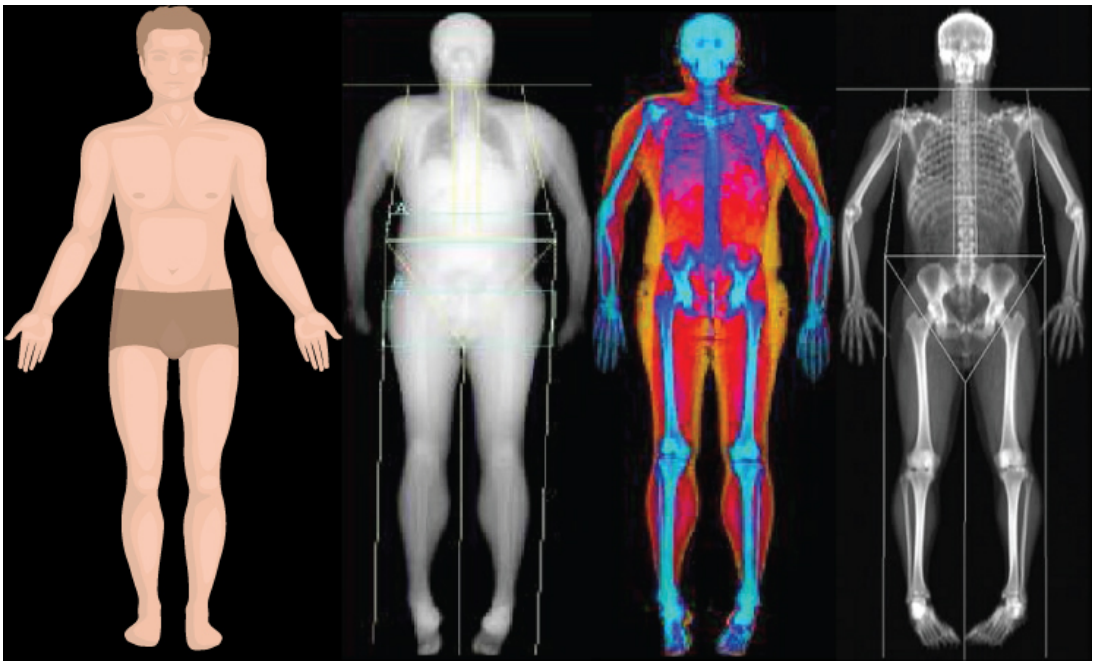
Advanced Body Composition



The Center for Osteoporosis & Bone Health

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The Center for
OSTEOPOROSIS
& Bone Health

Section 3

Advanced Body Composition Reports

Standard in **Advance** and **Forma** enCORE software

Lunar iDXA

GE Healthcare
3030 Ohmeda Drive
Madison, WI 53718
Phone: 608 221-1551

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

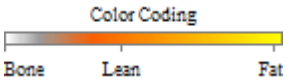
Body Composition

Body composition is used to describe the percentages of fat, lean, and bone in human bodies.

Because muscular tissue takes up less space in our body than fat tissue, our body composition, as well as our weight, determines leanness.

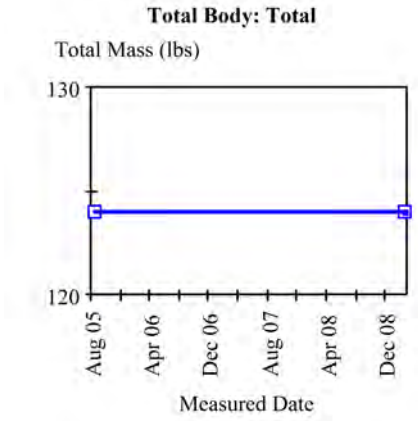
Image color-coding shown here helps to visualize the different components of your body composition.

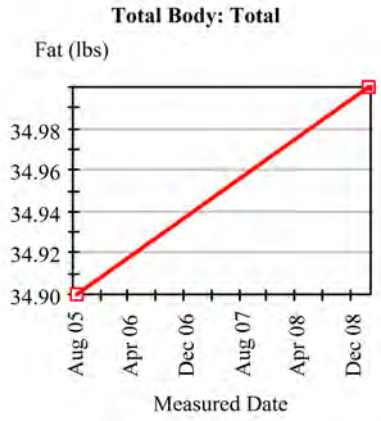
The table and charts below represent your historical composition results.



