Obs	studyid	usubjid	siteid	subjid	domain	rfstdtc	brthdtc	dmdtc	age	ageu
1	XT802	802101002	101	802101002	DM	2003-01-10T18:40	1950-01-30	2003-01-10	52	YEARS
2	XT802	802101004	101	802101004	DM	2003-02-24T11:01	1967-03-16	2003-02-24	35	YEARS
3	XT802	802101006	101	802101006	DM	2003-02-25T10:30	1977-11-16	2003-02-25	25	YEARS
4	XT802	802101008	101	802101008	DM	2003-03-02T12:33	1949-05-14	2003-03-02	53	YEARS
5	XT802	802101010	101	802101010	DM	2003-03-03T12:43	1955-04-29	2003-03-03	47	YEARS
6	XT802	802101001	101	802101001	DM	2003-01-10T12:52	1975-02-26	2003-01-10	27	YEARS
7	XT802	802101003	101	802101003	DM	2003-02-24T17:00	1944-02-21	2003-02-24	59	YEARS
8	XT802	802101005	101	802101005	DM	2003-02-24T12:51	1964-01-22	2003-02-24	38	YEARS
9	XT802	802101007	101	802101007	DM	2003-03-01T19:42	1969-06-22	2003-03-01	33	YEARS
10	XT802	802101009	101	802101009	DM	2003-03-03T19:13	1971-02-24	2003-03-03	31	YEARS

Obs	dmdy	country	arm	armcd	sex	rfendtc	race
1	1	United States	Drug A	0	F	2003-04-11T12:33	CAUCASIAN
2	1	United States	Drug A	0	M	2003-05-12T11:33	CAUCASIAN
3	1	United States	Drug A	0	M	2003-05-25T15:33	CAUCASIAN
4	1	United States	Drug A	0	M	2003-06-12T12:52	CAUCASIAN
5	1	United States	Drug A	0	F	2003-05-12T20:42	CAUCASIAN
6	1	United States	Drug B	1	M	2003-04-12T10:00	CAUCASIAN
7	1	United States	Drug B	1	M	2003-05-22T13:25	CAUCASIAN
8	1	United States	Drug B	1	M	2003-06-04T14:47	CAUCASIAN
9	1	United States	Drug B	1	F	2003-06-04T11:47	CAUCASIAN
10	1	United States	Drug B	1	M	2003-04-02T21:12	CAUCASIAN

Obs	studyid	usubjid	siteid	subjid	domain	rfstdtc	brthdtc	dmdtc	age	ageu
1	XT802	802101002	101	802101002	DM	2003-01-10T18:40	1950-01-30	2003-01-10	52	YEARS
2	XT802	802101004	101	802101004	DM	2003-02-24T11:01	1967-03-16	2003-02-24	35	YEARS
3	XT802	802101006	101	802101006	DM	2003-02-25T10:30	1977-11-16	2003-02-25	25	YEARS
4	XT802	802101008	101	802101008	DM	2003-03-02T12:33	1949-05-14	2003-03-02	53	YEARS
5	XT802	802101010	101	802101010	DM	2003-03-03T12:43	1955-04-29	2003-03-03	47	YEARS
6	XT802	802101001	101	802101001	DM	2003-01-10T12:52	1975-02-26	2003-01-10	27	YEARS
7	XT802	802101003	101	802101003	DM	2003-02-24T17:00	1944-02-21	2003-02-24	59	YEARS
8	XT802	802101005	101	802101005	DM	2003-02-24T12:51	1964-01-22	2003-02-24	38	YEARS
9	XT802	802101007	101	802101007	DM	2003-03-01T19:42	1969-06-22	2003-03-01	33	YEARS
10	XT802	802101009	101	802101009	DM	2003-03-03T19:13	1971-02-24	2003-03-03	31	YEARS

Obs	dmdy	country	arm	armcd	sex	rfendtc	race
1	1	United States	Drug A	0	F	2003-04-11T12:33	CAUCASIAN
2	1	United States	Drug A	0	M	2003-05-12T11:33	CAUCASIAN
3	1	United States	Drug A	0	M	2003-05-25T15:33	CAUCASIAN
4	1	United States	Drug A	0	M	2003-06-12T12:52	CAUCASIAN
5	1	United States	Drug A	0	F	2003-05-12T20:42	CAUCASIAN
6	1	United States	Drug B	1	M	2003-04-12T10:00	CAUCASIAN
7	1	United States	Drug B	1	M	2003-05-22T13:25	CAUCASIAN
8	1	United States	Drug B	1	M	2003-06-04T14:47	CAUCASIAN
9	1	United States	Drug B	1	F	2003-06-04T11:47	CAUCASIAN
10	1	United States	Drug B	1	M	2003-04-02T21:12	CAUCASIAN

The FREQ Procedure

Planned Arm Code=0

Frequency Percent Row Pct Col Pct	Table of sex by race	
	race(Race)	
sex(Sex)	CAUCASIAN	Total
F	2 40.00 100.00 40.00	2 40.00
M	3 60.00 100.00 60.00	3 60.00
Total	5 100.00	5 100.00

The FREQ Procedure

Planned Arm Code=1

Frequency Percent Row Pct Col Pct	Table of sex by race	
	race(Race)	
sex(Sex)	CAUCASIAN	Total
F	1 20.00 100.00 20.00	1 20.00
M	4 80.00 100.00 80.00	4 80.00
Total	5 100.00	5 100.00

Obs	armcd	sex	race	COUNT	PERCENT	PCT_ROW	PCT_COL
1	0	F	CAUCASIAN	2	40	100	40
2	0	M	CAUCASIAN	3	60	100	60
3	1	F	CAUCASIAN	1	20	100	20
4	1	M	CAUCASIAN	4	80	100	80

The FREQ Procedure

Planned Arm Code=0

Frequency Percent Row Pct Col Pct	Table of sex by race	
	race(Race)	
sex(Sex)	CAUCASIAN	Total
F	2 40.00 100.00 40.00	2 40.00
M	3 60.00 100.00 60.00	3 60.00
Total	5 100.00	5 100.00

The FREQ Procedure

Planned Arm Code=1

Frequency Percent Row Pct Col Pct	Table of sex by race	
	race(Race)	
sex(Sex)	CAUCASIAN	Total
F	1 20.00 100.00 20.00	1 20.00
M	4 80.00 100.00 80.00	4 80.00
Total	5 100.00	5 100.00

Obs	armcd	Table	sex	race	_TYPE_	_TABLE_	Frequency	Percent	RowPercent	ColPercent	Missing
1	0	Table sex * race	F	CAUCASIAN	11	1	2	40.00	100.00	40.00	.
2	0	Table sex * race	F		10	1	2	40.00	.	.	.
3	0	Table sex * race	M	CAUCASIAN	11	1	3	60.00	100.00	60.00	.
4	0	Table sex * race	M		10	1	3	60.00	.	.	.
5	0	Table sex * race		CAUCASIAN	01	1	5	100.00	.	.	.
6	0	Table sex * race			00	1	5	100.00	.	.	0
7	1	Table sex * race	F	CAUCASIAN	11	1	1	20.00	100.00	20.00	.
8	1	Table sex * race	F		10	1	1	20.00	.	.	.
9	1	Table sex * race	M	CAUCASIAN	11	1	4	80.00	100.00	80.00	.
10	1	Table sex * race	M		10	1	4	80.00	.	.	.
11	1	Table sex * race		CAUCASIAN	01	1	5	100.00	.	.	.
12	1	Table sex * race			00	1	5	100.00	.	.	0

The UNIVARIATE Procedure
Variable: age (Age in AGEU at Reference Date/Time)

Planned Arm Code=0

Moments			
N	5	**Sum Weights**	5
Mean	42.4	**Sum Observations**	212
Std Deviation	12.0747671	**Variance**	145.8
Skewness	-0.8284005	**Kurtosis**	-1.165501
Uncorrected SS	9572	**Corrected SS**	583.2
Coeff Variation	28.4782242	**Std Error Mean**	5.4

Basic Statistical Measures			
Location		**Variability**	
Mean	42.40000	**Std Deviation**	12.07477
Median	47.00000	**Variance**	145.80000
Mode	.	**Range**	28.00000
		Interquartile Range	17.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	7.851852	**Pr > |t|**	0.0014
Sign	**M**	2.5	**Pr >= |M|**	0.0625
Signed Rank	**S**	7.5	**Pr >= |S|**	0.0625

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	53
99%	53
95%	53
90%	53
75% Q3	52
50% Median	47
25% Q1	35
10%	25
5%	25
1%	25
0% Min	25

The UNIVARIATE Procedure
Variable: age (Age in AGEU at Reference Date/Time)

Planned Arm Code=0

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
25	3	25	3
35	2	35	2
47	5	47	5
52	1	52	1
53	4	53	4

The UNIVARIATE Procedure
Variable: age (Age in AGEU at Reference Date/Time)

Planned Arm Code=1

Moments			
N	5	**Sum Weights**	5
Mean	37.6	**Sum Observations**	188
Std Deviation	12.6015872	**Variance**	158.8
Skewness	1.7124807	**Kurtosis**	3.13799497
Uncorrected SS	7704	**Corrected SS**	635.2
Coeff Variation	33.5148596	**Std Error Mean**	5.63560112

Basic Statistical Measures			
Location		**Variability**	
Mean	37.60000	**Std Deviation**	12.60159
Median	33.00000	**Variance**	158.80000
Mode	.	**Range**	32.00000
		Interquartile Range	7.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	6.67187	**Pr > |t|**	0.0026
Sign	**M**	2.5	**Pr >= |M|**	0.0625
Signed Rank	**S**	7.5	**Pr >= |S|**	0.0625

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	59
99%	59
95%	59
90%	59
75% Q3	38
50% Median	33
25% Q1	31
10%	27
5%	27
1%	27
0% Min	27

The UNIVARIATE Procedure
Variable: age (Age in AGEU at Reference Date/Time)

Planned Arm Code=1

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
27	6	27	6
31	10	31	10
33	9	33	9
38	8	38	8
59	7	59	7

Obs	armcd	AGEMEAN	AGESKEWNESS	AGEKURTOSIS	AGEMAX	AGEMEDIAN	AGEMIN
1	0	42.4	-0.82840	-1.16550	53	47	25
2	1	37.6	1.71248	3.13799	59	33	27

