

UNIQUE™ Power Edition

Uncompromising Cancer Care



Aging Population Upcoming Challenges

It is estimated that there will be more than 12 million new cancer cases in 2007 worldwide, of which 5.4 million will occur in economically developed countries and 6.7 million in economically developing countries.

Source: American Cancer society Cancer facts and figures 2007.

William H. Frey, an analyst for the Brookings Institution think tank, predicts the median age in Europe will increase from 37.7 years old in 2003 to 52.3 years old by 2050.

The global cancer burden doubled in the last thirty years of the twentieth century, and it is estimated that this will double again between 2000 and 2020 and nearly triple by 2030.

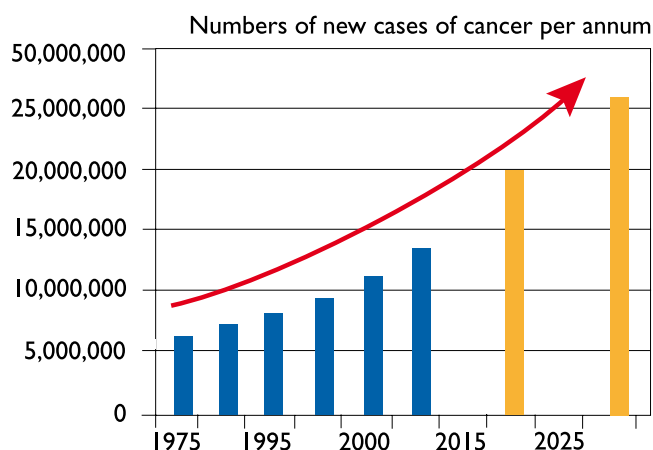
Source: WHO World Cancer Report 2008.

The number of new cancer patients in the developing world will reach 10 million per year by 2015 – and most will have no access to lifesaving treatment, say experts.

Source: BBC News (26/06/2003).

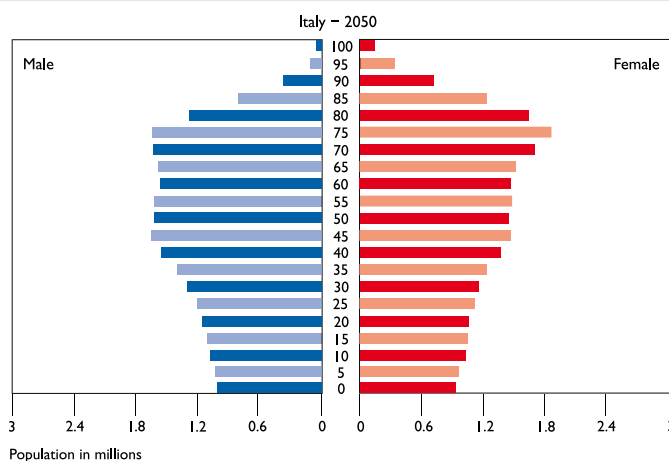
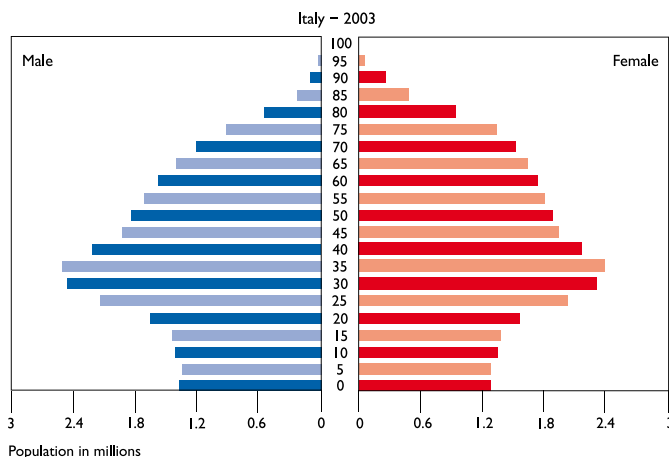
The International Atomic Energy Agency (IAEA) says many people in poorer countries are denied access to treatment which could save or prolong their lives, and decrease their pain and suffering.

Estimated Global Cancer Burden



Source: WHO World Cancer Report 2008.

Typical Population Pyramid of an Aging Population



Source: National Statistics Institute, Italy.

