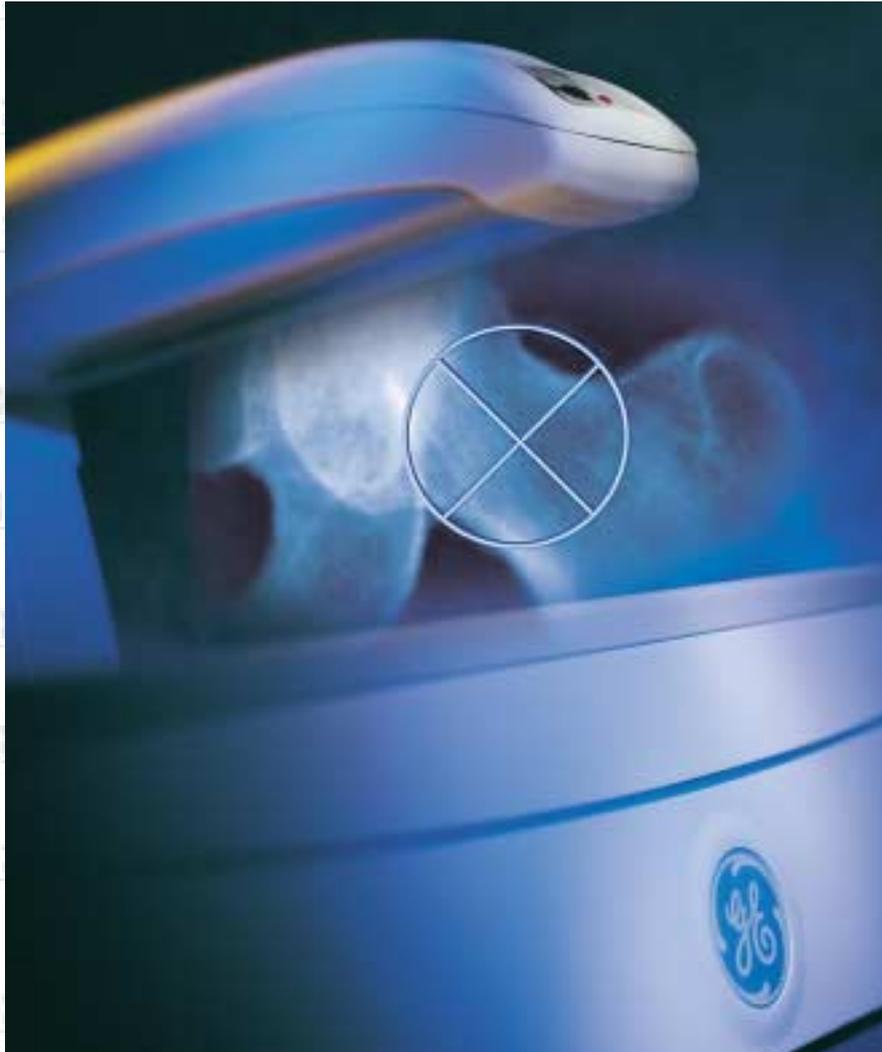


Lunar Prodigy

Direct-Digital Densitometry







Prodigy. A breakthrough in fracture risk assessment.

At GE Healthcare, we're firmly committed to finding new and more effective ways to help physicians diagnose osteoporosis and assess fracture risk.

That's why we developed the innovative Prodigy – the first system designed to look beyond bone mineral density to become the most complete bone assessment tool ever devised. Prodigy's improved technology detects subtle bone changes in a variety of clinical conditions and provides Advanced Hip Analysis and Lateral Vertebral Assessment.

Utilizing Direct-digital detector technology, Prodigy delivers rapid scans, near radiographic imaging and dose efficiency three to five times better than existing fan beam systems. And its comprehensive capabilities cover a complete range of applications.

Prodigy's unique software platform, enCORE™, optimizes productivity with automation breakthroughs that save time and ensure consistent results. And paperless digital reporting makes densitometry results accessible quickly and easily.

Looking ahead, Prodigy links you to the future with extensive options for connecting with local facility networks and the Internet, for instant integration of bone assessment results across your entire healthcare system.

Complete accuracy from any angle.

The precise depth and location of bone can vary significantly from patient to patient, depending on patient age, size and shape.

The wide-angle design used by competitive fan beam systems is subject to distortion caused by magnification. This makes it difficult to determine the true bone area and geometry with any degree of accuracy.

With these technological limitations, competitive systems can only estimate the mineral content, geometry and size of bone based on an approximation of its depth.

Prodigy's unique technology eliminates all of this guesswork. Its narrow-angle fan beam makes multiple passes across the patient to acquire multiple images, with each image overlapping the previous one.

