

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 DEXA narrow fan beam technology.

Ergonomic Scanning

Ergonomic scanning can reduce radiation dose via efficient scan area and short scan time. So it is less harmful than normal scanning function as entire scanning method.

LVA(Lateral Vertebral Assessment)

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

Hip Analysis

This tool can be used to evaluate proximal femur geometric, so can analysis structure of 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 program such as English, Spanish, Chinese, Portuguese, German, French and etc. (apply for the other languages also possible)

Remote Control for Maintenance

Technician can connect to the PRIMUS from KOREA in order to solve any software issue through internet.

Pediatric(Optional)

User also can measure the children's BMD as low-density bone mass compare with adult's 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 and user will intuitively know how to operate it because of assisting atomized software functions.

Touch Operating Panel

Touch operating on the control panel which is the most popularized technology in smart phone and give an user more easy operation.

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

Compare to pencil beam technology, PRIMUS provides more high resolution images.

Wider Scan Area(full scan area from head to toe)

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

Re-Scan

If user had wrong position of image during in the beginning of scanning, user can restart to scan again. This function reduce the total scan time and give user more continent.

Auto ROI

Automatic ROI(Region Of Interest) function can select automatically most correct line of each region of bone its give user more easy to make a proper area for analysis.

BMD Conversion(Import/Export)

PRIMUS provides a BMD conversion which can convert BMD value from the other maker's equipment to our's.

Multi Patient Data Saving and Remote Control

User can save the patient data into other PC or any hard disk and also do remote control from other PC in different place.

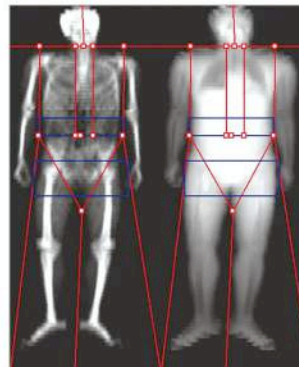
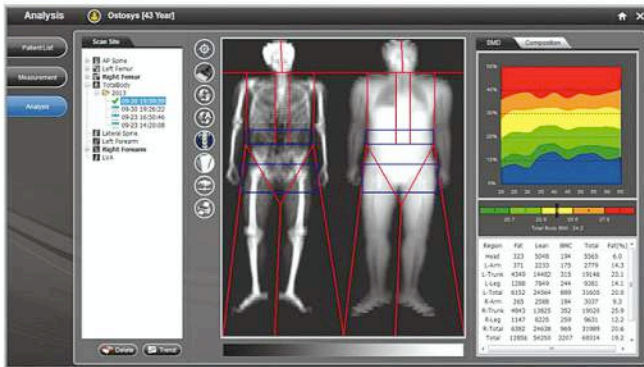
PRIMUS



- **No.1 BMD manufacturer in Korea**
- Specialized in Bone Mineral Densitometry
- Powerful R&D Center
- 96 countries and 125 sales network
- 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



Automatic ROI

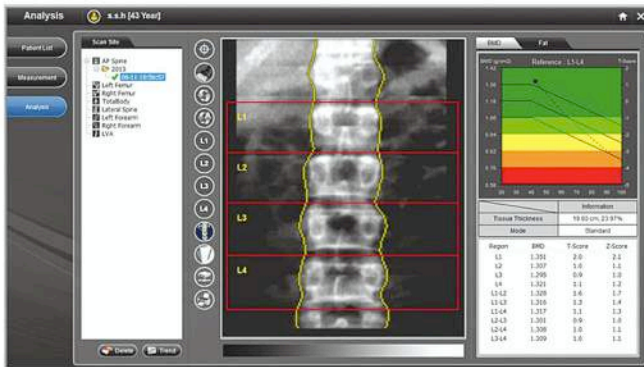
As soon as scanning, it is doing ROI automatically.

Manual ROI

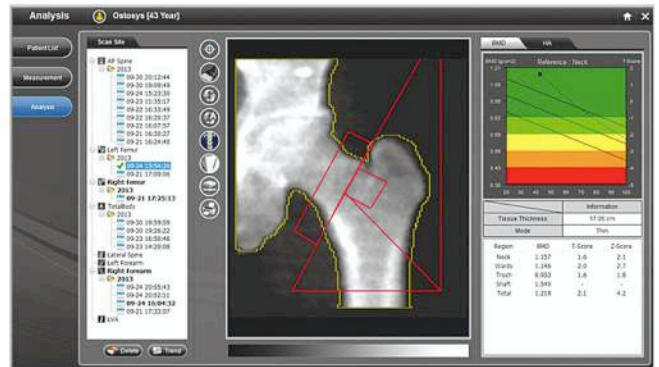
If user needs trimming of any part of the body, it is useful function for it. User can edit ROI depending on their interest.

Analysis on the measured total body image of a patient.

