

VARIAN
medical systems



A partner for life
Mid Year Review
May 1, 2007

Forward-Looking Statements

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.

Agenda

Welcome

Tim Guertin, President and CEO

Q2 YTD Financial Summary

Elisha Finney, Sr. VP and CFO

Oncology Systems Market

Tim Guertin, and
Dow Wilson, President Oncology Systems

Proton Therapy and Security & Inspection Products

Lester Boeh, VP of Emerging Businesses

Q & A

5 Year Growth Outlook

Tim Guertin

Q2 YTD Financial Summary

Elisha Finney
Sr. VP and CFO

Business Segments - Orders

	<u>FY06</u>	<u>%</u>
<u>Oncology Systems</u>	\$1,535M	85%
Radiation Therapy		
Brachytherapy		
radiosurgery		
<u>X-Ray Products</u>	\$ 242M	13%
Tubes		
Flat Panel Imagers		
<u>Other</u>	\$ 43M	<u>2%</u>
Ginzton Technology Center		
Security and Inspection Products		
TOTAL	\$ 1,820M	100%

Q2 FY07

(\$M)	VMS		OS		XTP		Other	
Net Orders	528	23%	373	2%	68	16%	88	1374%
Revenues	443	7%	358	3%	66	8%	19	176%
Gross Margin⁽¹⁾	42%		43%		42%		20%	
R&D ⁽¹⁾	28							
SG&A ⁽¹⁾	70							
Op Earnings⁽¹⁾	86	20% ROS (+9%)						
Interest Income	2							
EPS ^{(1) (2)}	\$0.46	<i>(132M diluted shares)</i>						

Note:

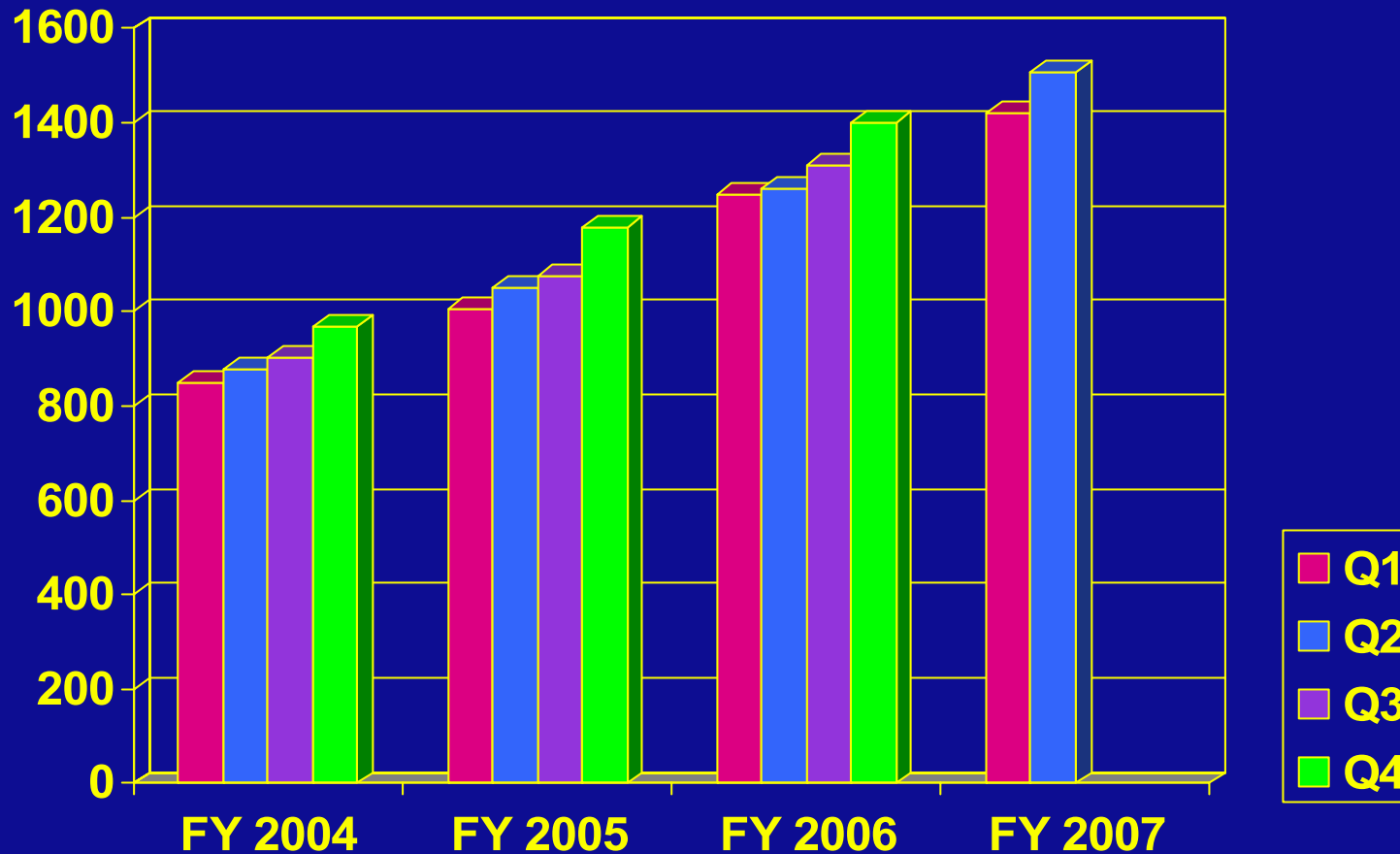
(1) Includes amounts for total share-based compensation expense and its related tax benefits.

(2) Includes \$0.06 net earnings per diluted share for share-based compensation expense.

Backlog

Record \$1,506M

(As of 03/30/07)



Q2 FY07 Balance Sheet / Cash Flow

Conservative balance sheet

\$289M cash and marketable securities

\$64M total debt

\$815M shareholder equity

Spent \$76M on stock buy-back

***DSO 85 days – up 3 days from year ago quarter**

Cash flow

\$30M cash flow from operations

Repurchased 1.6M shares during the quarter

2.9M shares remaining under the previously announced 4.5M share repurchase program in effect through September 27, 2007.

**Days Sales Outstanding*

Fiscal 2007 Outlook ^{(1) (2)}

(As of end of Second Quarter, Fiscal 2007)

- Revenue Growth Estimated in low double digits for FY 2007
- EPS Estimated at ~ \$1.79 to \$1.81 for FY 2007
- Revenues Growth Estimated at ~ 6% for the Third Quarter of FY 2007
- EPS Estimated at ~ \$0.35 to \$0.36 for the Third Quarter of FY 2007

Note:

(1) Fiscal 2007 Outlook includes the impact of the acquisition of ACCEL Instruments.

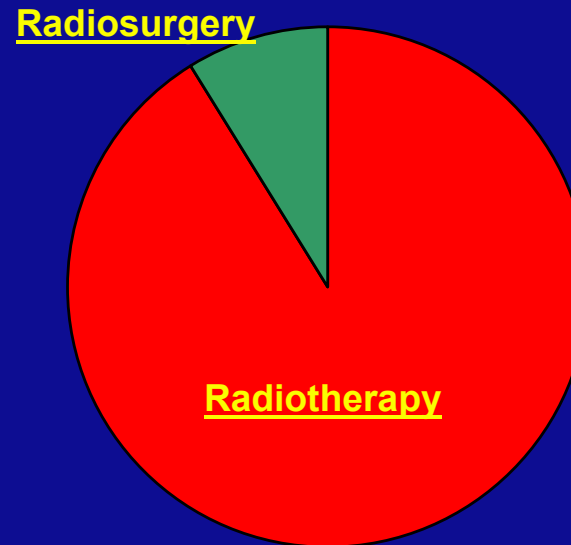
(2) Varian updates its outlook once per quarter when it reports financial results. This information is for reference purposes only and is not an affirmation of or an update to the outlook that Varian reported at the close of last quarter.

Continuing Varian's Growth

Oncology Systems' Market

Radiotherapy/Radiosurgery Market

- **\$3.0 Billion**
 - Estimated growth 10% annually
- **Competitors**
 - Varian
 - Elekta
 - Siemens
 - Tomotherapy
 - Accuray
- **Products**
 - Linear Accelerators
 - Accessories
 - Software



Market Drivers

Better Conformality → Better Outcomes

Conformality technology → better pricing

-Intensity Modulation (IMRT)

-Image Guidance (IGRT)

-RadioSurgery (SRS)

-All-in Trilogy ~\$3M

Competition for patients in U.S.

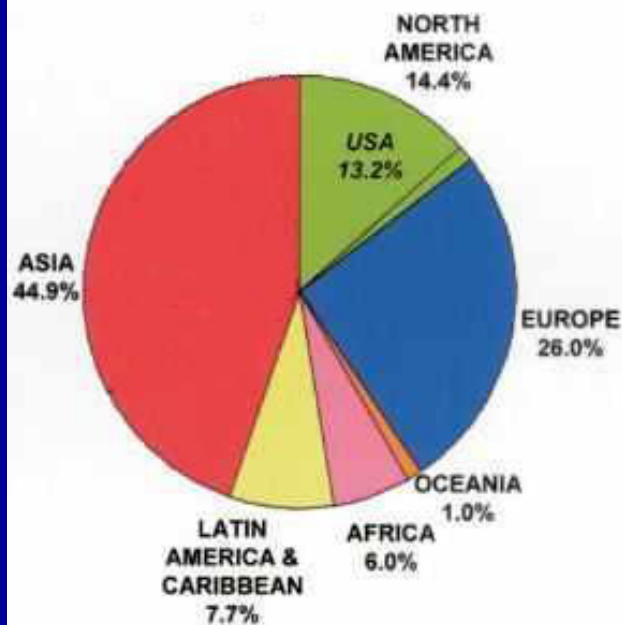
Political pressure in international markets

Demographics

Demographics--Cancer Epidemic

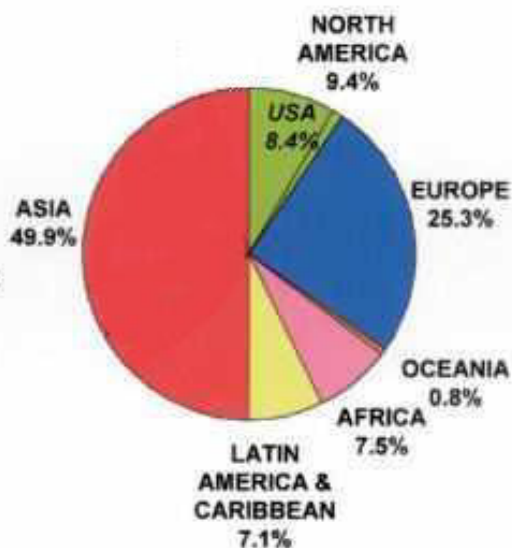
WHO Forecasts 50% Rise by 2020*

Incidence



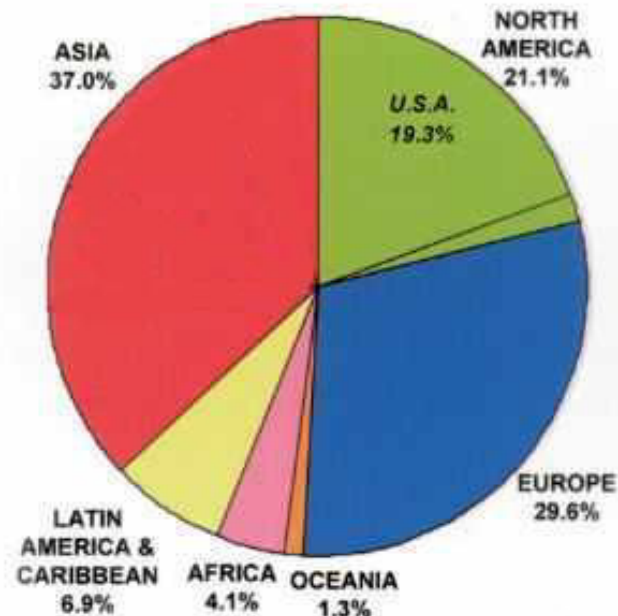
10.8 Million Cases

Mortality



6.7 Million Deaths

Prevalence



24.6 Million Persons

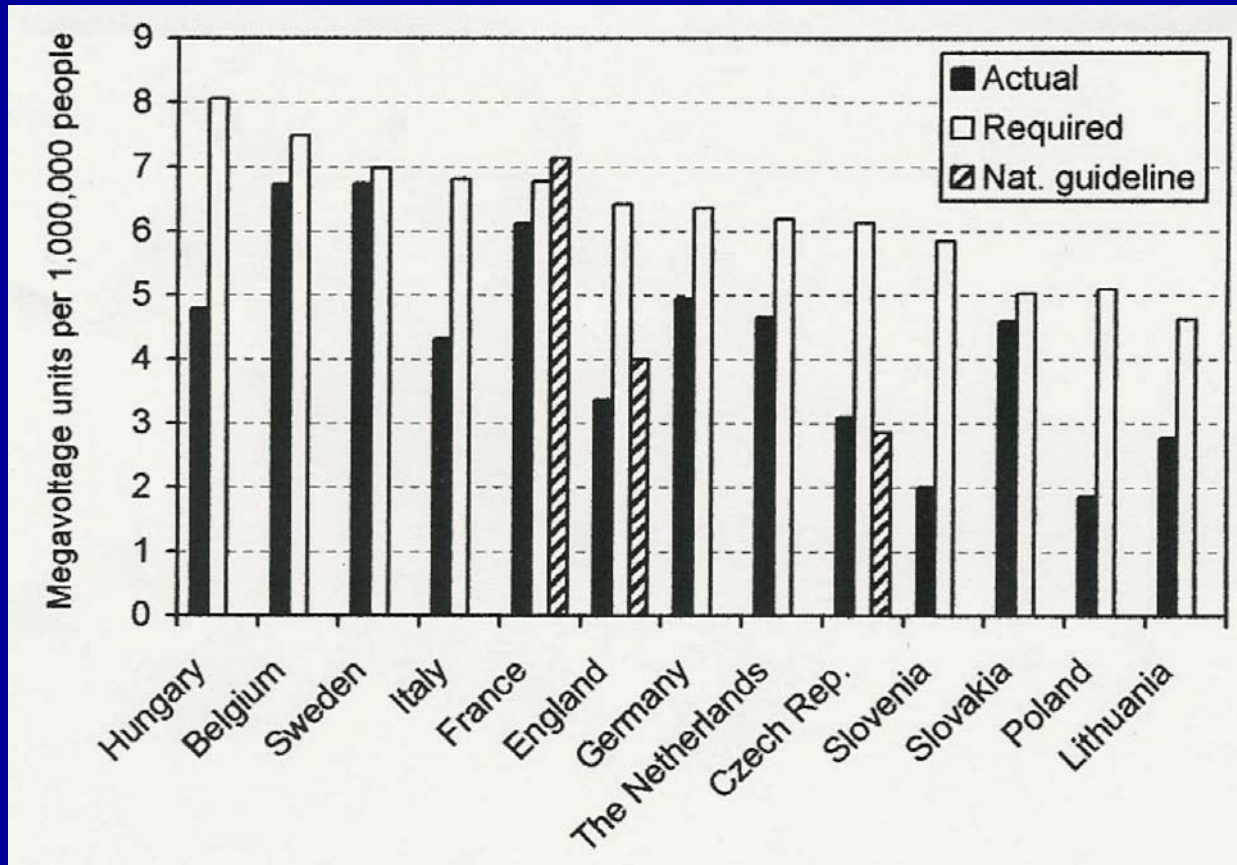
Global Cancer Statistics, 2002

by D. Max Parkin, MD, Freddie Bray, J. Ferlay and Paola Pisani, PhD

* World Cancer Report, 2003

Demographics

Europe Under-equipped



- **Advanced treatments will increase requirement**
- **Includes cobalt**

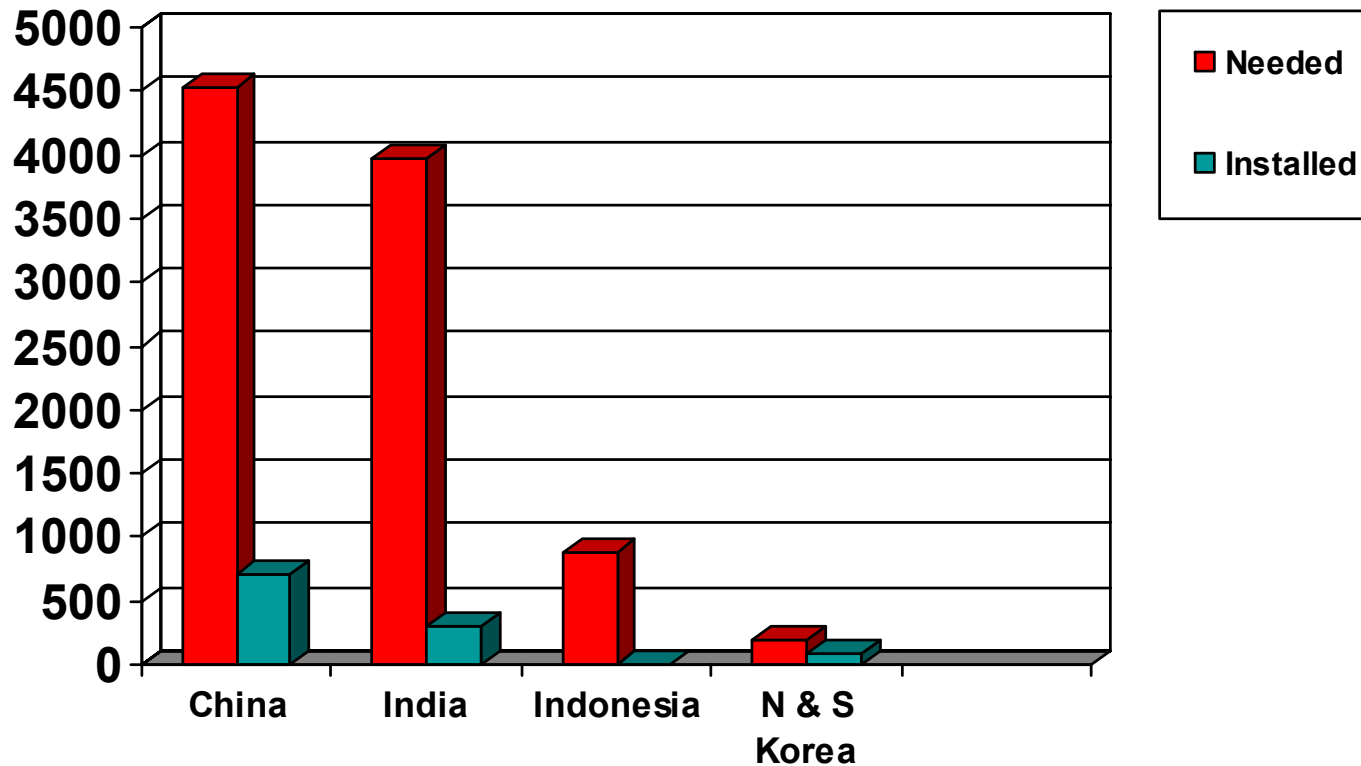
From: [Towards evidence-based guidelines for radiotherapy infrastructure and staffing needs in Europe: the ESTRO QUARTS project](#)
SM Bentzen, et al.

