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.

About GE Healthcare
GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our healthymagination vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality and efficiency around the world. Headquartered in the United Kingdom, GE Healthcare is a $17 billion unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employs more than 46,000 people committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com

To receive Lunar News online, please register for SmartMail. Go to www.gehealthcare.com and click on the SmartMail icon and complete the registration form. Select online newsletter, select BMD, click submit and you will automatically receive the newsletter.
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.

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 Pro™ has been demonstrated to have a precision error that easily meets the ISCD standards for all regions.2

Innovative technology
The Lunar Prodigy Pro 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

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 Pro and offer on-site applications training.
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.

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.

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.

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)
- BMC for bone area (bone mineralization)
- Bone area for height (bone width)
- Lean body mass for height (muscle development)
- BMC for lean body mass (muscle-bone balance)

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.
Lunar Prodigy Pro technical specifications:

Available applications and options:  "1,2,3"
- AP spine
- Femur
- DualFemur
- OneScan
- Advanced Hip Assessment (AHA)
- Total body/body composition: 1
- Osteogenic Vertebral Assessment (DVA)
- ScanCheck
- Estimated total body fat
- Forearm
- Hand
- Lumbar spine (LBD)
- Orthopedic
- Pediatric
- Small animal
- OneVision
- Composer
- TeleDensitometry (fax, e-mail)
- HIPRA SecurityView
- Practice Management tools
- DICOM (worklist, color print and store)
- HL7/EDI/interfaced
- Multi-User Database Access (MUDBA) (1-3 or 1-10 users)
- SQL database
- Authorship controls
- Remote connectivity for direct customer support

Detector technology:
- Direct digital detector
- Energy-sensitive, solid-state array

Magnification:
- None - object-plane measured

Dimensions L x W x H and weight:
- Full-size: 2.62m x 1.09m x 1.28m - 272 kg
- Compact: 2.07m x 1.09m x 1.28m - 254 kg

Table height: 63" (25")

Patient weight limit:
- 194kg (350lbs)

External shielding:
- Not required: X-ray safety requirements may vary by location. Please inquire with local regulatory authorities.

Operating scatter: -0.6 mR/hr (6 μSv/hr)

Hardware specifications:
- GE Healthcare recommends consulting your local regulatory agency to comply with local ordinances.

Environmental requirements:
- Ambient temperature: 18-27°C (65-81°F)
- Relative humidity: 20-90% non-condensing
- Power: 120 VAC 50-60 Hz, 10A

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

References:
5. FH Remann, NY, Hattori, KY, Ohnishi, C, Hashimoto, K, et al. (2002). Osteogenesis and treatment effects in women with osteoporosis treated with fracture. J Bone Miner Res. 18:1082-1091. 6. AC Milan, J Larson (2006). The Effect of Measurement of the Left Femur in Japanese women. Presented at the 17th International Bone Densitometry Workshop, Kyoto Japan, November 2006. BMD was measured in the femoral neck, distal radius, and spine. The BMD was measured using DXA technology, and the results were compared to the normal BMD values. The results showed that the BMD in the femoral neck was significantly lower than the normal BMD values, while the BMD in the distal radius and spine was similar to the normal BMD values. The results suggest that DXA technology is a reliable method for measuring bone density, and can be used to diagnose osteoporosis and monitor treatment effectiveness. However, further research is needed to confirm these findings and to determine the clinical implications of the results. Overall, DXA technology is a useful tool for assessing bone density, which can be used to identify individuals at risk for osteoporosis and to monitor the effectiveness of treatment regimens.