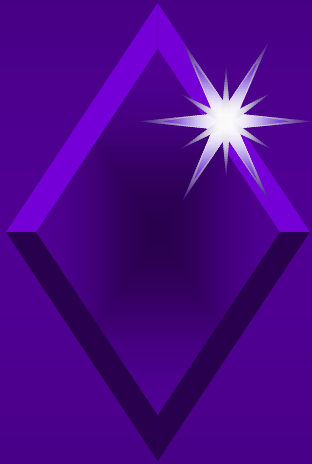


EVALUATING TECHNOLOGY FOR THE CARDIAC SERVICE LINE

CASE STUDY: DRUG-ELUTING STENTS



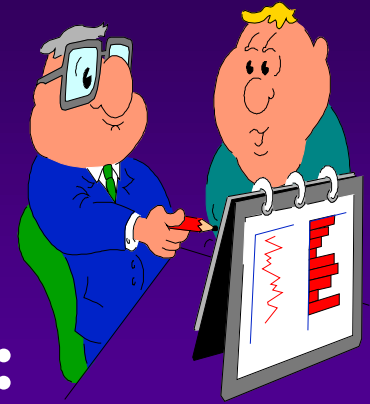
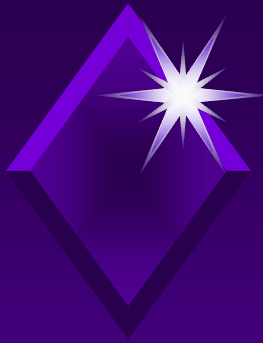
SPRING 2003

HFMA CONFERENCE

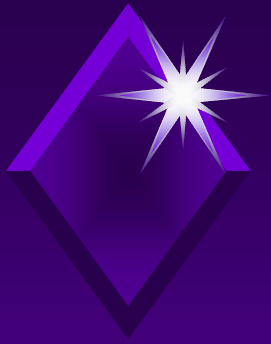
Presented by Nancy A. Lyle

Triad Consulting Group, Inc.
Portland, Oregon

Cardiac Technology Assessment



- ◆ In next 15 minutes.....present a model for evaluating new technology:
 - ◆ Review external factors impacting need for scrutinizing fiscal investments
 - ◆ Discuss key business factors to be considered when evaluating new technology
 - ◆ Case Study- present method for evaluating Drug-eluting Stent technology

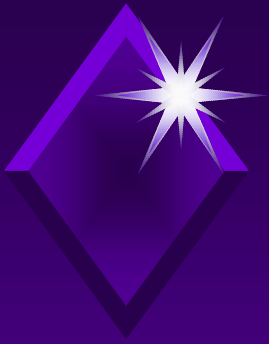


Situation Analysis - External

- ◆ **Increasing costs (supplies, technology, labor)**
- ◆ **Declining reimbursement/funding**
- ◆ **Economic slowdown:**
 - ✓ **High unemployment rates**
 - ✓ **Increased rate of un-insured**
- ◆ **Increased regulatory requirements**
- ◆ **Aging Population**
 - ✓ **Higher acuties**
 - ✓ **Increased resource utilization and service demand**



Wise Investment Decisions

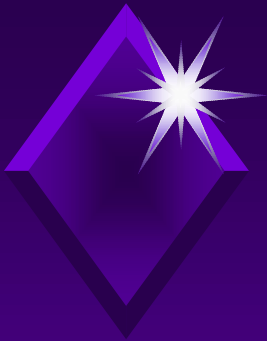


- ◆ Standard of Care or Niche?
- ◆ New Market/Volumes or Existing?
- ◆ Reimbursement?
- ◆ Past Hype
 - ◆ *Cath Lab-Laser Therapy*
 - ◆ *Brachytherapy*
 - ◆ *Atherectomy*



Investment Considerations

- ◆ **Standard of Care and Clinical Outcomes**
- ◆ **Alignment between Hospitals & Physician Partners**
- ◆ **Fiscal Performance & SBU Profitability**
 - ◆ **Payor-mix management**
 - ◆ **Cost management**
 - ◆ **Contracting leverage/opportunities**
 - ◆ **Operational efficiency**

