# Bone Densitometry Portfolio from GE Healthcare





# The GE Healthcare Advantage

GE Healthcare is a leading densitometry equipment partner worldwide. We are dedicated to developing innovative and productive bone assessment systems to help you diagnose osteoporosis.

#### **Advanced Technology**

- Excellent precision and accuracy
- · High-definition image quality
- Patented Narrow-Fan Beam Technology
- Low dosage and faster scan
- Multiple clinical applications
- Over 40 years of market and technology leadership

#### **Exceptional Support**

- Regular software updates and upgrade program available
- Theoretical and practical training program

#### **Connectivity**

• Networking: DICOM, HL7, PACS, TeleDensitometry and LAN data compatibility for excellence in patient management



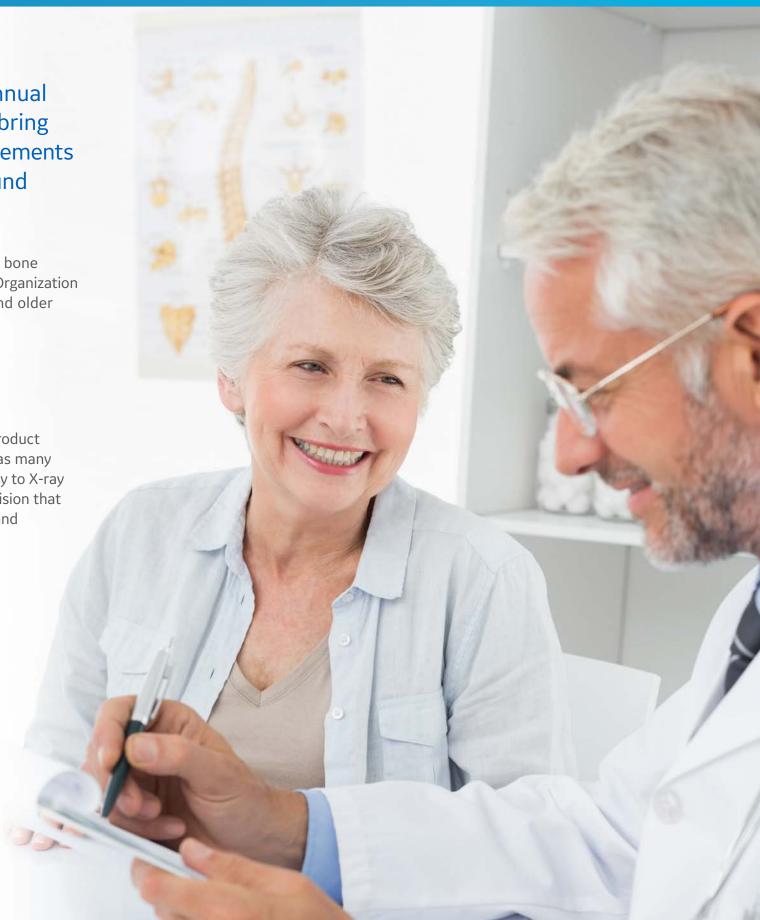
### Innovation and Dedication

Our dedication to the fight against osteoporosis is reflected in our annual breakthrough strategy where we bring new technology and clinical enhancements to physicians and researchers around the globe.

We believe that it is every woman's right to have a bone density test performed mid-life. The World Health Organization agrees,<sup>1</sup> and recommends that women aged 65 and older should have their bone density tested if they have:

- experienced a height loss
- a history of vertebral fracture
- been on long-term corticosteroid therapy

GE provides a comprehensive bone densitometry product portfolio to make bone densitometry accessible to as many patients as possible. From high-definition technology to X-ray free assessment, we have it – and with proven precision that is so crucial for accurate patient bone assessment and treatment monitoring.



## Comprehensive Portfolio

#### **Lunar iDXA**™

#### **Intelligent DXA**

GE Healthcare's premium segment advanced, research-grade bone densitometer with an aesthetic design that produces precise results, high-resolution images for both bone and body composition applications.



#### Prodigy™

#### **Proven Bone Densitometer**

GE Healthcare's performance segment bone densitometer with a robust design and a range of applications for bone and body composition. With more than 14,000 systems installed worldwide, Prodigy is one of the most trusted fan beam densitometers available.

#### **Aria**™\*

#### **Entry Level Bone Densitometer**

GE Healthcare's value segment bone densitometer that provides specialized bone only applications to ROI conscious physicians and smaller clinics and hospitals.



