

OsteoSys

About Osteosys

Over 15 years, Osteosys from the south Korea has designed and supplied bone densitometry systems to hospitals world-wide. Through continuous R&D efforts, Osteosys can provide the efficient **FANBEAM BONE DENSITOMETER SYSTEM** in a competitive environment. So you can always keep the Osteosys on to help you deliver the fastest speed and highest quality.

Headquarters

Room 903, 9 Floor, InK Digital Tower Building,
111 Digital-Ro 26, Guro-Gu, Seoul, Korea
Tel : +82-2-6124-5908
Fax : +82-2-6124-5958
E-mail : info@osteosys.com
Web site : www.osteosys.com

Headquarters

China office

39C, Shangshi Building, NO. 18 North Caoxi Rd,
Shanghai, China 200030
Tel : +86-21-6427-5873
Fax : +86-21-6427-5863
E-mail : info@osteosyschina.cn
Web site : www.osteosyschina.cn

China office

PRIMUS



• No.1 BMD manufacturer in Korea

- Specialized in Bone Mineral Densitometry
- Powerful R&D Center
- 96 countries and 125 sales representatives
- BMD full line-up
 - 2000 _ SONOST-2000 launched
 - 2001 _ EXA-3000 launched
 - 2004 _ SONOST-3000 launched
 - 2006 _ DEXXUM 3 launched
 - 2008 _ DEXXUM T launched
 - 2012 _ EXA-PRESTO launched
 - 2013 _ PRIMUS launched



PRIMUS

Total body DXA bone densitometer

Total body DXA bone densitometer



Features and applications

Total body assessment

This function provides total body image which detectors can utilize for assessing body structure through Auto ROI and segmentation software.

Total body composition

Accuracy measurements of body composition (fat mass, tissue mass, lean mass, and fat %) by DXA narrow fan beam technology.

Ergonomic scanning

Ergonomic scanning can reduce radiation dose by providing an efficient scan area and short scan time. It is less harmful than the normal entire area scanning method.

LVA (Lateral Vertebral Assessment)

The valuable PRIMUS technique to detect significant lateral vertebral fractures improves fracture risk assessment.

Hip analysis

This tool can be used to evaluate the proximal femur geometric, so it can analysis the structure of the hip for Dural Femur ; It identifies the weakest femur

Upper Neck Analysis
HAL (Hip Axis Length)
FMSA (Femoral Neck Shaft Angle)
FNW (Femoral Neck Width)
UFN-BMD (Upper Femoral Neck BMD)

Trend function

This function can provide subjects with a history of BMD values.

DICOM compatibility

Fully equipped with DICOM capabilities, storing, printing and transferring patient reports.

Remote control for maintenance

A technician can connect to the PRIMUS from Korea in order to solve any software issues through the Internet.

Pediatrics (Optional)

Users also can measure children's BMD as low-density bone mass compared with adult's BMD.

Orthopedics (Optional)

It automatically excludes hip prostheses, metal fastenings and other artifacts from the analysis region for accurate bone density results.

Fast measurement time

Scan time for femur and spine is 25 Seconds.

Easy & user friendly interface

It Provide users with an easy and user friendly interface ; the user will intuitively know how to operate it due to assisting atomised software functions.

Touch - operating panel

It features a Touch - operating control panel using the popular technology on smart phones and gives a user friendly operating system.

Low radiation dose

Fan Beam technology can reduce the total exposure time for x-ray due to short scanning time.

High resolution image

Compared to pencil beam technology, PRIMUS provides high resolution images.

Wider scan area (Full scan area from head to toe)

It Fully cover the whole body and particularly section of the body which can be selected by ROI (Region Of Interest) function.

Re-scan

If the user had the wrong image position at the beginning of the scanning they can restart the scan again. This function reduces the total scan time and gives the user more confidence.

Auto ROI

The Automatic ROI (Region of Interest) function can automatically select the correct line of each region of bone. This helps the user to target the correct area to analyse.

BMD conversion (Import/Export)

PRIMUS provides a BMD conversion which can convert the BMD value from another piece of equipment.

Multi - patient data saving and remote control

The user can save the patient's data onto another PC or any hard disk and use remote control from another PC in a different location.

Multi Colour mapping analysis

PRIMUS provides 3 types of colour mapping analysis to identify easily weakened bone area.