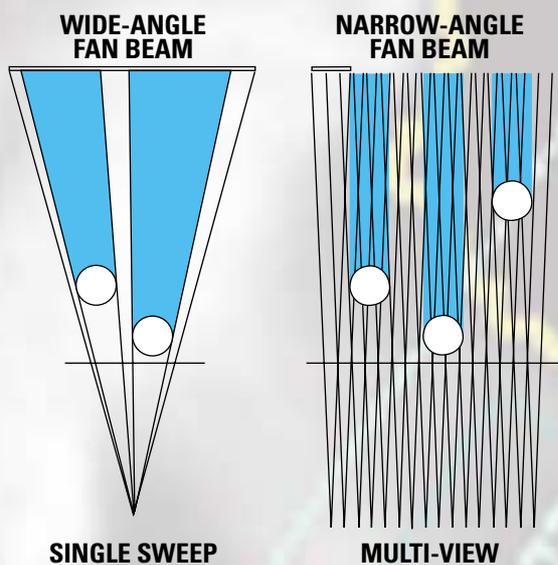
Then, Multi-View Image Reconstruction – an imaging technique perfected in computed tomography, or CT – slides these overlapping images together for a perfect match.

The result: the exact depth of the bone is determined accurately in every patient, ensuring precise, reliable, consistent measurement of area, bone mineral content and geometry such as hip axis length (HAL).

"HAL has been demonstrated in several prospective studies to predict fractures. Each centimeter (10%) increase in HAL increases hip fracture risk by 50-80%, depending on the study. Precision error of HAL on the Prodigy, determined from 43 subjects scanned multiple times, was 0.7%. While HAL cannot be viewed as a stand-alone clinical predictor, it can potentially provide utility in conjunction with BMD to identify high-risk patients."

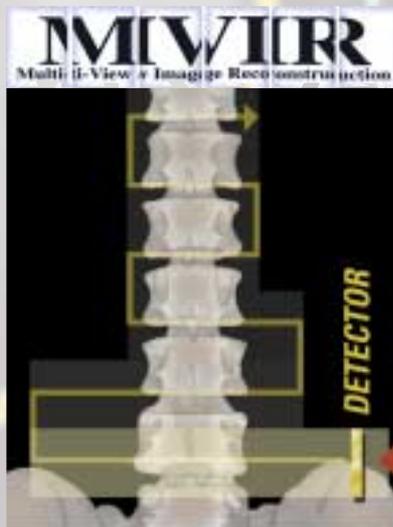
Kenneth G. Faulkner, Ph.D.
Chief Scientist
GE Healthcare





Wide-angle fan beam designs used by competitive systems don't correct for magnification. Differences in bone depth across patients, or even changes in positioning of the same patient, are projected as different sizes on the detector, making it difficult to accurately measure hip axis length.

Prodigy's narrow-angle fan beam reduces distortion due to magnification. The multi-view image reconstruction algorithm discerns the bone's true depth, for accurate determination of bone mineral content, size and geometry.



By reconstructing multiple images acquired by multiple passes of its narrow-angle fan beam, Prodigy determines the exact location, and the precise size and shape, of the spine and hip to accurately determine bone area, bone mineral content and bone geometry, such as hip axis length.



Expanded clinical utility. Right down to the bone.

Evidence continues to mount that there is additional clinical information to be derived from femoral bone density measurements – if the necessary analysis software were available.

Now, for the first time ever, the GE Lunar Prodigy delivers these remarkable analytical capabilities.

Advanced Hip Analysis

The Prodigy provides the first major advances in femoral densitometry analysis since the introduction of DXA system software in 1987. These advances are included in the new Advanced Hip Analysis software, available exclusively on the Prodigy.

Advanced Hip Analysis includes all the standard femoral regions of interest that have been previously available, but now includes the addition of other key measurements and assessments:

- Hip Axis Length (HAL) has been demonstrated in prospective studies as an effective adjunct to femur bone density in predicting fracture risk.
- DualFemur™ Assessment identifies the weakest femur while improving precision over single-femur measurements.
- New diagnostic regions of interest such as the upper neck can now be accurately assessed.
- Femur Strength Index : A unique Index combining geometrical parameters and BMD for a better assessment.

