Indications for use: The Prodigy series bone densitometer provides an estimate of bone mineral density and fat and lean tissue mass. The values can then be compared to a reference population at the sole discretion of the physician.

CAUTION: Federal Law restricts this device to sale by or on the order of a physician.
For over 30 years, the sole focus of Lunar bone densitometry has been the advancement of skeletal health assessments to help physicians improve patient outcomes. It’s all about dedication to the fight against osteoporosis. GE’s vision of early health and the expansion of preventative osteoporosis assessments with Lunar DXA provide opportunities to expand and diversify your practice. In addition to osteoporosis management, performing accurate body composition analysis may aid you in assessing your patients’ overall total body health.
Detection of osteoporosis

Precision – key to effective results
Effective use of serial DXA measurements for monitoring changes in BMD requires the minimization of precision error. Precision can vary widely depending on operator experience, the type of DXA used, and the skeletal site measured. The International Society for Clinical Densitometry (ISCD) has established standards for precision error at the spine, total femur and femoral neck. The Lunar Prodigy Advance™ has been demonstrated to have a precision error that easily meets the ISCD standards for all regions.

Breakthrough technology
The Lunar Prodigy Advance utilizes a direct-digital array detector and narrow-angle fan-beam technology to enhance dose efficiency and achieve excellent precision and patient throughput in spine, femur and total body measurements.

The World Health Organization (WHO) recommends that women aged 65 and older be routinely measured for osteoporosis to reduce the risk of fracture and spinal abnormalities often associated with the disease.
Beyond T-score

Extensive collaboration with renowned bone mineral researchers and clinicians around the globe has led to the development of our clinical applications.

**Dual-energy Vertebral Assessment (DVA)**

DVA aids in the identification and assessment of vertebral deformations. DVA provides a rapid single- and dual-energy images of the AP and lateral spine, allowing clinicians to visually assess the presence of vertebral deformations.

**DualFemur**

The DualFemur option automatically scans both femurs in one seamless acquisition without repositioning the patient. This critical hip region assessment identifies the weakest side to enhance confidence in treatment decisions. The trending function enables seamless follow-up of changes over time.4,5

**Orthopedic**

The orthopedic application provides accurate and precise bone mineral density and bone mineral content values. Bone assessment in the vulnerable region surrounding an implant is now possible. This application also enables automated bone assessment of the hip implant using standard Gruen zones (7 zones) and extended Gruen zones (19 zones) to provide better evaluation for practitioners and clinical researchers specialized in the fields of orthopedics and surgery.

**Advanced Hip Assessment (AHA)**

AHA includes all of the standard femoral regions of interest previously available, plus additional key measurements including Hip Axis Length (HAL).

**Total body/body composition**

Body composition measurement with dual-energy X-ray absorptiometry (DXA) can look beyond weight and the traditional body mass index (BMI) to determine body fat distribution.

Body composition measurement contributes to a thorough patient evaluation and helps physicians monitor the effects of therapy, diet or exercise.

Body composition scans with DXA provide precise and accurate data on bone and tissue composition, including bone mineral density (BMD), lean and fat tissue mass, and %fat. They provide both total body data and regional results (trunk, arms, legs, pelvis and android/gynoid regions). The measurements are fast and non invasive.

**Pediatric**

Now you can use one powerful set of tools to get valuable clinical information about growth and development in children. The Lunar DXA pediatric application measures more than BMD. It provides a complete assessment of bone, fat and lean tissue composition. These measurements enable enhanced evaluation of growth and development that include:

- Height for age (bone length)6
- BMC for bone area (bone density)6
- Bone area for height (bone width)6
- Lean body mass for height (muscle development)7,8
- BMC for lean body mass (muscle-bone balance)7,8

**enCORE**

The enCORE Windows®-based operator platform makes bone density testing seamless and automated. The user interface enables clinical features to be added through software only – with no downtime to your facility. Highly trained and certified staff will install the Lunar Prodigy Advance and offer on-site applications training.
DICOM
Lunar Prodigy Advance DICOM is flexible to meet your needs and is HL7 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.

