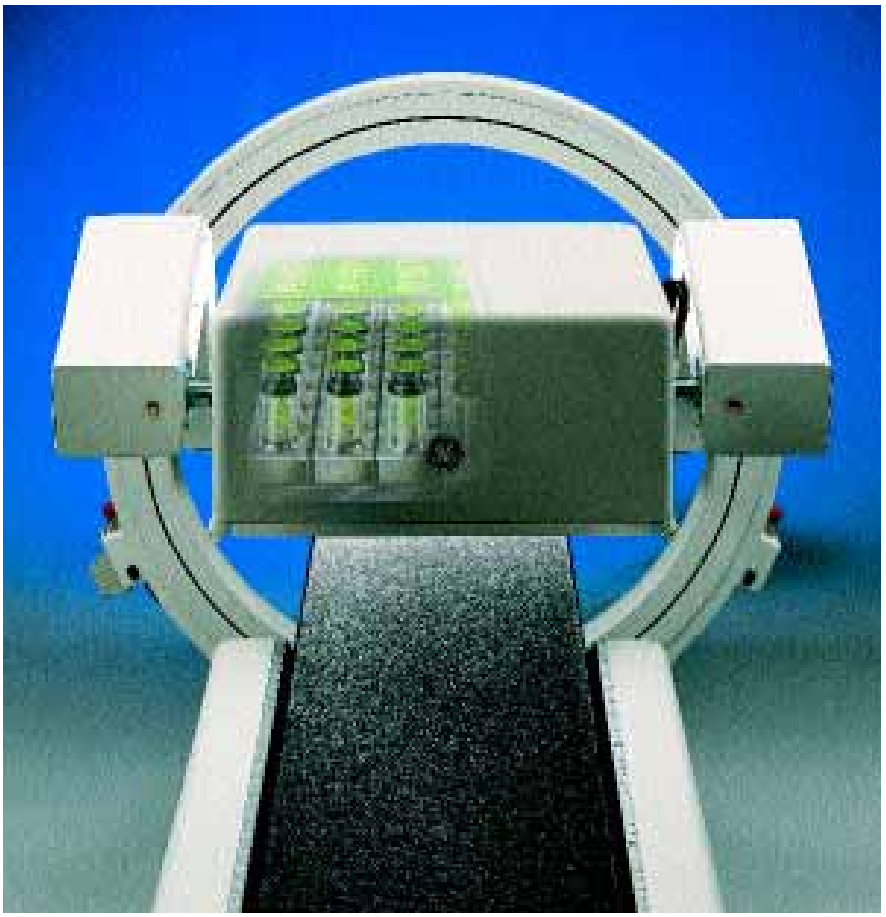
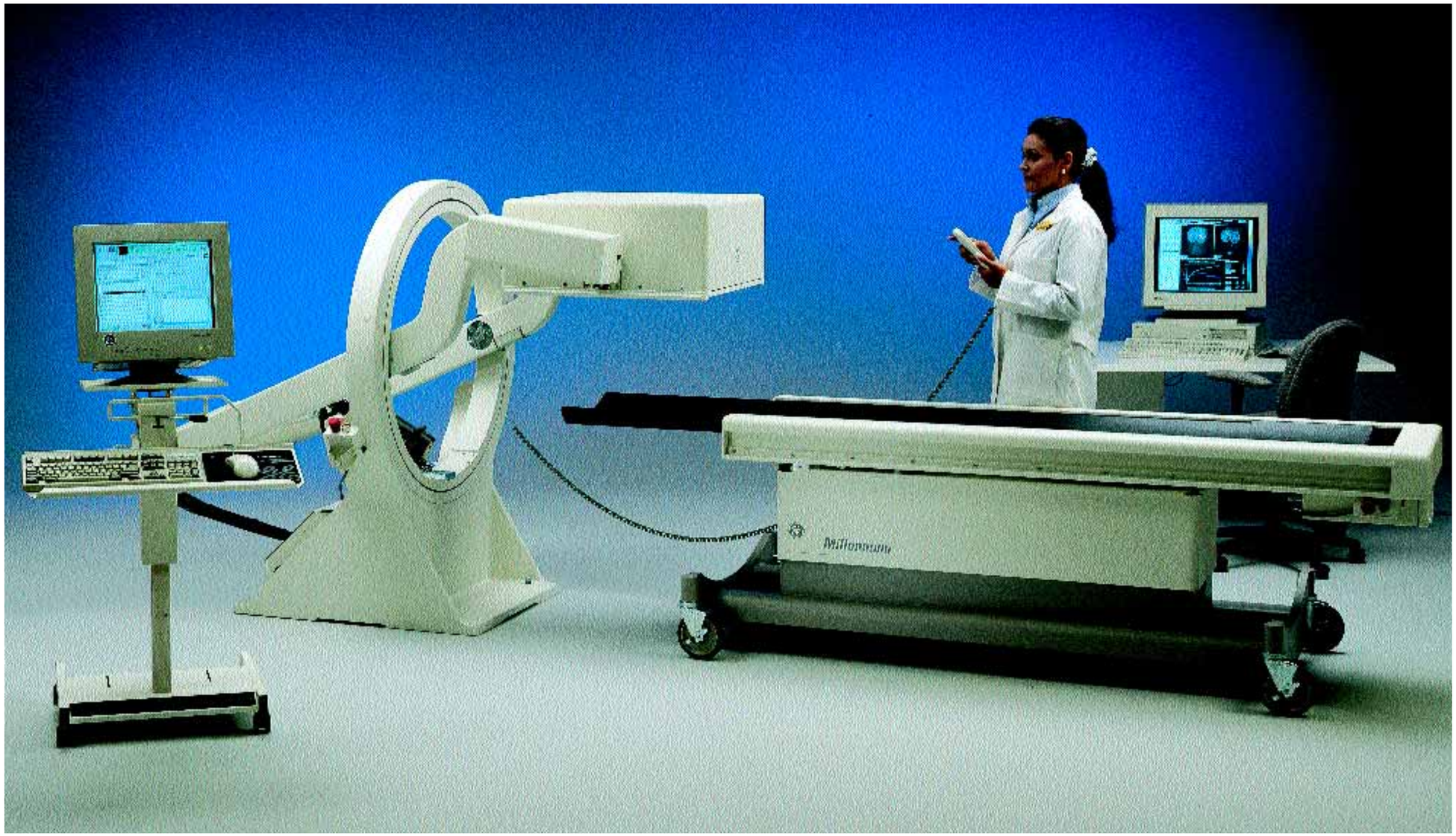
# MILLENNIUM™ MPR & MPS

