

VARIAN
medical systems



IR Day – Las Vegas

May 16, 2006

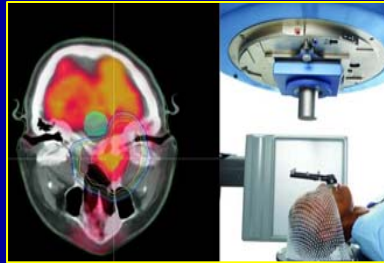
Questions of the Day

- How will the new CEO be different?
- Is the management team ready?
- Is there room to grow?

Growing Our Core Businesses



**Oncology
Informatics**



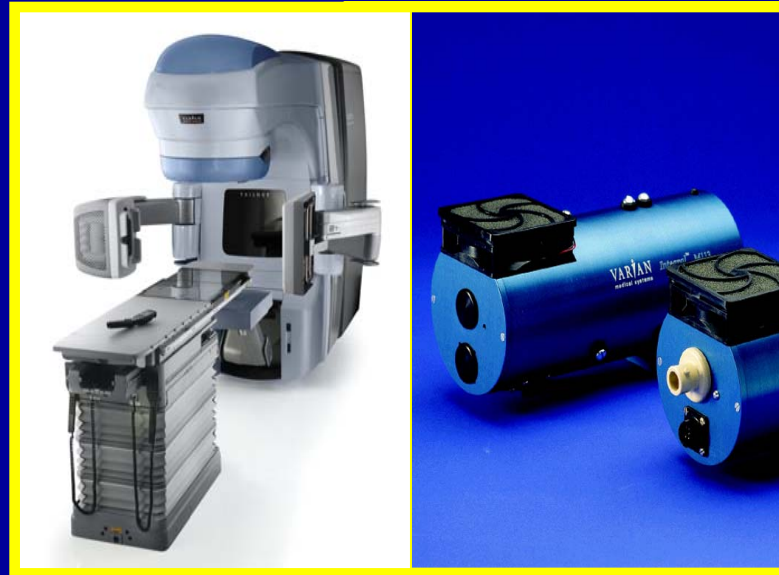
Neurosurgery



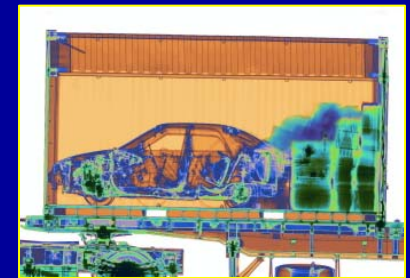
Filmless X-rays



Brachytherapy



**Radiation Oncology /
X-ray Imaging**



**Security and
Inspection**

VARIAN
medical systems

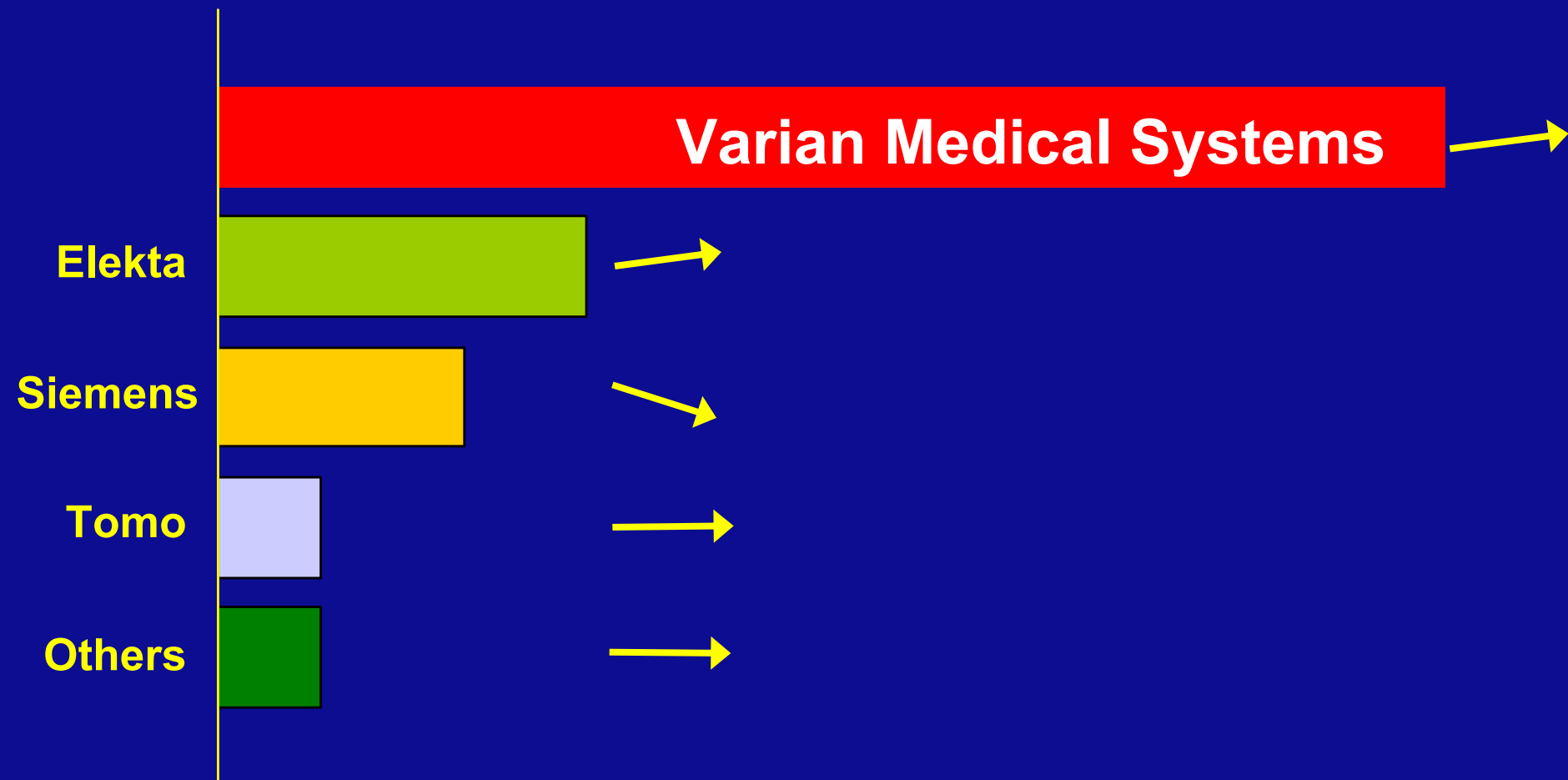


Dow Wilson
Executive Vice President
President, Oncology Systems

Today's Oncology System's Topics

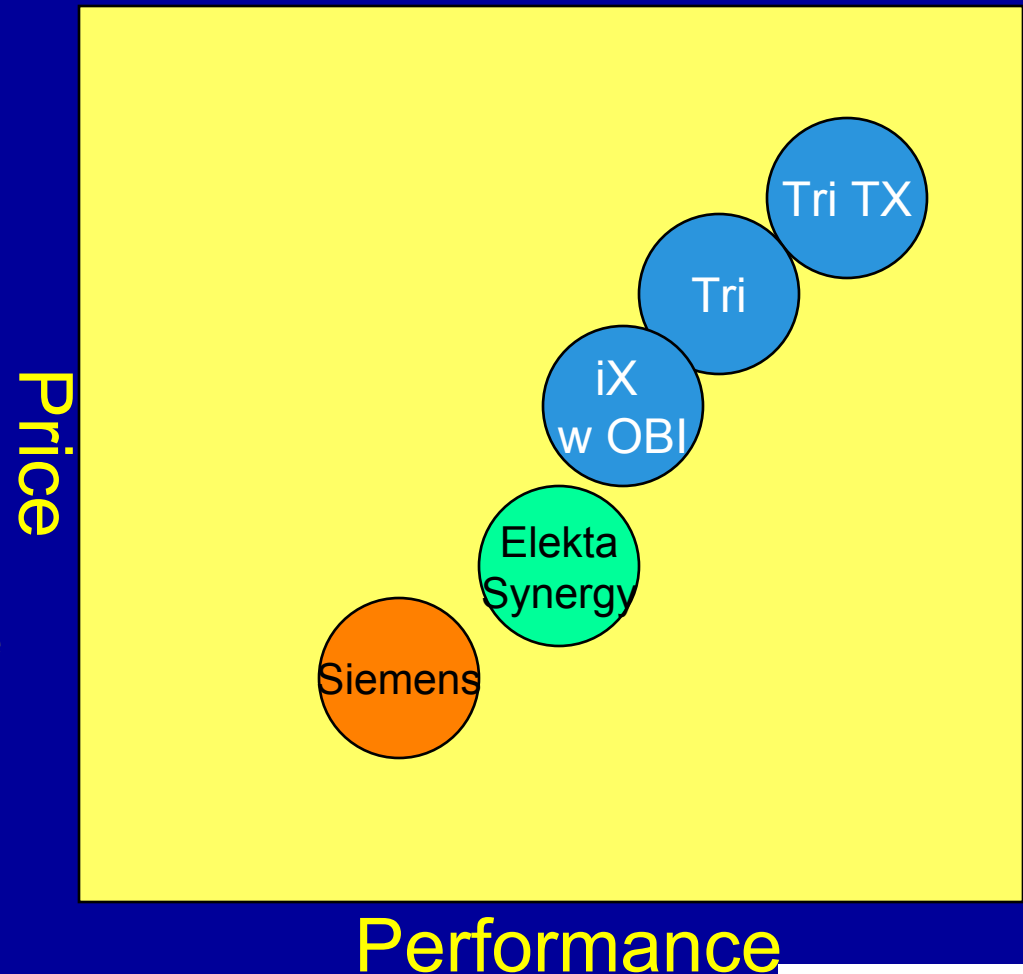
- Q2 YTD Share and Orders
- Growth Drivers
- Varian's Winning Edge

Competitive Environment/Share



Competitive Product Positioning

- Versatile product line designed for Conformal, IMRT and SRS
- Most cost effective products on market
- Premium price to competitors based upon
 - Reputation for reliability and stability
 - Unique features
 - 120 MLC
 - AS 1000
 - High dose rate SRS mode
 - Multi-mode IMRT



Q2 YTD Orders

	% change, '05 vs. '06
Americas	16%
International	9%
Worldwide	13%

Environment Drivers

- Cancer Incidence Rising
- Global Market Underserved
- Old Installed Base
- Expanded Role for RT in Cancer Care

*Sustaining 10%-15% Global Growth
in Varian Oncology Systems*

Sources of Growth

- IGRT
- Software
- DART
- Stereotactic Products / Trilogy
- Brachytherapy
- Services

Growth Update: IGRT

- IGRT is a perfect complement to IMRT
- Place dose precisely (IMRT) and position it accurately (IGRT)
- Installations progressing well
 - 200 OBIs installed or in process
 - 164 accepted...50 in Q2 alone
- Huge Upgrade Opportunity ... \$80M / year opportunity

IGRT

Leadership in Comprehensive Solutions

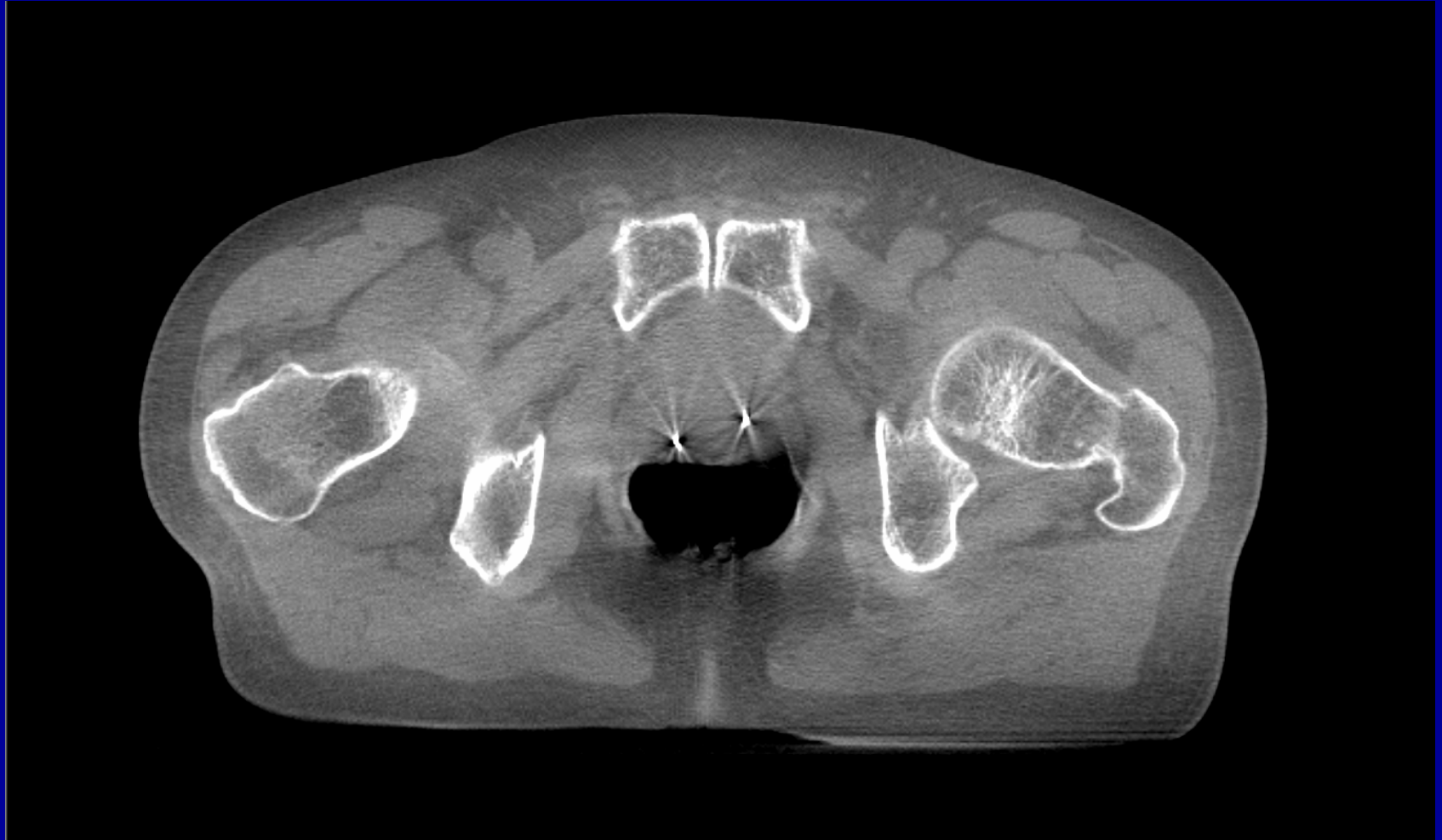


CBCT – Karolinska University Hospital

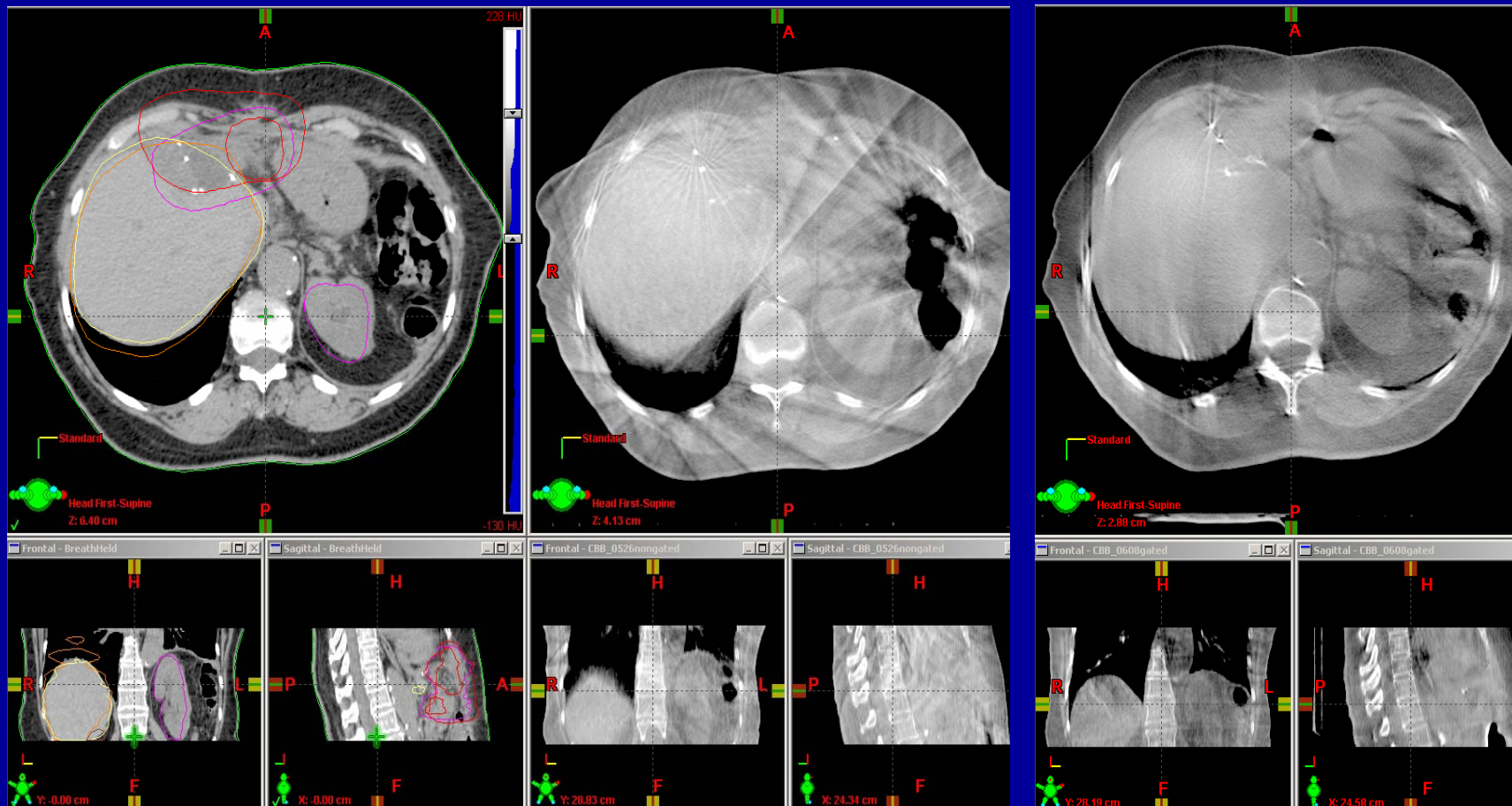
- Excellent image quality



CBCT – MIMA Cancer Center



IGRT – Enabling New Clinical Capabilities

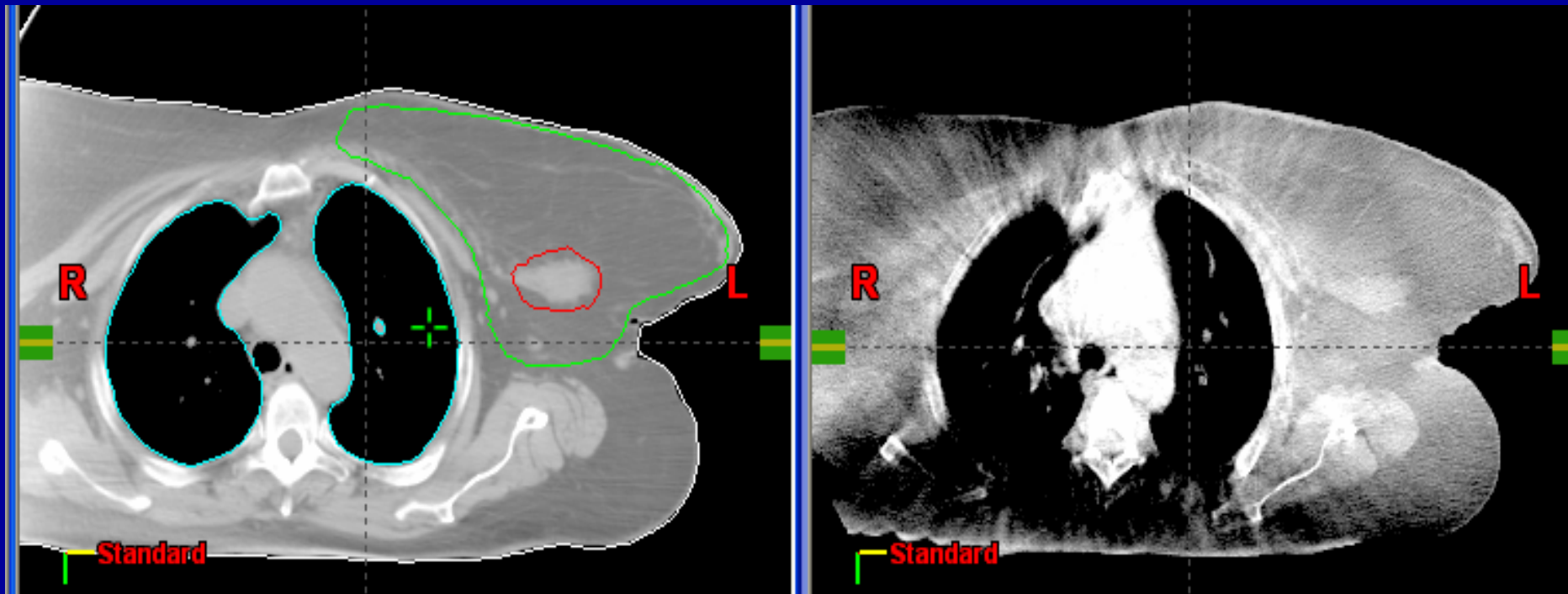


Sim CT

**CBCT
Free-breathing**

CBCT Breath hold

IGRT – Enabling New Clinical Capabilities



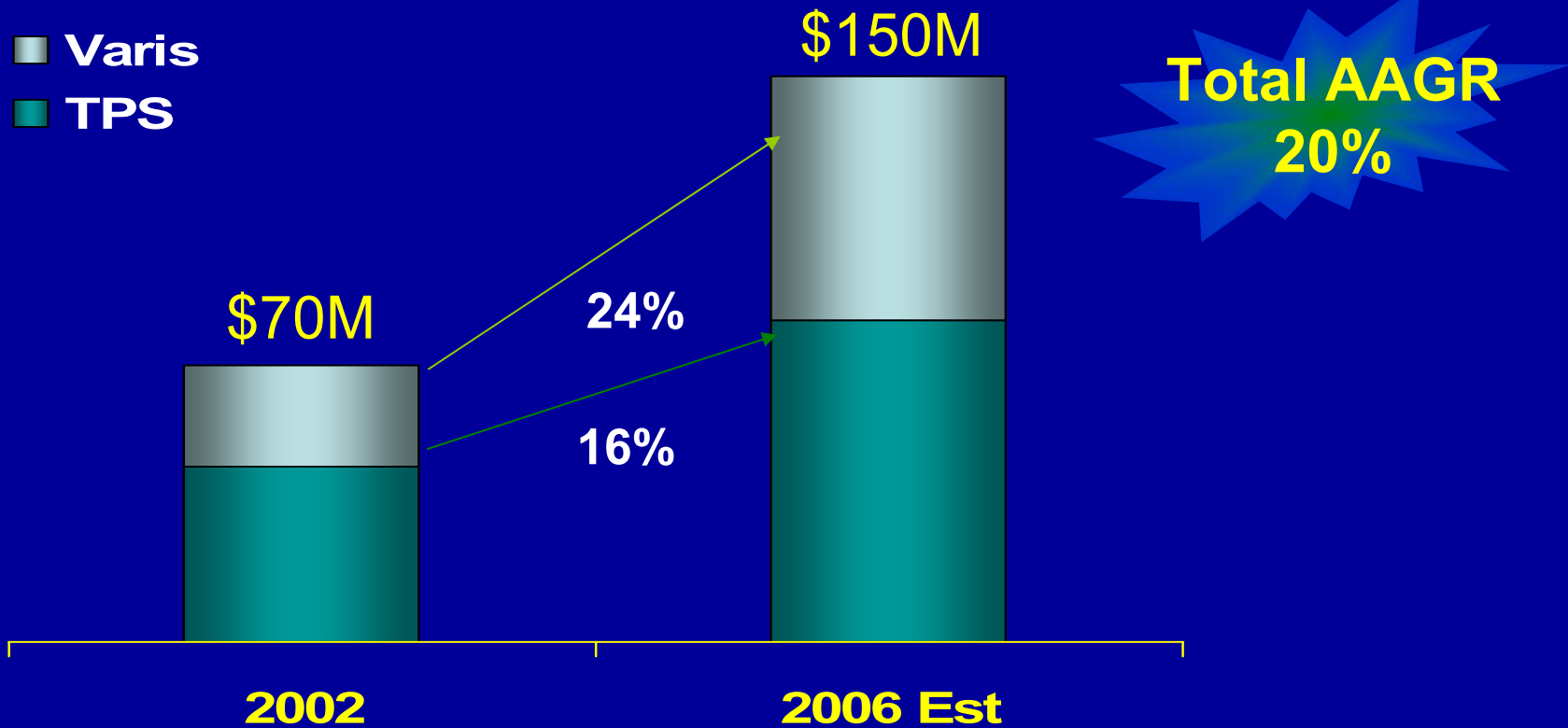
Planning CT

CBCT

Software – Leadership in Treatment Planning, Medical Oncology and Radiation Oncology



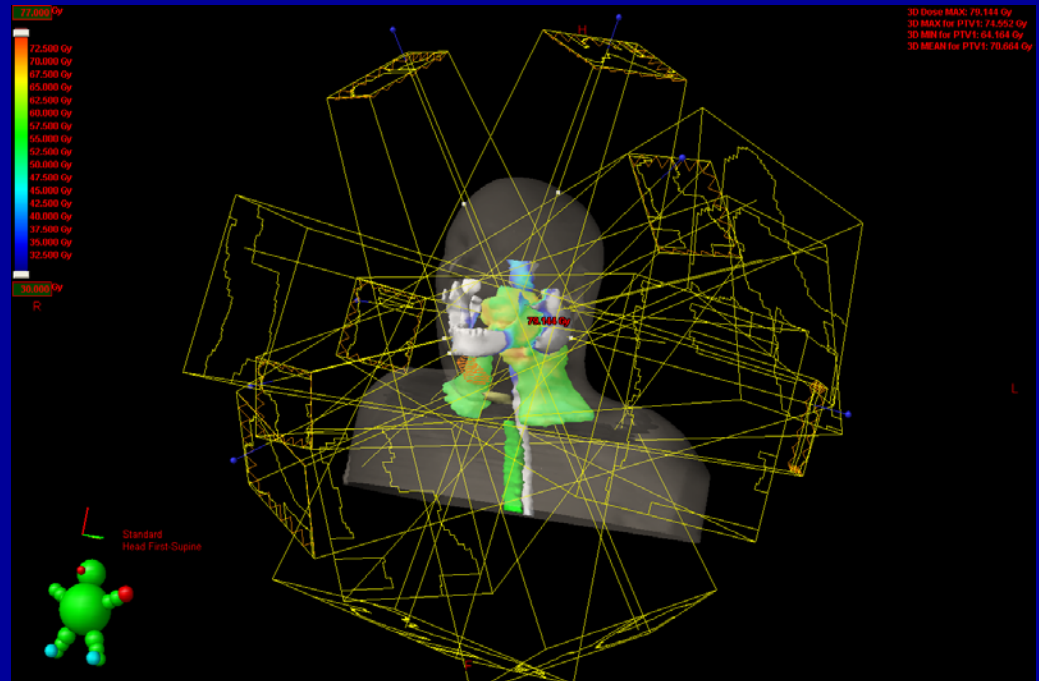
Software Order Growth



Solid Double Digit Growth!

