

PHILIPS

Progress in CT

Jim Green
Senior Vice President &
General Manager Philips CT





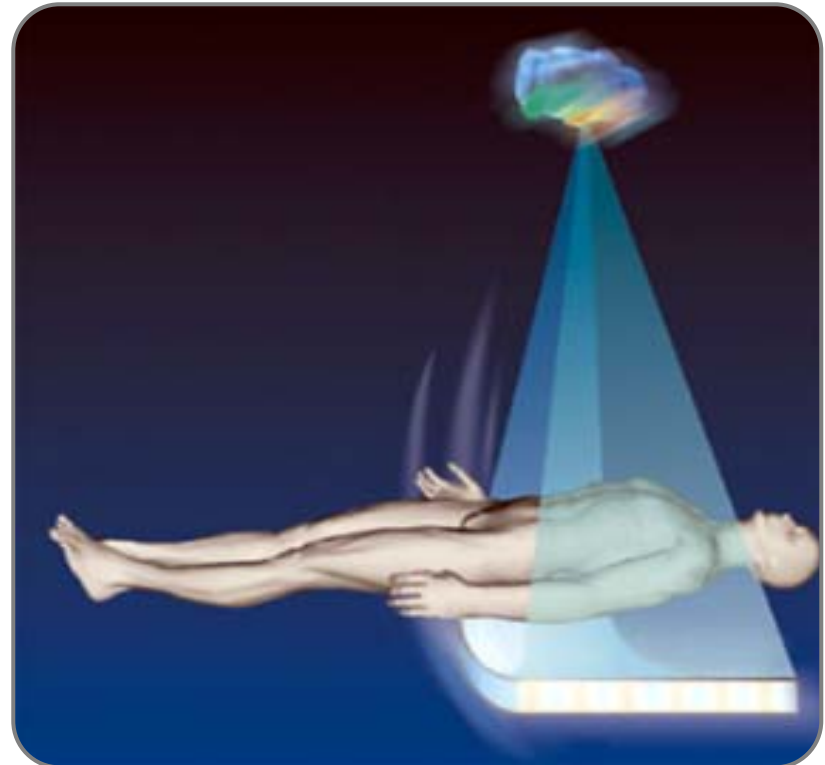
Agenda

- What is CT
- New clinical applications
- CT market
- Why we win



What is CT?

- Rotate an X-ray source and detection system around the area of interest
- Transmitted X-rays are received by detection system
- Detection system converts X-Rays to digital data
- Computers reconstruct data into a two dimensional cross-sectional image
- Images are viewed by the doctor who diagnoses the patient

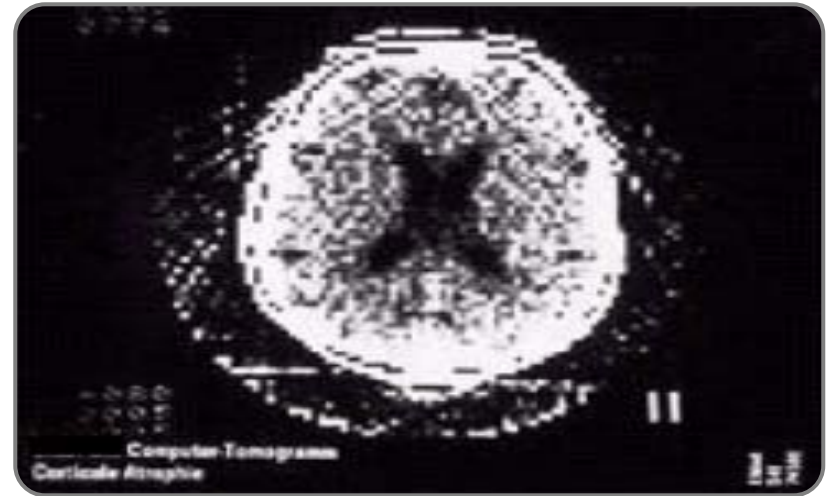


CT's early days



1970's

- Single-slice head scanner
- Rotation time in minutes
- 10 images (slices) per study



Simple head scan

- 10 images
- Total scan time: 1 hour

CT's come a long way!

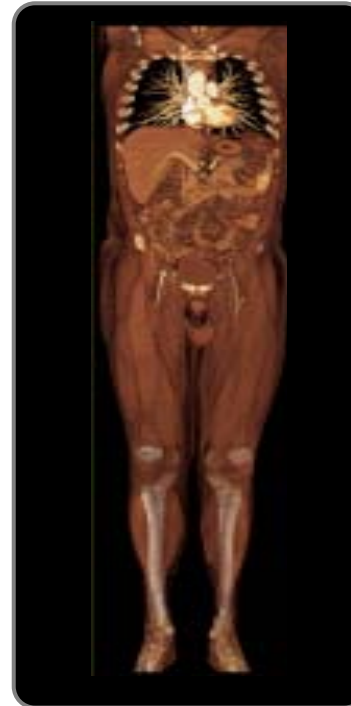
Today

- World's first 4cm large coverage CT
- Acquires up to 40 images per rotation
- Rotation time in 4/10ths of a second
- Sub-millimeter resolution
- True volume acquisition
- 3-Dimensional viewing



