

# BONE DENSITOMETRY SOLUTIONS



STRATOS  
SERIES



**DMS**  
IMAGING

A DIVISION OF THE DMS GROUP

DMS SOLUTIONS

# A COMPLETE RANGE OF SOLUTIONS FOR BONE DENSITOMETRY...

DMS IS THE EUROPEAN LEADER FOR BONE DENSITOMETRY EQUIPMENT. OUR PRODUCTS ARE DESIGNED AND MANUFACTURED IN FRANCE TO GIVE EXPERTS AND PATIENTS AN OPTIMAL DIAGNOSTIC EXPERIENCE. OUR PRODUCT RANGE INCLUDES MULTIPLE TECHNOLOGIES TO MEET ALL DIFFERENT MARKET NEEDS.

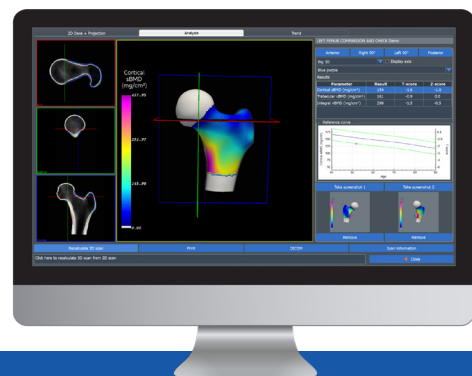


## STRATOS DR

The STRATOS DR is a high-end device using 2D-FAN BEAM technology to perform fast and high image quality examinations. It provides a comfortable diagnostic experience for both patients and practitioners.

## STRATOS

The STRATOS has established itself as the complete DXA solution for bone health specialists seeking a cost effective, powerful and fast solution for evaluating bone structure and assessing fracture risk.



## 3D-DXA

3D-DXA is a breakthrough technology that uses routine BMD images to modelize a 3D image of the femur. This technology brings new information about cortical and trabecular bone structure for a more accurate diagnostic and adapted treatment.

# ...AND BODY COMPOSITION ANALYSIS

## MULTI-SITE

Lean and fat composition results are available on several site of the body, for full body mapping: left leg, right leg, left arm, right arm, left ribs, right ribs, T-spine, L-spine, pelvis. Thanks to a large scan area, the whole body analysis provides an abundant panel of information about body composition.

## POWERFUL METABOLIC TOOLS

Based on years of research, our engineers have developed sophisticated calculation tools, to quickly measure fat and lean tissue percentage and distribution in the body. In addition to these parameters, other types of metabolic data are calculated to assist health and sports professionals (Fat mass index, Basal metabolic Rate, Android/Gynoid ratio...).

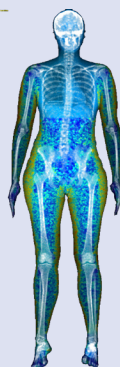
## MULTIPLE APPLICATIONS

The technology available on STRATOS and STRATOS DR manages a wide field of applications including centers devoted to the preparation and training of high level athletes and specialized clinics concerned with women's wellness, particularly weight management. Body composition is also particularly useful in supporting the diagnosis of certain disorders and optimizing treatment programs (Obesity, Cystic fibrosis, anorexia, wasting syndrome, chronic renal failure).



## TRENDING & FOLLOW-UP

Patient trending includes graphs and color mapping that provides an intuitive tool for analysis and communication. Fully customizable, the report offers complete information to develop successful roadmaps.



## VISCERAL ADIPOSE TISSUES (VAT)

Our patented algorithm estimates Visceral and Subcutaneous Adipose tissue in the android area, based on DXA scans. Significantly correlated with CT-scan results, this DXA method provides an alternative for monitoring the effects of patients' diet or cardiovascular risk.

# THE STRATOS DR SYSTEM



## STRATOS DR

THE STRATOS DR IS A HIGH-END DEVICE PROVIDING EXCELLENT IMAGE QUALITY AND MAKING FAST EXAMS ACCESSIBLE TO ALL BONE DENSITOMETRY PRACTITIONERS.

### 2D-FAN BEAM

Based on a 256-element multi-array detector, the 2D-Fan Beam is a technology designed by our R&D department to provide the highest image resolution for an optimal diagnosis.

### FAST & PRECISE DIAGNOSTIC

The STRATOS DR meets the needs of the most demanding practitioners searching for a powerful, complete and precise tool able to perform examinations in only 15 seconds per site.

### WIDE APPLICATIONS

The STRATOS DR is a complete device that in addition to routine exams provides a wide range of applications including orthopaedics, paediatrics, body composition and many more.