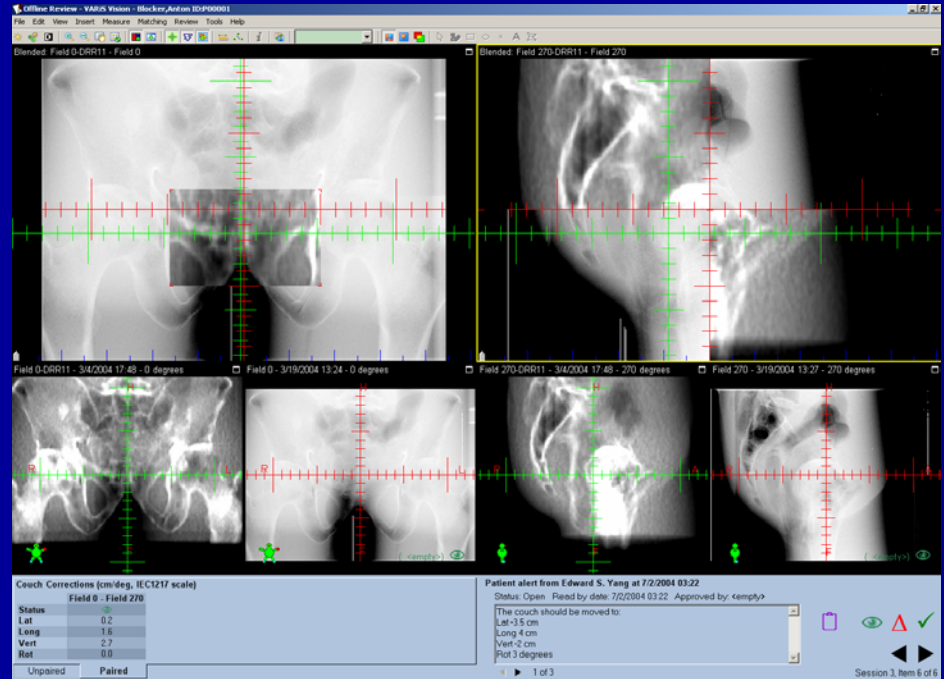
Eclipse Treatment Planning

- Eclipse - Planning for photons, electrons, protons, brachytherapy and SRS in one package
- GEOS - Geometrical beam angle and beam intensity optimization
 - Automates the planning process
 - Allows search for new IMRT techniques for complex treatment cases
 - Provides excellent dose conformity with minimum number of beams to minimize the integral dose to the patient
- >25% orders growth first half



ARIA Oncology Information Management

- Only integrated environment
- Most comprehensive image management
- Supports IGRT and DART
- Integrated Medical Oncology capability



3D Image Management on and off-line

Offline Review 8.1 - Blocker, Anton ID:P00001

File Edit View Insert Measure Matching Review Tools Help

Transversal - ImageUShort124 - ImageUShort180 - 5/30/2005 00:00

Transversal - ImageUShort124 - 5/30/2005 00:00

Head First-Supine
Z: -5.07 cm

Z: -5.07 cm

Frontal - ImageUShort124 - ImageUShort180 - 5/30/2005 00:00

Sagittal - ImageUShort124 - ImageUShort180 - 5/30/2005 00:00

Y: -2.89 cm

X: 3.89 cm

Couch Corrections (cm/deg, IEC1217 scale)

Status	ImageUShort48
Lat	0.0
Lng	2.6
Vrt	-2.1
Rtn	0.0

Unpaired/Plan 1 Paired/Plan 1 CBCT/Plan 1

Patient alert from Edward S. Yang, display date 7/2/2004

Status: Open Signed off date: 7/2/2004 12:22 Signed off by: <empty>

The couch should be moved to:

- Lat: -3.5 cm
- Long: 4 cm
- Vert: -2 cm
- Rot: 3 degrees

1 of 3

Thu 7/18/2002, Item 12 of 12

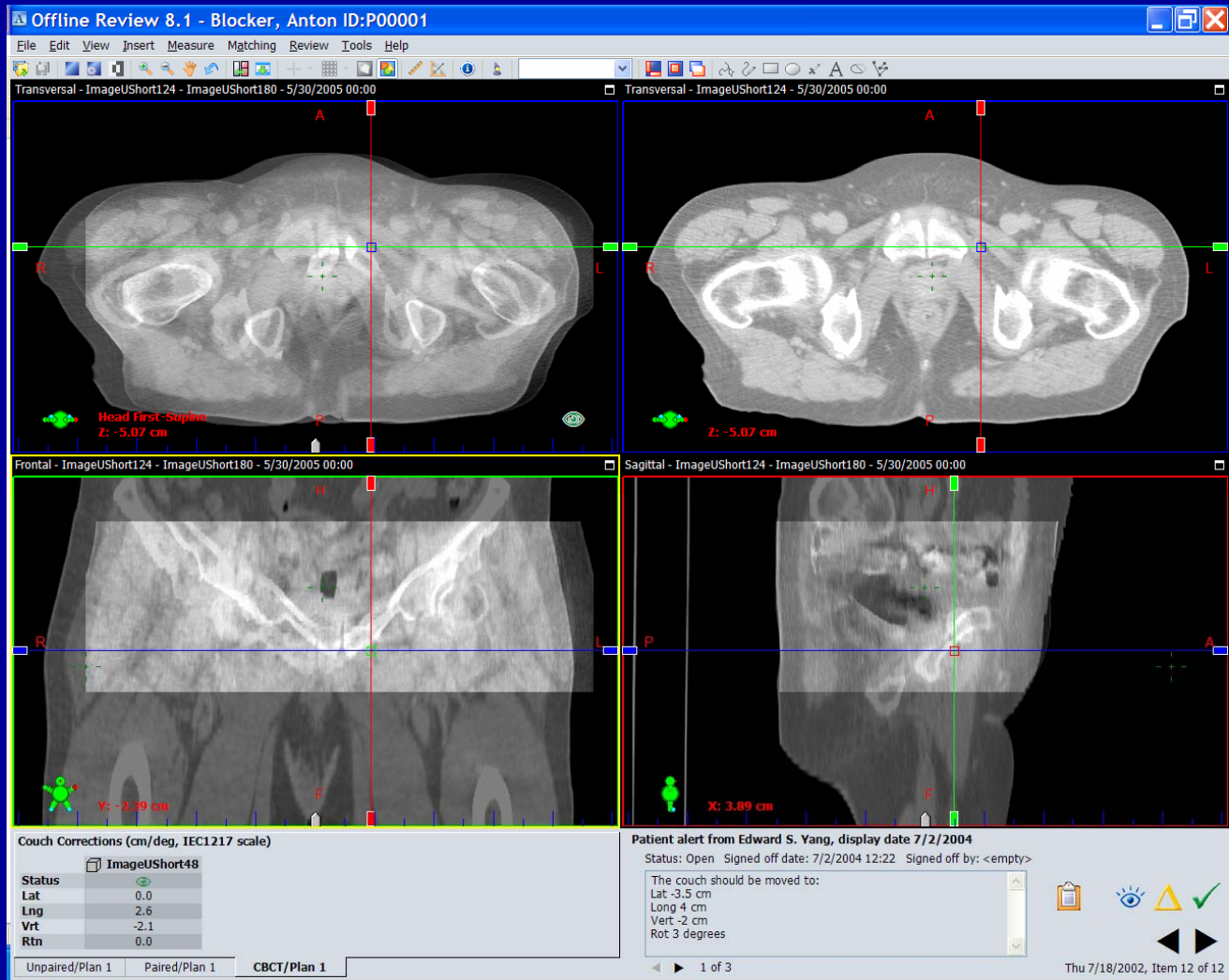
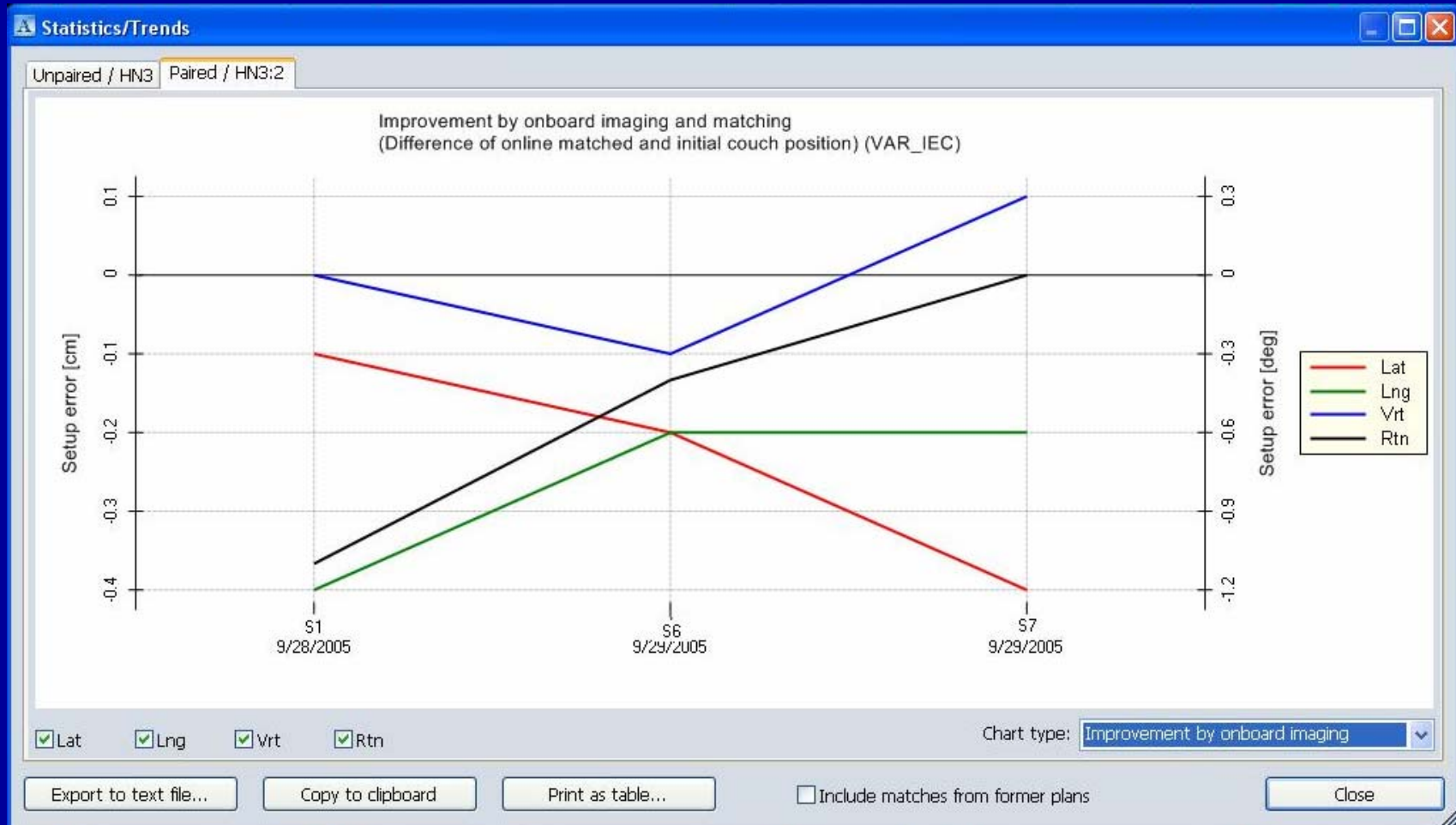


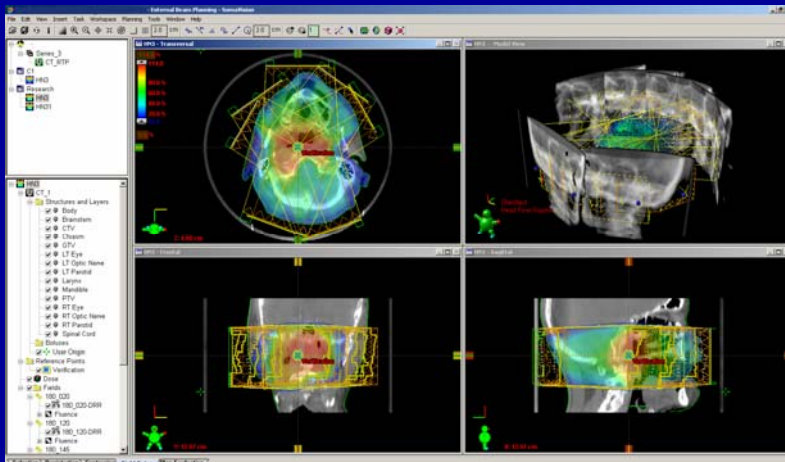
Image Review – Trend analysis



Medical Oncology

- 2004 OptX Acquisition
- Orders doubling this year; 3x since '04
- Why Med Onc is growing:
 - Great installed base sales opportunity
 - Integration of all cancer information in a single software tool
 - Digitization of Med Onc

Leadership in Dynamic Adaptive Radiation Therapy (DART)

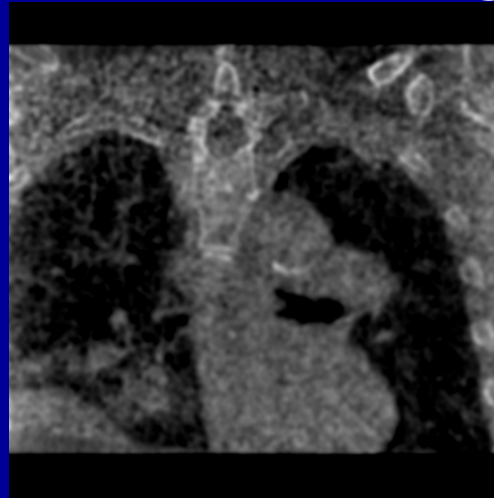


Dynamic Adaptive Radiation Therapy (DART)

- On Line – Position patient and adapt plan for geometric variation
- Real Time – Account for motion during treatment
 - Tool set being developed as components
 - Seed tracking
 - Motion enhancement
 - Diaphragm tracking
- Off line – adjust plan periodically for changes in anatomy and physiology

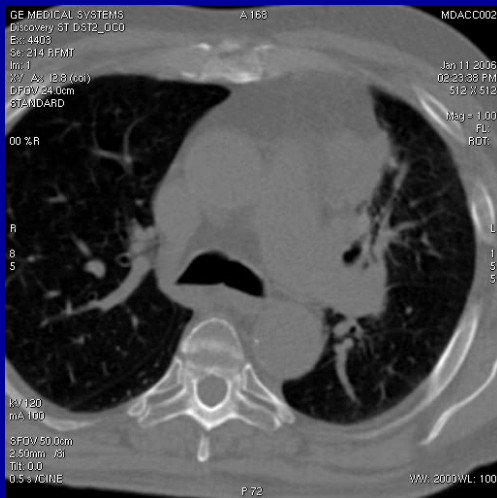
On line Innovations: 4D CBCT vs. 4D CT Patient Study

CBCT



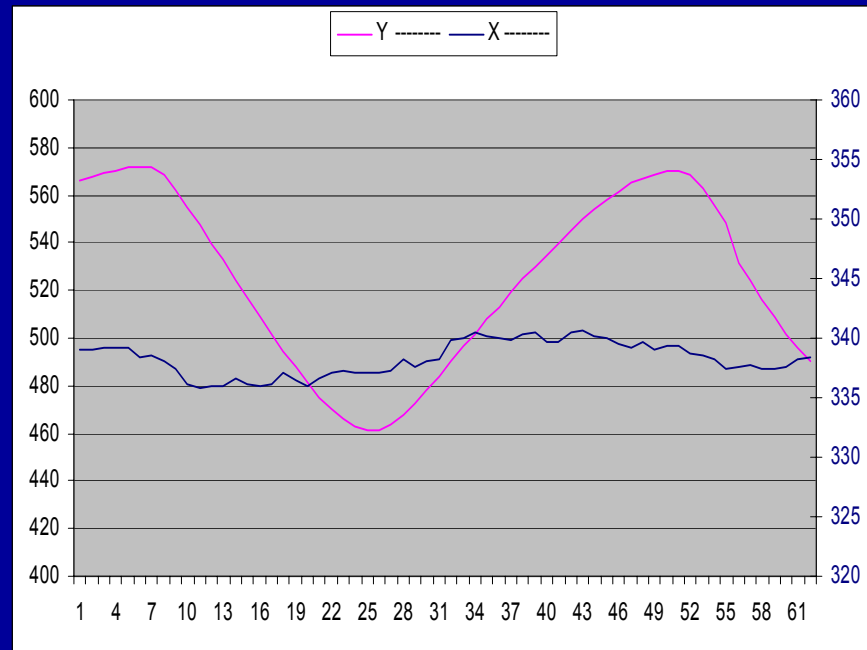
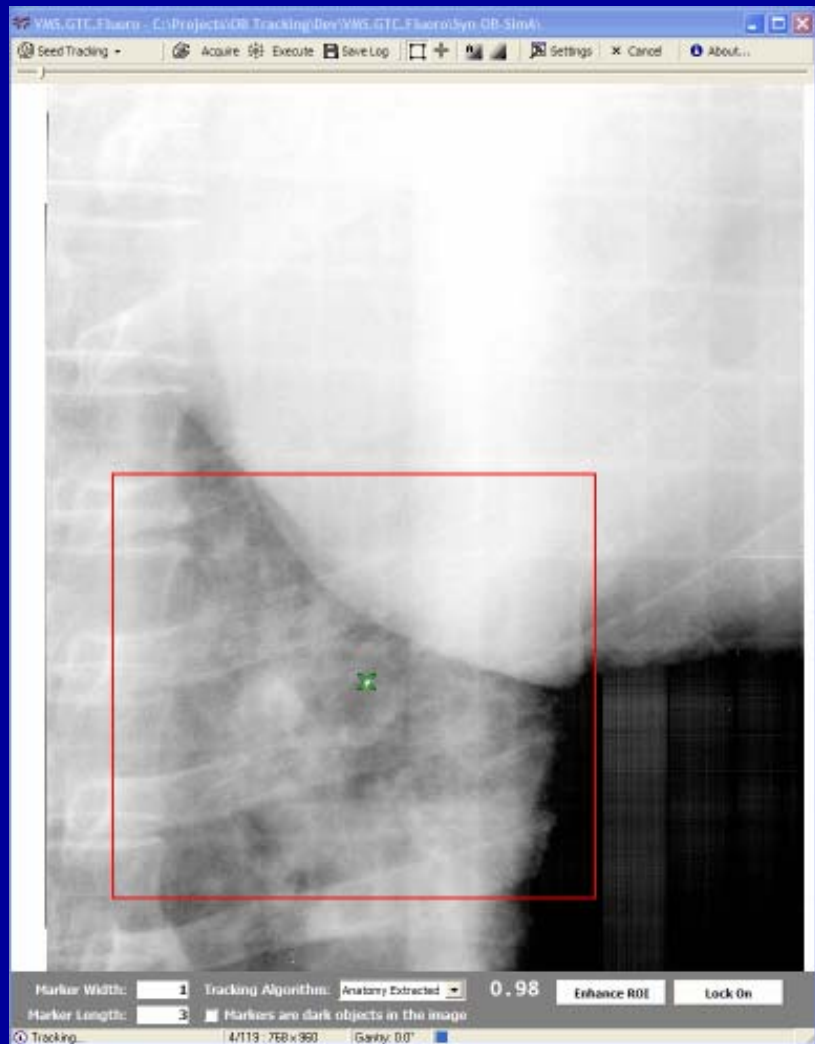
7.1 cGy, 125 kV, 50 mA, 20 ms, 2730 projection

MDCT



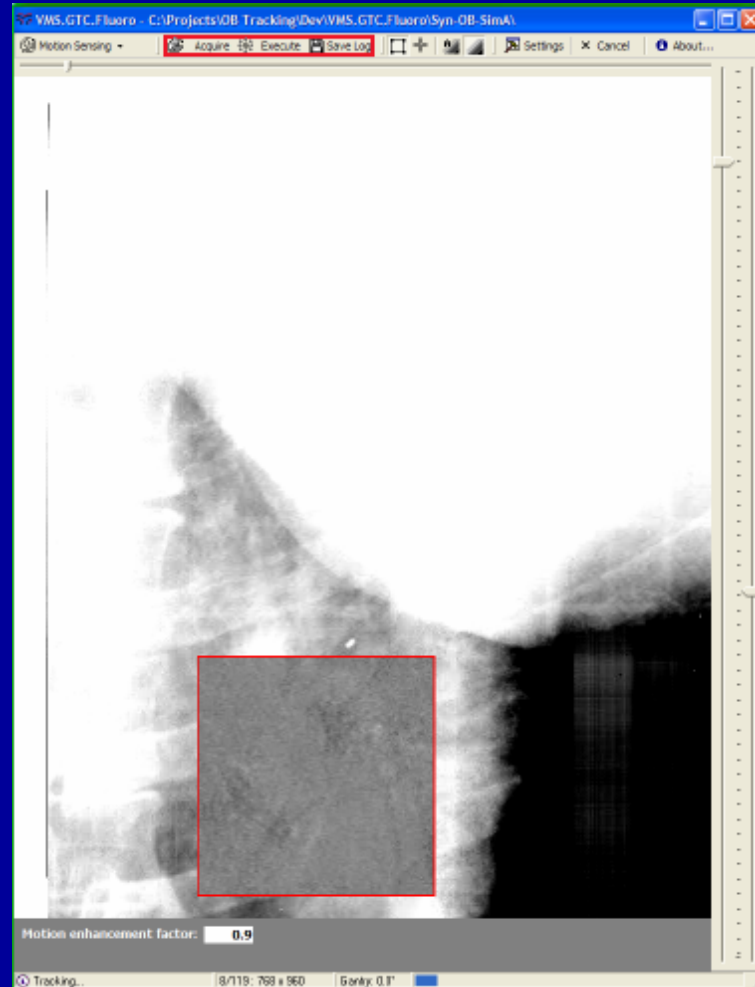
Real Time Innovations: Marker Tracking

Radio-Opaque Marker Automatic Acquisition and Tracking

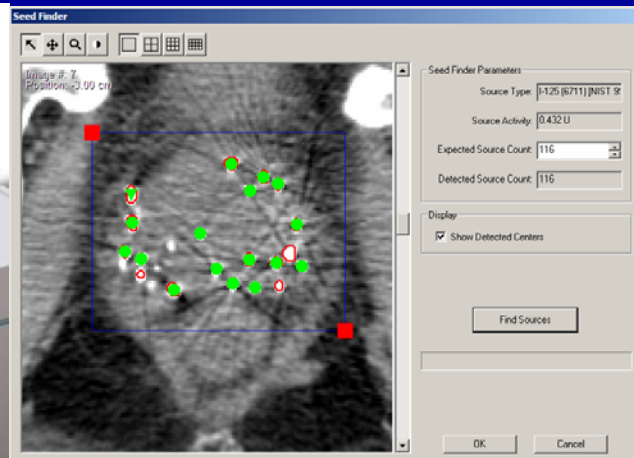
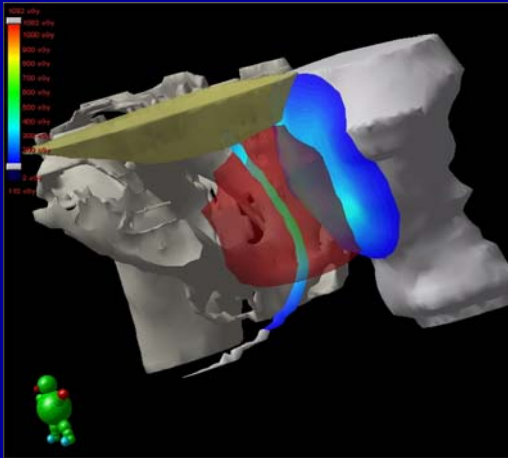