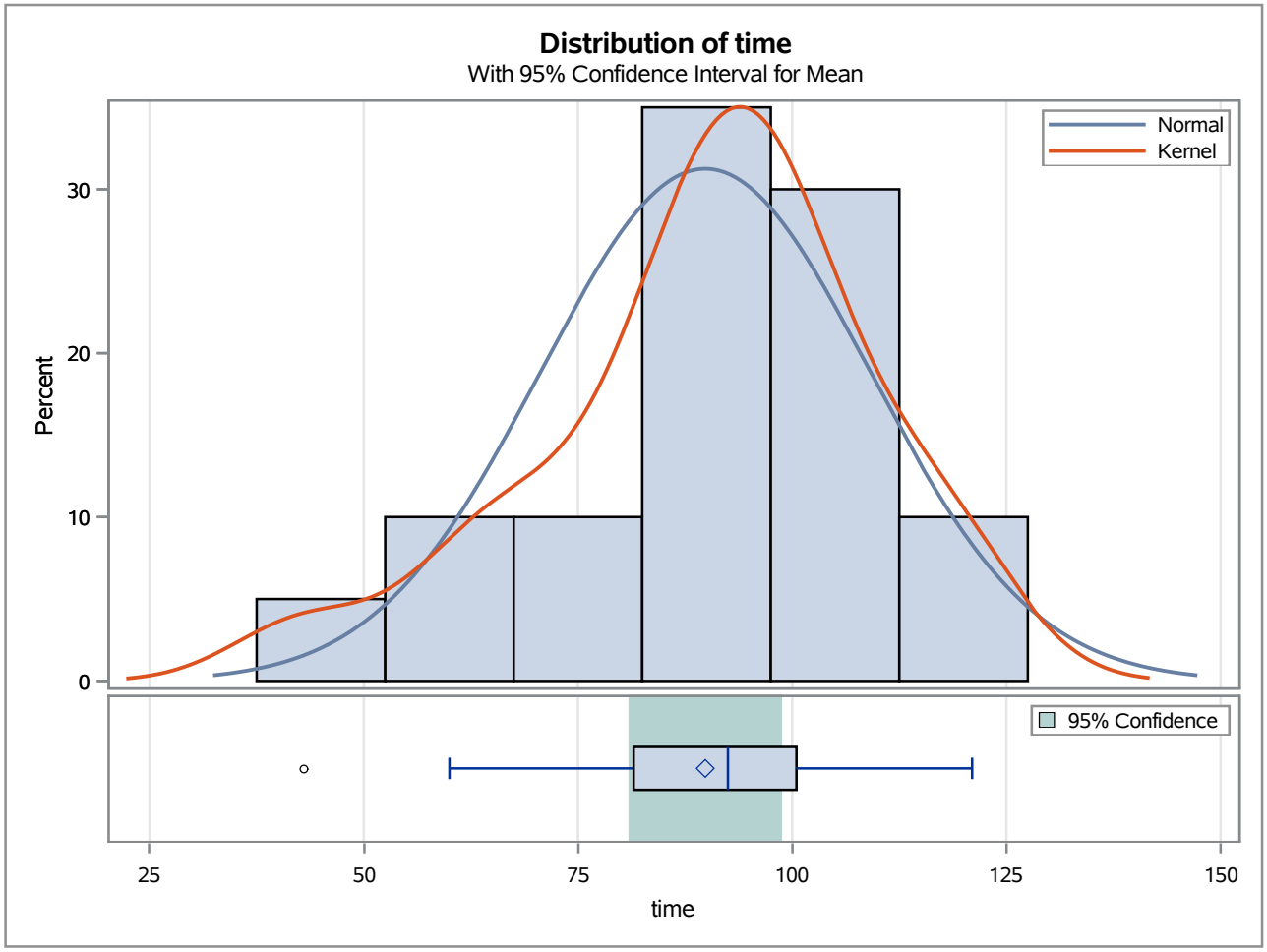
The TTEST Procedure

Variable: time

N	Mean	Std Dev	Std Err	Minimum	Maximum
20	89.8500	19.1456	4.2811	43.0000	121.0

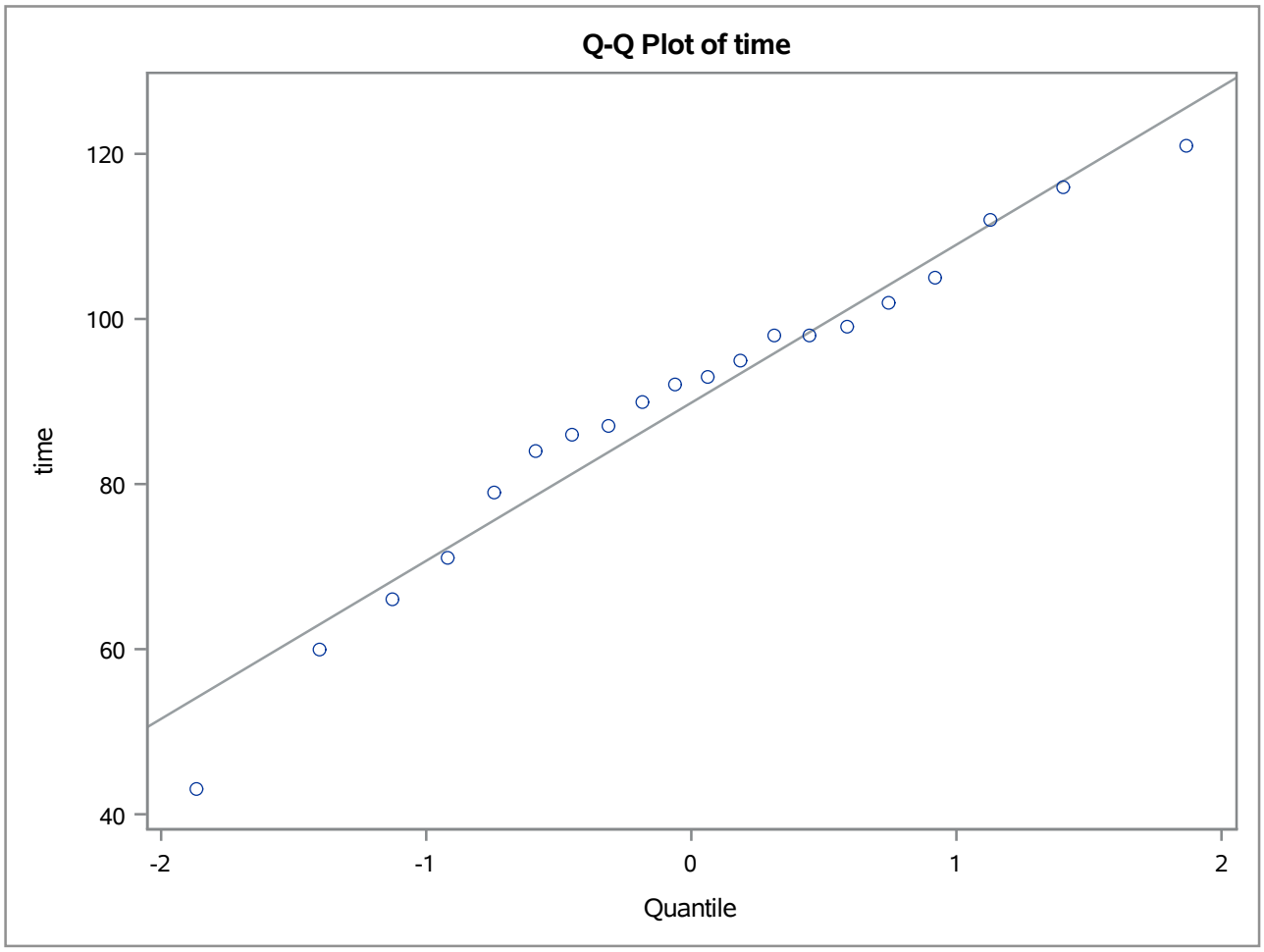
Mean	95% CL Mean		Std Dev	95% CL Std Dev	
89.8500	80.8896	98.8104	19.1456	14.5601	27.9636

DF	t Value	Pr > |t|
19	-23.36	<.0001



The TTEST Procedure

Variable: time



The CONTENTS Procedure

Data Set Name	PHARMA.TIME	**Observations**	20
Member Type	DATA	**Variables**	1
Engine	V9	**Indexes**	0
Created	12/05/2025 23:08:41	**Observation Length**	8
Last Modified	12/05/2025 23:08:41	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	16127
Obs in First Data Page	20
Number of Data Set Repairs	0
Filename	/home/ajay_malkani0/SAS Programming in the Pharmaceutical Industry/Data Sets and SAS code/time.sas7bdat
Release Created	9.0401M8
Host Created	Linux
Inode Number	728408829
Access Permission	rw-r--r--
Owner Name	ajay_malkani0
File Size	256KB
File Size (bytes)	262144

Alphabetic List of Variables and Attributes			
#	**Variable**	**Type**	**Len**
1	time	Num	8

The UNIVARIATE Procedure
Variable: time

Moments			
N	20	**Sum Weights**	20
Mean	89.85	**Sum Observations**	1797
Std Deviation	19.145633	**Variance**	366.555263
Skewness	-0.7081182	**Kurtosis**	0.66393627
Uncorrected SS	168425	**Corrected SS**	6964.55
Coeff Variation	21.3084396	**Std Error Mean**	4.28109369

Basic Statistical Measures			
Location		**Variability**	
Mean	89.85000	**Std Deviation**	19.14563
Median	92.50000	**Variance**	366.55526
Mode	98.00000	**Range**	78.00000
		Interquartile Range	19.00000

Tests for Location: Mu0=80				
Test	**Statistic**		**p Value**	
Student's t	**t**	2.300814	**Pr > |t|**	0.0329
Sign	**M**	5	**Pr >= |M|**	0.0414
Signed Rank	**S**	57	**Pr >= |S|**	0.0321

Obs	ID	Pre	Retain	Group	Gender	Change
1	101	56.41	89.19	Treatment	Male	32.78
2	103	66.67	86.49	Treatment	Male	19.82
3	105	58.97	56.76	Treatment	Male	-2.21
4	107	79.49	62.16	Treatment	Male	-17.33
5	110	46.15	56.76	Treatment	Male	10.61
6	112	58.97	59.46	Treatment	Male	0.49
7	121	56.41	75.68	Treatment	Male	19.27
8	104	71.79	81.08	Treatment	Female	9.29
9	109	51.28	75.68	Treatment	Female	24.40
10	115	71.79	81.08	Treatment	Female	9.29
11	116	76.92	67.57	Treatment	Female	-9.35
12	118	58.97	91.89	Treatment	Female	32.92
13	119	74.36	81.08	Treatment	Female	6.72
14	120	53.85	81.08	Treatment	Female	27.23
15	123	69.23	75.68	Treatment	Female	6.45
16	302	66.67	81.08	Control	Male	14.41
17	303	82.05	86.49	Control	Male	4.44
18	306	71.79	86.49	Control	Male	14.70
19	308	71.79	70.27	Control	Male	-1.52
20	312	53.85	70.27	Control	Male	16.42
21	316	84.62	78.38	Control	Male	-6.24
22	320	58.97	78.38	Control	Male	19.41
23	322	30.77	40.54	Control	Male	9.77
24	304	71.79	86.49	Control	Female	14.70
25	307	74.36	81.08	Control	Female	6.72
26	309	100.00	94.59	Control	Female	-5.41
27	313	79.49	81.08	Control	Female	1.59
28	317	79.49	81.08	Control	Female	1.59

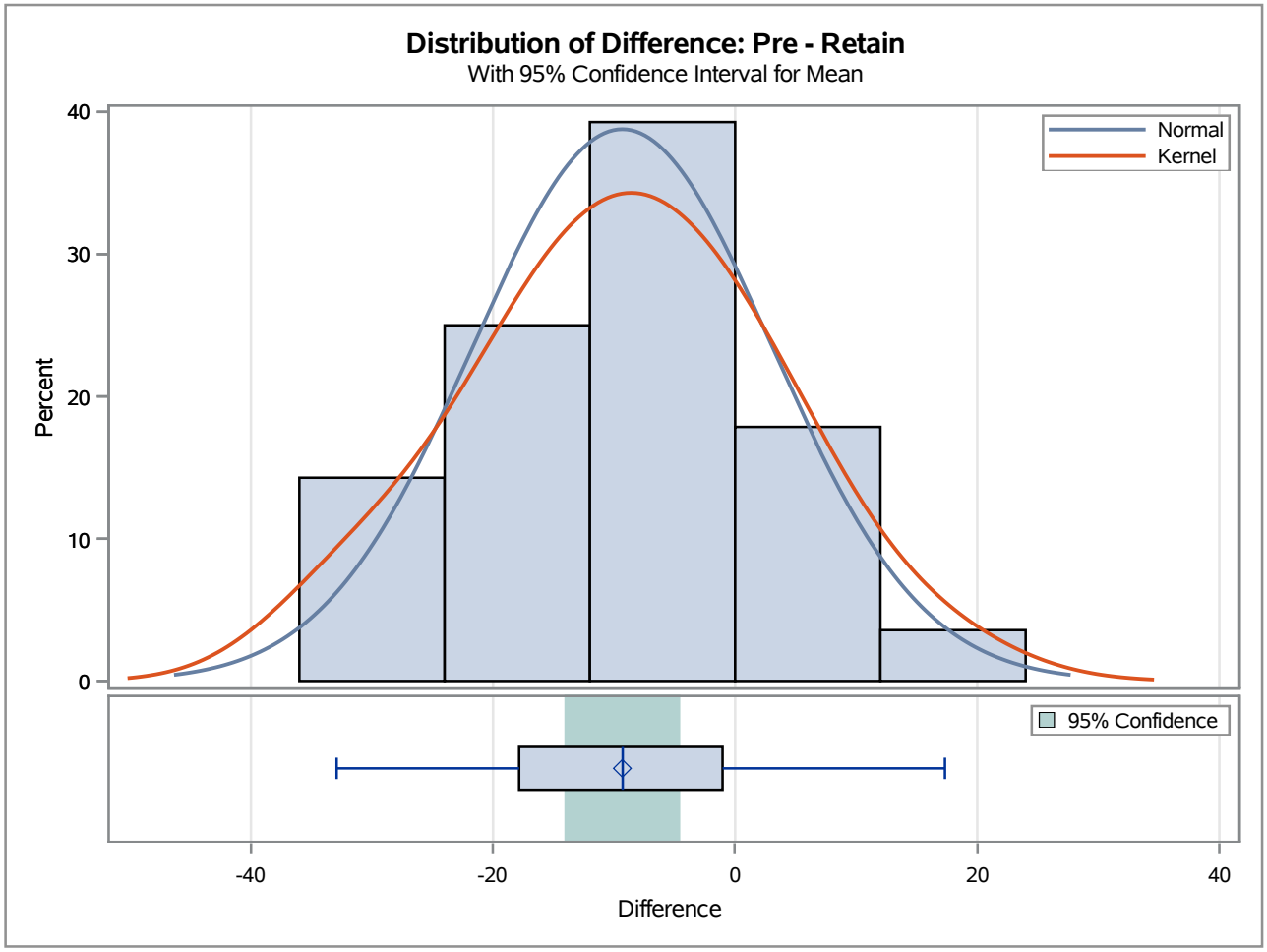
The TTEST Procedure

Difference: Pre - Retain

N	Mean	Std Dev	Std Err	Minimum	Maximum
28	-9.3200	12.3439	2.3328	-32.9200	17.3300