Dual femur assessment



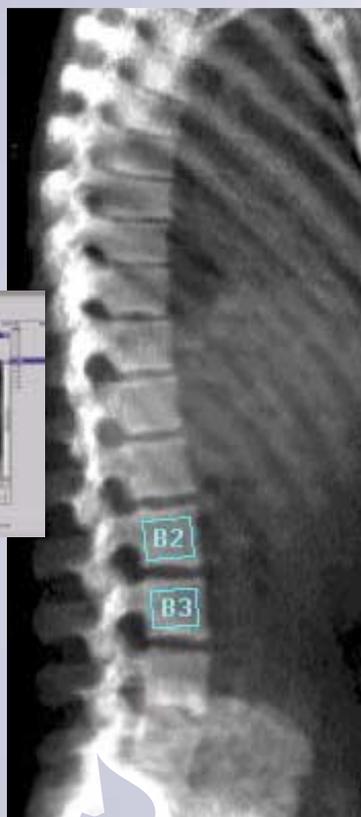
	Single Femur Precision	Dual Femur Precision
Total Femur Region	1.0% CV	0.6% CV



“Advanced Hip Analysis combines several advances in DXA measurement of the proximal femur into a single software package. It maintains the conventional femoral regions of interest, but with a precision previously only obtained at the spine. This feature alone represents a significant advance in femoral densitometry.”

Kenneth G. Faulkner, Ph.D.
Chief Scientist
GE Healthcare

Lateral Vertebral Assessment-quantified



Lateral Vertebral Assessment-quantified

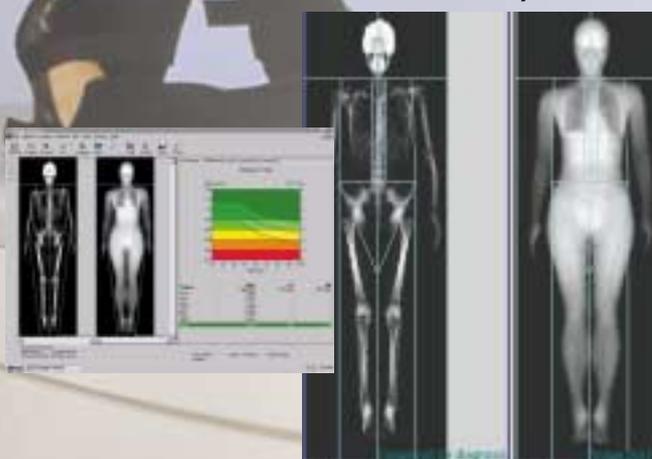
Prodigy's Lateral Vertebral Assessment-quantified (LVAq) improves fracture risk assessment by identifying and quantifying existing vertebral fractures – which at least double future fracture risk regardless of a patient's bone density.

LVAq subtracts soft-tissue artifacts for better bone images and easier visual assessment. In addition, reference data is provided for vertebral height and A/P ratio, and the Morphometry Wizard feature allows for easy step-by-step quantification.

Total Body Assessment

The ultimate in skeletal assessment, the Total Body exam provides both bone density and body composition (i.e., % fat) results. With an FDA-approved, gender-matched database, total body results expand the utility beyond osteoporosis management where the combined results are used in a variety of secondary conditions, or when spine/hip measurements are compromised.

Total Body Assessment



Orthopedic Analysis

The enCORE software platform facilitates accurate, customized analysis. Hip prostheses, metal fastenings and other artifacts are easily excluded from the analysis region for accurate bone density results. Customized regions of interest of any shape and size can be quickly defined for greater utilization, and customized enCORE analysis assures precise results while expanding your clinical and research applications.

Orthopedic Analysis





No speed limit.

Loaded with features for faster, easier and more convenient operation, the Prodigy will streamline performance and throughput in the busiest practices, clinics and departments.

Revolutionary enCORE software optimizes productivity.

Based on Windows XP® Professional, GE Lunar's unique enCORE software provides true Windows capabilities, including right-click menus, drag-and-drop editing and integration with other applications. Multiple scans can also be opened simultaneously. enCORE's intuitive graphical interface provides ease-of-use, fast throughput and automation that frees the operator for other tasks.

One-step AutoAnalysis delivers fast, precise, consistent results.

Excellent precision, or reproducibility, is key to detecting small changes in bone density. enCORE's AutoAnalysis calculates results in just one keystroke, for fast, precise analysis. Only GE Lunar offers true one-button analysis, eliminating operator variability, subjective decisions and inconsistent analysis in over 90% of scans.

OneVision scanning and reporting saves time and costs.

The Prodigy automatically combines scans of the spine and both hips into one comprehensive exam, acquired in one process and evaluated in one analysis. Rather than receiving multiple assessment reports, the referring physician receives a single, consolidated report that combines all risk assessment analyses for greater convenience and time savings.

OneVision reporting automatically generates a single, concise clinical report for all scans performed during a patient's visit. Standard text can be customized with patient-specific comments and changes to save time and eliminate transcription costs.



Analyze



Measure





A platform for productivity. Today and tomorrow.

A state-of-the-art fracture risk assessment tool, Prodigy will serve your needs exceptionally well today – and continue serving those needs just as effectively far into the future.

Digital connectivity and network integration provide fast, widespread communications.

Utilizing Prodigy's enCORE software, bone density results can be digitally transmitted throughout your healthcare enterprise – or anywhere in the world via the Internet – for viewing on remote workstations.

