

GE Healthcare

Lunar Prodigy Advance™

The Direct-Digital densitometer



GE imagination at work

Your practice needs to move fast,



yet you want peace of mind.



A partnership is a journey - expertise, support and leadership determine a successful destination. Partnering with GE Healthcare ensures access to the latest advancements in densitometry science, backed by the largest support network, from the #1 company in bone densitometry and medical diagnostics.

You and GE Healthcare will plot a path of precision by detecting bone loss quicker and determining response to therapy sooner than on any other system. The road to diagnostic confidence will be clear with the new Lunar Prodigy Advance™.

You will ascend to greater heights of efficiency with reporting and connectivity options to automate your exams, streamline your workflow, and maximize staff as well as patient satisfaction.

And for those challenging cases, GE Healthcare leads the way in advanced technologies to enhance your diagnostic power. We provide the only comprehensive solution for accurately and rapidly assessing total body bone and tissue composition, Dual-energy Vertebral Assessment, Advanced Hip Assessment, pediatric evaluations, and biomechanical measurements.

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Clinical detection of bone loss... up to 40% sooner

Unmatched Precision

Patient BMD changes slowly and smaller precision errors lead to shorter patient monitoring intervals. Lunar Prodigy Advance™ has been shown to have up to 40% better clinical precision when compared to competing systems.* Lunar Prodigy Advance™ enables clinicians to monitor therapy in the shortest interval possible.

**JBMR 2003; 18 (Supp2): S205.*

Direct-Digital

Lunar Prodigy Advance™ utilizes the industry's first Direct-Digital detector array. Direct X-ray conversion delivers high-resolution and rapid imaging in seconds, at a fraction of the dose of scintillating detector fan beam technologies.



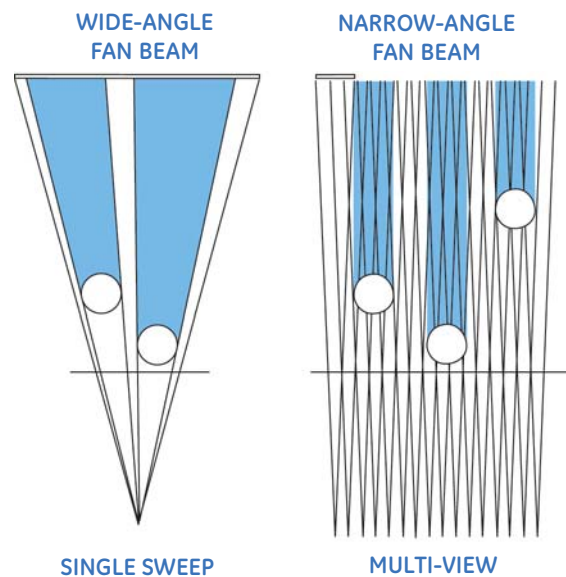
...with leadership technology

enCORE Software

The Lunar Prodigy Advance™ enCORE software, based on the Windows® platform, optimizes productivity with automation breakthroughs that save time and ensure consistent results.

TruView

TruView eliminates the inherent magnification and distortion effects of wide fan-beam densitometry. Area and BMC of the bone is determined automatically in patients, ensuring accurate and precise BMD measurements, including geometric dimensions necessary for Hip Strength Analysis predictors and Hip Axis Length.



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.

Lunar Prodigy Advance™'s narrow-angle fan beam reduces distortion due to magnification. The Multi-View Image Reconstruction algorithm (MVIR) discerns the bone's true depth, for accurate determination of Bone Mineral Content, size and geometry.

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Connectivity and efficiency

DICOM

Lunar Prodigy Advance™ DICOM is flexible to meet your needs and is IHE5 compliant. Features include DICOM structured reports, image storage and commitment, and DICOM worklist. Reports and images can be sent to your PACS server in color or black and white.

HL7

The Lunar Prodigy Advance™ receives and transmits HL7 information, including importing patient demographics and exporting patient exam results. This solution for electronic medical records closes the loop, completing the integration of the densitometer with existing electronic medical records.

DEXTER

This portable BMD review and dictation system gives you efficiency and portability on a PDA platform allowing the review of results and images anytime, anywhere.

TeleDensitometry

The TeleDensitometry option allows the Lunar Prodigy Advance™ to connect to existing computer networks or phone lines for the purposes of sending DXA reports via e-mail or via FAX direct from the densitometer.

MUDBA

The Multi-User Database option allows multiple computer workstations to access DXA scan files simultaneously or for multiple Lunar bone densitometers to acquire and save images to a common database.



