

CARDIOVASCULAR TRENDS: EMBRACING THE CHALLENGE

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Welcome



Symposium Overview: Day 1

- ▣ Pleural Effusion Evaluation and Management
- ▣ Abdominal Aortic Aneurysm
- ▣ Atrial Fibrillation: Maze Procedure
- ▣ Cardiovascular Complications
- ▣ Valvular Heart Disease
- ▣ Emerging Therapies in Atrial Fibrillation
- ▣ Optimal Non-Invasive Therapy in CAD

Symposium Overview: Day 2

- ▣ Focus : Cardiac Catheterization Lab
- ▣ Luis Tami, MD- Global vascular interventional concept
- ▣ William Alexis, MD (moderator): “The Basics”
- ▣ Juan Pastor, MD (moderator): “Adjunct Therapies”
- ▣ Brenda Sanzobrino, MD (moderator): “Clinical Syndromes”

Symposium Overview: Day 2

- ▣ Panel: Film Discussion
 - Luis Tami, MD (moderator)
 - William Alexis, MD
 - Bassel Ibrahim, MD
 - Michael Marek, MD
 - Juan Pastor-Cervantes, MD
 - Brenda Sanzobrino, MD
 - David Gomolin, MD

David Gomolin, MD



Keynote Lecture: Acute Myocardial Infarction

David Gomolin, MD, Beth Israel Deaconess Medical Center

- ▣ MD from McGill University Faculty of Medicine, 1979
- ▣ **Internship/Residency**
- ▣ Royal Victoria Hospital in Internal Medicine, 1982
- ▣ **Fellowship**
- ▣ Beth Israel Deaconess Medical Center in Cardiology, 1984
- ▣ **Board Certification:**
- ▣ American Board Internal Medicine
- ▣ Royal College of Physicians and Surgeons Canada
- ▣ American Board Internal Medicine (Sub: Cardiovascular Disease)

Statistics

- ▣ Cardiovascular disease (2006)
- ▣ High blood pressure — 73,600,000.
- ▣ Coronary heart disease — 16,800,000.
 - Myocardial infarction — 7,900,000.
 - Angina pectoris — 9,800,000.
- ▣ Stroke — 6,500,000.
- ▣ Heart Failure — 5,700,000

<http://www.americanheart.org/presenter.jhtml?identifier=4478>



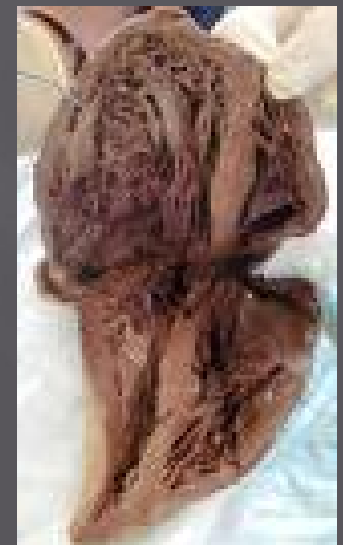
Excellent health statistics - smokers are less likely to die of age related illnesses.'

Cardiovascular disease

- ❑ Claimed 864,480 lives in 2005 (final mortality) (35.3 percent of all deaths or 1 of every 2.8 deaths).
- ❑ Other final 2005 mortality: total cancer 559,312; accidents 117,809; HIV (AIDS) 12,543.
- ❑ Nearly 151,000 Americans killed by CVD in 2005 were under age 65.
- ❑ 2005 final death rates from CVD were 324.7 for white males and 438.4 for black males; for white females 230.4 and for black females 319.7. (Death rates are per 100,000 population. The rates listed use the year **2000** standard U.S. population as the base for age adjustment.)
- ❑ From 1995 to 2005, death rates from CVD declined 26.4 percent.
- ❑ In the same 10-year period the actual number of deaths declined 9.6 percent.

