

#### **ENHANCING THE HEART STENT DEVELOPMENT PROCESS** USING REALISTIC SIMULATION

### **IMPROVING THE FLOW**

By refining designs early in the conceptual process, computer simulation is helping leading medical device companies understand the in-vivo performance and surgical delivery of coronary stents to further optimize device behavior for better patient outcomes.

# 450,000 procedures

Coronary stent surgeries performed each year in the U.S., requiring numerous designs

**10 YEARS** Length of time a stent has to last to satisfy ISO standards

## **36%** Restenosis Rate

Percentage of patients with a stent that will need another procedure within a year<sup>1</sup>

1. Results include study of both bare metal stents (BMS) and drug-eluting stents (DES

### THE BENEFITS OF REALISTIC SIMULATION

**Strength:** Evaluate the deployment characteristics to ensure proper stent apposition with the vessel wall and delivery of expected therapeutic outcome.

**Fatigue Life:** Analyze structural fatigue to safeguard long-term patient success.

**Design Reliability:** Measure performance of numerous variables to help design the right device for the right patient.

**Accelerated Approvals:** Reduce number of physical tests by validating designs with simulation results.

#### LEARN MORE

Watch the e-Seminar: <u>Using Simulation to Power</u> <u>Innovation in Life Sciences</u>