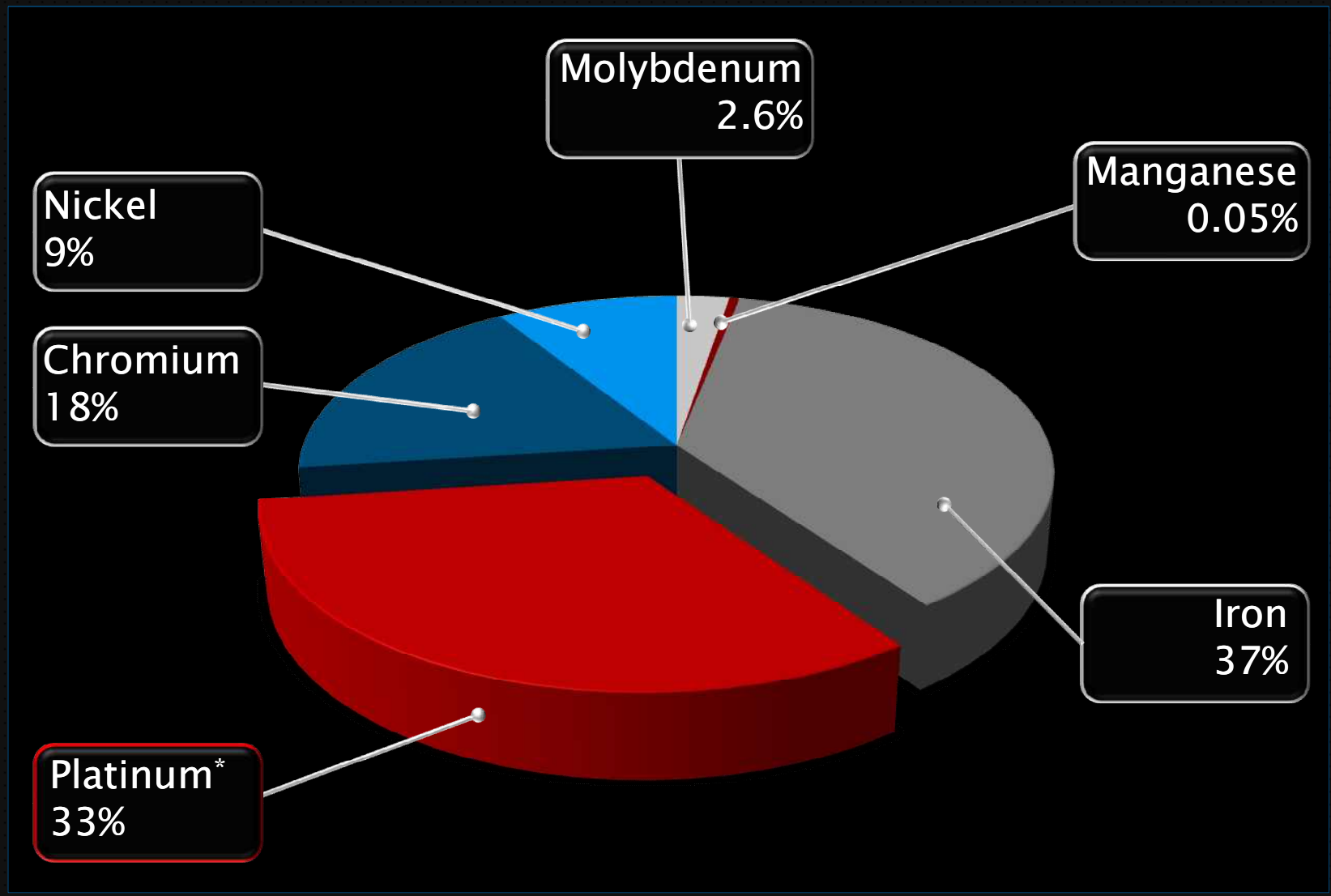
Allows for more consistent drug delivery across diameter range


Taxus Express²
Taxus Liberté
Taxus Element


Element SV
(2.25)
Element SWH
(2.50,2.75)
Element WH
(3.00,3.50)
Element LV
(4.00,4.50)
Element Stent Designs

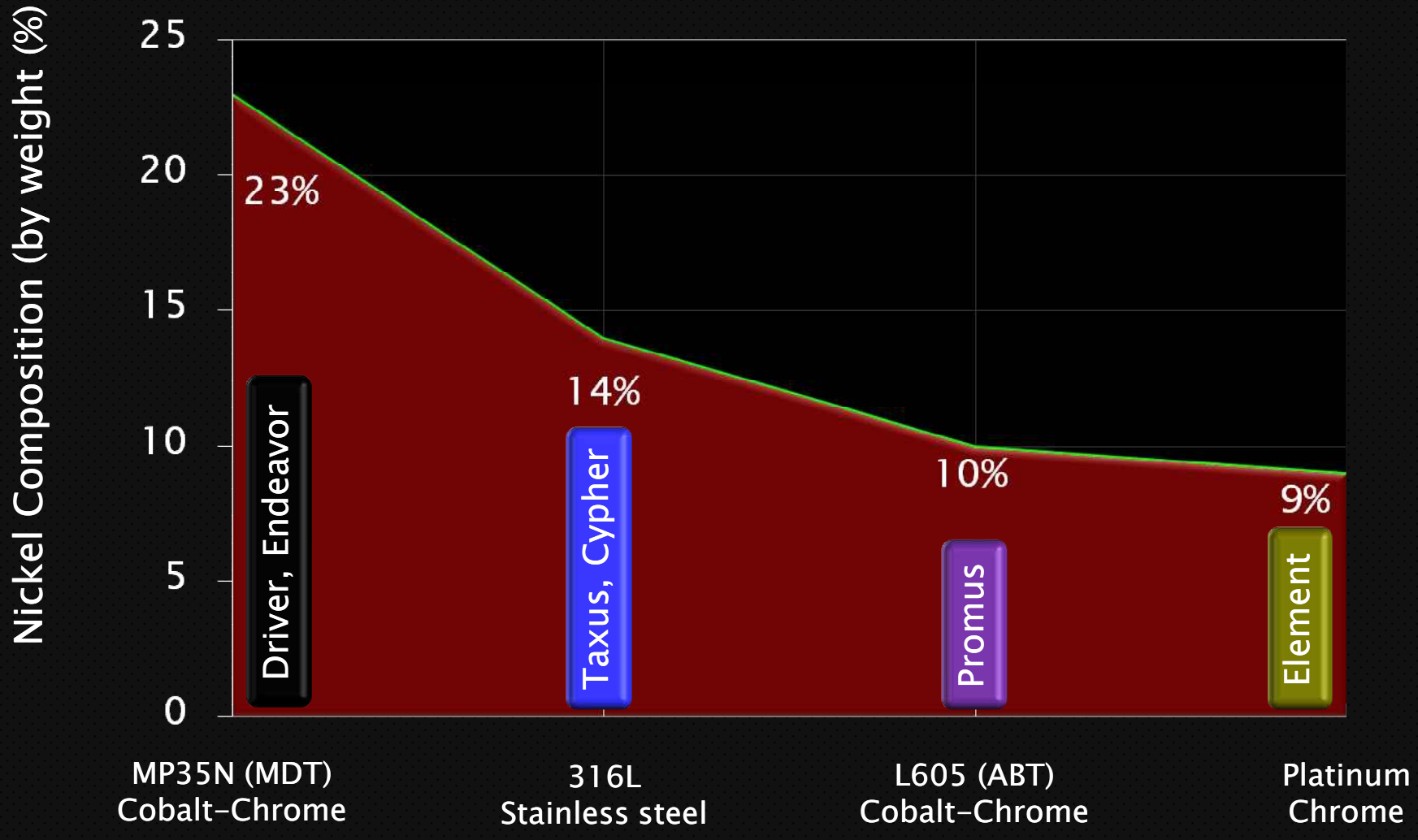
Platinum Chromium (Element Stent)





