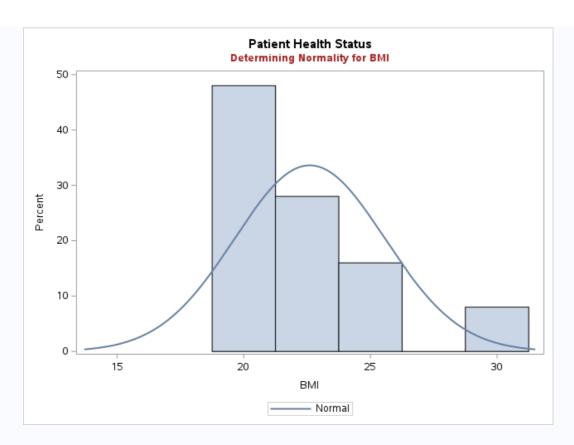
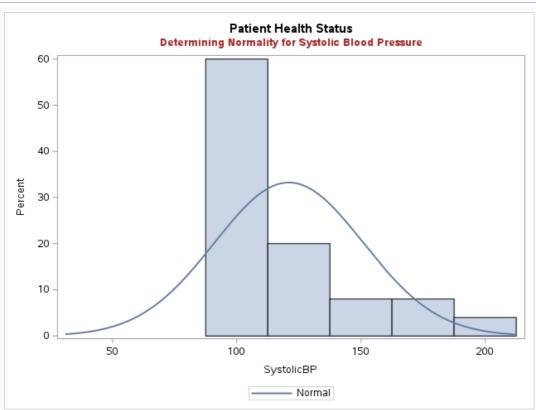
## **Patient Health Status**

Obs	Name	Diabetes	SystolicBP	DiastolicBP	CVD	Smoking	MealsADay	Vegetarian	Height	Weight	ВМІ	WeightStatus	Gender	Age	MaritalStatus
1	Joanne	No	115	70	No	No	3	Yes	1.65	58	21.3	Normal weight	Female	45	Married
2	Mary	No	105	65	No	No	3	No	1.49	45	20.3	Normal weight	Female	60	Married
3	Lynda	No	100	65	No	No	3	Yes	1.65	58	21.3	Normal weight	Female	29	Single
4	Edward	No	100	65	No	No	3	No	1.76	65	20.98	Normal weight	Male	35	Married
5	Mia	No	105	65	No	No	3	No	1.49	45	20.3	Normal weight	Female	31	Married
6	Keith	No	129	84	No	Yes	3	Yes	1.8	73	22.5	Normal weight	Male	28	Married
7	Jake	Yes	111	75	No	Yes	4	Yes	1.76	80	25.8	Obese	Male	52	Married
8	Kelvin	No	100	65	No	No	3	No	1.76	65	20.98	Normal weight	Male	43	Single
9	Richard	No	102	66	No	No	3	Yes	1.82	77	23.25	Normal weight	Male	47	Married
10	Lily	Yes	210	120	Yes	Yes	4	Yes	1.64	75	30.43	Obese	Female	51	Married
11	Janet	No	115	70	No	Yes	3	No	1.57	52	21.1	Normal weight	Female	61	Married
12	Anna	No	105	65	No	No	3	No	1.49	45	20.3	Normal weight	Female	45	Married
13	Steven	Yes	179	109	Yes	Yes	3	Yes	1.82	84	25.4	Overweight	Male	39	Married
14	Oscar	Yes	180	110	Yes	Yes	6	Yes	1.6	78	30.46	Obese	Male	44	Married
15	Billie	No	100	65	No	No	3	No	1.76	65	20.98	Normal weight	Female	35	Single
16	Adele	Yes	159	109	Yes	Yes	4	Yes	1.57	62	25.15	Overweight	Female	53	Single
17	Lee	Yes	145	100	Yes	Yes	4	Yes	1.69	73	25.56	Overweight	Male	48	Married
18	Sam	No	100	65	No	No	3	No	1.76	65	20.98	Normal weight	Male	37	Married
19	Queine	No	100	65	No	No	3	No	1.65	58	21.3	Normal weight	Female	30	Single
20	Jen	No	108	62	No	No	3	No	1.55	59	20.4	Normal weight	Female	25	Single
21	Samuel	No	112	68	No	No	3	Yes	1.75	75	22.6	Normal weight	Male	22	Married
22	Dora	No	105	65	No	No	3	No	1.49	45	20.3	Normal weight	Female	36	Married
23	Terance	No	105	65	No	No	3	No	1.49	45	20.3	Normal weight	Male	52	Married
24	Chloe	No	120	80	No	Yes	2	Yes	1.7	66	22.84	Normal weight	Female	45	Married
25	Kendall	No	115	70	No	No	3	No	1.72	69	20.3	Normal weight	Male	24	Single