Measured Date:	####	####
Total Mass (lbs):	**124.0**	**124.0**
Fat Mass (lbs):	**34.9**	**35.0**
Lean Mass (lbs):	**84.0**	**83.9**
%Fat:	29.4	29.4
Total Mass Baseline %Change:	baseline	0.0%
A/G Ratio:	0.47	0.47

A/G Ratio: The Android region is that of the abdomen, and often the body type with increased fat in this area is described as "apple shaped." The Gynoid region is that around the hips and thighs and often the body type with increased fat in this area is described as "pear shaped." Understanding where fat is stored on the body is recognized as an important predictor of the potential health risks of obesity.





Resting Metabolic Rate (RMR)

Resting Metabolic Rate (RMR) is synonymous with Resting Energy Expenditure (REE) and is an estimate of how many calories you would burn if you were to do nothing but rest. It represents the minimum amount of energy needed to maintain body temperature, heartbeat, and respiratory rate.

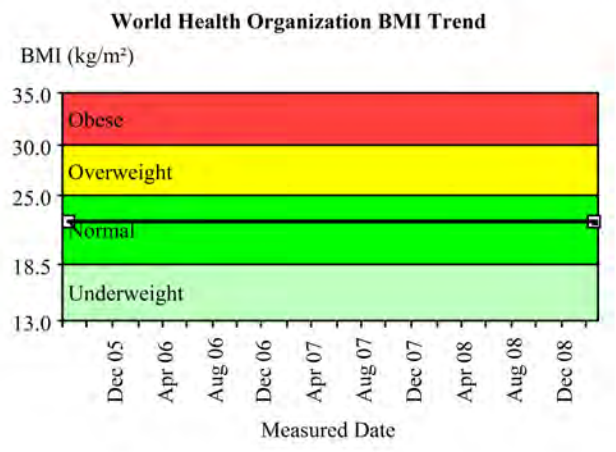
RMR: 1,390 cal/day

RMR (Resting Metabolic Rate) based on Harris-Benedict equation.
RMR(female) = 655.0955 - (4.6756 x age[yrs]) + (9.5634 x weight[kg]) + (1.8496 x height[cm])
Harris JA, Benedict FG. A biometric study of basal metabolism in man. Washington, DC: Carnegie Institute of Washington, 1919. (Carnegie Institute of Washington Publication 279).

Body Mass Index (BMI)

Your Body Mass Index (BMI) is an estimate of your body fat, based on your height and weight. While it is generally accurate, the BMI can read too high for athletes or others with large, heavy muscles. Likewise, it can exaggerate low readings for frail older people who have lost muscle mass.

Measured Date	**BMI** (kg/m²)
####	22.5
####	22.5



Assessment

Add text here...

Recommendation

Add text here...

Follow-up

Add text here...

Reading Physician

Lunar iDXA

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Madison, WI 53718
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Client	Sex	Ethnicity	Birth Date	Height	Weight	Measured
####, ####	####	####	####	####	####	####