Exclusive DICOM and HL7 compatibility ensures maximum connectivity.

A Prodigy exclusive, DICOM seamlessly integrates densitometry results with Radiology Information Systems (RIS) and Picture Archival and Communication Systems (PACS). Digital densitometry results may then be viewed on remote DICOM review stations. With Worklist, patient information can also be received directly from scheduling applications via HL7 or DICOM for faster throughput and reduced data entry errors.

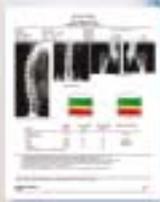
TeleDensitometry™ speeds reports to reading or referring physicians.

With TeleDensitometry, digital paperless reports are sent as faxes or as simple attachments to standard email messages that can be viewed on any personal computer without the need for special software. The digital report contains all the information found in the standard hard-copy report, including patient information, high-resolution images, a reference graph, a clinical results table and a trending graph to monitor changes over time.

GE Continuum protects your investment.

To keep your bone densitometry and assessment capabilities current through rapid advances in technology, new features and applications can be easily added to your Prodigy as economical software upgrades, ensuring you of state-of-the-art system performance for years to come.





- Comprehensive Clinical Capabilities**
- **Advanced Hip Analysis**
 - **Lateral Vertebral Assessment-quantified**
 - **Total Body Assessment**
 - **AP Spine**
 - **Forearm**
 - **Orthopedic Analysis**
 - **Ultra Low-Dose Pediatrics**

Technical Specifications

Available Applications and Options

AP Spine
Femur
DualFemur
Advance Hip Assessment with Hip Axis Length, Cross Sectional Moment of Inertia and Femur Strength Index
Total Body*
Body Composition* (with fat/lean assessment)
Dual Energy Vertebral Assessment (DVA)
Forearm
Lateral Spine BMD
Orthopedic Hip Analysis
Pediatric*
Infant Total Body***
Small Animal
OneVision
OneScan
Composer with 10-year Fracture Risk assessment
Practice Management Report
Dexter PDA interface software**
Computer Assisted Densitometry (CAD)
TeleDensitometry**
DICOM (Worklist -Color Print and Store)**
Multi User Data Base Access (3/10)**
HL7 Bidirectional interface **

enCORE™ Software Platform

Advanced intuitive graphical interface
Multiple Patient directories with Microsoft Access® database
SmartFan™ for scan window optimization and dose reduction
Automated Scan mode selection
AutoAnalysis™ for a better precision
Customized Analysis for clinical flexibility
Exam Comparison process
BMD or sBMD results (BMC and Area)
Extensive Reference Data
 > 12,000 subjects – NHANES and several Regional Lunar Reference Data
 User defined Reference Population
T-score, Z-score, % Young-Adults and % Age-Match
Automated WHO Background evaluation
Patient trending with previous exam importation
Multiple languages available
Multimedia Online Help

Typical Scan Time and Radiation Dose at the best Precision

AP Spine : 30 sec : 0.037mGy (< 1%CV)
Femur : 30 sec : 0.037 mGy (< 1%CV)
Total Body/ Body Comp. : 4 min 30sec: 0.0003 mGy (< 1%CV)

Calibration and Quality Assurance

Automated test program with complete mechanicals and electronics tests and global measurement calibration
Automated QA Trending with complete storage

Scanning Method

Narrow FanBeam (4,5° angle) with SmartFan, MVIR and TruView algorithms

X-ray characteristics

Constant potential source at 76kV
Dose efficient K-edge filter

Detector technology

Direct-Digital CZT (Cadmium Zinc Telluride) detector
Energy sensitive solid state Array

Magnification

None - Object-plane measured

Dimensions (L x H x W) and weight

263 x 111 x 128 cm - 272 kg (Full)
202 x 111 x 128 cm - 254 kg (Compact)
Vinyl table pad

External shielding

Not required : X-ray safety requirements may vary upon destination. Please inquire with local regulatory authorities.
GE Healthcare recommends consulting your local regulatory agency to comply with local ordinances.

Environmental requirements

Ambient temperature: 18-27°C
Power: 230/240 VAC ±10%, 10A,
50/60 Hz
Humidity: 20% - 80%, non-condensing

Computer workstation

Windows XP® Professional
Intel processor computer, printer and monitor
Contact GE Healthcare or our local distributor for the detailed current configuration and optional hardware.

* on full size table only

** networking is under the user's responsibility

*** for research only

For more than 100 years, healthcare providers worldwide have relied on GE Healthcare for medical technology, services and productivity solutions.

So no matter what challenges your healthcare system faces – you can always count on GE to help you deliver the highest quality healthcare.

For details, please contact your GE representative today.

GE imagination at work



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