#### Patient Health Status Shapiro-Wilk Test

The UNIVARIATE Procedure Variable: BMI (BMI)

Moments							
N	25	Sum Weights	25				
Mean	22.6044	Sum Observations	565.11				
Std Deviation	2.96732073	Variance	8.80499233				
Skewness	1.64632598	Kurtosis	2.16112791				
Uncorrected SS	12985.2923	Corrected SS	211.319816				

Moments						
Coeff Variation	13.127182	Std Error Mean	0.59346415			

	Basic Statistical Measures							
Loc	ation	Variability						
Mean	22.60440	Std Deviation	2.96732					
Median	21.30000	Variance	8.80499					
Mode	20.30000	Range	10.16000					
		Interquartile Range	2.85000					

Tests for Location: Mu0=0						
Test	Statistic p Value					
Student's t	t	38.08891	Pr >  t	<.0001		
Sign	М	12.5	Pr >=  M	<.0001		
Signed Rank	s	162.5	Pr >=  S	<.0001		

Tests for Normality						
Test Statistic p Value						
Shapiro-Wilk	w	0.75748	Pr < W	<0.0001		
Kolmogorov-Smirnov	D	0.269882	Pr > D	<0.0100		
Cramer-von Mises	W-Sq	0.378118	Pr > W-Sq	<0.0050		
Anderson-Darling	A-Sq	2.189062	Pr > A-Sq	<0.0050		

Quantiles (Definition 5)				
Level	Quantile			
100% Max	30.46			
99%	30.46			
95%	30.43			
90%	25.80			
75% Q3	23.25			
50% Median	21.30			
25% Q1	20.40			
10%	20.30			
5%	20.30			
1%	20.30			
0% Min	20.30			

Extreme Observations						
Low	est	Highest				
Value	Obs	Value	Obs			
20.3	25	25.40	13			
20.3	23	25.56	17			
20.3	22	25.80	7			
20.3	12	30.43	10			
20.3	5	30.46	14			

#### Patient Health Status Shapiro-Wilk Test

The UNIVARIATE Procedure Variable: SystolicBP (SystolicBP)

Moments							
N	25	Sum Weights	25				
Mean	121	Sum Observations	3025				
Std Deviation	29.9972221	Variance	899.833333				
Skewness	1.82415806	Kurtosis	2.55225062				
Uncorrected SS	387621	Corrected SS	21596				
Coeff Variation	24.7910926	Std Error Mean	5.99944442				

Basic Statistical Measures							
Loc	ation	Variability					
Mean	121.0000	Std Deviation	29.99722				
Median	108.0000	Variance	899.83333				
Mode	100.0000	Range	110.00000				

Basic Statistical Measures						
Location	Variability					
	Interquartile Range	18.00000				

Tests for Location: Mu0=0						
Test	Statistic p Value					
Student's t	t	20.16853	Pr >  t	<.0001		
Sign	М	12.5	Pr >=  M	<.0001		
Signed Rank	S	162.5	Pr >=  S	<.0001		

Tests for Normality						
Test	Statistic p Value					
Shapiro-Wilk	W	0.713657	Pr < W	<0.0001		
Kolmogorov-Smirnov	D	0.299267	Pr > D	<0.0100		
Cramer-von Mises	W-Sq	0.546547	Pr > W-Sq	<0.0050		
Anderson-Darling	A-Sq	2.887321	Pr > A-Sq	<0.0050		

Quantiles (Definition 5)				
Level	Quantile			
100% Max	210			
99%	210			
95%	180			
90%	179			
75% Q3	120			
50% Median	108			
25% Q1	102			
10%	100			
5%	100			
1%	100			
0% Min	100			

Extreme Observations						
Low	Lowest		est			
Value	Obs	Value	Obs			
100	19	145	17			
100	18	159	16			
100	15	179	13			
100	8	180	14			
100	4	210	10			