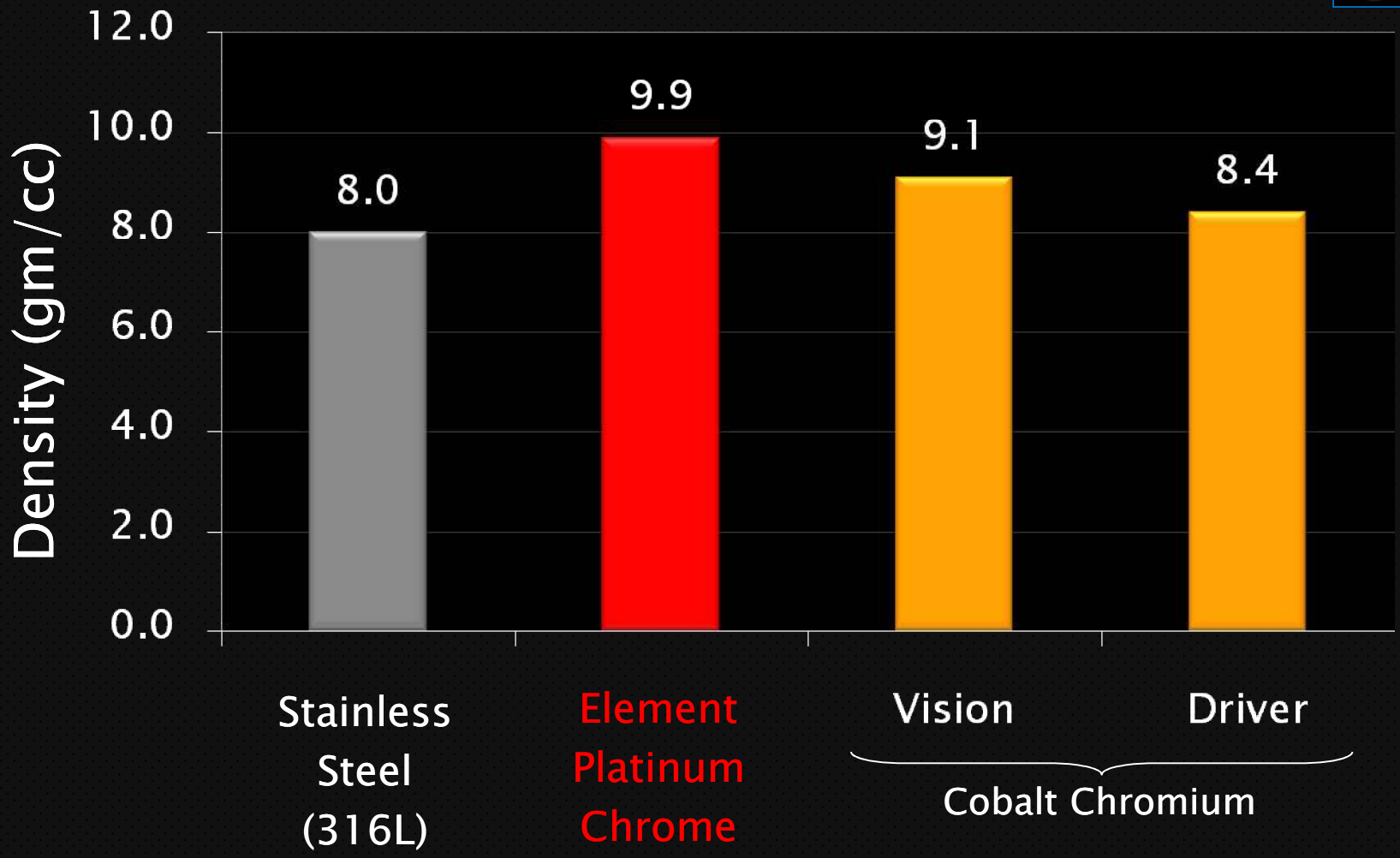
*Platinum fully incorporated in the alloy (not coating)