Whole body scan

- 3,750 slices
- Scan time: 33 seconds

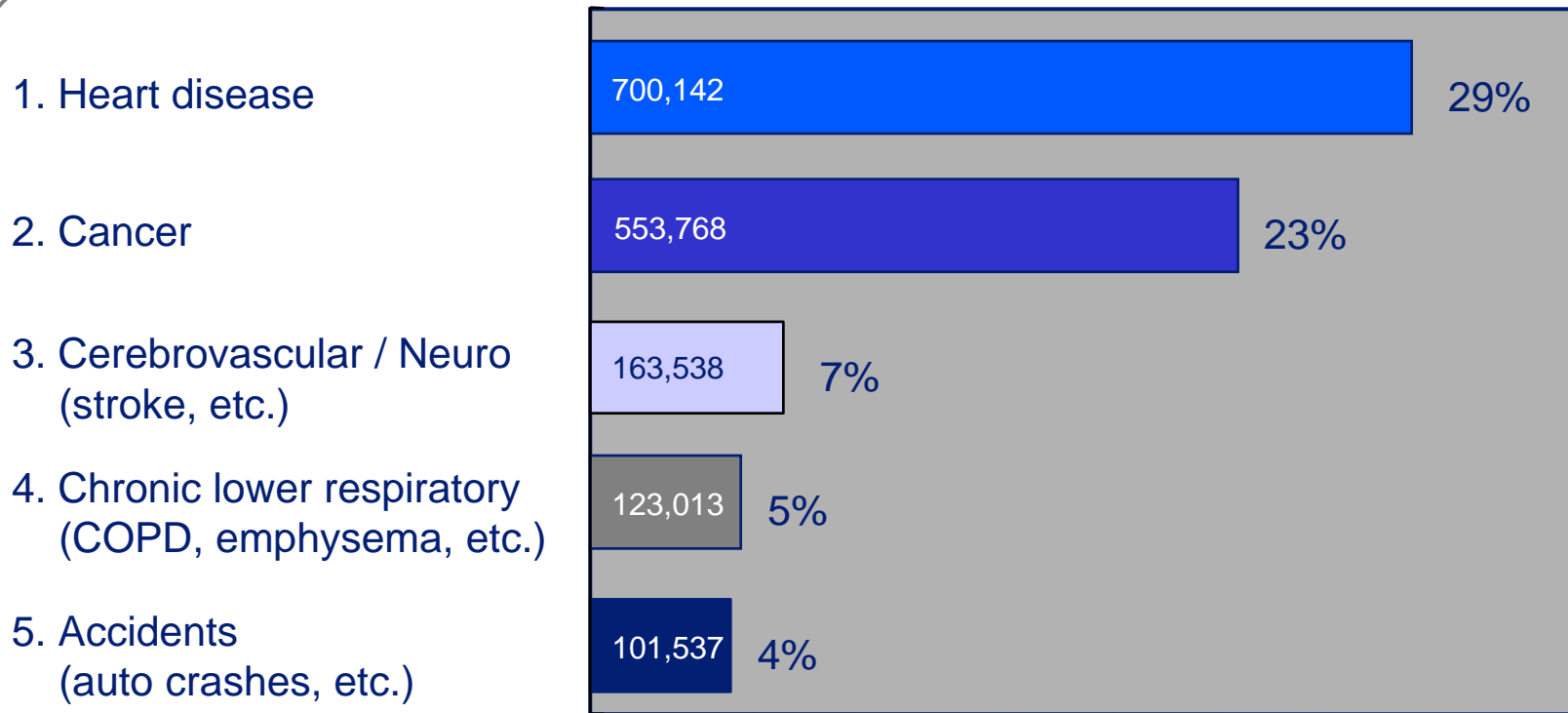


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Top 5 Leading Causes of Death in US



Total Number of Deaths: 2,416,425

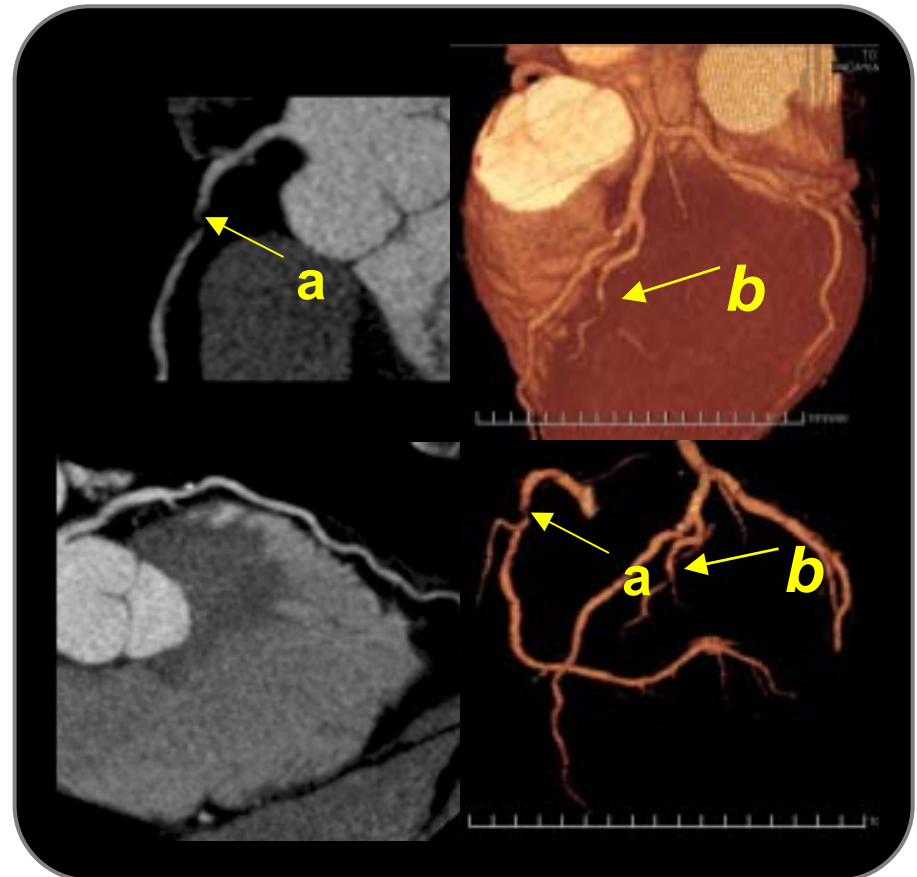
Source: CDC, NCHS, National Vital Statistics System for 2001