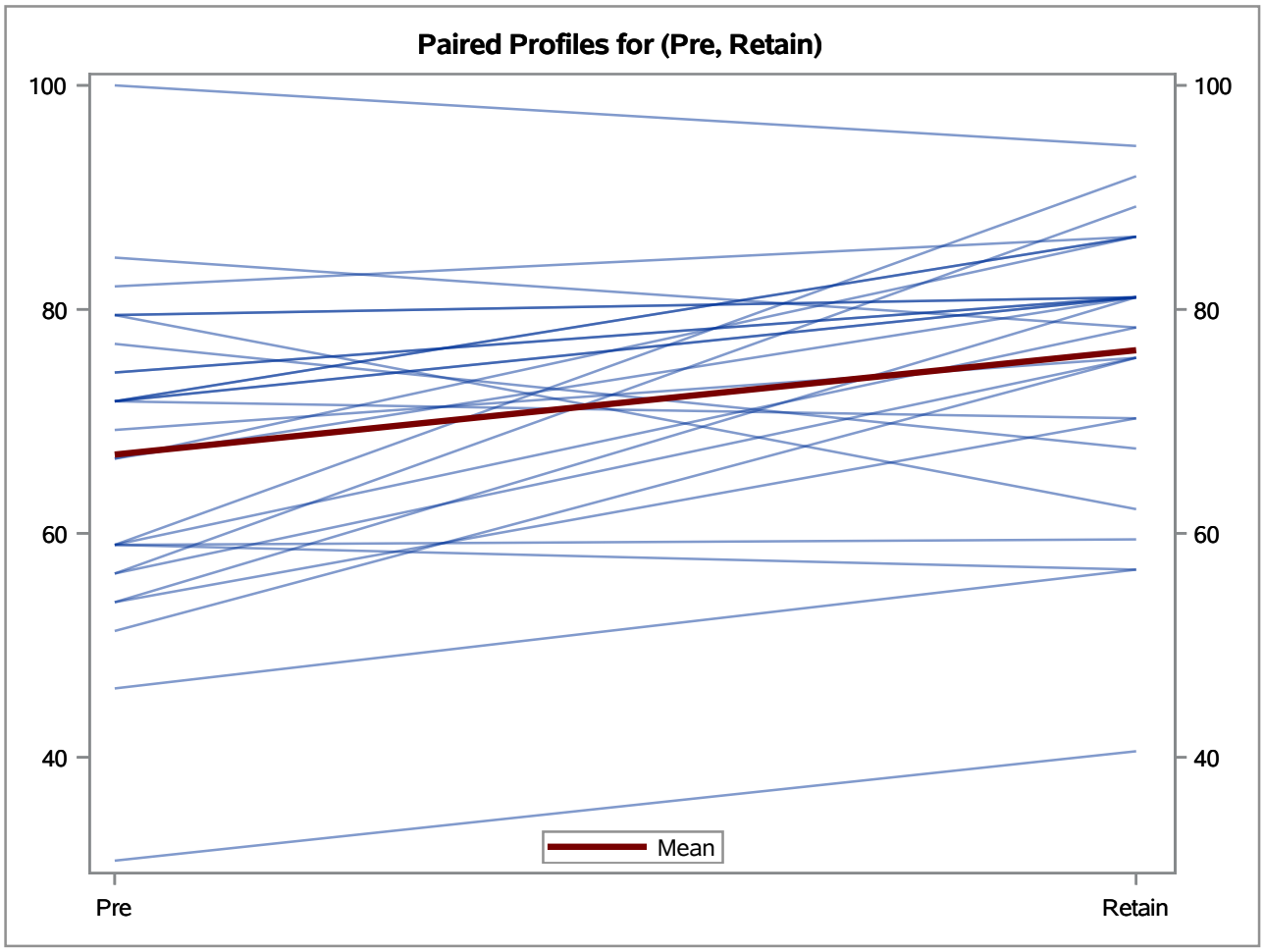
Mean	95% CL Mean		Std Dev	95% CL Std Dev	
-9.3200	-14.1064	-4.5336	12.3439	9.7593	16.8017

DF	t Value	Pr > |t|
27	-4.00	0.0004



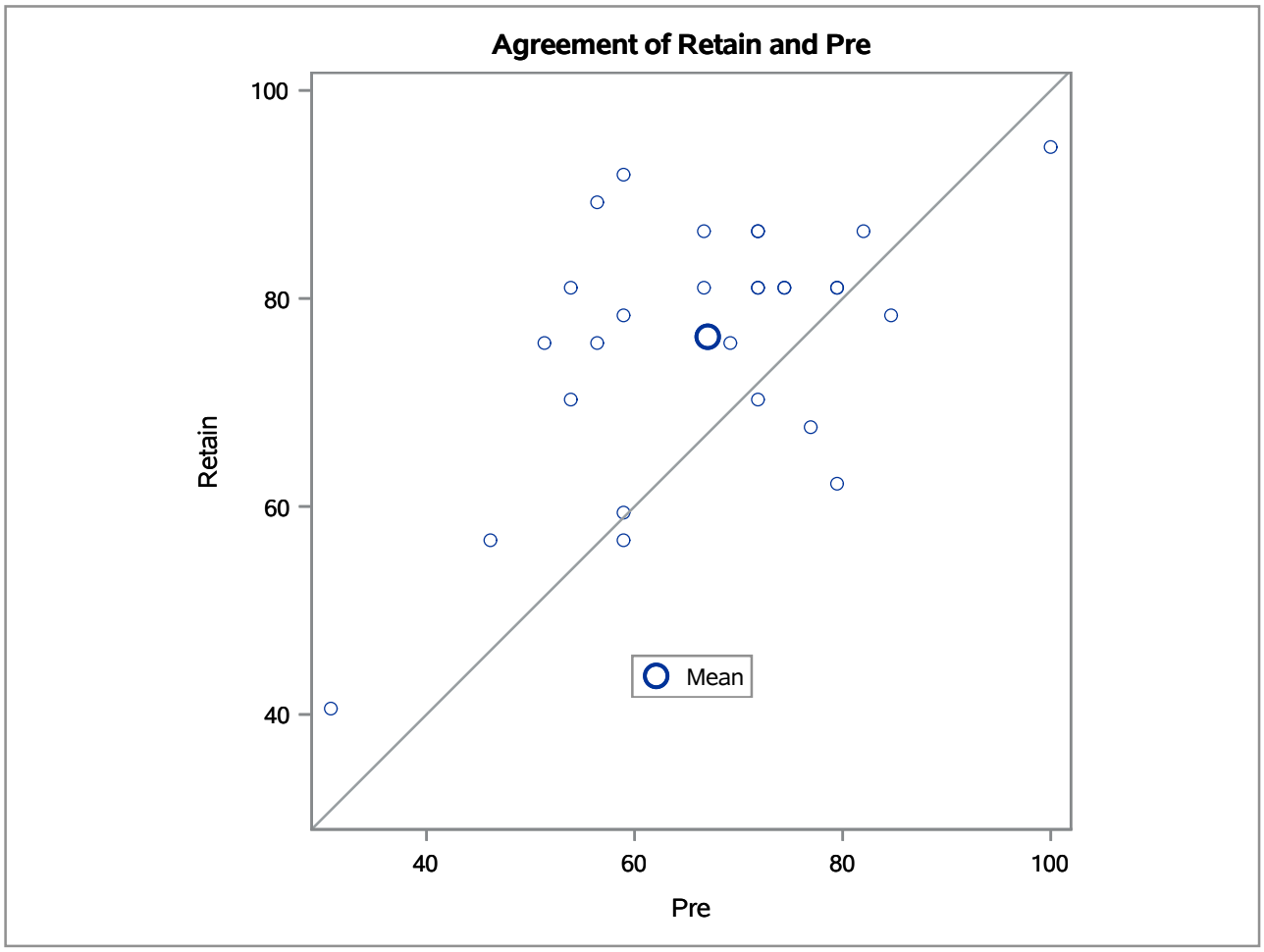
The TTEST Procedure

Difference: Pre - Retain



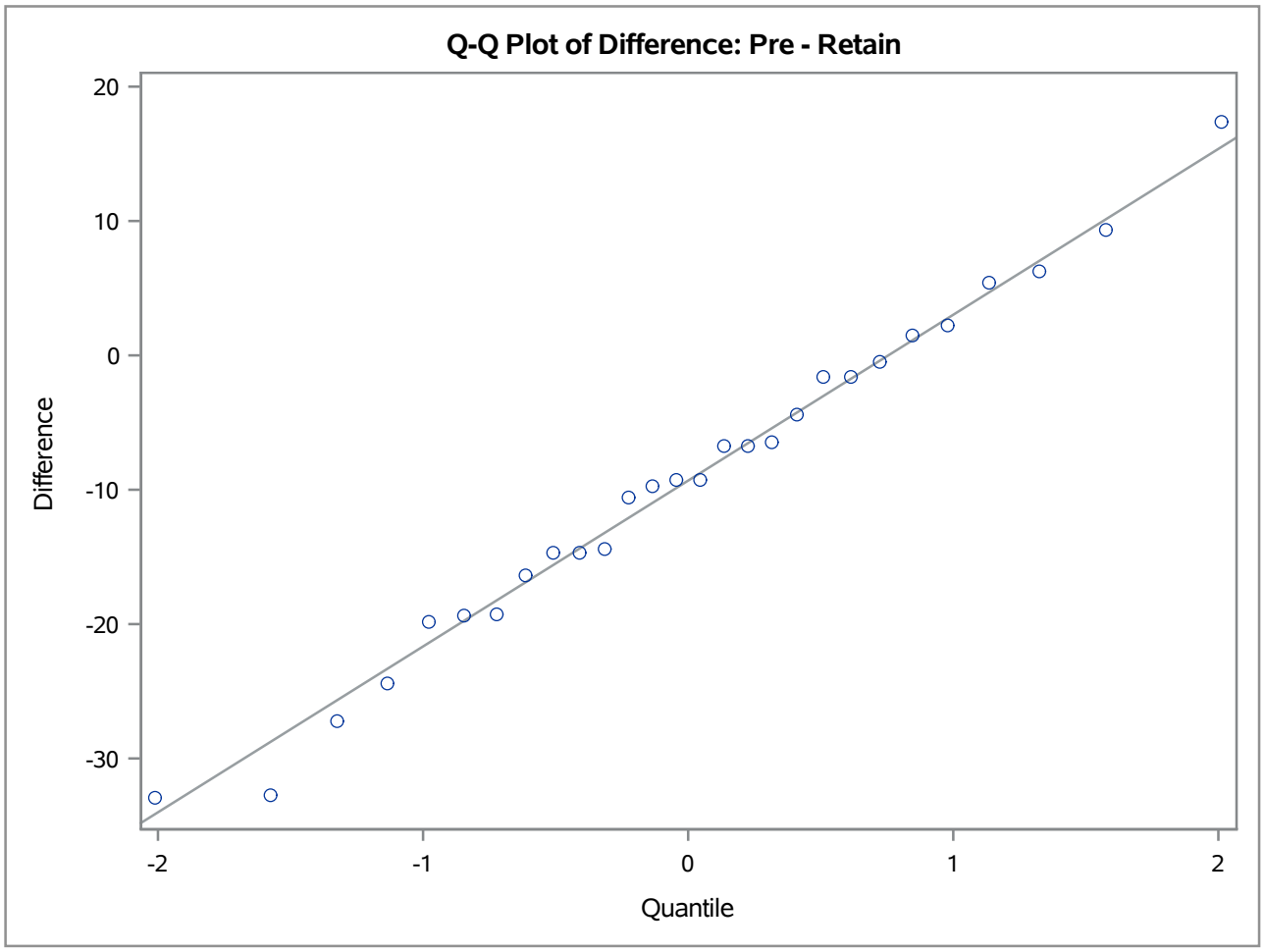
The TTEST Procedure

Difference: Pre - Retain



The TTEST Procedure

Difference: Pre - Retain



Two-sample paired t-test without change from baseline variable

Obs	Variable1	Variable2	Difference	tValue	DF	Probt
1	Pre	Retain	Pre - Retain	-4.00	27	0.0004