Design for the real world

Patient Conveniences:

- 158 kg (350 lbs) weight accommodation
- Washable pad cleans up with soap and water
- Sculptured side rail for safety and visual appeal
- Open architecture for patient comfort

Practice Conveniences:

- QuickView 10-second AP Spine & Femur acquisition
- Excellent patient throughput with OneVision, OneScan
- Complete importation of previous exams made on other manufacturer devices
- Complete importation of the GE Healthcare bone densitometer database

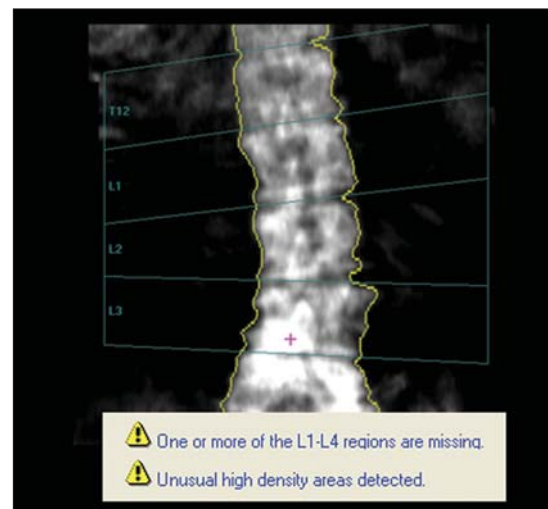
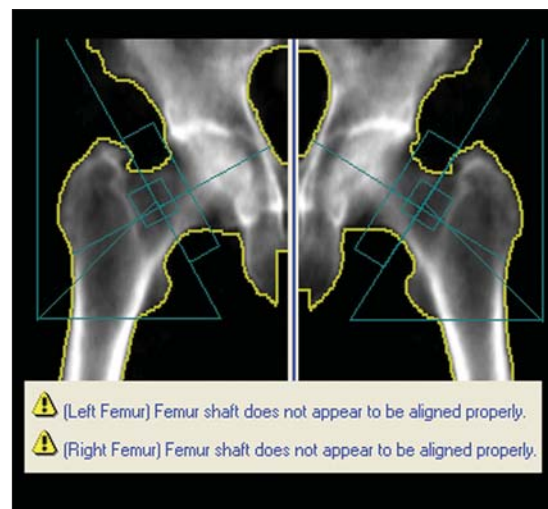
CAD

Computer Assisted Densitometry (CAD), a GE Healthcare exclusive, automatically identifies potential acquisition and analysis errors for AP Spine, Femur and DualFemur scans. CAD will alert the technologist to unusual patient anatomy, high-density areas, and artifacts. After identifying a potential problem, CAD makes a recommendation for correction via the online multimedia help. CAD is clinically proven to concur with osteoporosis expert assessments*.

* *JBMR 2003; 18 (Suppl 2): S201.*

Composer

Composer automatically generates patient reports, including assessments and follow up recommendations. Scan results are based on pre-defined criteria established by the World Health Organization (WHO), and International Society of Clinical Densitometry (ISCD) and the National and International Osteoporosis Foundations (NOF and IOF). It determines the lowest T-score, based on user-defined regions, and automatically inserts the corresponding assessment and recommendations.

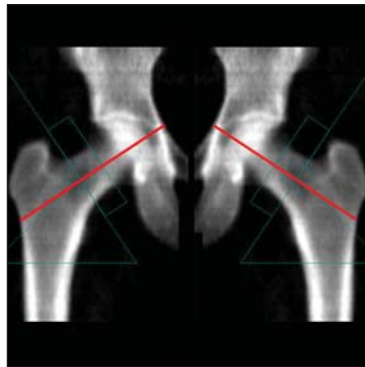


CAD detects and flags characteristics that require closer review.

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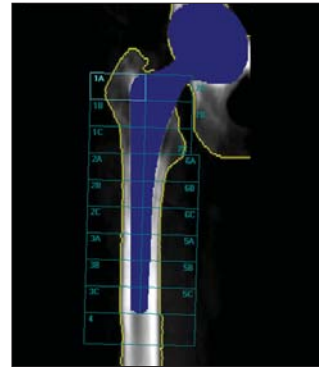
Lateral DVA and AP Spine



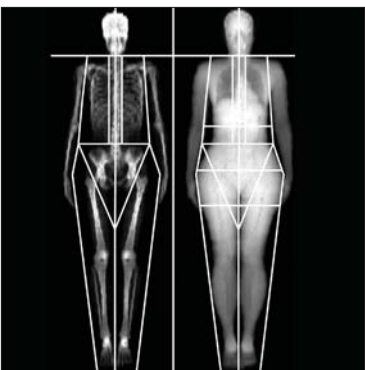
Hip Axis Length



Cross-Sectional Moment of Inertia



Orthopaedic - Hip Implant



Total Body



Hand



Advances beyond BMD

Total Body, Body Composition

The Total Body exam, the ultimate in skeletal assessment, provides precise bone density and Body Composition (total fat, lean and bone tissue) results in one scan. Body Composition measurements are used increasingly to manage a variety of clinical and research applications including: secondary osteoporosis, hyperparathyroidism, anabolic steroid therapy, anorexia nervosa and malabsorptive syndromes.