CT Breakthroughs in Cardiac

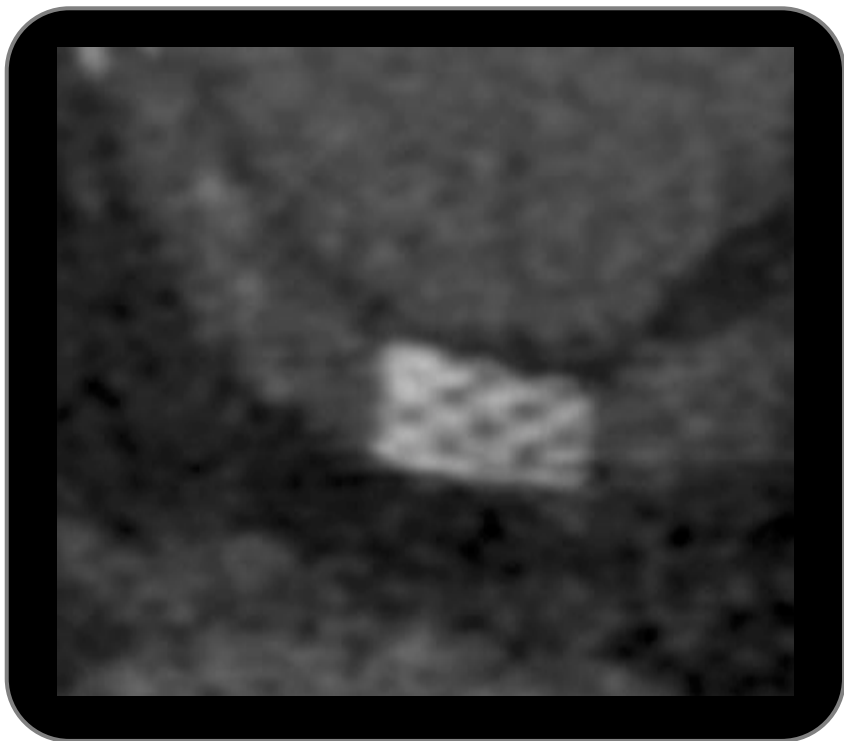
CT Coronary Angiogram

- In just seconds
- Still-frame 3-D picture
- Non-interventional
- Complete coronary view
- Functional Analysis
- Cost effective

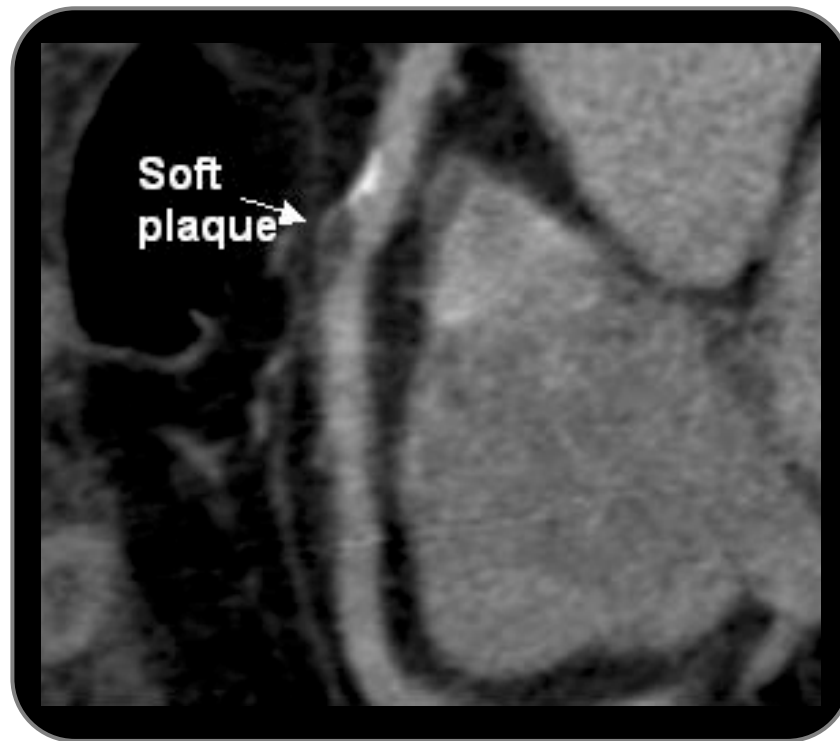
Coronary angiogram



CT Breakthroughs in Cardiac



Stent patency



Plaque characterization
(in development)

