## Simple data listing (first 5 obs)

SUBJID	LVMecho	LVMindex	EF	DiastLVdia	SystLVdia	RWT	LVH	EF3cat	FS
J521969									
J558060									
J100180			65					Normal	
J100537			65					Normal	
J100757			65					Normal	

## Univariate summary stats: categorical

### The FREQ Procedure

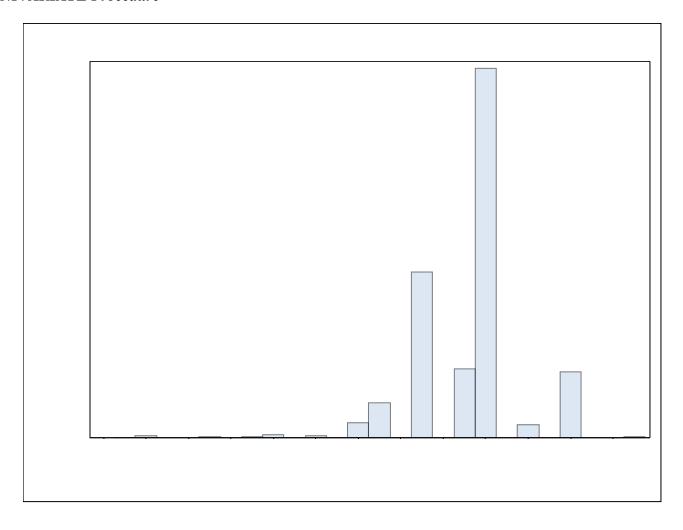
Left Ventricular Hypertrophy									
LVH	Frequency			Cumulative Percent					
	1905	35.90	1905	35.90					
Absent	3144	59.25	5049	95.16					
Present	257	4.84	5306	100.00					

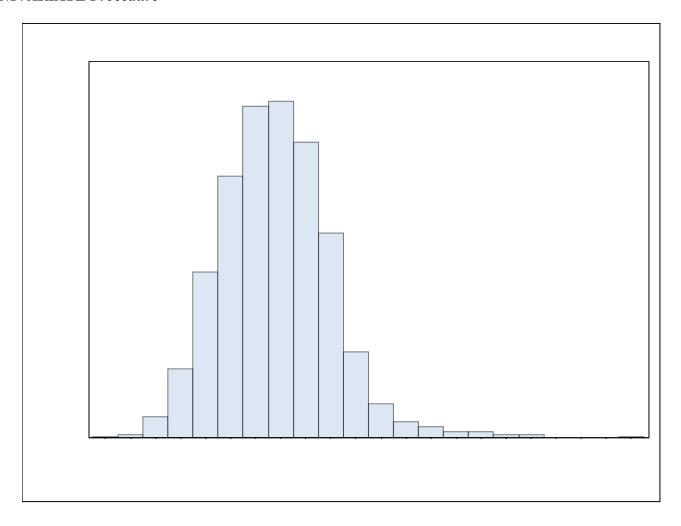
Ejection Fraction Categorization									
EF3cat	Frequency	Percent	Cumulative Frequency	Cumulative Percent					
•	253	4.77	253	4.77					
Normal	3527	66.47	3780	71.24					
Preserved	1477	27.84	5257	99.08					
Reduced	49	0.92	5306	100.00					

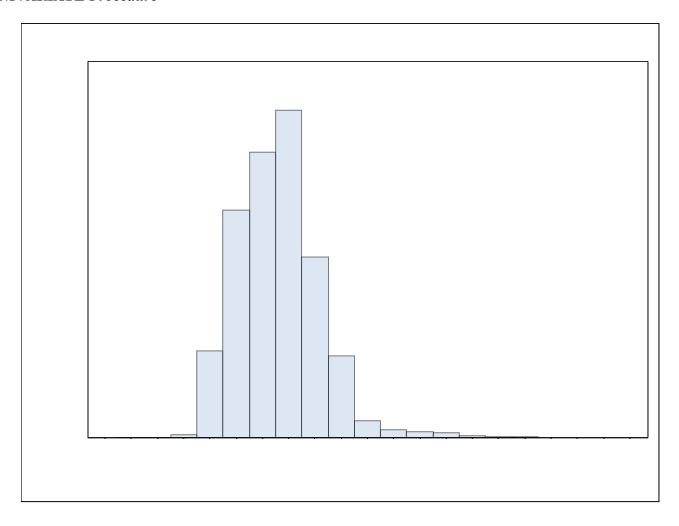
Fractional Shortening								
FS	Frequency	Percent	Cumulative Frequency	Cumulative Percent				
	1902	35.85	1902	35.85				
Normal	3226	60.80	5128	96.65				
Abnormal	178	3.35	5306	100.00				