Real Time Innovations: Markerless Tracking

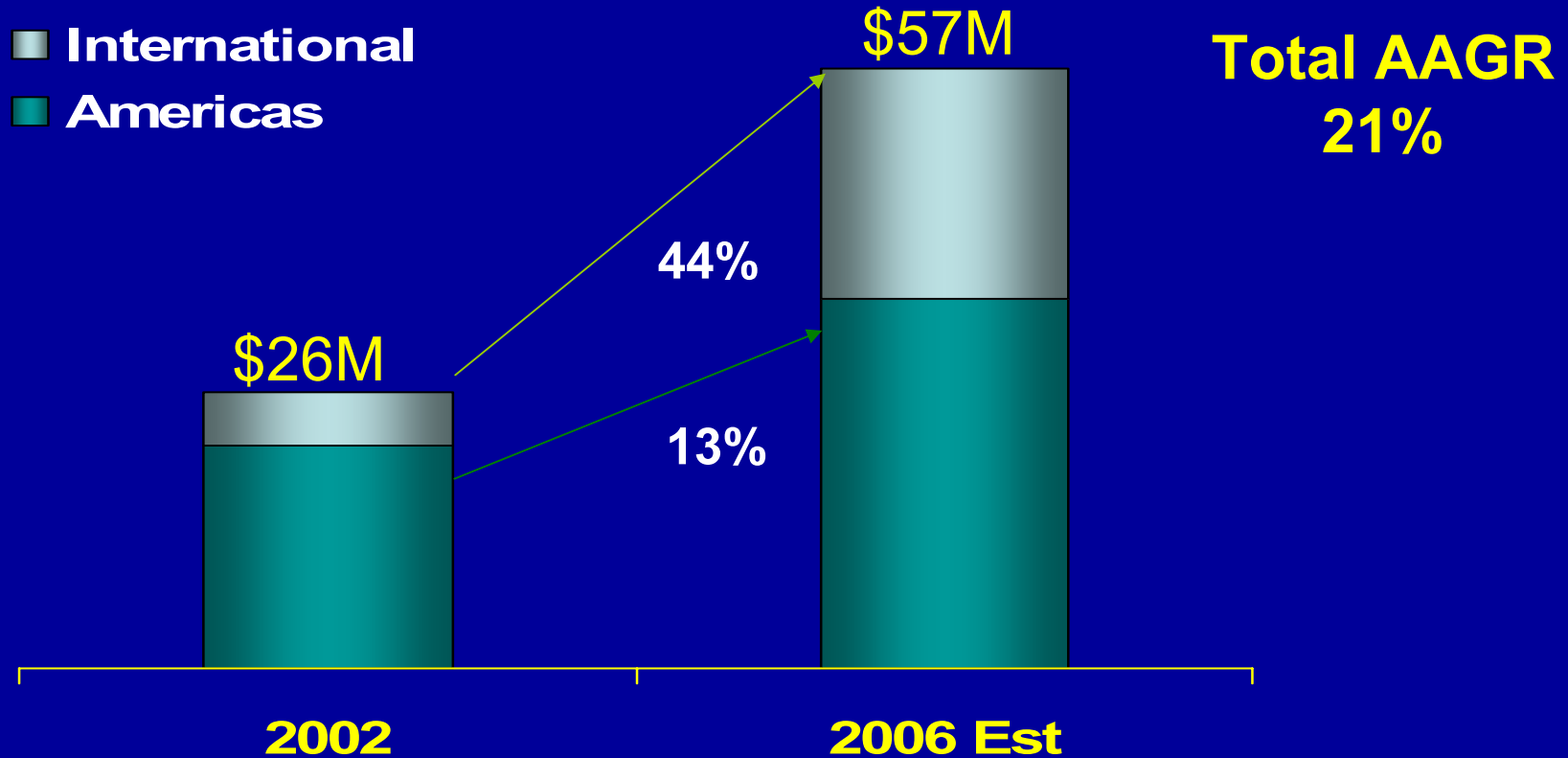
- Tracking of soft tissues in real time for fluoro based gating and tracking variation



Leadership in Brachytherapy

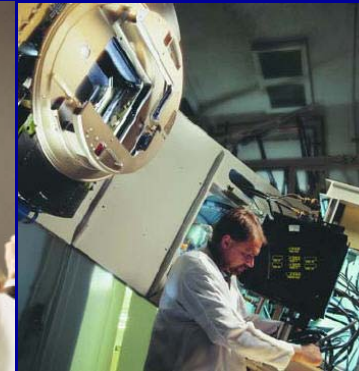


Brachytherapy Growth



APBI Driving Americas Growth
Expanded Int'l Coverage Delivering Growth

Leadership in Services

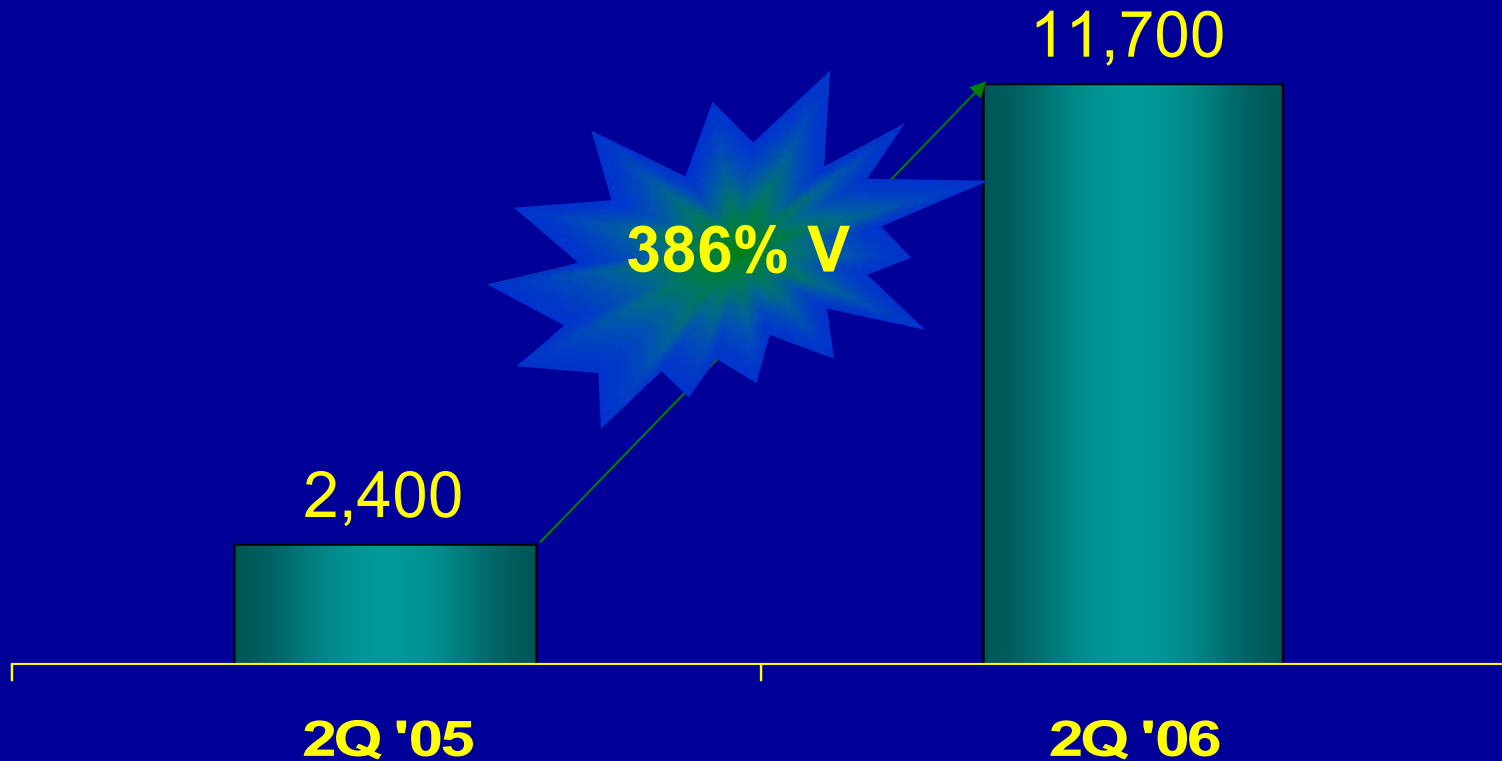


Service Growth Drivers

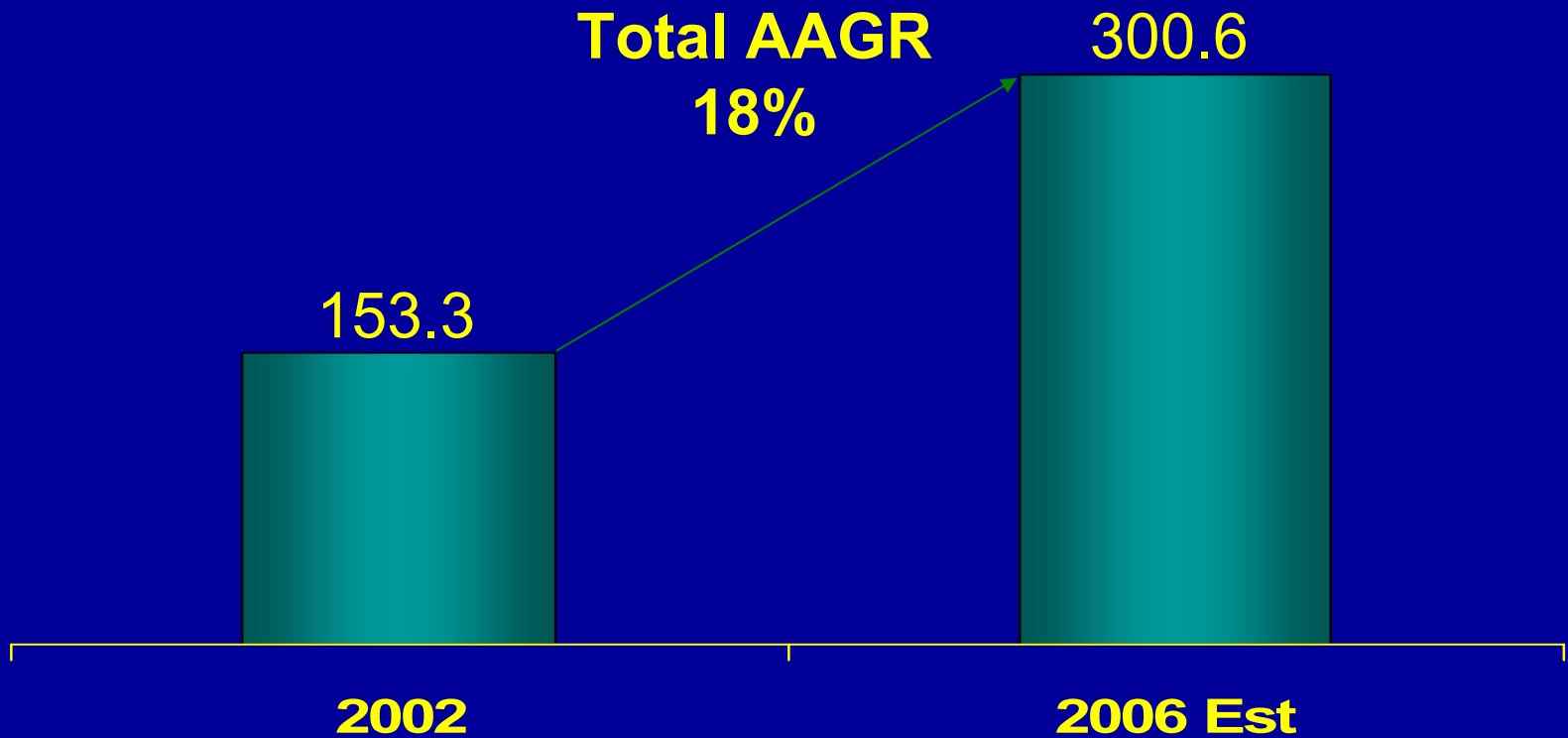
- Installed Base
- Installed Base Offerings ... Upgrades
- S/W Service Contract
\$18M in '04 → \$32M '06 Est
- Software Support

Service Growth

Smart Connect Usage - hours



Service Growth





Lester Boeh
VP and GM
Surgical Sciences and
Security Inspection Products

Varian Surgical Sciences

Purpose

Leverage Varian's experience, talents and technology into other areas of patient care

Accelerate business growth beyond Oncology by expanding IGRS access to patients being treated via other methods

Add value by developing innovative non-invasive alternatives to open surgery

What is Stereotactic Radiosurgery (SRS)?

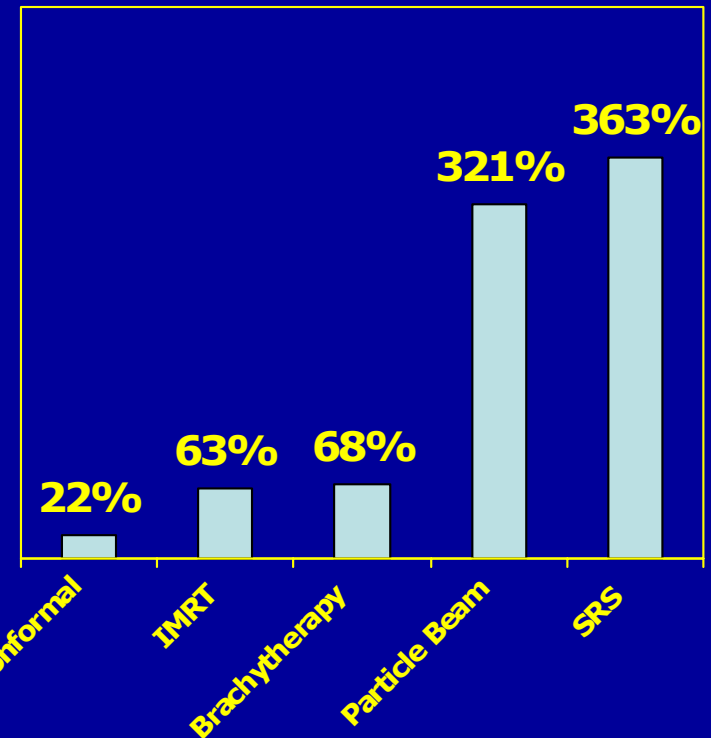
- SRS is the non-invasive delivery of an accurate beam of high-energy radiation to a target, usually in a single session.
- SRS can also be done in several sessions (“phases”).
- SRS combines advanced software and hardware to treat tumors, vascular malformations and functional conditions
 - Bloodless outpatient procedure
 - SRS is a valuable treatment alternative for patients with “inoperable” conditions
- *IGRS is the next step, enhancing SRS with images of the patient in the treatment position.*

SRS will continue to grow at a rapid rate

Distribution of Radiation Oncology Procedure Volume by Modality US Market, 2005

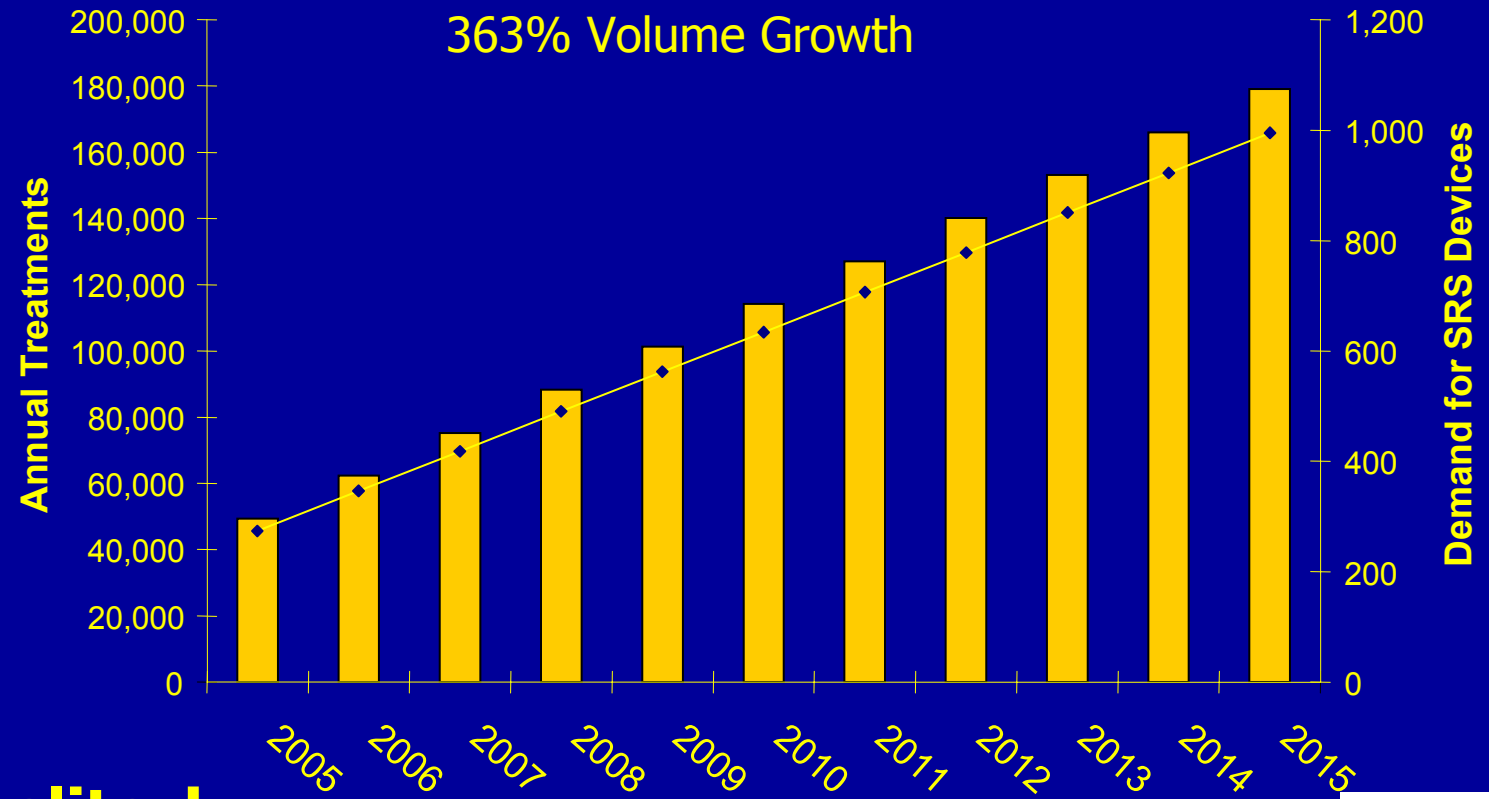
Modality	2005 Volumes	% Share
3D Conformal	24,372,388	92%
IMRT	972,772	4%
Brachytherapy	945,771	4%
SRS	49,318	0.2%
Particle Beam	9,716	0.04%

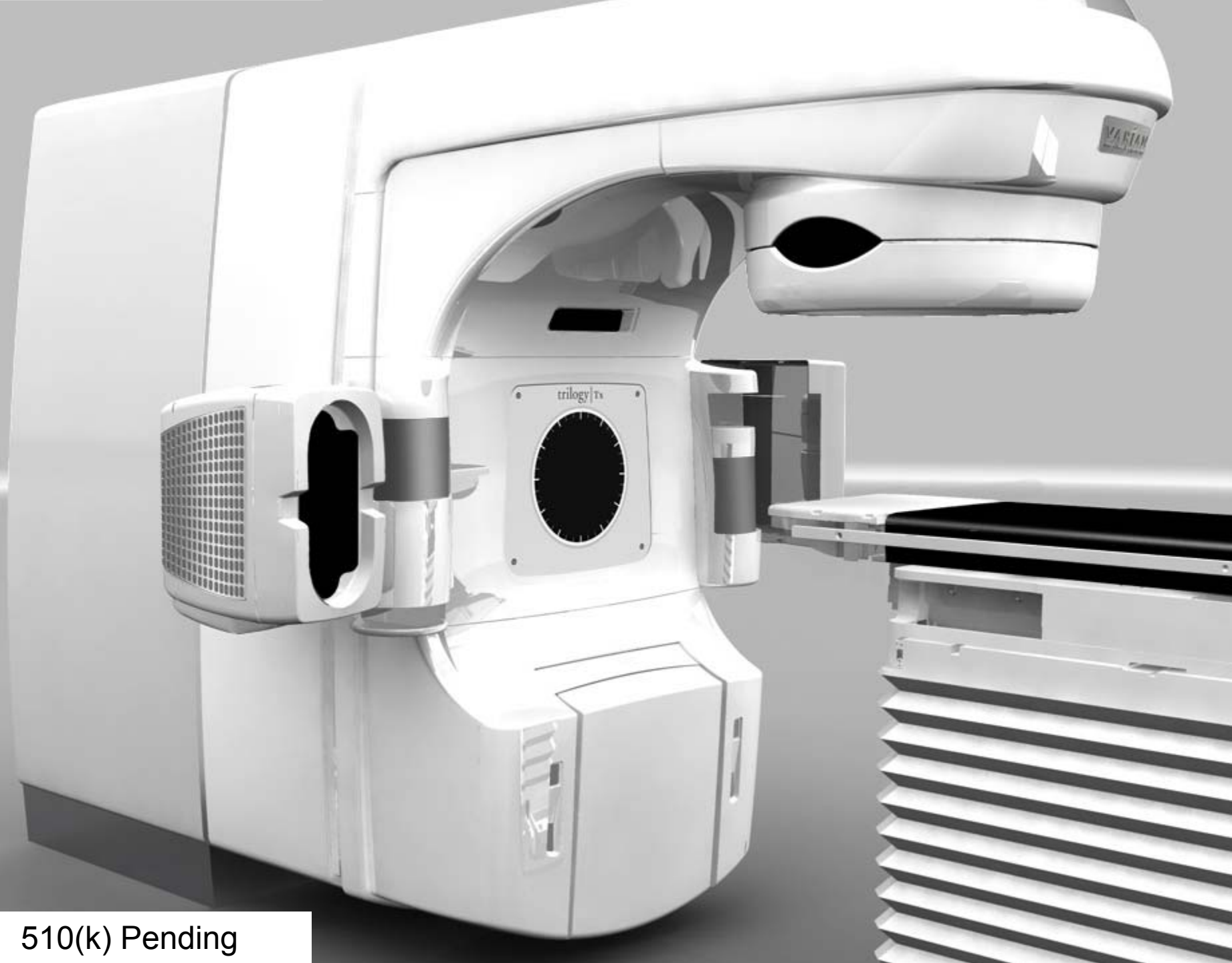
Volume Growth Radiation Oncology by Modality US Market 2005-2015



Physician adoption will drive treatment volume and SRS sales

Stereotactic Radiosurgery Market Growth Projections

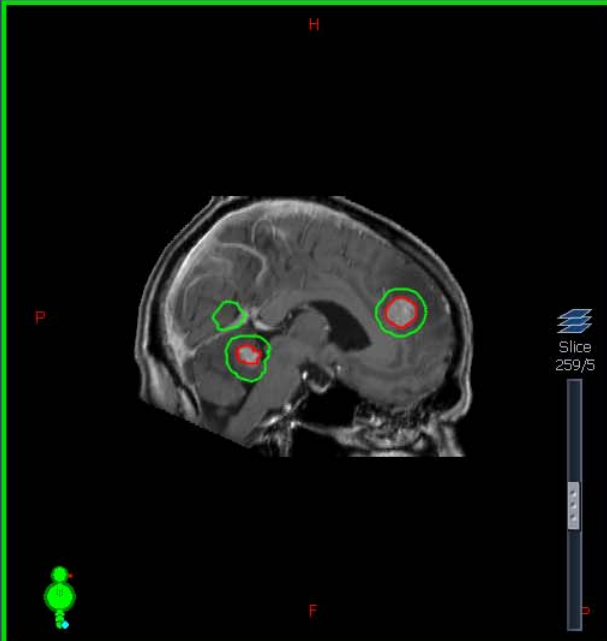
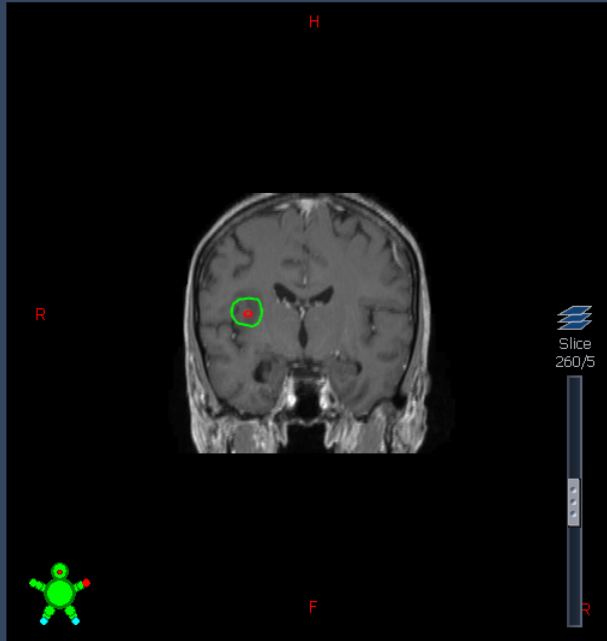
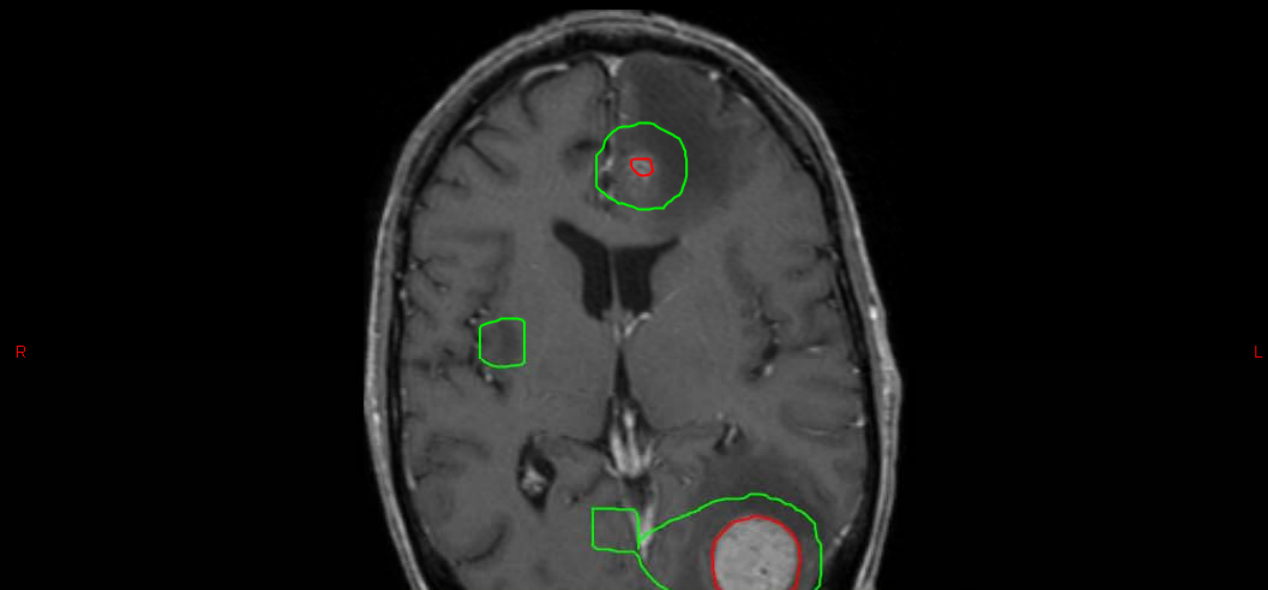