Shape Trend

####

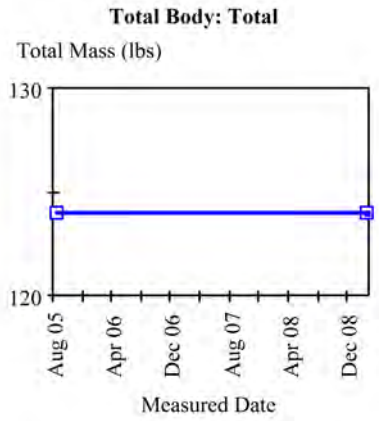
Color Coding

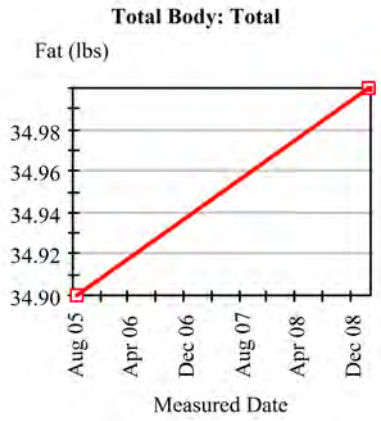
Bone — Lean — Fat

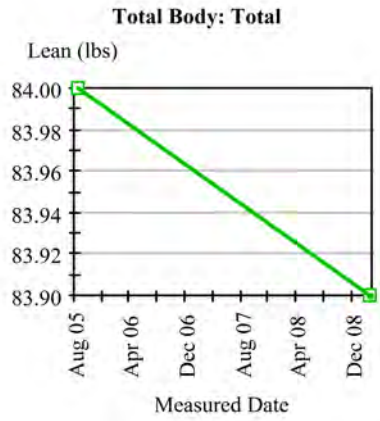
Body Composition History (Region: Total)

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)	%Fat (%)	BMC (lbs)
####	**124.0**	baseline	-	**34.9**	baseline	-	**84.0**	baseline	-	29.4	5.1
####	**124.0**	0.0	0.0	**35.0**	0.1	0.1	**83.9**	-0.1	-0.1	29.4	5.1

BMC = Bone Mineral Content







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

Resting Metabolic Rate (RMR)

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RMR: 1,390 cal/day

RMR (Resting Metabolic Rate) based on Harris-Benedict equation.
RMR(female) = 655.0955 - (4.6756 x age[yrs]) + (9.5634 x weight[kg]) + (1.8496 x height[cm])
Harris JA, Benedict FG. A biometric study of basal metabolism in man. Washington, DC: Carnegie Institute of Washington, 1919. (Carnegie Institute of Washington Publication 279).

Relative Skeletal Muscle Index (RSMI)

RSMI represents the relative amount of muscle in the arms and legs.

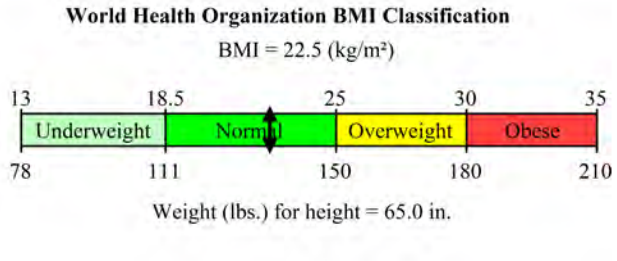
RSMI: 5.92 kg/m²

RSMI (Relative Skeletal Muscle Index) based on Baumgartner equation.
RSMI = (lean mass of arms[kg] + lean mass of legs[kg]) / (height[m])²
Baumgartner RN, Koehler KM, Gallagher D, Romero L, Heymsfield SB, Ross RR, Garry PJ, Lindeman RD (1998) Epidemiology of sarcopenia among the elderly in New Mexico. Am J Epidermiol 147(8):755-763.

Body Mass Index (BMI)

Your Body Mass Index (BMI) is an estimate of your body fat, based on your height and weight. While it is generally accurate, the BMI can read too high for athletes or others with large, heavy muscles. Likewise, it can exaggerate low readings for frail older people who have lost muscle mass.

Body Mass Index (BMI):	22.5 kg/m²
WHO Classification:	Normal
%Fat:	29.4%



Assessment

Add text here...

Recommendation

Add text here...

Follow-up

Add text here...

Reading Physician

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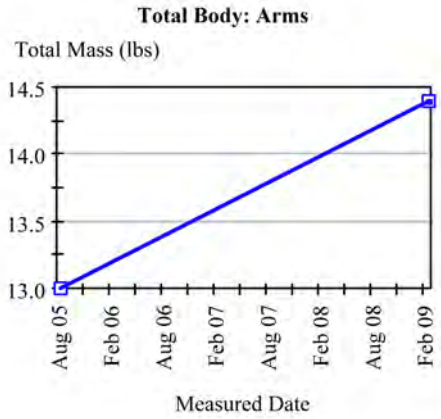
3030 Ohmeda Drive
Madison, WI 53718
Phone: 608 221-1551