Cardiac CT

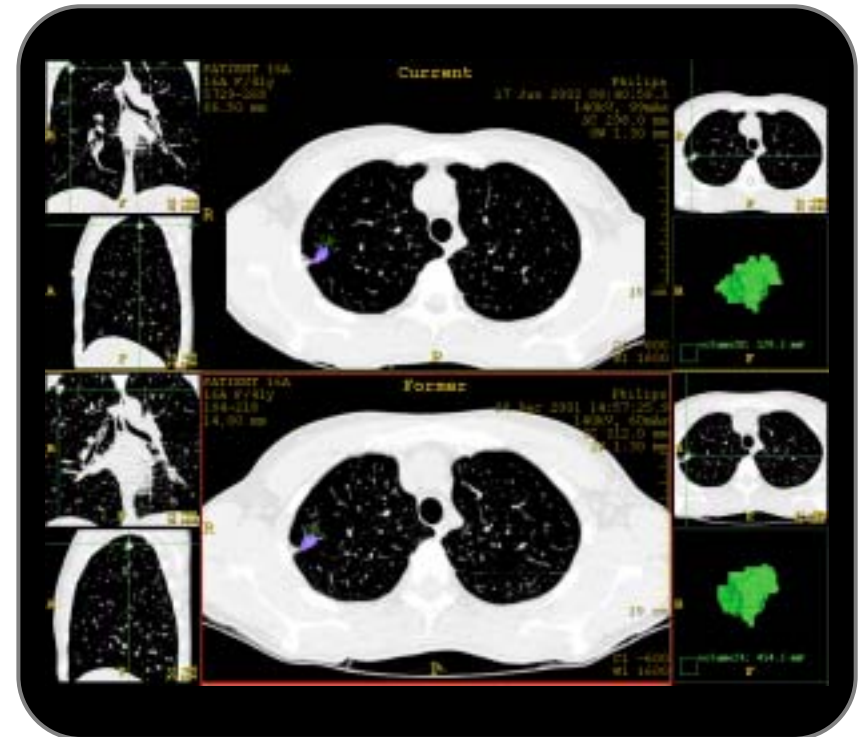


**Dr. Charles Fitzgerald, Medical Director,
Heart Care Clinic of Arkansas, Little Rock, AK, USA**

CT Breakthroughs in Cancer Detection

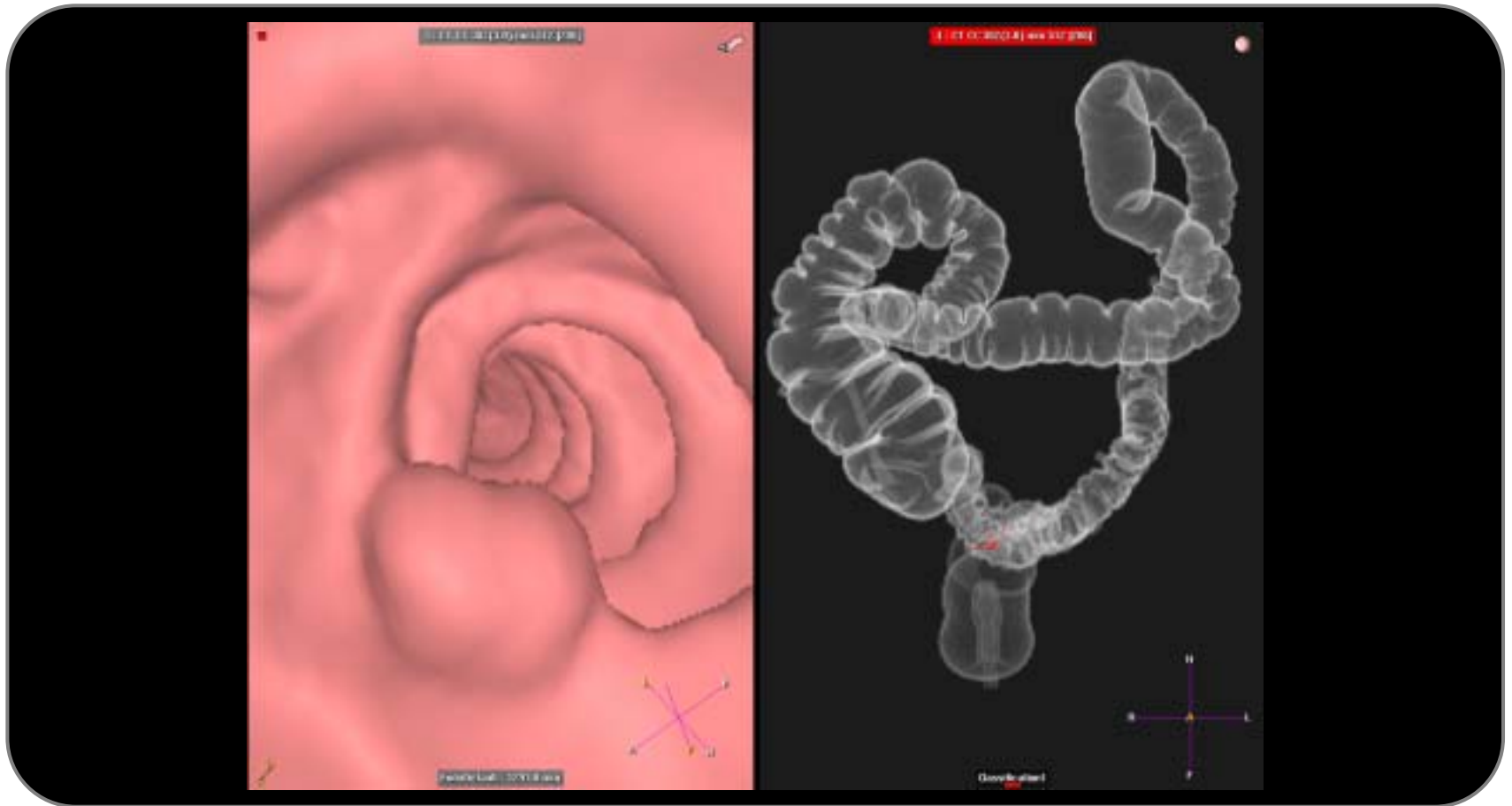
Fast detection of lung cancer

- 3 second lung scan
- Computer aided detection
- Easy / fast follow-up