## NUCLEAR IMAGING SYSTEMS



GE Medical Systems

# WELCOME TO THE NEXT MILLENNIUM IN NUCLEAR MEDICINE.




The Millennium MPS (Multi-Purpose Square) and MPR (Multi-Purpose Rectangular) single-detector imaging systems are specifically designed to help you address the needs of today's rapidly changing healthcare environment.

And tomorrow's.

To accomplish this challenge, Millennium provides you with unmatched operational ease and versatility, to make your department more productive than ever before.

In addition Millennium features an extraordinary level of image quality and operational flexibility that will lead you into an exciting new era of clinical utility.

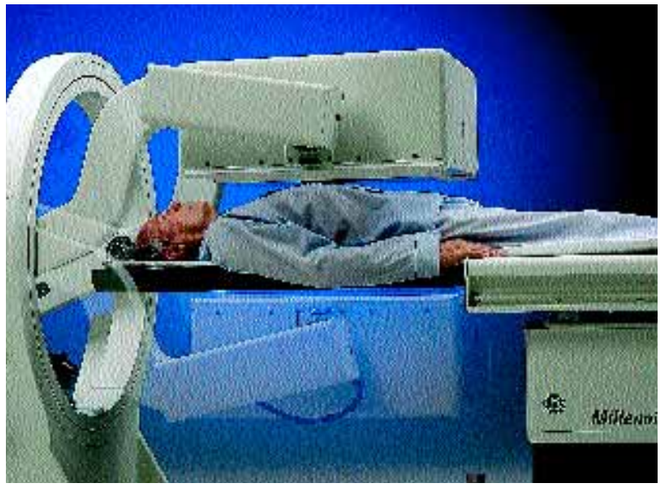
Forethought and vision are inherent in the Millennium design, which places you on a clearly defined GE Continuum upgrade path and virtually eliminates the concept of product obsolescence.