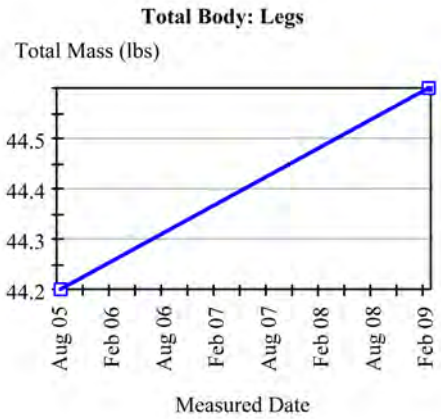
Client	Sex	Ethnicity	Birth Date	Height	Weight	Measured
####, ####	####	####	####	####	####	####

Arms



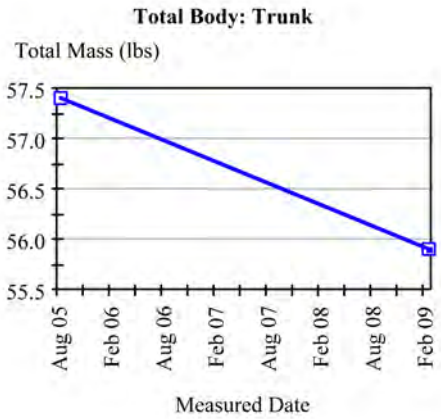
Region	Measured Date	Total Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)
Right	####	7.4	baseline	-
Left	####	7.0	baseline	-
Total	####	**13.0**	baseline	-
	####	**14.4**	1.4	1.4

Legs



Region	Measured Date	Total Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)
Right	####	22.5	baseline	-
Left	####	22.0	baseline	-
Total	####	**44.2**	baseline	-
	####	**44.6**	0.4	0.4

Trunk



Region	Measured Date	Total Mass (lbs)	Change vs. Baseline (lbs)	Change vs. Previous (lbs)
Right	####	26.7	baseline	-
Left	####	29.1	baseline	-
Total	####	**57.4**	baseline	-
	####	**55.9**	-1.5	-1.5

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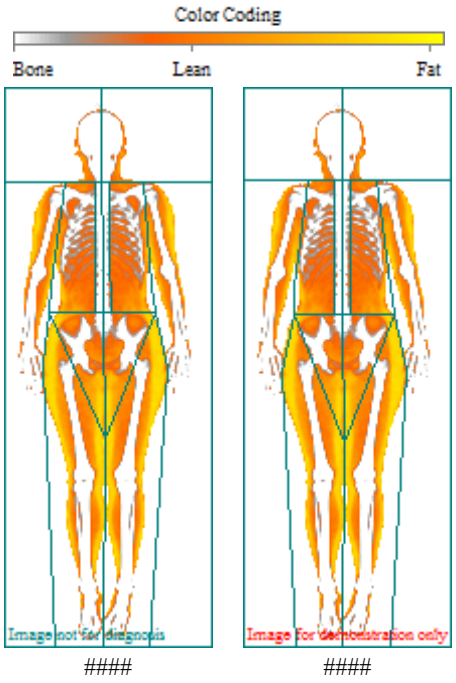
Client	Sex	Ethnicity	Birth Date	Height	Weight	Measured
####, ####	####	####	####	####	####	####

Segmental Analysis



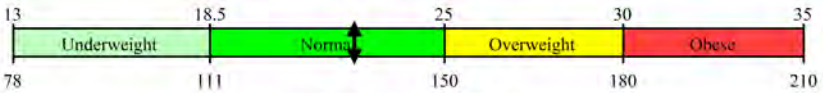
#####

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

World Health Organization BMI Classification

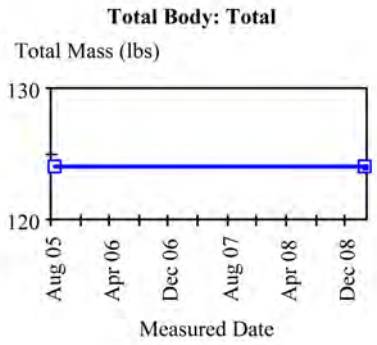
BMI = 22.5 (kg/m²)

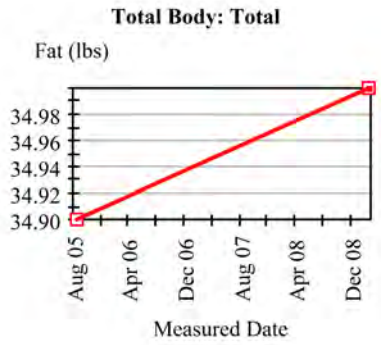


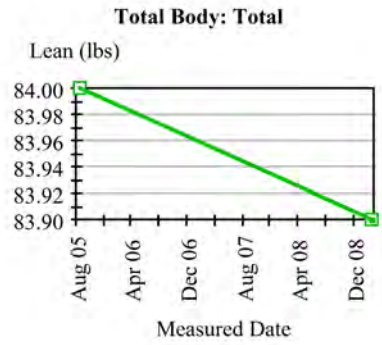
Weight (lbs.) for height = 65.0 in.