Stent Nickel Content

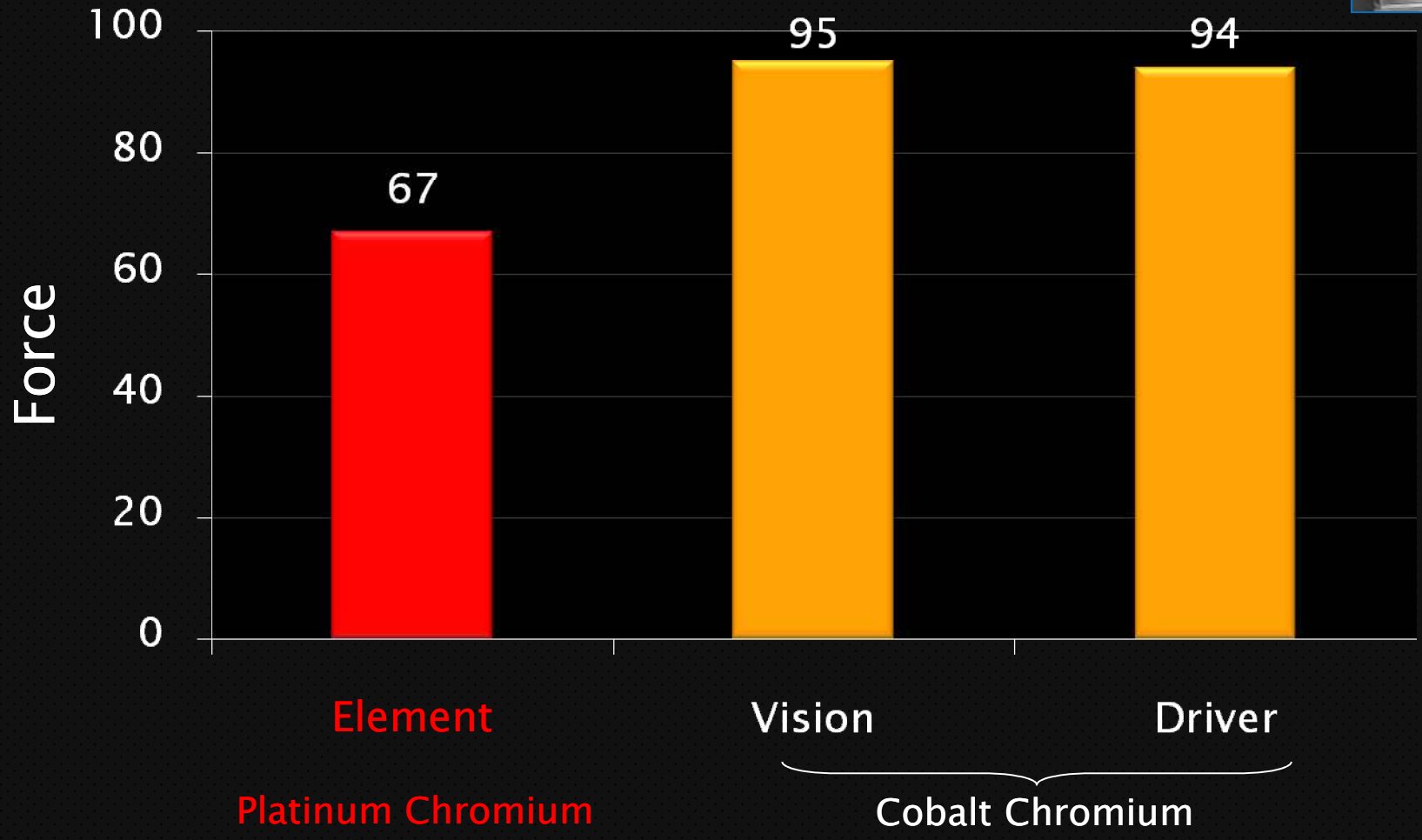


Platinum chrome has the lowest Nickel content of the available alloys

Comparative Density

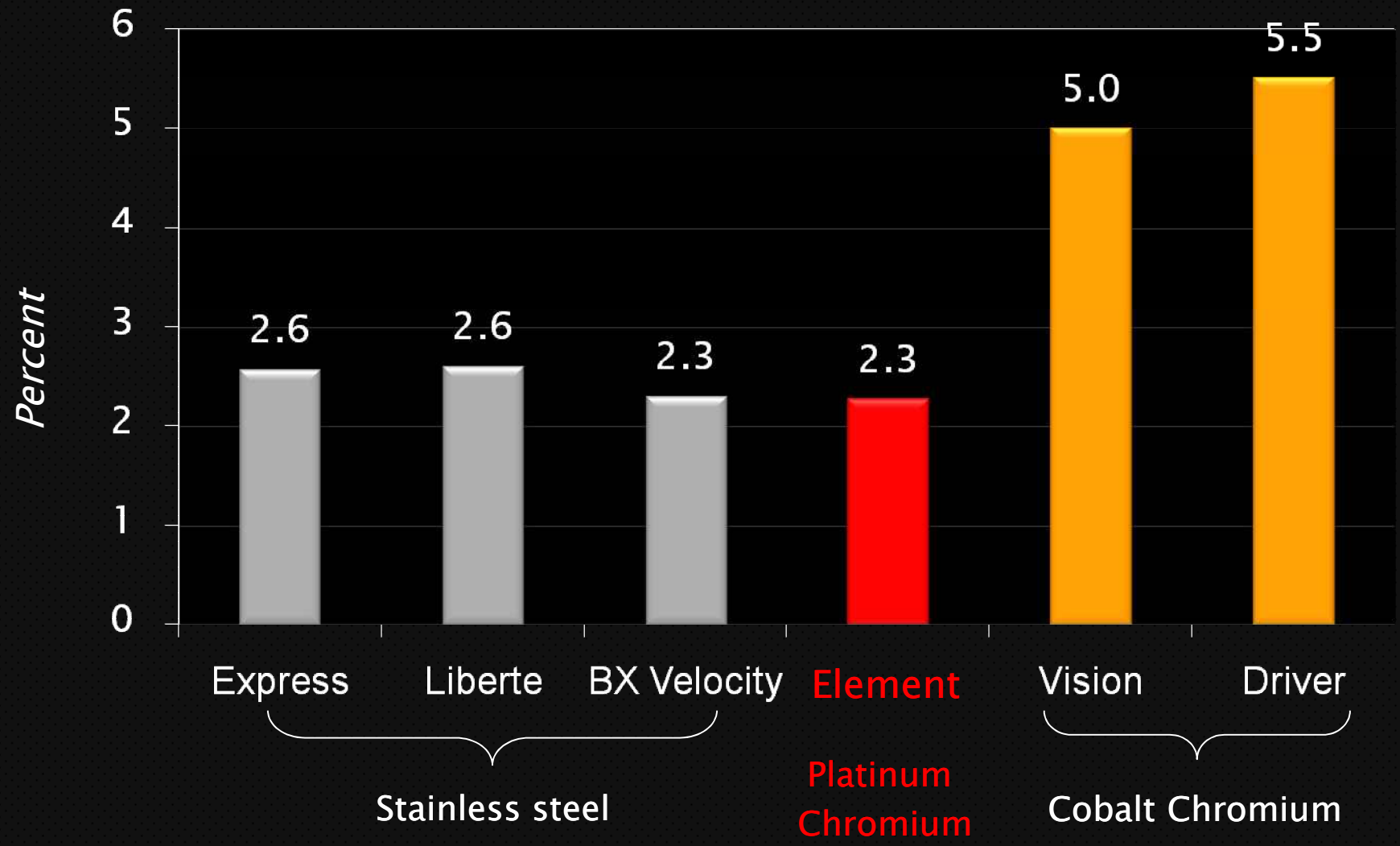


Comparative Trackability*



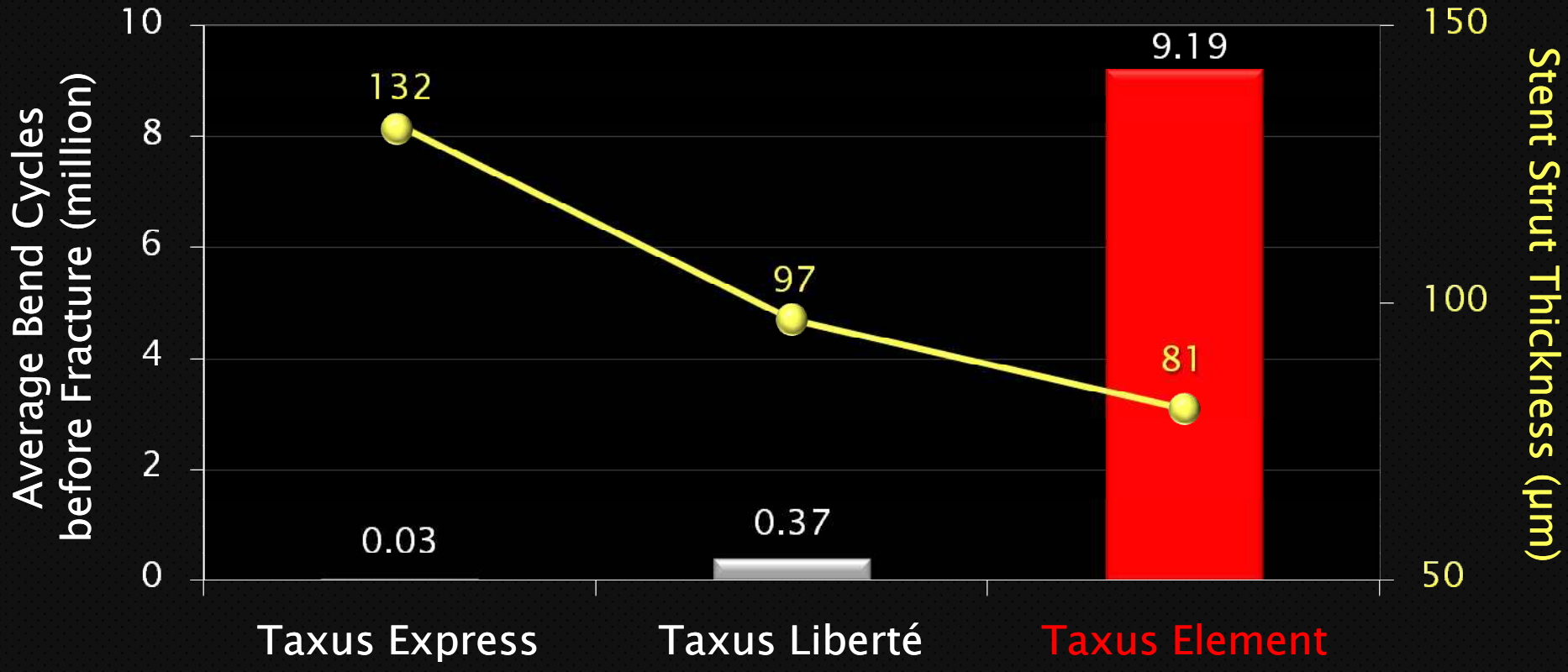
*Trackability: Measures the ability of the stent delivery system to maneuver through a tortuous artery model. Lower forces indicate increased trackability and greater distal segment flexibility.

Comparative Recoil*



*Recoil: The percentage that the stent diameter decreases after balloon deflation. Lower recoil maintains better vessel lumen diameter after the balloon is deflated and withdrawn.

Fracture Resistance (Bend Fatigue)



Taxus Element has Thinner Struts *and* Higher Fracture Resistance

BSC Two Drug Strategy

