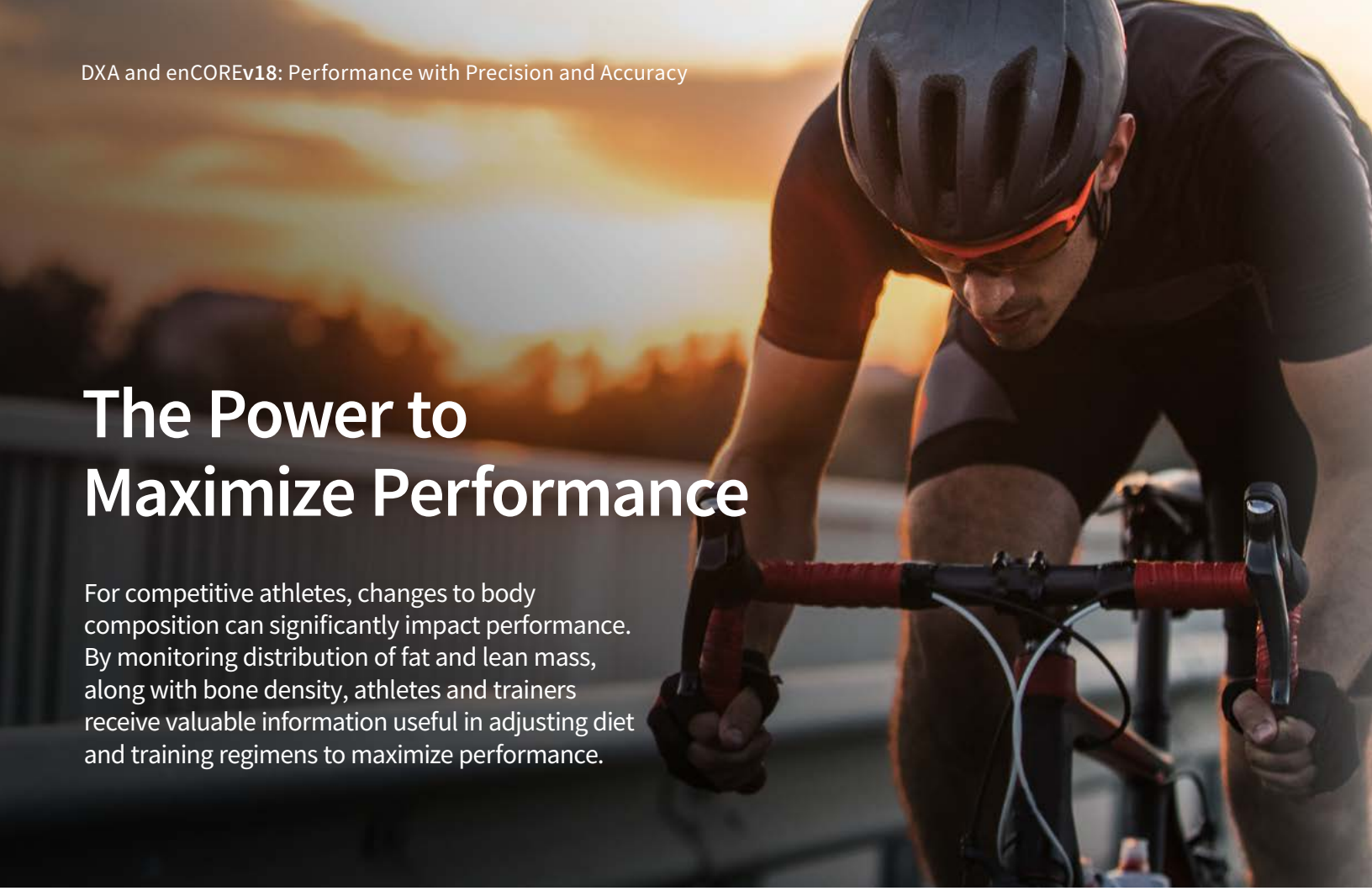
GE HealthCare

Bone & Metabolic Health

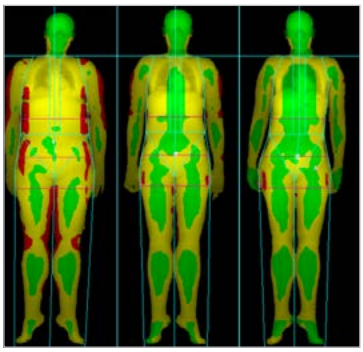
DXA and enCORE v18: Performance with Precision and Accuracy

Advanced Tools for Body Composition Insights



The Power to Maximize Performance

For competitive athletes, changes to body composition can significantly impact performance. By monitoring distribution of fat and lean mass, along with bone density, athletes and trainers receive valuable information useful in adjusting diet and training regimens to maximize performance.