Demographics

10,000+ Units Needed in

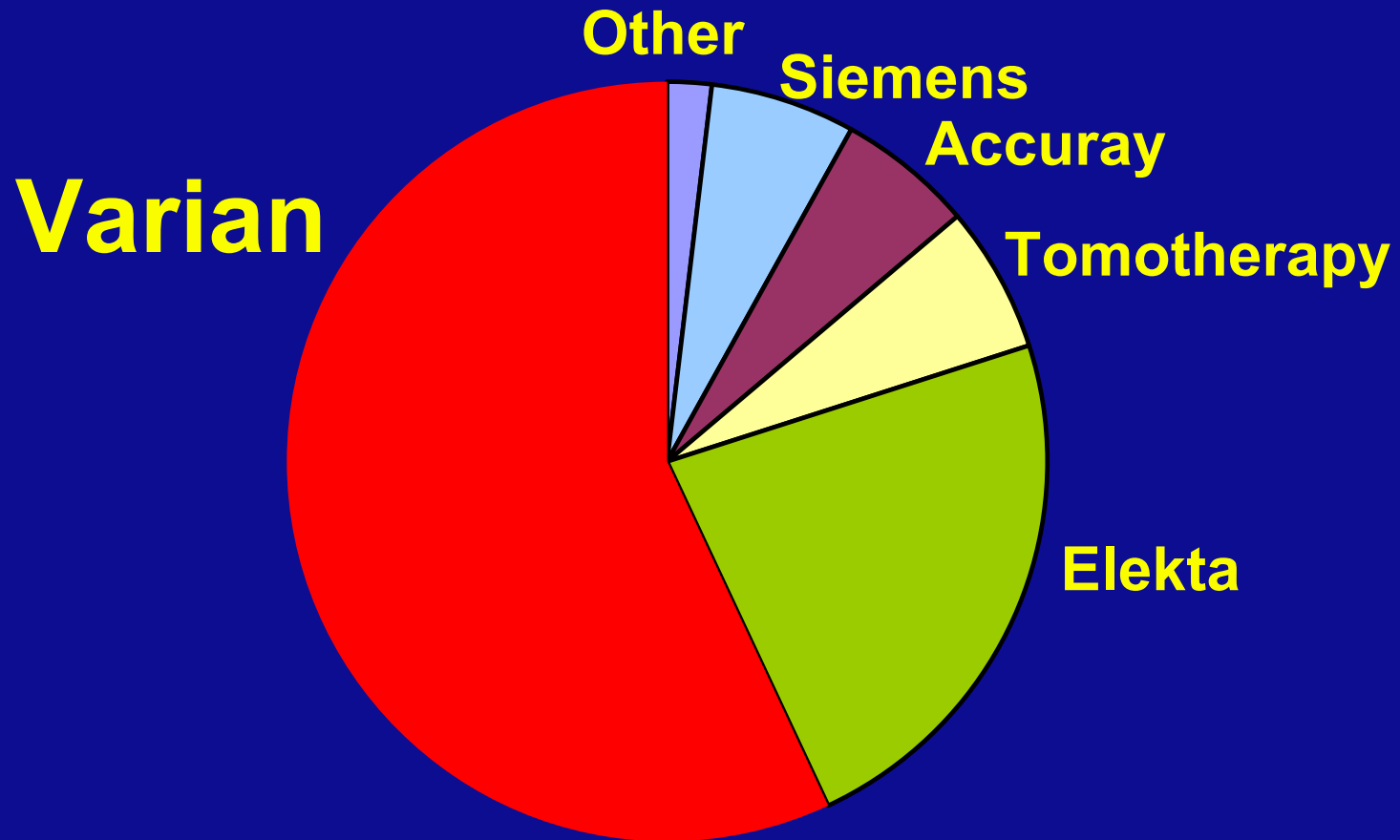
A

Treatment Machines

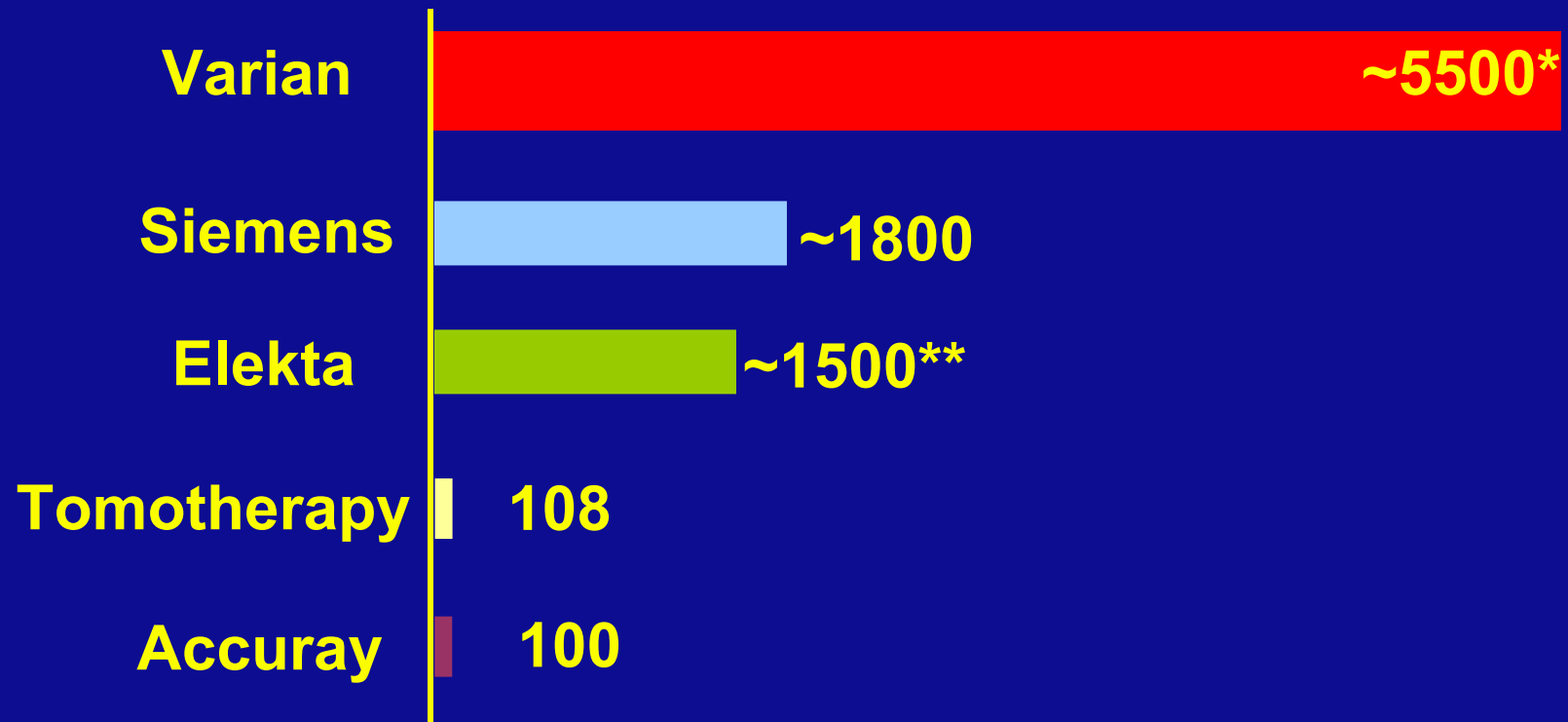


Need estimated @ 4 machines per million population

Global Orders \$ Market Share Radiotherapy and Radiosurgery



Installed Base

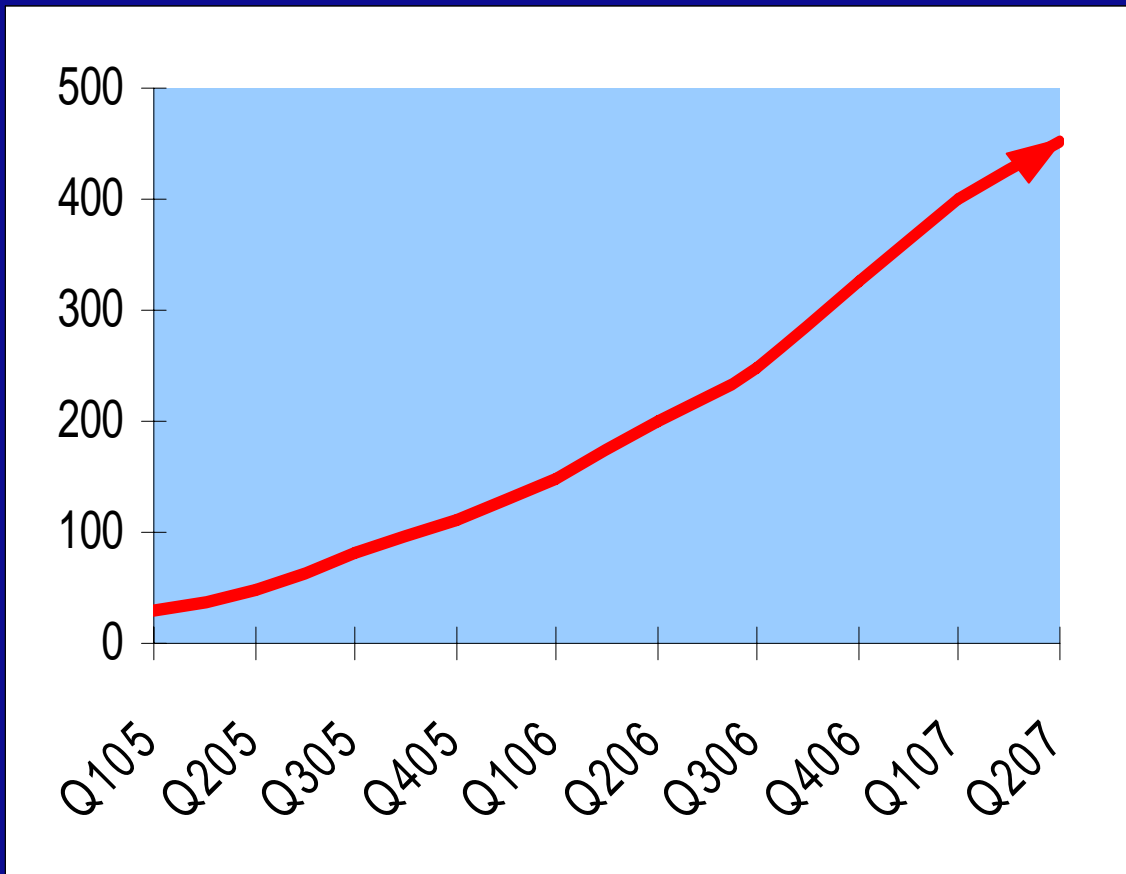


•Includes ~700 GE + Mitsubishi units under Varian service

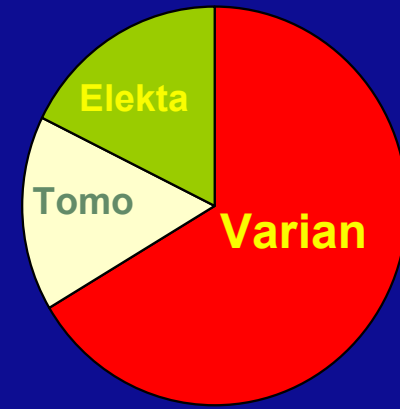
•**Includes 240 GammaKnives

IGRT/SRS Installations

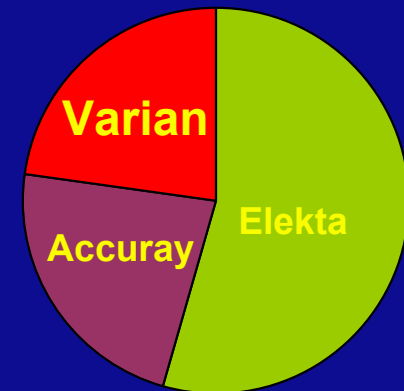
Varian Installs



IGRT - ~675

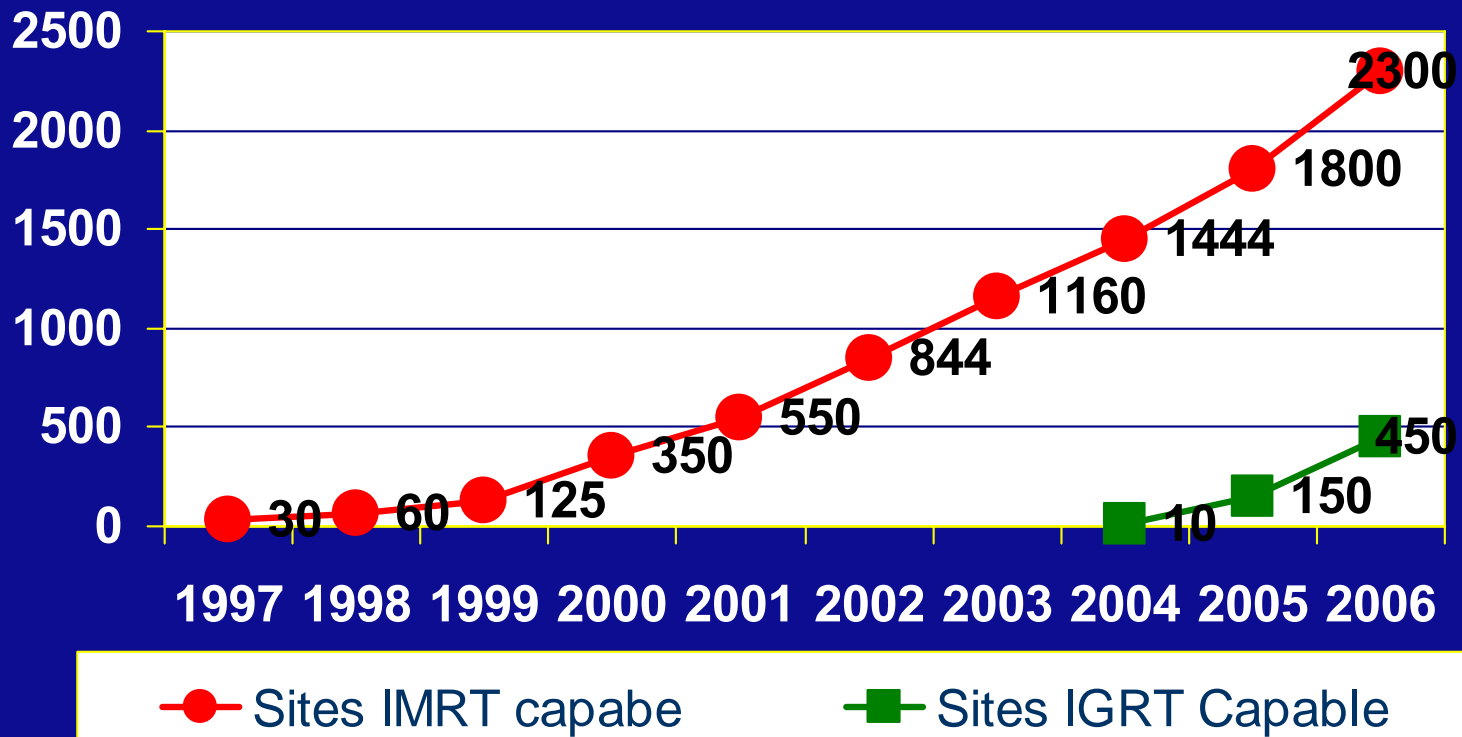


SRS - ~440



Varian Customer Adoption Trends

Varian IMRT and IGRT Adoption Trend
FY1997-FY2006



IGRT Penetration - <8%

675 units today

~9000 unit opportunity

Early
Adopters

Mainstream Market

Buying Criteria

- Research
- Marketing
- Reimbursement

Buying Criteria

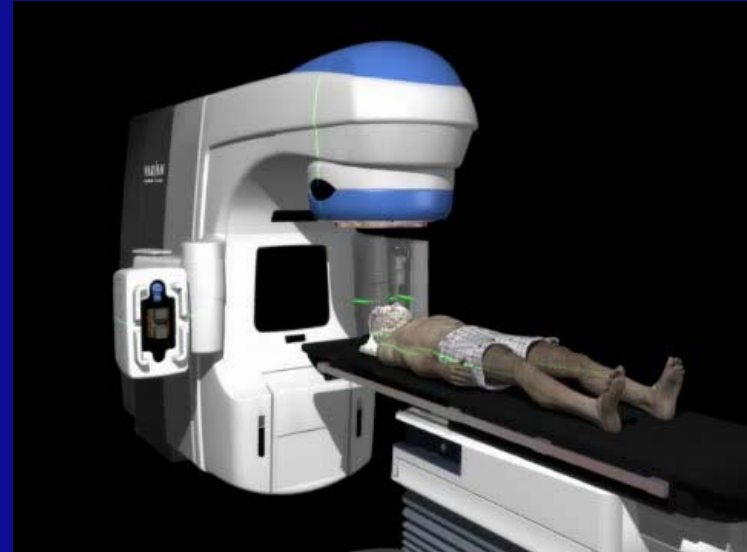
- Proven clinical effectiveness
- Value
 - Large ROI
 - Price & Service
- Versatility – all therapy types
- Patient throughput
- Ease of use
- Reliability
- Staffing

Keys to Growth

- **Clinical superiority; fast and simple to use**
 - IMRT
 - Stereotactic Radiosurgery
 - Image Guidance
 - Motion Management
- **Help users market to:**
 - Mainstream Radiation Oncology Market
 - Patients
 - Surgeons
 - Referring Physicians

Varian's Leadership in IGRT/SRS

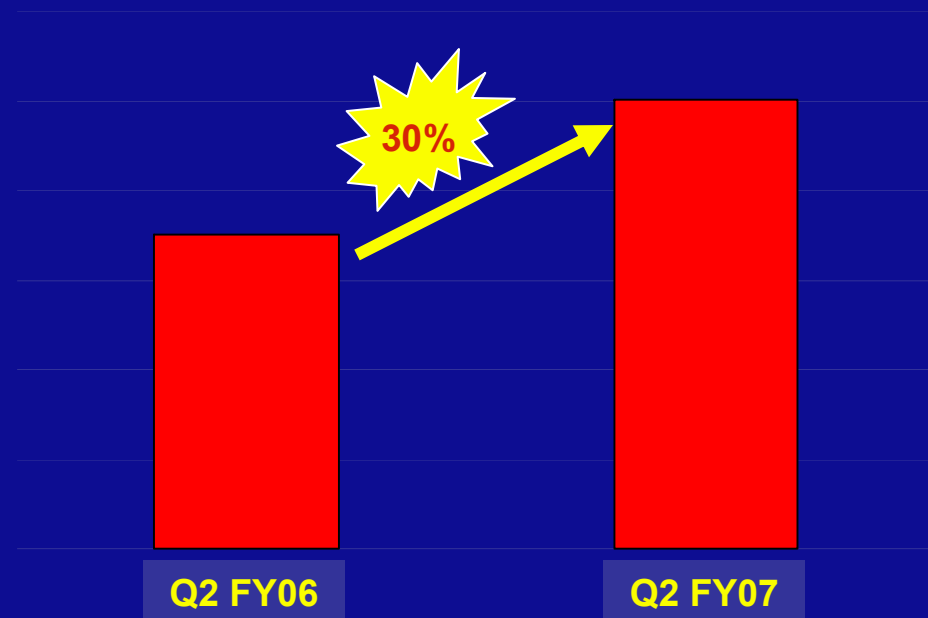
- Fully automated, remotely controlled, robotic imaging and delivery system for IGRT and SRS
- 450 shipments & installations as of Q2 FY07
- Only system with kV radiographic, fluoroscopic, gated fluoroscopic, automatic marker detection, 3D CBCT, ultrasound
- Respiratory gated imaging and treatment



The only fully automated process
2-4 minutes: Can be done in standard appointment

Varian Order Growth in IGRT/SRS

- US growth rapid
- International ramping
- Recent orders:
 - ~70% OBI
 - ~30% Trilogy



