

better products for better life

PRIMUS

Total body DXA bone densitometry



OsteoSys

Total body DXA bone densitometry



Features and applications

Total body assessment

This function provides total body image of 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 can analysis the structure of the hip for Dural Femur ; 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)

DICOM compatibility

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

Multi-languages

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

Remote control for maintenance

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

Pediatric(Optional)

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

Orthopedic analysis(Optional)

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

Easy & friendly user interface

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

Touch operating panel

Touch operating on the control panel using the popular technology on smart phones and gives a user an easier operating system.

Fast measurement time

Scan time for femur and spine is 25 Seconds.

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 more high resolution images.

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

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

Re-scan

If user had the wrong image position at the beginning of 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 most 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 BMD value from another piece of equipment.

Multi patient data saving and remote control

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

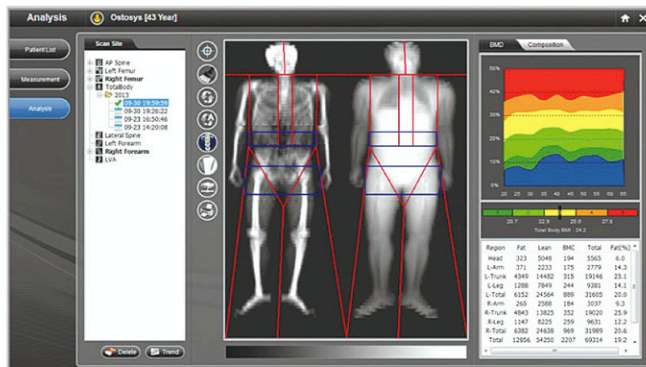
PRIMUS



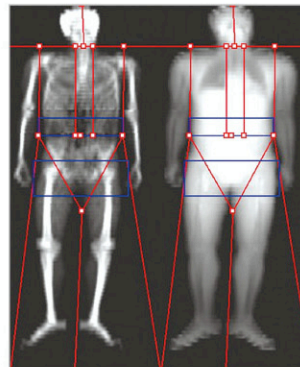
- **No.1 BMD manufacturer in Korea**
- Specialized in Bone Mineral Densitometry
- Powerful R&D Center
- 96 countries and 125 sales representatives
- Branch office : China/Mexico
- OEM with Japanese manufacturer
- BMD full line-up
 - 2000 _ SONOST-2000 launched
 - 2001 _ EXA-3000 launched
 - 2004 _ SONOST-3000 launched
 - 2006 _ DEXXUM 3 launched
 - 2008 _ DEXXUM T launched
 - 2012 _ EXA-PRESTO launched
 - 2013 _ PRIMUS launched

Image analysis

Total Body



Analysis on the measured total body image of a patient.



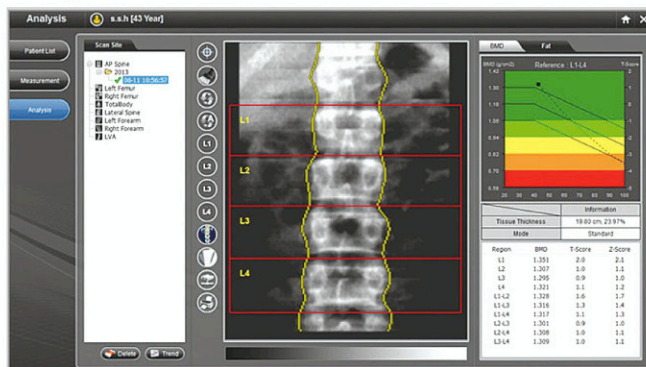
Automatic ROI

As soon as scanning, it is doing ROI automatically.

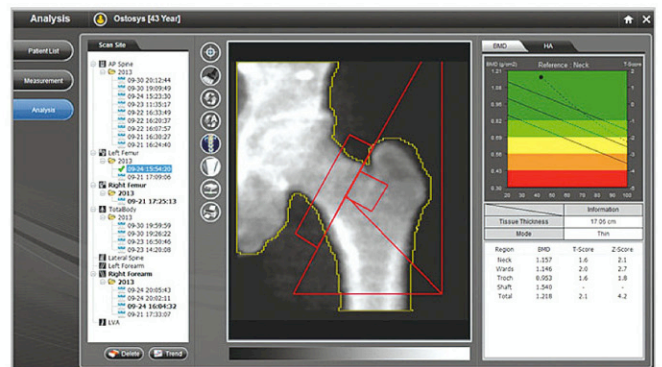
Manual ROI

If user needs trimming of any part of the body, it is useful function for it. User can edit ROI depending on their interest.

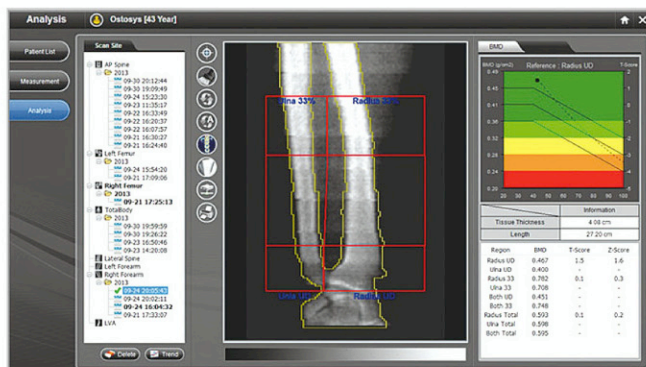
AP Spine



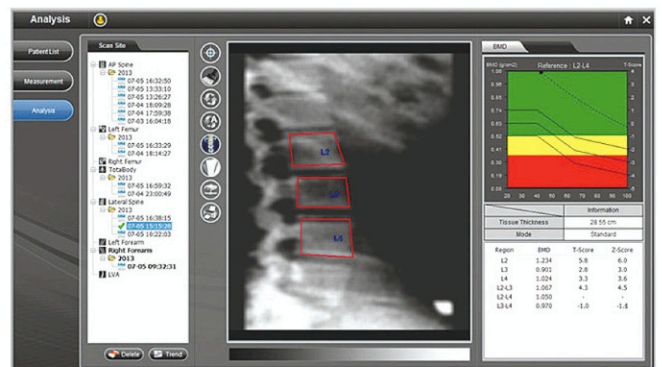
Femur



Forearm



Lateral Spine



Analysis on the measured lateral spine image of a patient.