510(k) Pending

Fleinkman, Harold

Axial, Sagittal, Coronal



Plan Parameters

Plan Name / ID: IMRT - 13 Beams Last modified by: LGB 3/3/06 @ 2:45PM

Targets	%	Min Dose	Rx Dose	Volume	Equiv. Dia.	Conformality
<input checked="" type="checkbox"/> PTV	<input type="checkbox"/>	19.2Gy	20.0Gy	14.6cc	3.0cm	1.15

Critical Structures	Max Dose	Min distance to:		At...	Volume	Equiv. Dia.
		PTV, Rx Dose	At...			
<input checked="" type="checkbox"/> Optic Chiasm	4.2Gy	35mm	Max Dose	0.0cm3	0.0cm	
<input checked="" type="checkbox"/> Optical Nerve	2.9Gy	38mm	Max Dose	0.0cm3	0.0cm	
<input checked="" type="checkbox"/> Brain Stem	14.6Gy	2.3mm	10Gy	0.12cm3	0.6cm	
<input checked="" type="checkbox"/> Eyes	2.4Gy	45mm	Max Dose	0.0cm3	0.0cm	
<input type="checkbox"/> Total Tissue	25.1Gy	n/a	1/2 Rx Dose	49.85cm3	4.6cm	

Contouring

Fusion Review

Plan Review

Compare Plans

Accept

Works in Progress

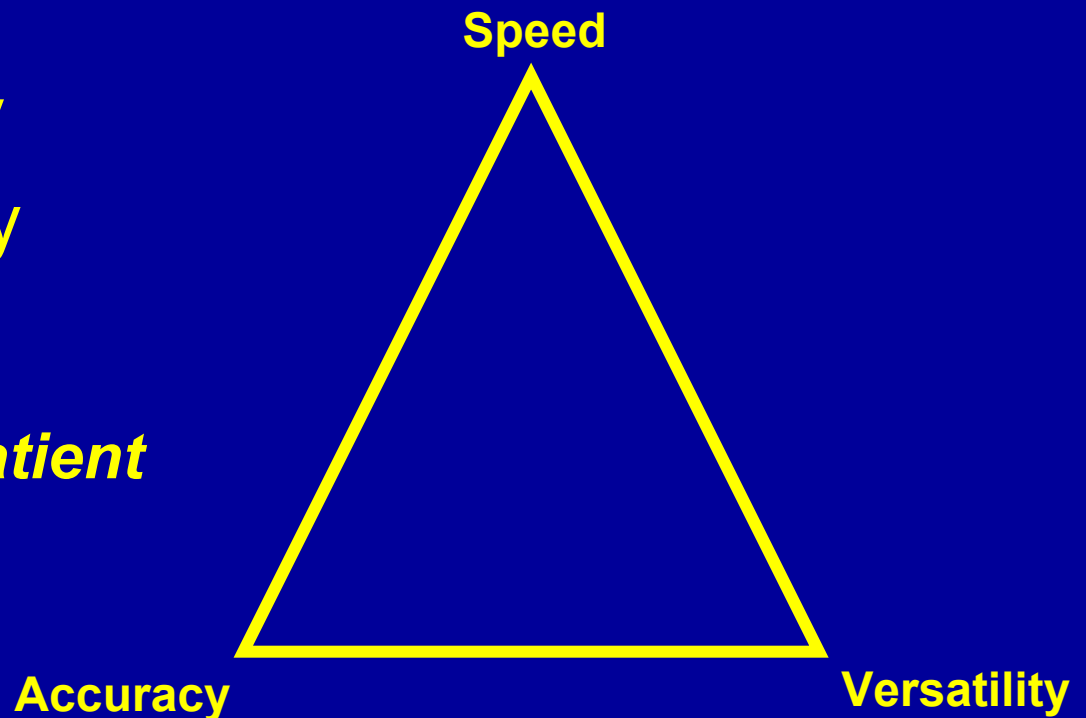


Works in Progress

Trilogy

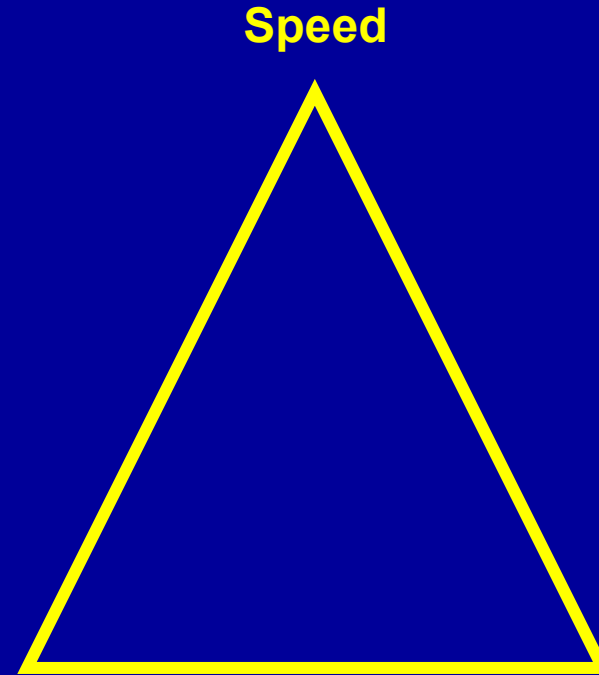
- Speed
- Accuracy
- Versatility

“SAVE” the patient



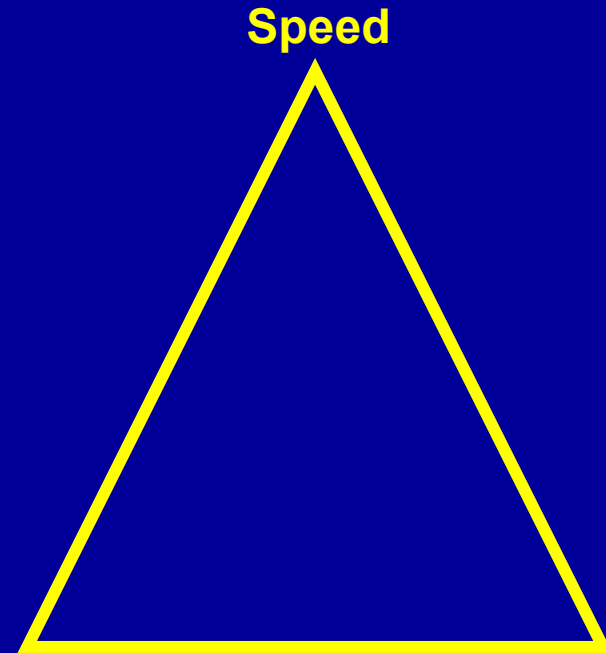
Trilogy

- Speed
 - High dose rate
 - 1000 MU/min
 - MLC
 - Larger lesions and multiple lesions with one isocenter
 - Remote couch motion
 - Portal Dosimetry
 - Information management



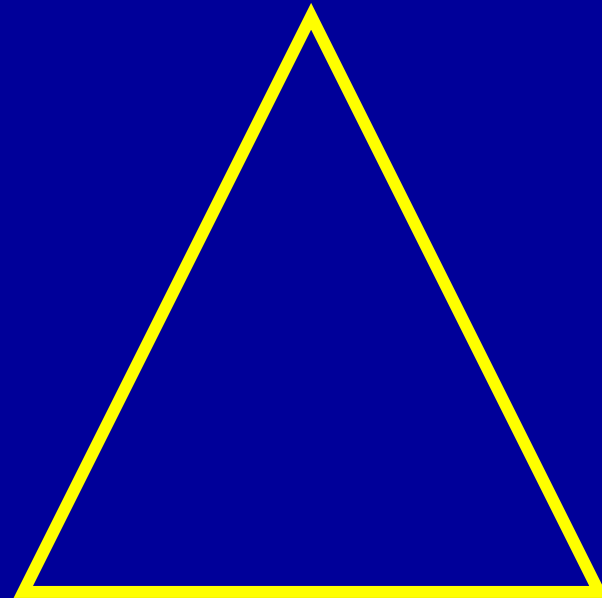
Trilogy

- The benefits of speed are:
 - reduced effects of lesion motion during treatment
 - more biologically effective treatments
 - enhanced patient comfort
 - More efficient staff and department utilization



Trilogy

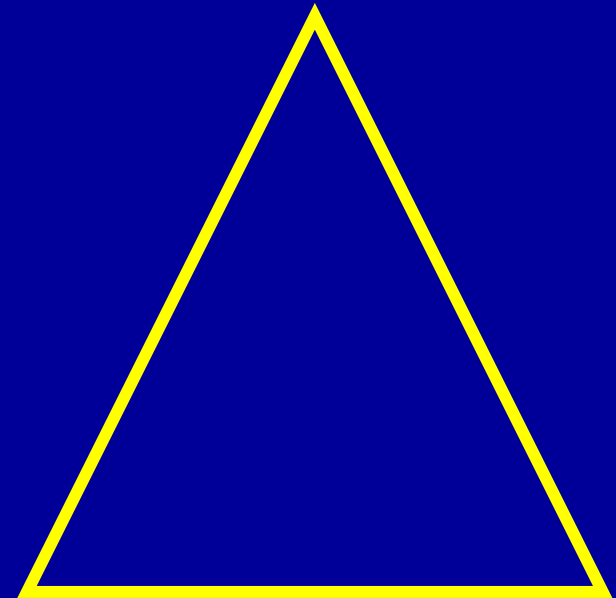
- Accuracy
 - Image-Guided patient set-up
 - Optical, kV and MV imaging systems
 - Tight mechanical specifications
 - Tight dosimetry specifications



Accuracy

Trilogy

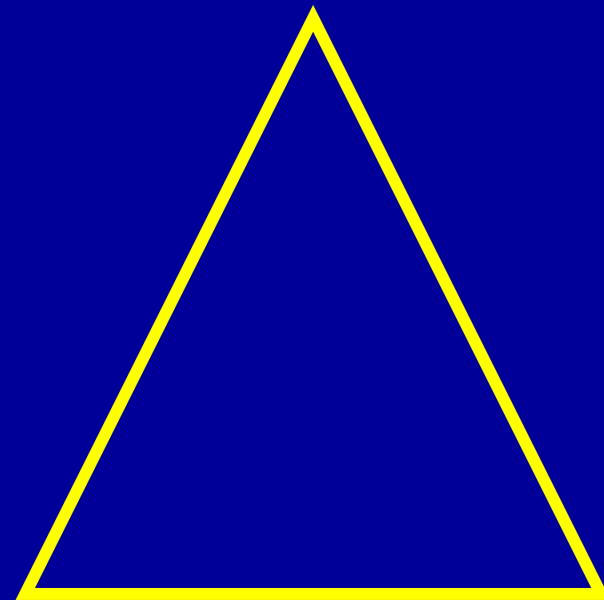
- The benefits of accuracy are:
 - *Confidence!*
 - The right dose at the right location
 - Ability to treat smaller lesions
 - Spare healthy tissues to an extent that was unimaginable only a few years ago.
 - 3-D kV CT imaging technology allows soft tissue lesions to be seen directly
 - Optical guidance cameras monitor the patient with high spatial accuracy and no dose
 - MV imaging allows the lesion and treatment beam to be directly visualized.



Accuracy

Trilogy

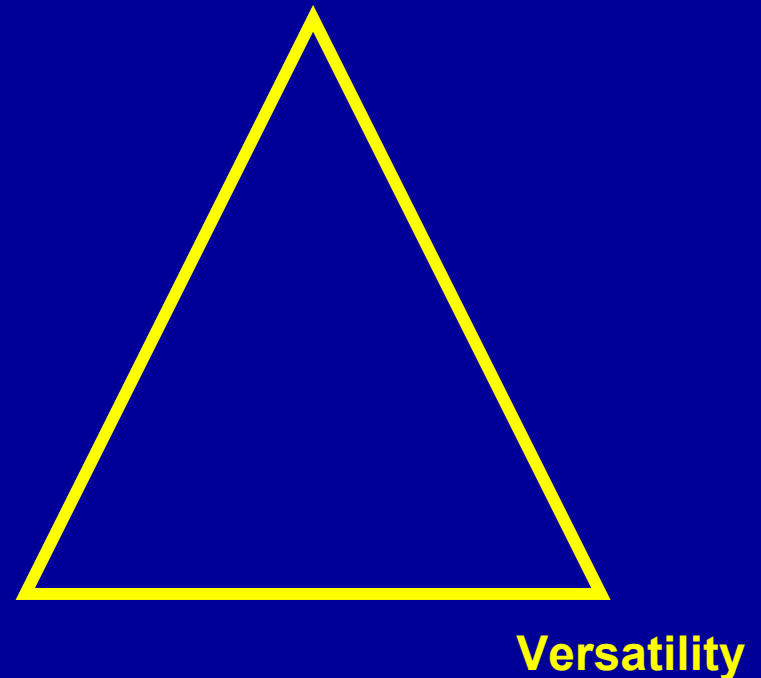
- Versatility
 - Cranial and extra-cranial
 - Invasive and non-invasive fixation
 - Three treatment beams
 - 6 MV, High X, 6 MV SRS
 - Two beam shaping technologies
 - MLC or cones
 - Three imaging systems
 - Optical
 - kV
 - MV
 - Three localization technologies
 - FrameArray
 - FramelessArray
 - BodyArray
 - SRS, IGRS, SRT, IMRS, SBRT, IMRT and 3D CRT



Versatility

Trilogy

- The benefits of versatility are:
 - The ability to treat virtually any case
 - The ability to treat in the optimal way
 - Trilogy has been optimized for radiosurgery and radiotherapy and is designed to raise the standard of care while lowering the cost of treatment.
 - Both neurosurgeons and radiation oncologists can use Trilogy to treat their patients, without having to buy two separate, expensive machines.

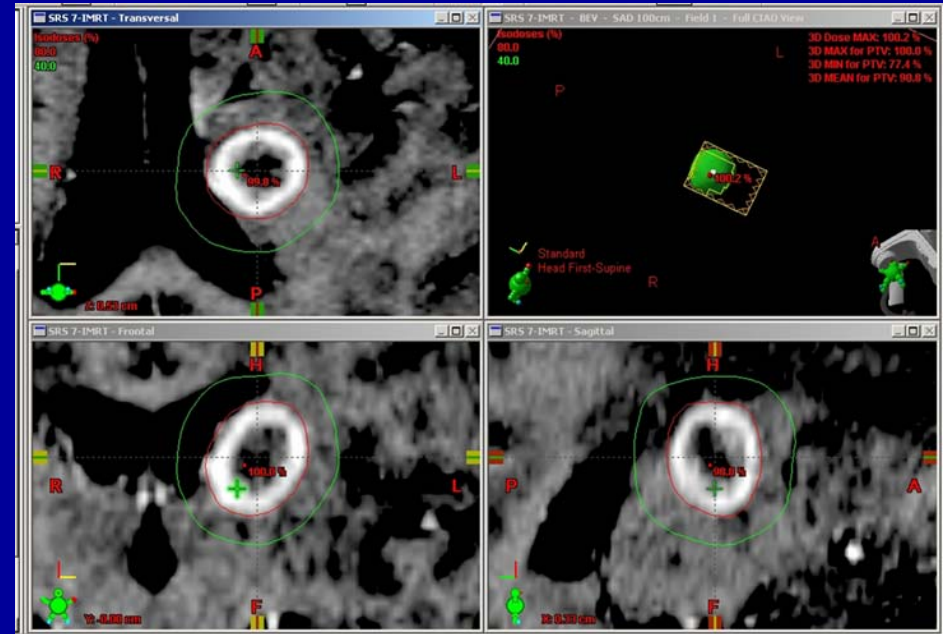


What Is IGRS Used For In The Brain?

- Brain tumors
- Arteriovenous malformations (AVMs)
- Trigeminal neuralgia
- Acoustic neuromas
- Pituitary tumors

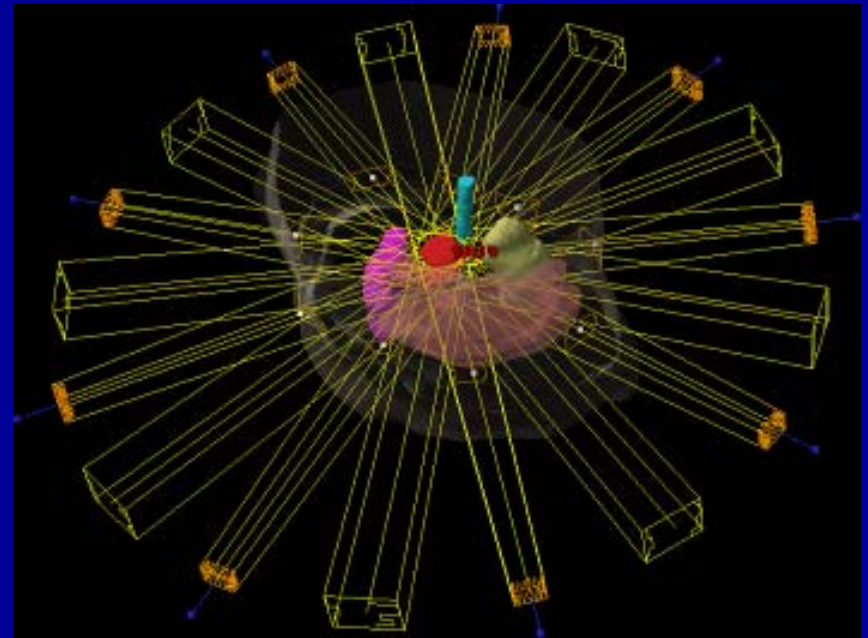
Cranial Example: Single Metastasis

- Eclipse TPS
- MLC120 beam shaping
- 7 beam IMRS
 - Cone-based plan would require 1 isocenter and 7 arcs
- Dose = 20Gy to 80% of max dose



Spinal Example: Lumbar Spine Metastasis

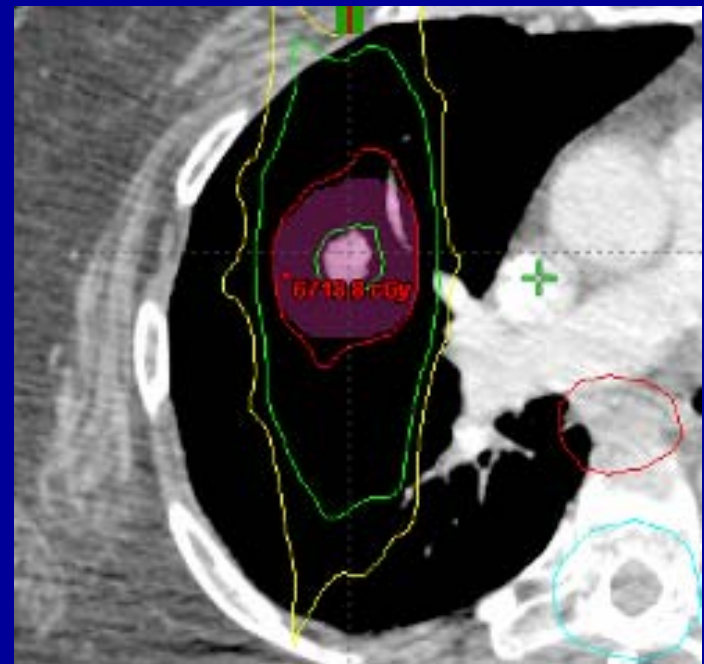
- Eclipse TPS
- MLC-120 beam shaping
- 9 beam IMRS
- 3-D Conebeam CT localization
- Total IGRS treatment time ~25 minutes



Red is the 16 Gy treatment line
Green is the 10 Gy dose gradient line
Pink is the 8 Gy dose gradient line

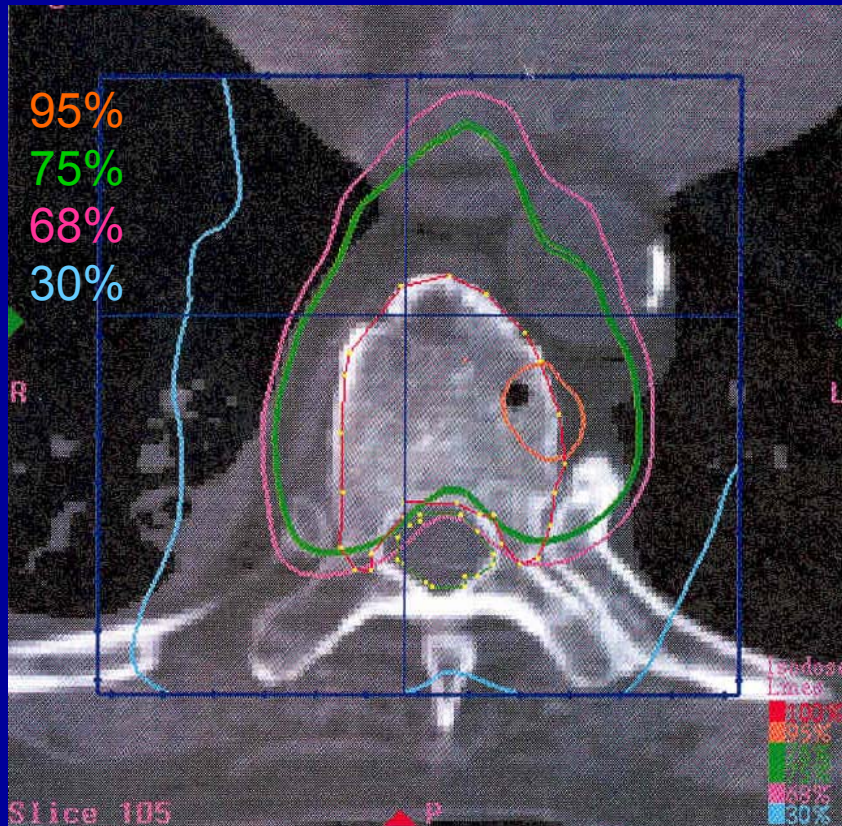
Extracranial Example: Lung Metastasis

- Eclipse TPS
- MLC-120 beam shaping
- 9 beam IMRS
- Respiratory controlled imaging and beam delivery
- Total IGRS treatment time ~35 minutes

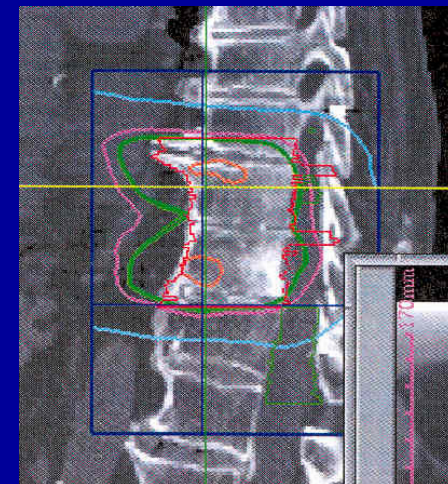
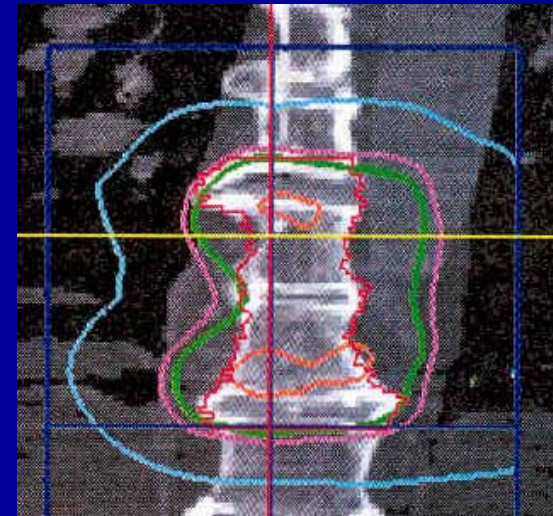


Red is the 60 Gy treatment line
Green is the 30 Gy dose gradient line
Yellow is the 20 Gy dose gradient line