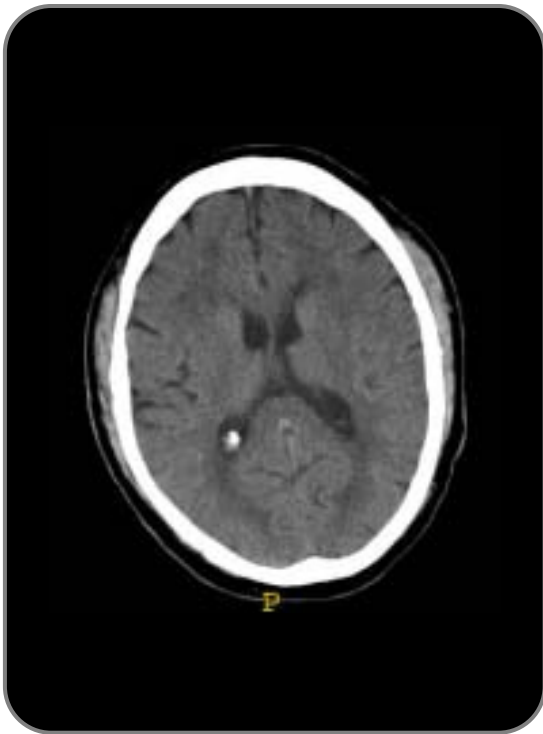
CT Breakthroughs in Cancer Diagnosis

Accurate, patient-friendly, Virtual Colonoscopy, in seconds..

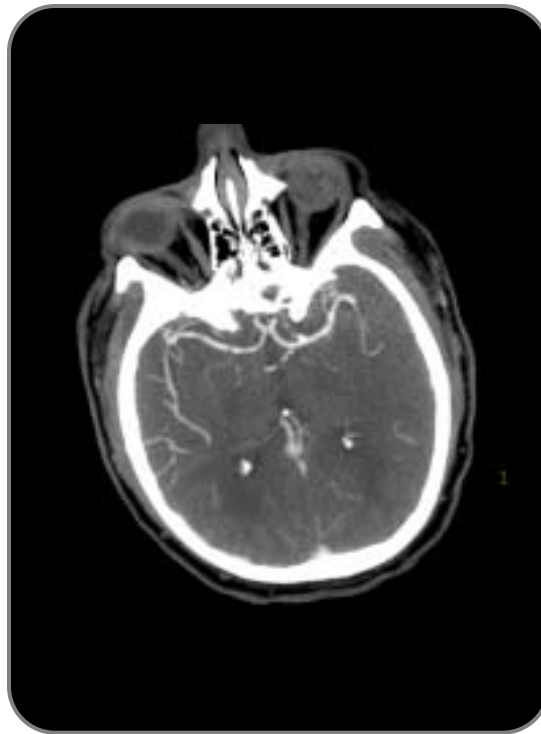


CT Breakthroughs in Neurologic Diagnosis

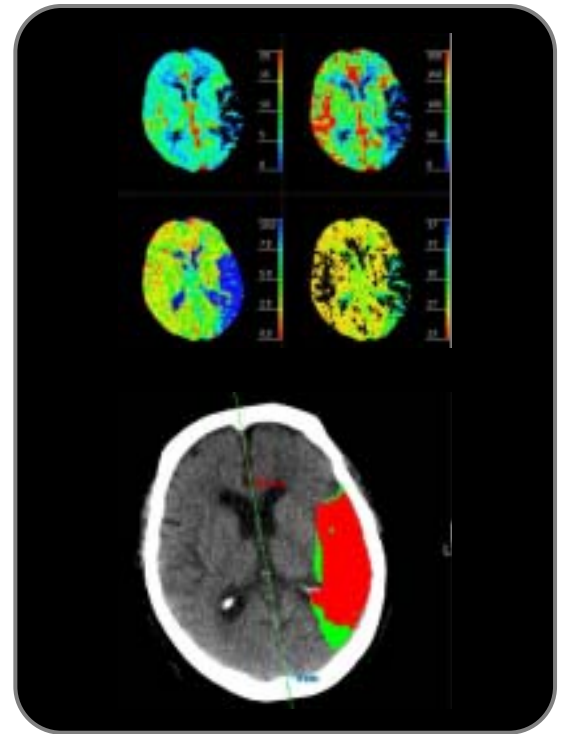
Comprehensive Stroke Review w/ CT “In minutes, not hours”



