

GE Healthcare

Lunar Prodigy Advance

Direct-Digital Densitometry



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 service and 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. Prodigy 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.

...with leadership technology

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.

enCORE Software

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

TruView™ Image Reconstruction

TruView image reconstruction 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.



Connectivity and efficiency

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 email 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.

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.

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.



Design for the real world

Patient Conveniences:

- 350 lbs/160 kgs 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:

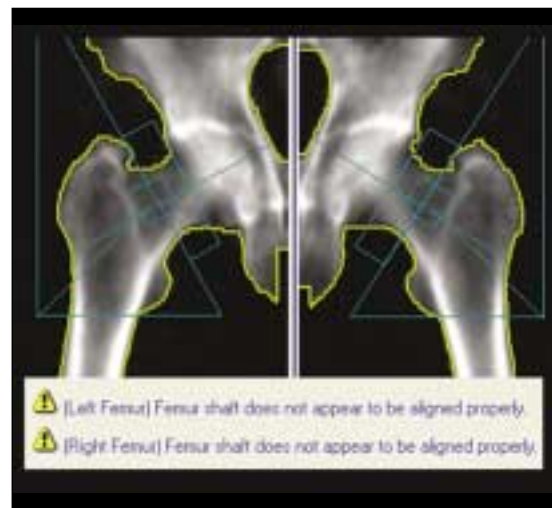
- QuickView 10-second AP spine & femur acquisition
- Excellent patient throughput with OneVision, OneScan
- Complete importation of previous exams made on other manufacturer devices
- Complete importation of the Lunar bone densitometer database

CAD™

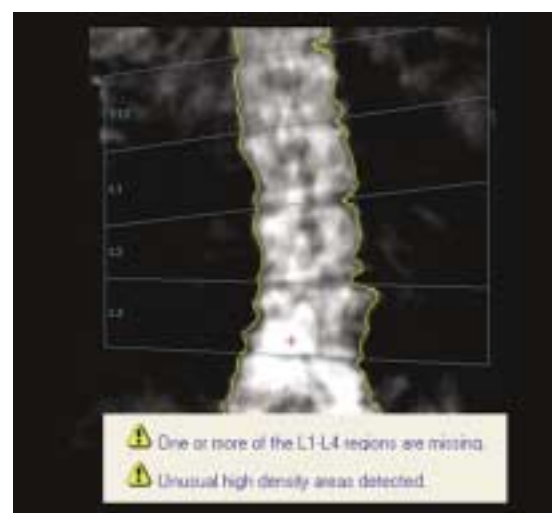
Computer Assisted Densitometry (CAD), a GE Healthcare exclusive, automatically identifies potential acquisition and analysis errors for AP Spine, Femur and DualFemur™ scans. CAD will alert the technologist to unusual patient anatomy, high-density areas, and artifacts. After identifying a potential problem,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

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



Lateral DVA and AP Spine



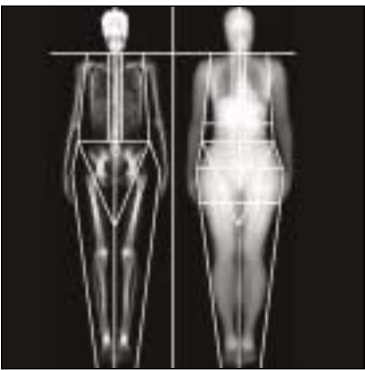
Hip Axis Length



Cross-Sectional Moment of Inertia



Orthopedic



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.**

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.*

Advanced Hip Assessment (AHA): Hip Axis Length (HAL), Cross-Sectional Moment of Inertia (CSMI)

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.

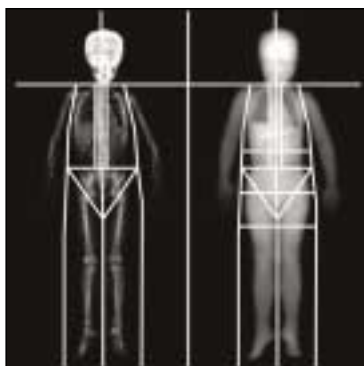
AHA includes all the standard femoral regions of interest that were previously available, plus additional key measurements and assessments:

- **HAL** has been demonstrated in prospective studies as an effective adjunct to femur bone density in predicting fracture risk.
- **CSMI** calculated using the Lunar Prodigy Advance for research into load-bearing capacity of the hip.

Orthopedic

The Orthopedic software measures precisely and accurately Bone Mineral Density (BMD), and Bone Mineral Content (BMC), providing orthopedists with a valuable tool for both clinical practice and research.

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Pediatric



Infant Total Body

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

**For research use only

Smarter, Faster, Better





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
Advance Hip Assessment with Hip Axis Length and Cross Sectional Moment of Inertia
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
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

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

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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)
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.

* 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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