The Millennium nuclear imaging system. It is the realization of our unique Productivity by Design™ philosophy.

*Produ ctivity by Design*

# DESIGNED FOR THE ULTIMATE IN PRODUCTIVITY.

The Productivity by Design philosophy is apparent in every Millennium component. With its powerful architecture, operational ease and clinical flexibility, Millennium makes short work of virtually any department's daily routine.



*Millennium's table top was designed to be extra-wide and ultra-thin to enhance patient comfort and improve image resolution.*

**A mobile 3-axis table for uncompromised flexibility.**

Millennium's unique design starts with a component that might be thought of as insignificant, but it is one that is critical to maximizing the productivity equation - the patient table. Millennium features a mobile table that significantly enhances your clinical flexibility and productivity.

The Millennium table wheels easily to the gantry, where unobtrusive floor plates lock it securely in place. It also wheels easily away from the gantry, not only for fast response in emergencies, but also for imaging seated patients, patients on gurneys and patients undergoing stress ergometer tests.

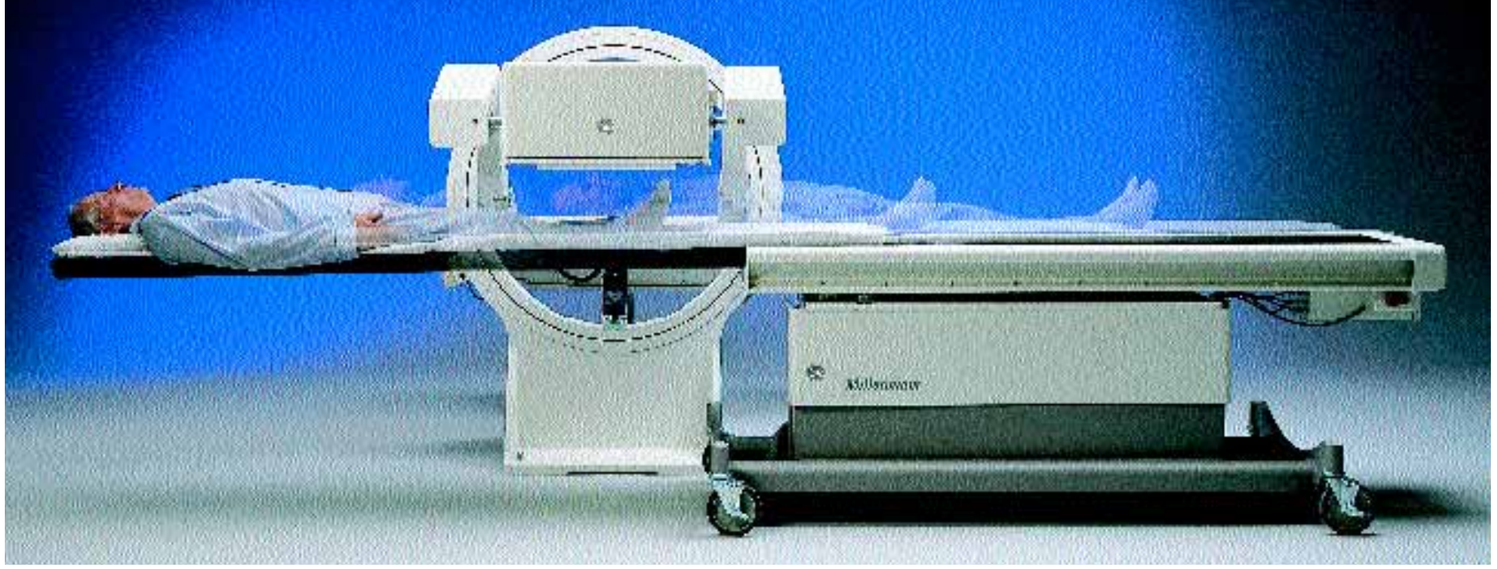
The unique 3-axis table also provides touch-of-a-button patient positioning, using either the preprogrammed or user-programmable commands. It can be lowered to ease transfer of wheelchair bound patients, raised for effortless gurney transfers and moved laterally for optimum patient positioning.

What's more, the Millennium table accommodates patients up to 182 kilograms (400 pounds) and up to 1.9 meters (6'3") tall, supporting them comfortably in an extra-wide, sculptured cradle.