Non Contrast CT

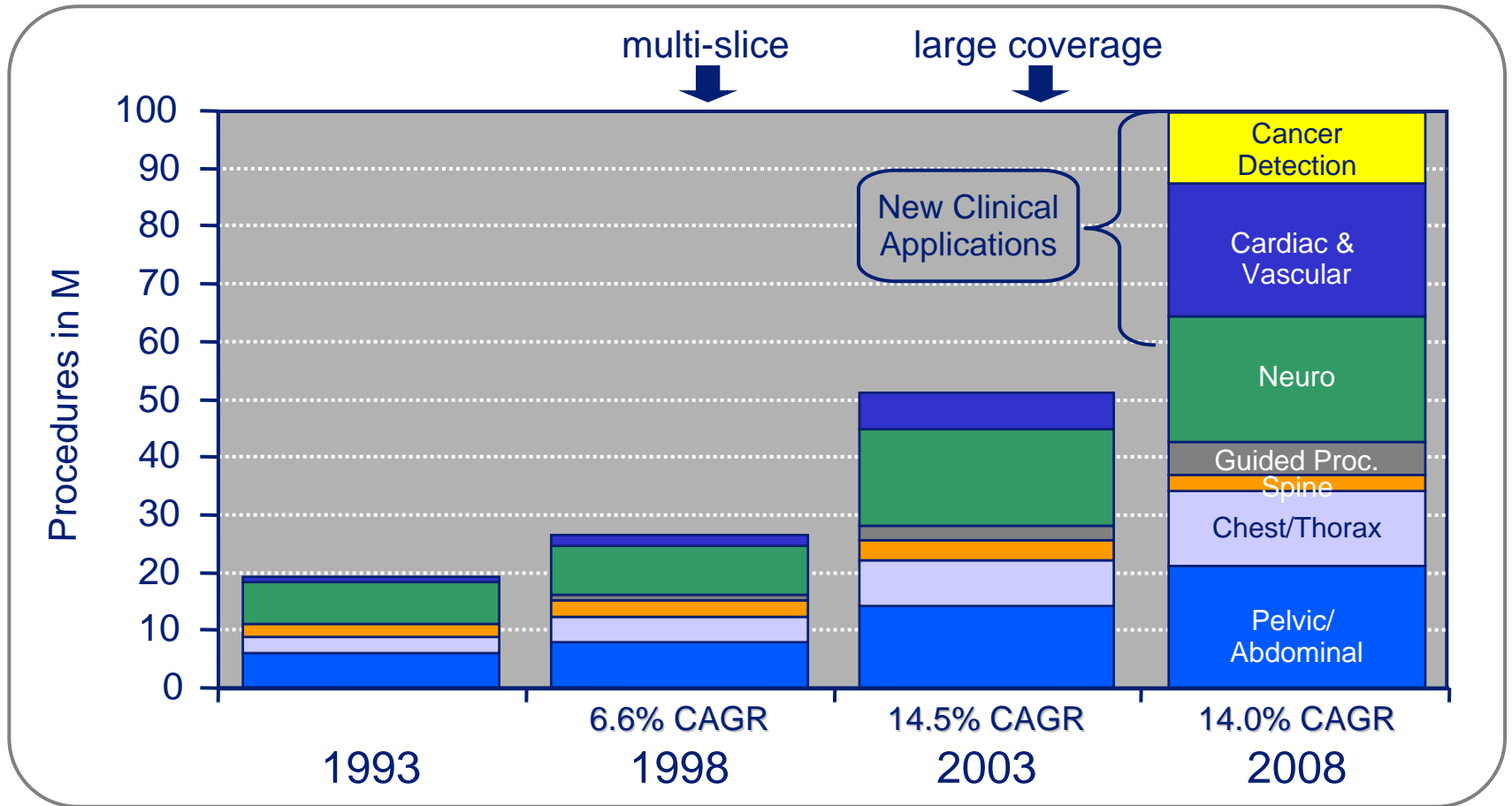


CT Angiography



CT Perfusion/
stroke maps

CT Procedure Growth in U.S.