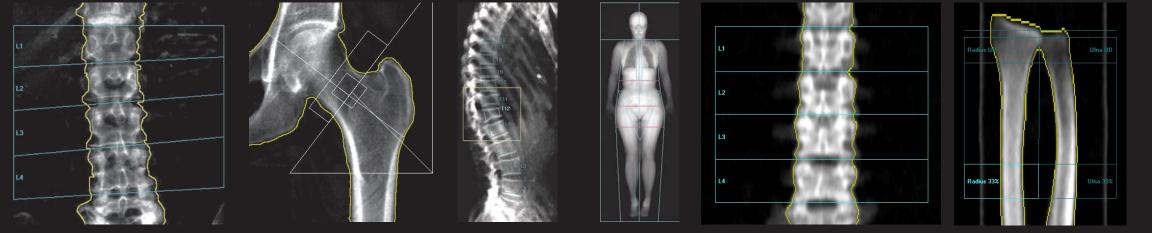
#### **Achilles**<sup>™\*</sup> **EXP II**

#### Portable and X-ray Free

The Achilles offers you osteoporosis testing on the go. This lightweight, proven and reliable ultrasound system assesses patient fracture risk within minutes.



<sup>\*</sup>Available in select markets only.



# Technology Benefits<sup>2</sup>

#### **Narrow Fan Beam Scan**

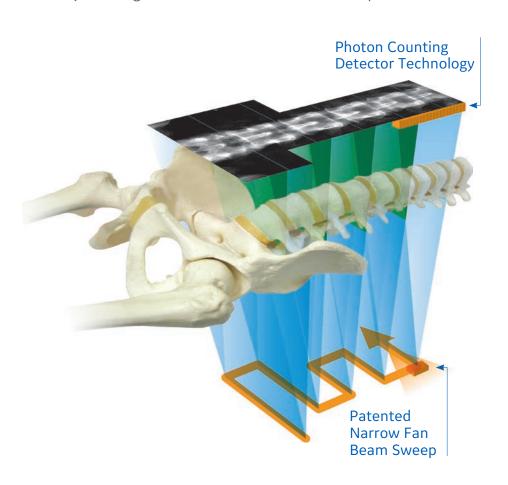
Patented narrow fan beam technology that combines the best features of pencil beams (no magnification, low dose) with the short scan time of wide fan beams while reducing magnification error inherent to wide-angle fan beam systems.

#### **Photon Counting Detector**

Dose-efficient photon counting detector technology that simultaneously counts low and high energy X-rays photons resulting in lower dosage to the patient and faster and efficient scans.

#### **SmartScan**<sup>™</sup>

Unique feature exclusive to GE Healthcare bone densitometry systems that identifies bone regions after each transverse sweep to estimate where to begin exposing the patient to X-rays on the subsequent sweep, thereby reducing the scan time and the dose to the patient.



#### **K-edge Filter**

A unique "K-edge filter" that absorbs the X-rays in the middle energy range and protects the patient against unnecessary exposure.

#### **Multi-View Image Reconstruction (MVIR)**

Using narrow fan beam technology to perform multiple, spaced and transverse sweeps across the site of interest resulting in accurate determination of bone-height above the tabletop, minimization of magnification errors, and thereby providing higher precision and accuracy.

#### **Low Scattered Radiation**

Due to narrow-fan beam technology, low scatter radiation in comparison to wide-angle fan beam systems.

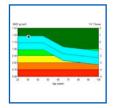


# One Upgradeable Platform<sup>2</sup>

GE Healthcare's Windows®-based enCORE software platform brings speed and automation to today's bone densitometry. Daily testing of multi-point calibration coupled with a large reference population database ensures accurate and precise bone assessments. GE Healthcare's versatile family of bone densitometers provides comprehensive applications covering crucial BMD clinical and research needs:

#### **BMD**

Measures the bone mineral density of a preferred skeletal site that can be compared to an adult reference population at the sole



discretion of the physician. Generates a reference chart with z-score and t-score.

#### **AP Spine**

Provides an estimate of bone mineral density for the lumbar spine.



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

Lateral and anterior views of the spine

with soft tissue equalization to identify vertebral deformations. Performs both LVA and APVA in one scan.

#### **Lateral Spine** Measurement

Lateral Spine measurement and analysis provides an estimate of bone mineral density for the lumbar spine.



#### Femur/ **Dual Femur**

Measures both single femur or both the femurs in one scan, helping you assess the weakest femur



#### OneScan

OneScan performs an AP Spine and Dual Femur exam without repositioning between scans.