Why We Are Winning in IGRT/SRS

Radiation Oncology

- **IMRT, IGRT and SRS optimized in one machine**
- **Highest throughput compared to any competitor**
- **Varian Brand**
- **Best ROI**
- **Reliability and serviceability**

Radiorurgery

- **Best multi-leaf technology and smallest leaf width**
- **IMRS planning capability compelling**
- **Fastest treatments**
 - Highest dose rate
 - Dynamic MLC
 - Automation
- **3D and 2D imaging**

Competing IGRT Technologies

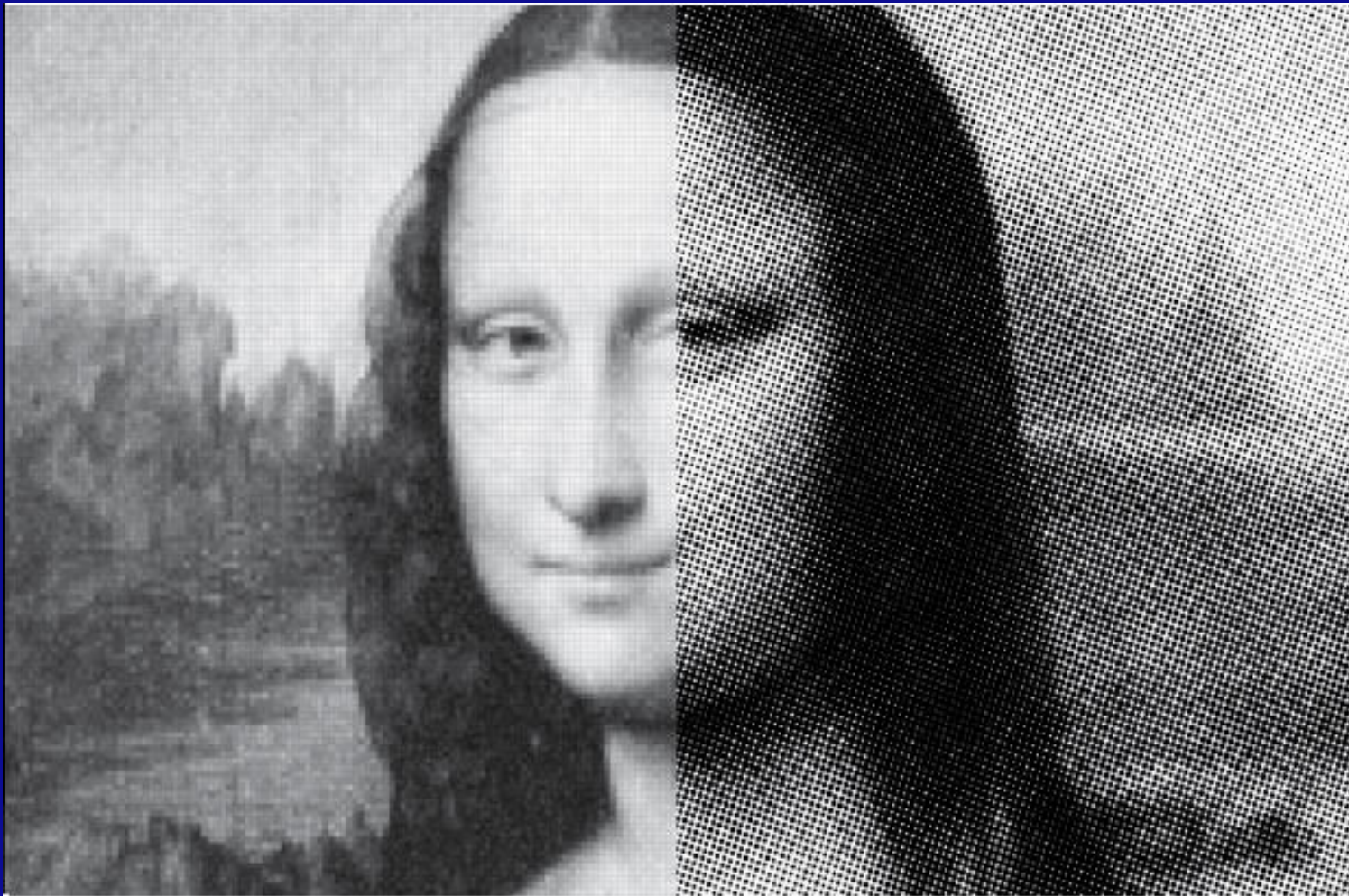
Feature	Tomotherapy	Elekta	Varian
Image Guidance	MV 3D single slice only	3D CBCT	2D, 3D CBCT, Dynamic Targeting, I Tomosynthesis (WIP)
Motion Management	--	Breath control	Breath control, Gating (released) & Tracking (WIP)
IMRT Technology	Single slice helical	MLC Volumetric, move and shoot (static)	MLC volumetric, dynamic and static, Very fast
IMRT Capability	360° IMRT Hi-res at slow speeds	Good at very Slow speeds	Excellent and fast; GEOS automation
Patient throughput	2-3/hour	4/hour	4-5/hour
Disease Site	Limited breast & brain Good bone marrow TBI	Versatile	All sites + moving sites
Accessibility to Target	Coplanar only	Coplanar + Non-coplanar	Coplanar + Non-coplanar
Marketing Advantage	RT in CT form factor	Low price	Universal utility, throughput, reliability, upgradability
Reliability	↓	→	↑

Competing Radiosurgical Technologies

	Gamma Knife	CyberKnife	Trilogy
Sites Treated	Intracranial only	Intracranial and extracranial	Intracranial and extracranial
On-Board Imaging	No	Yes	Yes
Immobilization	Frame	Frame and Frameless	Frame and Frameless
SRS Time	30-60 minutes	2-4 hours	< 30 minutes
Fractionated Therapy	Not available	Yes	Yes
Field shaping	Conical collimators	Conical collimators	Conical collimators and MLC
Multipurpose machine	Intracranial SRS only	SRS, SRT, IGRT	SRS, SRT, IMRS, 3DCRT, IMRT, IGRT, Electron RT, Gated RT, Conformal Arc Therapy

Source: *Dr. Kevin Murphy, Medical Director,
University of California at San Diego*

Dose Painting Resolution



Varian

Competition

Case Example #1

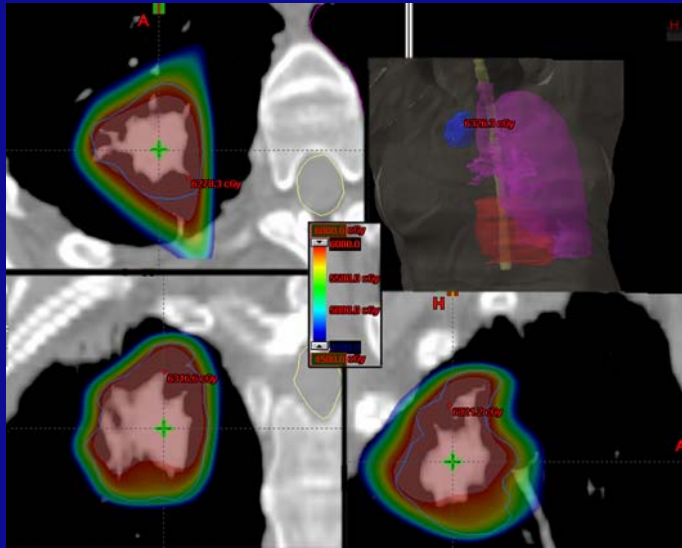
Dynamic Targeting – SBRT Lung

- **Tumor requires robust motion management**
 - 4D CT describes clear target margins
 - Gated 3D CBCT and fluoro verification confirm target location and motion control
- **Gated delivery allows for tight margins and less normal tissue irradiation**
- **Allows for dose escalation and tumor control with less toxicity**

A Varian unique capability

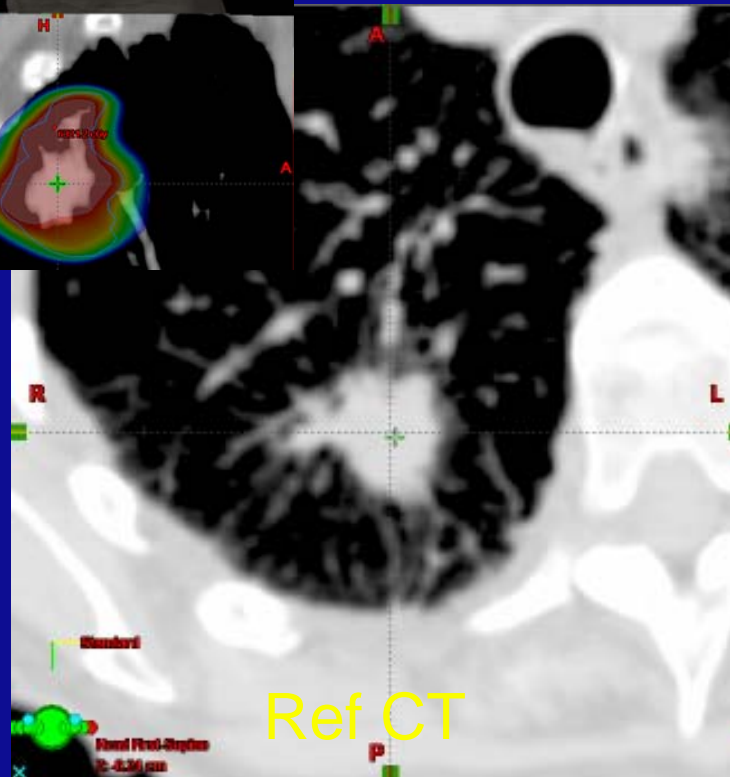
Case Example #1

Dynamic Targeting – SBRT Lung

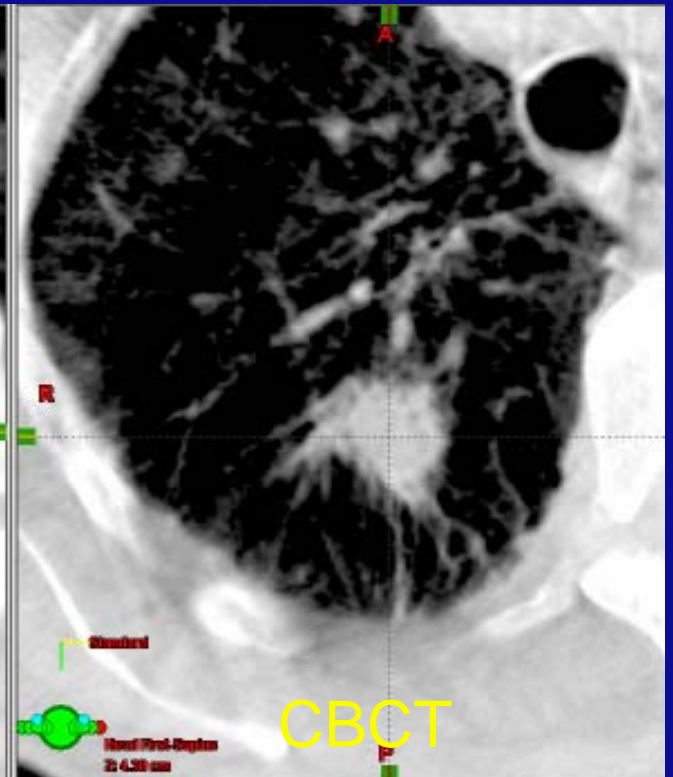


CBCT Patient Positioning

*4D Planning
with tight
margins*



Ref CT

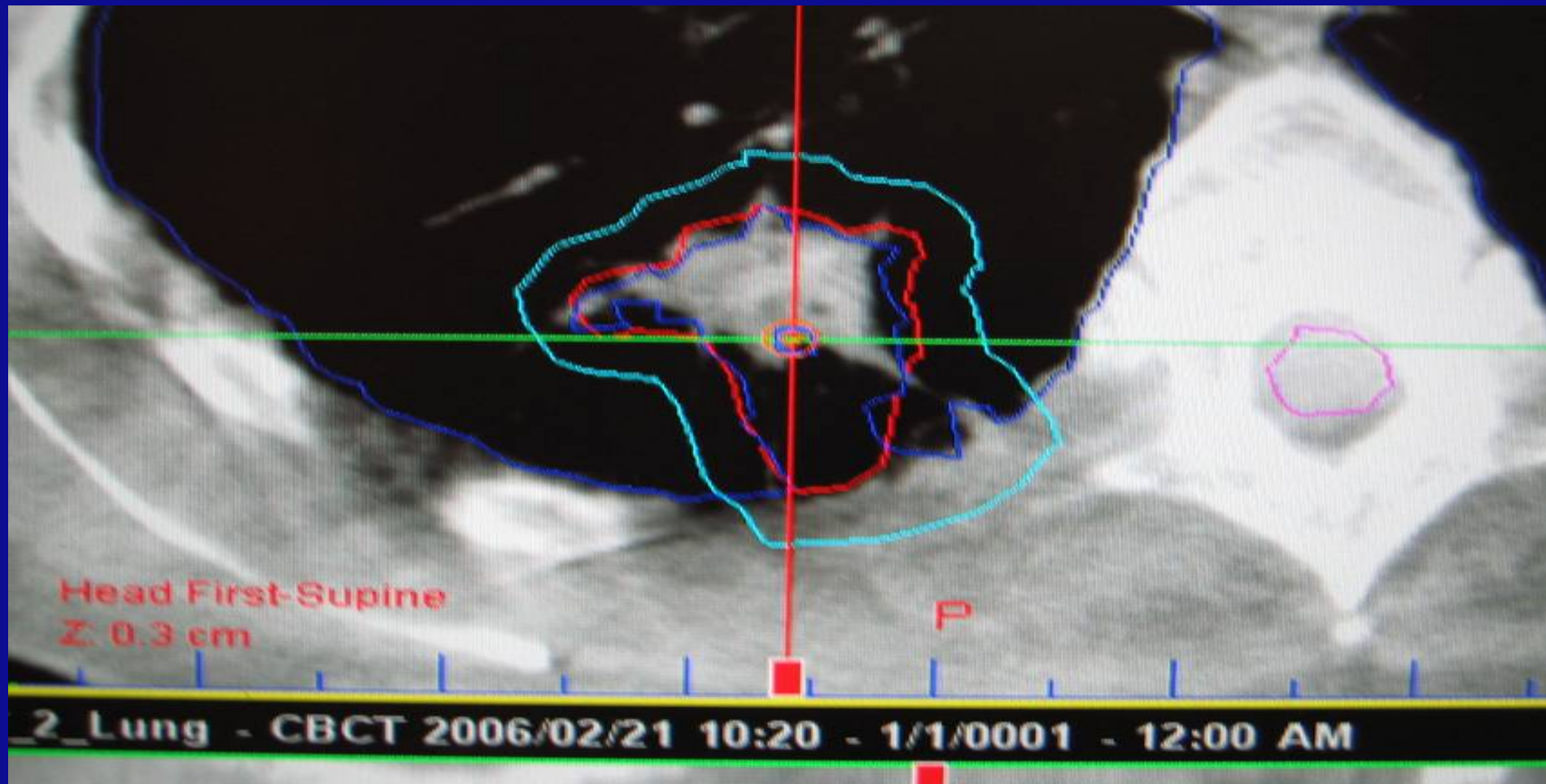


CBCT

Case Example #1

Dynamic Targeting – SBRT Lung

Final CBCT Verification



Case Example #2

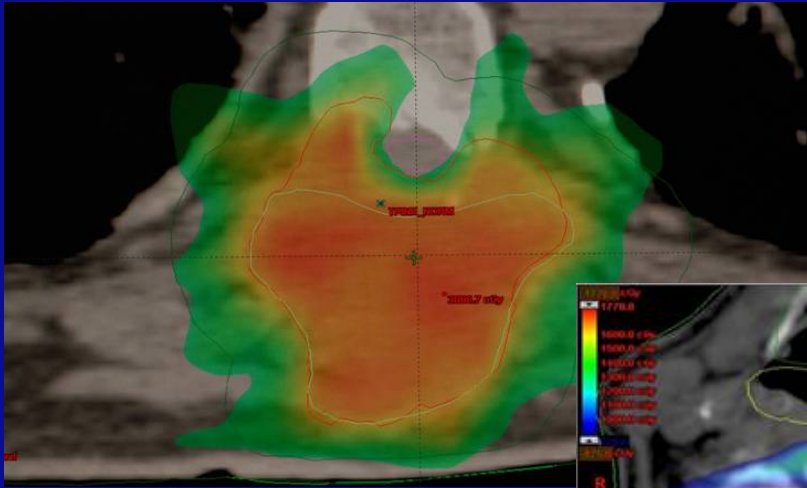
SBRT Spine

- Tumor next to spinal cord
- 3D soft tissue analysis needed to locate tumor, spinal cord and bone
- Patient can't lie still
 - Requires fast dose delivery
- Patient on back
- Precision critical

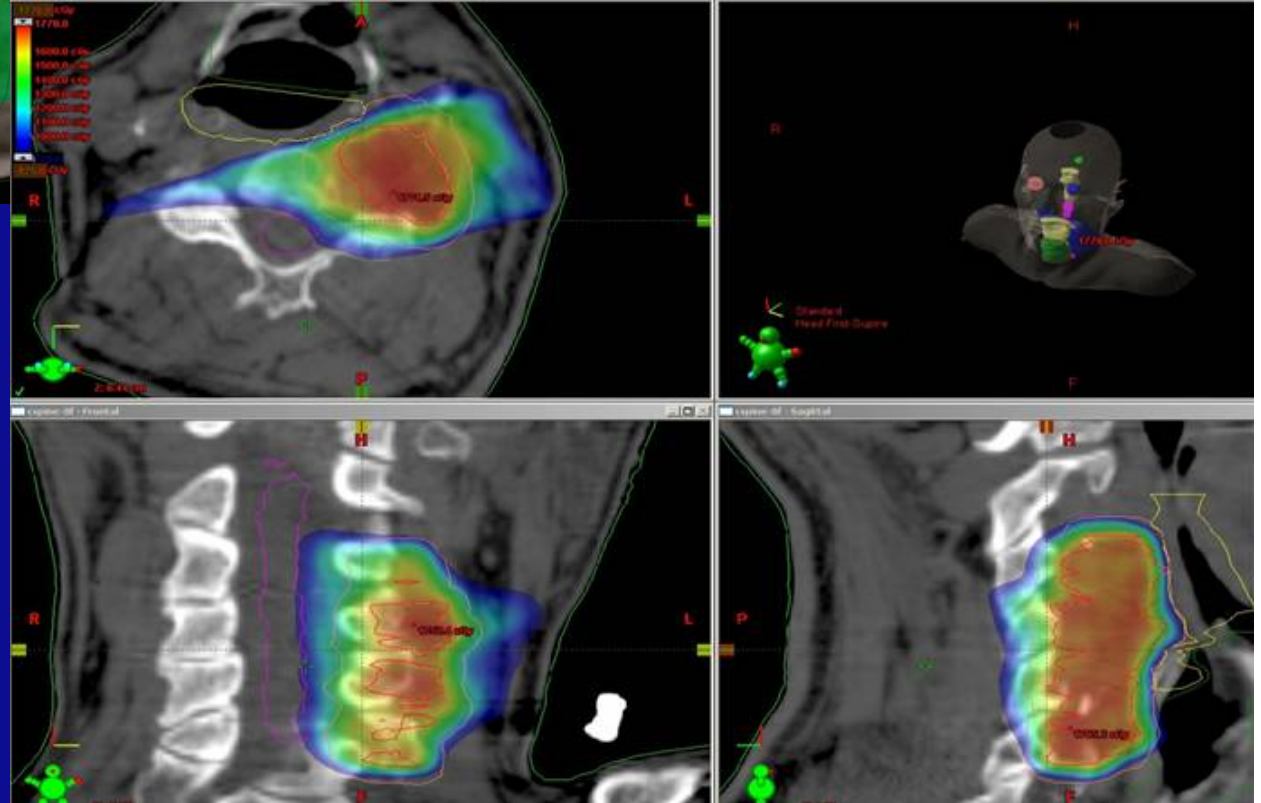
Another Varian unique capability

Case Example #2

SBRT Spine



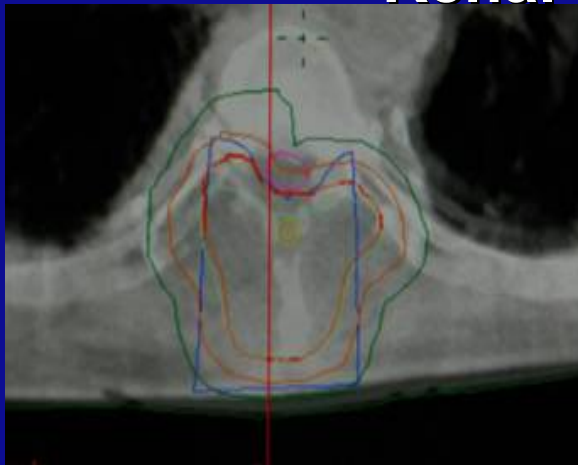
- Fastest delivery
- Best target access -- 360 degrees
- High quality 3D CBCT