German Training, Comparing Treatment to Control
One-Sided two-sample t-Test

The TTEST Procedure

Variable: Change

Group	Method	N	Mean	Std Dev	Std Err	Minimum	Maximum
Control		13	6.9677	8.6166	2.3898	-6.2400	19.4100
Treatment		15	11.3587	14.8535	3.8352	-17.3300	32.9200
Diff (1-2)	Pooled		-4.3910	12.3720	4.6882		
Diff (1-2)	Satterthwaite		-4.3910		4.5188		

Group	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Control		6.9677	1.7607	12.1747	8.6166	6.1789	14.2238
Treatment		11.3587	3.1331	19.5843	14.8535	10.8747	23.4255
Diff (1-2)	Pooled	-4.3910	-14.0276	5.2457	12.3720	9.7432	16.9550
Diff (1-2)	Satterthwaite	-4.3910	-13.7401	4.9581			

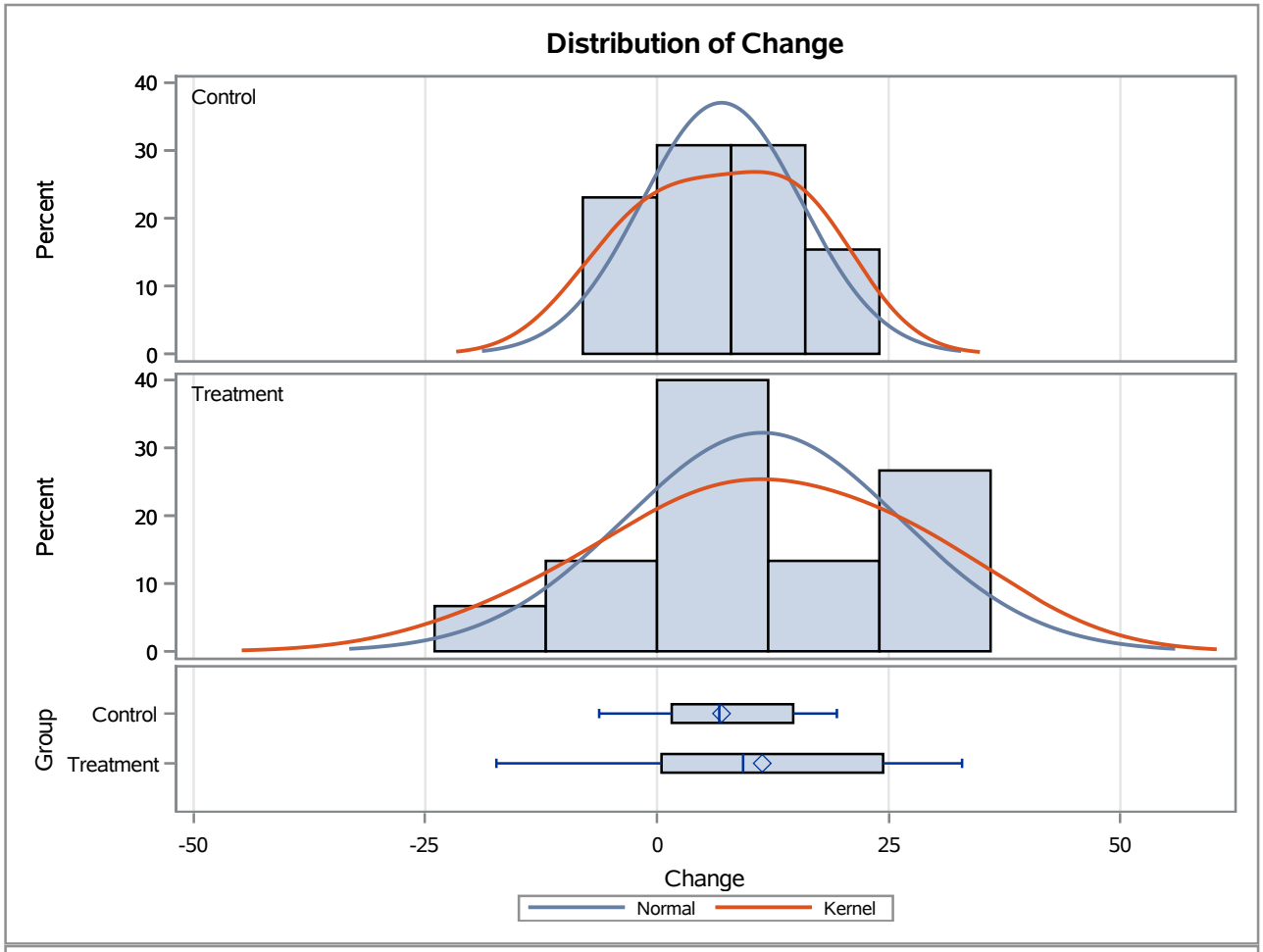
Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	26	-0.94	0.3576
Satterthwaite	Unequal	22.947	-0.97	0.3413

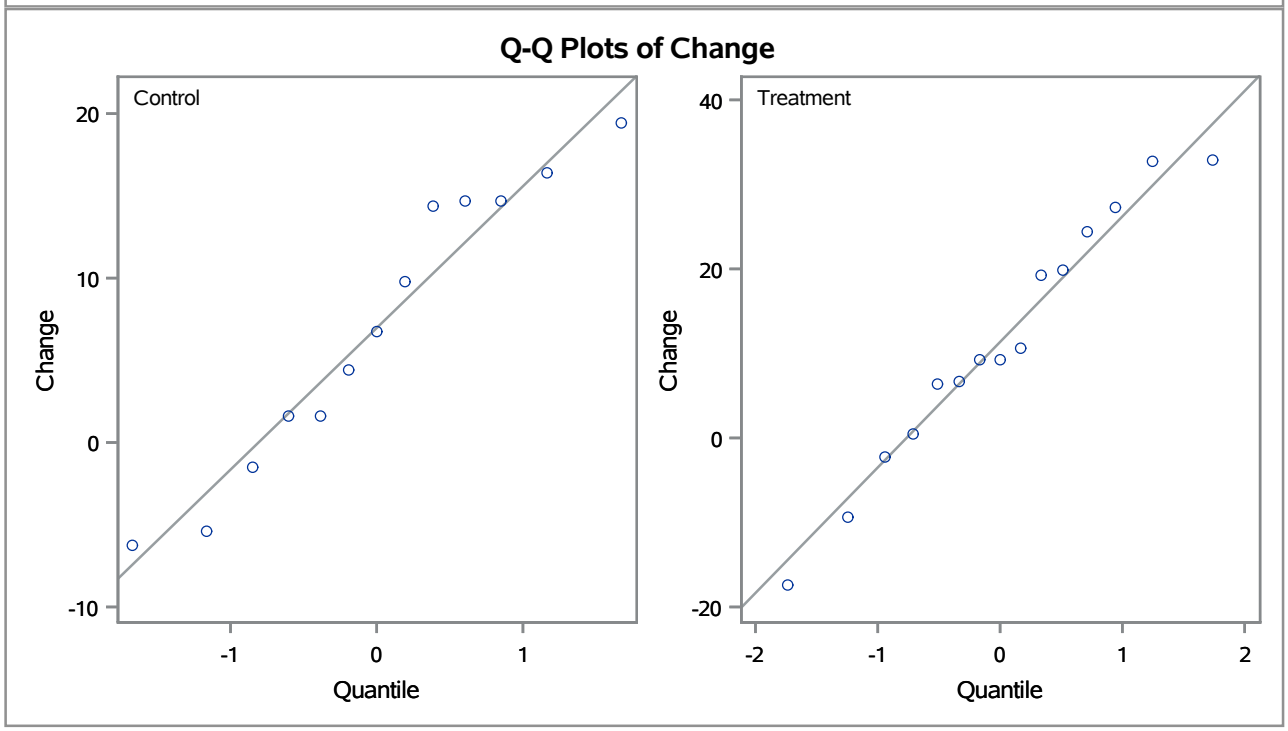
Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	14	12	2.97	0.0660

German Training, Comparing Treatment to Control
One-Sided two-sample t-Test

The TTEST Procedure

Variable: Change





Obs	Variable	Method	Variances	tValue	DF	Probt
1	Change	Pooled	Equal	-0.94	26	0.3576
2	Change	Satterthwaite	Unequal	-0.97	22.947	0.3413

Obs	Variable	Method	NumDF	DenDF	FValue	ProbF
1	Change	Folded F	14	12	2.97	0.0660

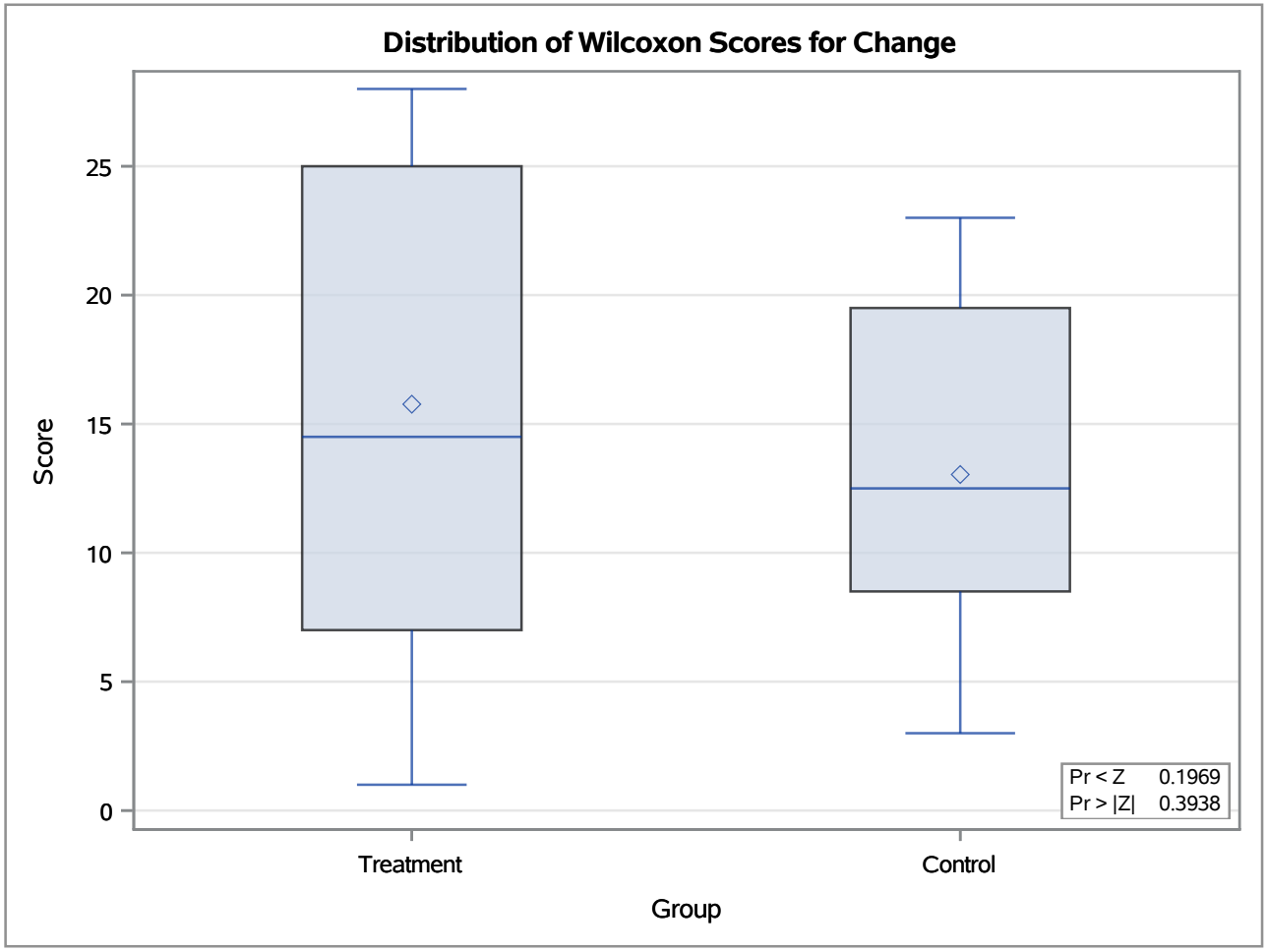
Obs	Variable	Method	Variances	tValue	DF	Probt
1	Change	Pooled	Equal	-0.94	26	0.3576
2	Change	Satterthwaite	Unequal	-0.97	22.947	0.3413

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Change Classified by Variable Group					
Group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
Treatment	15	236.50	217.50	21.696408	15.766667
Control	13	169.50	188.50	21.696408	13.038462
Average scores were used for ties.					