AP Spine



Femur



Forearm



Lateral Spine



Analysis on the measured lateral spine image of a patient.

Main View



Switch



Positioning



Result Report

Report **OsteoSys**

PrintDate: 2013-09-26 Telephone:

Patient Information

PatientID: 194479 Doctor: Osteosys
 Name: Oteleoye Ethnicity: Korean
 BirthDate: 1970-01-01 (43.7) Gender: Male
 Height: 175.0 cm Weight: 75.0 Kg

AP Spine

2013-09-03

Region	BMD	T-Score	Z-Score	BMD(g)	AnatomID
L1	1.272	-0.3(97%)	-2.3(98%)	18.27	18.28
L2	1.128	-0.5(95%)	-2.4(95%)	16.48	16.38
L3	1.070	-1.0(90%)	-2.8(92%)	20.96	19.42
L4	1.074	-1.0(90%)	-2.8(92%)	22.89	21.13
L1-L2	1.101	-0.3(97%)	-2.2(98%)	34.55	31.38
L1-L3	1.091	-0.4(94%)	-2.4(92%)	55.43	52.80
L1-L4	1.086	-0.4(92%)	-2.7(93%)	76.12	71.93
L2-L3	1.069	-0.8(85%)	-2.7(89%)	36.36	36.89
L2-L4	1.060	-0.9(82%)	-2.7(87%)	62.05	58.94
L3-L4	1.074	-1.0(85%)	-2.9(91%)	43.57	43.35

Left Femur

2013-09-03

Region	BMD	T-Score	Z-Score	BMD(g)	AnatomID
Neck	1.210	0.5(107%)	1.0(115%)	7.28	7.16
Wards	0.822	-0.4(90%)	-2.3(104%)	3.87	3.21
Troch	0.895	1.1(110%)	1.2(118%)	20.19	22.34
Shaft	1.418	-	-	-	-
Total	1.289	1.2(117%)	1.3(123%)	32.94	29.89

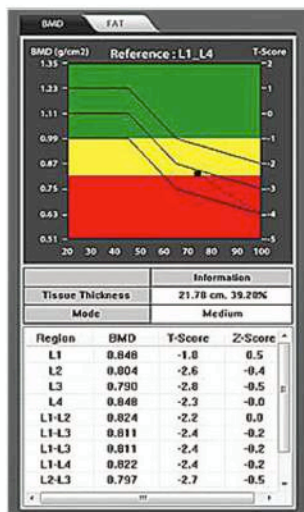
Comment

Korean Reference Population
 According to the publication of the World Health Organization(WHO)
 Normal: A BMD result not more than 1SD below the young adult mean(T>1.0 is considered normal)
 Osteopenia: A BMD result that lies between 1 standard deviation below the young adult mean(1.0 > T > -2.5 indicates osteopenia)
 Osteoporosis: A BMD result more than 2.5SD below the young adult mean(T < -2.5) is classified as osteoporosis.
 Normal: T > -1.0
 Osteopenia: -1.0 > T > -2.5
 Osteoporosis: T < -2.5

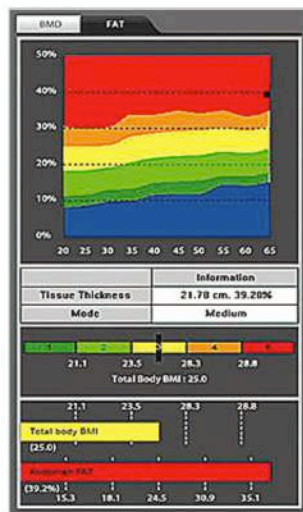
PRIMUS Best products for better the OsteoSys www.osteosys.com

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 1.5mR, 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 200cm
 Femur : 12 x 12cm, Spine : 16 x 16cm
- X-ray characteristics** Constant potential source at 83kV
 Dose efficient K-edge filter
 High Frequency : 50kHz
 X-ray tube maximum : 3mA/83kV
 Dual Energy Low- 40kV/High- 83kV
- Detector Technology** CZT(Cadmium Zinc Telluride) detector
- Dimensions(L x W x H)** 2784 x 1045 x 1258mm
- Weight** 210kg
- Environmental Requirements** Ambient temperature : 17~30°C
 Power : 100~120VAC. 50~60Hz/
 220~240VAC. 50~60Hz
 Humidity : 20%~80%, non-condensing
- Computer Workstation** Win 7 and Win 8
 HDD : 500GB, RAM : 4GB
 It is optional depend 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.

OsteoSys

About OsteoSys

Over 10 years, Osteosys from the south of Korea has designed and supplied bone densitometry systems to hospital in world wide. Through Continuous R&D efforts, Osteosys can providing efficient **FANBEAM BONE DENSITOMETER SYSTEM** in a competitive environment. So, you can always keep on Osteosys to help you deliver the fast speed and highest quality.

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