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.
It’s all about dedication to the fight against osteoporosis.

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. 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.\(^1\)

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.\(^2\)

**Innovative 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.\(^3\)
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 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 exceptional evaluation for practitioners and clinical researchers specialized in the fields of orthopedics and surgery.

**Advanced Hip Assessment (AHA)**

The AHA application provides tools to evaluate the structural properties of the hip:

- 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) are calculated for the assessment of the load-bearing capacity of the hip.
- Color bone mapping is displayed to differentiate areas of cortical and high/low density trabecular bone.

**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 measurements contribute to a thorough patient evaluation and help 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, pelvic 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 mineralization)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.
## Connectivity and productivity

### 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, the Worklist enables automatic use of patient information from scheduling applications, helping to reduce data entry errors.

<table>
<thead>
<tr>
<th>BMD (g/cm²)</th>
<th>Gender: Female</th>
<th>Caucasian Race, Indications: Osteopenia</th>
<th>T-score: (1.038)</th>
<th>Height: 65.0 in.</th>
<th>Weight: 137.0 lbs.</th>
<th>Gender: Female</th>
<th>Caucasian Race, Indications: Osteopenia</th>
<th>T-score: (1.038)</th>
<th>Height: 65.0 in.</th>
<th>Weight: 137.0 lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0.482)</td>
<td>(0.621)</td>
<td>(0.760)</td>
<td>(0.899)</td>
<td>(1.038)</td>
<td>(1.177)</td>
<td>(1.316)</td>
<td>(0.482)</td>
<td>(0.621)</td>
<td>(0.760)</td>
<td>(0.899)</td>
</tr>
</tbody>
</table>

### SQL database format

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

### Insite with ExC

A real-time service, Insite ExC 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 that can be viewed on any personal computer.

### MUDB

The Multi-User Database (MUDB) option allows multiple computer workstations to access DMA 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

### ScanCheck

ScanCheck automatically studies acquisition inputs and the acquired image, looking for errors and patient irregularities.

### 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.
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.

We’ve got your back.

Lunar Prodigy Advance technical specifications:

- **Available applications and options**: AP spine, Femur, QuickView (10-second mode for AP spine & femur), DualFemur, OneScan, Advanced Hip Assessment (AHA), Total body/body composition, with test-to-test assessment, Dual-energy Vertebral Assessment (DVA), ScanCheck, Estimated total body %Fat, Forearm, Hand, Lateral spine BMD, Orthopedic, Pediatric, Orthopedic, Lateral spine BMD, Hand, Forearm, Estimated total body %Fat, Radiation, and development.

- **enCORE Windows-based user interface**: Advanced intuitive graphical interface with multimedia on-line help.

- **Languages**: Multiple languages available.

- **SmartScan**: for scan window optimization and dose reduction.

- **Scan mode selection**: Automated scan mode selection.

- **AutoAnalysis**: for exceptional precision.

- **Customization**: for clinical flexibility.

- **Exam comparison process**: Multiple patient directories with database.

- **Bone mineral density (BMD)**: BMC values, body mass index (BMI), software option (body composition) used on GE Lunar systems.

- **WHO guidelines for diagnosis of osteoporosis**: patient trending with previous exam importation.

- **Patient trending with previous exam importation**: enCOREXpress mode for brief click path.

- **Complete quality assurance**: Automated test program with complete storage.

- **Scanning method**: NARROW, Fan beam (4.5° angle) with SmartFan and MVR.

- **K-ray characteristics**: Tube current: 0.15-3.00 mA. Dose efficient K-edge filter. Narrow fan beam (4.5° angle) with multi-point calibration and quality control measurement. Scanning method: narrow fan beam (4.5° angle) with SmartFan and MVR.

- **AutoAnalysis**: for exceptional precision.

- **Automated scan mode selection**: for brief click path.

- **Tomography**: with multimedia on-line help.

- **Dimensions (L x W x H) and weight**: Full-size: 2.62 m x 1.09 m x 1.28 m - 272 kg (103” x 43” x 51” - 599 lbs). Compact: 2.01 m x 1.09 m x 1.28 m - 254 kg (79” x 43” x 51” - 559 lbs). Table height: 63 cm (25”).

- **Networking**: is the user’s responsibility. Depending on product configuration and availability. Contact your local regulatory agency to comply with local ordinances.


- **Computer workstation**: Windows platform. Computer, printer and monitor.

- **X-ray safety requirements**: May vary by location. Please inquire with local regulatory authorities.


- **Indications for use**: The GE Lunar body composition software option body composition value provided on GE Lunar DXA bone densitometer measures the regional (whole body, bone mineral density, BMC), lean and body tissue mass and calculates denormalized values of bone mineral content (BMC), soft tissue mass (including lean and fat mass), regional mineral content (RMC) and regional soft tissue mass ratio. Not required: X-ray safety requirements. Only the health care professional can make these judgments. Some of the denormalized values for which body composition values are useful for health care professionals in the management of diseases and conditions where the disease is unrelated to bone or its treatment, can affect the relative amounts of patient fat and lean tissue. The GE Lunar Body Composition Software option does not diagnose disease, nor recommend treatment. The GE Lunar Body Composition Software option provides a single, additional tool that can aid the health care professional in making these judgments. Some of the denormalized values for which body composition values are useful include chronic renal failure, anorexia nervosa, obesity, AIDS/HIV and cystic fibrosis. The GE Lunar body composition software is useful in determining labile bone loss.