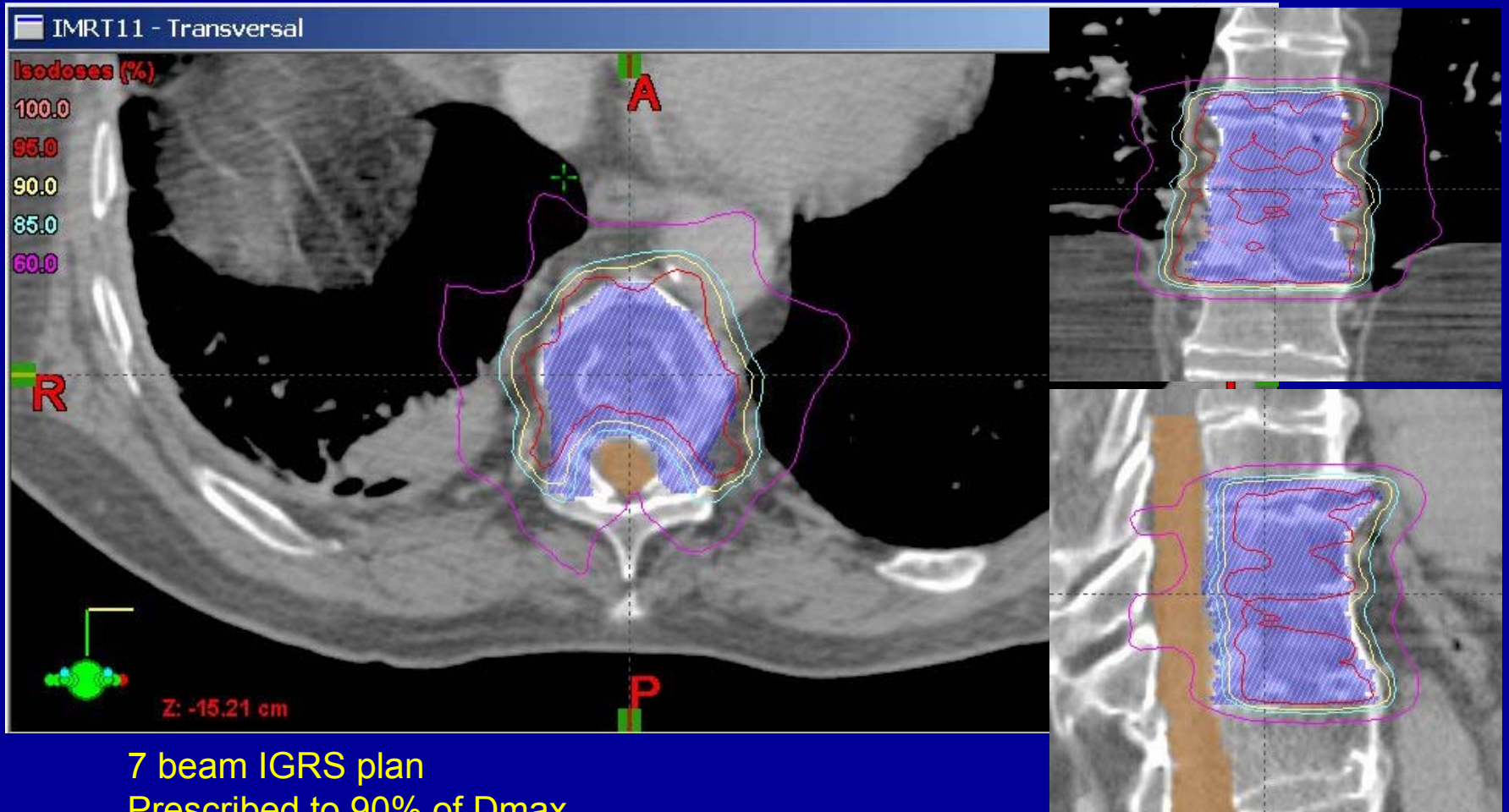
Cyberknife Plan



Prescribed to 80% of Dmax
Delivered in 60 minutes



Trilogy Plan



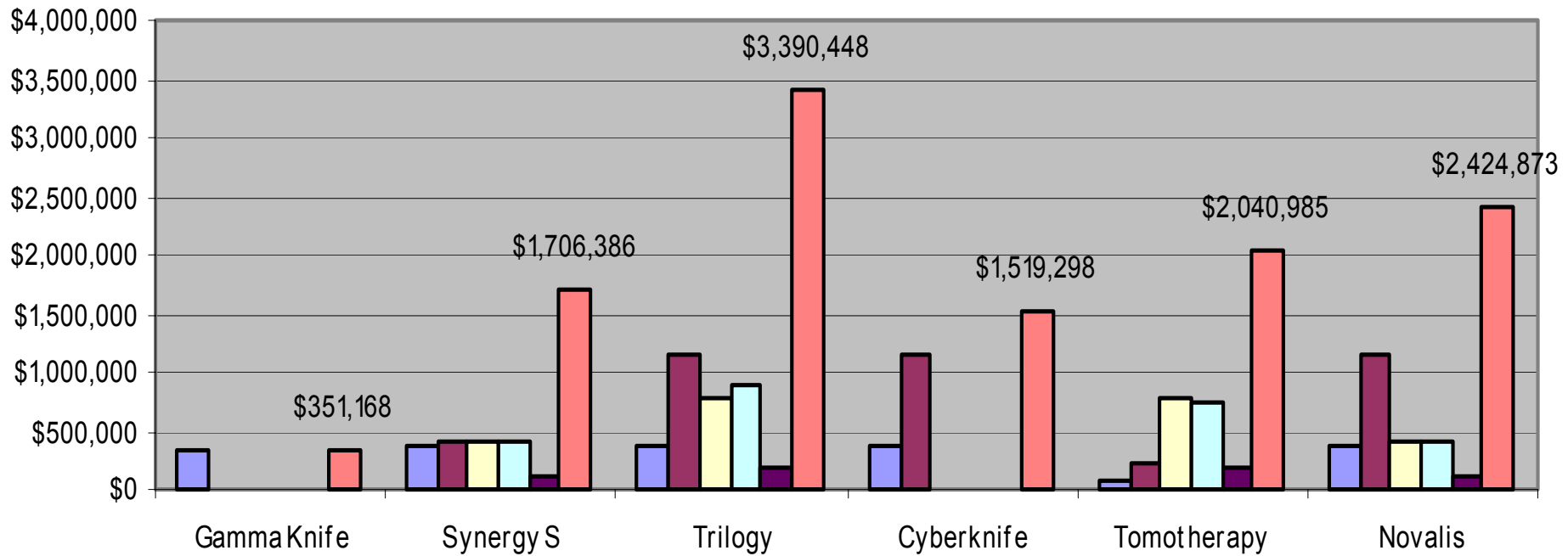
7 beam IGRT plan
Prescribed to 90% of Dmax
Delivered in 5 minutes

Revenue Comparison According to AMAC (2006 Data)

Patient Mix SRS=50, SRT=50, 3D=100, IGRT=50 patients/year

Comparing Revenue from Technologies

Patient Mix: SRS=50, SRT=50, 3D=100, IMRT=50, IGRT=50 patients per year

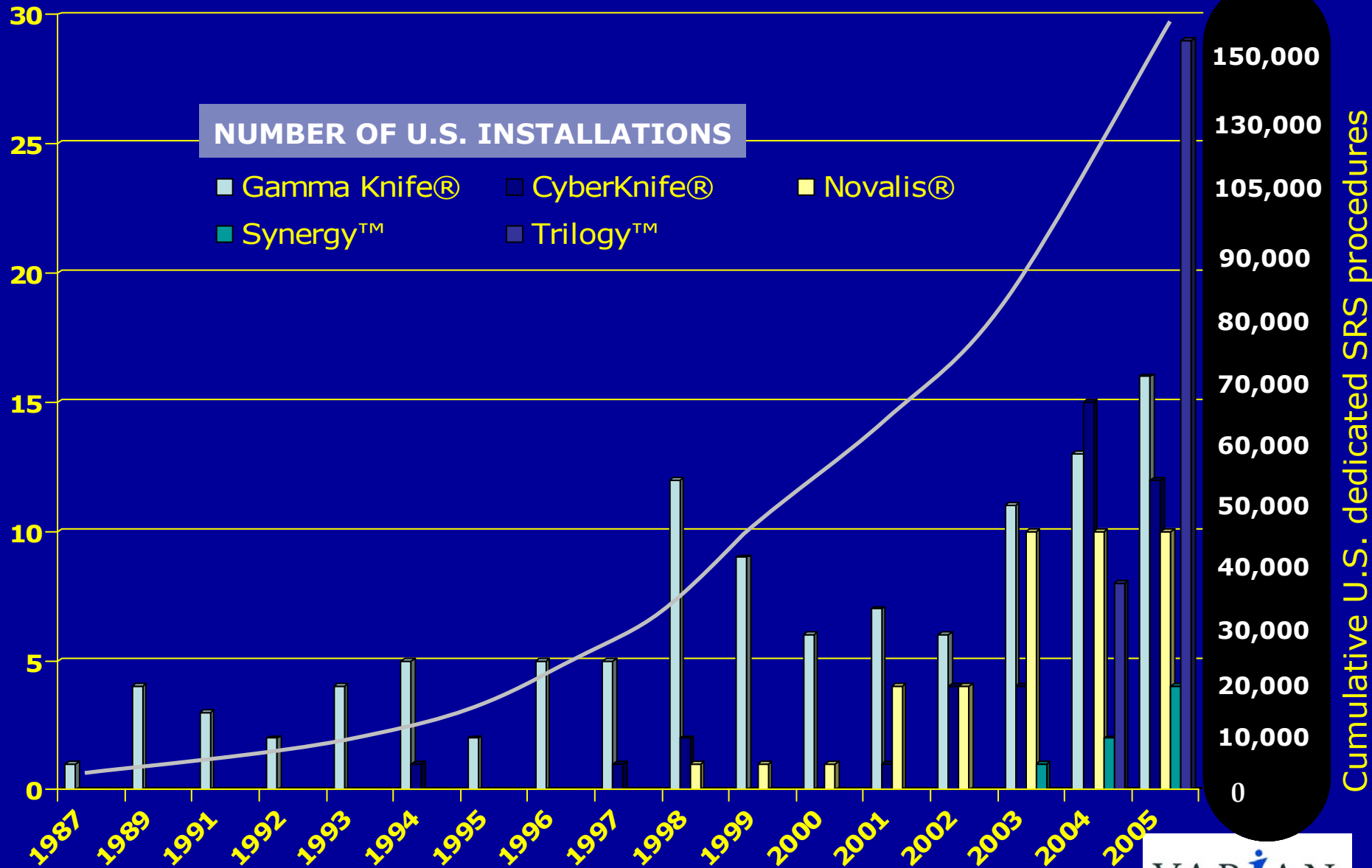


Source: AMAC

■ SRS
 ■ SRT
 ■ 3D
 ■ IMRT
 ■ IGRT
 ■ Total

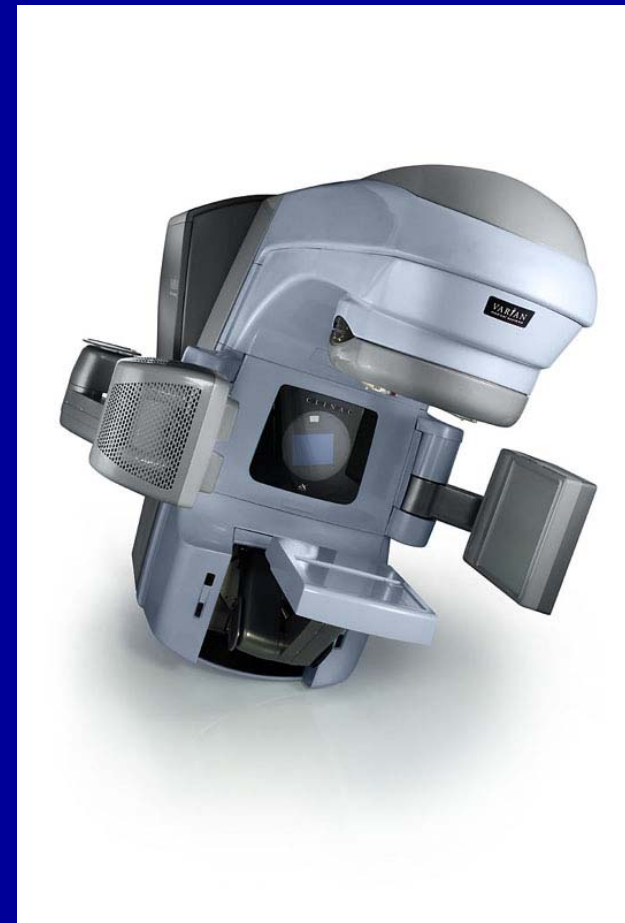
SRS device growth

NeuroSource®



Summary

- Trilogy is the first in a new generation of non-invasive radiosurgery systems.
- The power of Trilogy yields treatment times that are shorter, making the experience more comfortable for the patient.
- The accuracy of Trilogy allows us to spare healthy tissues to an extent that was unimaginable only a few years ago.
- The versatility of Trilogy enables us to treat a wide variety of patients using a single machine.



VARIAN
medical systems



Robert Kluge
Vice President
President, X-Ray Products

X-ray Product Lines

- Medical X-ray Tubes
 - Diagnostic X-ray
 - CT Scanner Tubes
 - Mammography Tubes
- Industrial X-ray Tubes
- Flat Panel Imaging Systems

Product Overview

- **X-ray Tubes**
- **Imaging Panels**

Radiographic



PAXSCAN® Portfolio



PaxScan® 2520



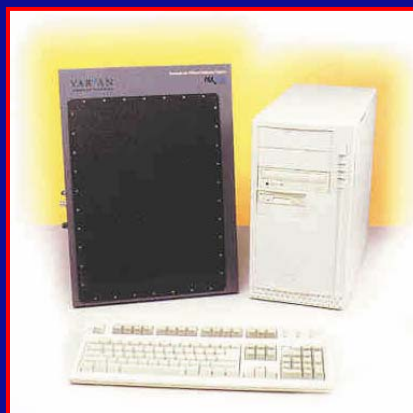
PaxScan® 2520E



PaxScan® 2020



PaxScan® 4030A / CB

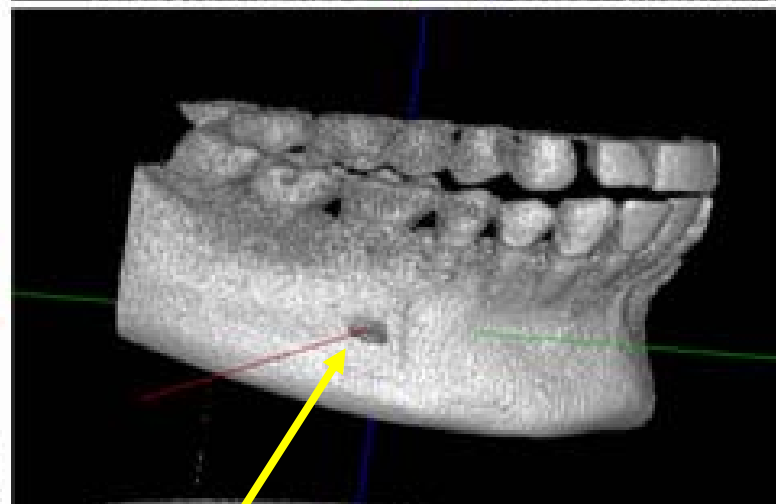
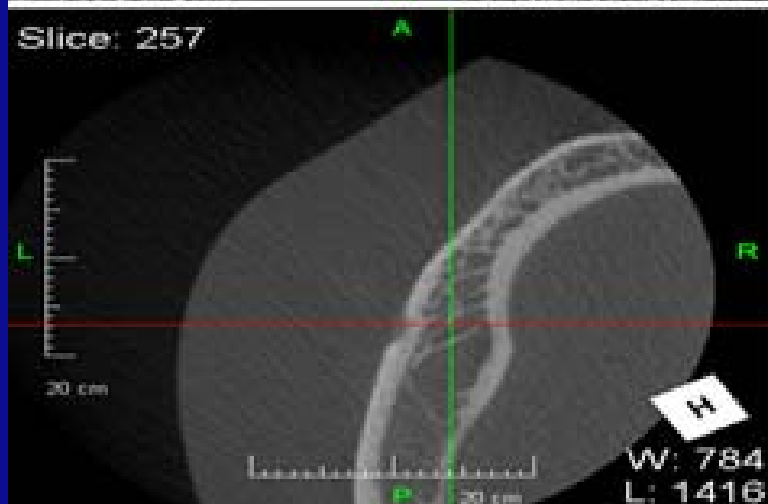
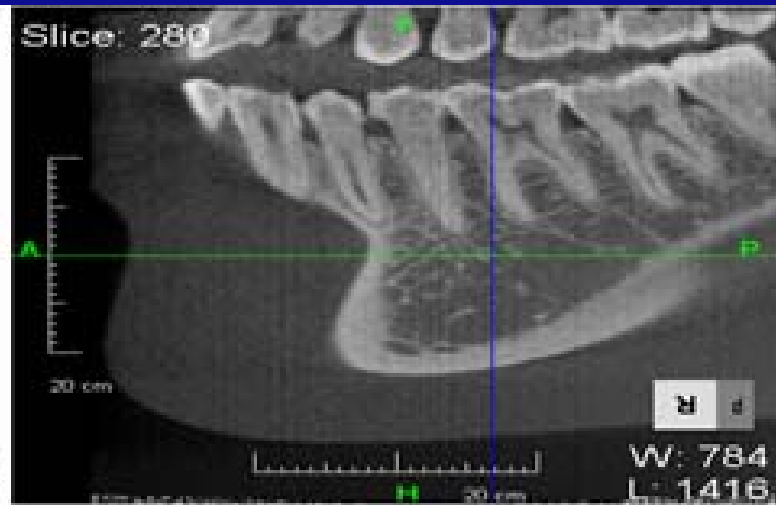
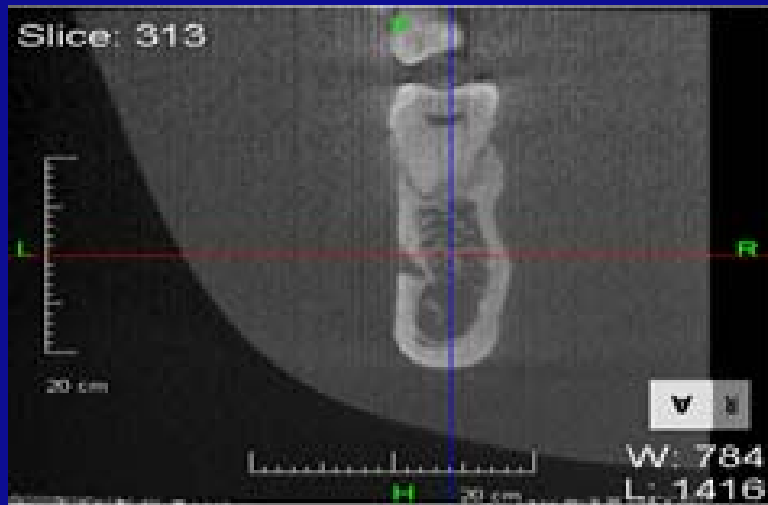


PaxScan® 4030R



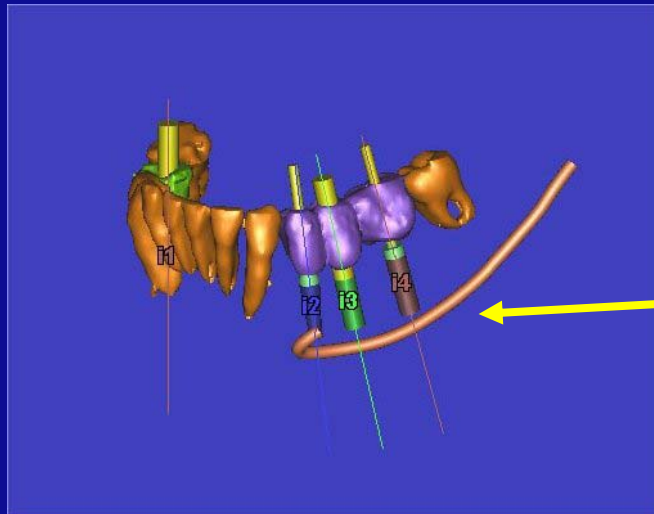
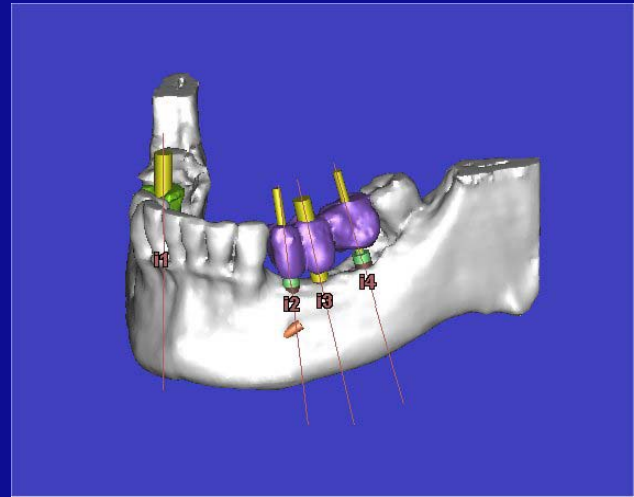
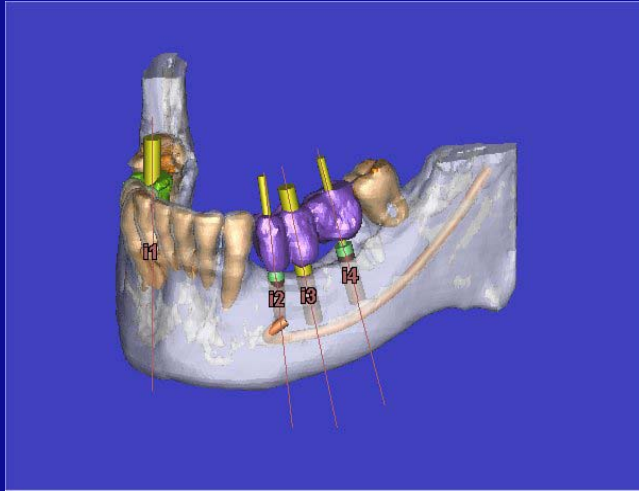
PaxScan® 1313

2520V 3D Image...



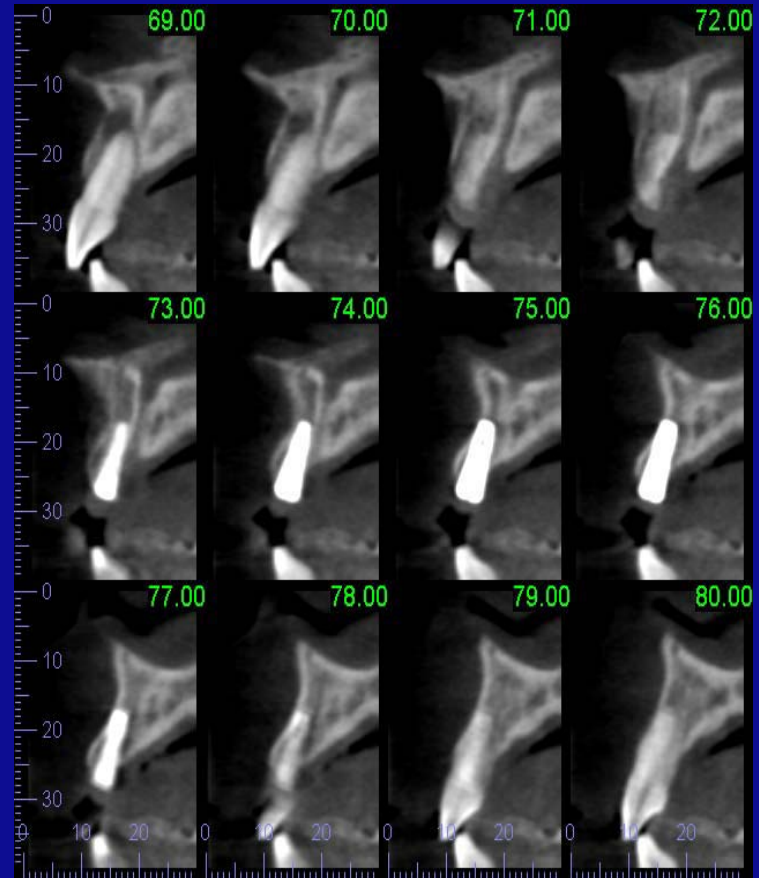
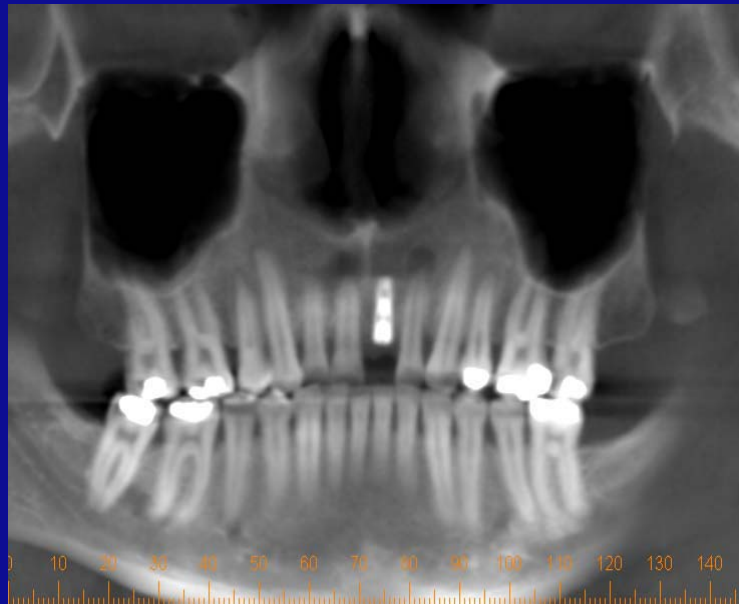
Mental Foramen