Radiotherapy

A Cost-Effective Solution

Radiotherapy (RT) is an essential component of the treatment of cancer, and whether used palliatively or to cure, radiotherapy has been shown to be cost effective. Radiotherapy is one of the least expensive cancer treatments per patient and one of the most effective in terms of cure and overall survival.

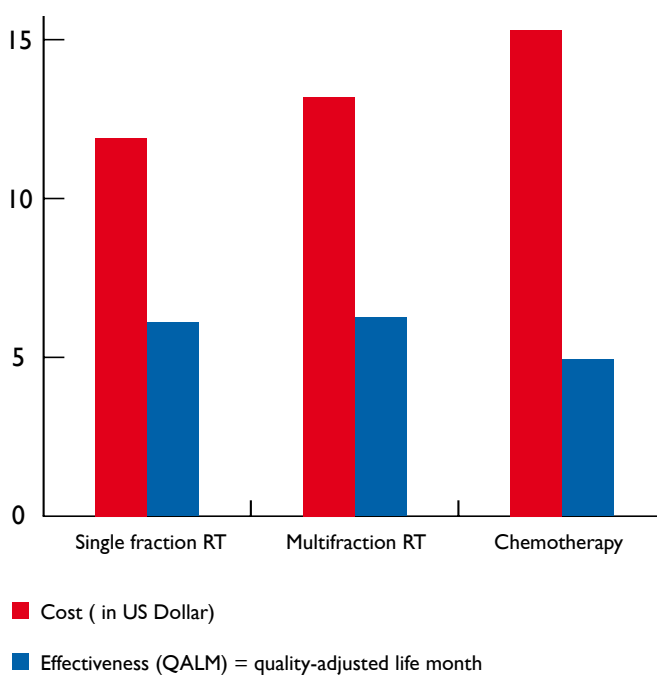
Radiotherapy accounts for less than 10% of the cancer budget in the UK, while chemotherapy will cost more than 15% and surgery more than 30%, as does emergency unscheduled care for cancer patients.

Source: WHO World Cancer Report 2008.

Single-fraction Radiotherapy was the most cost-effective palliative treatment compared to pain medication and chemotherapy.

Source: Andre Konski, Int. J. Radiation Oncology Biol. Phys., Vol. 60, No.5, 1373 – 1378, 2004.

Cost-Effectiveness of various treatment options for bone metastasis



Source: Andre Konski, M.D., M.B.A., M.A. Radiotherapy is a cost-effective palliative treatment for patients with bone metastasis from prostate cancer. Int. J. Radiation Oncology Biol. Phys., Vol. 60, No.5, 1373 – 1378, 2004.

Our Goal

100,000 More Survivors

Varian's goal is to help save the lives of 100,000 more patients each year. That's enough survivors to fill a large stadium. Varian is pushing in two directions to reach this challenging goal

- Leading edge solutions for most advanced forms of treatment
- Make advanced therapy accessible for many around the world, not only few

Meeting this goal is not simply a matter of providing appropriate **technology**; there must be sufficient **training** and **support services**.



- **Focused training and education programs**
Customized programs taking care of your training needs. A balanced mix between classroom, on-site and clinical training.
- **Reliable and proven technology**
Tools and capabilities for easy and clinically effective operation.
- **Comprehensive service package**
An all-inclusive program, keeping your clinical equipment and information system running and up-to-date for multiple years.

UNIQUE™

Power Edition

Treatment Techniques

- Conformal Treatment using high-precision MLC
- Enhanced Dynamic Wedge™
- Photon Arc Mode
- Total Body Mode
- IMRT, RapidArc® (optional)



Single Low Photon Energy Linear Accelerator

- Small footprint
- Patient protection system
- Exact couch with carbon fiber table top



Amorphous Silicon PortalVision™ Based IGRT Tools

- Low dose, high quality MV imaging capabilities
- Online patient position verification
- Offline review and approval

UNIQUE represents a **complete cost-effective radiation oncology solution** featuring all components and services to build a state-of-the-art radiation therapy cancer center, without compromising on quality.

Don't ask for less!