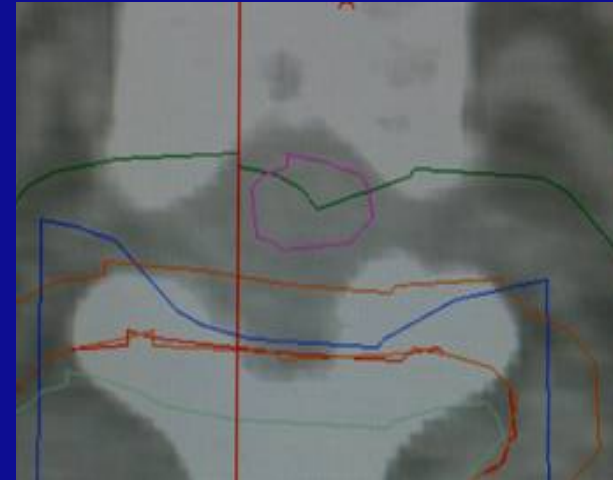
Case Example #2

SBRT Spine

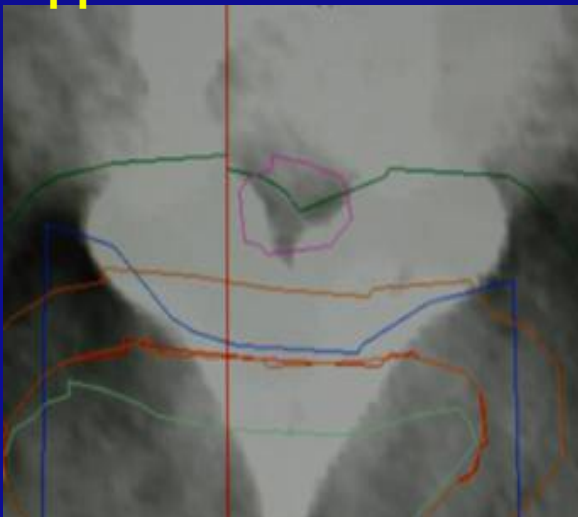
Initial 3D CBCT With Structure Set Overlay for Recurrent Renal Cell Met



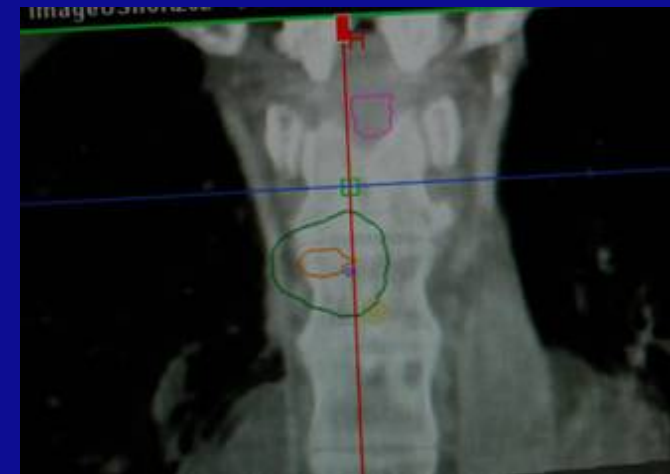
Apparent Lower Match



Some Upper Rotation



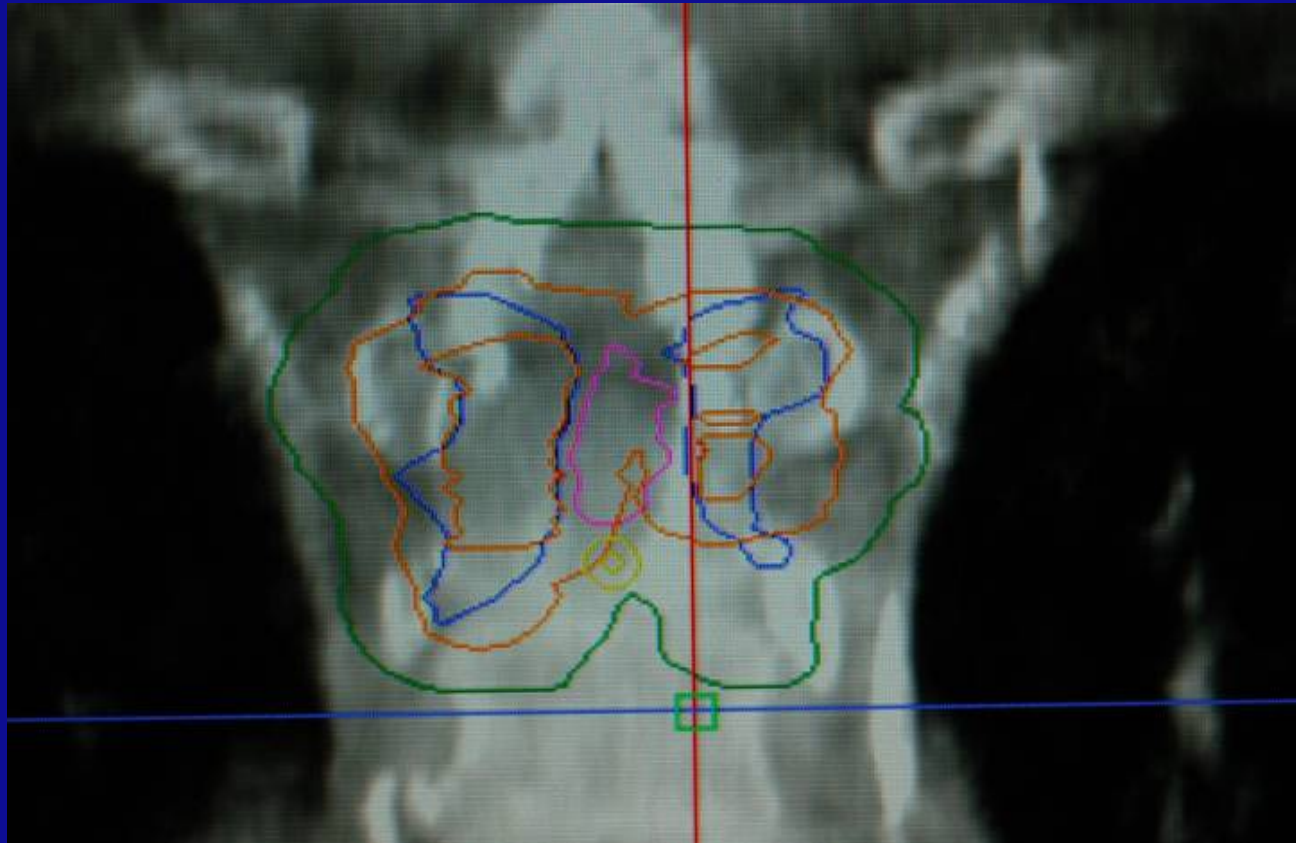
Cord Structure not in Spinal Canal



Case Example #2

SBRT Spine

Final Image Match with CBCT for Recurrent Renal CA



Spinal Cord in Pink - Minimum Effective Dose in Blue

How We Are Going To Continue Winning!

Driving Growth

- **New Product Initiatives**
- **Stimulating Replacements**
- **Sales Coverage**
- **Marketing Initiatives**

Driving Growth

New Product Initiatives – a sampling

- **Smart Segmentation**
 - Fastest, fully automated contouring
- **4D Planning and Visualization**
 - leading motion management solution from planning to delivery
- **Beam Angle Optimization**
 - Automated beam selection for IMRT
- **Physician Off-line Image Review**
 - 2D and 3 D review of real time IGRT procedures
- **OBI 1.4**
 - faster, smoother, better image quality, 3.5 minutes
- **DART**
 - unique system feature for adapting to geometric and physiological changes

Driving Growth: Spending on R&D

VAR	\$115M	
Tomo	\$ 14M	} \$97M
Accuray	\$ 18M	
Elekta	\$ 45M	
Siemens	\$ ~20M	

Driving Growth: Stimulating Replacements

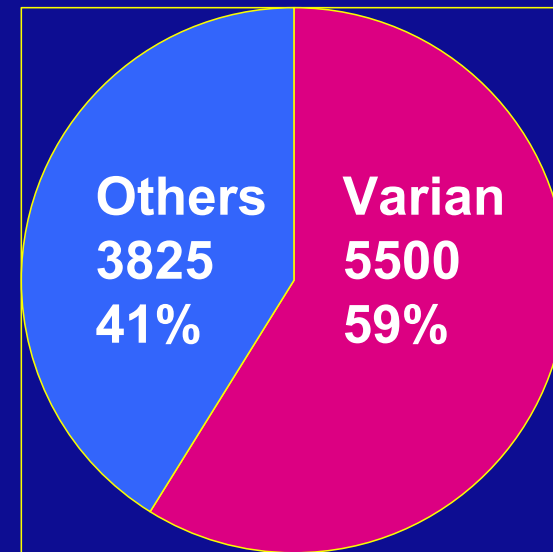
IGRT Today

- What's important
 - Ease of installation
 - Ease of use
 - Fast payback
 - Large ROI

Our Plan:

- 4 week install – new machines
- 5 day install for OBI
- Faster workflow
 - 2 minute Rad, 4 minute CBCT
- Payback under one year in US

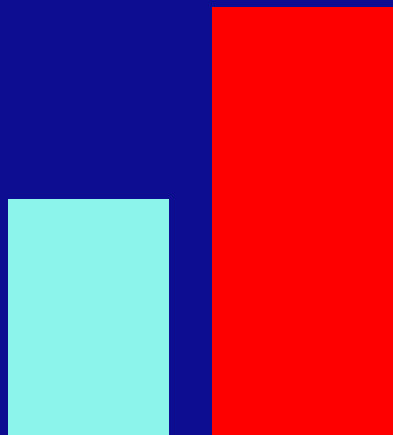
Worldwide Installed Base April 2007



Driving Growth: Expanding Sales Coverage

Expanding Global Sales Force Worldwide

Full Line
+12



05

07

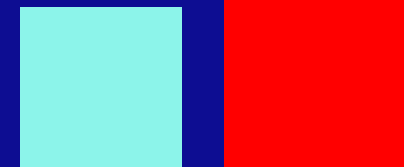
Neuro-surgery
+10



05

07

Specialty
+12



05

07

Driving Growth: **Stepping Up Marketing**

- **Direct to Patients**
- **Marketing to Customers**
- **Hospital, Clinic Marketing Support**

Direct To Patients

- Going National
- Hitting Major Markets
- Print and Radio
- Branding Varian and Our Customers



RADIO SPOT

New cancer-fighting technology offers hope to millions.



Dynamic Targeting* Image-guided radiation therapy delivers more powerful treatments with fewer side effects. It enables your doctor to see, measure, track, and treat cancerous tumors with unprecedented precision—even when they move. It's the reason why 78% of leading hospitals choose — and more than 100,000 patients per day are treated on — Varian equipment.¹



Varian's technology is so accurate that it was able to reproduce the Mona Lisa using focused beams of radiation, millimeter by millimeter.

Ask your oncologist about Dynamic Targeting IGRT from Varian. To find a treatment center near you, call us at: **1-800-544-4636**, or visit www.varian.com/hope

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medical systems

1. Data based on the 2010 edition of "America's Best Hospital" from U.S. News & World Report. ©2011 Varian Medical Systems and Equipment. Targeting is a registered trademark of Varian Medical Systems, Inc.

VARIAN
medical systems

Patient Information Website



Cancer Patients | Section Title Here

Patient information | Section Title Here

NON-HODGKIN'S LYMPHOMA



Cancer Treatment

Patient Stories

Share Your Story

Varian Treatment Centers

Additional Resources

- What is Radiation Therapy
- Useful Cancer Links

News:
Advancements in Technology

Contact

Additional resources - Useful cancer treatment links.

Cancer Resource Links

The links, provided below by Varian Medical Systems, are provided for your convenience and reference only. These links are not intended as an endorsement by Varian Medical Systems of the information contained on the web sites or of the individual(s)/companies/institutions operating these web site(s).

- ◆ Cancer Information Web Sites
- ◆ Cancer Organizations and Societies

Cancer Information Web Sites

American Cancer Society
<http://www.cancer.org>

CancerCare
<http://www.cancercare.org>

Cancerdata.com
<http://www.cancerdata.com>

Cancereducation.com
<http://www.cancereducation.com>

Cancerfacts.com
<http://www.cancerfacts.com>

Cancer Group
<http://www.cancergroup.com>

The Cancer Group is a team of dedicated health care professionals providing the general public and other health care professionals with a variety of resources in the fight against cancer.

CancerNet
http://www.cancer.gov/cancer_information/



Marketing Our Advantages

CLINICAL OBSERVATION #1

Minutes
are faster
than hours.



TRILOGY Tx

CLINICAL OBSERVATION #2

Typical patients
have fronts
and backs.



TRILOGY Tx

CLINICAL OBSERVATION #3

An information
network is
smarter than an
information island.



TRILOGY Tx

CLINICAL OBSERVATION #5

Precision
and **accuracy**
beats leakage
and scatter.



TRILOGY Tx

CLINICAL OBSERVATION #6

Dose painting
is better than
connecting
the dots.



TRILOGY Tx

CLINICAL OBSERVATION #7

Soft tissue
is no place for
hard markers.



TRILOGY Tx

CLINICAL OBSERVATION #9

When your
patients move,
your instrument
should keep up.



TRILOGY Tx

CLINICAL OBSERVATION #10

Experience
and **passion**
often beats
start-up
technology.



TRILOGY Tx

Supporting Customer Communications

Power to the community.



Some battles you can fight alone. For other battles, you'll want help.



TRILOGY | New generation cancer care

If cancer picks a fight with you or a loved one, you'll want every possible advantage. At our center, we give you that extra advantage. Today a new generation of powerful technology helps make cancer treatments faster and more effective than ever. Providing that technology is part of our ongoing commitment to the community. We aim to deliver the most advanced cancer care available, so we can help you win your battle.

your logo

Power to the physician.



TRILOGY | Power. Precision. Versatility

When patients battle cancer, it's important to use the most effective therapy against the tumor. That's precisely what our versatile new Trilogy™ Stereotactic System from Varian Medical Systems provides. Now we can offer every modality of external beam radiation therapy, including advanced image-guided and stereotactic techniques.

Make us your center of choice. We bring power, precision, and versatility to cancer care.

Your logo



VARIAN
medical systems

Oncology Summary

- **Leading in IMRT, IGRT, and SRS**
- **Investing, Continuing Product innovation**
- **Growing Sales Footprint**
- **Stimulating Replacements**
- **Building Brand Awareness among Customers and Patients**

Proton Therapy

Lester Boeh, VP
Emerging Businesses

Protons 101

“Protons are heavy, penetrate without scattering, and dump nearly their entire dose in a small volume of tissue (like the prostate), with almost no collateral damage. You really don’t need to understand anything other than this.”

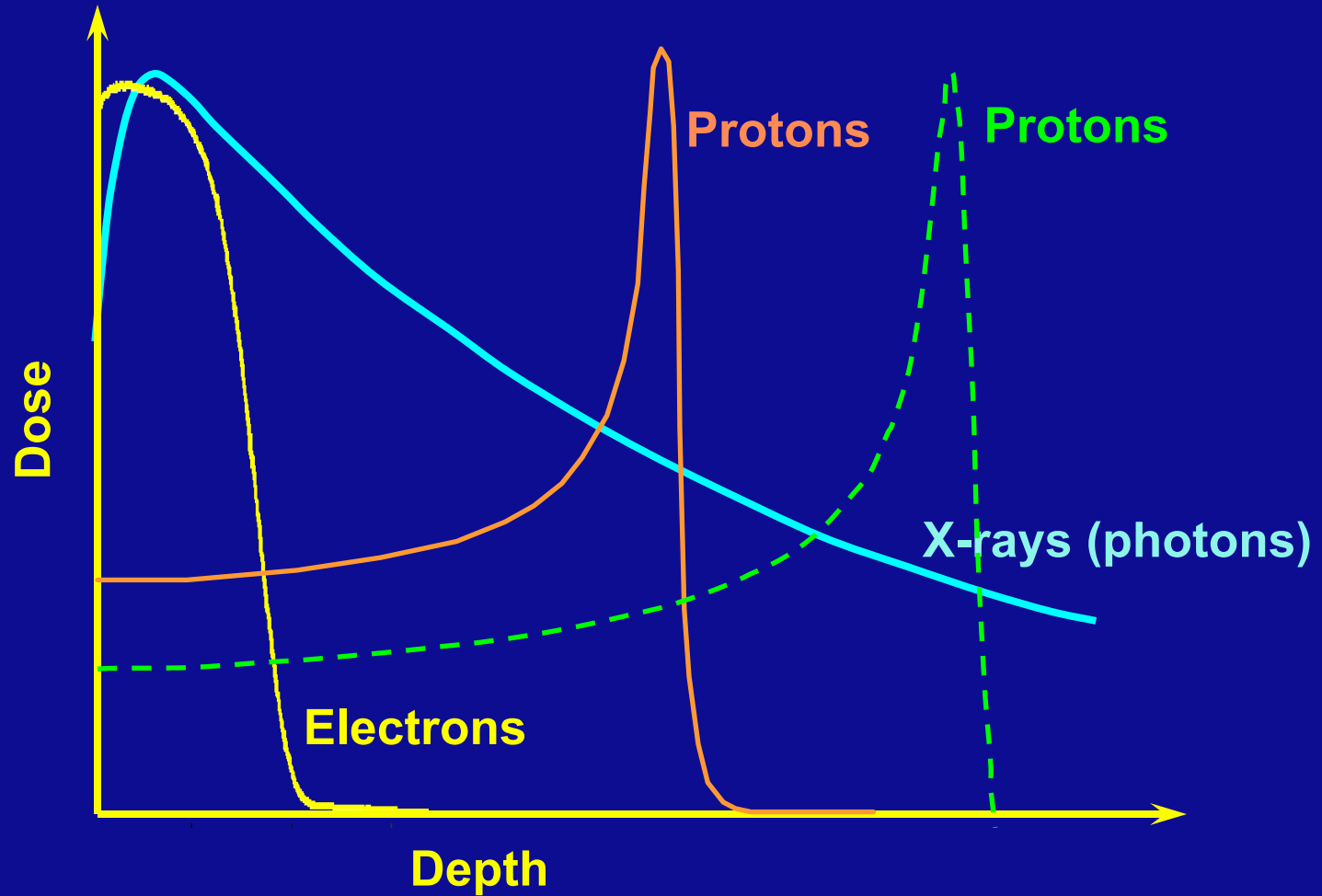
Dennis Hollars - San Jose, California, www.protonbob.com