Wilcoxon Two-Sample Test					
				t Approximation	
Statistic	Z	Pr < Z	Pr > |Z|	Pr < Z	Pr > |Z|
169.5000	-0.8527	0.1969	0.3938	0.2007	0.4013
Z includes a continuity correction of 0.5.					

Kruskal-Wallis Test		
Chi-Square	DF	Pr > ChiSq
0.7669	1	0.3812



Obs	_VAR_	_WIL_	Z_WIL	PL_WIL	PR_WIL	P2_WIL	PTL_WIL	PTR_WIL	PT2_WIL	_KW_	DF_KW	P_KW
1	Change	169.5	-0.85268	0.19692	.	0.39384	0.20067	.	0.40134	0.76689	1	0.38118

Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
Group	2	Control Treatment

Number of Observations Read	28
Number of Observations Used	28

Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

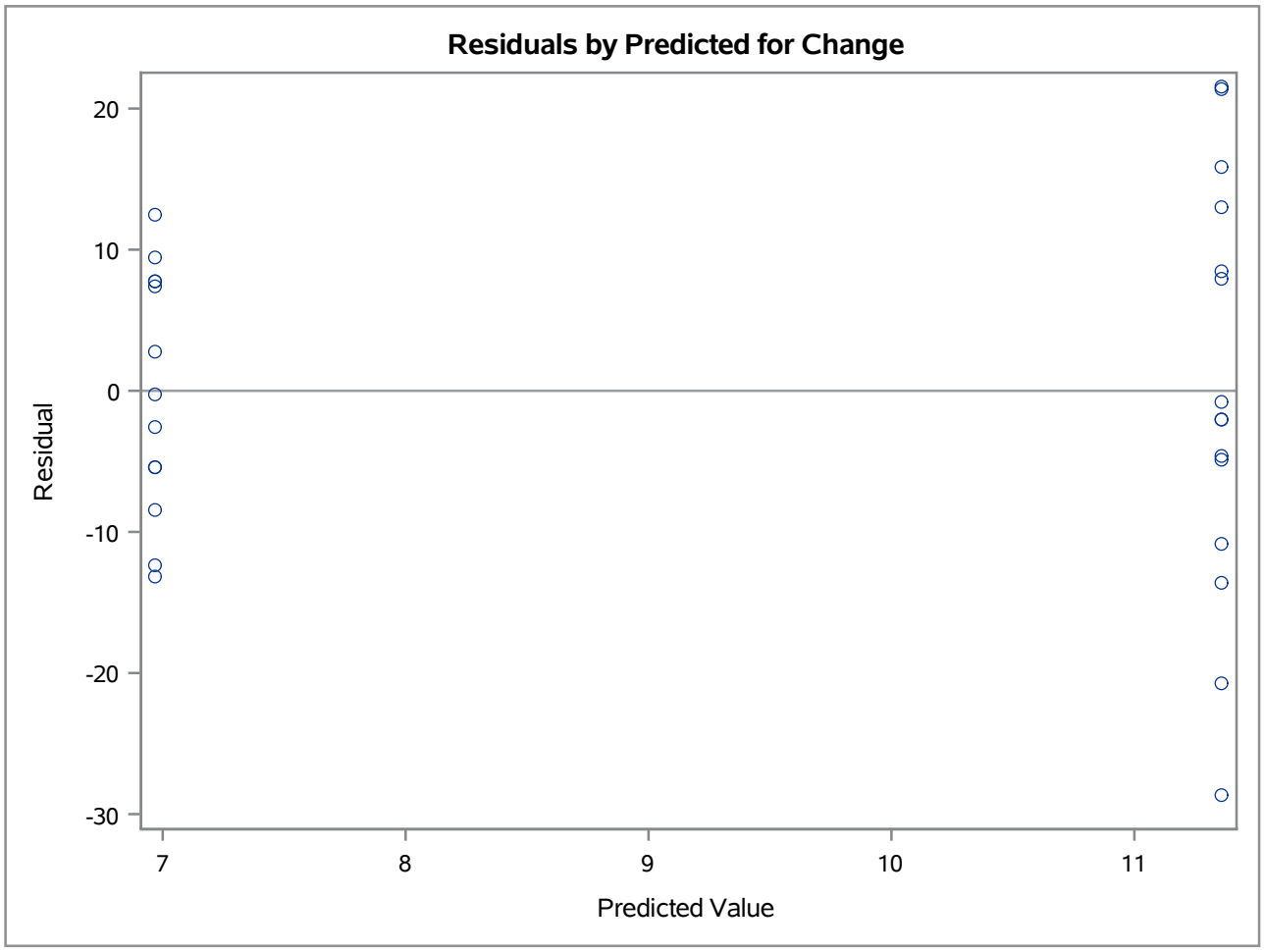
Dependent Variable: Change

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	134.275996	134.275996	0.88	0.3576
Error	26	3979.736404	153.066785		
Corrected Total	27	4114.012400			

R-Square	Coeff Var	Root MSE	Change Mean
0.032639	132.7470	12.37202	9.320000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.88	0.3576

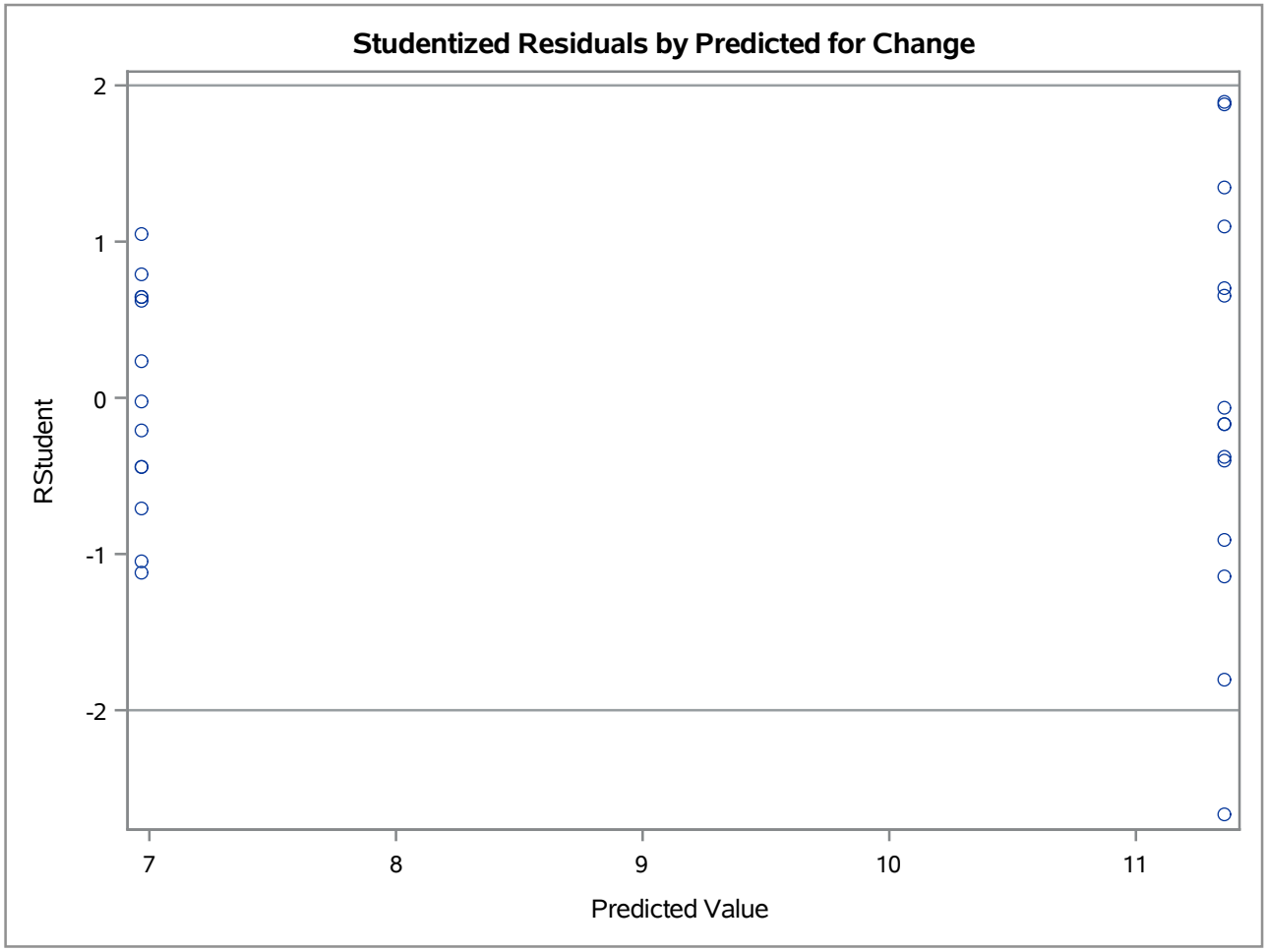
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.88	0.3576



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

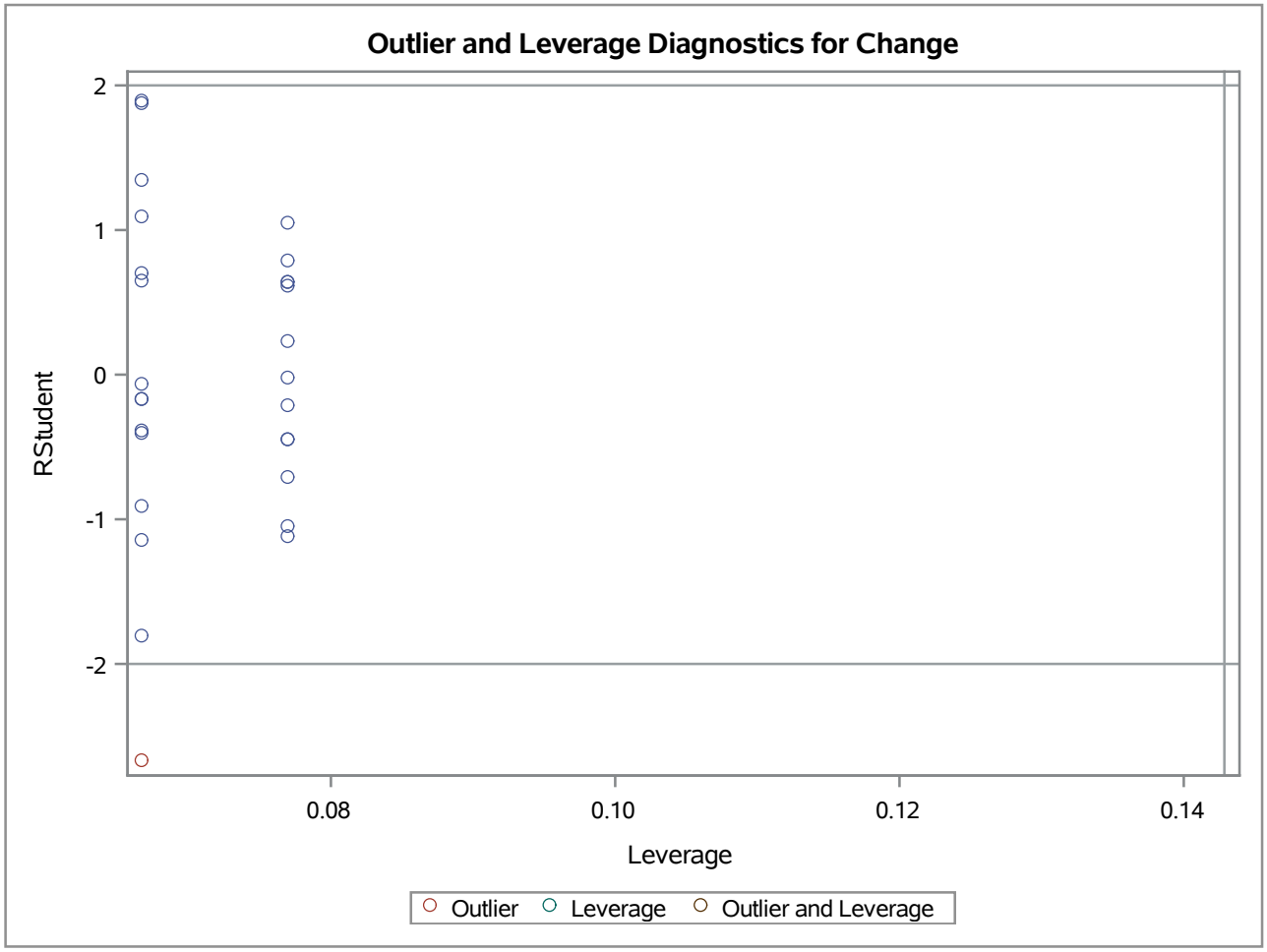
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