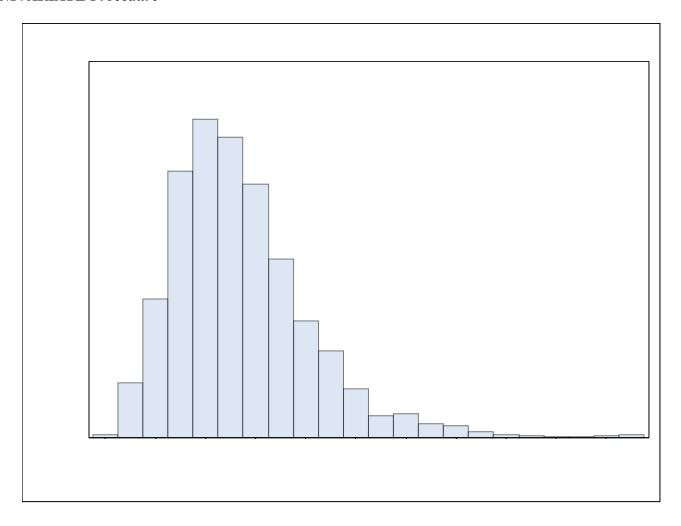
#### The MEANS Procedure

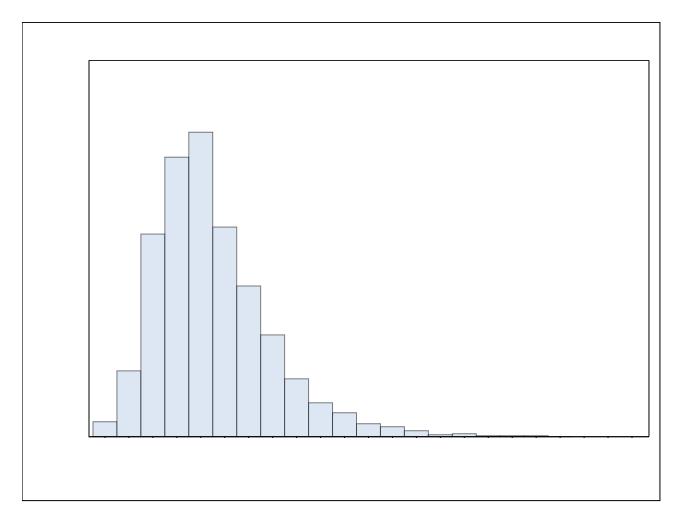
			N				
Variable	Label	N	Miss	Mean	Std Dev	Minimum	Maximum
LVMecho	Left Ventricular Mass (g) from Echo	3406	1900	149.04	41.63	66.40	384.23
LVMindex	Left Ventricular Mass Indexed by Height^2.7	3401	1905	36.09	9.88	16.41	106.81
EF	Ejection Fraction	5053	253	61.80	7.65	10.00	85.00
DiastLVdia	Diastolic LV Diameter (mm)	3408	1898	49.59	4.51	35.50	78.60
SystLVdia	Systolic LV Diameter (mm)	3404	1902	30.25	4.93	10.70	71.30
RWT	Relative Wall Thickness	3406	1900	0.35	0.06	0.15	0.90

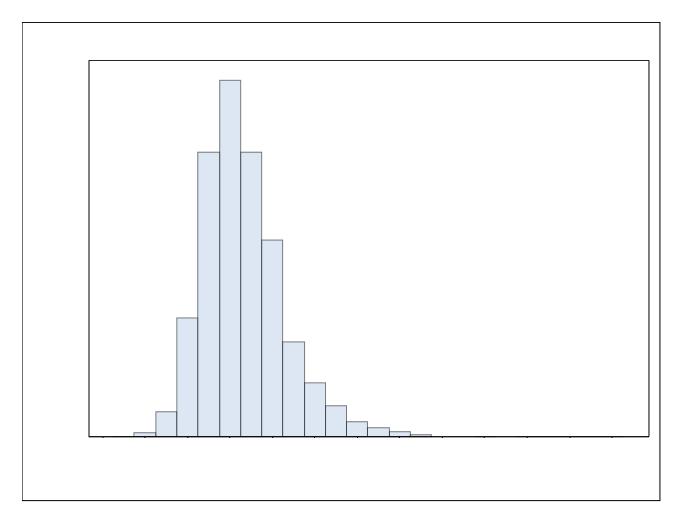












## the summary of EF by EF categories

#### The MEANS Procedure

Analysis Variable : EF Ejection Fraction								
Ejection Fraction N Categorization Obs N Mean Std Dev Minimum Maximum								
Normal	3527	3527	65.7924582	4.1477286	60.0000000	85.0000000		
Preserved	1477	1477	53.3920108	3.1725476	40.0000000	55.0000000		
Reduced	49	49	27.9591837	8.4112008	10.0000000	35.0000000		