Proton Therapy Indications

- Prostate
- Pediatric Cancers
- Esophageal Cancer
- Head and Neck Cancer
- Brain
- Central Nervous System/Spine
- Sarcoma
- Female Genital Tract
- Skull Base
- Lung/Chest

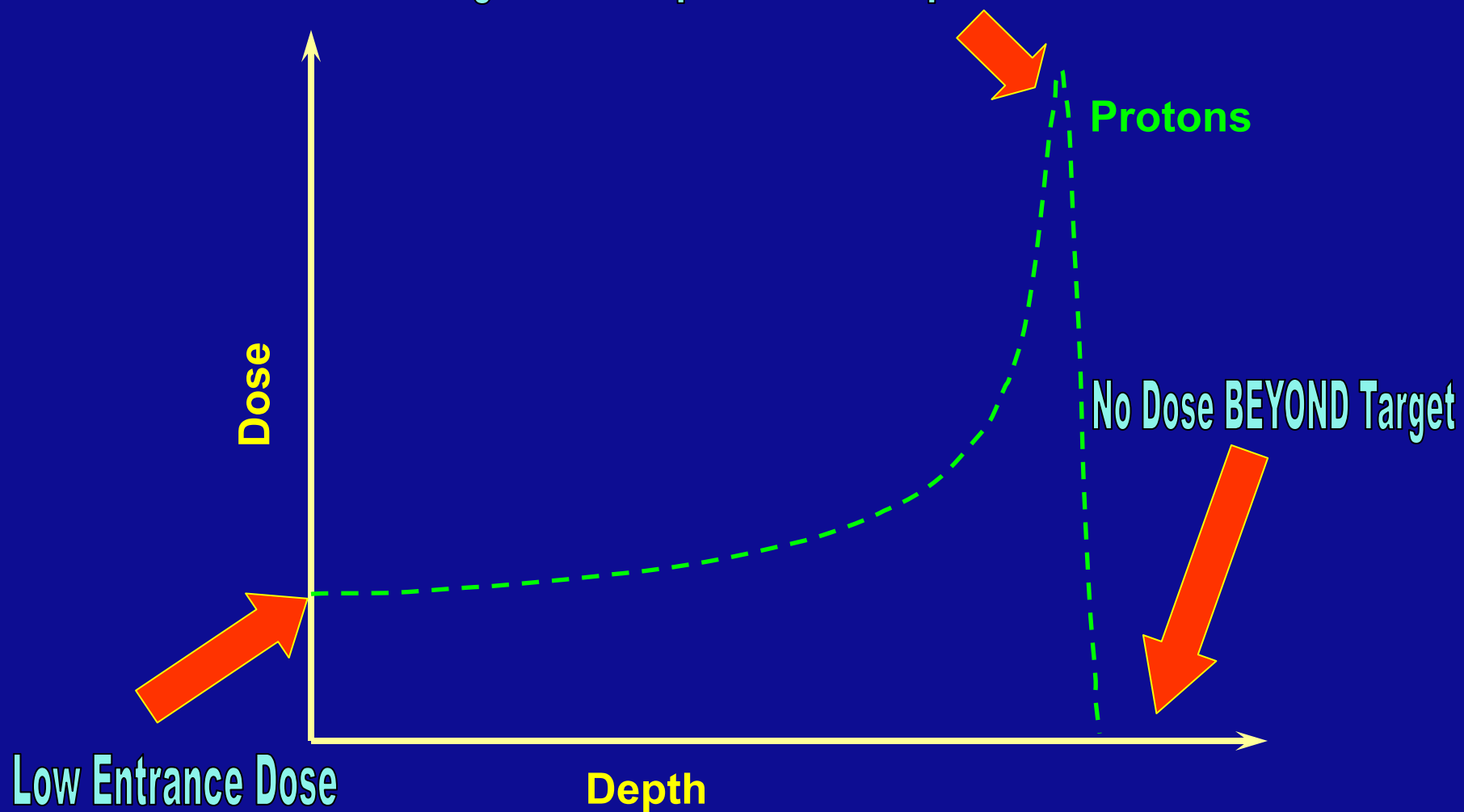
Tumors considered for proton therapy should be localized, require high doses of radiation for control and be located near sensitive normal tissues