UNIQUE Oncology Software Suite, Complete Fully Integrated Solution

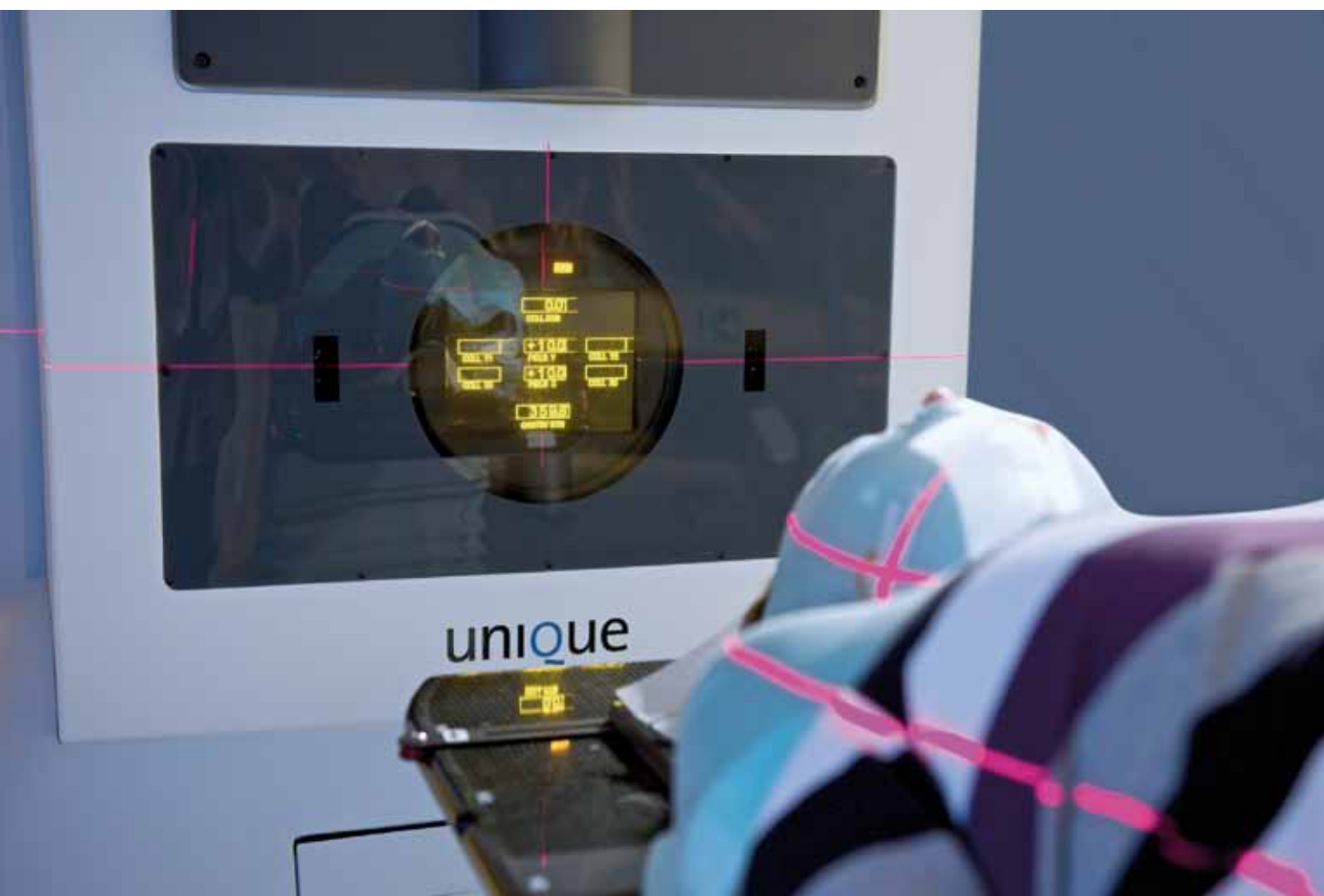
- Eclipse™
- ARIA



Eclipse – The complete Treatment Planning System

Elegant Design

Patient-Friendly Environment



UNIQUE Accelerator

No Compromise on Quality and Safety

Reliable Solution

- Single low photon energy linear accelerator
 - Robust and reliable technology
 - Magnetron based
 - Low bunker shielding needed
 - Standard 400MU/min dose rate, 600MU/min (optional)
 - Easy and fast installation and commissioning
- Exact couch with Indexed Immobilization®
 - Advanced carbon fiber couptop for rigid support of patients up to 227kg
 - Motorized control of longitudinal, lateral, vertical and angular positions
 - Fully compatible with existing Indexed Immobilization accessories
- Millennium™ MLC for easy conformal beam shaping
 - 80-leaf low-leakage, high precision MLC
 - Fast and precise
 - Interdigitating leaves
 - Automatic calibration procedure
 - Perfectly suitable to treat prostate, breast, cervix, ...