# **Patient Health Status**

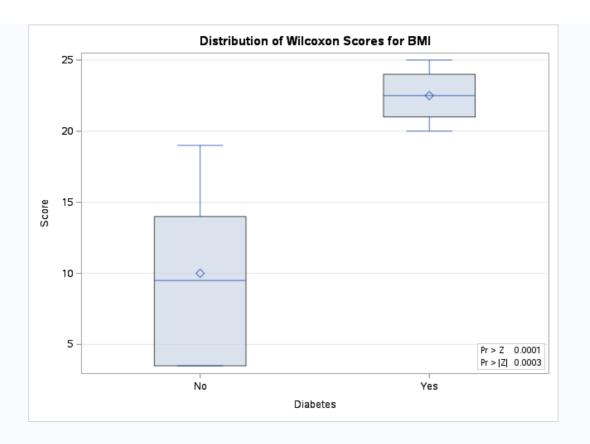
Difference between 2 Independent Population

# Wilcoxon Rank Sum Test

Wilcoxon Scores (Rank Sums) for Variable BMI Classified by Variable Diabetes							
Diabetes N Scores Under H0 Under H0 Score							
No	19	190.0	247.0	15.567434	10.00		
Yes 6 135.0 78.0 15.567434 22.50							
Average scores were used for ties.							

Wilcoxon Two-Sample Test								
t Approximation Exact					Exact			
Statistic (S)	Z	Pr > Z	Pr >  Z	Pr > Z	Pr >  Z	Pr >= S	Pr >=  S-Mean	
135.0000	3.6294	0.0001	0.0003	0.0007	0.0013	<.0001	<.0001	
Z includes a continuity correction of 0.5.								

Kruskal-Wallis Test					
Chi-Square DF Pr > ChiSq					
13.4065	1	0.0003			

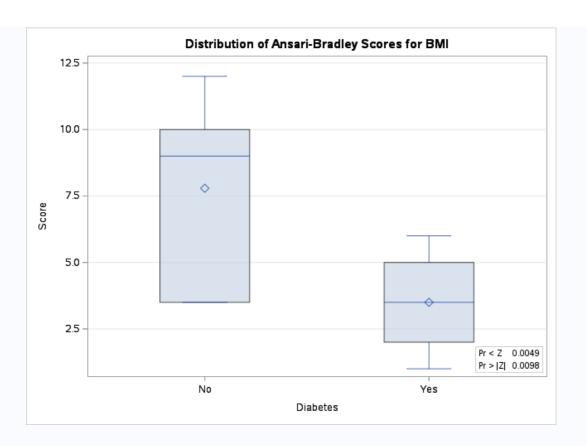


Patient Health Status
Difference between 2 Independent Population
Ansari-Bradley Test

Ansari-Bradley Scores for Variable BMI Classified by Variable Diabetes							
Diabetes N Scores Under H0 Under H0 Score							
No	19	148.0	128.440	7.575711	7.789474		
Yes 6 21.0 40.560 7.575711 3.500000							
Average scores were used for ties.							

Ansari-Bradley Two-Sample Test					
Statistic	Z	Pr < Z	Pr >  Z		
21.0000	-2.5819	0.0049	0.0098		

Ansari-Bradley One-Way Analysis						
Chi-Square	DF	Pr > ChiSq				
6.6664	1	0.0098				



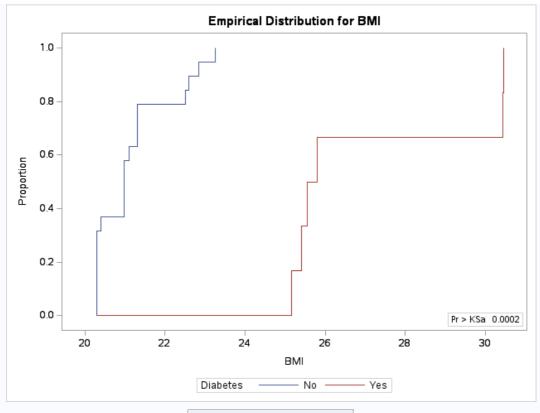
Patient Health Status
Difference between 2 Independent Population

# **Kolmogorov-Smirnov Test**

Kolmogorov-Smirnov Test for Variable BMI Classified by Variable Diabetes					
Diabetes N Maximum Diabetes N Maximum					
No	19	1.000	1.046136		
Yes	6	0.000	-1.861612		
<b>Total</b> 25 0.760					
Maximum Deviation Occurred at Observation 9					
Value of BMI at Maximum = 23.250					