RCM : Relative bone density colour mapping mode

BCM : Bone density colour mapping mode

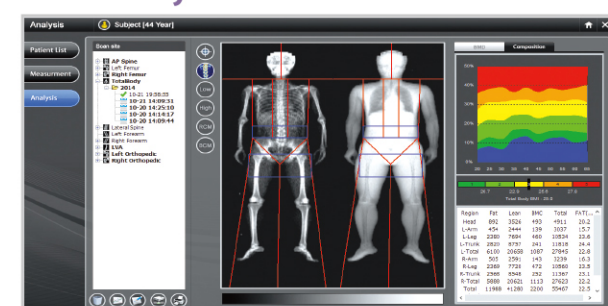
OCM : osteoporotic colour mapping mode

Multi-languages

PRIMUS offers multi-language based programmes including English, Spanish, Chinese, Portuguese, German and French etc.

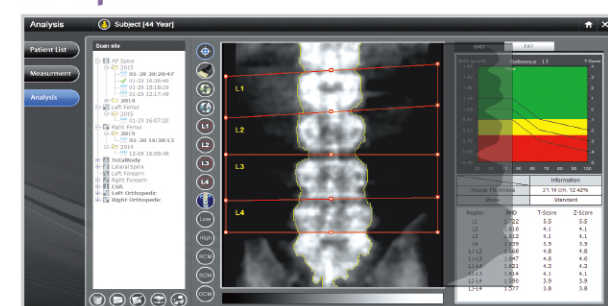
Image analysis

Total Body



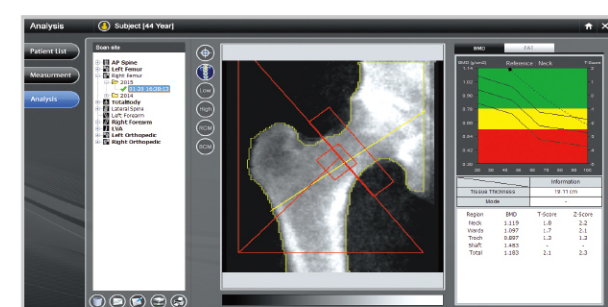
Analysis of the measured total body image of a patient.

AP Spine



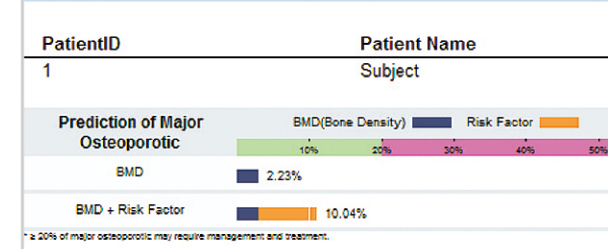
Automatic and manual ROI positioning setting (incl. Angle setting)

Femur

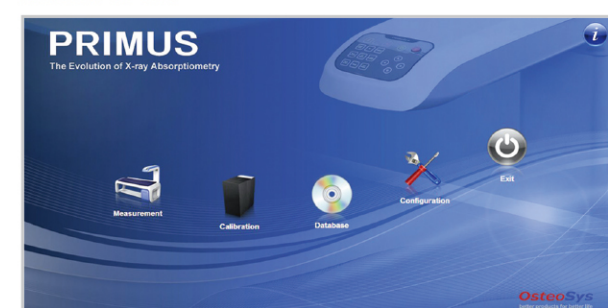


Fracture Risk Assessment Index (FRAX®)

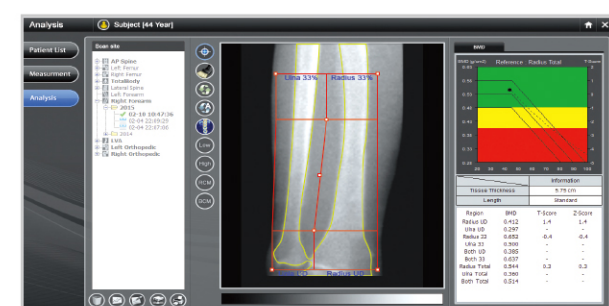
* The FRAX® tool has been developed by WHO to evaluate fracture risk of patients. It is based on clinical risk factors as well as bone mineral density (BMD) at the femoral neck.



Main view

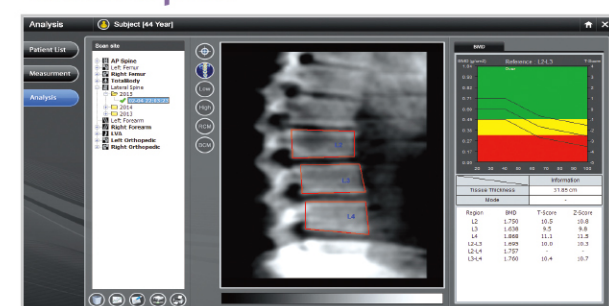


Forearm



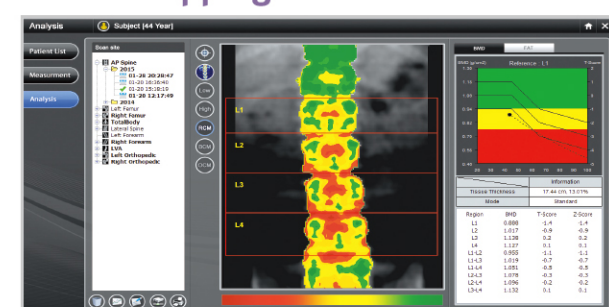
Automatic positioning on Radius UD, Radius 33% and Radius Total

Lateral Spine



Analysis of the measured lateral spine image of a patient.