Percent Depth Dose for X-rays, Electrons, and Protons



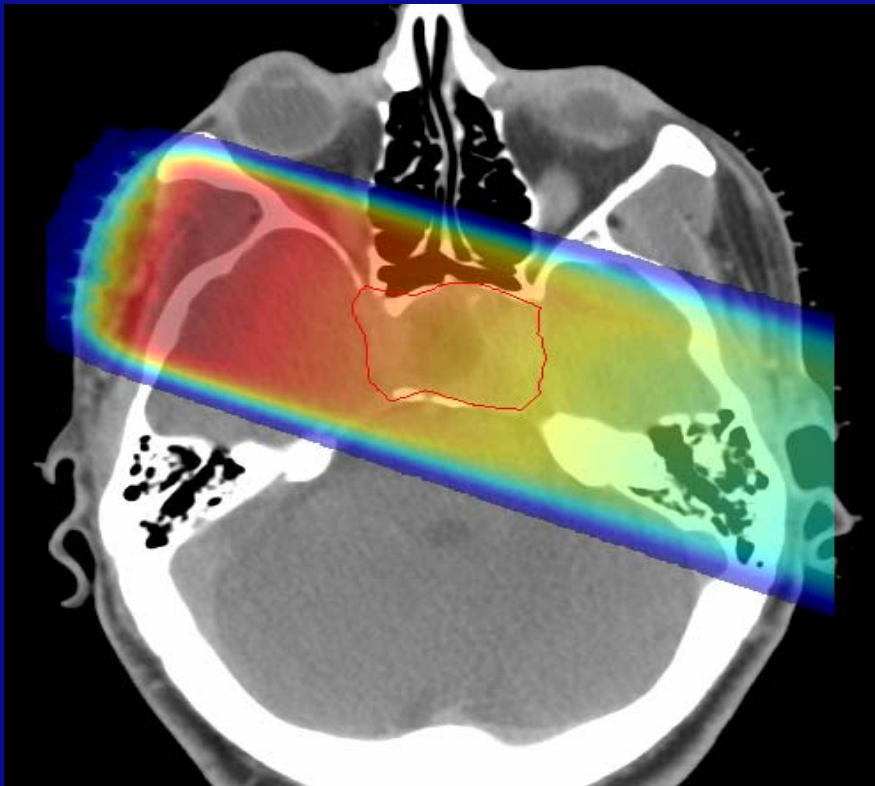
Percent depth dose for Protons

Large Dose Deposition at Depth

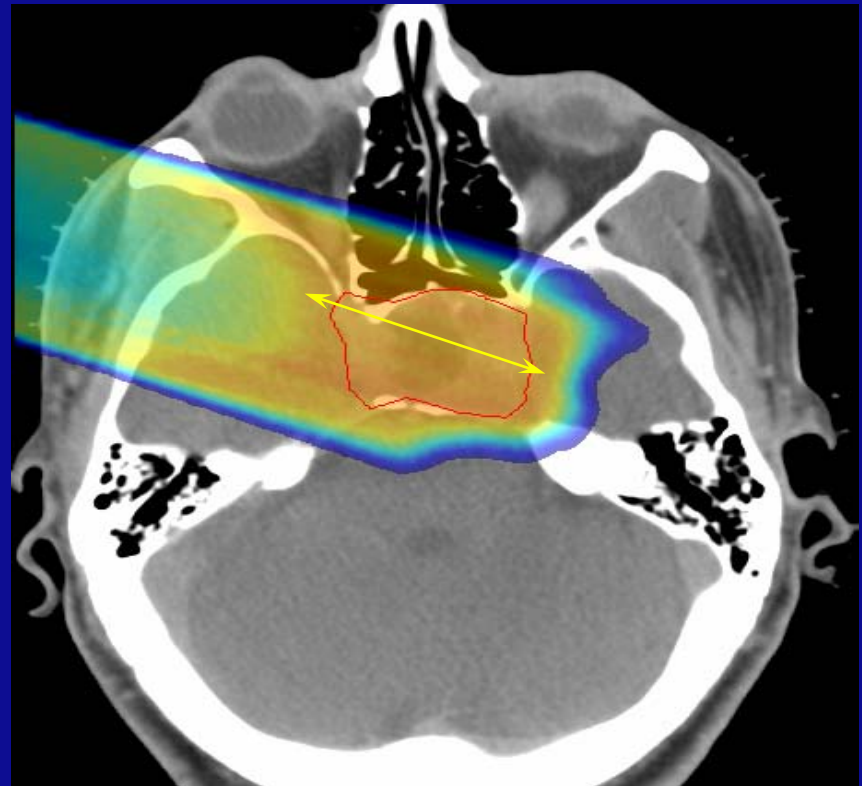


Comparison of X-ray versus Proton Beams

X-ray Beam

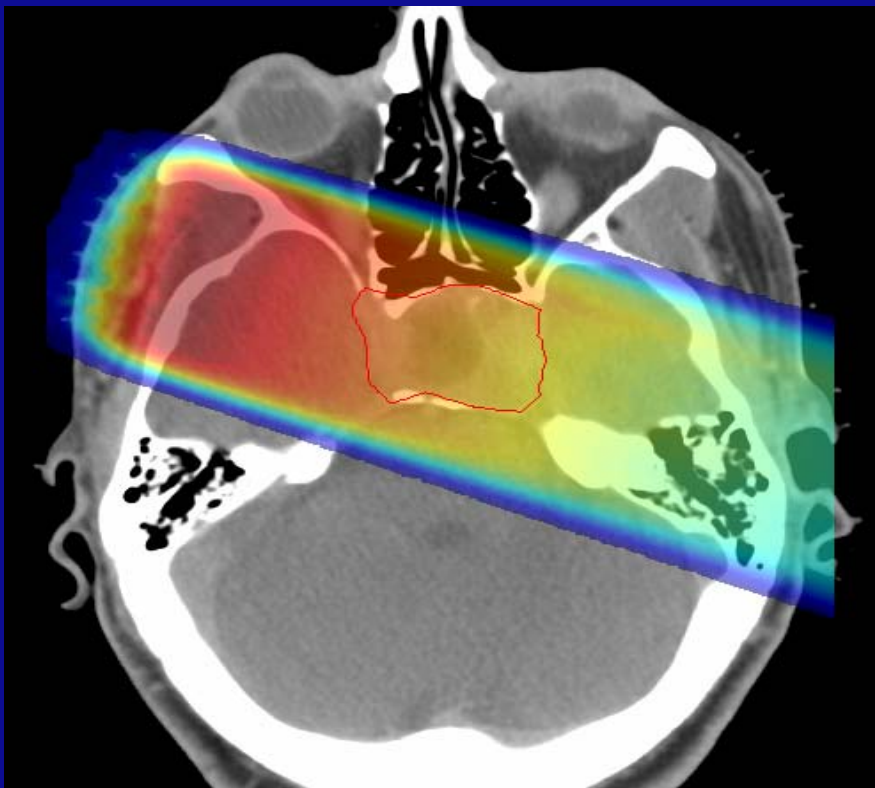


Proton Beam

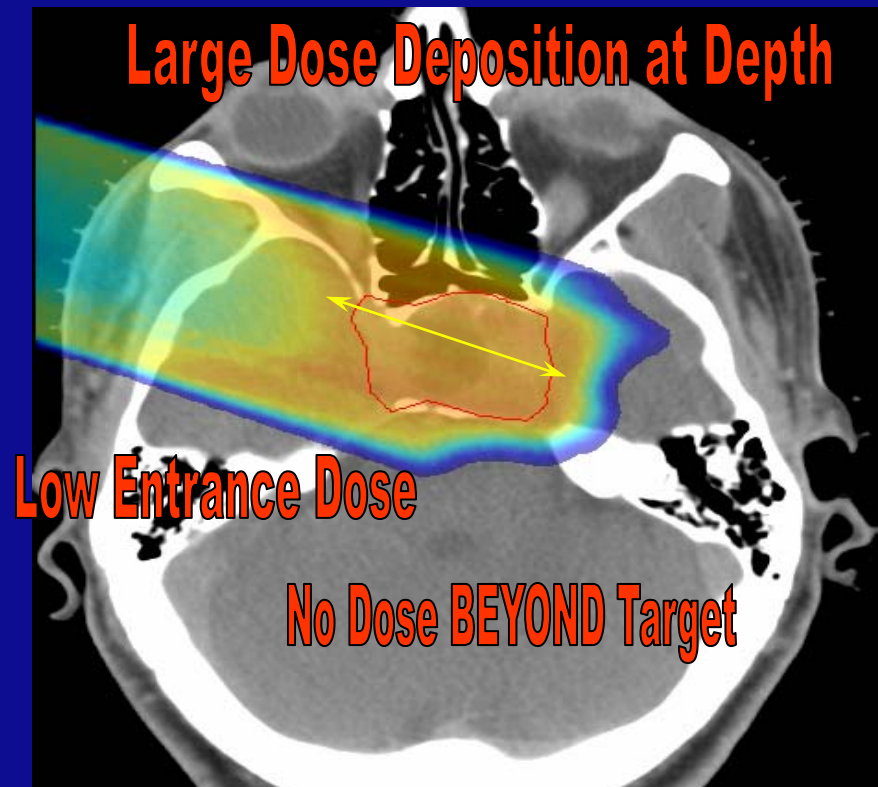


Comparison of X-ray versus Proton Beams

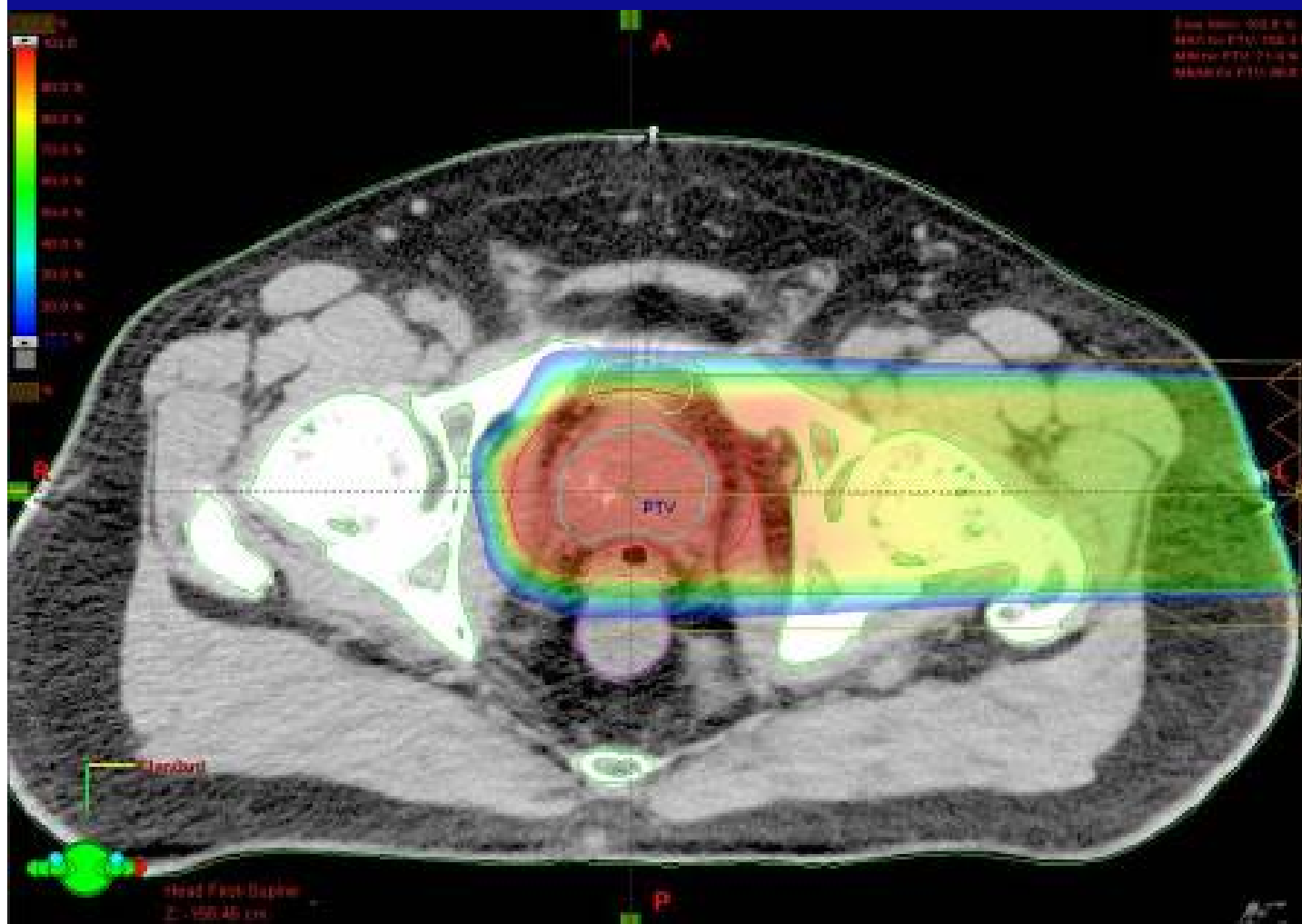
X-ray Beam



Proton Beam

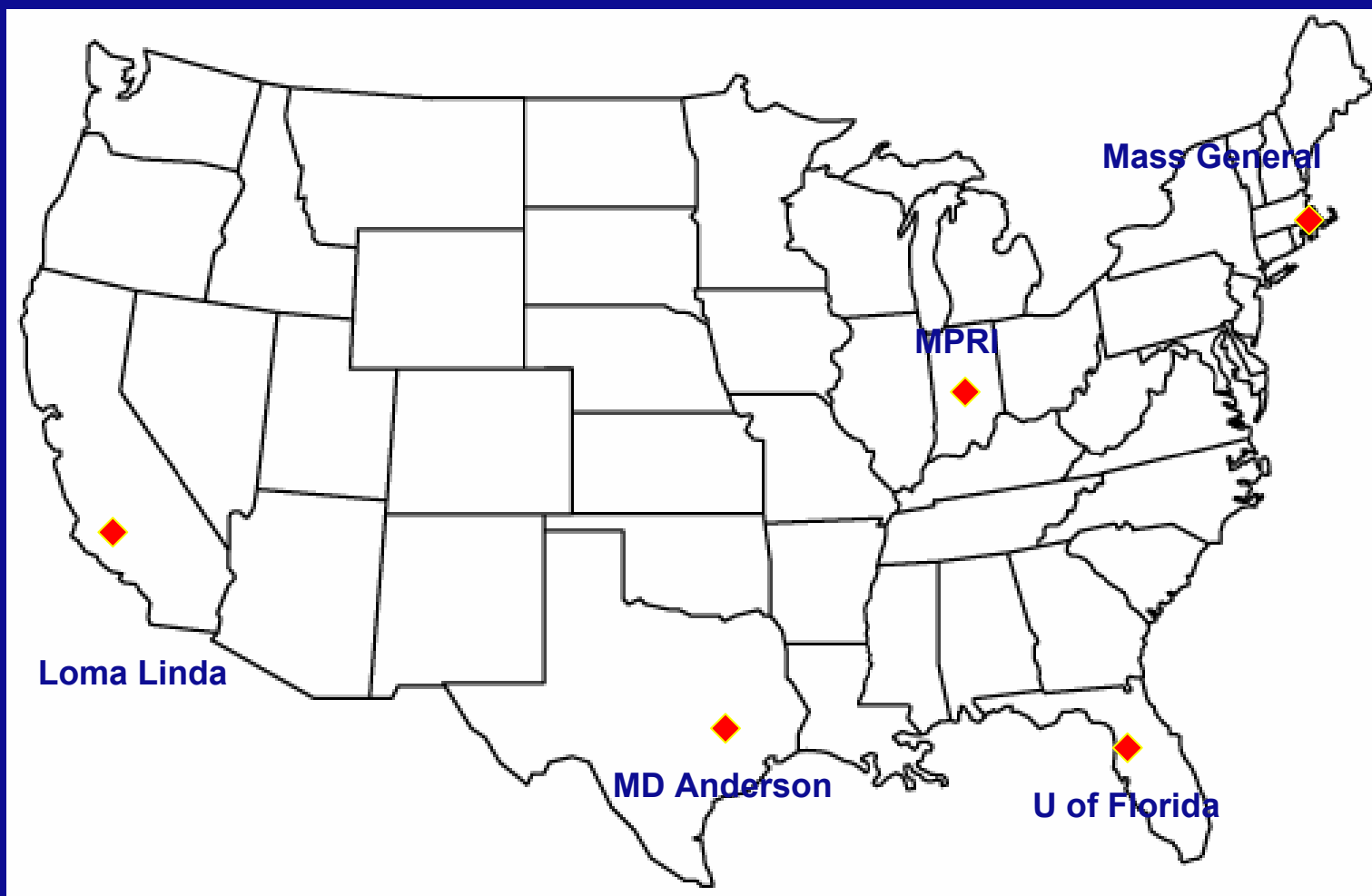


Highly Conformal Treatment



Increasing
use of
prostate
boost with
RT

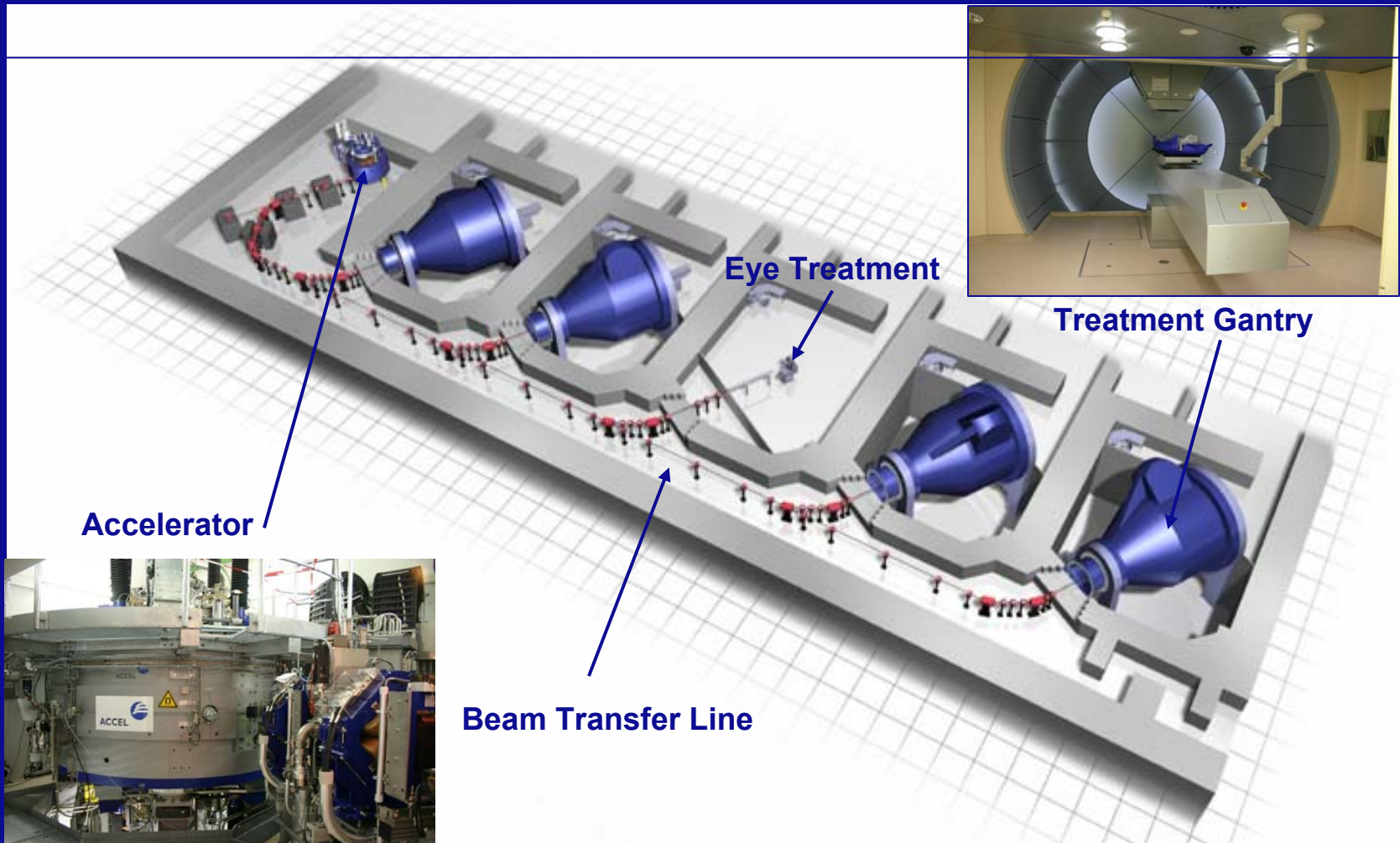
Current Proton Therapy Centers February, 2007



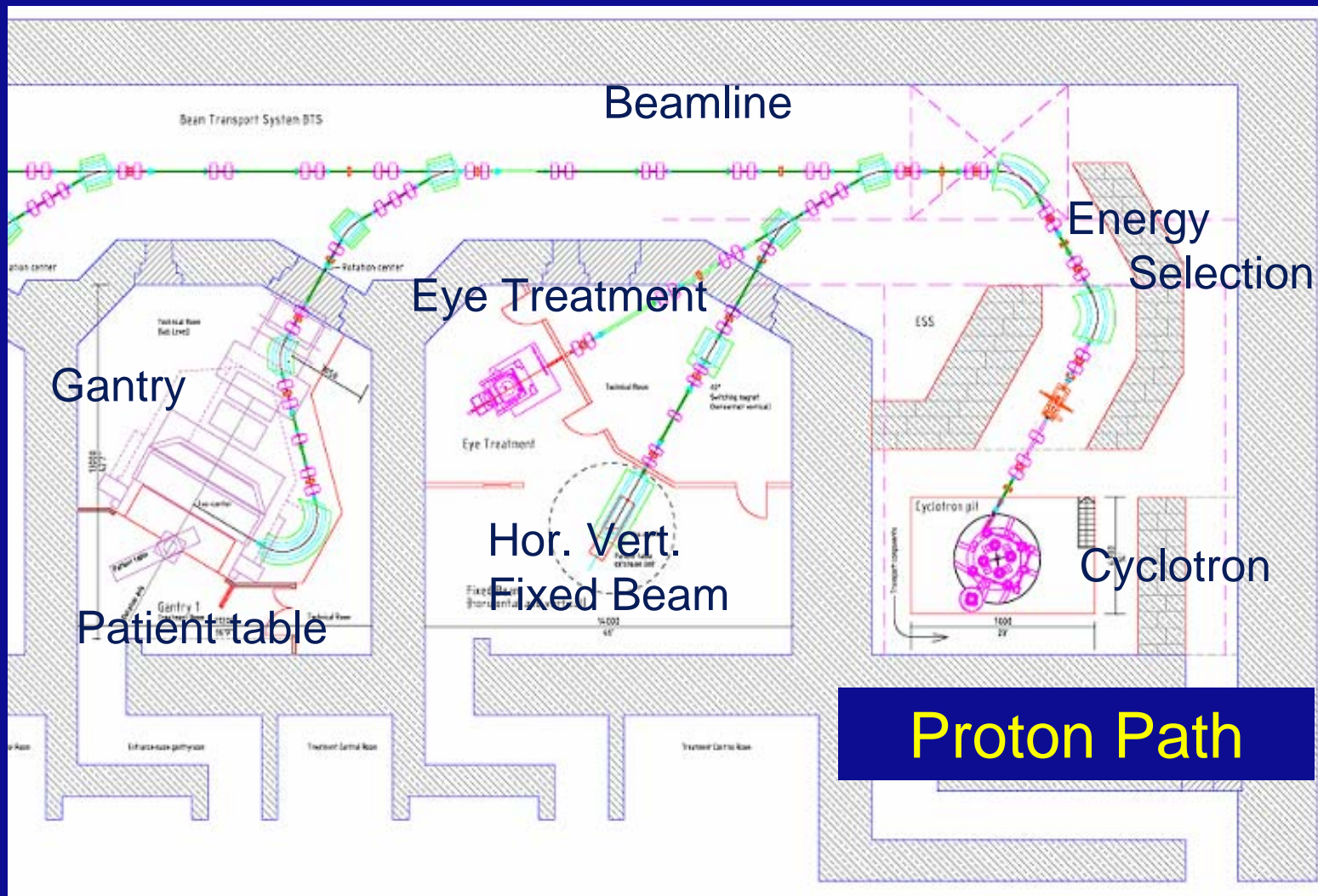


*"We just made a big cancer breakthrough.
Have a cigar."*

RPTC Munich layout - Varian/Accel



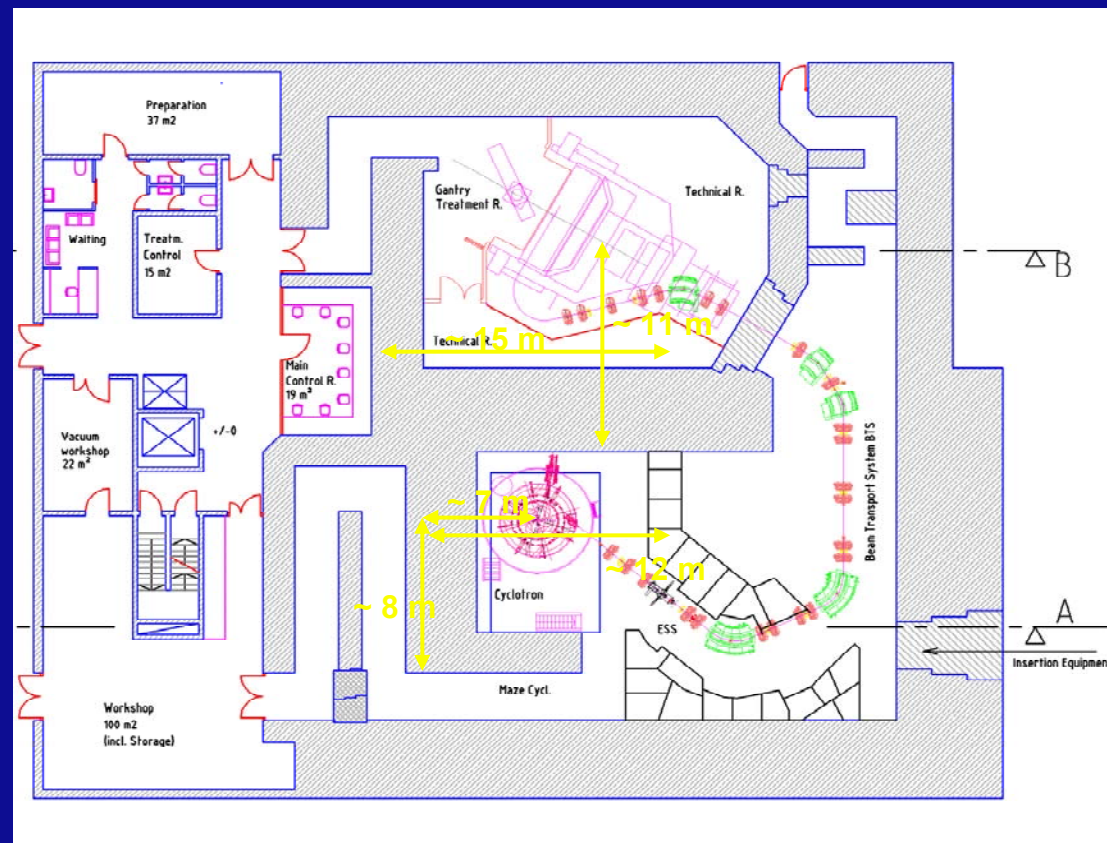
Proton Therapy Facility Layout



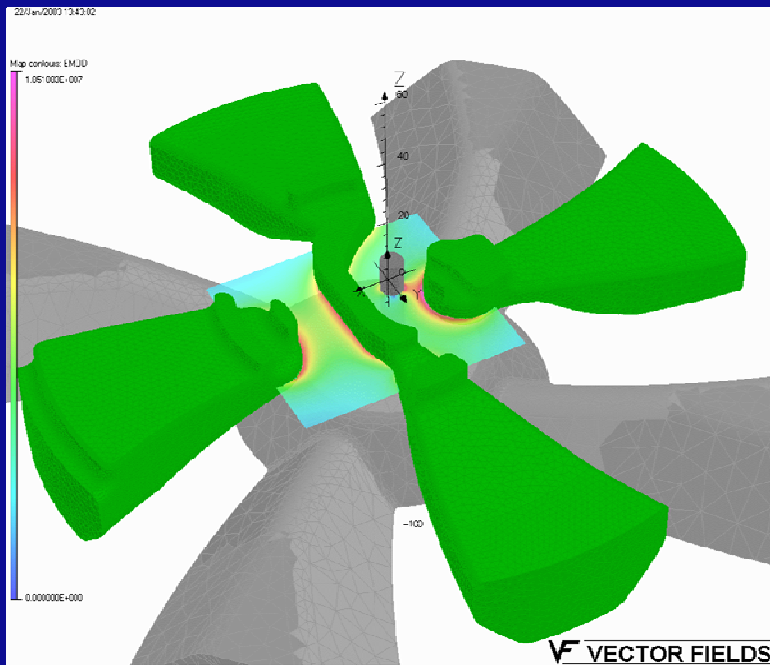
Proton Path

Production of Clinically-Useful Proton Beams

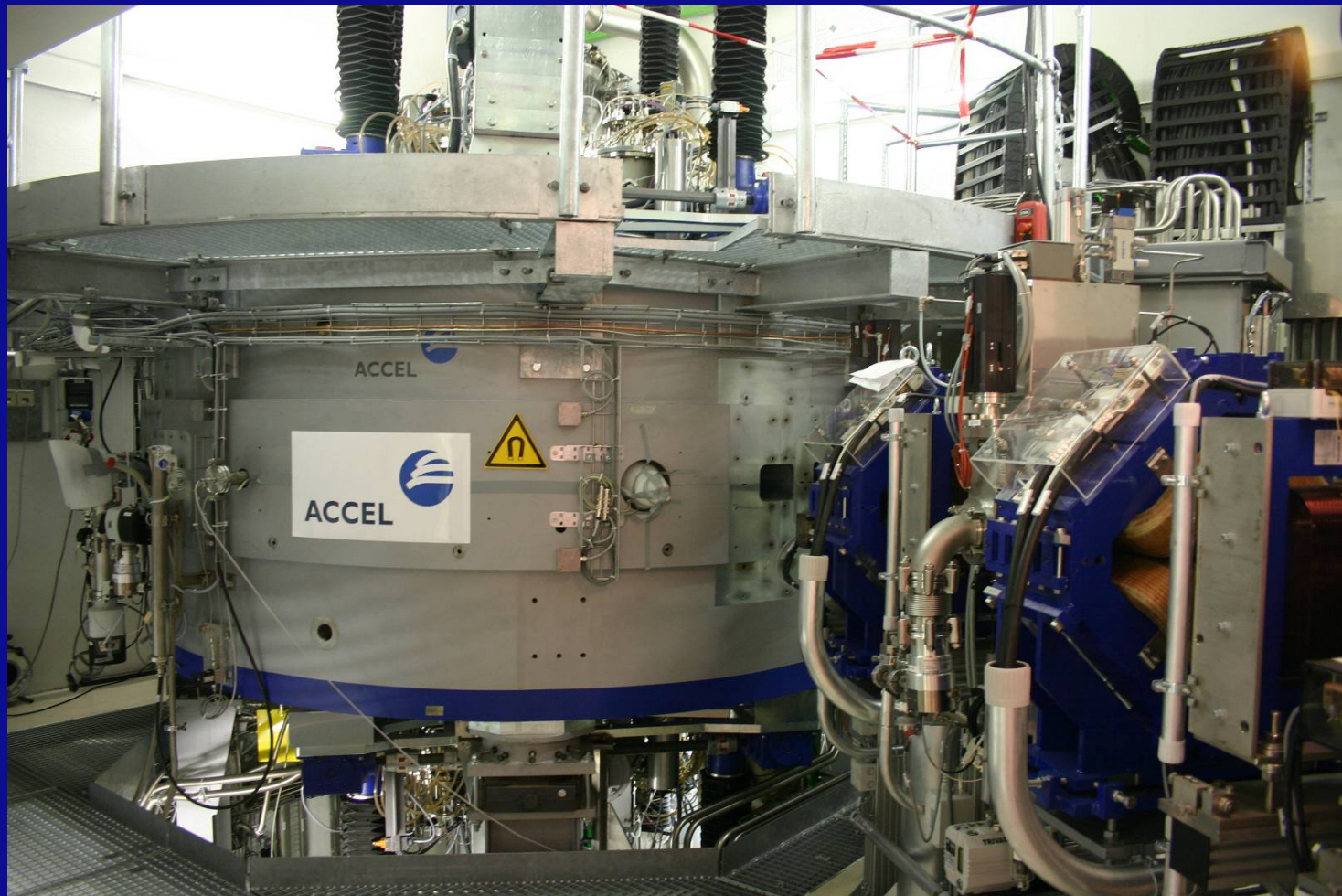
- Cyclotron: 250 MeV proton beams (~40 cm depth in water)
- Energy degrader: reduce energy to the desired value
- Beam line: guide the proton beam to the treatment room