Worklist feature
in both DICOM and HL7 enables automatic use of patient information from scheduling applications, helping to reduce data entry errors.

SQL database format
Offered in addition to the MUDB database, the SQL database format increases flexibility in statistical data management.

Insite with ExC
is an optional real-time service that allows remote monitoring “on screen”, application support and quick problem diagnosis and repair. Insite ExC helps resolve support issues quickly to maximize your equipment investment without compromising data security.

TeleDensitometry
TeleDensitometry provides the ability to send paperless reports as e-mail attachments or faxes that can be viewed on any personal computer.

MUDB
The Multi-User Database (MUDB) option allows multiple computer workstations to access DXA scan files simultaneously. Multiple Lunar bone densitometers can acquire and save images to a common database.

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

Computer-Assisted Densitometry (CAD)
CAD automatically studies acquisition inputs and the acquired image, looking for errors and patient irregularities. CAD detects and flags characteristics that require closer review.

Composer
Automated physician reporting comes complete with the National Osteoporosis Foundation (NOF) treatment guidelines and World Health Organization (WHO) diagnostic criteria for a complete osteoporosis assessment. Composer™ is designed to follow diagnostic guidelines proposed by the International Society of Clinical Densitometry (ISCD), determining the lowest T-score based on defined regions. Recommendation text is inserted to aid productivity.
We’ve got your back.

Backed by a dedicated team of bone densitometry specialists

Get assistance from our highly-trained and widely deployed bone densitometry service teams, plus remote applications support.

Backed by in-depth training

Dedicated on-site applications training and self-guided tutorials extend your training options.

Backed by clinical research and development

Thousands of articles and studies support the clinical use of our innovative DXA technology.

Lunar Prodigy Advance technical specifications:

- Remote connectivity for direct
- Applaud™ CD-based training
- Multi-User Database access (MUDB)
- HL7 bidirectional interface
- DICOM (worklist, color print and store)
- TeleDensitometry (fax, e-mail)
- OneVision
- Pediatric
- Lateral Spine BMD
- Forearm
- Hand
- Computer-Assisted Densitometry (CAD)
- Dual-energy Vertebral Assessment (DVA)
- Total Body/Body Composition
- Advanced Hip Assessment (AHA)
- OneScan
- QuickView (10-second mode for
- Femur
- AP spine
- Contralateral Hip if the Spine Is Not Included in the Bone
- SmartFan and MVIR
- Computer workstation
- Windows platform

Minimum room dimensions:

- Full-size table: 2.4m (8')
- Compact table: 2.01m x 1.09m x 1.28m - 254kg

Minimum room requirements:

- Tube current: 0.15-3.00mA
- Dose efficient K-edge filter
- Constant potential source at 76kV
- SmartFan and MVIR

References:

1. ISCD 2005 positioning statement
2. Ghelardini et al. 2006, presented at ISCD annual meeting:
   Bone densitometry: from technology to clinical practice,
   Presentation and management of osteoporosis, 2005.
3. KE Cole, J Turner D.B.S.: The Effect of Measurement of the
   Contralateral Hip of the Spine to Include the BMD of the Pelvis,
   Journal of Radiology (9-238-248).
   Osteoporosis diagnosis and treatment decision with dual energy X-ray
   absorptiometry. 2006.
5. RE Cole, J Turner D.B.S.: The Effect of Measurement of the
   Contralateral Hip of the Spine to Include the BMD of the Pelvis,
   Journal of Radiology (9-238-248).

1. Indications for use: The GE Lunar Body Composition
   Software option (body composition) is used on GE Lunar
   DEXA bone densitometer systems for body composition
   analysis. This includes body composition analysis for
   body mass index, fat mass, fat-free mass, lean body mass,
   bone mineral density, regional bone density, regional
   fat, percent body fat, fat-free mass, lean body mass,
   bone mineral density, total body fat, total body mass,
   body fat percentage, bone mass, lean body mass,
   body fat percentage, bone mineral density, total body fat,
   total body mass, bone mineral density, total body fat,
   total body mass, body fat percentage, bone mineral density,
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