Colour mapping



RCM, BCM, OCM

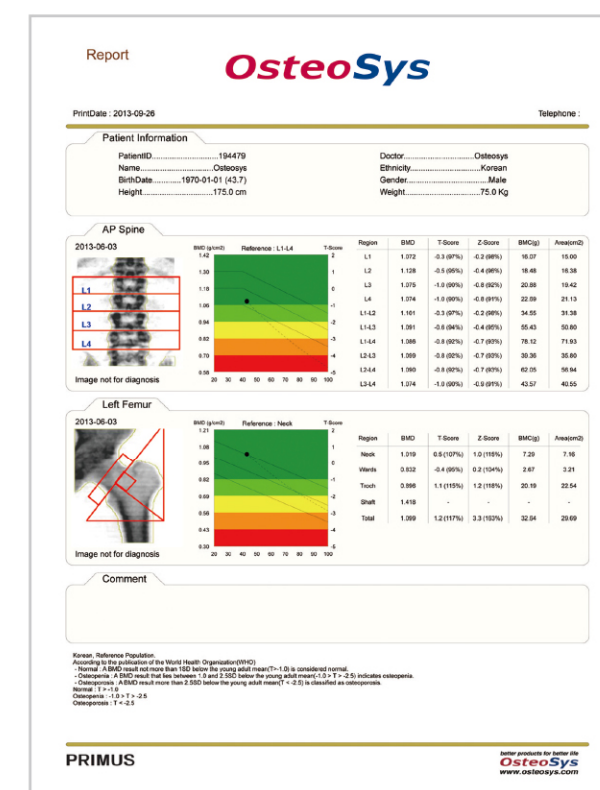
Positioning



Operating panel



Result report



Technical specifications

Scan site	Spine, Femur (Left / Right), Forearm, Lateral spine, Total Body
Analysis	BMD / FAT mode BMD, T-score, Z-score, BMC, Area, BMI Body composition (FAT / Lean / BMC), Total body assessment, Hip assessment : Upper / Lower femur neck analysis, Colour mapping, HAL (Hip Axis Length) and LVA (Lateral Vertebral Assessment) Pediatrics (Optional), Orthopedics (Optional), Trend function, 10 years fracture risk report and fracture risk analysis (fracture risk %), Automatic calibration. One scan : 2 or 3 sites scanned simultaneously
Patient dose	Total Body ≤ 2 mR, Spine ≤ 1.5 mR, Femur ≤ 1 mR
Acquisition time	Spine 29 sec., Femur 19 sec.
Total body/ Body composition	5 min. (Depending on height)
User image enhancement	Contrast, Brightness, Zoom in / Out
DB	Data compatibility with GE, DB backup / Restore
PACS/DICOM	PACS system / Worklist DICOM
Multi-languages	
Scanning method	Narrow Fan Beam Ergonomic or normal User can add / delete bone and tissue to reduce errors in calculating BMD.
Laser pointer for positioning Scan area	Total Body : 580/620(Optional) × 2020 mm Femur : 120 × 170 mm, Spine : 160 × 210 mm
X-ray characteristics	Constant potential source at 83 kV Dose efficient K-edge filter High frequency : 50 kHz X-ray tube maximum : 3 mA / 90 kV Dual energy : low -40 kV / High -83 kV
Detector technology	CZT (Cadmium Zinc Telluride) detector
Dimensions(L x W x H)	2784 × 1040 × 1250 mm
Weight	210 kg
Environmental requirements	Ambient temperature : 15 ~ 30°C Power : 100 ~ 120VAC, 50 ~ 60 Hz 220 ~ 240VAC, 50 ~ 60 Hz Humidity : 20% ~ 80%, Non-condensing
Computer workstation	Win 7 and Win 8 HDD : 500 GB, RAM : 4 GB It is optional dependent on user requirement
Monitor resolution	over 1280 × 720 Pixel

* Software
Operating system ≤ Windows 7

* Hardware
The PRIMUS includes patient table, C-arm carriage, X-ray tube, generator, using CZT digital detector, PRIMUS delivers fast scan time and near radiographic imaging with low radiation dose rate. PRIMUS's narrow fan beam reduces distortion due to magnification for accurate determination of bone mineral content, size and geometry.