The Millenium table also equips you with an ingenious molded table surface featuring two thoughtfully placed positioning rulers to aid in patient positioning. The sculpted hand rail allows easy table movement and accommodates snap-on accessory devices that hold IV poles and catheter bags.


*The Millennium table lowers to wheelchair height for easy patient transferring.*

*Millennium's mobile table and gantry's sculptured arms permit imaging of patients on gurneys and non-standard tables.*



*Millennium MPR's extra large field of view provides uncompromised whole body imaging.*

**A streamlined 3-axis gantry for maximum productivity.**

Millennium's tomographic ring is unlike any you may have seen before. In addition to the standard SPECT and detector elevation motions, the gantry also allows the detector to be tilted to image seated or standing patients.

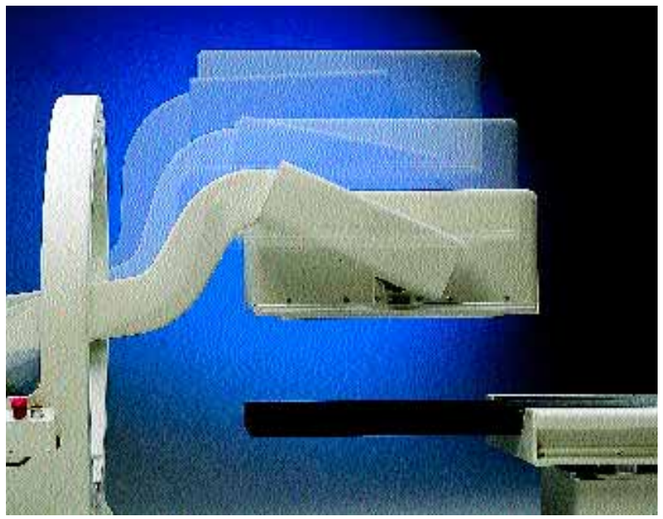
Its base is fixed securely in place to preserve both the stability and the integrity of signal detection. Gantry motions are automated, with many pre-programmed or user programmable, to streamline virtually any study.

The detector arms are elegantly sculptured, for unobstructed detector motion ancl optimized patient positioning – even with non-standard imaging tables or hospital gurneys.

The detector automatically self-levels to maintain the selected angle throughout complex gantry movements, virtually eliminating time-consuming manual detector adjustments.

Compact and self-contained, the gantry has all components housed within its base, including a modular power supply featuring a completely integrated suppression / filtration power conditioning systern, which can plug in to most standard wall outlets.

*The Millennium gantry automatically levels and maintains the selected detector angle.*



*Millennium's unique transport cart allows for fast and easy collimator changing and storage.*

**A detector that will not slow you down.**

Whether you choose the true square MPS configuration to optimize SPECT applications, or the true rectangular MPR configuration for whole-body applications, you will find the multi-purpose Millennium Digital CSE™ (Correlated Signal Enhancement) detectors make a vast difference in your studies.

One example of this can be found when changing the system's full range of collimators. Millennium features lightweight transport carts for effortless collimator switching and storage.

The system even eliminates manual counterweight adjustments when changing collimators; on Millennium those time-consuming adjustments are completely automatic.

To ensure patient comfort, collision detection sensors have been placed at key locations on the detector, collimator and gantry arms, stopping all movement in the event of contact. Should contact occur, the system does not force you to restart the exam. Instead, it provides you with a Pause / Resume function to continue the study without loss of data already acquired.

**An icon-based handset for intuitive control.**

A small item, perhaps, but one that can make a big contribution to your department's productivity, is the easy-to-use Millennium handset. It allows you to control all gantry, table and detector motions at the touch of a button; universal icons facilitate quick recognition and operating ease.

You can also use the handset to initiate time-sensitive acquisitions at tableside, instead of returning to the acquisition console.

For convenient operation wherever you may need to be in the scan room, simply connect the handset cord into one of the convenient ports found on either side of the gantry and table.

**Fast start-up, long-term reliabilitty.**

Millennium also provides you with the fast start-up and downtime-minimizing reliability that are the keys to maximizing productivity.

For instance, its compact, rail-free design, plug-in power supply and small footprint allow rapid installation, in many cases reducing installation time to just a day and a half.

What's more, Millennium has been designed to meet the highest quality standards, ensuring long-term reliability It has even passed the world's most rigorous quality standards.