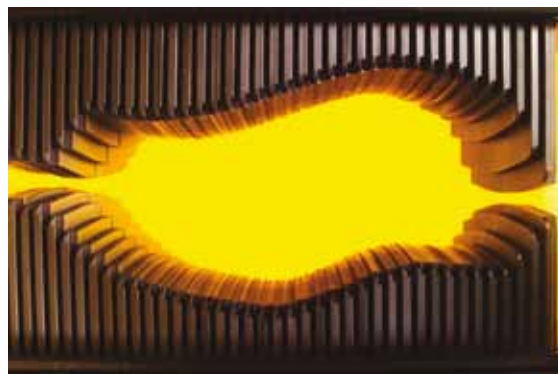
Secure Solution

The **LaserGuard™ patient protection system** significantly reduces the possibility of a potential gantry collision by detecting objects close to the collimator and automatically stopping gantry motion. This is particularly useful when performing remote gantry rotations, whether from the Clinac console or during an automated treatment sequence.



Small-Footprint Solution

UNIQUE accelerator fits in almost every treatment vault thanks to its small footprint (total length of only 269cm) and low energy (6MV). UNIQUE is the perfect match for a smooth transition from Cobalt treatment technology to robust and reliable state-of-the-art radiation oncology.



Imaging Solution

Low Dose, High Quality

The PortalVision aS500-II flat panel detector, Varian's latest generation of Amorphous Silicon detector technology, with a matrix of 512 x 384 pixels and an active imaging area of 30.1 x 40.1 cm², enables patient repositioning using megavoltage (MV) images. Varian's extensive experience with this solid state technology has proven its **radiation hardness** and **detector lifetime**.

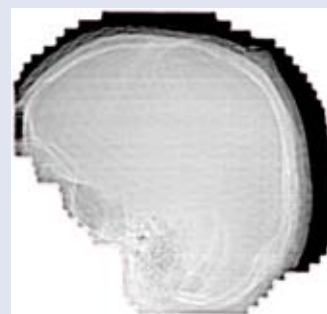
Thanks to Varian's exclusive acquisition system the imaging beam will be automatically stopped when sufficient dose has reached the image receptor, for high-quality imaging with radiation doses as small as 1 monitor unit (MU).

The flat panel is mounted on the **motorized Exact® arm**, which can be moved remotely from the treatment console, this offers a unique movement range allowing imaging in almost every situation.

The imager can be positioned above the isocenter, with the Exact arm. This is ideal for **Portal Dosimetry** and machine QA (software not included).



AP Pelvis <1MU



Lateral Head <1MU



Imager at standby position



Imager at isocenter

Reliable IGRT Solution

Intuitive Position Verification Tools

PortalVision Advanced Imaging enables patient position verification and verification of treatment field size and shape. The MV images of patient anatomy are acquired and matched with their corresponding verification images to assess the accuracy of patient setup quantitatively. It's possible to **manage day-to-day changes** in patient setup as well as changes in patient positioning during treatment.



Patient position can be digitally approved and reviewed offline by the physician from his own desk.

Advanced IGRT (Image Guided Radiotherapy) techniques allow **more precise tumor targeting** which aides in sparing healthy tissue.

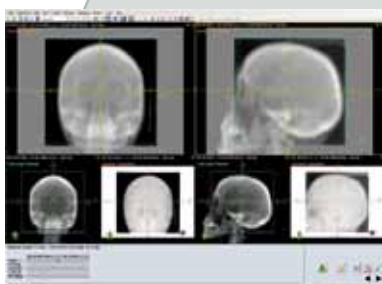


Step 1: Image acquisition before, during, or after treatment.

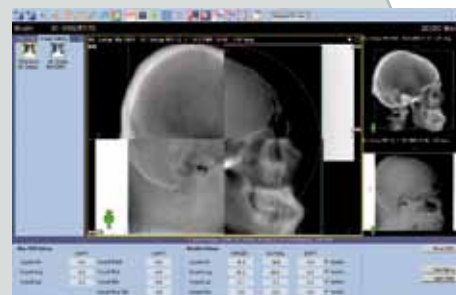


Step 5: Image can be approved and locked.