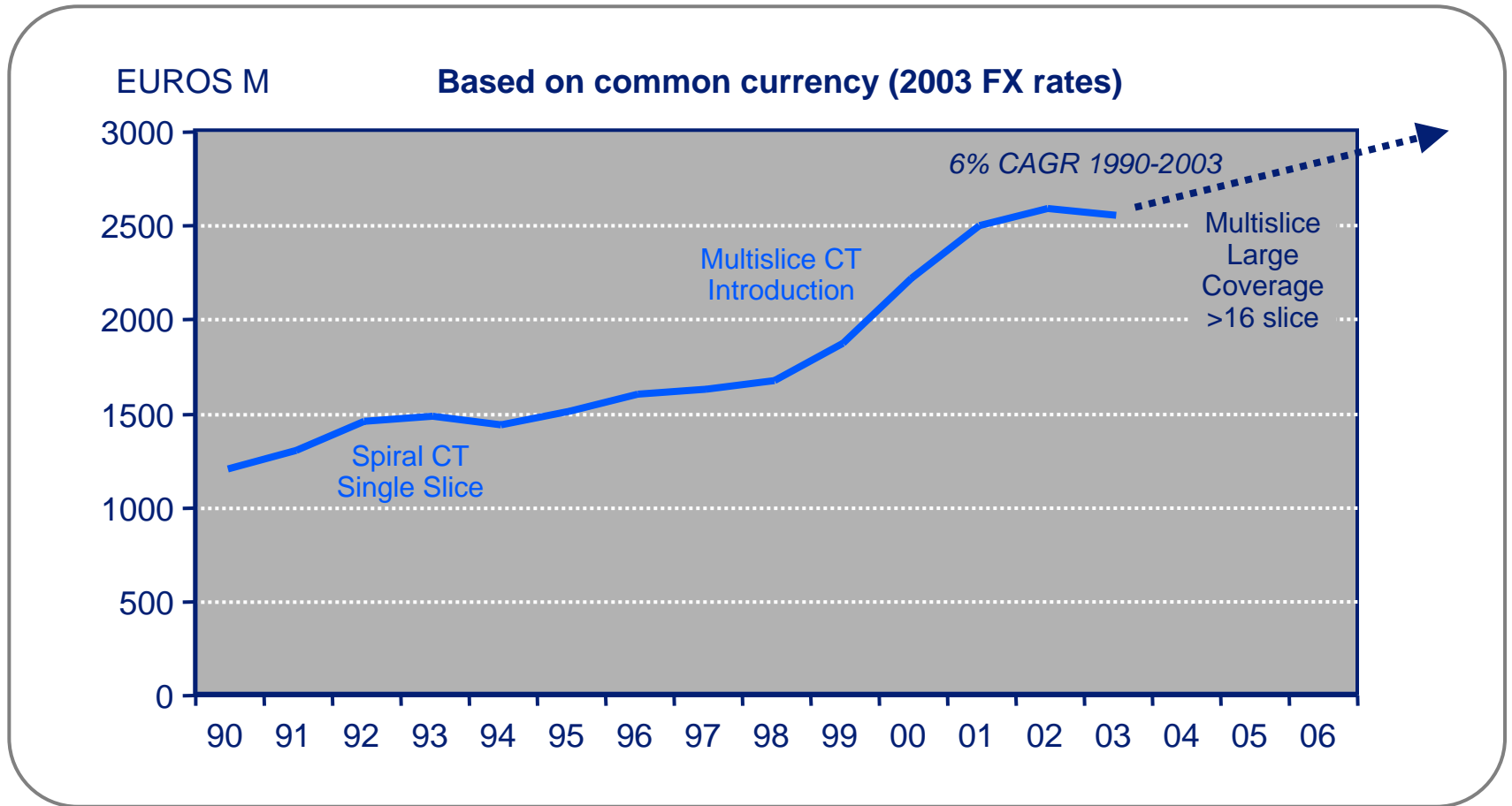
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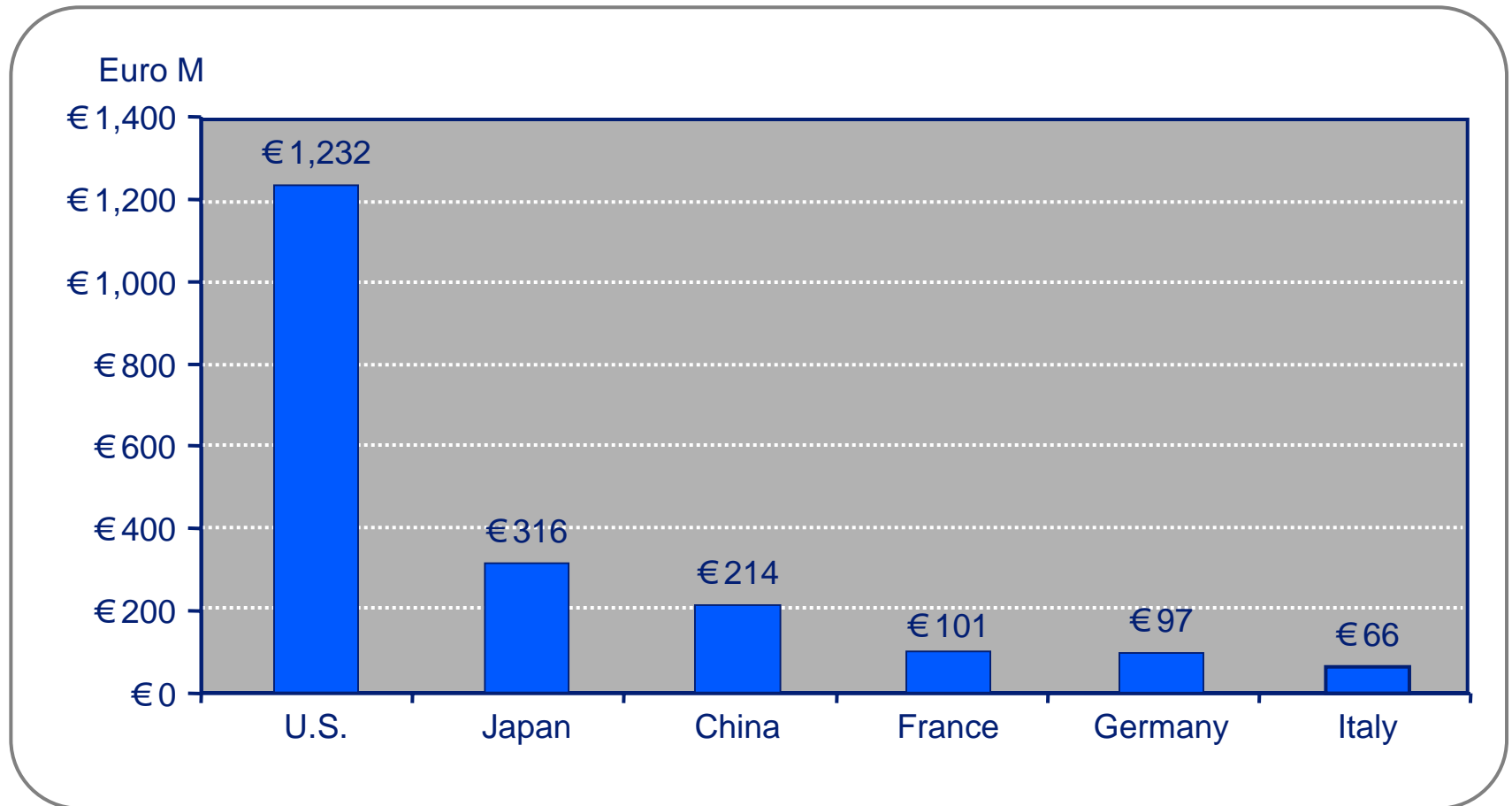