KS	0.4271	KSa	2.1354

Kolmogorov-Smirnov Two-S	Kolmogorov-Smirnov Two-Sample Test					
D = max  F1 - F2	1.0000					
Asymptotic Pr > D	0.0002					
Exact Pr >= D	<.0001					
D+ = max (F1 - F2)	1.0000					
Asymptotic Pr > D+	0.0001					
Exact Pr >= D+	<.0001					
D- = max (F2 - F1)	0.0000					
Asymptotic Pr > D-	1.0000					
Exact Pr >= D-	1.0000					



		s Test for Variable BMI Variable Diabetes
Diabetes	N	Summed Deviation from Mean
No	19	0.406174
Yes	6	1.286219

-	Cramer-von Mises Statistics (Asymptotic)				
	CM	0.067696	CMa	1.692393	

	Variable BMI able Diabetes	
Diabetes	N	Deviation from Mean
No	19	1.0
Yes	6	0.0

Kuiper Two-Sample Test (Asymptotic)							
K 1.000000 Ka 2.135416 Pr > Ka 0.0038							

#### **Patient Health Status**

Difference between 3 or More Independent Population Kruskal-Wallis Test

Wilcoxon Scores (Rank Sums) for Variable SystolicBP Classified by Variable WeightStatus							
WeightStatus	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score		
Normal weight	19	196.0	247.0	15.536892	10.315789		
Obese	3	63.0	39.0	11.821802	21.000000		
Overweight         3         66.0         39.0         11.821802         22.0000							
Average scores were used for ties.							

Kruskal-Wallis Test						
Chi-Square	DF	Pr > ChiSq	Exact Pr >= ChiSq			
10.8032	2	0.0045	0.0003			



### Patient Health Status Testing Correlations

## **Spearman's Correlation Test**

# The CORR Procedure

5 Variables: Age MealsADay SystolicBP DiastolicBP BMI

Simple Statistics								
Variable N Mean Std Dev Median Minimum Maximum Label								
Age	25	40.68000	11.08197	43.00000	22.00000	61.00000	Age	
MealsADay	25	3.24000 0.72342 121.00000 29.99722	0.72342	3.00000	2.00000	6.00000	MealsADay	
SystolicBP	25		29.99722	108.00000	100.00000	210.00000	SystolicBP	
DiastolicBP	25	76.32000	17.93906	66.00000	62.00000	120.00000	DiastolicBP	
ВМІ	25	22.60440	2.96732	21.30000	20.30000	30.46000	BMI	

Spearman Correlation Coefficients, N = 25 Prob >  r  under H0: Rho=0							
	Age	MealsADay	SystolicBP	DiastolicBP	ВМІ		
Age	1.00000	0.35707	0.27655	0.33923	0.24160		
Age		0.0797	0.1808	0.0971	0.2446		
MealsADay	0.35707	1.00000	0.45741	0.52890	0.56518		
MealsADay	0.0797		0.0215	0.0066	0.0032		
SystolicBP	0.27655	0.45741	1.00000	0.87072	0.57384		
SystolicBP	0.1808	0.0215		<.0001	0.0027		
DiastolicBP	0.33923	0.52890	0.87072	1.00000	0.79954		
DiastolicBP	0.0971	0.0066	<.0001		<.0001		
BMI	0.24160	0.56518	0.57384	0.79954	1.00000		
BMI	0.2446	0.0032	0.0027	<.0001			

# **Patient Health Status**

**Testing Goodness of Fit** 

**Chi-Square Test** 

The FREQ Procedure

Frequency
Percent
Row Pct
Col Pct

Table of Gender by Vegetarian							
	Vegetarian(Vegetarian)						
Gender(Gender)	No Yes Total						
Female	8 5 13 32.00 20.00 52.00 61.54 38.46						

Table of Gender by Vegetarian						
	Vegetarian(Vegetarian)					
Gender(Gender)	No Yes Total					
	61.54	41.67				
Male	5 20.00 41.67 38.46	7 28.00 58.33 58.33	12 48.00			
Total	13 52.00	12 48.00	25 100.00			

#### Statistics for Table of Gender by Vegetarian

Statistic	DF	Value	Prob
Chi-Square	1	0.9872	0.3204
Likelihood Ratio Chi-Square	1	0.9935	0.3189
Continuity Adj. Chi-Square	1	0.3516	0.5532
Mantel-Haenszel Chi-Square	1	0.9477	0.3303
Phi Coefficient		0.1987	
Contingency Coefficient		0.1949	
Cramer's V		0.1987	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	8
Left-sided Pr <= F	0.9188
Right-sided Pr >= F	0.2772
Table Probability (P)	0.1960
Two-sided Pr <= P	0.4338

Sample Size = 25