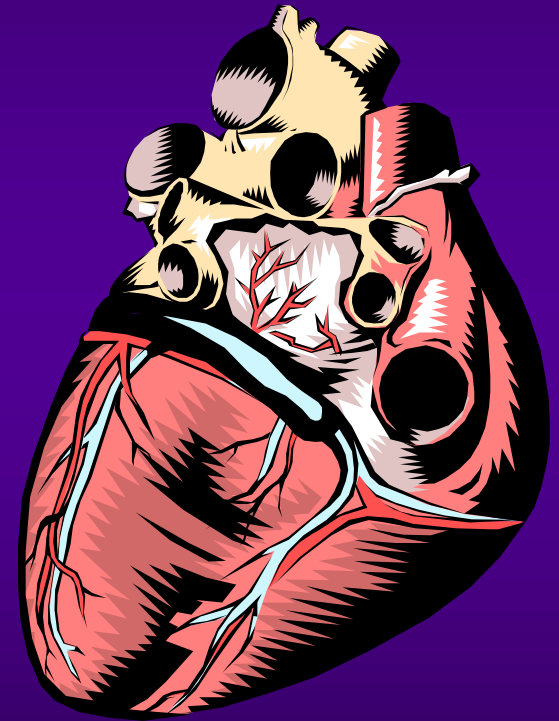


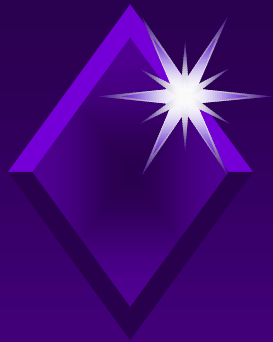
Investment Considerations

- ◆ **Clinical Services that meet the needs of marketplace/consumers**
- ◆ **Market Share and Volumes**
- ◆ **Consumer Awareness and Recognition**
 - ◆ **Market Positioning “Provider of Choice”**
 - ◆ **Market Leverage**
- ◆ **Customer Satisfaction**

What are Drug-Eluting Stents?

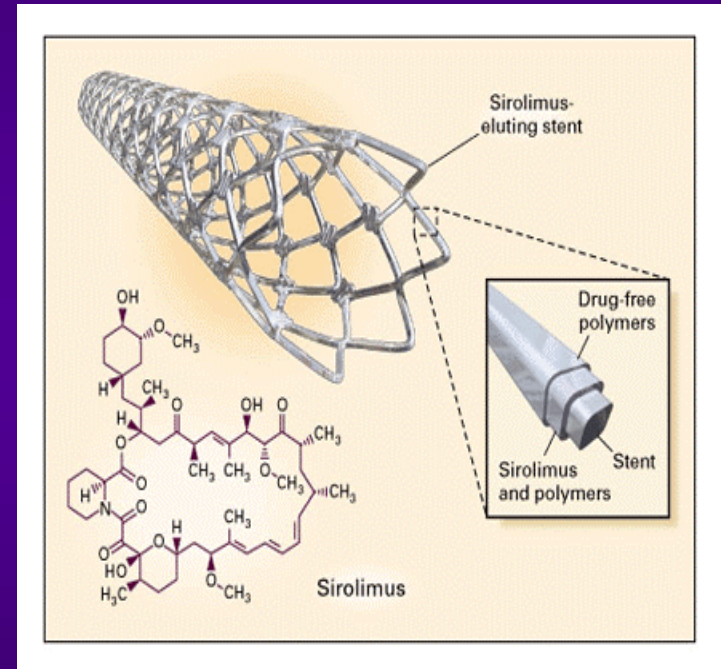
- ◆ **Drug-eluting Stents are used to treat narrow or obstructed coronary arteries. Stents are placed at the point of obstruction or narrowing in the vessel to improve blood flow to the heart muscle.**