Paclitaxel

Element Stent

Trial Complete N=1488

TAXUS PERSEUS

ACC.10 59th Annual Scientific Session

Everolimus

Element Stent

PROMUS PLATINUM

Trial Complete N=1828

BSC Two Drug Strategy

Paclitaxel

Everolimus

Element Stent

Direct Drug comparison on the same ELEMENT Platform

Next Generation DES

Next Generation DES Attributes

Deliverable, Visible, Trackable Conformable

No Stent Thrombosis ('BMS' like)

Shortened DAPT Requirement

Low TLR, Low Clinical Symptom Recurrence

Reduced Polymer Load

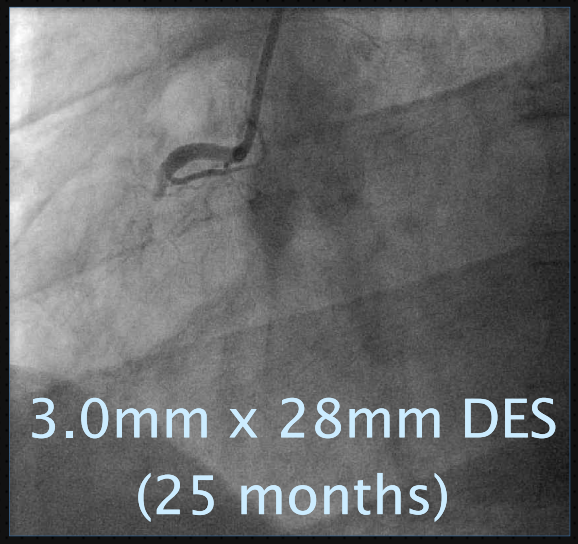
- Ablumenal Polymer
- Bioerodable Polymer
- No Polymer

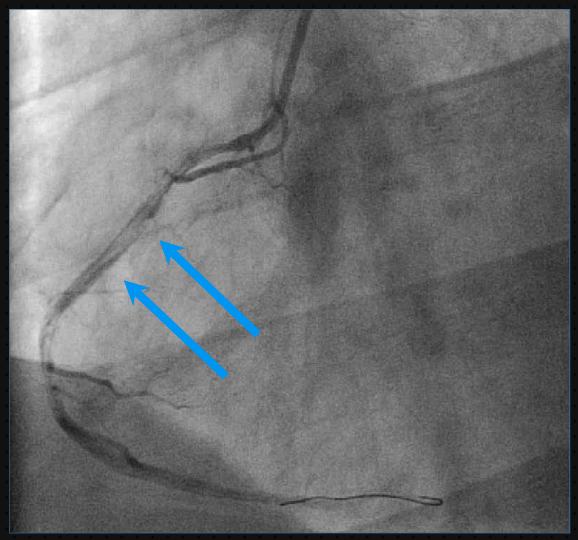
Reduced Drug Load

Stent Delivery System

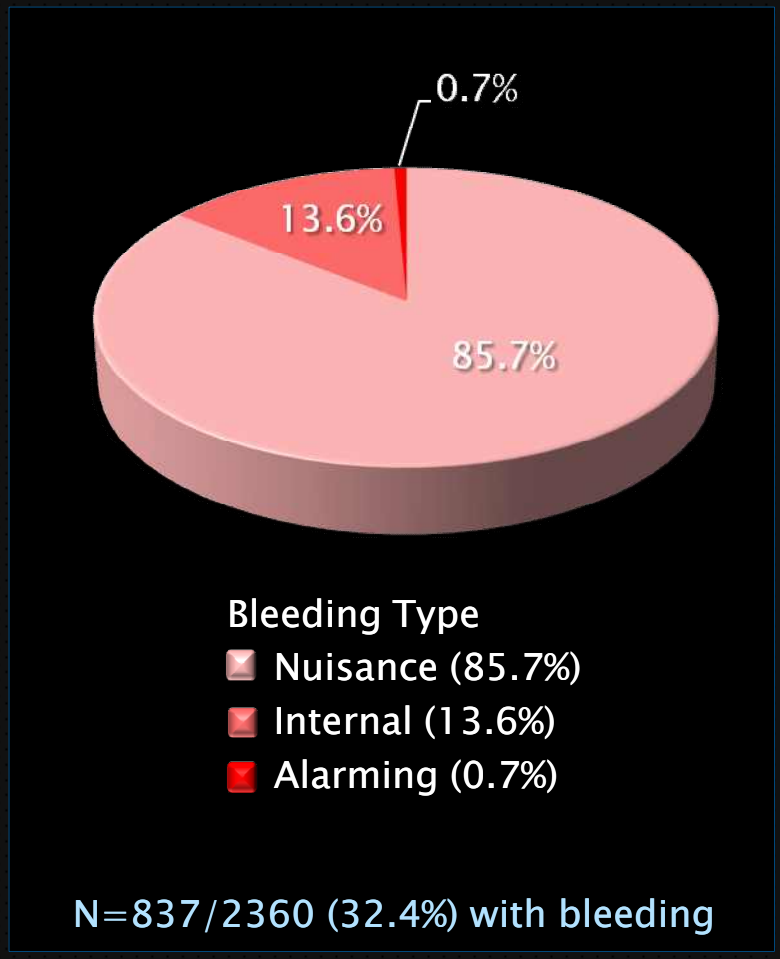
- Stent Material
- Thinner Struts
- Modified Stent Geometry
- Surface Coating