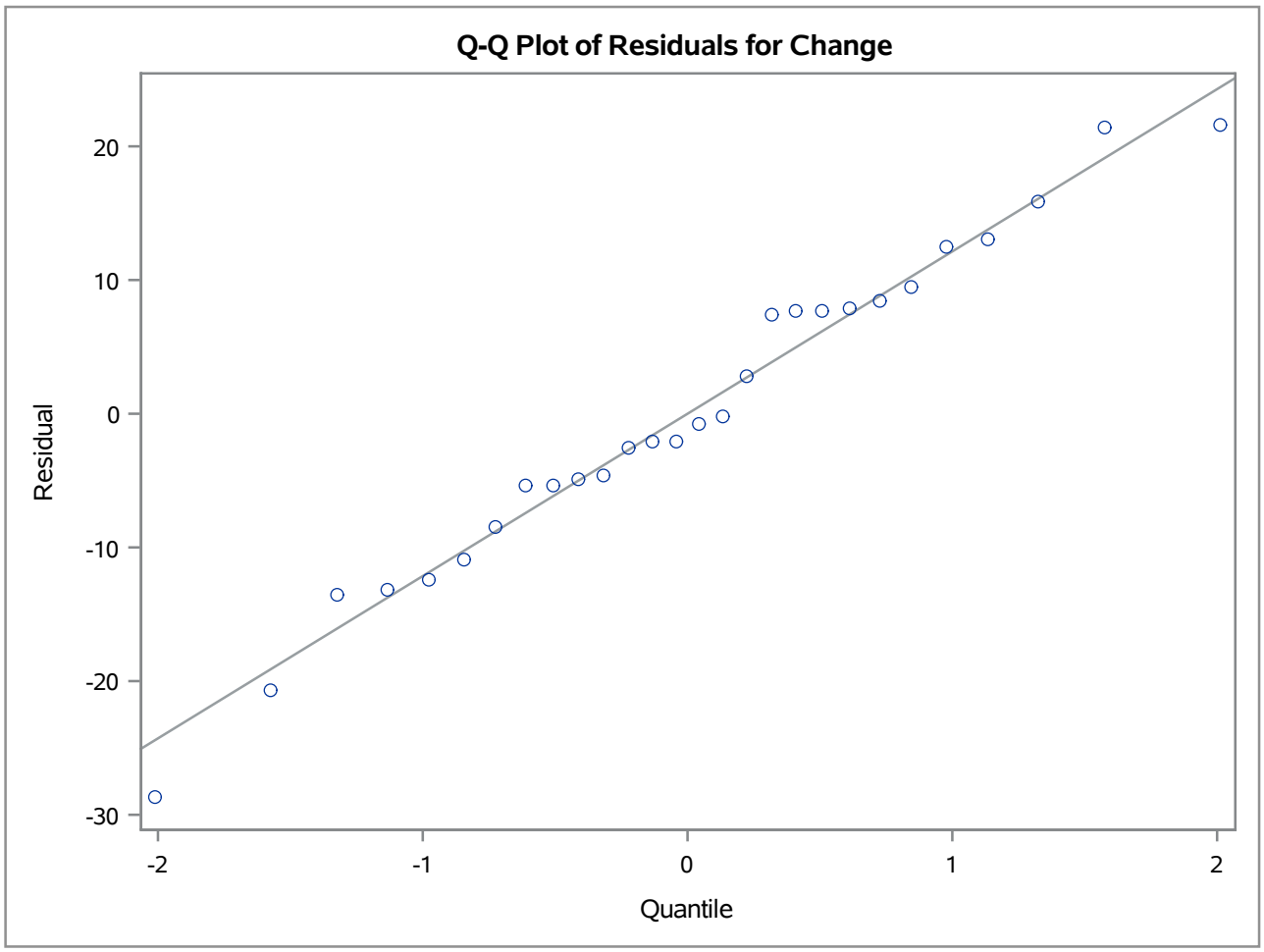
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

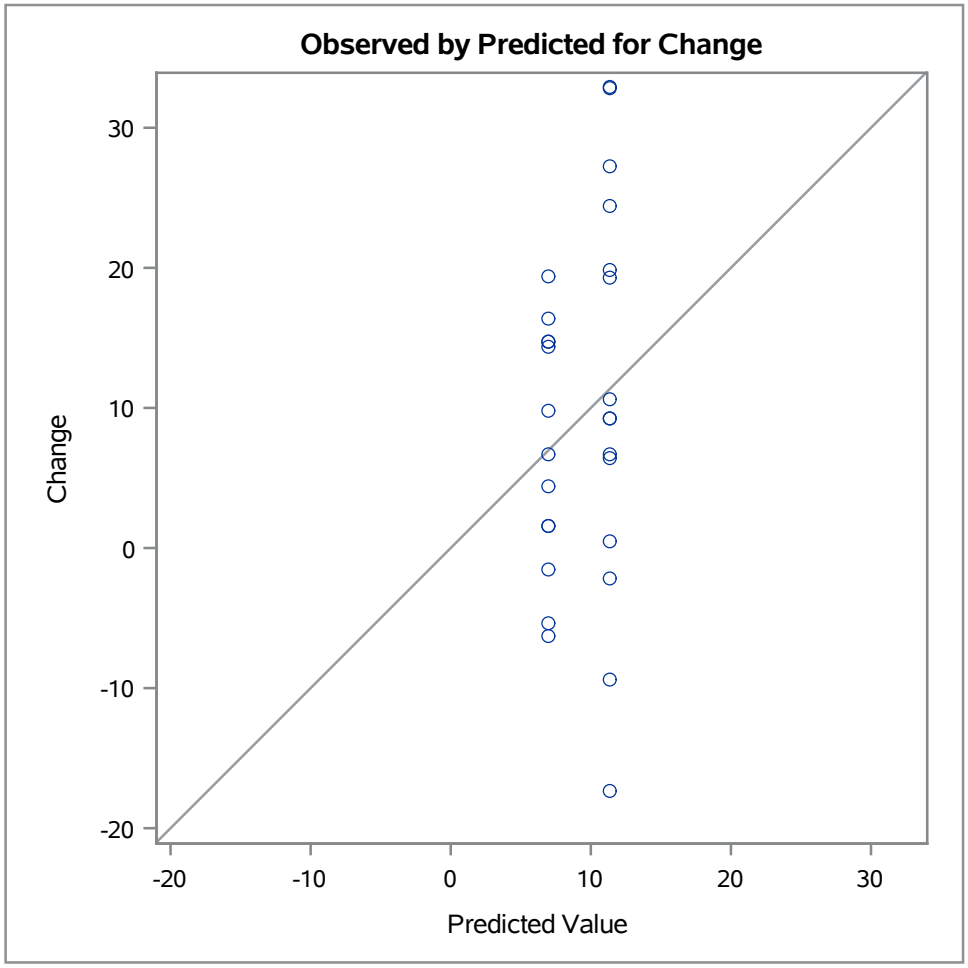
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

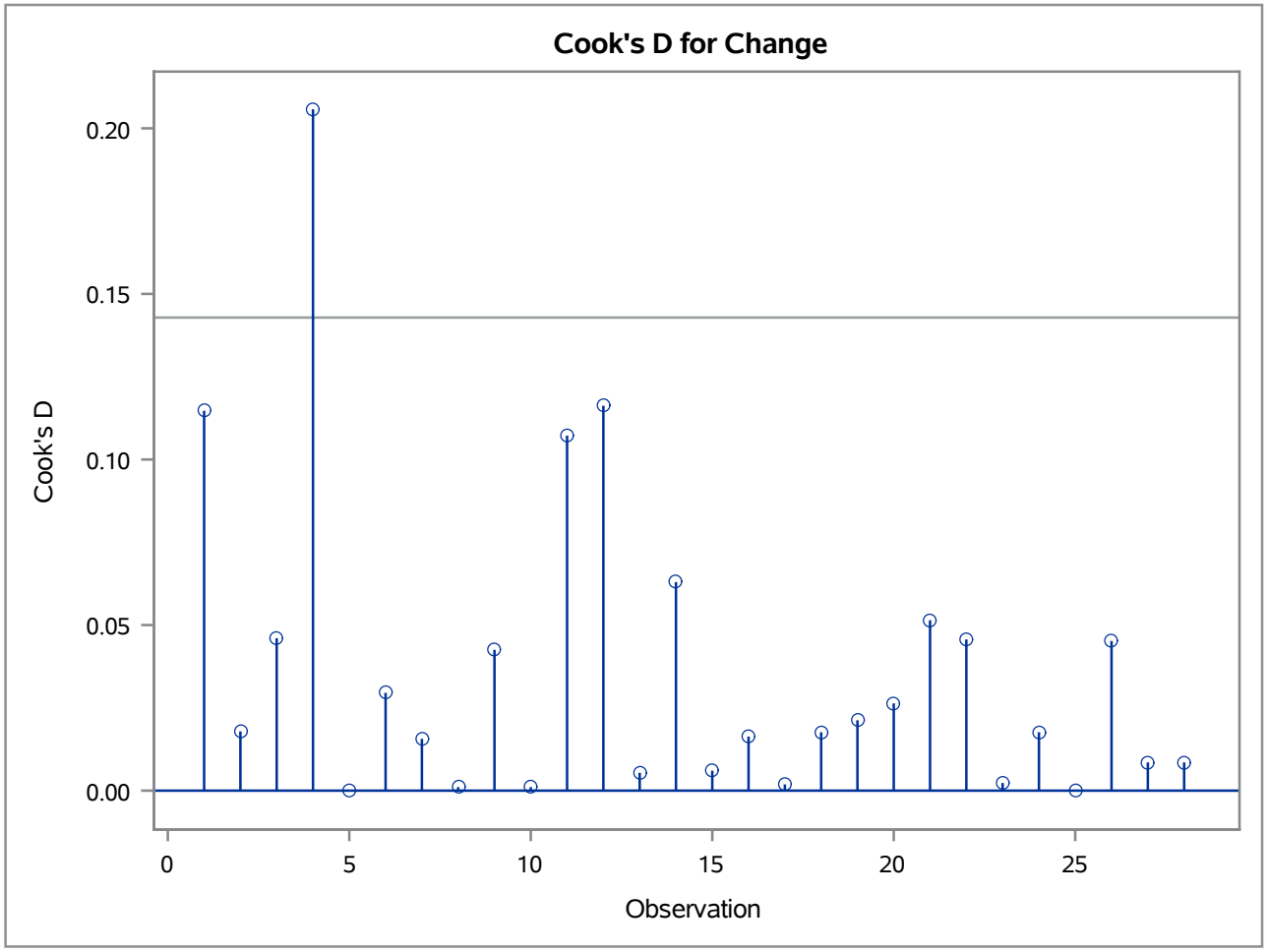
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