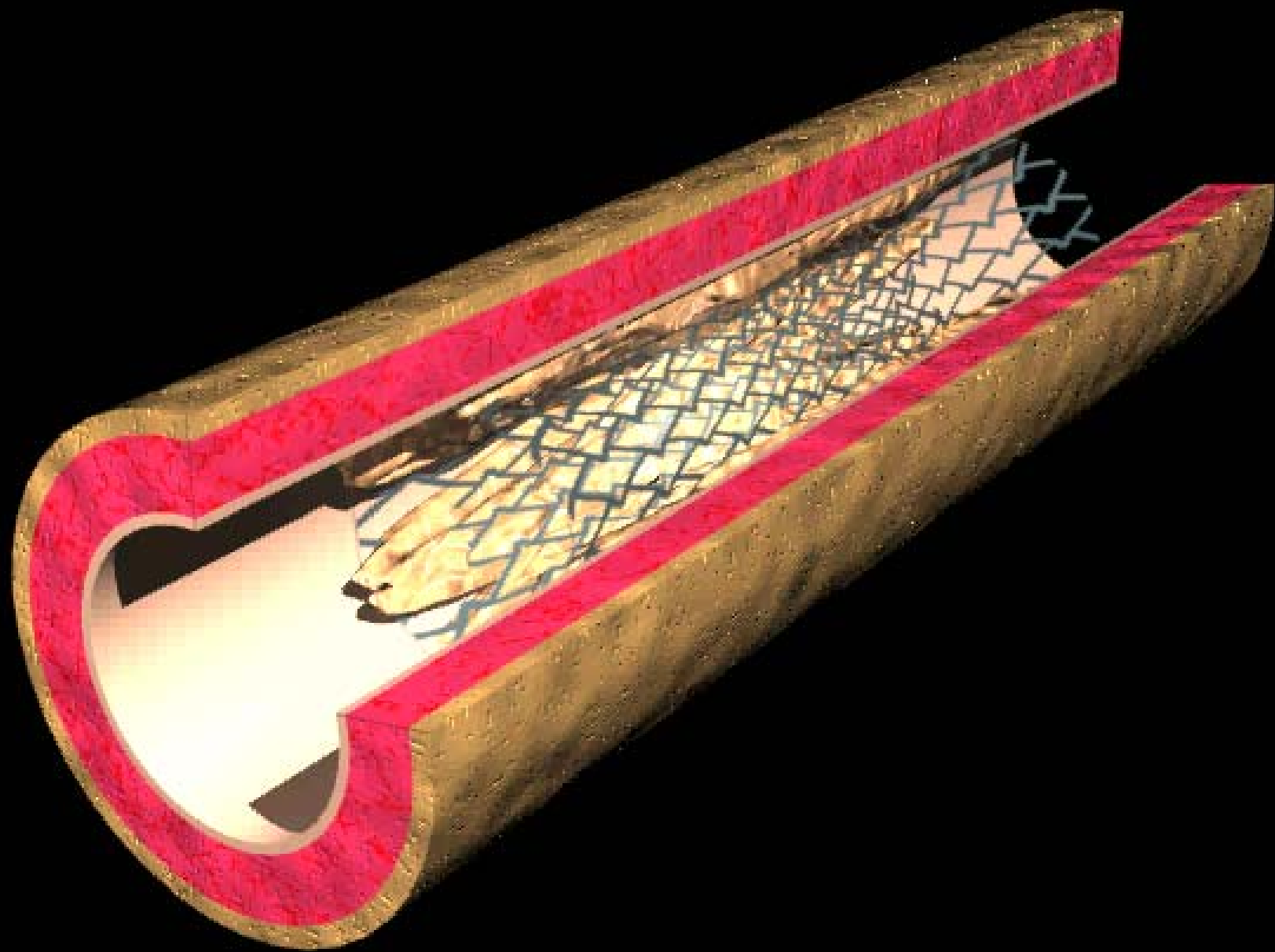


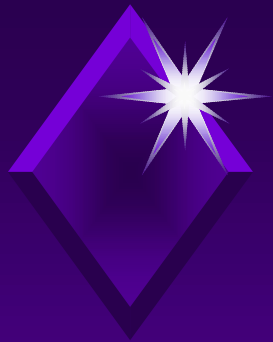


What are Drug-Eluting Stents?

- ◆ The new Drug-eluting Stents (DES) are coated with a drug (Sirolimus) that prevents re-stenosis (closure)
 - ◆ Re-stenosis rates are 20% to 30% for traditional bare metal devices
 - ◆ Re-stenosis rates are less than 5% for DES
- ◆ New Industry Standard of Care







Background: Drug-Eluting Stents

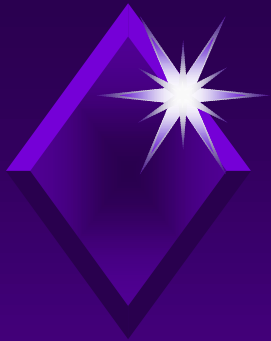
- ◆ **FDA approved April 24, 2003**
- ◆ **New DRGs approved –April 2003**
 - ◆ **DRG 526: PCI w/Drug-eluting Stent w/AMI**
 - ◆ Shift from DRG 516
 - ◆ Medicare Reimbursement \$24,544
 - ◆ **DRG 527: PCI w/Drug-eluting Stent w/o AMI**
 - ◆ Shift from DRG 517
 - ◆ Medicare Reimbursement \$19,951
 - ◆ **New CPT Code Effective October 2003???**
- ◆ **Only One Vendor (Cordis) –Pricing & Supply Issues**