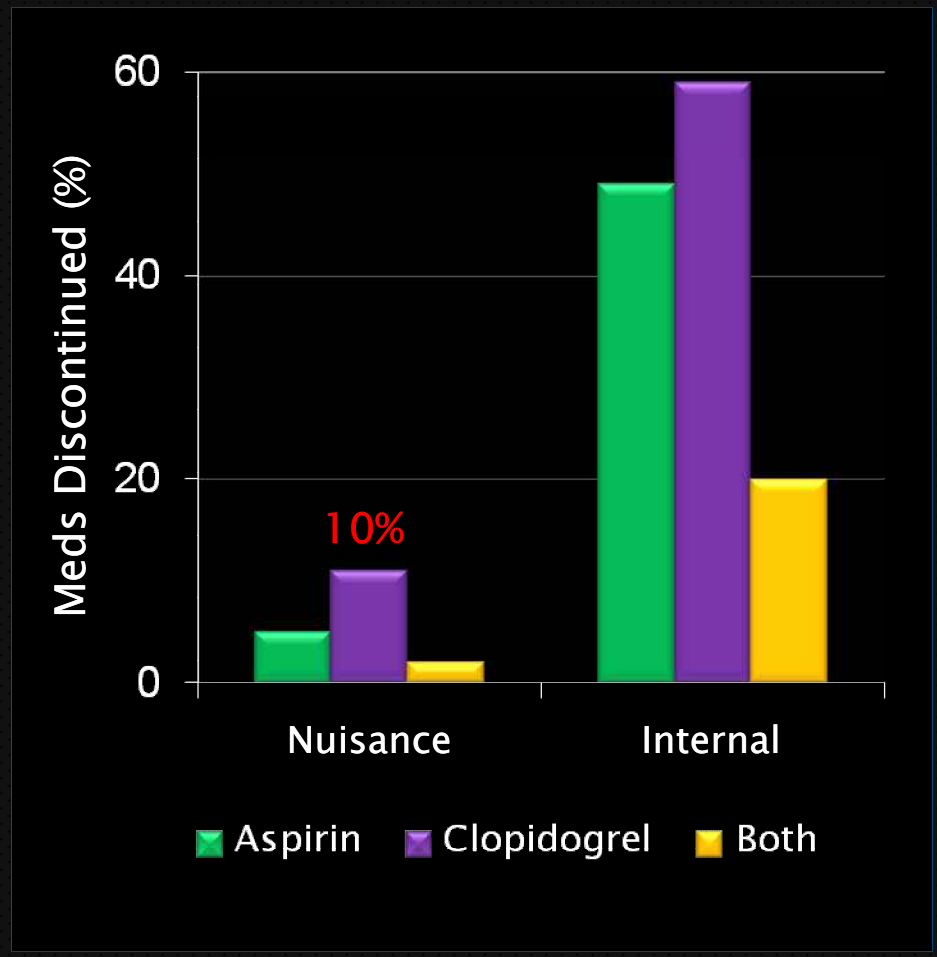
Very Late DES Thrombosis (VLST)