Total CT Global Equipment Market

History



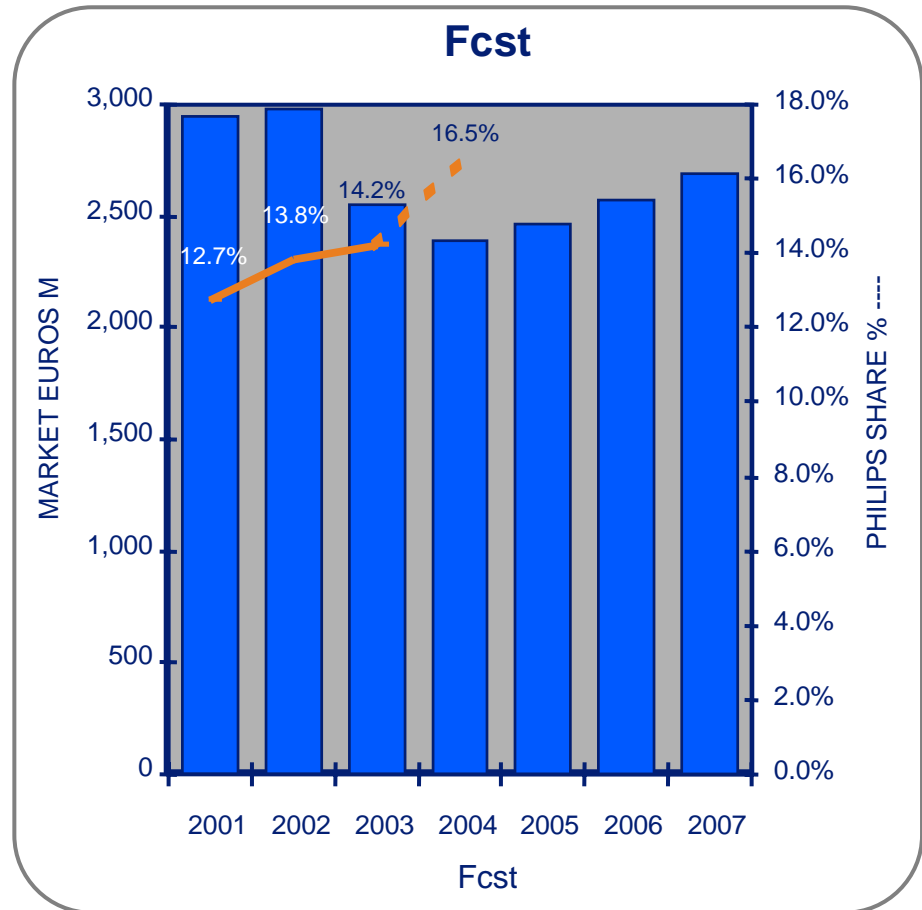
World Top 6 CT Markets by Size (2003)



CT Global Orders Market and Philips Share

Comments:

- '03 & '04 market decreases driven by currency
- China has excellent growth opportunity
- Strong incremental growth in Japan
- Strong in Europe due to technology orientation and Philips brand
- NA experienced initial integration issues but is now on track

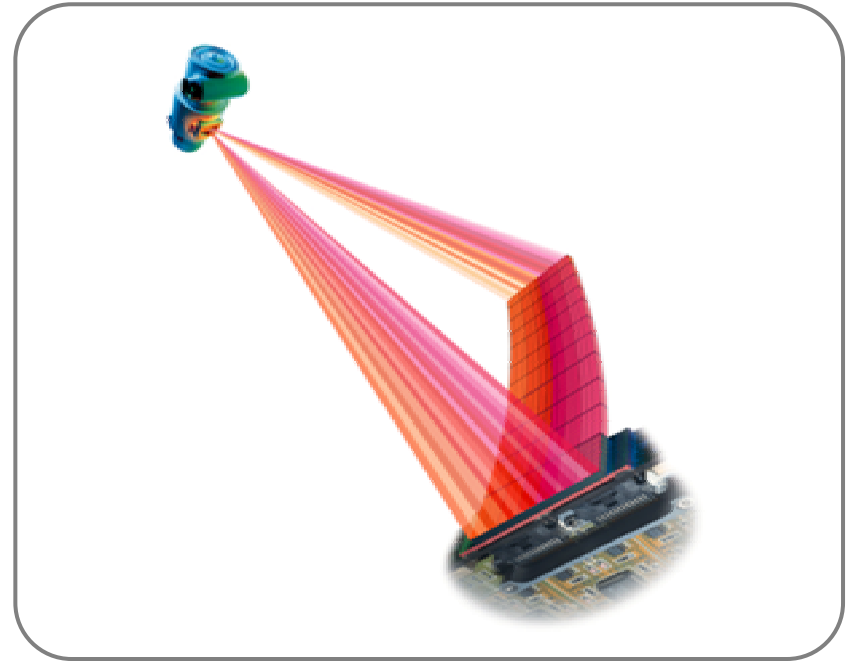


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Why we win: Technology Leadership



- Royal Philips Research
- Technology leader in detection, with large area coverage
- Patented Tach technology, more complex than Pentium

Why we win: Advanced Applications

22-day-old child



- Snapshot 3D volume picture
- In less than 400msec
- Perfect for pediatrics
- Most dose efficient



Technology enables the most advanced applications

Why we win: First to Market

History of Firsts to Market

- 1980: Solid-state detector
1988: Continuous rotation slip ring CT
- 1991: Multi-slice CT (dual)
- 1992: MRC (liquid metal bearing) X-ray tube
- 2002: The First 16-slice CT

First to Market: FDA approved for sale and systems in clinical operation

Today

- First with 4cm large coverage CT (40 slice)
- Breakthrough applications: Neuro & Cardiac
- The clear leader in technology





Dr. Jonas Rydberg, Associate Professor,
Department of Radiology, Indiana University, USA

Conclusions

- Backed by Royal Philips Research
- Technology drives our costs down, and enables breakthroughs
- First-to-market enables our premium pricing
- New geographical markets drive our marketshare
- Clinical breakthroughs and emerging market segments are driving our growth