Technology Trends History

- ▣ Coronary Artery Bypass
- ▣ First performed May 2, 1960
 - Robert Goetz, MD, Michael Rohman, MD, Jordan Haller, MD, Ronald Lee, MD.
- ▣ Autopsy 9 month later showed atheromatous plaque at the origin of the LIMA



Technology Trends History

- ▣ Dr Vasilii Kolesov (1964): performs the first successful coronary artery anastomosis
- ▣ Dr. Rene Favalaro (1967): Cleveland Clinic Foundation , Cleveland Ohio
 - SVG to replace stenotic segment of RCA
 - SVG utilized as by-pass graft -RCA
- ▣ Dr. Dudley Johnson: SVG to LAD, Cx
- ▣ Drs. Charles Bailey, T. Hirose, G. Green: IMA as conduit



Technology Trends History

- ▣ Dr. Mason Sones (1964) discovers the heart tolerates intra coronary injections of contrast. Thus the beginning of angiography
- ▣ Dr. Andreas Gruentzig (1975) Zurich, Switzerland,
 - Invented double-lumen catheter fitted with PVC balloon
 - (1977) First successful PTCA



Technology trends: 1980's

- ▣ 1980- 1000 angioplasties worldwide
- ▣ 1982- Over-the-wire co-axial balloon systems, brachial guiding catheters, steerable guides
- ▣ 1986- Athrectomy devices
- ▣ (Toulouse, France) Dr. Jacques Puel & Ulrich Sigwart implant the first “wall-stent”



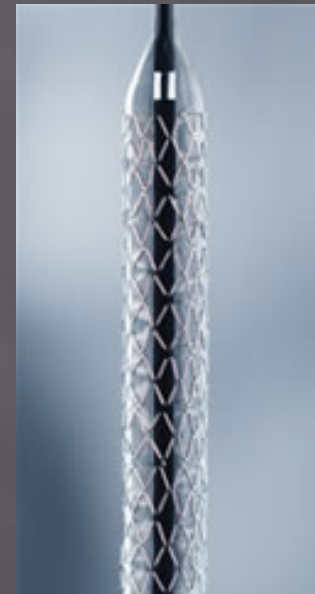
Technology Trends: 1990's

- ▣ 1987-1993 Technology boom
 - Laser
 - Rotational atherectomy
 - IVUS
 - Stents
- ▣ 1994 – 1997
 - Stents become commonplace
 - (1997) 1,000,000 angioplasties worldwide



Technology Trends: 2000's

- ▣ 2003- First Drug Eluting Stent "Cypher" (J & J / Cordis)
- ▣ 2004- "Taxus" (Boston Scientific)
- ▣ 2008- "Endeavor" (Medtronic)



http://en.wikipedia.org/wiki/Coronary_artery_bypass_surgery#History

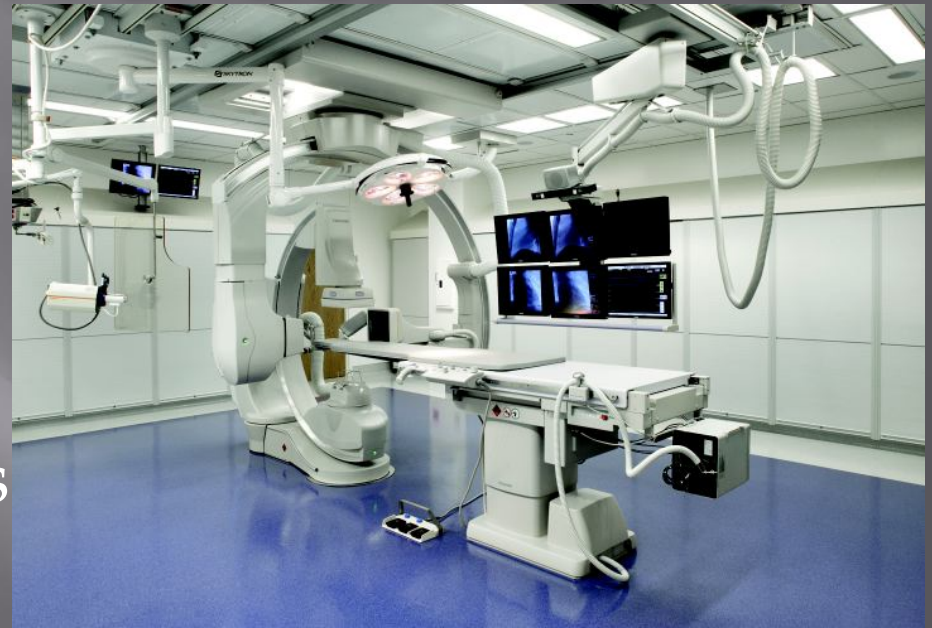
http://www.ptca.org/images/endeavor_stent_vertical.jpg