### CONNECTED EXPERIENCE

Offering the possibility of multiple users on different workstations, exams can quickly be imported or exported through DICOM from STRATOS DR to the PACS and RIS.



# STRATOS

A COMPETITIVE SOLUTION FOR ROUTINE DXA SCANS, OFFERING OPTIMAL PATIENT COMFORT.

## COMPLETE DEVICE

With a full range of applications, the STRATOS is always improved to provide the all parameters for a bone densitometry evaluation and body composition analysis.

## COMPACT VERSION

The STRATOS has been designed in a compact version to enable our DXA system to be installed in smaller rooms.

## FAST PENCIL BEAM

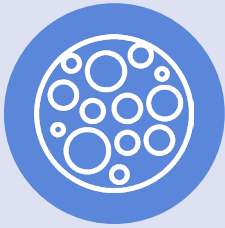
The Digital Fast Beam is an improved version of the pencil beam. The technology allows the STRATOS to be the fastest pencil beam devices on the market and to provide better image quality.

## OPTIMIZED WORKFLOW

The intuitive software was specifically designed to help practitioners optimize their time dedicated to exam analysis, diagnosis, patient follow up and data processing.

# ADVANCED TOOLS

## STANDARD DIAGNOSTIC SUPPORT



### BMD

Bone mineral density ( $\text{g}/\text{cm}^2$ ), is the amount of bone mineral in bone tissue. Based on the BMD, for each site the T-score and Z-score are (then) calculated.



### FEMUR/DUAL FEMUR

The femur is an essential site for fracture risk measurement. For accurate analysis, a dual femur is also recommended.



### FOREARM

The forearm is a complementary site with slow bone remodeling privileged for particular patient cases (obesity, spine arthrosis, orthopaedic material).



### AP-SPINE

Spine (L1-L5) is also an important site frequently coupled with Femur for diagnostic.



### DVA

A radiology type image for automatic morphometric measurement of lateral spine and its GENANT table classification. Also available in AP positioning.



### HAND

In paediatric mode, the image can be used to determine Bone Age. The Bone Age result can then be reported on the result file (only available on Stratos dR).

## ADDITIONAL APPLICATION



### FRAX

A method from Sheffield University based on patient questionnaire, used to define risk fracture. Available for more than 50 countries.



### ORTHOPAEDICS

Orthopaedic mode is aimed for bone density calculation around prosthetics (knee, elbow, shoulder, hip,...) and on particular Region of Interest (ROI).



### PAEDIATRICS

Paediatric mode provides various bone analysis parameters for the young population.



### ROI SELECTION

The automatically selected ROI can be modified at the discretion of the operator in order to take a very precise area into account.



### HSA

The Hip Structural Analysis (HSA) program measures structural geometry of cross-sections in the proximal femur (HAL, FNA, IH, FNAL) to predict fracture risk.



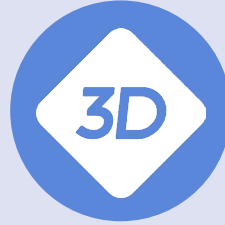
### EASY SCAN REPOSITIONING

Computer assistance for easy patient positioning during the exam in addition to the laser placement helper.



### QUICKVIEW

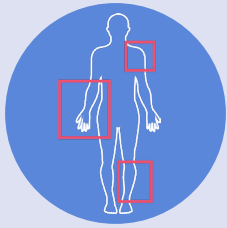
Fast mode that allows to make an acquisition by optimizing the workflow



### 3D-DXA

3D modelisation analyzes the proximal femur and provides clinicians with a separate assessment of the trabecular and cortical bone.

## BODY COMPOSITION



### WHOLE BODY SEGMENTATION

Body segmentation in different region of interest to analyse fat and lean mass repartition on the whole body.



### COLOR MAPPING

Patient monitoring and communication through color mapping according to the distribution of bone, fat and lean mass.



### VAT & SAT

Analysis of visceral fat and subcutaneous fat in the abdomen.



### METABOLIC INFO

Calculation of various metabolic parameters : Android/Gynoid ratio, Body mass Index, Fat mass index, Basal Metabolic rate and many more.



### SARCOPENIA

Assessment of Sarcopenia based on published definitions. Sarcopenia is a degenerative disease related to the loss of skeletal mass, quality and strength.

## DESIGNED FOR OPERATOR



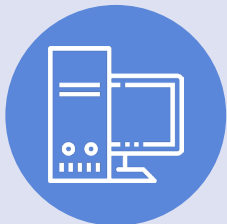
### REFERENCE POPULATION

Each sites own reference population can be developed in addition to the existing database.



### PATIENT TRENDING

Patient follow-up can be monitored through graphs and tables which provide an analysis and evolution of patient data over time.