# the summary of LVMindex by LVH categories

#### The MEANS Procedure

Analysis Variable : LVMindex Left Ventricular Mass Indexed by Height^2.7								
Left Ventricular Hypertrophy	N Obs	N	Mean	Std Dev	Minimum	Maximum		
Absent	3144	3144	34.1557102	7.0100107	16.4131118	50.9524497		
Present	257	257	59.8085982	9.0131635	51.0130684	106.8054345		

# the summary of LVMindex by LVH categories

### The FREQ Procedure

Table	Table of EF3cat by LVH							
EF3cat(Ejection Fraction Categorization)	LVH(Left Ventricular Hypertrophy)							
Frequency Percent Row Pct Col Pct	. Absent Present Total							
•	238 4.49 94.07 12.49	15 0.28 5.93 0.48	0 0.00 0.00 0.00	253 4.77				
Normal	1111 20.94 31.50 58.32	2253 42.46 63.88 71.66	163 3.07 4.62 63.42	3527 66.47				
Preserved	538 10.14 36.43 28.24	865 16.30 58.56 27.51	74 1.39 5.01 28.79	1477 27.84				
Reduced	18 0.34 36.73 0.94	11 0.21 22.45 0.35	20 0.38 40.82 7.78	49 0.92				
Total	1905 35.90	3144 59.25	257 4.84	5306 100.00				

# the summary of LVMindex by LVH categories

### The FREQ Procedure

Table o	Table of EF3cat by HTN							
EF3cat(Ejection Fraction Categorization)	HTN(Hypertension Status)							
Frequency Percent Row Pct Col Pct	. No Yes Total							
•	2 0.04 0.79 100.00	117 2.21 46.25 5.07	134 2.53 52.96 4.47	253 4.77				
Normal	0 0.00 0.00 0.00	1479 27.87 41.93 64.08	2048 38.60 58.07 68.36	3527 66.47				
Preserved	0 0.00 0.00 0.00	704 13.27 47.66 30.50	773 14.57 52.34 25.80	1477 27.84				
Reduced	0 0.00 0.00 0.00	8 0.15 16.33 0.35	41 0.77 83.67 1.37	49 0.92				
Total	2 0.04	2308 43.50	2996 56.46	5306 100.00				

#### The UNIVARIATE Procedure Variable: RWT (Relative Wall

Thickness)

Moments								
N	3406	Sum Weights	3406					
Mean	0.34906662	<b>Sum Observations</b>	1188.92091					
<b>Std Deviation</b>	0.05859158	Variance	0.00343297					
Skewness	1.16990894	Kurtosis	3.9962409					
<b>Uncorrected SS</b>	426.701878	Corrected SS	11.689273					
<b>Coeff Variation</b>	16.7852135	Std Error Mean	0.00100395					

	Basic Statistical Measures							
Location Variability								
Mean	0.349067	<b>Std Deviation</b>	0.05859					
Median	0.340469	Variance	0.00343					
Mode	0.333333	Range	0.75423					
		Interquartile Range	0.07155					

Tests for Location: Mu0=0								
Test	est Statistic		p Val	ue				
Student's t	t	347.6926	Pr >  t	<.0001				
Sign	M	1703	Pr >=  M	<.0001				
Signed Rank	S	2901061	Pr >=  S	<.0001				

<b>Quantiles (Definition 5)</b>		
Level	Quantile	
100% Max	0.900538	
99%	0.528345	
95%	0.454762	
90%	0.423077	
75% Q3	0.380435	
50% Median	0.340469	
25% Q1	0.308880	
10%	0.284895	
5%	0.271318	

#### The UNIVARIATE Procedure Variable: RWT (Relative Wall Thickness)

Quantiles (Definition 5)		
Level	Quantile	
1%	0.243902	
0% Min	0.146310	

<b>Extreme Observations</b>				
Lowe	st	Highe	est	
Value	Obs	Value Obs		
0.146310	4961	0.604651	2364	
0.199229	4901	0.625000	2754	
0.208464	995	0.651054	2940	
0.209335	2859	0.715026	2964	
0.210370	42	0.900538	3460	

Missing Values			
		Percent Of	
Missing Value	Count	All Obs	Missing Obs
	1900	35.81	100.00

#### The UNIVARIATE Procedure

Variable: EF (Ejection

Fraction)

Moments			
N	5053	Sum Weights	5053
Mean	61.8009104	<b>Sum Observations</b>	312280
<b>Std Deviation</b>	7.65007822	Variance	58.5236967
Skewness	-1.027955	Kurtosis	4.28669571
<b>Uncorrected SS</b>	19594850	Corrected SS	295661.716
<b>Coeff Variation</b>	12.378585	Std Error Mean	0.10761956

Basic Statistical Measures			
Location Variability			
Mean	61.80091	<b>Std Deviation</b>	7.65008
Median	65.00000	Variance	58.52370
Mode	65.00000	Range	75.00000
		Interquartile Range	10.00000