2520V 3D Implant Visualization and Planning



Mental Foramen

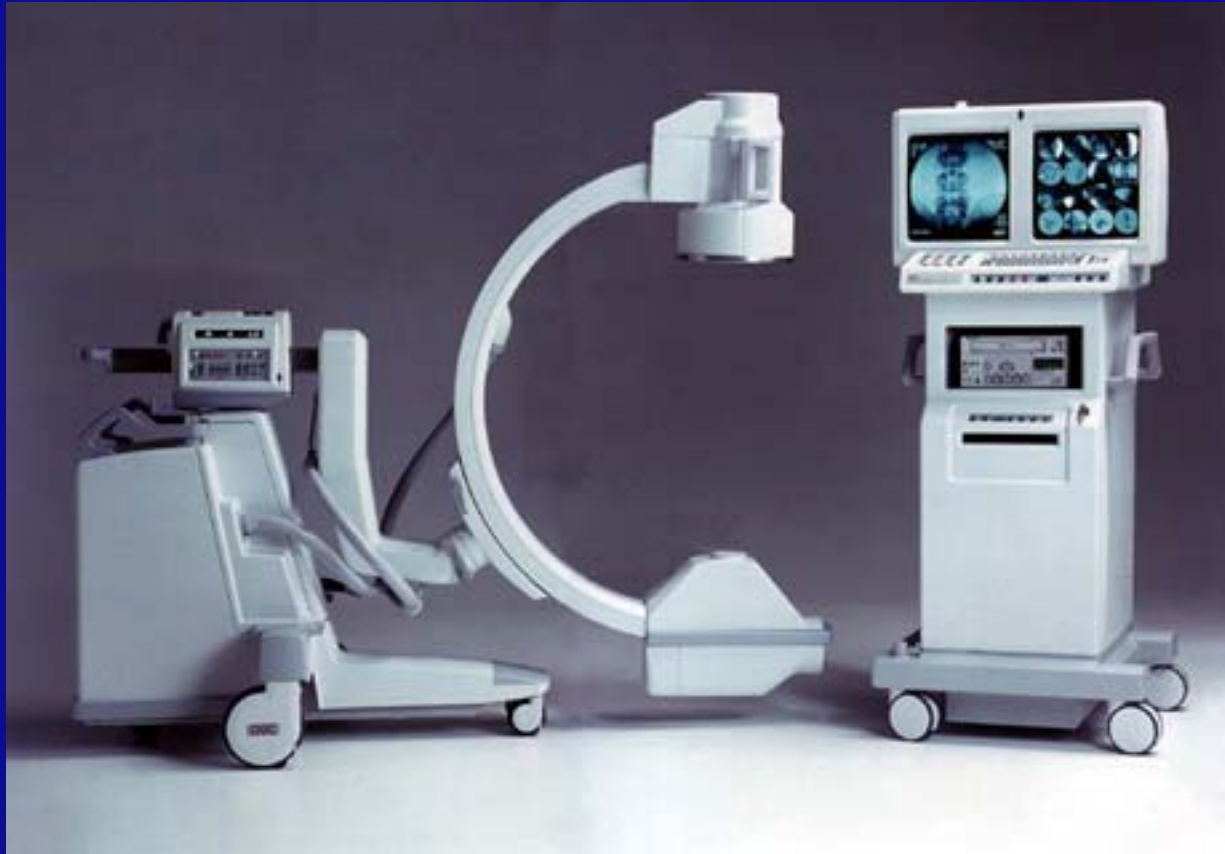
Dental Implants



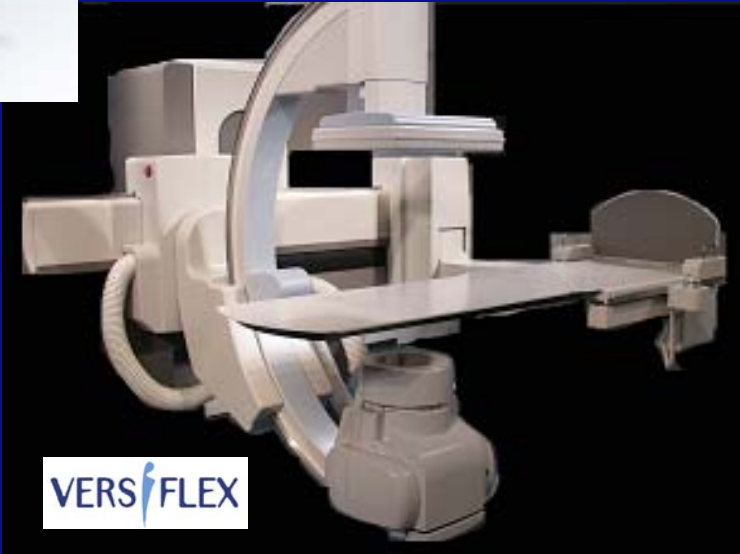
Radiographic System



Mobile C Arm



Hitachi FPD Systems



Integral Mammography



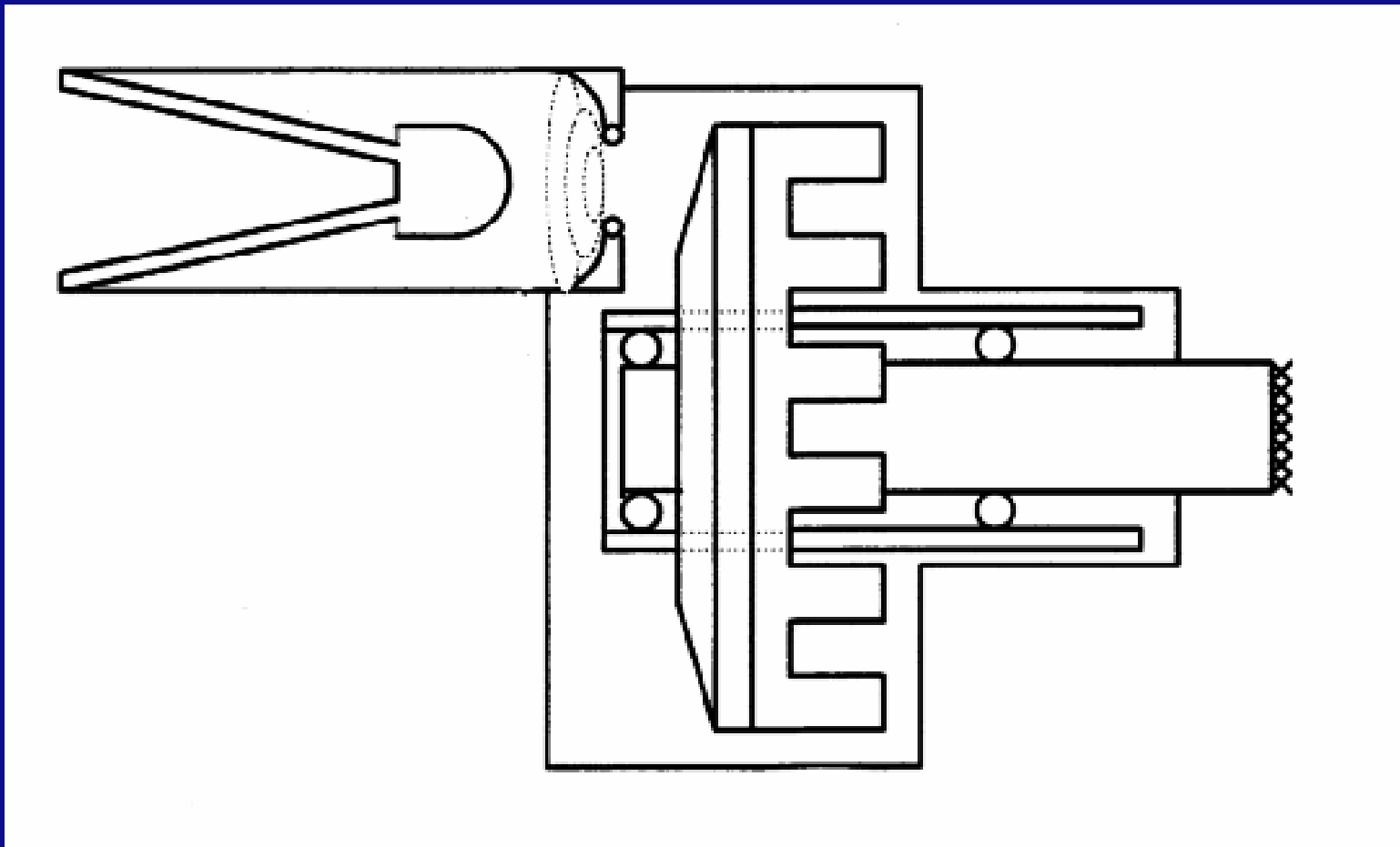
Mammography X-ray System



Computerized Tomography Tubes



MCS-7078



Baggage Screening



Baggage Screening

Image Courtesy of InVision Technologies

X-ray Tube Market

- X-ray Tube Market \$700M Wholesale
- Relatively Flat Market (2 – 5 % Growth)
 - Growth At High End

Market Drivers

- Growth Of Helical CT
- Trend Toward Longer Tube Life
- Higher Power Requirements
- X-ray Equipment



Varian Strategy

- Sell On Technology
 - Fast Rotation Speed On CT Tubes
 - High Power Capability
- Sell On Cost / Quality
 - Six Sigma Approach
 - Cost Reduction
- Sell On Customer Support
 - Technical Collaboration

X-Ray Tube Summary

- Varian Is Well Positioned From A Technology/Product Cost Perspective
- Varian Is “By Far” The Strongest Independent Supplier

Varian Medical Systems

Flat Panel Business

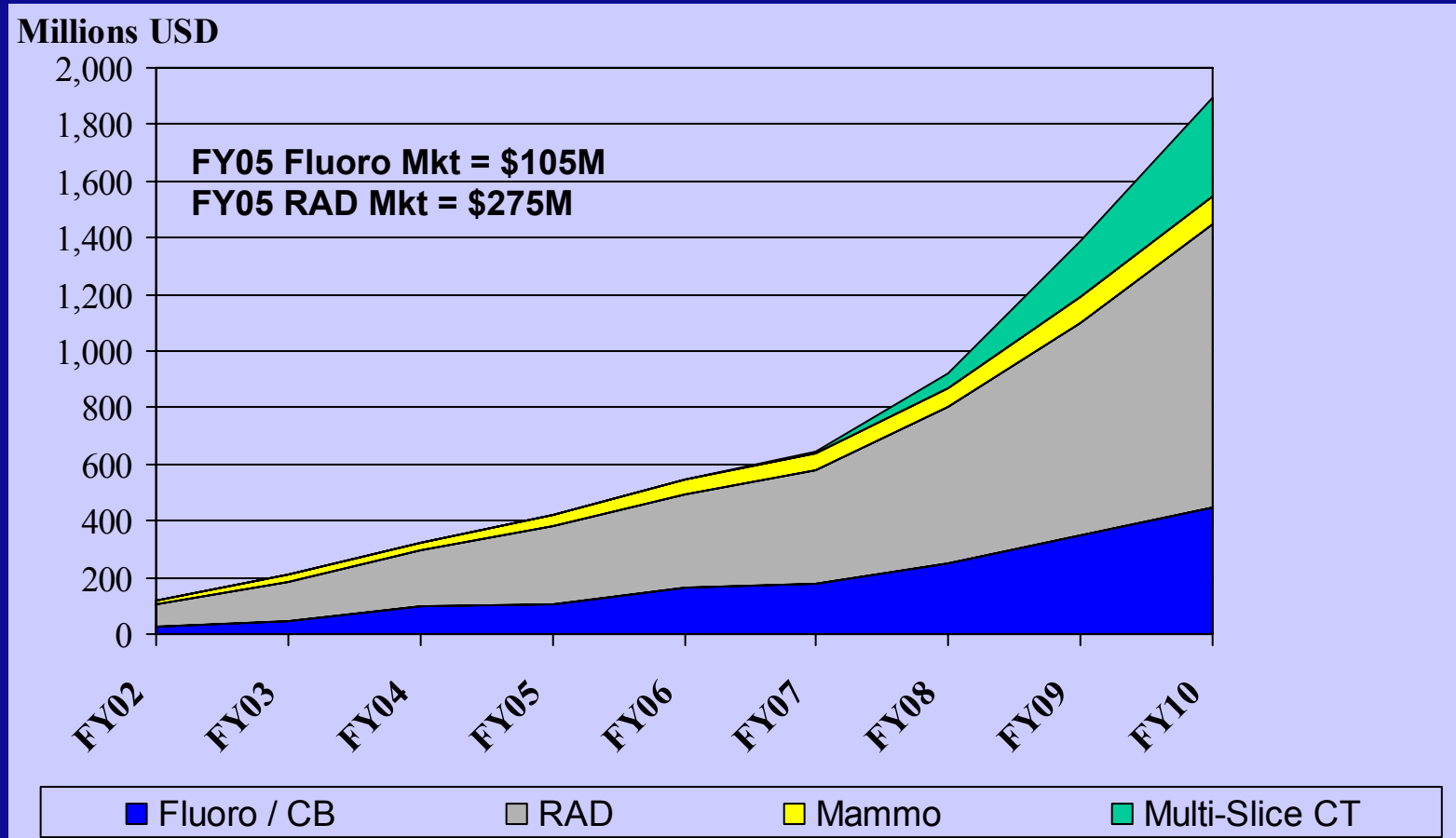
Key Flat Panel Advantages

- Compact, Light Weight, Flexible
- Excellent Imaging Quality Across The Entire Panel
- Flexibility Of Direct To Digital
 - Eliminates Camera And Components
 - Image Manipulation Capability Eliminates Retakes

Key Issues To Address

- Difficult Manufacturing Process
- Costs Remain High

Estimated World Market FPD Revenue (Wholesale value)



Key assumptions: 1) Product cost reaches competitive position with film-based systems
2) Technological break-throughs make Multi-Slice CT segment a reality

Key Flat Panel Advantages

- Compact, Light Weight, Flexible
- Excellent Imaging Quality Across The Entire Panel
- Flexibility Of Direct To Digital
 - Eliminates Camera And Components
 - Image Manipulation Capability Eliminates Retakes

Key Issues To Address

- Difficult Manufacturing Process
- Costs Remain High

Flat Panel Market

- Market Has Been Slow To Develop
 - Panel Cost And Availability
- Market Potential Is Large (\$1B - \$3B)
 - Replacement For Image Intensifier System
 - Partial Replacement For Film
 - CT Detector?

Key Flat Panel Competitors

- Trixell
 - Well Funded Consortium
Focused On Amorphous Silicon
- GE
 - Focused On Amorphous Silicon
To Enhance Performance Of GE
Medical Equipment
- Other
 - Hologic, Cannon

Varian Medical Systems Advantage

- Long Time Supplier To Medical Imaging OEMs
- Effective Sales And Support Structure
- Most Technically Capable Flat Panel Product Line Currently Available
- 40% Owner of dpiX Consortium

Varian Strategy

- Develop A Full Line Product Portfolio
- Focus On Technology
 - Advanced Applications
 - Next Generation Technology
- Focus On Product Cost
 - dpiX Consortium
 - Internal Cost Structure
- Leverage Existing Distribution Channel / Approach
- Market Has Been Slow To Develop

VARIAN
medical systems

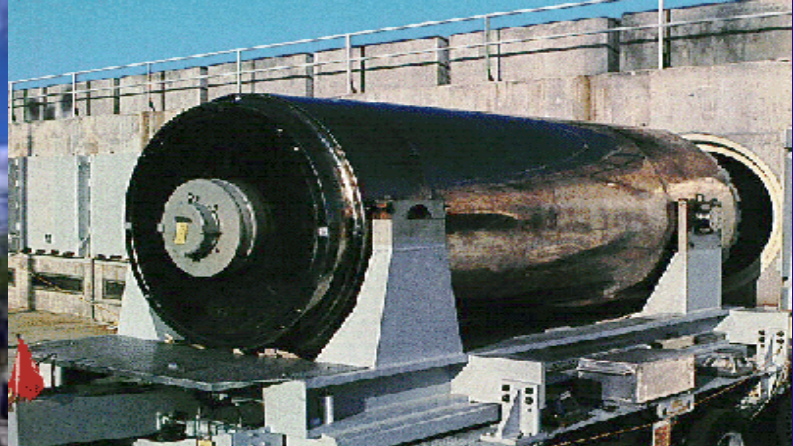


Lester Boeh
VP and GM
Surgical Sciences and
Security Inspection Products

SIP at a glance

- Two market segments; NDT & Cargo
 - Typical NDT Applications
 - Cargo applications – Ports, borders, airports
 - Cargo Facts & Figures
 - Sample Images
- What's next?
 - Dual Energy
 - Adding value as an OEM

Typical Industrial applications for NDT



Clockwise from top left – Nuclear Waste management, ASTM Pressure Vessels, Off Shore Oil Rigs and Turbine Blade manufacturing

Industrial applications



Industrial applications



Industrial applications



Orbiter components

Cargo Inspection – Ports, Borders & Airports

- Focus on intermodal, borders and critical infrastructure
- Priorities:
 - Identification of nuclear materials
 - Identifying suspect cargo and individuals
- Thousands of companies and products
 - DHS wants integration
 - Layered systems

No one is above suspicion



Cargo Inspection



Fixed Site (Airports, Borders)



Relocatable (Ports & Perimeter defense)



Mobile (Sea & Air Ports)



Portal (Ports & Borders)

Images courtesy of Smiths and L3

Facts & Figures

Modern cargo vessels carry on average 4,500-6,000 TEU's (Twenty Equivalent Units). New vessels carry up to 9,600 TEU's

Shipping containers enter USA at a rate of 20 per minute, 30,000 per day, 11M boxes or 17.5M TEU's per year

95% of all cargo coming to the USA enters through one of the nations 361 ports

Overseas shipping accounts for more than 90% of world trade

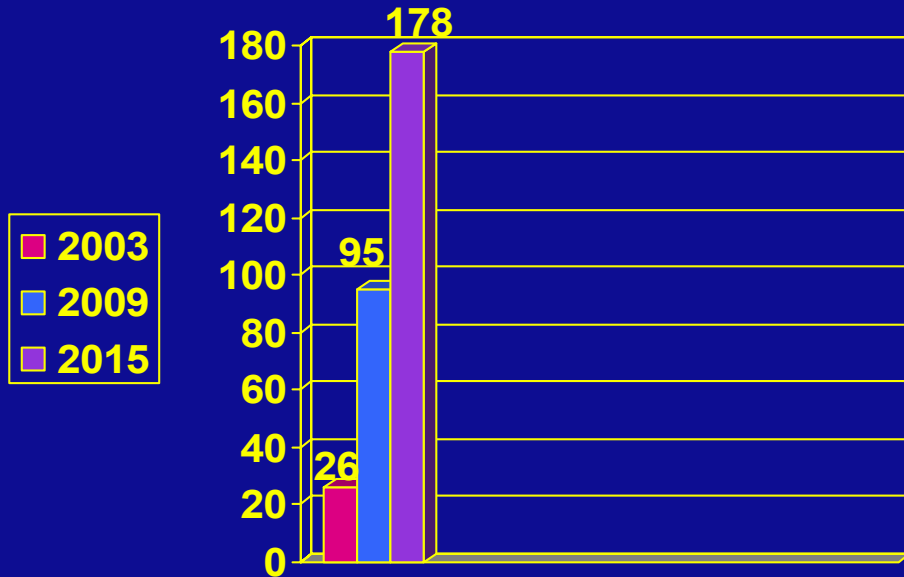
More than 95% of containers still go uninspected

Inspection times:
Manual – 5 people, 4 hours
Automated – 3 people, <1 min.

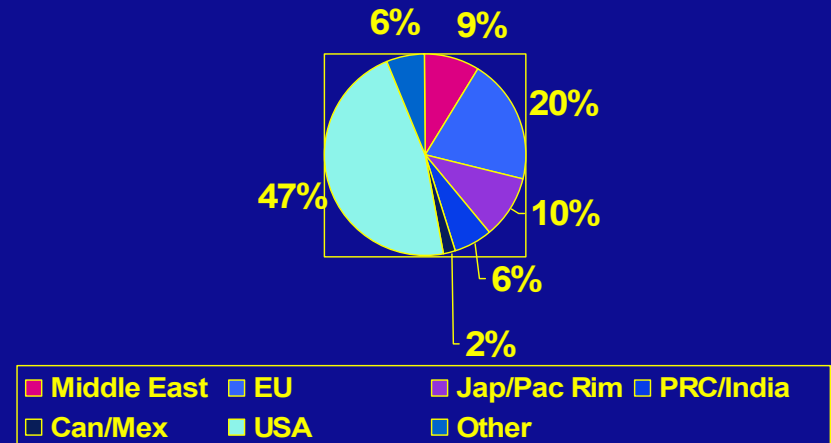


Security Spending 2003-2015

Homeland Security/Defense Spending 2003-2015 (\$B)



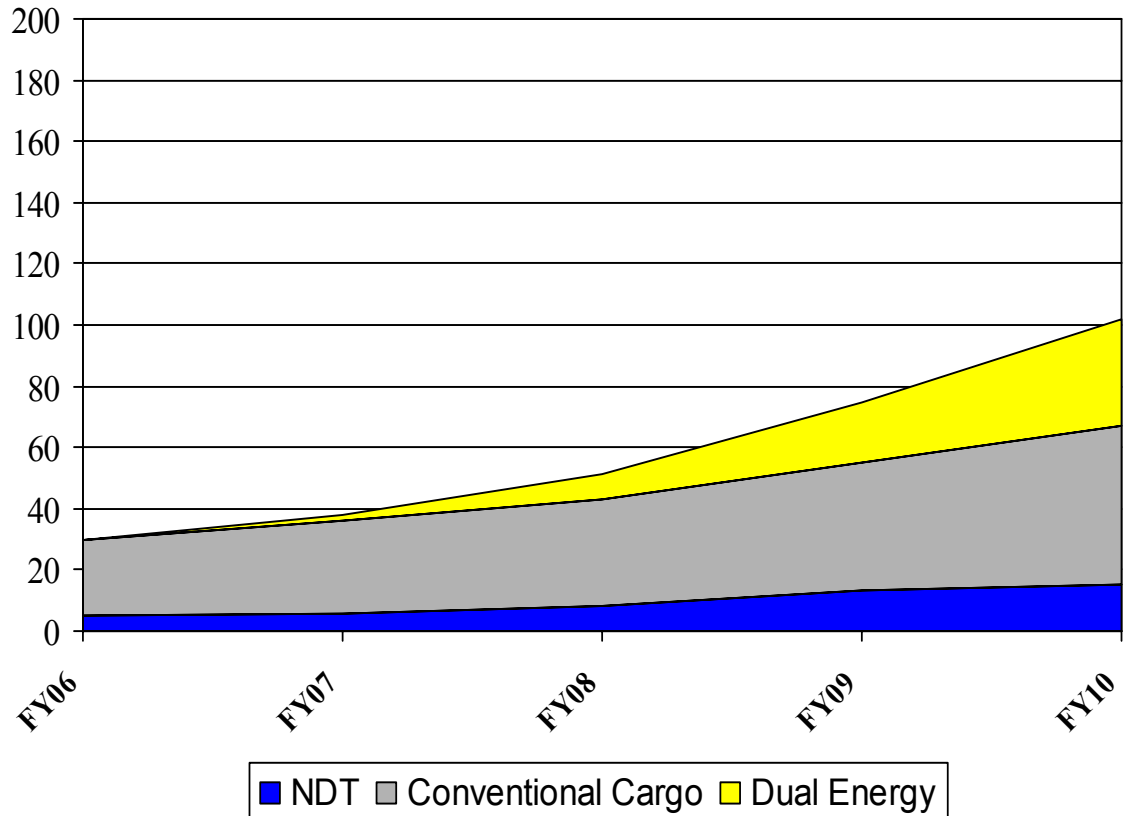
Regional Spending - 2010



Source: Homeland Security Research Corporation

SIP Growth Potential

Millions USD



High Energy Screening Market Landscape

Company	Source	Detector	Imaging Software	Systems Integration	Global Sales/ Service
SAIC	VAR	✓	✓	✓	✓
AS&E	AS&E VAR	✓	✓	✓	✓
Smiths Detection	VAR	✓	✓	✓	✓
L3	VAR	✓	✓	✓	✓
BIR	VAR	✓	✓	✓	✓
Rapiscan/ ARACOR	VAR	✓	✓	✓	✓
NUCTECH	✓	✓	✓	✓	