Physicians today use DXA for body composition because it accurately shows exactly where fat is distributed throughout the body. GE HealthCare DXA systems directly measure and calculate total fat, lean and bone tissue, instead of estimating body composition.

DXA systems must perform at the highest precision possible. In fact, experts agree that in monitoring patients over time, it is crucial to get consistent results. GE HealthCare DXA systems are backed by numerous studies that demonstrate high accuracy and precision in total body measurement.[1]

What is a DXA Scan?

Dual-energy X-ray Absorptiometry (DXA) scans use two low-dosage X-ray beams of different energies to precisely measure lean and fat mass in the body.

Offering precise measurements with very low dose radiation,[2,3] DXA body scanning technology has become the preferred measurement of body composition for athletes.

DXA Body Composition measurements can help athletes achieve more:

- **Assess and Benchmark Body Composition**
- **Track Progress Over Time**
- **Aid in Injury Prevention and Recovery**
- **Motivate from Seeing Results**
- **Build Confidence in Training Programs**

Top Professional & Collegiate Sports Teams use DXA

Baseball
Basketball
Football
Ice Hockey
Lacrosse
Rugby
Soccer

Elite athletic programs around the world use DXA Technology to measure and evaluate their players, optimizing for performance, monitor injuries and track recovery progress.

DXA Scans Measure Muscle, Fat and Bone Mass

Valuable Insights into Body Composition and Bone Density

Our DXA technology combines high precision images with powerful clinical applications.

Lunar iDXA™

GE HealthCare's premier, research-grade DXA scanner that provides the highest quality, research-grade whole body assessment, including lean and fat tissue mass plus bone-density.

Prodigy™

GE HealthCare's performance-grade DXA scanner that provides body composition analysis, including lean and fat tissue mass plus bone-density. Available in full and compact sizes.

Sample body composition reports

Sample Body Composition Report

Business Name
Street Address
City, State Zip
Phone: ### ###-#### Fax: ### ###-####
Web: http://##########.com

Body Composition/BMD Report: (Day, Month, Year)

CLIENT

Name: Patient, A.

Age: ## years
Sex: Female
Ethnicity: White

Birth Date: ##/##/##
Height: 65.0 in.
Weight: 124.0 lbs.

Patient ID: #######
Measured: ##/##/####

LEAN

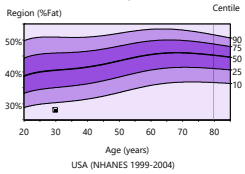
Lean mass includes all parts of the body [organs, muscle, and fluids] but excludes body fat.

The higher the Tissue %Lean, the more muscular the body.

Total Mass:	124.0 lbs
Lean Mass:	84.1 lbs
Tissue %Lean:	67.8 %

FAT

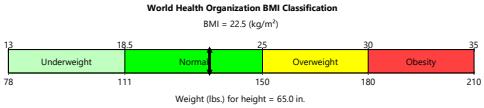
Total Body: Total



Fat Mass:	34.8 lbs
Region (%Fat)	28.1 %

Composition Reference Graph shows your Total Body %Fat result compared to a reference population. This comparison is very similar to how babies are measured and compared to reference data for height and weight. The bold black line on the graph represents the median result for the reference population. The square on the graph represents your result. There are currently no standard definitions of normal or obesity based on %Fat results, but you can see how you compare to this reference population.

World Health Organization BMI Classification



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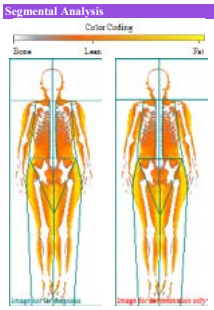
Client: ############ Client ID: #######

Sample Body Segmental Report

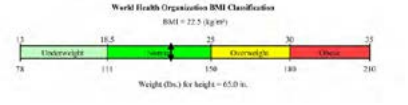
Client	Sex	Ethnicity	Birth Date	Height	Weight	Measured
####, ####	####	####	####	####	####	####

Segmental Analysis



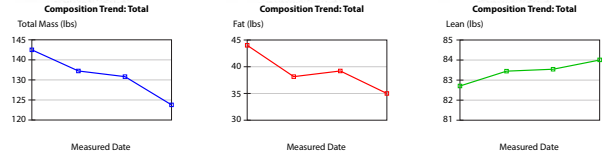
Region	%Fat (%)	Total Mass (lbs)	Fat Mass (lbs)	Lean Mass (lbs)	BMC (lbs)
Arms Total	33.8	14.4	4.6	9.1	0.7
Right	31.2	7.4	2.2	4.8	0.4
Left	36.5	7.0	2.4	4.2	0.4
Difference	-5.3	0.4	-0.2	0.6	0.0
Legs Total	37.9	44.6	16.2	26.5	1.9
Right	37.6	22.5	8.1	13.5	0.9
Left	38.3	22.0	8.1	13.0	1.0
Difference	-0.8	0.5	0.0	0.5	0.0
Trunk	22.9	55.9	12.5	42.0	1.4
Android	18.2	7.3	1.3	5.9	0.1
Gynoid	38.2	21.8	8.1	13.1	0.5
Total	29.4	124.0	35.0	83.9	5.1