Engineering The Beam



250 MeV Superconducting CYCLOTRON



Proton Beam Line

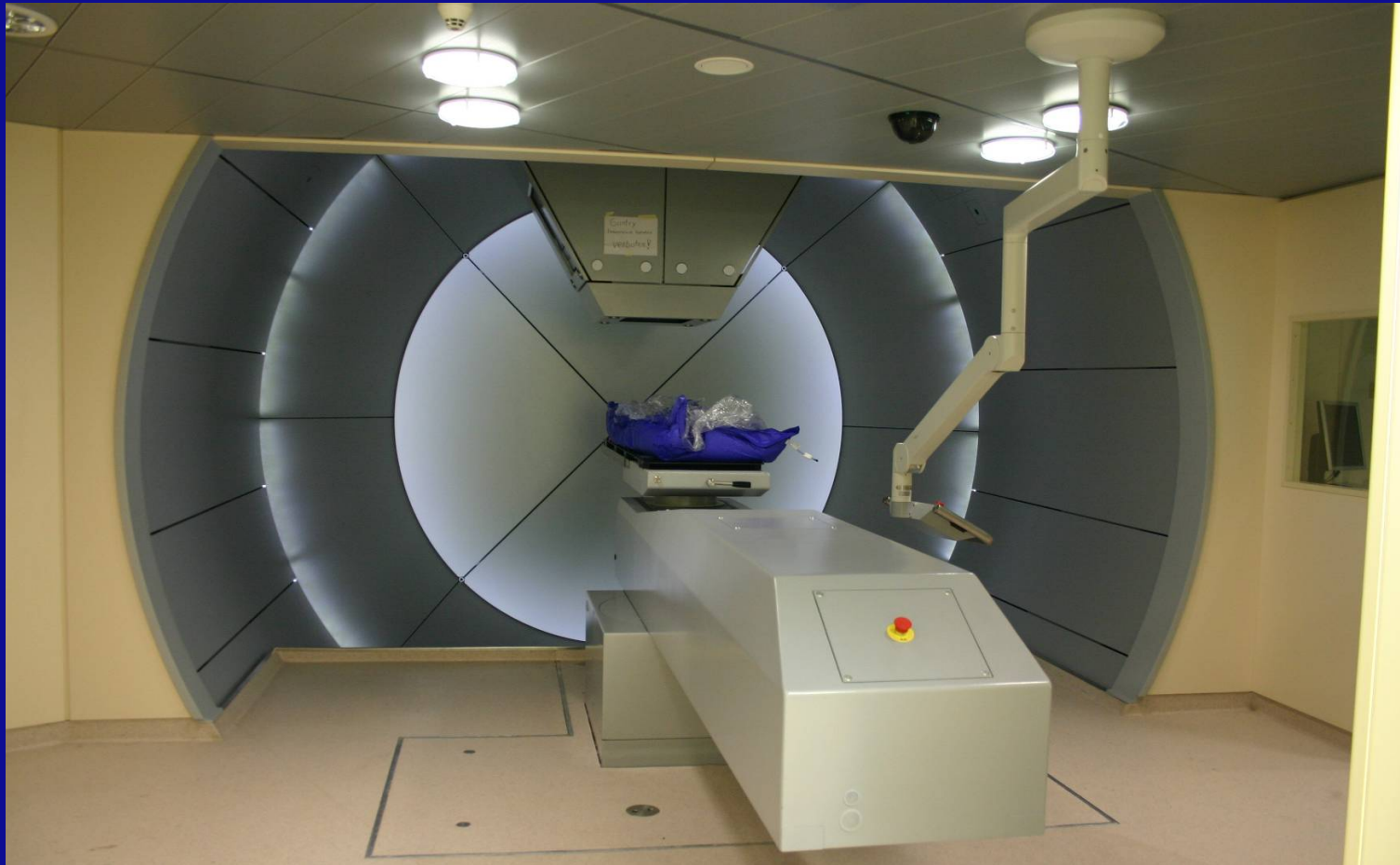
Energy Selection System (250 MeV \rightarrow 70 MeV)
Beam Transport and Switching System



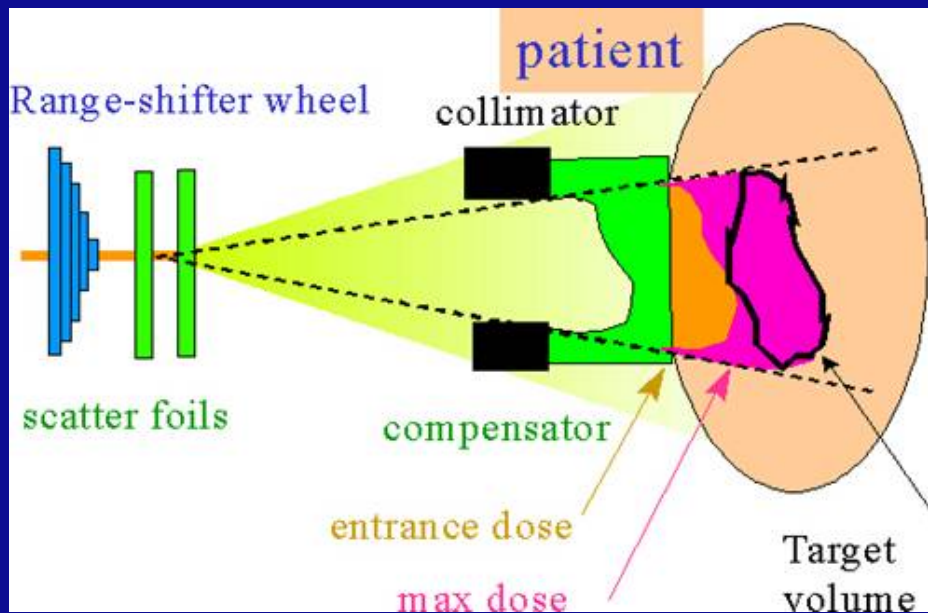
Varian Isocentric Gantry



Varian Treatment Nozzle and PPS



Beam Delivery: Scattering vs. Scanning



Double Scattering Technique

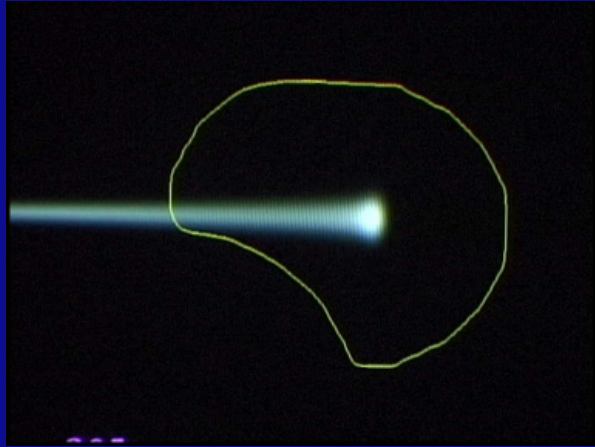
Scanning Development
Pioneers are Accelerator
Research Institutions

→ Protons: PSI

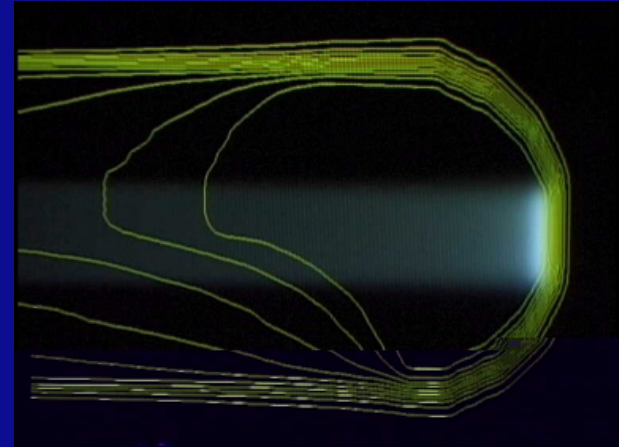
First Commercial Proton
Scanning System

→ VARIAN/ACCEL

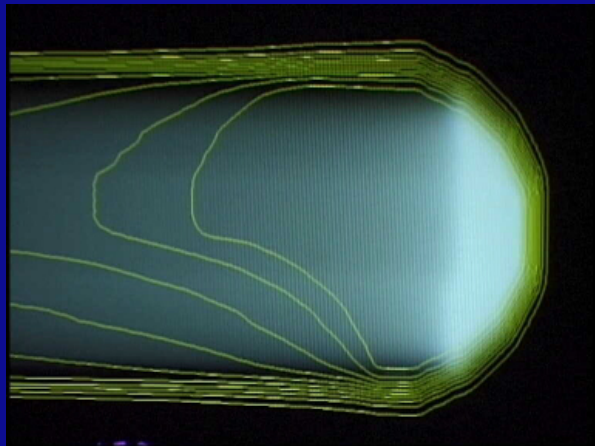
Spot Scanning Technique



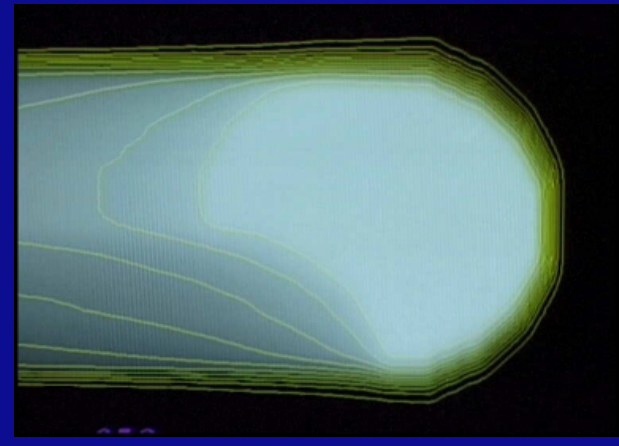
One spot



... a few spots



... more



... until it is
complete

Why The Interest?

- **Clinical merit: Pediatric, ocular, etc.**
- **Patient referrals benefit entire facility**
- **Profile in the community**
- **Proton adoption accelerating: seeking early adopter advantages**
- **Research opportunities**
- **Recruiting**

Customer Profile

- **Large academic institutions**
 - Project mission research focused
- **Large private institutions**
 - Market leadership
 - Attract/retain clinical staff
 - Community focused
- **Interest increasing rapidly**

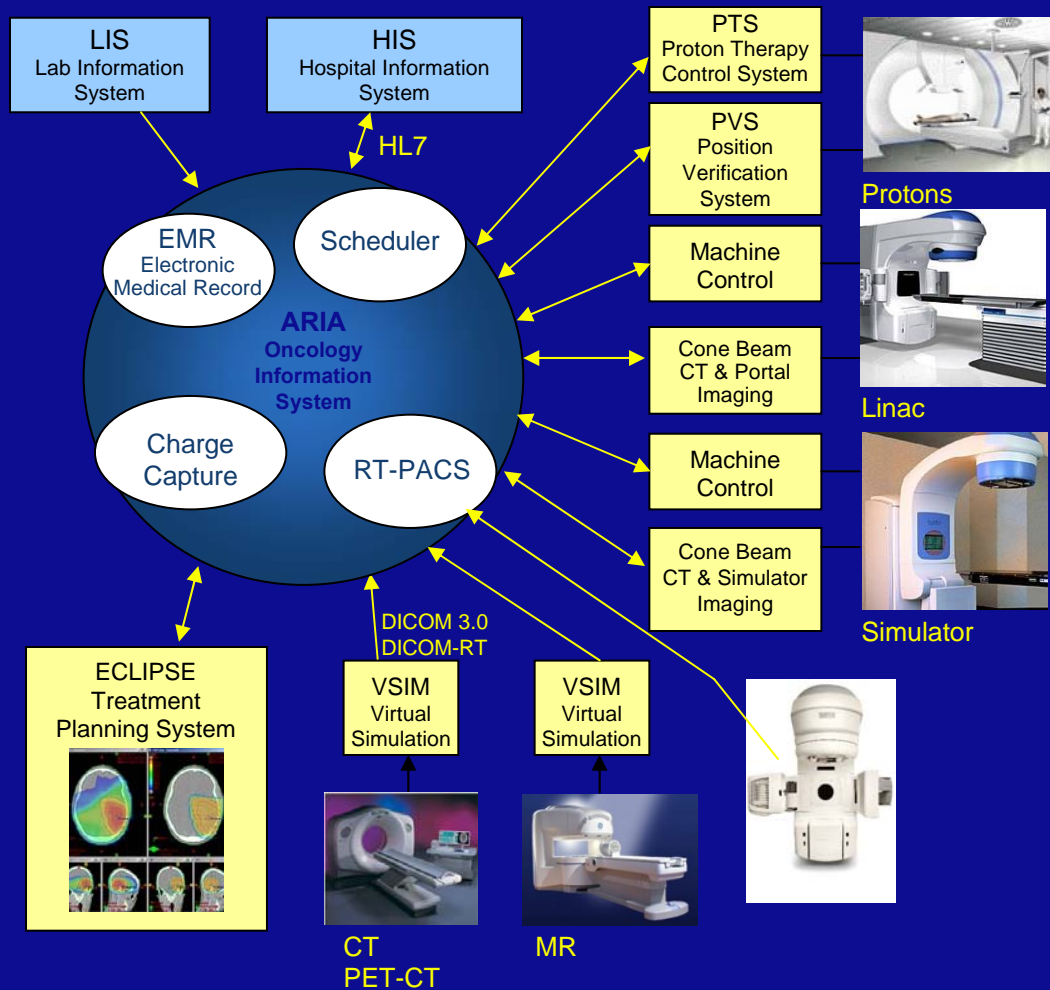
Market Participants

- **Varian/Accel**
 - First and only SC Cyclotron/IMPT system
 - Integrated Offering
- **Siemens**
 - Carbon-Ion focus
- **IBA**
 - Installed base
- **Hitachi**
 - Focused on large projects
- **Still River**
 - WIP gantry-mounted device

The Varian Solution

- **The Varian system is IMPT capable (Intensity Modulation Proton Therapy) with scanning**
- **Scalable: The system can grow with patient demand**
- **Proven technology. The accelerator is clinical (PSI).**
- **Full 360 degree gantry rotation**
- **Fully integrated with the rest of the Varian suite**

The Integrated Oncology Service



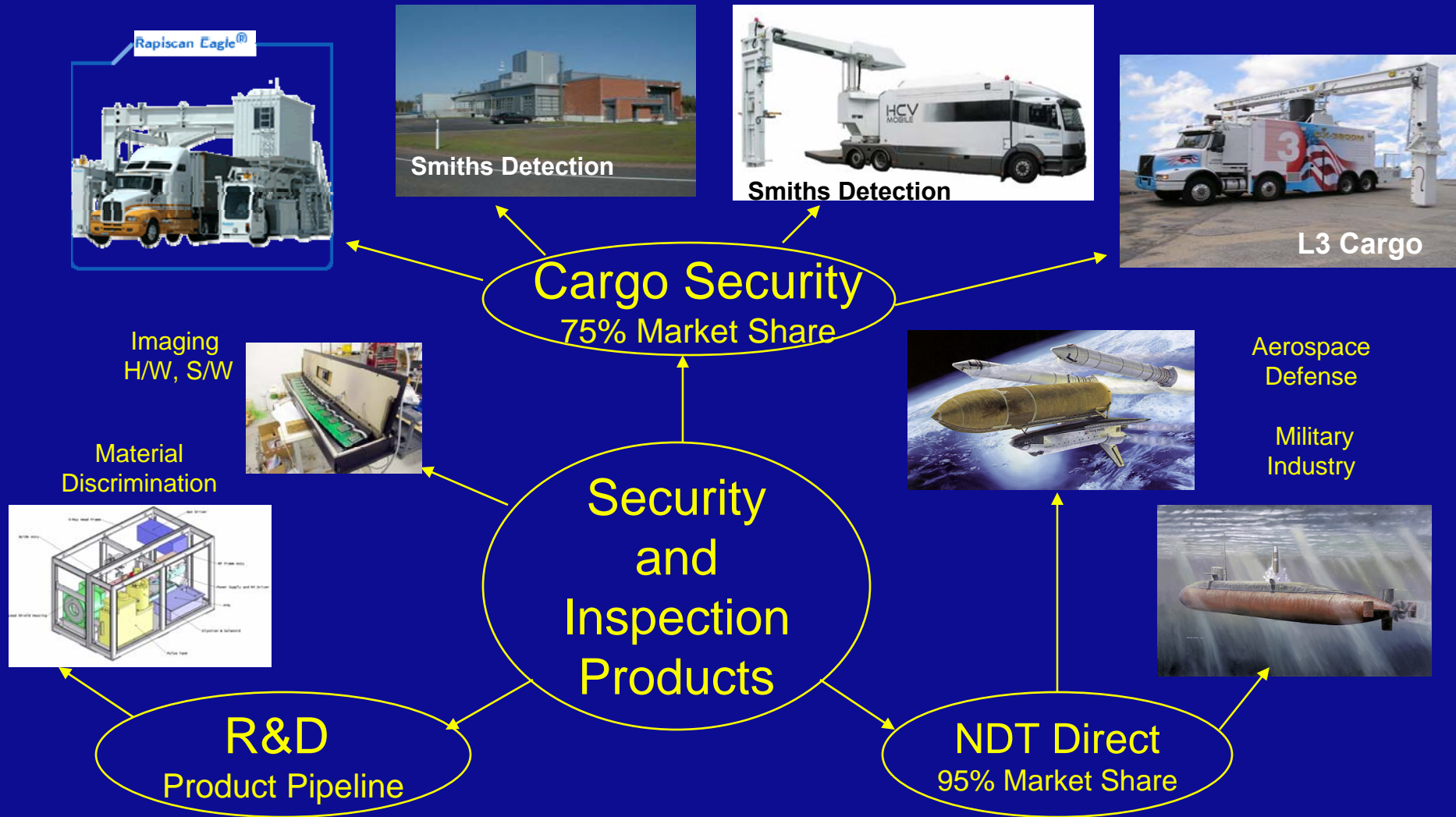
Security and Inspection Products

Lester Boeh, VP
Emerging Businesses

Security & Inspection Products

- Opportunity continues to grow
- High energy X-ray systems for cargo screening and non-destructive testing (NDT)
 - Linatron M & K series
 - Global supplier
- Record Orders (27% CAGR since 1999)
- New Legislation
- Major Int'l RFP's
 - Increased interest in border protection
- Materials discrimination
- Varian market position
 - Key technology supplier
 - Significant IP portfolio

SIP Market Position



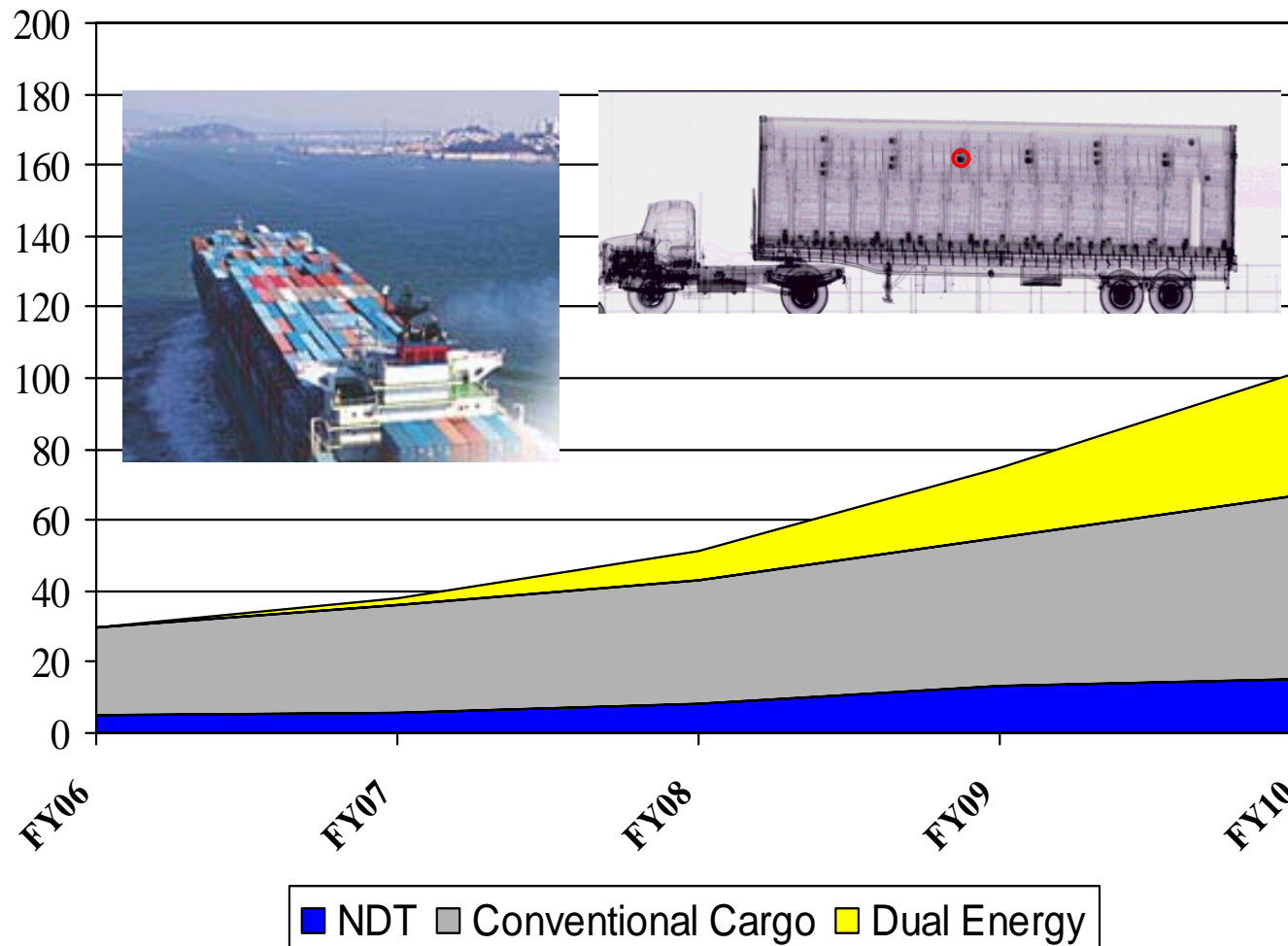
- **Apr 25, 2007**
- **Varian Medical Systems Signs Agreement to Acquire Bio-Imaging Research; Acquisition to Strengthen Varian's Security and Inspection Product Offerings**