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...

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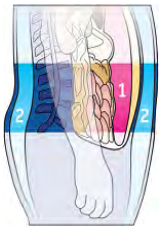
Madison, WI 53718
Phone: 608 221-1551

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

Abdomen Composition

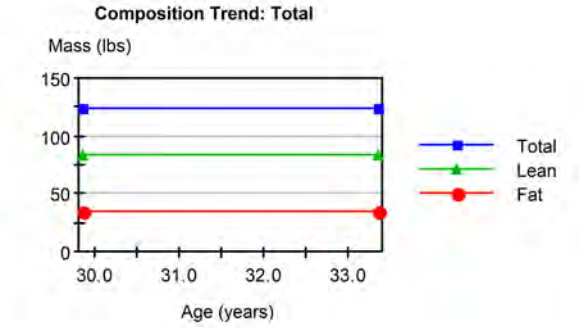


Adipose Tissue
1 Visceral
2 Subcutaneous

The Android region is that of the abdomen, and often the body type with increased fat in this area is described as "apple shaped." The Gynoid region is that around the hips and thighs and often the body type with increased fat in this area is described as "pear shaped." Understanding where fat is stored on the body is recognized as an important predictor of the potential health risks of obesity.

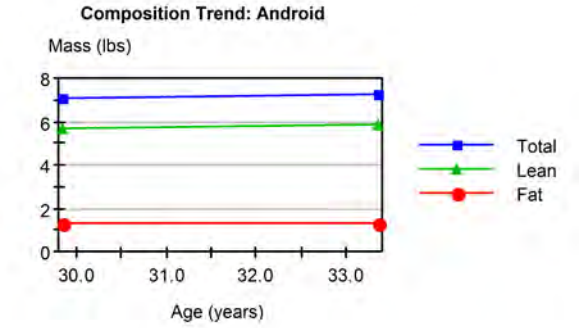
CoreScan estimates the VAT (Visceral Adipose Tissue) content within the android region, VAT is a specific type of fat that is associated with several types of metabolic diseases such as obesity, metabolic syndrome, and type 2 diabetes. CoreScan results have been validated for adults between ages 18-90, and with a BMI in the range of 18.5-40.

Total



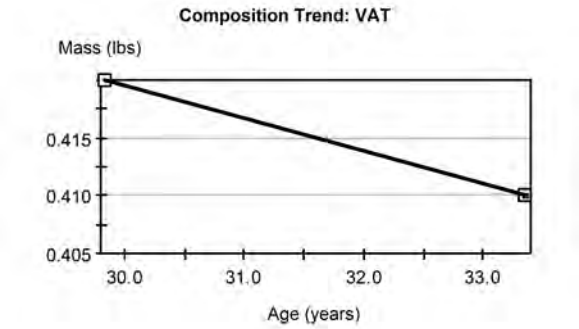
Date	Age	Total Mass (lbs)	Lean Mass (lbs)	Fat Mass (lbs)
####	####	124.0	84.0	34.9
####	####	124.0	83.9	35.0

Android / Gynoid



Date	Age	Android Mass (lbs)	Android Lean (lbs)	Android Fat (lbs)	Android %Fat	Gynoid %Fat	A/G Ratio
####	####	7.1	5.7	1.3	18.0	38.6	0.47
####	####	7.3	5.9	1.3	18.2	38.2	0.47

Visceral Adipose Tissue (VAT)



Date	Age	Fat Mass (lbs)	Volume (in³)
####	####	0.42	12.21
####	####	0.41	12.06

Lunar iDXA

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3030 Ohmeda Drive
Madison, WI 53718
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Body Composition/BMD Report: Monday, February 18, 2013