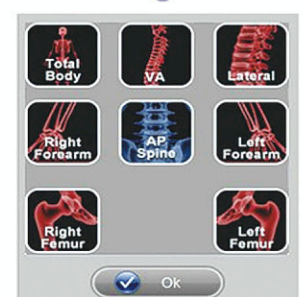
Main view



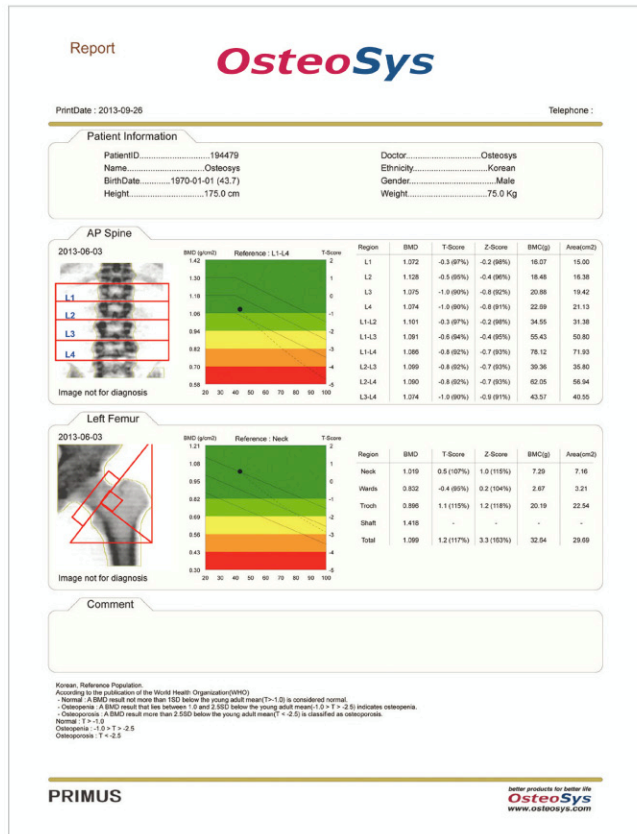
Switch



Positioning

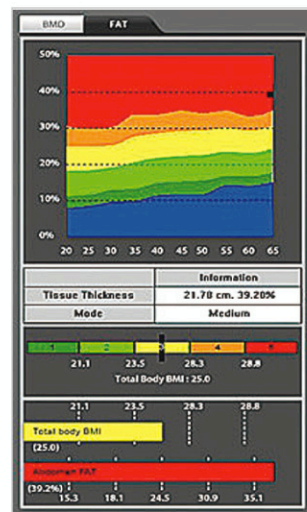
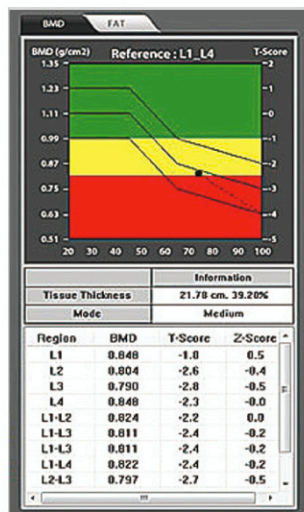


Result report



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 femoral neck analysis, HAL(Hip Axis Length) and angle LVA(Lateral Vertebral Assessment) Pediatric(Optional) Orthopedic(Optional) 10 years fracture risk report and fracture risk analysis(10-year fracture risk with %) Automatic calibration One scan : 2 or 3 sites scan simultaneously New AP Spine or Femur scans can be done by halting the current scanning process without changing the patient's positioning.
Patient dose	Total Body : 2mR, Spine : 1.5 mR, Femur : 1mR
Acquisition time	Spine - fast : 25 sec., Femur - fast : 25 sec.
Total body/ Body composition	5 min(Depend on height)
User image enhancement	Contrast, Brightness, Zoom in/Out
DB	Data compatibility with GE, DB backup/Restore
PACS system/Worklist	
DICOM compatible(Including worklist)	
Multi-languages	
Scanning method	Narrow Fan Beam Ergonomic or normal User can add/delete bone and tissue to reduce errors in calculating BMD for fracture, implant, and surgery area.
Laser pointer for positioning	
Scan area	Total Body : 58/62(Optional) x 200 cm Femur : 12 x 12 cm, Spine : 16 x 16 cm
X-ray characteristics	Constant potential source at 83 kV Dose efficient K-edge filter High frequency : 50 kHz X-ray tube maximum : 3mA/83 kV Dual energy : low-40 kV/High-83 kV
Detector technology	CZT(Cadmium Zinc Telluride) detector
Dimensions(L x W x H)	2784 x 1045 x 1258 mm
Weight	210 kg
Environmental requirements	Ambient temperature : 17~30°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 x 720 Pixel



BMD mode
Scanning for BMD

FAT mode
Scanning for FAT



* Software
Operating system : Windows

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

About Osteosys

Over 10 years, Osteosys from the south of 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 fast speed and highest quality.

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