Cargo Inspection Market Landscape

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

Emerging Businesses Security & Inspection Products

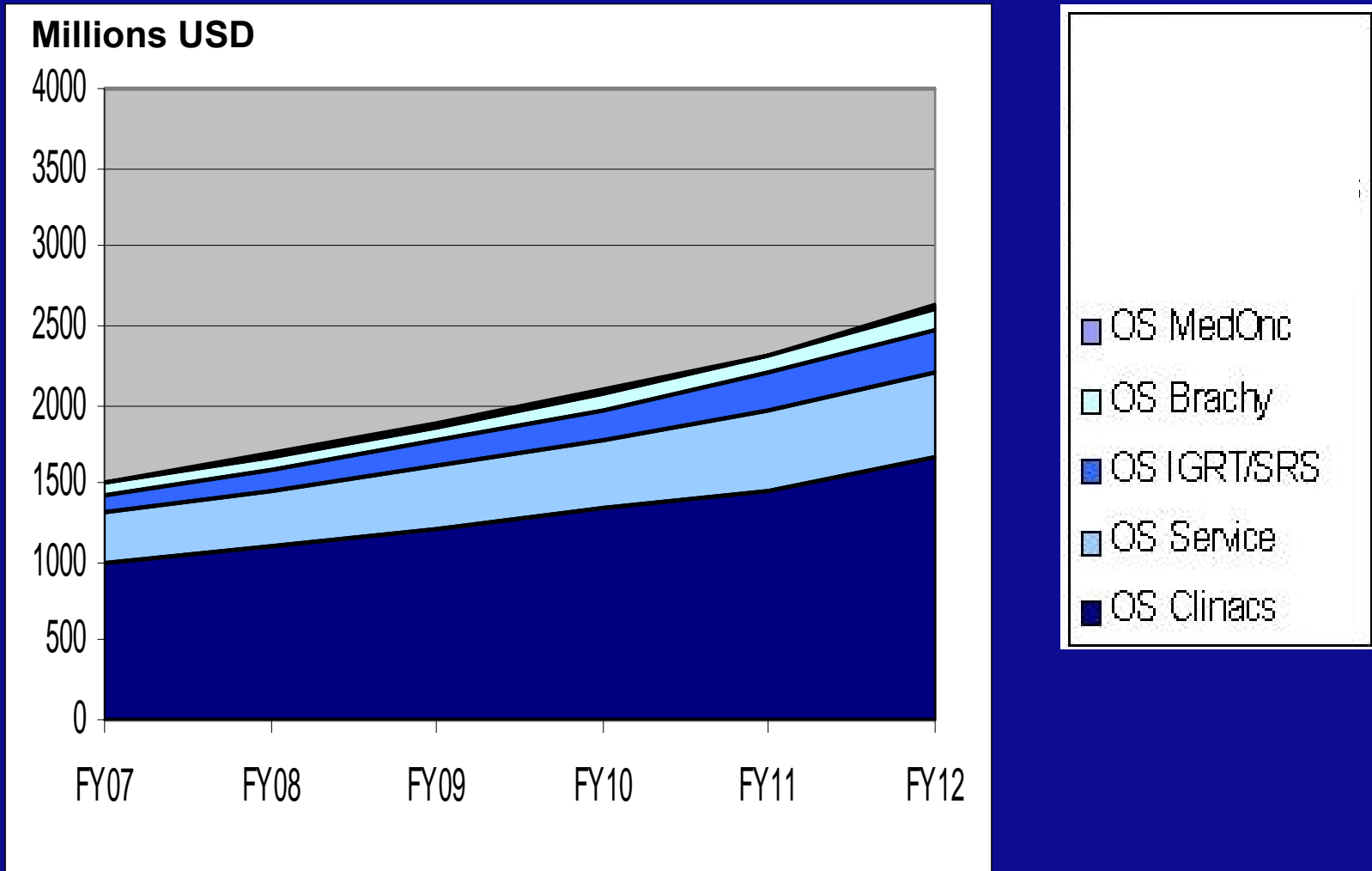
Millions USD



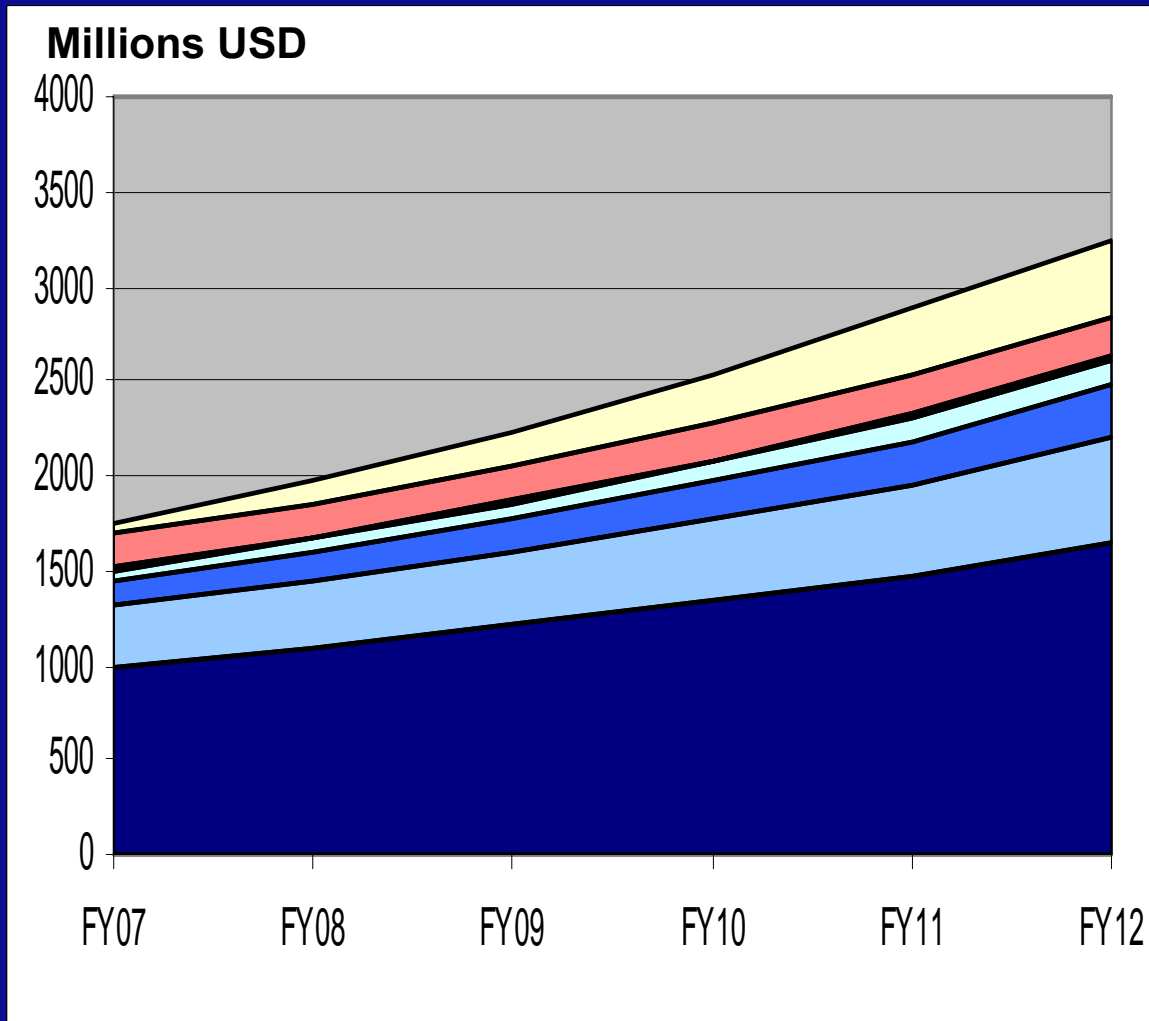
5 Year Growth Outlook

Tim Guertin

Five Year Growth Opportunity

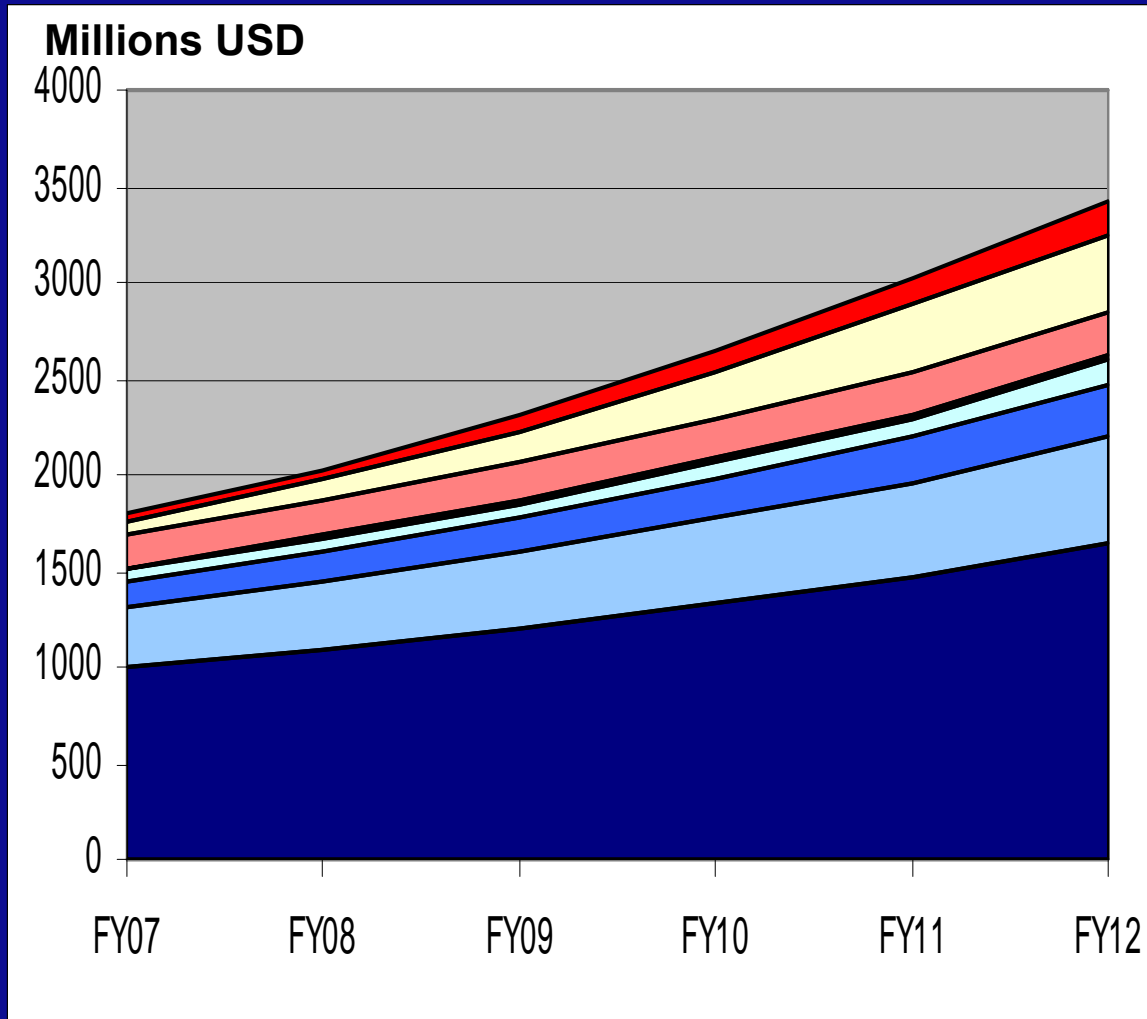


Five Year Growth Opportunity



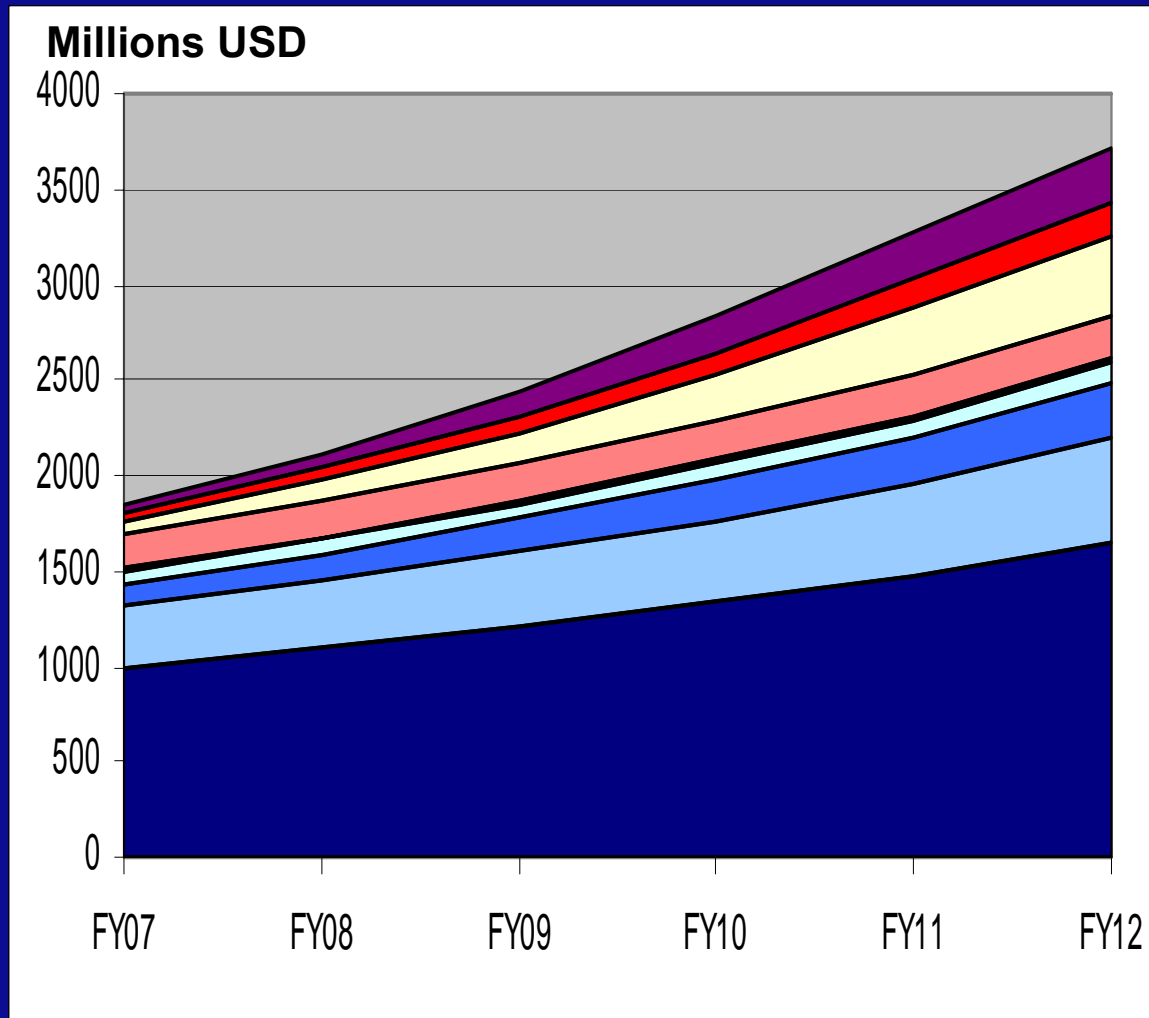
- X-ray Flat Panels
- X-ray Tubes
- OS MedOnc
- OS Brachy
- OS IGRT/SRS
- OS Service
- OS Clinacs

Five Year Growth Opportunity

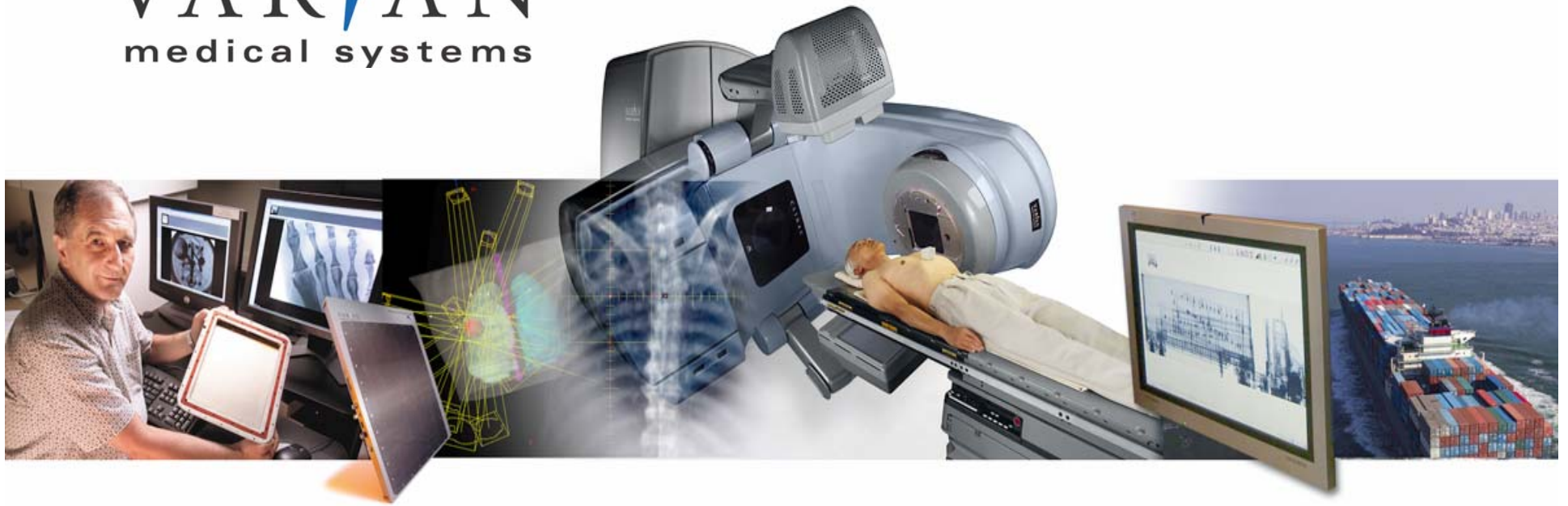


- Security
- X-ray Flat Panels
- X-ray Tubes
- OS MedOnc
- OS Brachy
- OS IGRT/SRS
- OS Service
- OS Clinacs

Five Year Growth Opportunity



VARIAN
medical systems



A partner for **life**