CLIENT

Name: #### ####

Age:	####	**Birth Date:**	####		
Sex:	####	**Height:**	####	**Patient ID:**	####
Ethnicity:	####	**Weight:**	####	**Measured:**	####

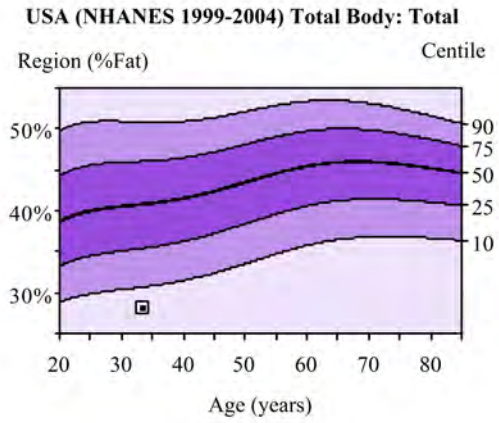
LEAN

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.

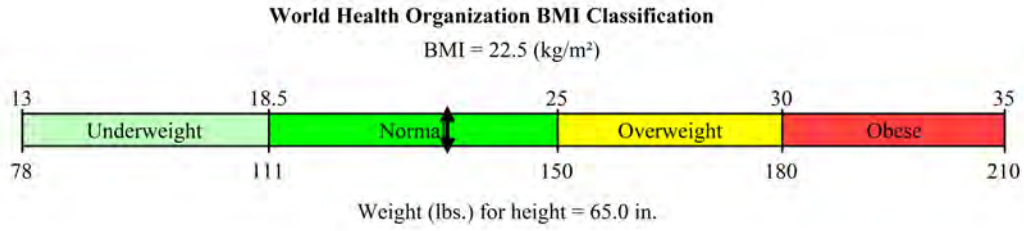
Total Mass:	124.0 lbs
Lean Mass:	83.9 lbs
Tissue %Lean:	67.7%

FAT



Fat Mass:	35.0 lbs
Region (%Fat)	28.2%

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.



ANDROID / GYNOID (waist / hip)

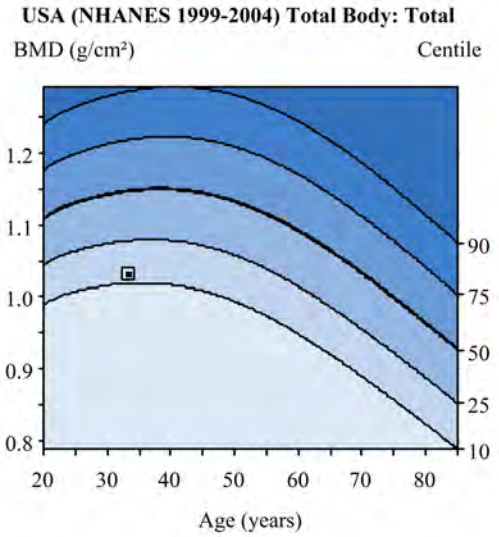
While Total Body %Fat will tell you more about your overall fitness than your weight alone, regional fat distribution tells you where the fat is located.

Android (waist) fat is often associated with apple-shaped body types.

Gynoid (hip) fat is often associated with pear-shaped body types.

Region	Tissue %Fat
Android:	18.2%
Gynoid:	38.2%
A/G Ratio:	0.47

BONE



Age	BMD (g/cm²)	T-score	Z-score	Centile
####	1.032	-	-1.1	13

A bone densitometry test helps your physician to diagnose osteoporosis. The test compares your Bone Mineral Density (BMD) to that of a "young adult" at peak bone strength, displayed as your T-score. It also compares your results to people of your same age, called "age-matched" displayed as your Z-score. This information, along with other factors, helps physicians assess your risk of osteoporotic fracture.

RESTING METABOLIC RATE (RMR)

Resting Metabolic Rate (RMR) is synonymous with Resting Energy Expenditure (REE) and is an estimate of how many calories you would burn if you were to do nothing but rest. It represents the minimum amount of energy needed to maintain body temperature, heartbeat, and respiratory rate.