<http://www.cypherstent.com/Pages/index.aspx>

<http://www.bostonscientific.com/procedure/ProcedureLanding.bscli,./navRelId/1000.1002/method/Procedure/id/10001151/seo.serve>

Technology Trends: Future

- ▣ Better drugs
- ▣ Smaller stents
- ▣ Absorbable stents
- ▣ Drug coated balloons
- ▣ Hybrid OR-Labs
- ▣ Lesser invasive surgical approach



<http://www.cathlabdigest.com/article/7265>
http://www.spectrum.ieee.org/images/public_html/automaton/DaVinci-Robot.jpg
<http://www.dicardiology.net/node/30898/>

Evidence Based Practice

- ▣ Best available evidence + clinical expertise
- ▣ Robert Reich (1990) “public idea”
- ▣ Dr. Archie Cochrane: “treatments that work”
- ▣ Identify / End treatments that cause harm
- ▣ “What is the best way to do this?”
- ▣ “What evidence supports my reason?”

EBP: Why use it?

- “It is unethical to use treatment without known efficacy”
- Example:
 - Vital signs q 15 min X 1 hour, q 30 min X 1 hour, q hour X 4 hours



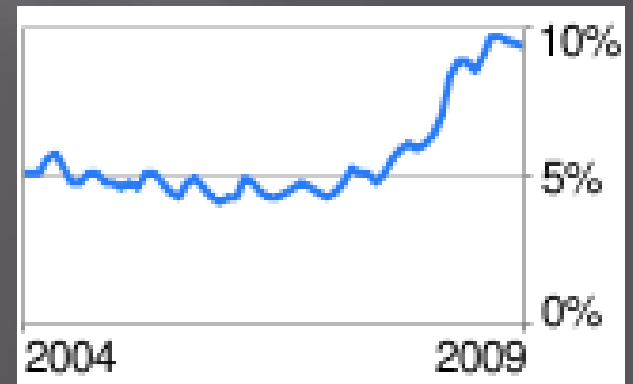
“You’re in a hospital, Nurse Hill. If you collapse from exhaustion, the emergency room is just down the hall.”

Healthcare Reform

- ▣ U.S Unemployment rate: 10.7% (August 2009)
- ▣ Detroit, MI : 17% (September 30, 2009)
- ▣ Florida : 10.7% (Sept., 2009)
- ▣ Broward County: 9.6% (Sept., 2009)
- ▣ 5.4% (Sept 2008)

<http://www.bls.gov/web/laumstrk.htm>

<http://www.eflorida.com/profiles/CountyReport.asp?CountyID=6&Display=all>



Healthcare Reform Issues (Oct 7, 2009)

- ▣ Personal -vs- Employer Health Insurance
- ▣ Guaranteed-issue personal health insurance policies
- ▣ Employer Pre-Tax Payment and Reimbursement of Premiums
- ▣ Employee Pre-Tax Payment of Premiums through POP Plans

What can nurses expect

- ▣ Computers
- ▣ Technologically
- ▣ EBP
- ▣ Research
- ▣ Flexibility / Change
- ▣ Higher education



Patient Safety: Crew Resource Management

- ▣ CRM (1979) – NASA: Improve air safety
- ▣ Majority of accidents result from Human Error
 - Interpersonal communication
 - Leadership
 - Decision making
- ▣ CRM Training
 - Communications
 - Situational awareness
 - Problem solving
 - Decision making
 - Teamwork



Summary



- ▣ ...Change...
- ▣ ...the future will bring about much change, and many challenges...
- ▣ Cardiovascular Trends: Embrace the challenge