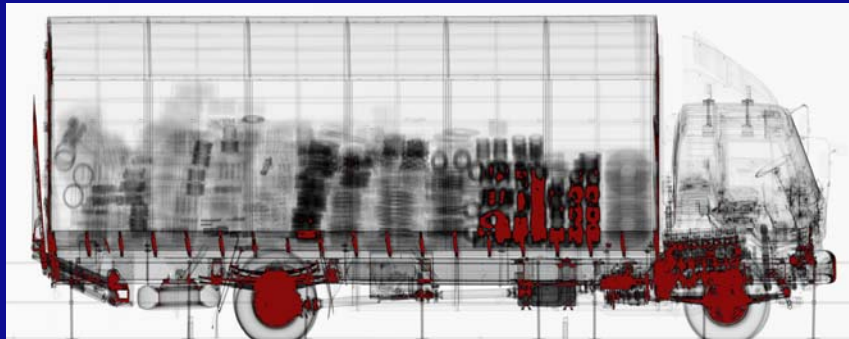
Image Comparison



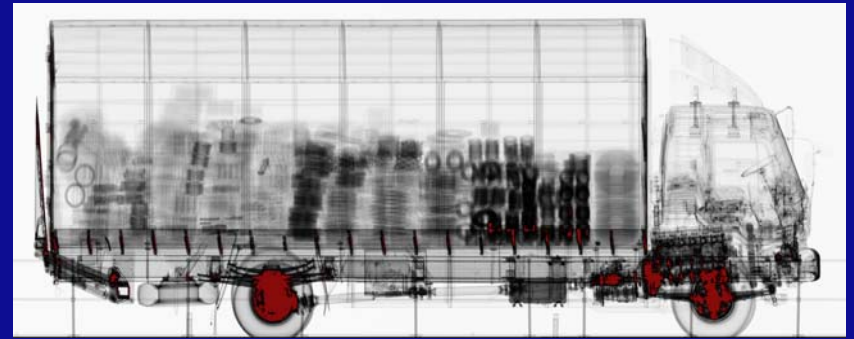
kV



Gamma



6MV



9MV

Images Courtesy of Rapisan

Image Detail

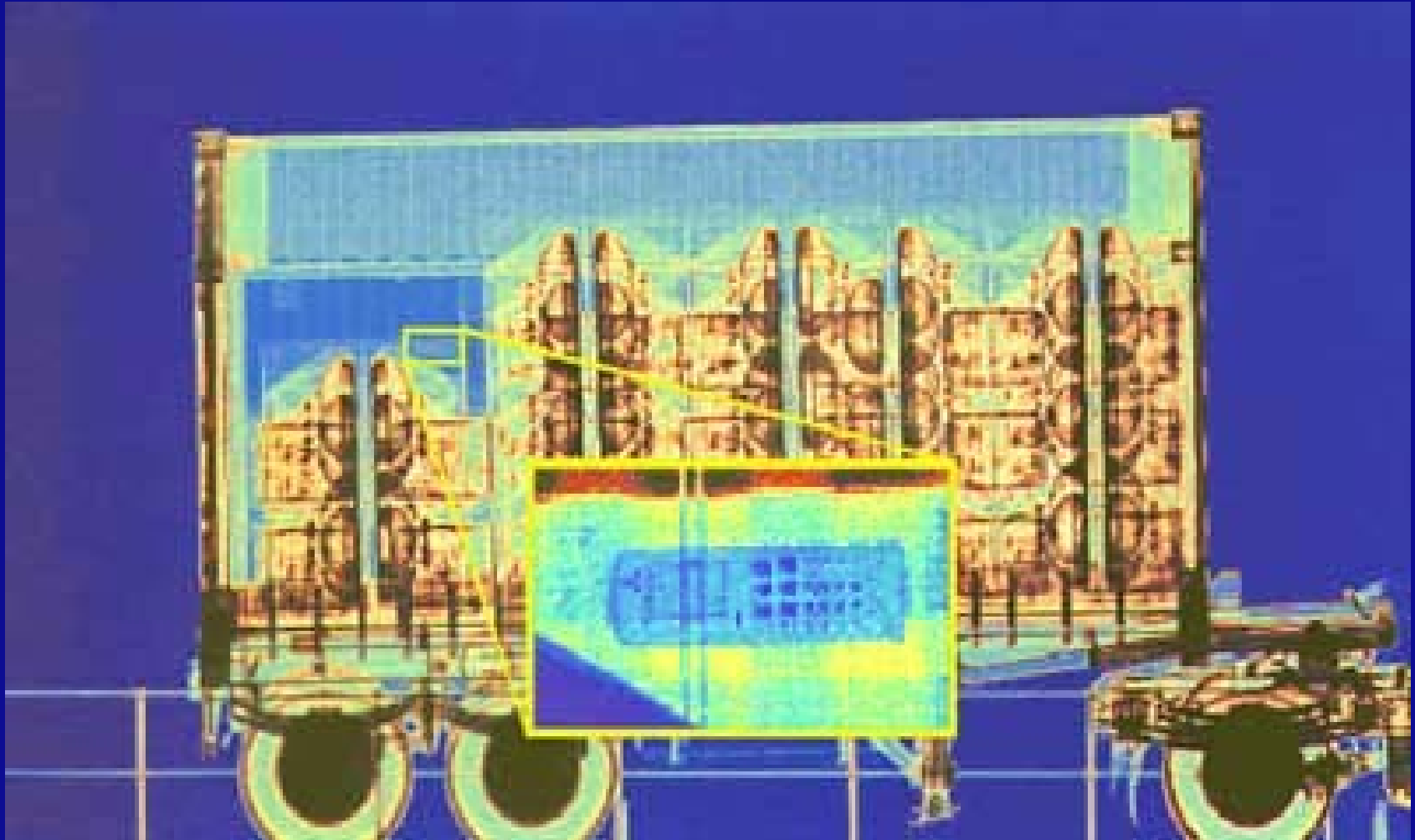
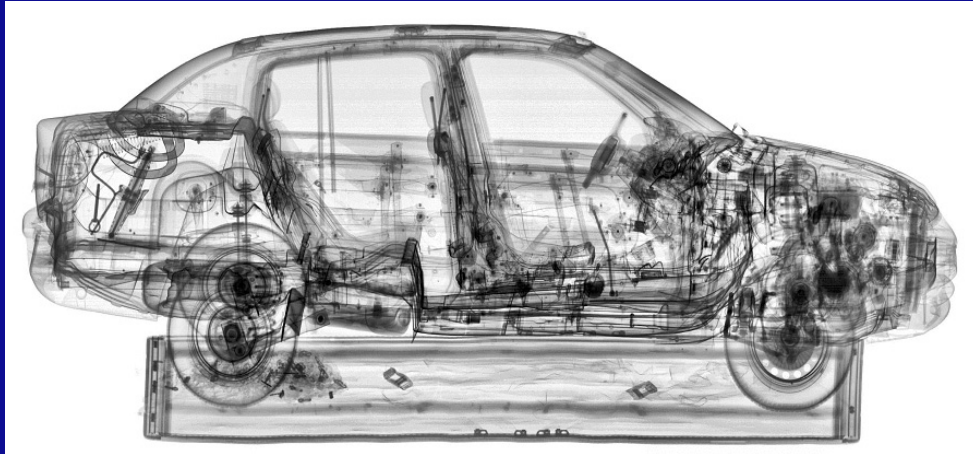


Image Courtesy of BIR

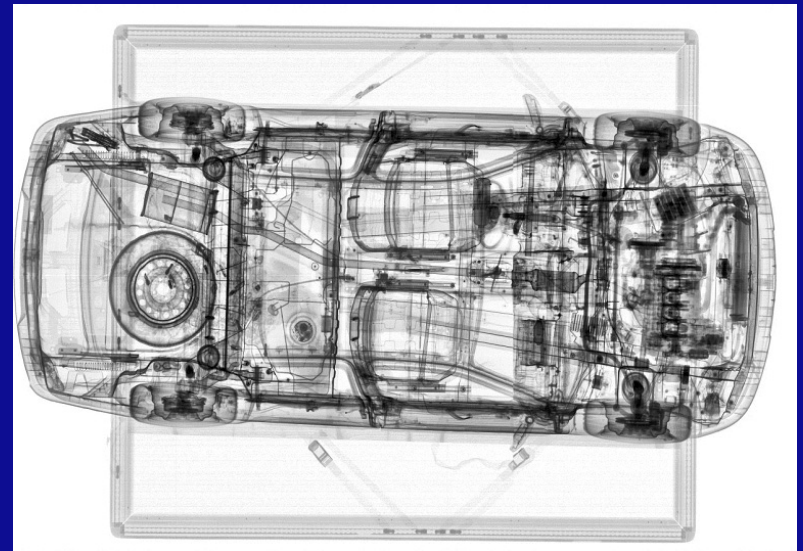
Image Detail



Excellent Resolution

High Contrast

Fast Acquisition



Images Courtesy of L3

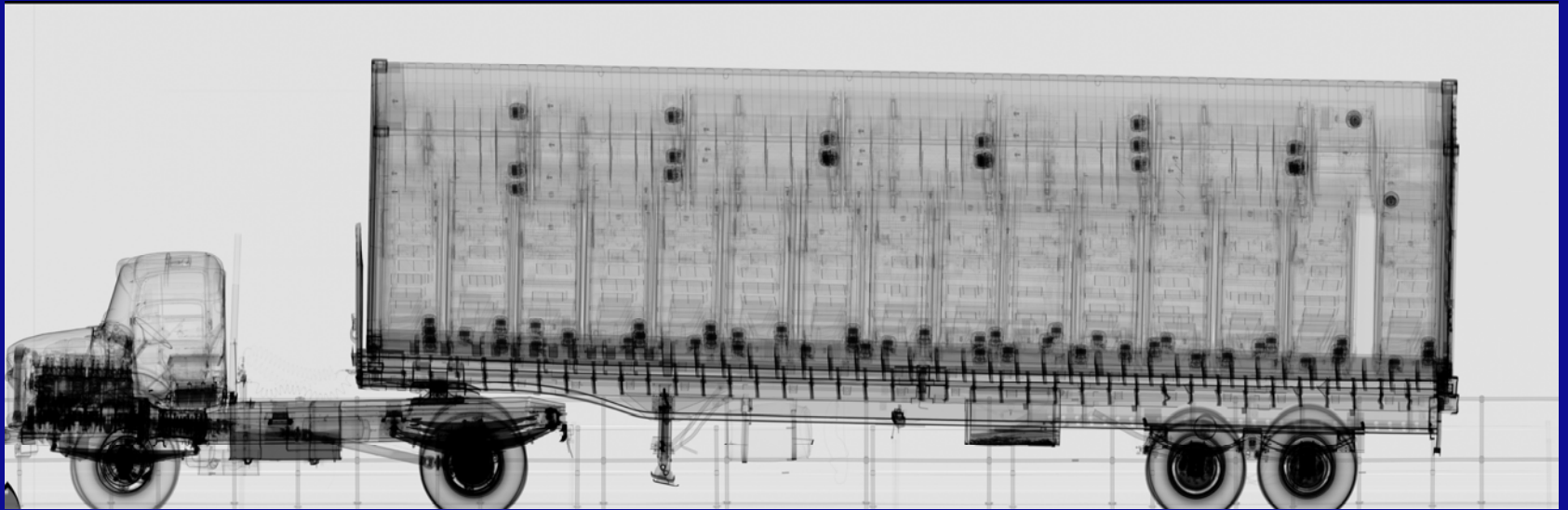
Fissile Materials in the Former USSR

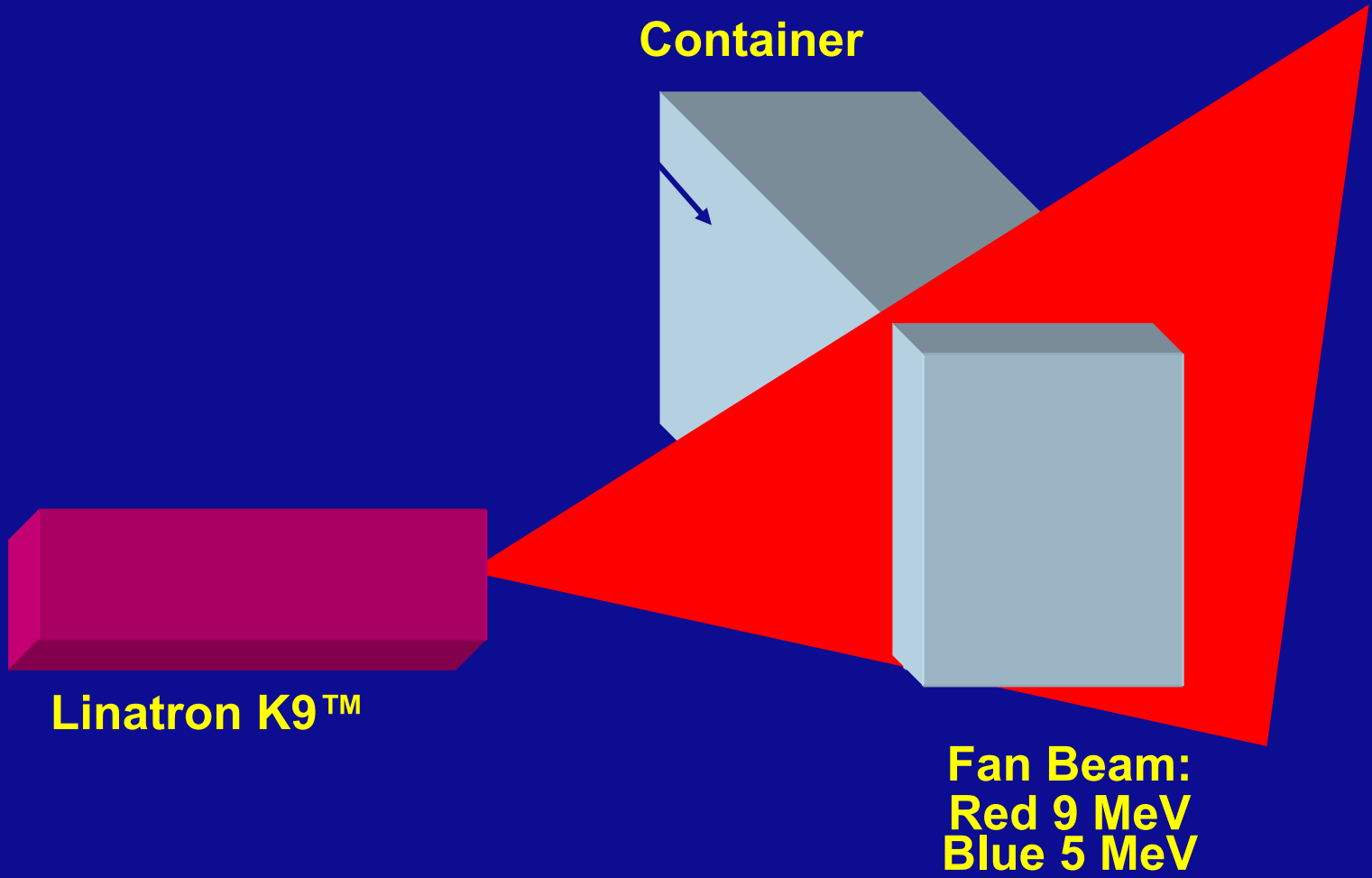
- Fissile materials not wholly contained
 - Significant amounts of plutonium & uranium (fissile), Co60, strontium and cesium (RDD) “lost”
- The est. amount of fissile material W/W is staggering
 - 70,000 KG of surplus uranium
 - 65,000 KG of highly enriched uranium
 - 23,000 KG of weapons grade plutonium
- Lack of controls
 - The standard acceptable inventory reconciliation score is 97%
 - 0.01% of the inventory is adequate to build 18 Hiroshima-sized devices
 - Odds of smuggling material into US in cargo container still alarmingly high
- Now Iran and North Korea want to join the club

What's Next?

- Dual Energy
 - Automatic identification of WMD's & Nuclear materials in sea & air cargo containers and vehicles
 - Prototype fabrication complete, radiation testing underway
 - New installations plus replacements for existing systems
- Detectors & Analysis Software
 - Complete the imaging chain
 - Increasing value added as an OEM supplier
 - Upgrades, service revenue opportunity