Impact of Bleeding on Anti-Platelet Compliance after DES Implantation

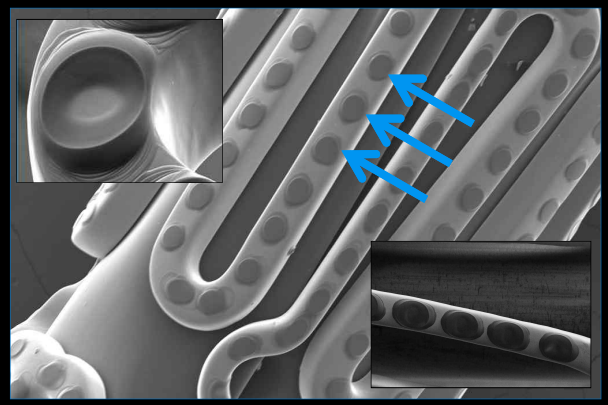




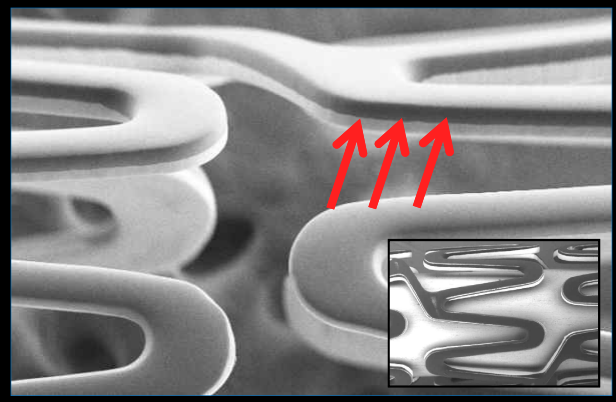
Am J Cardiol 2008;102:1614-1617

BSC Next Generation DES

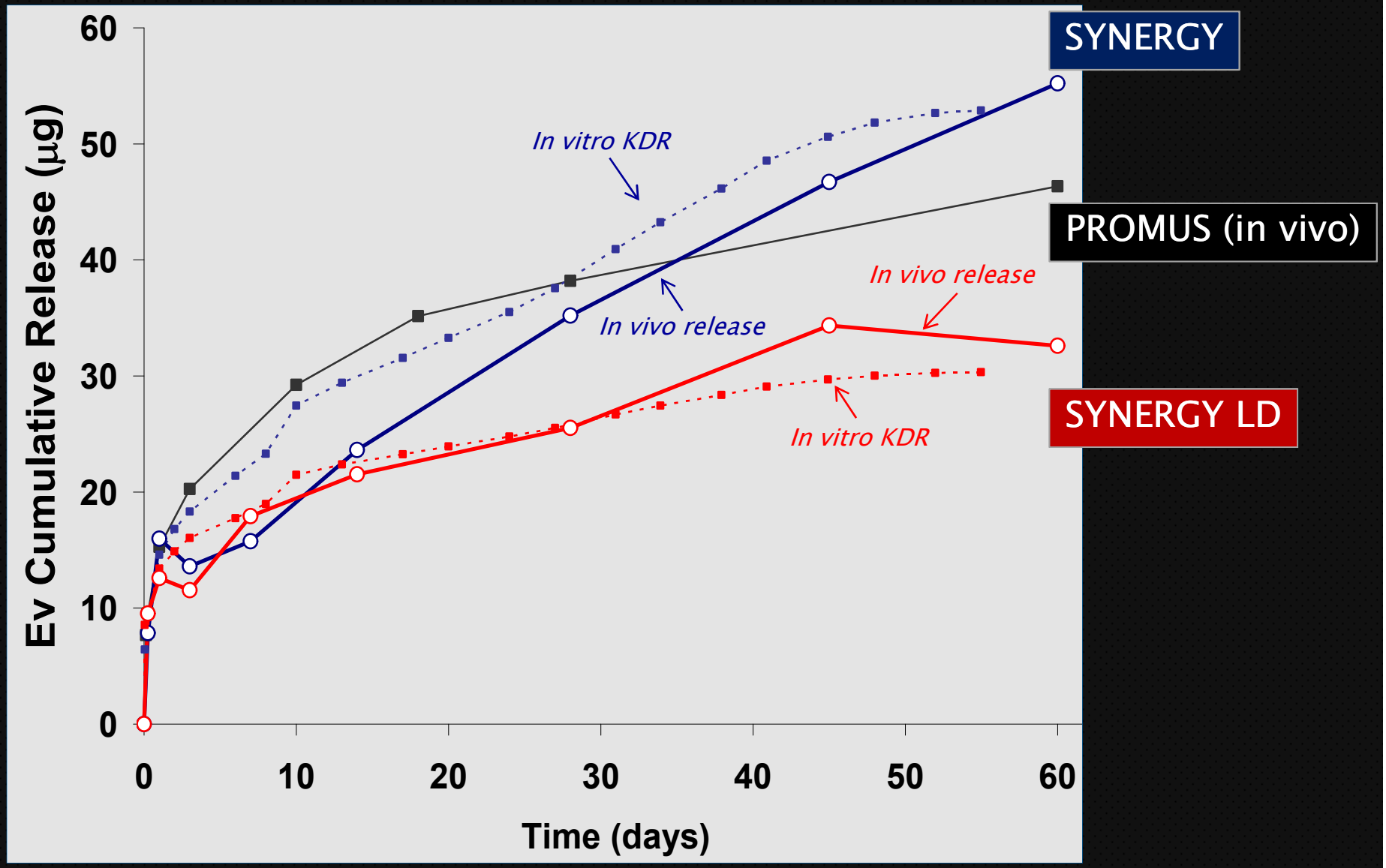
Labcoat
Paclitaxel
PLA
Ultrathin Abluminal, Bioerodable Polymer ('Dot' Technology)
Liberté



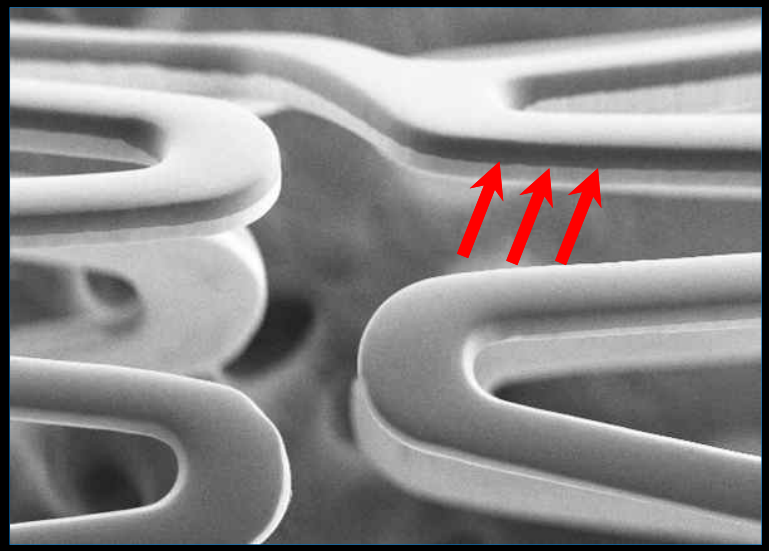
Evolution
Everolimus
PLGA
Ultrathin Abluminal, Bioerodable Polymer (Rollcoat Technology)
Element