Millennium also employs advanced detector diagnostics, all the way down to the PMT level. The system can be placed on-line with InSite™ and QSA™ (Quantitative System Analysis), two unique GE remote diagnostic services that consistently solve the majority of system problems promptly, over conventional phone lines.

*Millennium's iconbased handset allows intuitive control of all gantry, table and detector motions.*

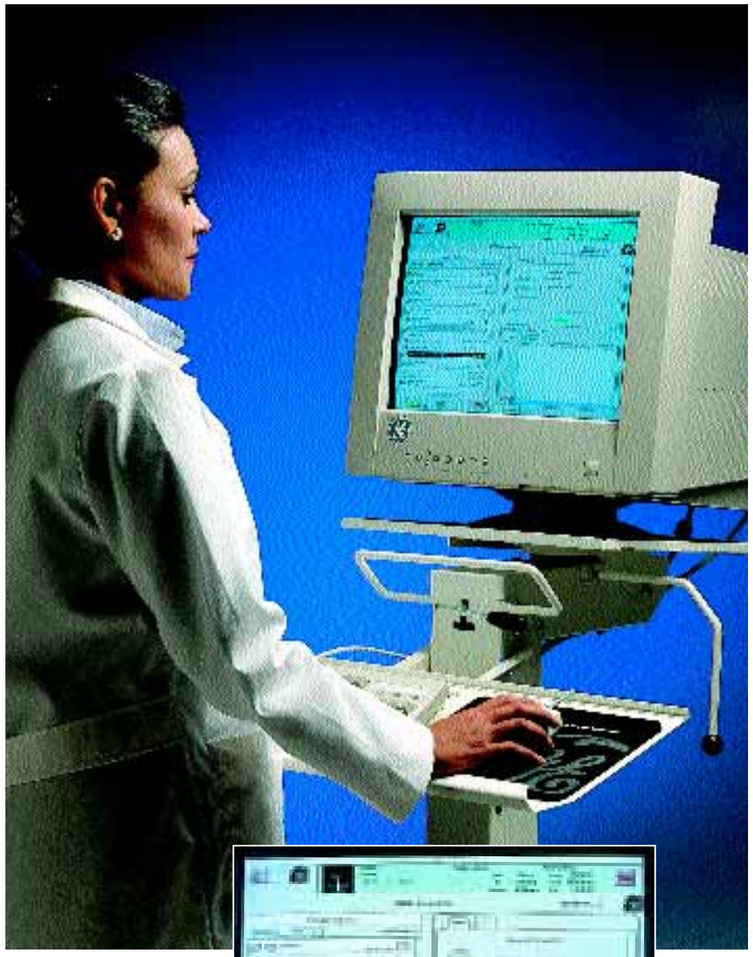
# AN IMAGING ENVIRONMENT THAT REDEFINES EASE OF USE.

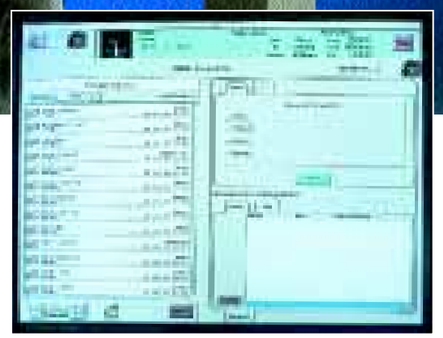
Millennium is the first GE nuclear camera designed in conjunction with GENIE™, the GE Nuclear Imaging Environment – a powerful, modular and flexible computing platform that is redefining the concept of productivity.

GENIE's all-new Intuitive Imaging Environment™ was designed from the start as the optimum nuclear medicine interface, an interface that reduces even input-intensive tasks to just a few clicks of the mouse.

The heart of this environment is our unique AutoTab™ filing system. Highly graphical and extremely intuitive, it keeps the tools you need in clear sight. Launching an application is just a click away. It also incorporates a wide range of additional productivity-enhancing tools, all accessed via universally recognized icons. Millennium also anticipates your needs, automatically adjusting controls to match the needs of your currently displayed application.

The result: a truly intuitive user interface to help ensure maximized productivity.