1.2 kg of high atomic number material is hidden in this container

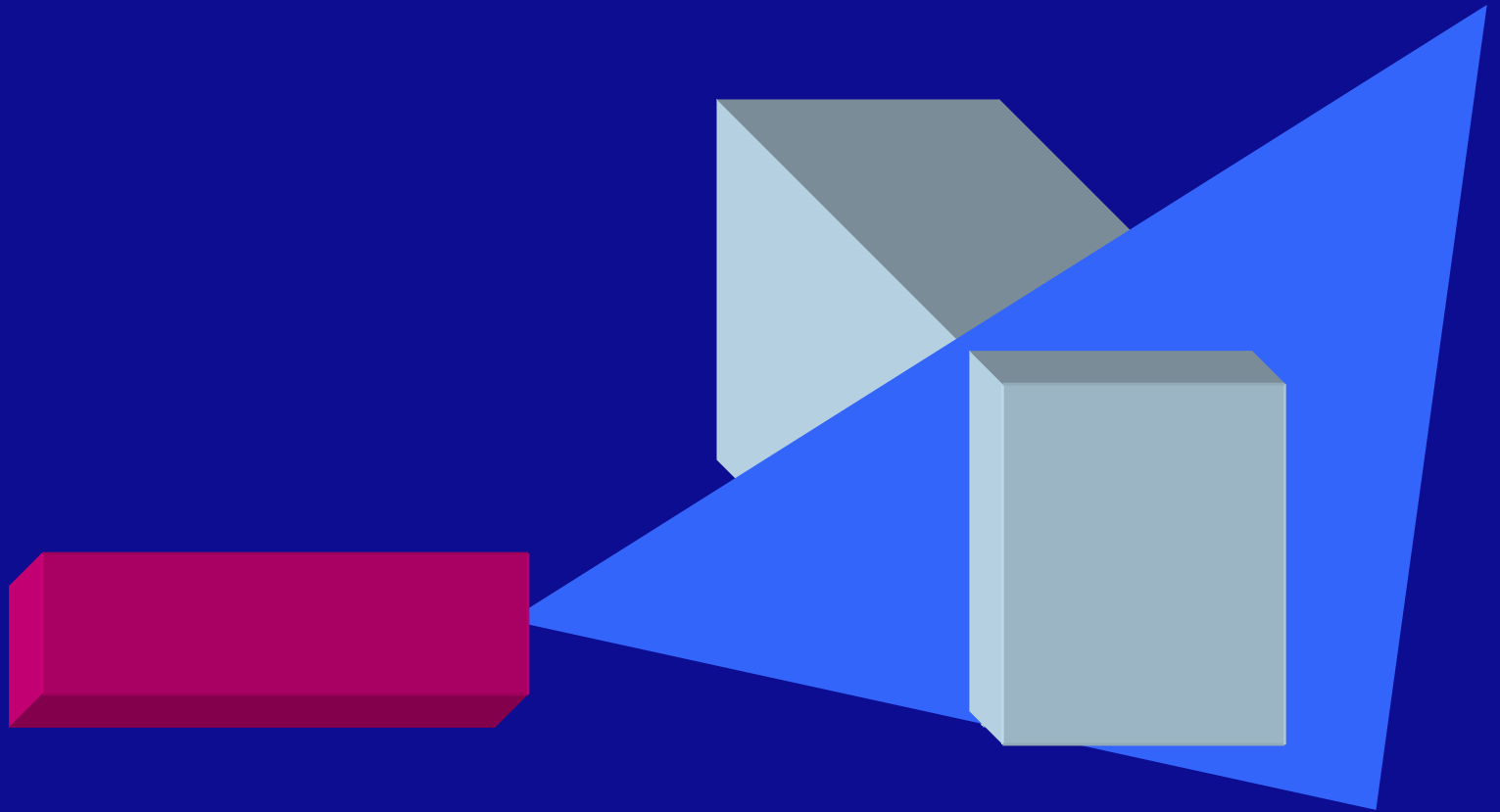


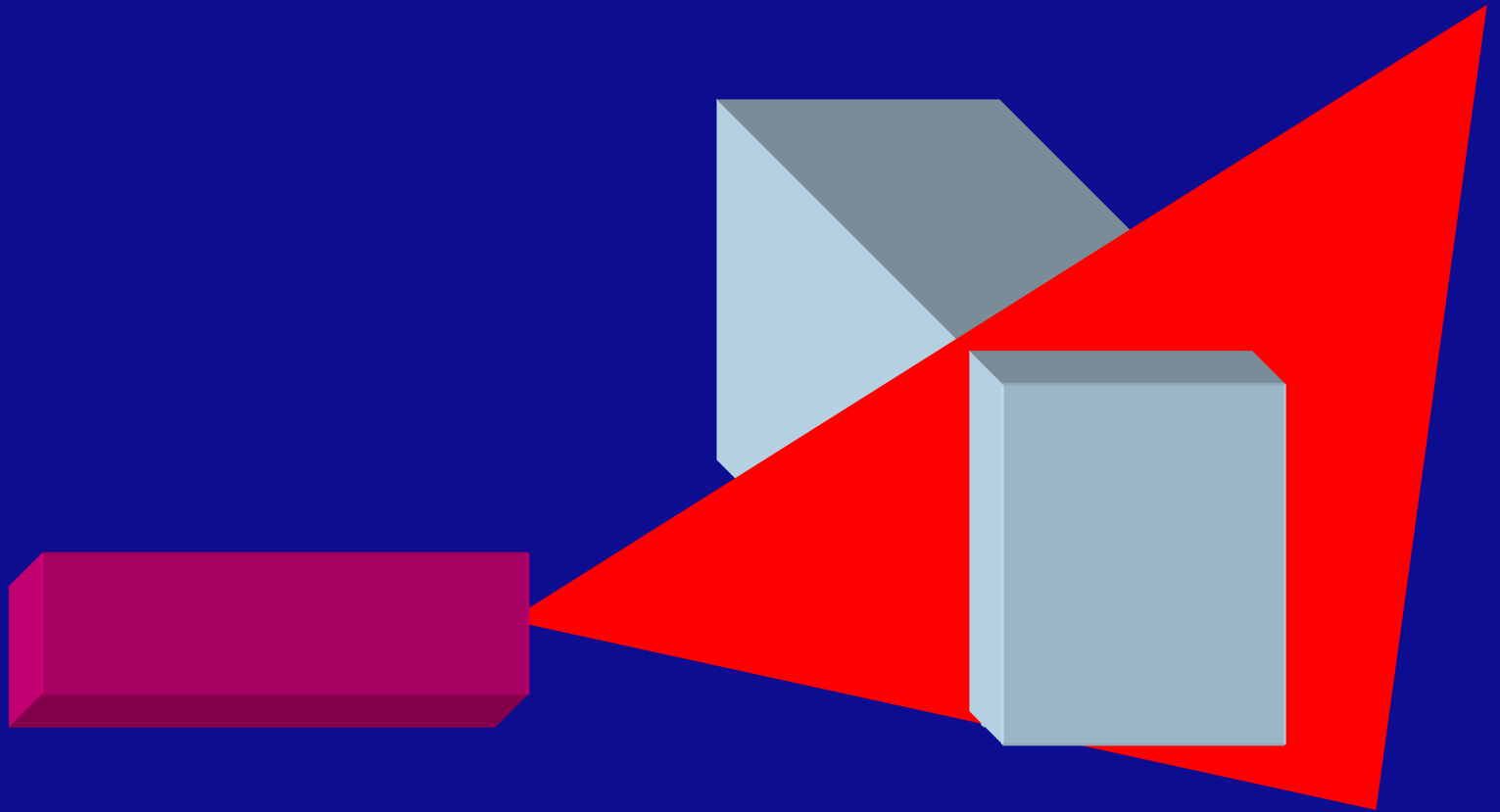


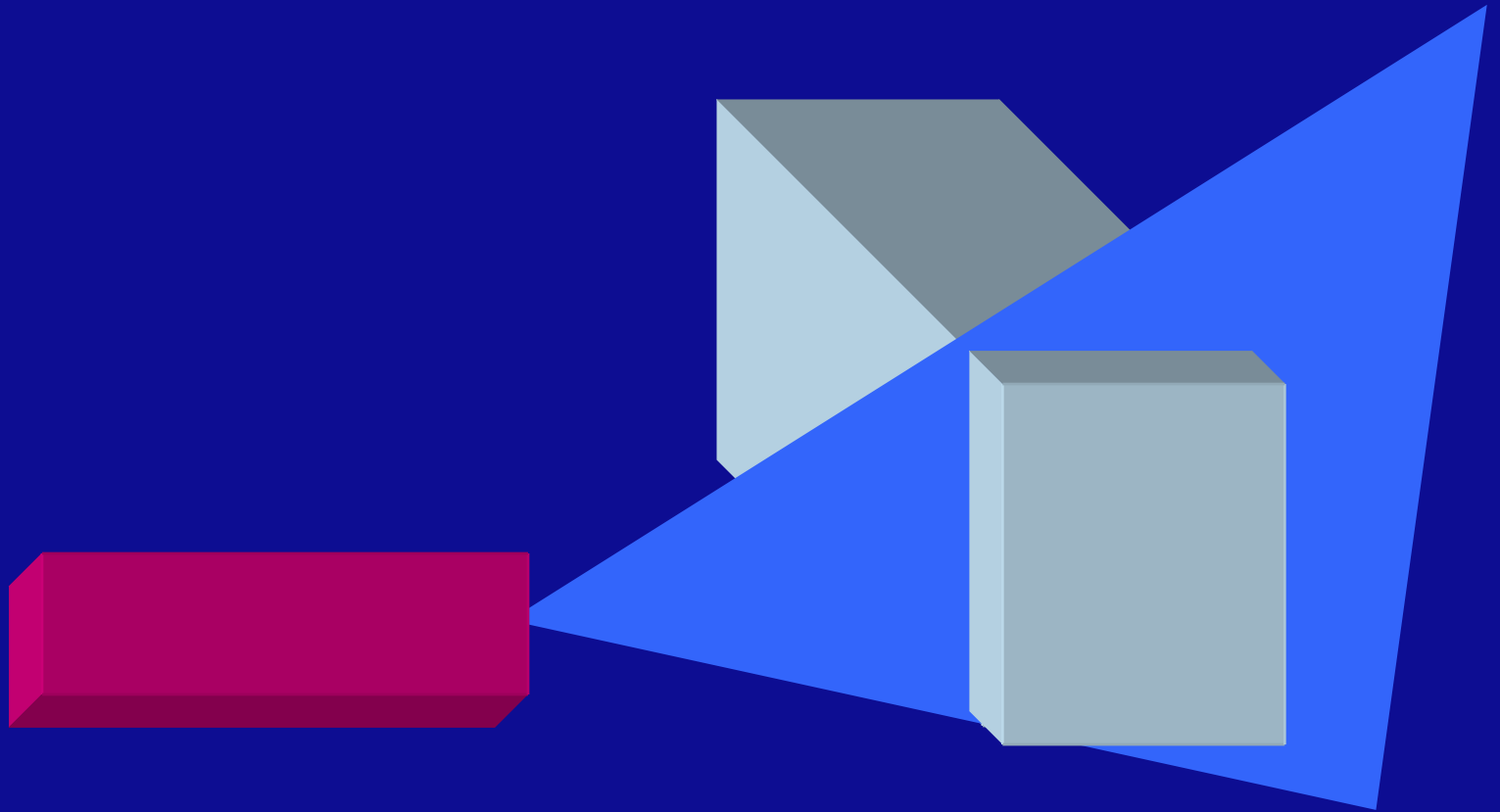
Linatron K9™

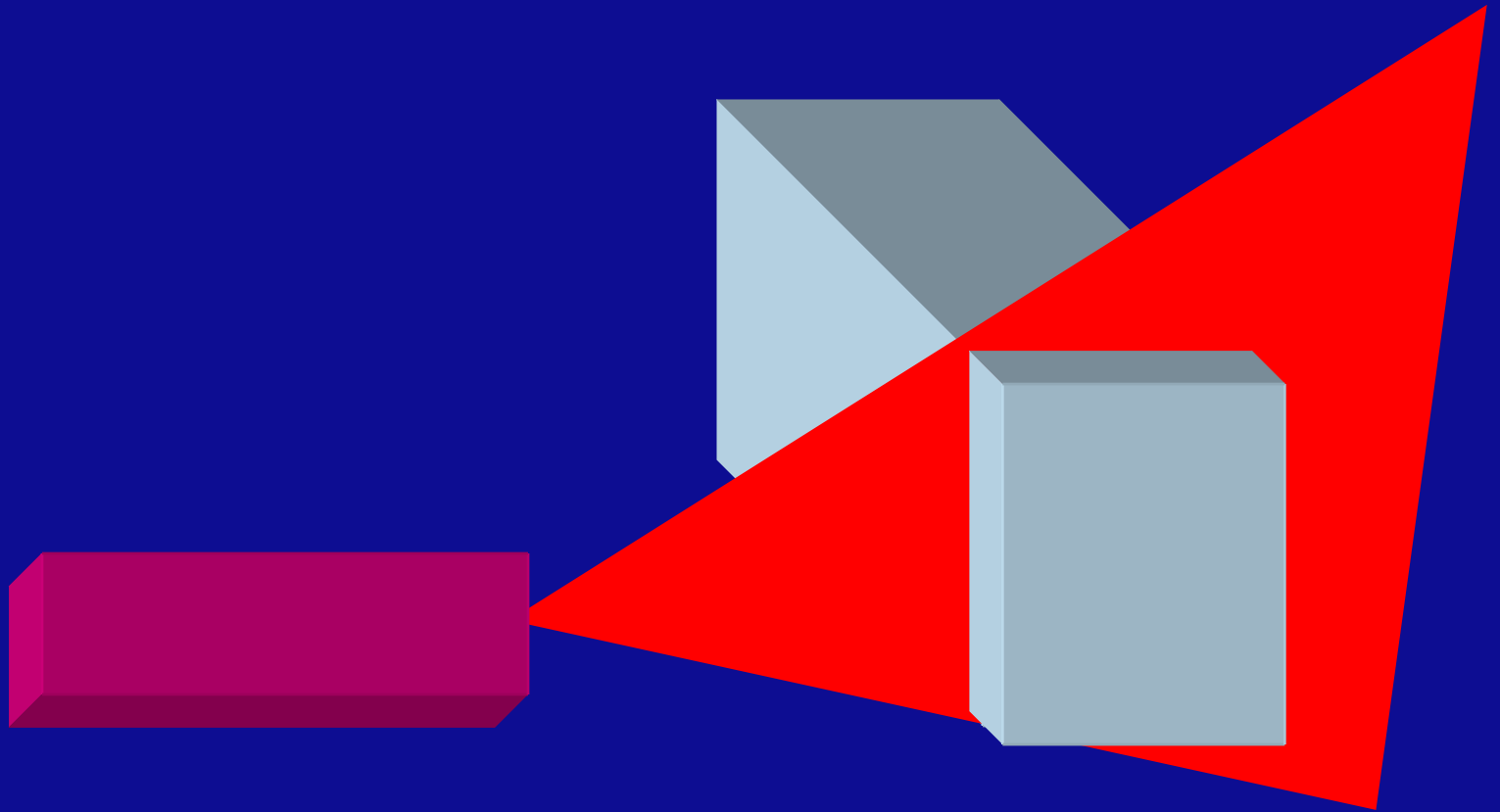
Container

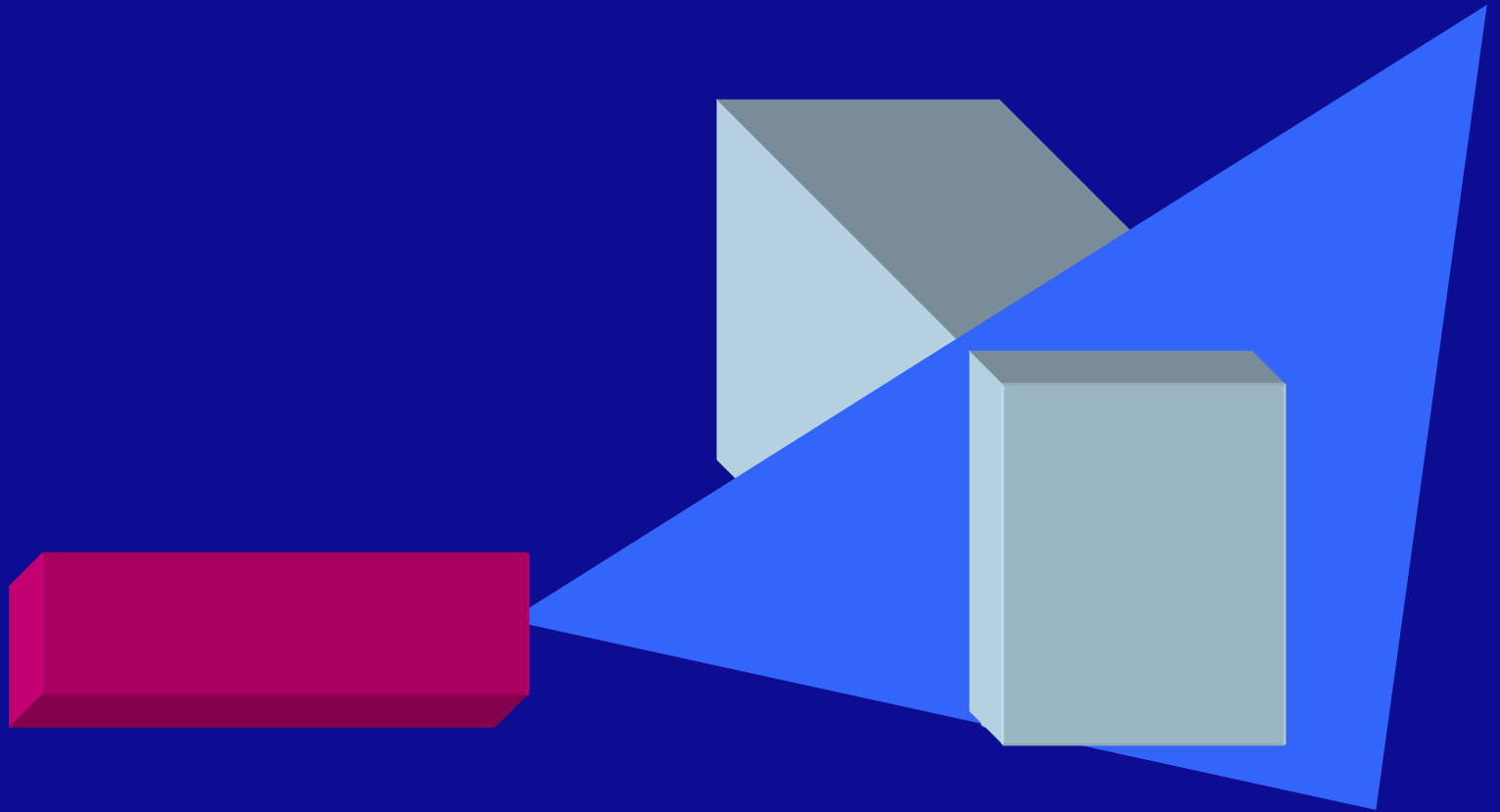
**Fan Beam:
Red 9 MeV
Blue 5 MeV**

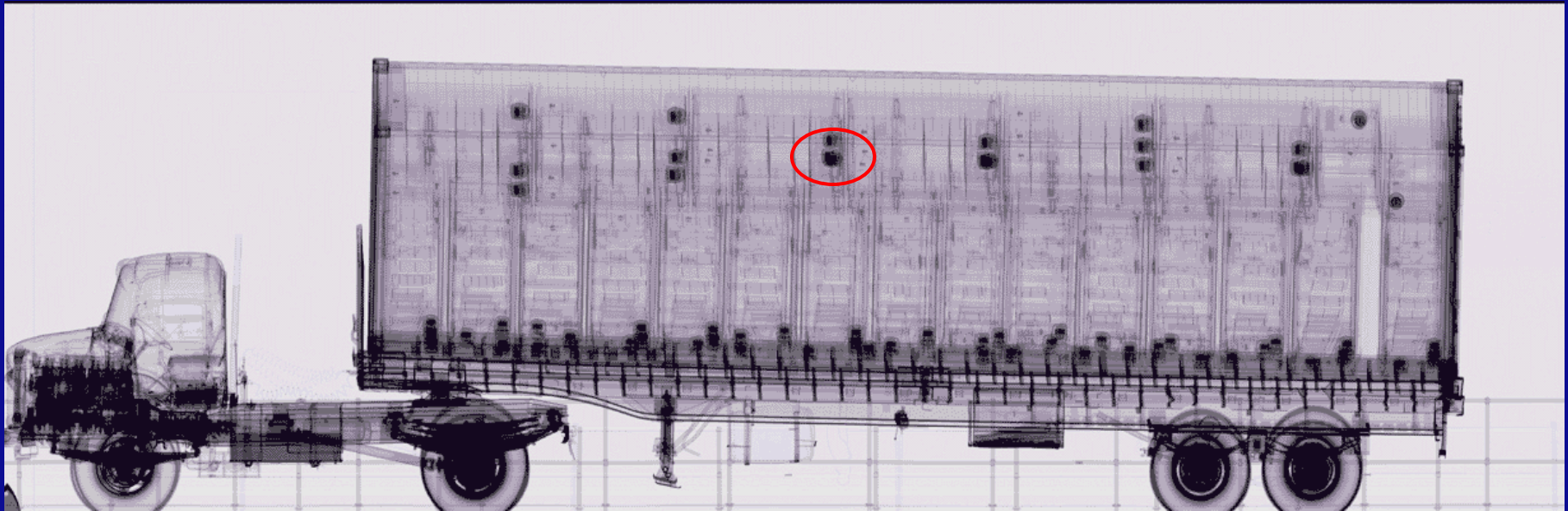


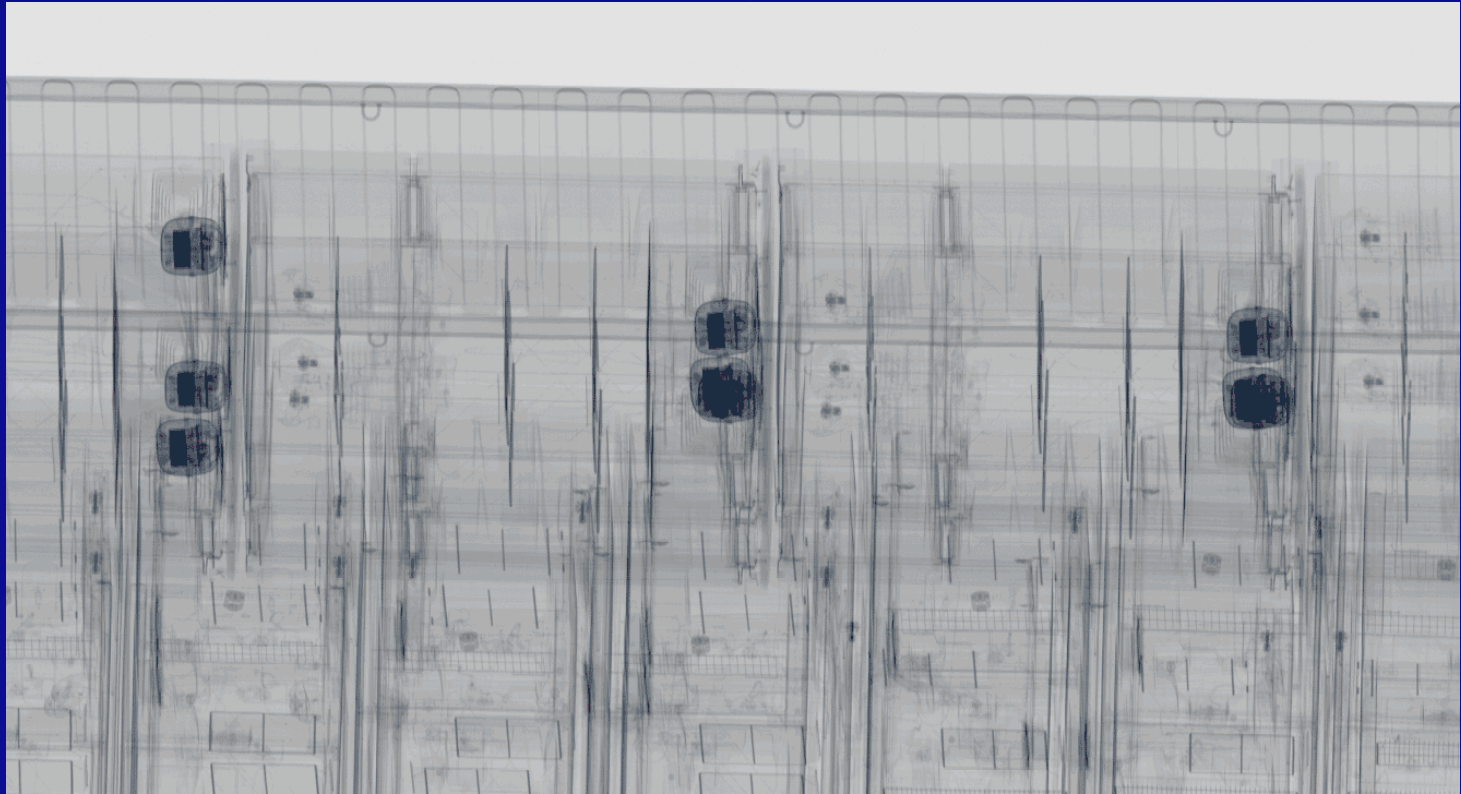


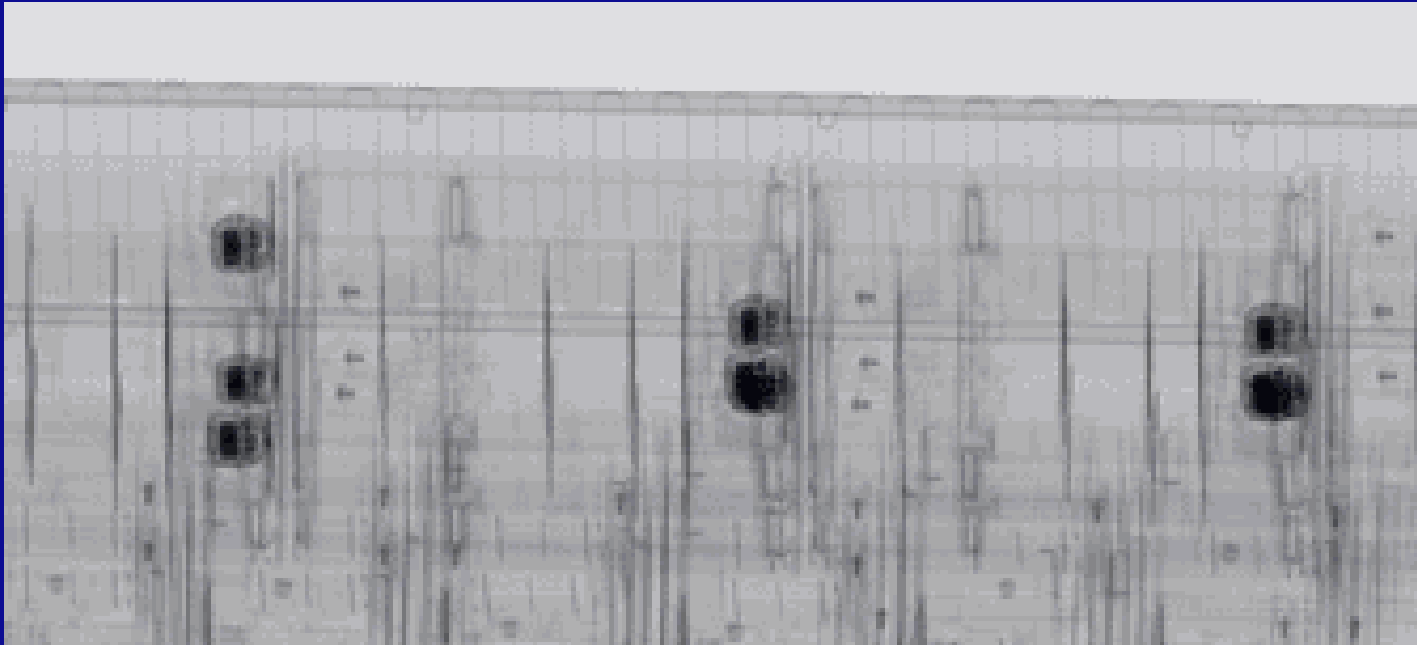


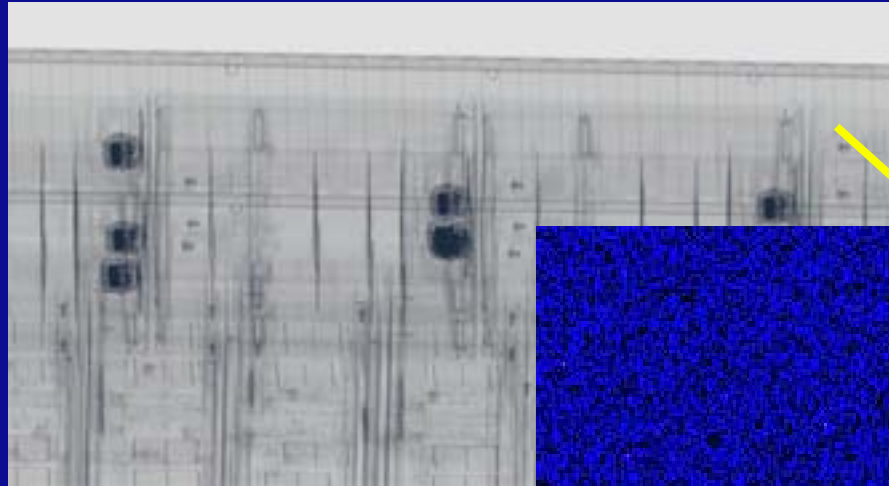




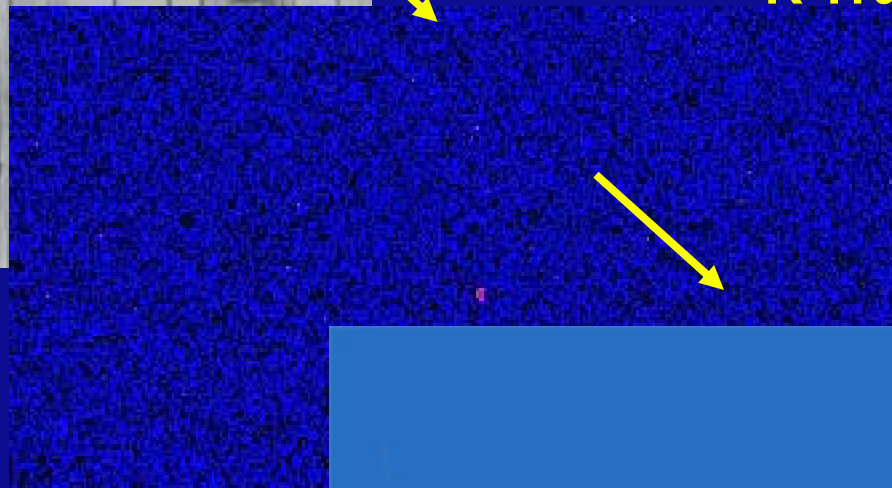




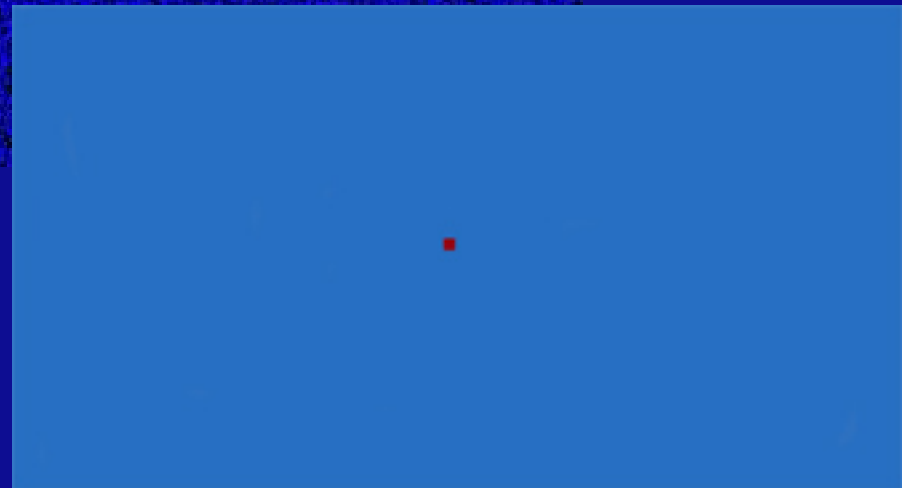




Normal Truck Image



R Truck Image



Algorithm Result

Integrated images reveal material density
Difference between Steel and Lead clearly visible
Automatically determine density, size and threat potential

6MV

Steel & Lead behind 3" of Steel

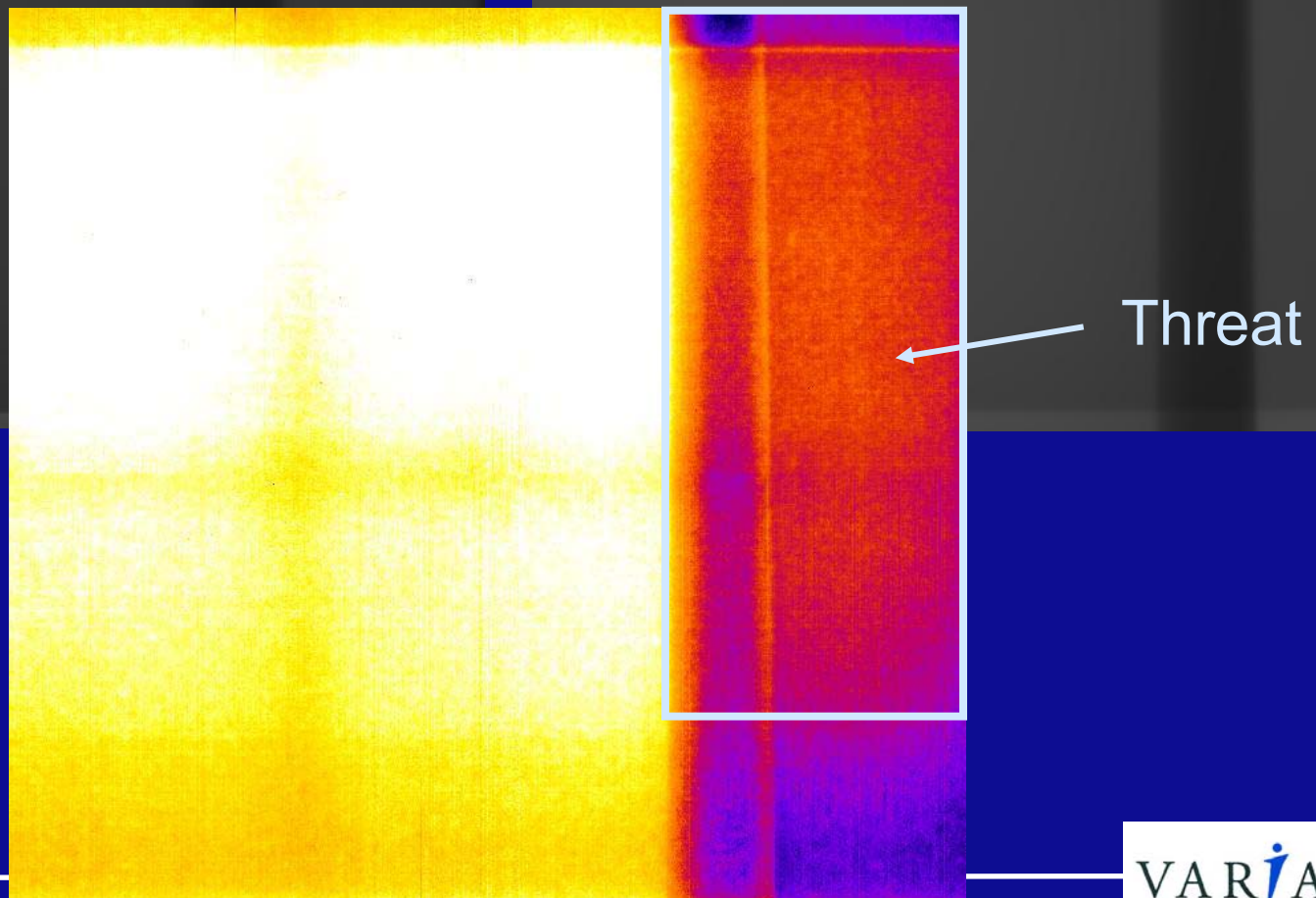
9MV

Steel & Lead behind 3" of Steel

Threat

No visible difference between the objects in the
individual images

Integrated images reveal material density
Difference between Steel and Lead clearly visible
Automatically determine density, size and threat potential





Introducing Linatron K9®

The watchdog™

Cargo inspection with teeth

Varian's Linatron K9 is the solution to high-speed interdiction of cargo containers transporting nuclear-based WMDs and Dirty Bombs.

The K9 is the only dual-energy X-ray source capable of switching energies pulse-to-pulse, enabling cargo screening systems with the ability to automatically identify high-density materials used in WMD's and Dirty Bombs, even in heavily loaded cargo containers.

The K9 provides unmatched penetration capabilities of 17" of solid steel, enabling fast, high-resolution images ensuring that the user is able to completely screen a fully loaded container faster than any other non-invasive inspection system in the world.

K9 is built on Varian's proven high-energy Linatron accelerator technology, the industry standard used by cargo screening system manufacturers around the world.

Put some teeth into your cargo screening system with the Linatron K9.

Linatron K9 – The Watchdog. The latest innovation from Varian.

To see more, contact:

Varian Medical Systems
Security & Inspection
Products

Las Vegas, Nevada

tel: 702.938.4859

fax: 702.938.4833

www.varian.com/sip

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From One Innovation to the Next

Forward-Looking Statements and Non-GAAP Reconciliation

Except for historical information, the information that follows contains certain forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include the matters described in the risk factors section of our information statement and other risks detailed from time to time in the company's filings with the Securities and Exchange Commission.

The company makes reference to certain financial results in the first quarter of fiscal year 2006 which would have been consistent with GAAP if presented in prior quarters, but which are now inconsistent with GAAP due to changes in accounting standards. These results were reached by excluding non-cash, share-based compensation expenses. The company references those results to allow a better comparison of results in the current period to those in prior periods. The company's reference to these results should be considered in addition to results that are prepared under current accounting standards but should not be considered a substitute for results that are presented as consistent with GAAP. A reconciliation between GAAP and Non-GAAP numbers appears at the end of the financial section of this presentation.