Tests for Location: Mu0=0				
Test	Statistic p Value			
Student's t	t	574.2535	<b>Pr</b> >  t	<.0001
Sign	M	2526.5	Pr >=  M	<.0001
Signed Rank	S	6384466	Pr >=  S	<.0001

<b>Quantiles (Definition 5)</b>		
Level	Quantile	
100% Max	85	
99%	75	
95%	75	
90%	70	
75% Q3	65	
50% Median	65	
25% Q1	55	
10%	55	
5%	50	

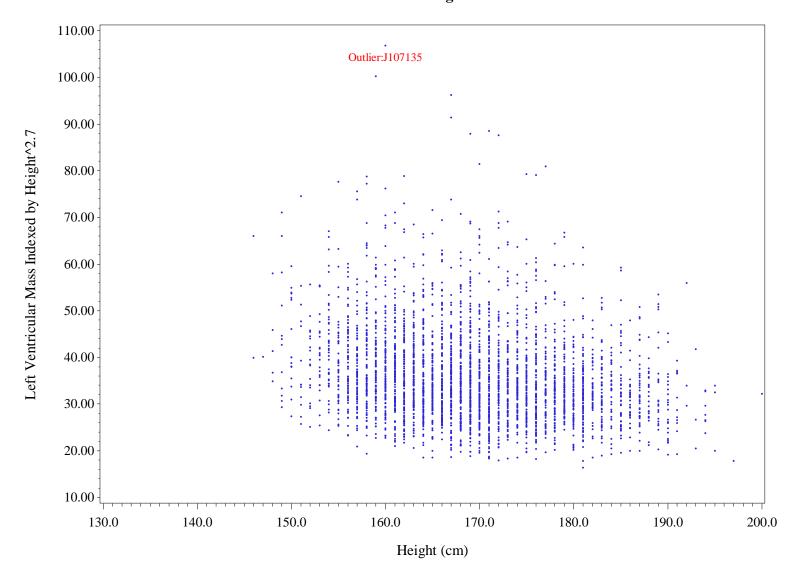
#### The UNIVARIATE Procedure Variable: EF (Ejection Fraction)

<b>Quantiles (Definition 5)</b>	
Level	Quantile
1%	40
0% Min	10

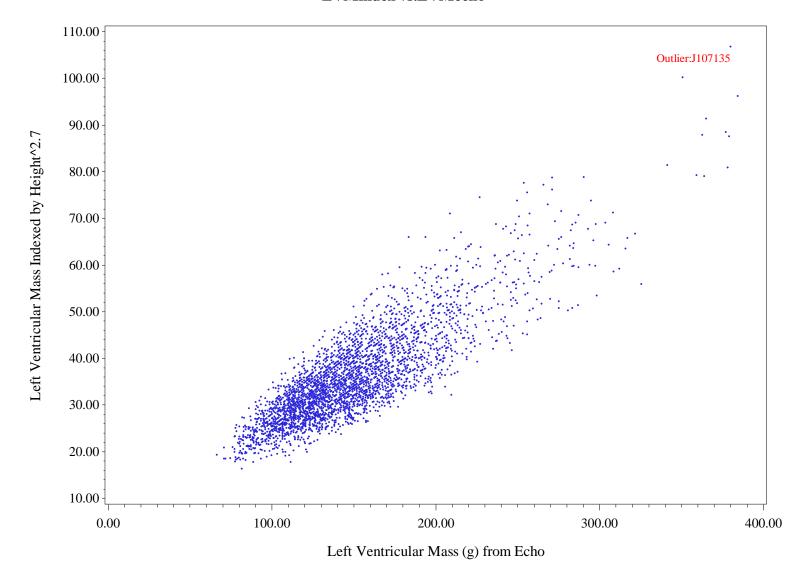
<b>Extreme Observations</b>				
Low	est	High	est	
Value	Obs	Value Obs		
10	4900	85	3344	
15	4961	85	3460	
15	4901	85	3500	
15	4555	85	3971	
15	3882	85	3994	

Missing Values				
		Percent Of		
Missing	Count	All Oba	Missing Obs	
vaiue	Count	All Obs	Obs	
•	253	4.77	100.00	

#### LVMindex vs.height



#### LVMindex vs.LVMecho



Diastolic LV Diameter (mm) vs. Systolic LV Diameter (mm) break down by FS status

M-mode diastolic IV septum thickness (mm) vs. M-mode diastolic posterior wall thickness (mm)

M-mode diastolic IV septum thickness(mm) vs. Relative Wall Thickness(RWT)

$\label{eq:mode_mode} \mbox{M-mode diastolic posterior wall thickness} (mm) \ vs. \ Relative \ Wall \ Thickness (RWT)$