#### **Hip Axis Length** (HAL)

Measurement of the distance along the femoral neck axis, extending from the

bone edge at the base of the trochanter to the bone edge at the inner pelvic brim

#### Metabolic **Information**

Provides insight on metabolic information such as Resting Metabolic Rate (RMR) and Relative Skeletal



Muscle Index (RSMI) with ability to capture Total Body Water (TBW), Intracellular Water (ICW), & Extracellular Water (ECW).

#### **FRAX**

FRAX 10-Year Fracture Risk provides an estimate of 10-year probability of hip fracture and 10-year probability of a major

osteoporotic fracture for men and postmenopausal women ages 40-90 years.

#### Hand Measurement

Hand measurement and analysis provides an estimate of the bone mineral density for the hand.



#### **Orthopedic** -**Hip Implant**

region around the hip implant and visualizes 19 Gruen zones.



Measure the delicate



#### **Pediatrics**

position.

Pediatric measurement and analysis feature provides BMD, BMC, fat mass, and lean mass for patients from birth to 20 years old.

**Color Mapping/** 

Color Mapping can be

used to set thresholds

coding can be used to

code bone, lean tissue

and fat tissue.

**Forearm** 

Measures radius

and ulna, providing

information on BMD

This measurement

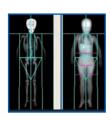
for the distal forearm.

can be taken in both sitting or supine

additional clinical

on fat %, while color

**Color Coding** 



#### **Body Composition** -**Total/Regional**

Performs total body scan to measure bone mass, lean mass and

fat mass. Also measures regional and whole body bone mineral density (BMD), lean and fat tissue mass.

#### **CoreScan**<sup>™</sup>

CoreScan software feature estimates the VAT (Visceral Adipose Tissue) mass and volume within the android region.



# One Upgradeable Platform<sup>2</sup>

#### Sarcopenia

Sarcopenia software calculates values based on published definitions and thresholds using measured appendicular lean mass in



combination with patient demographics and entered values of muscle strength and physical performance.

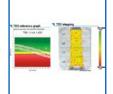
### Small Animal Body Scan

Small Animal measurement and analysis is for investigational use on laboratory animals or for other tests that do not involve human subjects.



### **Trabecular Bone Score (TBS)**

Provides trabecular bone score based on bone structure assessment of the trabecular region of the bone.



#### **OneVision**

The OneVision feature allows you to set up multiple measurements in one exam. This eliminates keystrokes and



improves throughput for customers that routinely perform multiple measurements on each patient.

#### Practice Management

Provides generalpurpose business reporting tools to view existing patient population as well as follow-up on next site visit.



#### **ScanCheck**

ScanCheck assists the user in detecting Spine, Femur, Forearm and Total Body abnormalities.



# **Custom Reference Population**

Physicians can create a custom reference population and use that population for comparison to your patients' results.

#### Atypical Femur Fracture (AFF)

AFF measurement and analysis provides an x-ray image of the entire femur for both qualitative visual



assessment and quantitative measures in order to identify areas of focal thickening along the lateral cortex of the femoral shaft.

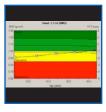
#### QuickView

QuickView offers a fast, 10 second spine or femur scan. Measurement and analysis procedures are the same as other scan modes.



### Patient BMD Trending

Monitoring tool to view changes in a patient's BMD over time. To view trending results, all of the trended



measurements must be from the same site.

### Orthopedic Knee

Orthopedic Knee
measurement and
analysis provides an
estimate of the bone
mineral density around
knee implants pre and post-surgery.



#### Multi-User Database Access

Allows multiple users to access and analyze data from the same patient database.



#### Composer

Composer feature provides many pre-generated report formats as well as ability to create custom reports.



#### LVA Morphometry & Spine Geometry

LVA Morphometry measurement and analysis provides an



x-ray image of the spine for qualitative visual assessment in order to identify vertebral deformations and estimate vertebral heights (morphometry), while LVA and APVA Spine Geometry measure Cobb angles.

### Mirrorlmage Scan

The MirrorImage function can be used to estimate the total body composition and bone mineral density (BMD)



when regions of the body are outside of the scan window by using scanned data from the corresponding region(s) on the opposite half of the body.



- The WHO Study Group on Osteoporosis. 1994 Assessment of fracture risk and its application to screening for postmenopausal osteoporosis. WHO, Geneva, Switzerland. Technical Report Series 843.
- 2. X-ray bone densitometers only.
- 3. Boudousq V, Goulart DM, Dinten JM, Caderas de Kerleau C, Thomas E, Mares O, Kotzki PO (2005) Image resolution and magnification using a cone beam densitometer: optimizing data acquisition for hip morphometric analysis.

  Osteoporos Int 16 (7):813–822.

#### Imagination at work

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