Financial Analysis-Assumptions

Drug-eluting Stents

- ◆ **Volume Projections**
 - ◆ Existing business (DRG 516, 517 and 518)
 - ◆ Percent that shift to new DRGs (70%-DES)
 - ◆ New business (Growth opportunities –6%)
- ◆ **Stent Utilization per Case**
 - ◆ Current Utilization (1.35 per case)
 - ◆ Projected (1.5 per case)
- ◆ **Cost of Stents/Other**
 - ◆ Bare metal \$1,500
 - ◆ Drug-eluting \$3,500
- ◆ **LOS (current & projected)**
- ◆ **Reimbursement & Payor Mix**



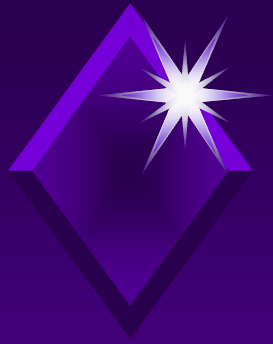
Volume and Cost Assumptions

Volume & Cost Impact of DES

FY04 Projections	Cost Per Stent		Number of Patients		
	Metal	Drug-Eluting	Metal	Drug-Eluting	Total
	\$1,500	\$3,500	248	579	827

Hospital XYZ:

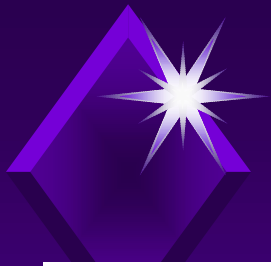
Accounts for projected 6% growth with 70% DES Usage



Additional Incremental Costs

Additional Costs per Case

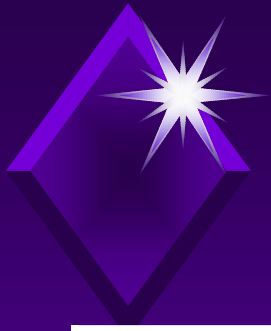
\$	5,250	(@ 1.5 stents / case)
\$	2,025	(@ 1.35 stents/ case)
\$	3,225	Additional Cost Per Case



FY04 Projections by DRG

Profit & Loss Analysis

DRG/ Procedure	FY04 projected Volume	FY04 Projected Average LOS	FY04 Projected ICU Average LOS	Average Cost / Discharge (FY03)	DRG Reimbursement
DRG 516: PCI w/ AMI	149	4.0	1	\$15,283	\$21,471
DRG 517: PTCA w/ stent w/ o AMI	89	2.2	0	\$12,996	\$17,154
DRG 518: PTCA w/ o stent, w/ o AMI	10	2.0	0	\$5,300	\$13,617
DRG 526: PCI w/ drug eluting stent w/ AMI (April 03)	174	4.0	1	\$18,508	\$24,544
DRG 527: PCI w/ drug eluting stents w/ o AMI (April 03)	405	2.6	0	\$16,221	\$19,951



Stent Utilization Break-Even Analysis

DRG 526	
Reimbursement	\$24,544
Projected Costs	\$18,508
Profit	\$6,036

DRG 527	
Reimbursement	\$19,951
Projected Costs	\$16,221
Profit	\$3,730

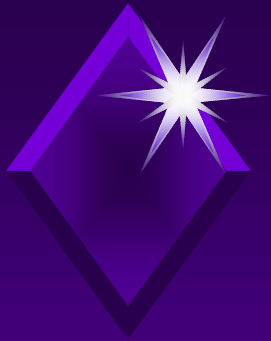
• Breakeven by Stent Utilization:

3.22

• Breakeven by Stent Utilization:

2.56

** Based on cost of \$3,500 per DES



Action Items



- ◆ Ensure accurate coding of device
- ◆ Monitor stent utilization per case
- ◆ Effective case management of patients
 - ◆ *Pre-authorization*
 - ◆ *LOS/Cost Management/ICU resource consumption*
- ◆ Amend payor contracts to address new technology and costs
- ◆ Contracting for supplies and inventory management



Conclusion

Technology Decisions

- ◆ Success in today's challenging health care environment depends on how well it's services are organized and delivered to meet needs of the consumers:
 - ✓ Standard of Care/Clinical Outcomes
 - ✓ Physician Partnership
 - ✓ Market Growth Opportunities
 - ✓ Cost Management
 - ✓ Payor Management