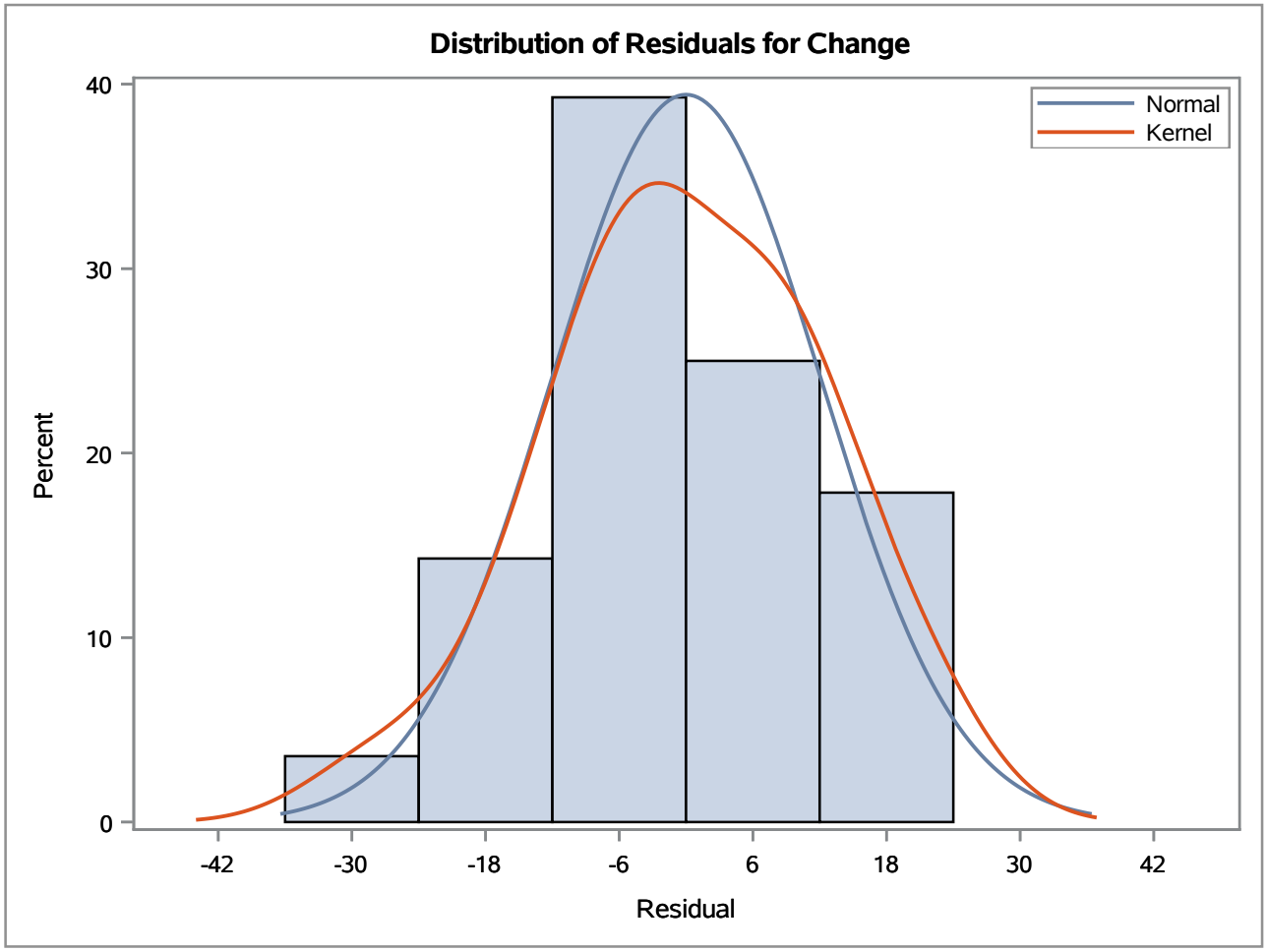
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

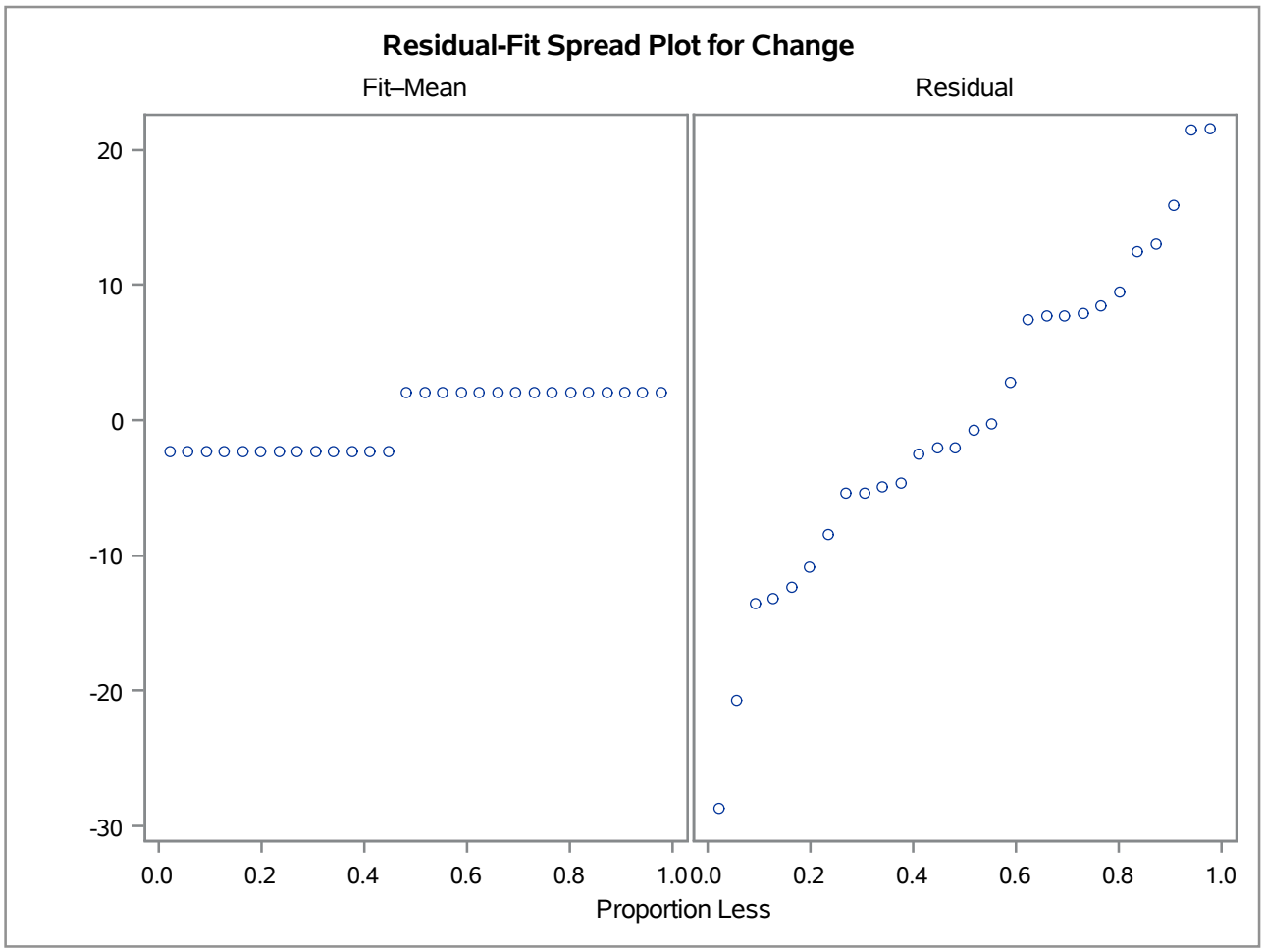
Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

Dependent Variable: Change



Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

Levene's Test for Homogeneity of Change Variance ANOVA of Squared Deviations from Group Means					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Group	1	131446	131446	4.05	0.0547
Error	26	844282	32472.4		

Testing for Equality of Treatment Group on Change using PROC GLM

The GLM Procedure

Level of Group	N	Change	
		Mean	Std Dev
Control	13	6.9676923	8.6166323
Treatment	15	11.3586667	14.8535233

The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
Group	2	Control Treatment

Number of Observations Read	28
Number of Observations Used	28

The GLM Procedure

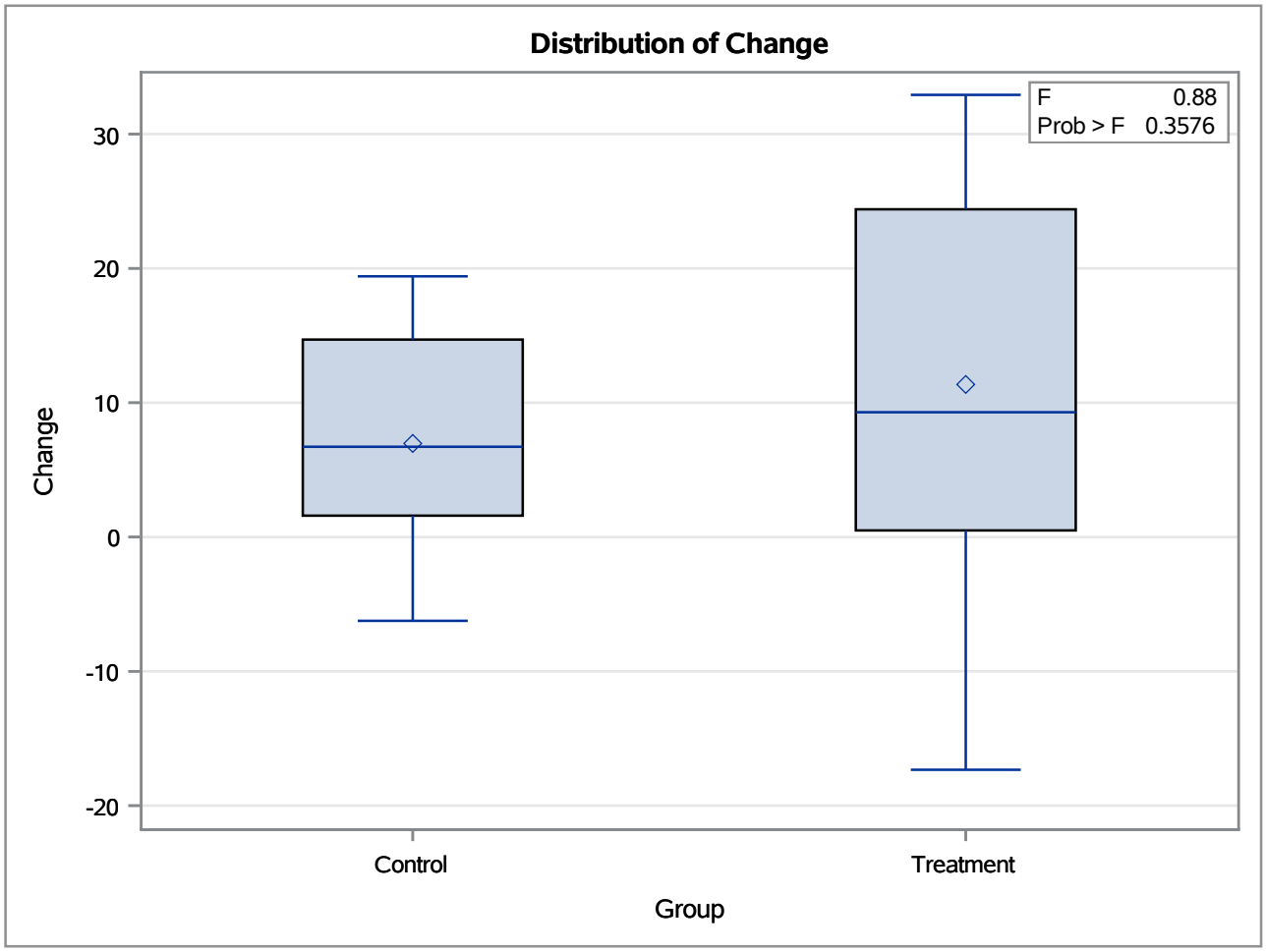
Dependent Variable: Change

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	134.275996	134.275996	0.88	0.3576
Error	26	3979.736404	153.066785		
Corrected Total	27	4114.012400			

R-Square	Coeff Var	Root MSE	Change Mean
0.032639	132.7470	12.37202	9.320000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.88	0.3576