### WORKSTATION

Possibility for the practitioner to work on a remote workstation to process patient data



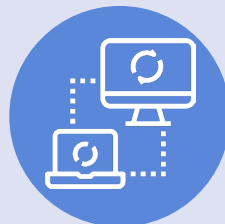
### PERSONALIZED REPORT

DXA reports can be generated and can be personalized according to the practitioners use.



### DATA EXPORTATION

Data exportation from device to network (PACS/RIS) via DICOM.



### DATA IMPORTATION

Possibility to import data from a competitor's equipment into our equipment. The doctor can keep all his data when renewing his platform.



### AUTOMATIC LETTER

Automatic letters can be printed for patients or doctors from different letter models.



# 3D-DXA : REVEALING THE CORTICAL BONE

3D-DXA IS A BREAKTHROUGH TECHNOLOGY THAT USES ROUTINE BMD IMAGES TO MODELIZE A 3D IMAGE OF THE FEMUR. IT ASSESSES SEPARATELY BOTH CORTICAL AND TRABECULAR BONE COMPARTMENTS FOR MORE ACCURATE DIAGNOSIS AND ADAPTED TREATMENT.

## HOW IT WORKS

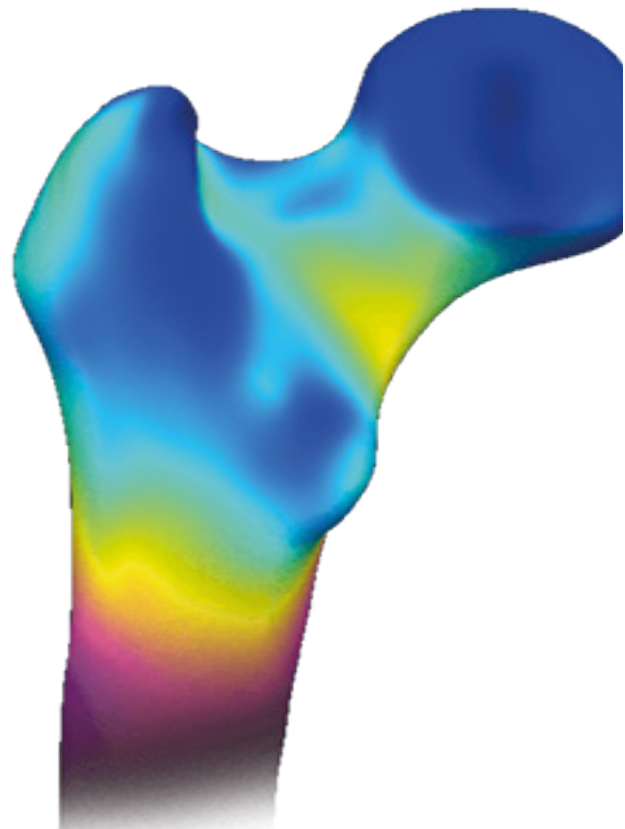
3D-DXA is a software application that registers a 3D statistical model onto the hip DXA scan of the patient and uses a model-based algorithm to create a 3D map of the cortical surface density.






## VALIDATION

A multicenter clinical study was performed to compare 3D-DXA with Quantitative Computed Tomography (QCT) analyses. Strong correlations were found between measurements performed using the two techniques.

## FEATURES

3D-DXA provides automated workflow, retrospective analysis, patient follow-up and Report generation.



	<b>VISUALIZE THE FEMORAL SHAPE AND DENSITY IN 3D</b>
	<b>MEASURE THE CORTICAL SURFACE DENSITY</b>
	<b>MEASURE THE VOLUMETRIC TRABECULAR DENSITY</b>
	<b>COMPARE MEASUREMENTS WITH NORMATIVE DATA</b>
	<b>MONITOR CORTICAL AND TRABECULAR BONE MEASUREMENTS</b>

BONE DENSITOMETRY: MADE IN FRANCE INNOVATION



**HEADQUARTERS** > 9 Avenue du canal Philippe Lamour – 30660 Gallargues-le-Montueux – FRANCE  
**PHONE** > +33 4 66 29 09 07 – **FAX** > +33 4 67 50 49 09 – [www.dms-imaging.com](http://www.dms-imaging.com)

STRATOS and STRATOS DR are Class IIb medical device manufactured by APELEM and bear the CE marking. They are certified in the European Union under the Medical Device Directive 93/42/EEC by SGS CE1639, exclusively for the indication of bone densitometry evaluation. Other non-medical uses ascribed to these devices are not within the scope of CE certification. Read the operating instructions carefully. Photos are non-contractual. BrochureA\_BONEDENSITOMETRY\_A\_01 01/2022