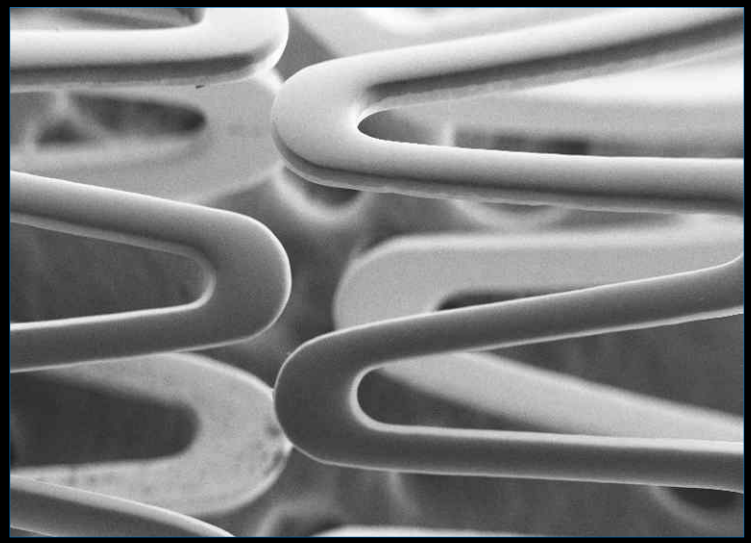


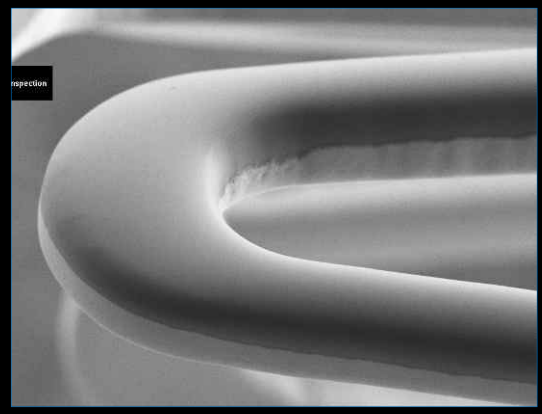
Everolimus Release Kinetics



SYNERGY Stent







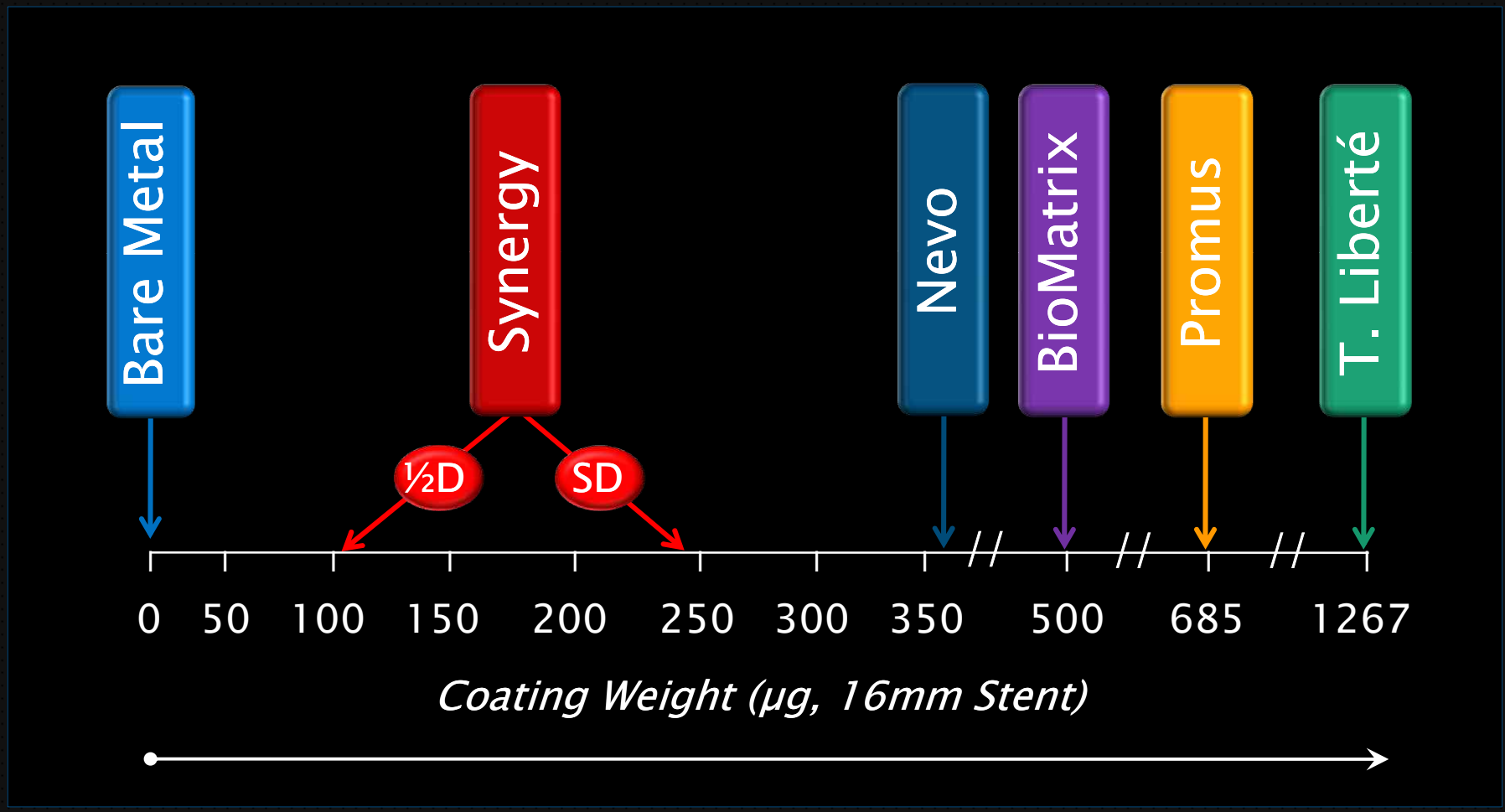
- Bioerodable polymer is only applied to the abluminal surface of the stent
- Maximum coating thickness 3µm (low dose) and 4µm (high dose)

SYNERGY Stent

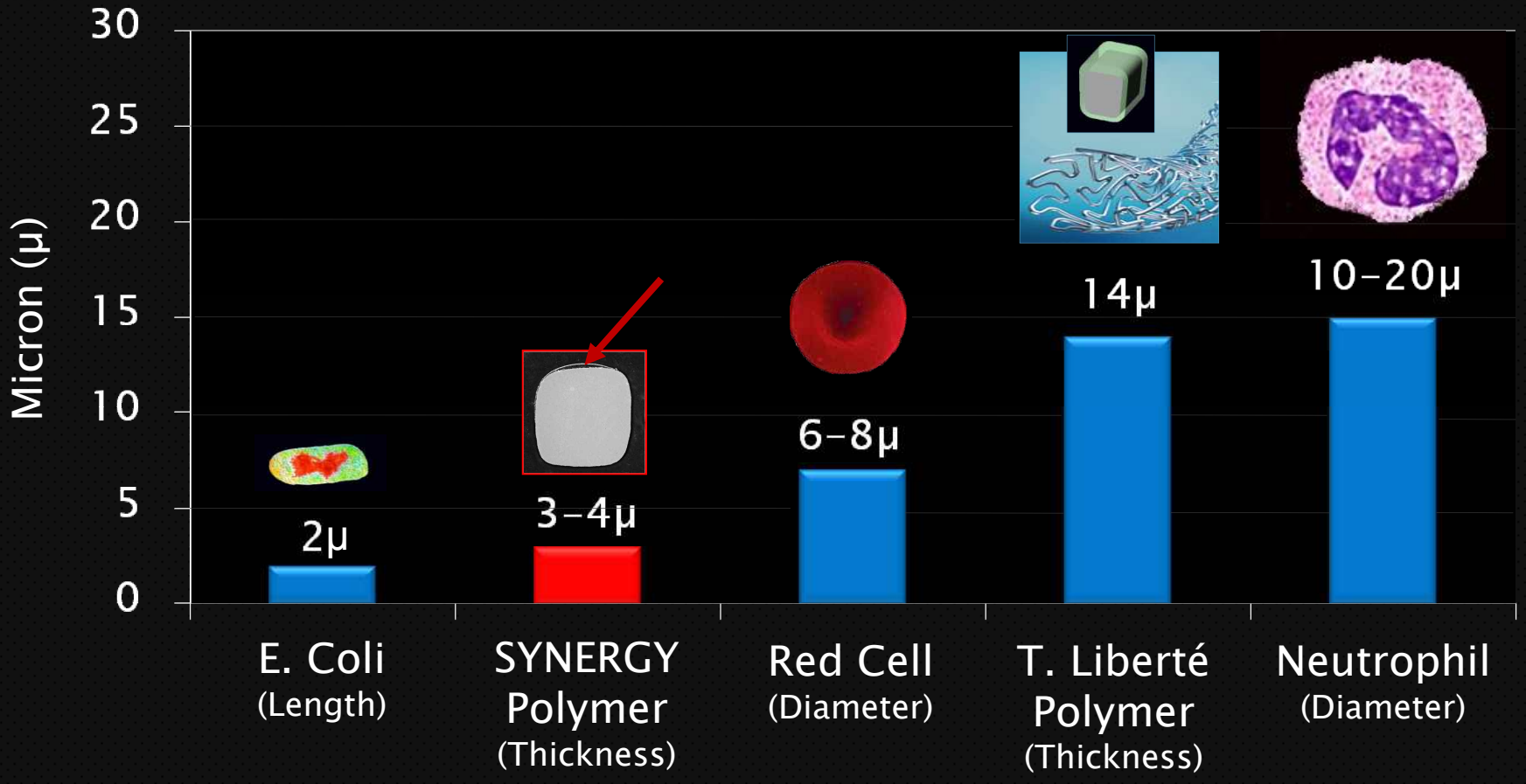
Current DES	SYNERGY DES
Conformable Durable Polymer	Abluminal Bioerodable Polymer