*GENIE is built completely on industry standard components which allow the highest performance available in the marketplace and protects your investment for the future in this rapidly changing workstation environment.*

**The graphic acquisition interface designed exclusively for Nuclear Medicine.**

GENIE Acquisition makes everything from protocol entry to image management incredibly easy. In fact, if you take advantage of its default settings, you can reduce the entire process to a few clicks of the mouse.

Yet this simplicity masks powerful flexibility. You can easily modify any of the preprogrammed parameters, for example, or create your own custom settings.

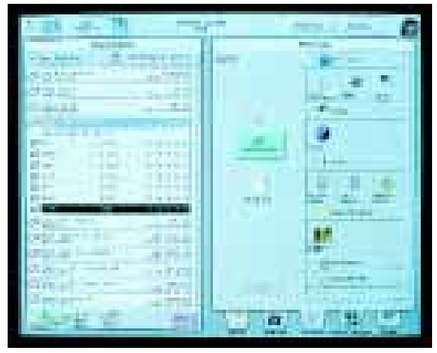
GENIE Acquisition is extremely compact. It resides on a mobile cart that can be wheeled anywhere in the scan room. It also features easy vertical height adjustment - at full height if you prefer to work from a standing position, or lowered for comfortable seated viewing.

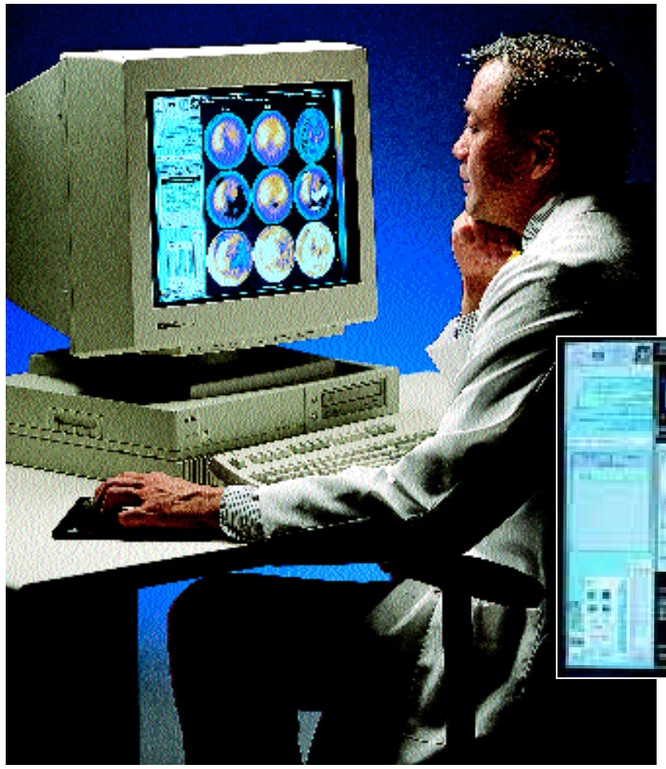
**Eminently simple processing.**

GENIE Processing & Review applies the same uniquely intuitive interface to the most sophisticated processing routines available – including the many outstanding clinical packages that set GE processing protocols apart.

With its sophisticated architecture, GENIE easily handles true simultaneous operation of its reconstruction, display, analysis, networking, filming and archiving functions, for the ultimate in productivity.

GENIE modularity also means you can site optional Processing and Review stations wherever it makes the most sense for your operation – in the scan room or in a central location. In either case, networking to any number of GE acquisition systems is simple and convenient.





# SUPERB CLINICAL PERFORMANCE IN EVEN THE BUSIEST ENVIRONMENTS.

By all the measures of clinical importance in Nuclear Medicine, Millennium puts you at the forefront of technology.

**Outstanding image quality.**

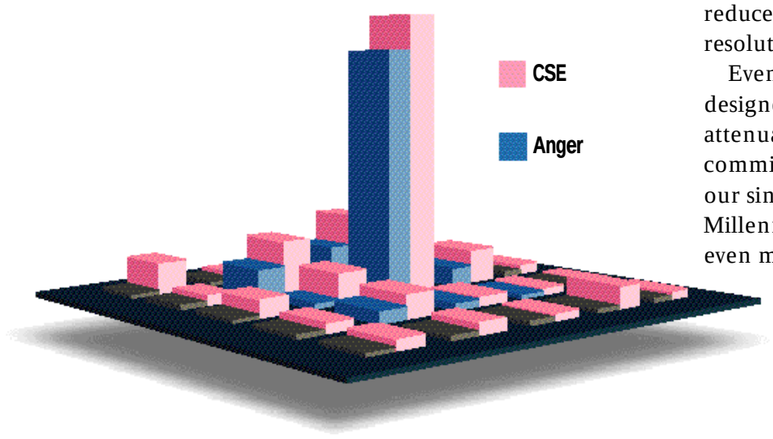
Millennium's designers believed that there had to be a better detection technique than the traditional Anger camera approach.