BMC = Bone Mineral Content



Body Composition History (Region: Total)

Measured Date	Total Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)	Fat Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)	Lean Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)
####	**124.0**	baseline	-	**34.9**	baseline	-	**84.0**	baseline	-
####	**124.0**	0.0	0.0	**35.0**	0.1	0.1	**83.9**	-0.1	-0.1



Recommendation / Follow-up

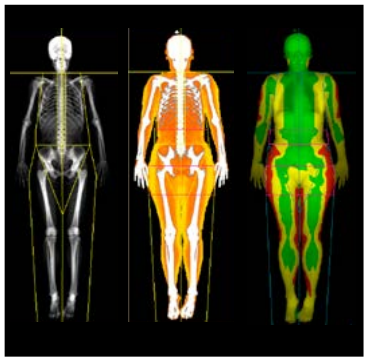
Add text here...

Body Composition Applications

Our Windows®-based software platform offers a wide range of Body Composition Tools

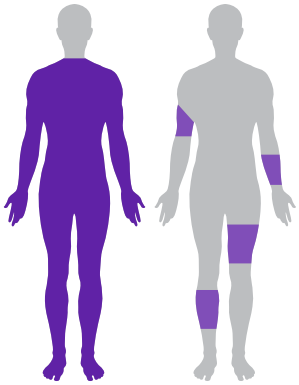
Metabolic Information (Advanced Body Comp)

Tools to help athletes understand impact of diet, lifestyle and exercise on health and performance. Color Coding of Body Composition (lean, fat and bone distribution) images. Metabolic results include RMR, RSMI, BMC, fat and lean trending and more. Color mapping tool to set threshold adjustments to fat%.[4]



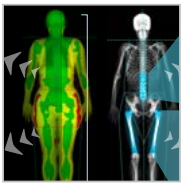
Sports Athletics Package

Smart scanning lets you easily select body regions to scan and report on, including Total Body Less Head (TBLH) and Smaller Body Composition. Use Smaller Body Composition (ROI) to monitor body symmetry and track injury recovery. Data can be help to develop rehabilitation programs.



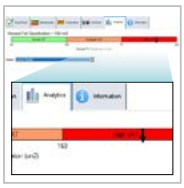
Corescan[5] (VAT and SAT)

CoreScan estimates Visceral and Subcutaneous Adipose Tissue (VAT and SAT) mass, volume and area within the android region.



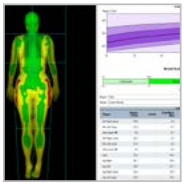
Advanced Analytics

Provides deep analytic insights with custom equations, metrics and ratios based on 200+ parameters. Use to generate bone and body composition insights that can be applied across your athlete population (including retrospectively).



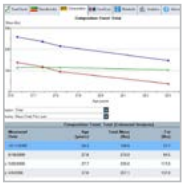
Customizable Thresholds (VAT)[6,7,8]

Customized VAT Thresholds enables setting of cut-offs and can be used to generate body composition insights, easily applied across your athlete population (including retrospectively).



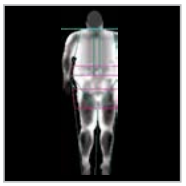
Total Body Composition

Provides lean and fat tissue composition in grams and %fat. Total and regional Body Composition, Android and Gynoid ROI, plus trending. BMI plotted with WHO criteria for Obesity; trend graph. Color Fat Mapping.[4]



Composition Trending

Ability to trend total body plus regions of lean and fat tissue and BMC over time.



Mirror-Image Scan

Mirror-image scanning simplifies workflow when athletes exceed the size of the scan window.

Multi-User Database

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

Custom Reference Population

Create custom reference populations, as a comparison for your group of athletes.

Composer Reporting

Provides pre-generated report formats and ability to easily create your own custom reports.

References:

1. Lunar publication BMD-0172-05.06.-EN-US 21. KG Faulkner, Accuracy and Precision of the Lunar iDXA, a New Fan-Beam Densitometer, presented at ECTS 2006. fan beam densitometers available.
2. ICRP Publication 60. 1990 Recommendations of the International Commission on Radiological Protection. Annals of the ICRP 1991; 21: no.1-3.
3. Caution: Although the X-ray dose from the bone densitometry test is very low, you should inform the operator if you are pregnant or may be pregnant prior to scanning.
4. Color Mapping available on Lunar iDXA only.
5. Not available in Japan.
6. Requires Advance Analytics.
7. Customizable Threshold for AFF requires AFF Application.
8. Customizable Threshold for VAT requires CoreScan application.

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