RMR:	1,390 cal/day

RMR (Resting Metabolic Rate) based on Harris-Benedict equation.
RMR(female) = 655.0955 - (4.6756 x age[yrs]) + (9.5634 x weight[kg]) + (1.8496 x height[cm])
Harris JA, Benedict FG. A biometric study of basal metabolism in man. Washington, DC: Carnegie Institute of Washington, 1919. (Carnegie Institute of Washington Publication 279).

RELATIVE SKELETAL MUSCLE INDEX (RSMI)

RSMI represents the relative amount of muscle in the arms and legs.

RSMI:	5.92 kg/m²

RSMI (Relative Skeletal Muscle Index) based on Baumgartner equation.
RSMI = (lean mass of arms[kg] + lean mass of legs[kg]) / (height[m])²
Baumgartner RN, Koehler KM, Gallagher D, Romero L, Heymsfield SB, Ross RR, Garry PJ, Lindeman RD (1998) Epidemiology of sarcopenia among the elderly in New Mexico. Am J Epidermiol 147(8):755-763.

ASSESSMENT

Nutritional Evaluation

Protein:	☐ **Normal**	☐ **Deficient**
Mineral:	☐ **Normal**	☐ **Deficient**
Fat:	☐ **Normal**	☐ **Deficient**

Weight Management

Weight:	☐ **Normal**	☐ **Under**	☐ **Over**	
Lean:	☐ **Normal**	☐ **Under**	☐ **Strong**	
Fat:	☐ **Normal**	☐ **Under**	☐ **Over**	
Tissue %Fat:	☐ **Normal**	☐ **Under**	☐ **Obese**	☐ **Very Obese**
A/G Ratio:	☐ **Normal**	☐ **Under**	☐ **Obese**	☐ **Very Obese**
BMI:	☐ **Normal**	☐ **Underweight**	☐ **Overweight**	☐ **Obese**

Body Strength

Upper:	☐ **Normal**	☐ **Weak**	☐ **Developed**
Lower:	☐ **Normal**	☐ **Weak**	☐ **Developed**
Muscle:	☐ **Normal**	☐ **Weak**	☐ **Developed**

Comments

Lunar iDXA

GE Healthcare
3030 Ohmeda Drive
Madison, WI 53718
Phone: 608 221-1551

Body Composition - Lean Balance and Fat Distribution Report: Monday, February 18, 2013

CLIENT

Name: #### ####

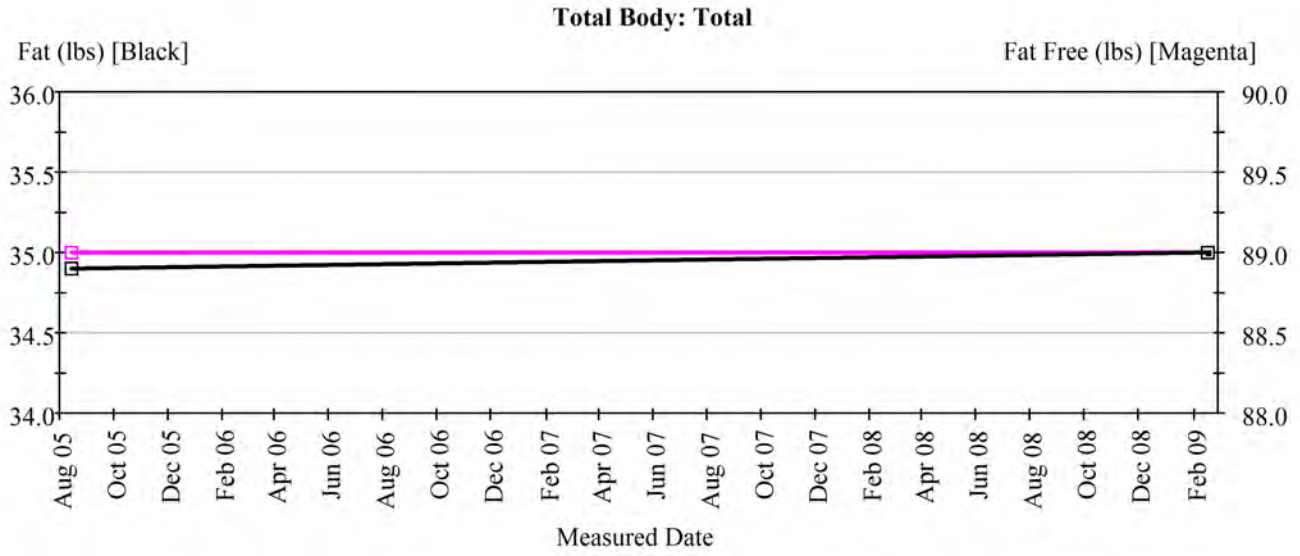
Age:	####	**Birth Date:**	####		
Sex:	####	**Height:**	####	**Patient ID:**	####
Ethnicity:	####	**Weight:**	####	**Measured:**	####