UNIQUE Power IGRT workflow



Step 4: Images are automatically saved after treatment for offline review by physicians.



Step 2: Match portal image with reference image.

Monitor Values	TARGET	ACTUAL	SHIFT	
Couch X	10.0	10.0	0.0	Initiate
Couch Y	63.2	63.2	0.0	Initiate
Couch Z	2.1	2.1	0.0	Initiate
Couch Roll	0.0	0.0	0.0	Initiate

Step 3: Calculate shift. Corrections can be made to the patient position by going into the treatment room or they can be applied automatically (optional).

Fast and Effective Treatment Solution

Advanced Automation

Auto Field Sequencing

Auto Field Sequencing (AFS), is standard with the UNIQUE system for automated delivery of multiple coplanar fields in sequence from the UNIQUE console. With this time-saving feature, UNIQUE automatically acquires the accelerator mode up and setup information from the R&V system, and then allows the operator to remotely move the gantry, jaws and collimator axes between co-planar treatment fields. This feature saves the operator's need to go back into the treatment room to alter setup between coplanar fields.



Example of an isocentric breast treatment with dynamic wedge. The time of the patient on the couch was less than 3 minutes thanks to the AFS and enhanced dynamic wedge.

Enhanced Dynamic Wedge

Enhanced Dynamic Wedge (EDW) Mode: EDW offers both precision jaw collimator movement and dose rate control to create wedge-shaped dose distributions. Therapists save time with EDW, especially when used with AFS, by avoiding the need for room re-entry to add or remove wedges. Enhanced Dynamic Wedges of 10, 15, 20, 25, 30, 45, and 60 degrees are included, with up to 30cm (wedge direction) by 40cm field sizes, using the Y-jaw to create the wedge angle.



A Complete and Fully Networked Solution

Don't Ask for Less

ARIA Oncology Information System **The Distinct Solution**

ARIA is a comprehensive information system that addresses the clinical, administrative, and imaging needs of the oncology department. ARIA streamlines departmental operations by eliminating redundant data entry and makes the treatment process faster and easier by providing a single user interface that integrates record and verify, the multileaf collimator, and PortalVision. The different UNIQUE radiation oncology solutions feature the main ARIA applications.



Eclipse Treatment Planning System **Total Planning Power**

Eclipse is an advanced windows based treatment planning system. It provides intuitive automatic and manual contouring and image registration tools, including automatic image registration based on a mutual information algorithm. It supports the different planning methods such as 3D conformal static and arc planning (standard), inverse planning for intensity modulated radiotherapy (IMRT) and RapidArc® planning for the RapidArc delivery option of the UNIQUE Performance Edition. The system offers the high quality dose calculation algorithm AAA (Analytic Anisotropic Algorithm). Eclipse is focused to support the clinical workflow and uses clinical protocols to speed up the planning part and to enable you to use class-solutions for the different clinical indications.



Upgradable Solution

UNIQUE Supports Future Growth

The UNIQUE Power Edition is perfectly **upgradable at the time of purchase or later-on** and is therefore an ideal entry level system for centers planning to introduce advanced clinical procedures such as dynamic Intensity Modulated Radiotherapy (IMRT) or RapidArc at a later stage.

UNIQUE Performance **upgrade package** will enable **RapidArc**, for highly conformal treatment plans delivered in less than 2 minutes and **advanced IGRT functionalities**.

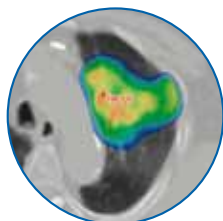
The package includes:

- Millenium 120MLC
- High dose rate (600MU/min)
- PortalVision aS1000 (1024x768 pixels)
- Remote positioning

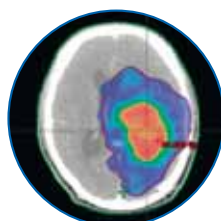
(Options are also separately available)



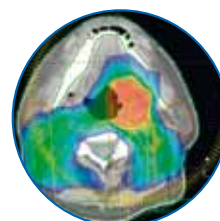
RapidArc – Extensive Clinical Application



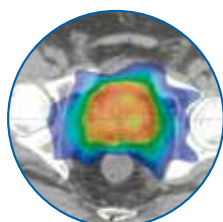
Non-Small Cell Lung Carcinoma SRT
2 arcs, 210 sec