Pediatric

BMD and soft-tissue assessment provide valuable clinical information in children with growth disorders, metabolic diseases, and cachexic disorders, among other conditions. Gender-specific pediatric reference data is implemented. A specific option "Infant Total Body" is also available for measuring young children and infants*.

**Osteoporosis Int 1998; 8:177-183*

Dual-energy Vertebral Assessment (DVA) - diagnose and assess vertebral fractures with your densitometer

Dual-energy Vertebral Assessment (DVA) expands the clinical applications available for the Lunar Prodigy Advance™ bone densitometer. DVA provides a rapid, Dual-energy image of the AP and Lateral Spine allowing clinicians to visually assess the presence of vertebral fractures. Experts and radiologists agree; Dual-energy is the preferred method for imaging the Lateral Spine**.

***For research use only*

Advanced Hip Assessment (AHA)

The Lunar Prodigy Advance™ provides the first major breakthroughs in femoral densitometry assessment since the introduction of DXA system software in 1987. These features are included in the new Advanced Hip Assessment software.

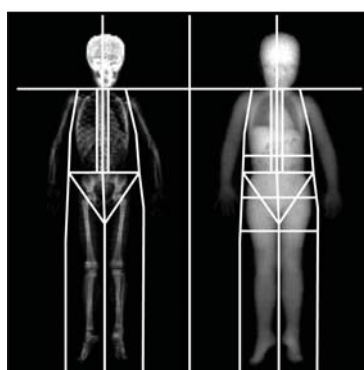
AHA includes all the standard femoral regions of interest that were previously available, plus additional key measurements and assessments:

- **Hip Axis Length (HAL)** has been demonstrated in prospective studies as an effective adjunct to Femur bone density in predicting fracture risk.
- **Cross-Sectional Moment of Inertia (CSMI) and Femur Strength Index (FSI)** calculated using the Lunar Prodigy Advance™ for research into load-bearing capacity of the hip.
- **Colour Bone Mapping and Cortical Thickness Measurement** is available to the physician to improve the osteoporosis assessment.

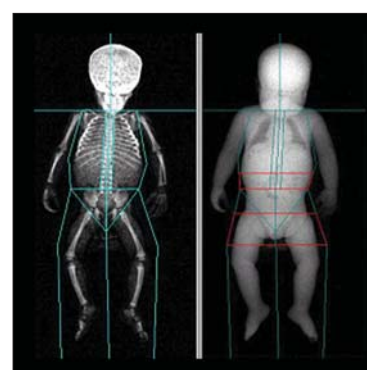
Orthopaedic

Thanks to this software application, an accurate and precise Bone Mineral Density, Bone Mineral Content and Bone Area measurement in the delicate region surrounding an implant (hip and other) becomes possible. Moreover this package enables an automated bone assessment of the hip implant using the standard Gruen zones (7 zones) and the extended Gruen zones (19 zones).

As such this option helps to provide better patient care to both practitioners and clinical researchers specialized in the fields of orthopaedics and surgery.



Pediatric



Infant Total Body

The GE Healthcare Advantage





With new treatment options becoming available, you can count on GE Healthcare's commitment to the science of osteoporosis management. We are continually advancing the screening and diagnostic methods in bone densitometry, simultaneously improving your productivity and bottom line.

Join us . . . the ride will be swift yet safe.

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Technical Specifications

Available Applications and Options

AP Spine
Femur
QuickView (10-second mode for AP Spine & Femur)
DualFemur
Advanced Hip Assessment with HAL, CSMI, Femur Strength Index, Colour Bone Mapping and Cortical Thickness Measurement
Total Body*
Body Composition* (with fat/lean assessment)
Dual-energy Vertebral Assessment (DVA)
Forearm
Hand Software
Lateral Spine BMD
Orthopaedic
Pediatric*
Infant Total Body***
Small Animal
OneVision
OneScan
Composer
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 **

* on full size table only

** networking is under the user's responsibility

*** for research only

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 GE Healthcare 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 : 37 µGy (< 1%CV)
Femur : 30 sec : 37 µGy (< 1%CV)
Total Body/ Body Comp. : 4 min : 0.37 µGy (< 1%CV)

Complete Quality Assurance

Automated test program with complete mechanicals and electronics tests and including also calibration and quality control measurement
Automated QA Trending with complete storage

Scanning Method

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

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)
Washable 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.

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 Healthcare to help you deliver the highest quality healthcare.

For details, please contact your GE Healthcare representative today.



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GE Medical Systems, A General Electric Company, going to market as GE Healthcare.

General Electric Company reserves the right to make changes in specifications and features shown herein, or discontinue the product described at any time without notice or obligation. Contact your GE Representative for the most current information.

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