Lean Mass Balance

Lean mass balance is a comparison of your body's right to left lean mass symmetry. A lean mass difference close to zero indicates a balance of muscle. An injury, non-symmetrical training, or a health condition may cause disproportionate lean mass differences, but only your physician can determine if a health condition is the related cause.

Region	Measured Date	Age	Lean Mass Right (lbs)	Lean Mass Left (lbs)	Lean Mass Difference (lbs)
Arms:	####	####	4.8	4.2	0.6
Legs:	####	####	13.5	13.0	0.5
Trunk:	####	####	19.9	22.1	-2.2
Total:	####	####	41.7	42.2	-0.5

FAT DISTRIBUTION



Region	Measured Date	Age	Region (%Fat)	%Change vs. Previous	%Change vs. Baseline
Arms:	####	####	30.7	-	baseline
	####	####	32.1	1.4	1.4
Legs:	####	####	35.9	-	baseline
	####	####	36.3	0.4	0.4
Trunk:	####	####	23.2	-	baseline
	####	####	22.4	-0.8	-0.8
Android:	####	####	17.7	-	baseline
	####	####	17.9	0.2	0.2
Gynoid:	####	####	37.7	-	baseline
	####	####	37.3	-0.4	-0.4
Total:	####	####	28.2	-	baseline
	####	####	28.2	0.0	0.0

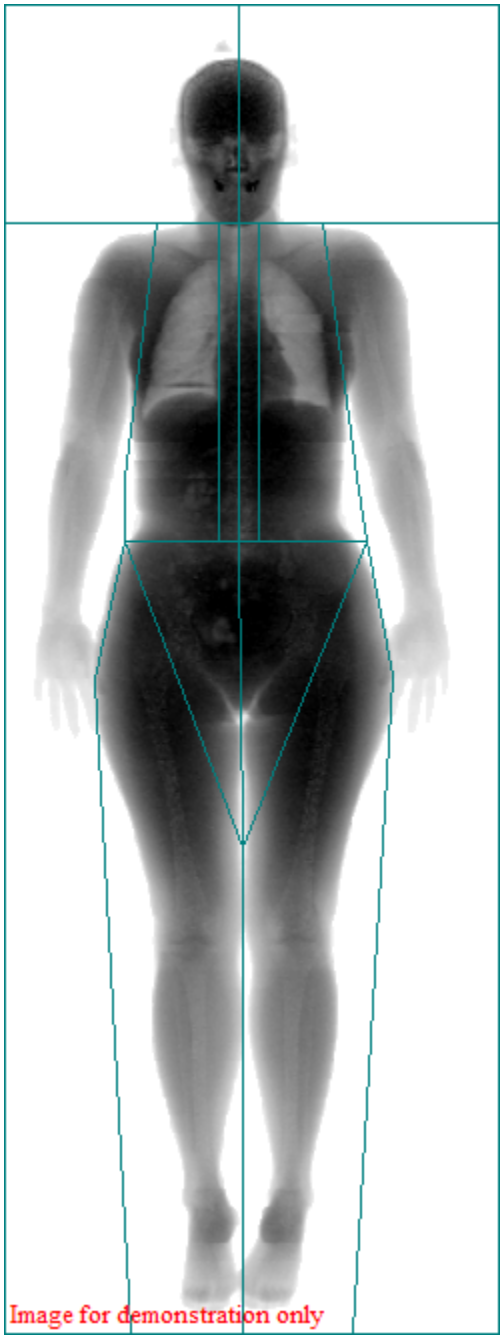


Image for demonstration only