Everolimus + Ultra-thin Bioerodable PLGA Polymer applied to abluminal aspect of a 0.0028" stent strut

Relative Drug Coating Weights

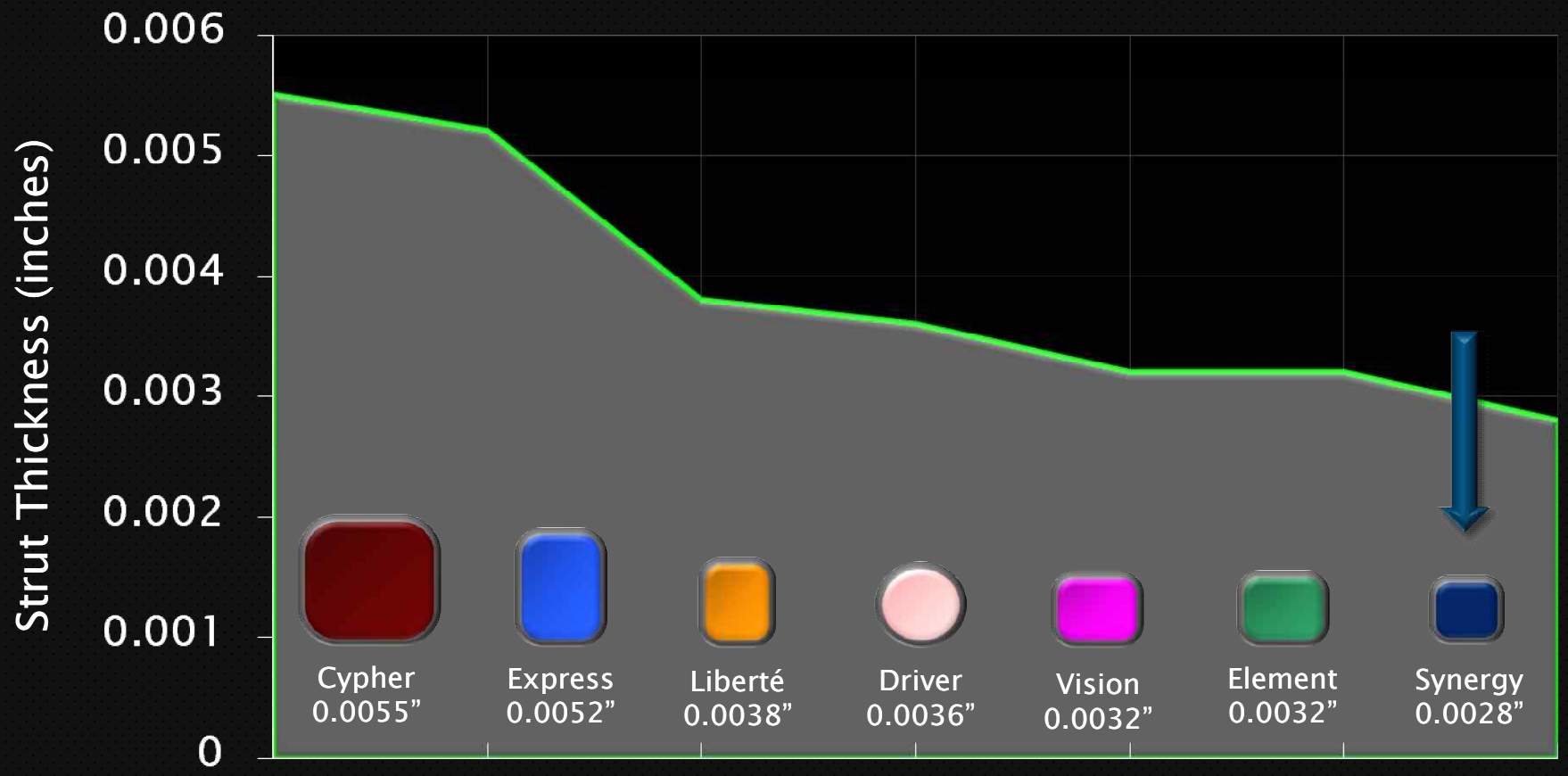


SYNERGY Relative Polymer Thickness



SYNERGY = Minimal Drug + Ultrathin Bioerodable Abluminal Polymer

Stent Strut Thickness



BSC Two Drug Strategy

Paclitaxel

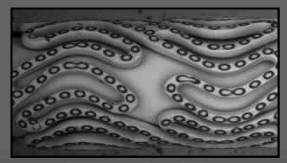
Everolimus

Next Generation DES

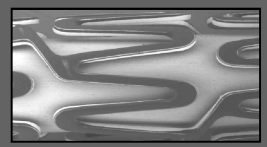
Low Drug Dose, Ablumenal Delivery, Bioerodable Polymer $\xrightarrow{?}$ Short DAPT

Trial Complete N=103

Labcoat Liberté



SYNERGY



EVOLVE

Trial to commence Q2 2010

EVOLVE Trial – Study Flow

Design	Randomized (1:1:1), single-blind, non-inferiority
Test Devices	SYNERGY 56 µg/20mm stent (Low Dose) SYNERGY113 µg/20mm stent ≡ PROMUS Element
Control Device	PROMUS Element
Sample Size/Sites	291 Patients/Up to 35 Sites in Europe, Australia, & NZ
Primary Endpoint	Composite safety @ 30D (death, MI, TLR) In-stent Late Loss @ 6M
Additional Analysis	IVUS @ Baseline & 6M
Lesion Treatment	Single *de novo* native coronary artery lesions
Lesion Size	≤ 28mm in length, RVD ≥2.25mm – ≤3.5mm
Principal Investigators	Ian Meredith & Stephan Verheye

Conclusions:

- The BSC DES pipeline is robust
- Unique Two Drug position (Paclitaxel + Everolimus) pursued through the Element Program
- PERSEUS (Taxus Element) reported at ACC 2010 (LBT), and PLATINUM (Promus Element) Trial at ACC 2011 (QCA/IVUS at TCT 2010)
- Next generation Promus Element launched in Europe, Middle East, Asia (2010 Q1), Taxus Element in Q2 2010
- SYNERGY, ultrathin abluminal bioerodable polymer loaded stents under clinical evaluation (EVOLVE Trial commences 2010 Q2)
- Further significant investments in the cardiovascular space anticipated…

Boston Scientific