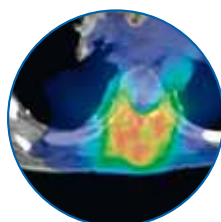
Glioblastoma
2 arcs, 150 sec



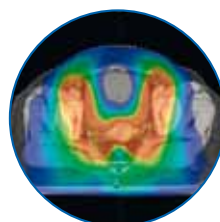
Head & Neck (Nasopharynx)
1 arc, 79 sec



Prostate
1 arc, 75 sec



Paraspinal Lesion
1 arc, 215 sec



Cervix Uteri
1 arc, 74 sec



For more information please consult your local representative or www.varian.com

Training Solution

The Answer to All Your Trainings Needs

Training is an essential part of developing a successful oncology practice. At Varian, we have a strong commitment to our customers; we make training and education a top priority.

Every year we provide training to thousands of physicians, physicists, dosimetrists, radiographers and administrative personnel at customers' treatment centers and at key Varian education centers located worldwide.

Wherever you are in the world, Varian offers:

- Comprehensive training programs in the safe and effective use of our systems.
- Product support by training and clinical experts consisting of certified Radiation Professionals with extensive clinical expertise
- Committed training coordinators working with you to develop a comprehensive program
- Industry leader in end-to-end solution training
- Specialized training and continuous education

Different hospitals may have different training needs; Varian acknowledges this fact and developed customized training and education packages.

Additionally to the standard training solutions we offer a comprehensive program to fulfill the customers' individual needs.



Additional Training and Education Package

For customers that are not so experienced in for example IGRT, 3D treatment planning, IMRT, etc. we offer individualized training programs upon your request.

After performing a site-survey, a training package will be created, ensuring a smooth start-up of the clinical operations.



This package can include:

- Beam commissioning support
- Additional on-site training
- RT mentorship (establishing a link with institutes with a long standing experience)
- Access to remote training material (e-learning, live-meetings, ...)

Customer Support Services

Protecting Your Investment

In more than 50 years of service to health-care providers, Varian's Customer Support Services have remained a testament to service innovation at every level. Our worldwide support team is dedicated to providing local support for our products whenever and wherever needs arise. From site planning to service support agreements, training solutions, on-site support and Help Desk telephone support, Varian offers programs that keep your products and personnel operating at peak efficiency.

SmartConnect™

Experts at your shoulder

SmartConnect puts a team of first-rate clinical and technical experts at your command. With the exclusive remote monitoring capabilities of SmartConnect, Varian experts can see exactly what you see and work with you as if they were in the same room with you. It provides proactive and predictive service capabilities and helps ensure that the UNIQUE system is performing at an optimum level. SmartConnect allows Varian to provide the customer with remote application and technical support and helps to minimize clinical downtime.

Fine Beam Matching

The new UNIQUE system can be beam matched to your already installed Varian Clinac® or Trilogy™ system to allow for easy movement of patient treatment plans between machines of similar energy.

Conditions may apply. Please contact your local service organization for more information.



Service Solution

Stay within Budget

Comprehensive Service Package* (optional)

The comprehensive service package will protect your UNIQUE system against any unexpected costs or downtime and help you to stay within budget. It will not only cover the UNIQUE accelerator, but also ARIA and Eclipse, starting with the date of acceptance lasting for a period of multiple years.

The comprehensive service package includes

- **Parts coverage, including glass and vacuum**
Varian supplies all parts necessary to keep the equipment functioning properly, including all glass and vacuum parts and imaging panel.
- **Periodic maintenance inspections**
Varian will carry out all regular periodic maintenance inspections each year.
- **Maintenance releases and updates**
Varian will provide maintenance releases for the software and firmware on the UNIQUE accelerator, ARIA and Eclipse.

- **Highest level of support**

- **Help Desk**

Varian will provide applications, technical, and clinical support for the UNIQUE Package. Specialists provide e-mail and multilingual phone support for Varian customers worldwide.

- **Remote Service**

SmartConnect enables remote monitoring and diagnosis of equipment performance and allows for remote installation of updates and upgrades.

It provides proactive and predictive service capabilities and helps to ensure that the UNIQUE system is performing at an optimum level.

- **On-site support**

Varian will provide on-site field service support for issues that cannot be resolved by helpdesk or through remote service support.

* Following conditions apply: Service agreement does not cover damage relating to environmental changes, abuse, neglect and others. Comprehensive service package may not be available in some countries.



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