They were right. GE-patented Digital CSE™ (Correlated Signal Enhancement) detectors take an entirely new approach to gathering data – an approach that optimizes utilization of all the available signal.

Based on large, square photomultiplier tubes (PMTs), the CSE detector gathers and sums signals from rows and columns of` PMTs before any signal processing is performed – in effect, using information from even the distant, small signals that are discounted and discarded by conventional Anger cameras.

This innovative technology has been combined with an array of other image enhancements, including Advanced AutoTune™ for continuous, automatic adjustments to PMT gain using sophisticated new algorithms, algorithmic correction to reduce the count loss associated with traditional Anger methods and improved dynamic range for faster tuning.

The result: Significant improvement in both count rate and uniformity.




*Millennium's Digital Correlated Signal Enhancement (CSE) detectors utilize more information than conventional Anger cameras, improving both count rate and uniformity.*

**There is more. Much more.**

Millennium has heen designed, down to the smallest detail, to help you achieve consistently excellent diagnostic results.

Consider, for example, its unique, composite tabletop material. This table is so thin it lets you position the detector closer than ever to your patients, for reduced attenuation and unprecedented resolution.

Even more exciting, Millennium is designed to accommodate future attenuation-correction hardware. We are committed to applying this capability to our single-detector system. With it, Millennium users will be able to achieve even more accurate results while performing fewer additional studies.


*Millennium MPR's unique detector orientation, coupled with optional programmable body contouring, provides for fast and accurate SPECT studies.*

**Extraordinary clinical flexibilily.**

Millennium's clinical flexibility is truly outstanding.

That is in large part because it offers you a choice of two multi-purpose Digital CSE detectors – each excellent for the full range of studies, each optimized to ensure maximum productivity for a particular type of caseload, each ready to equip you with optional programmable body contour imaging (elliptical tomography) and whole-body contour imaging.

If most of your cases involve small-organ imaging – cardiac SPECT, for example – select the Millennium's true square MPS detector. Its geometry is optimized for the full spectrum of these studies.

On the other hand, if uncompromised whole-body imaging free from shoulder cut-off is your primary goal, select the true rectangular MPR detector.

Developed with extensive input from the medical community, this detector is oriented with the short axis between the gantry arms to deliver tremendous clinical benefies. For example, it allows maximum coverage for long-axis SPECT studies, to optimize imaging of the abdomen, lungs and spine. Additionally the MPR detector is so efficient, it permits you to complete whole-body SPECT exams in just two passes.

Alternatively, when space is limited, we can install the MPR detector with its long axis positioned between the gantry arms, so you can do whole-body studies through the ring.

# THE SYSTEM OF CHOICE FOR TODAY. TOMORROW. AND INTO THE NEXT MILLENNIUM.

Millennium is a member of a new generation in nuclear imaging equipment - and of the GE Continuum, our on-going commitment to helping you stay at the forefront of Nuclear Medicine.

It was designed for simple, cost-effective upgradability, to fit your department as seamlessly tomorrow as it does today - including accommodation of attenuation correction and different configurations.

Just as important, Millennium is backed by the full support of GE Medical Systems.

That means flexible, affordable financing, offered at highly competitive rates.

Comprehensive training - including cost-effective, on-site programs via the Tip-TV broadcast network.

Sophisticated networking products and services, to help you meet your short- and long-term medical-information management objectives.

And acclaimed GE service, delivered by one of the industry's largest and best trained service forces - and backed by our unique InSite™ remote diagnostics and repair services, for prompt resolution of most system problems.

Extraordinary systems. Extraordinary support. Any way you look at it, it is Productivity by Design.

For details, please contact your GE representative.

**GE Medical Systems**

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*Printed in France - 96071-E*