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.88	0.3576



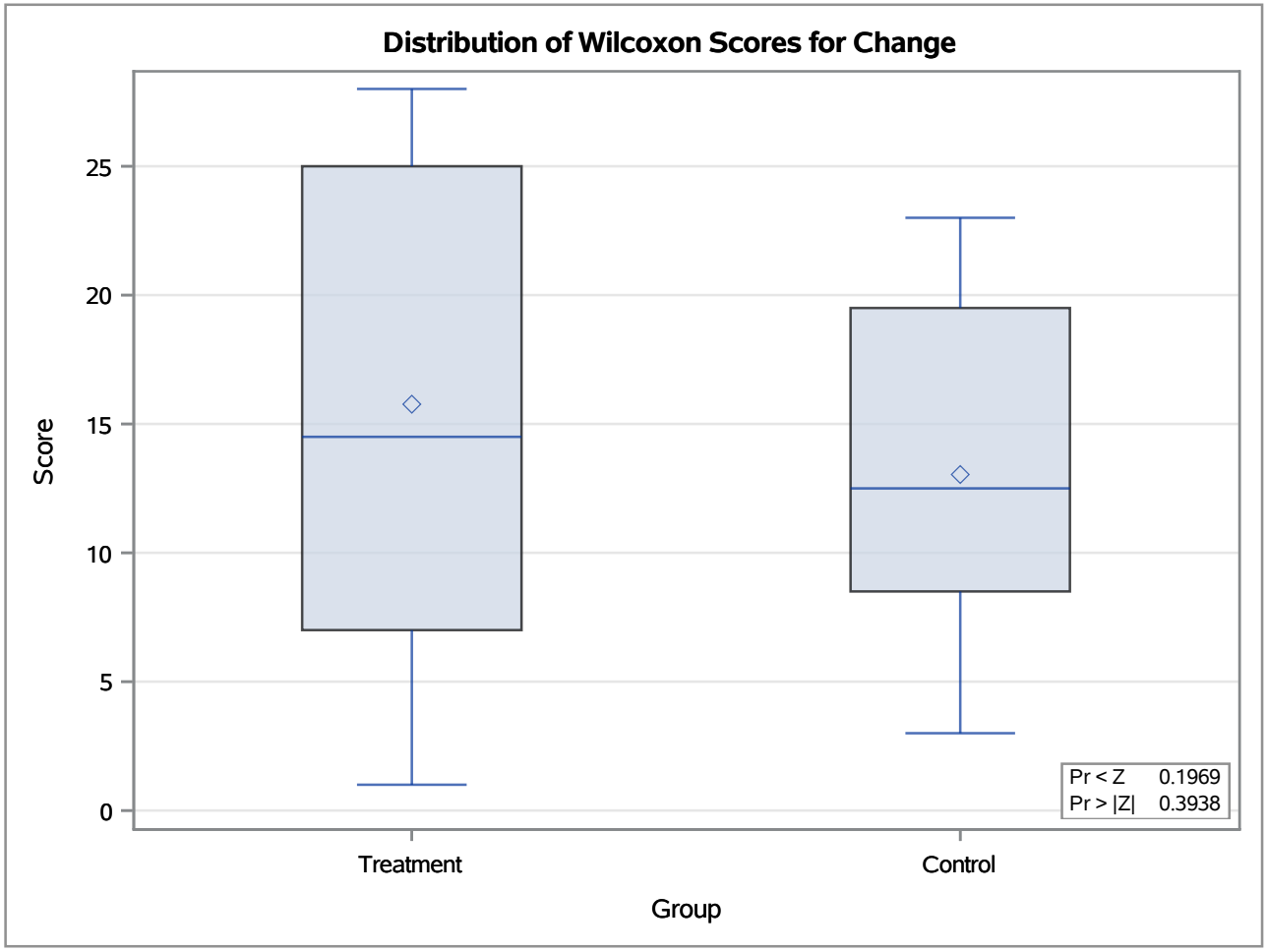
Obs	_NAME_	_SOURCE_	_TYPE_	DF	SS	F	PROB
1	Change	ERROR	ERROR	26	3979.74	.	.
2	Change	Group	SS1	1	134.28	0.87724	0.35758
3	Change	Group	SS3	1	134.28	0.87724	0.35758

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Change Classified by Variable Group					
Group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
Treatment	15	236.50	217.50	21.696408	15.766667
Control	13	169.50	188.50	21.696408	13.038462
Average scores were used for ties.					

Wilcoxon Two-Sample Test					
				t Approximation	
Statistic	Z	Pr < Z	Pr > |Z|	Pr < Z	Pr > |Z|
169.5000	-0.8527	0.1969	0.3938	0.2007	0.4013
Z includes a continuity correction of 0.5.					

Kruskal-Wallis Test		
Chi-Square	DF	Pr > ChiSq
0.7669	1	0.3812



pvalue1 data set - non-normal distribution of errors, use of Kruskal-Wallis test P_KW

Obs	_VAR_	_WIL_	Z_WIL	PL_WIL	PR_WIL	P2_WIL	PTL_WIL	PTR_WIL	PT2_WIL	_KW_	DF_KW	P_KW
1	Change	169.5	-0.85268	0.19692	.	0.39384	0.20067	.	0.40134	0.76689	1	0.38118

Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
Group	2	Control Treatment
Gender	2	Female Male

Number of Observations Read	28
Number of Observations Used	28

Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

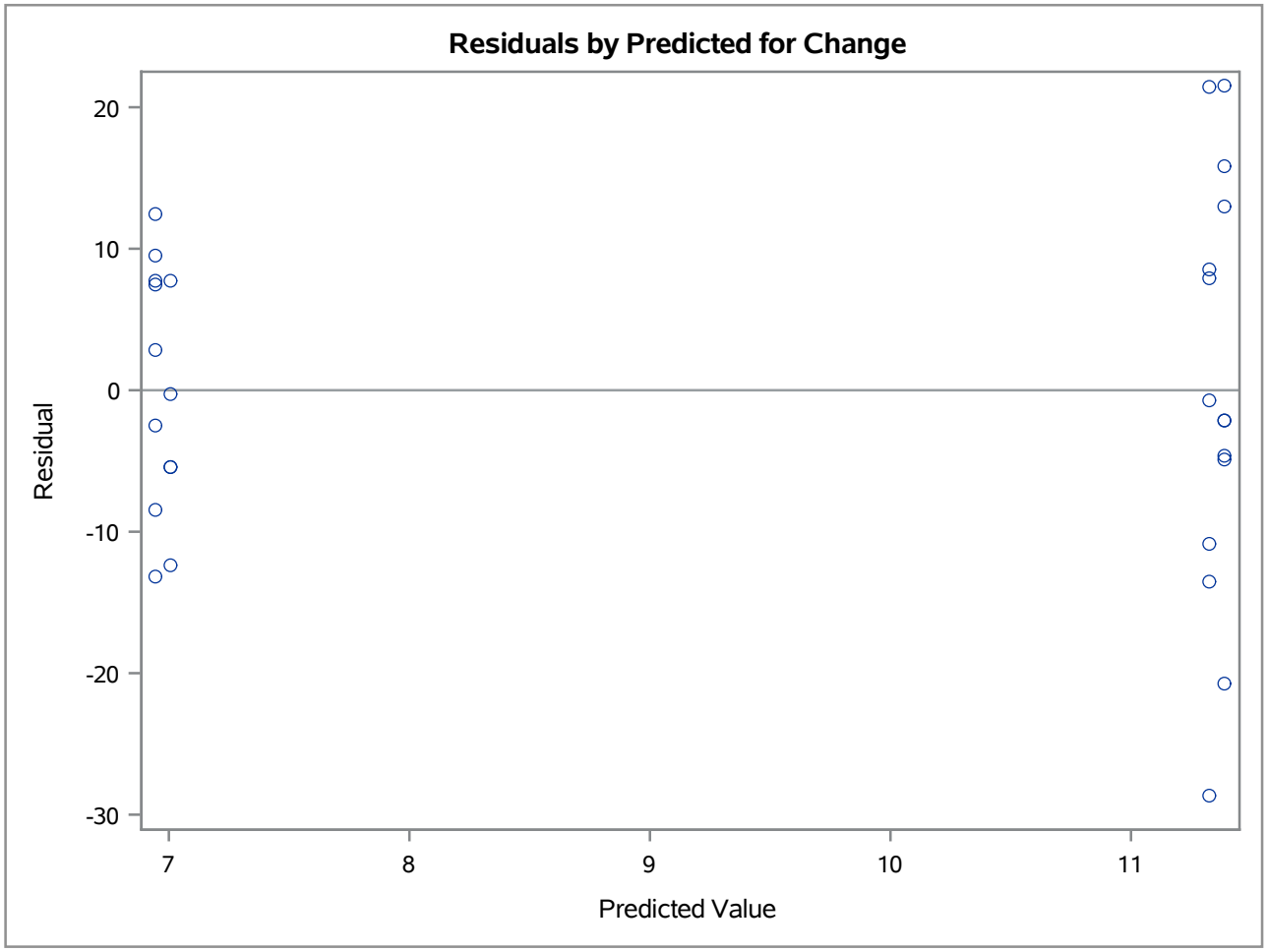
Dependent Variable: Change

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	134.303425	67.151713	0.42	0.6604
Error	25	3979.708975	159.188359		
Corrected Total	27	4114.012400			

R-Square	Coeff Var	Root MSE	Change Mean
0.032645	135.3754	12.61699	9.320000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.84	0.3672
Gender	1	0.0274294	0.0274294	0.00	0.9896

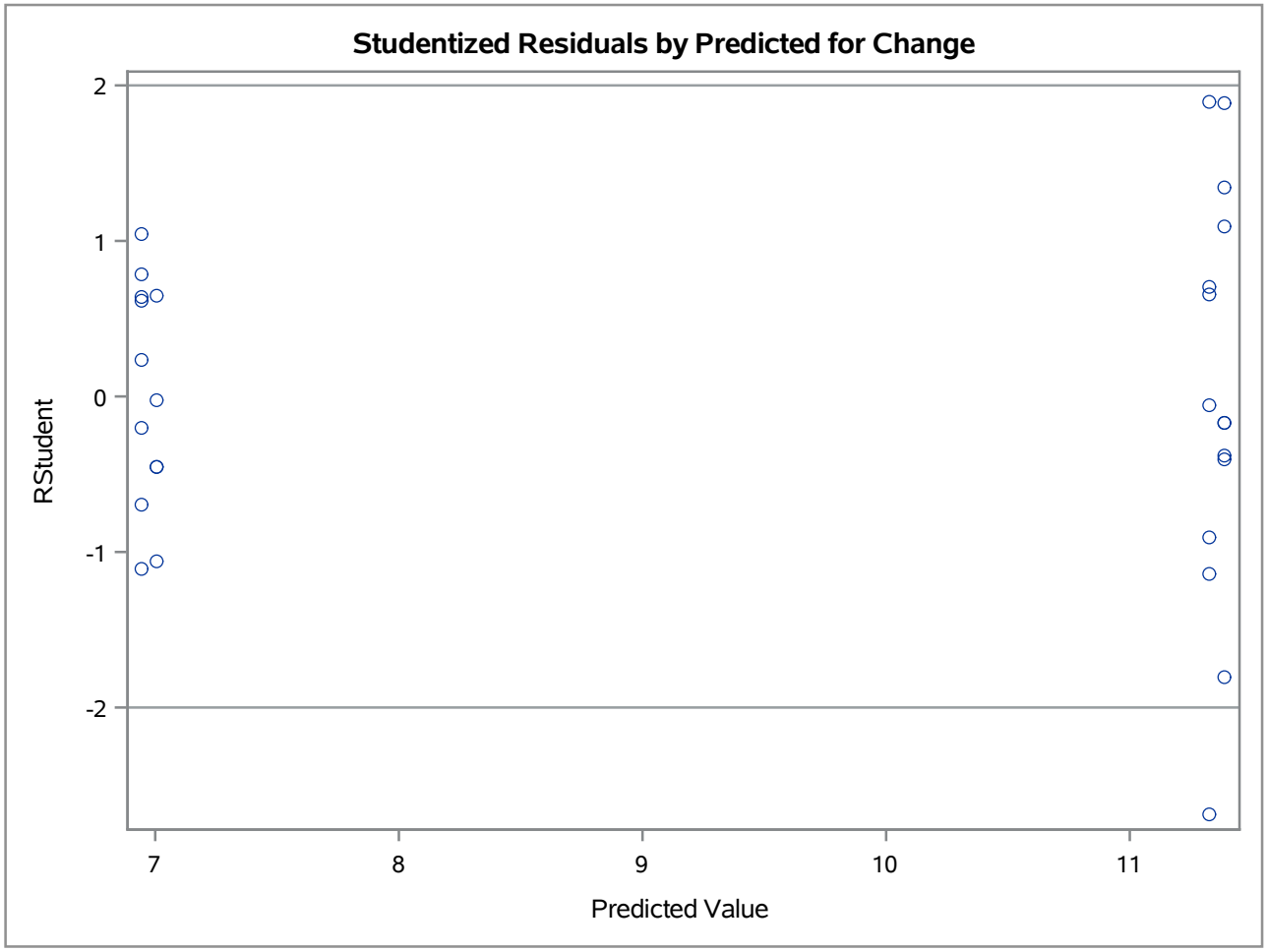
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Group	1	130.7423422	130.7423422	0.82	0.3735
Gender	1	0.0274294	0.0274294	0.00	0.9896



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

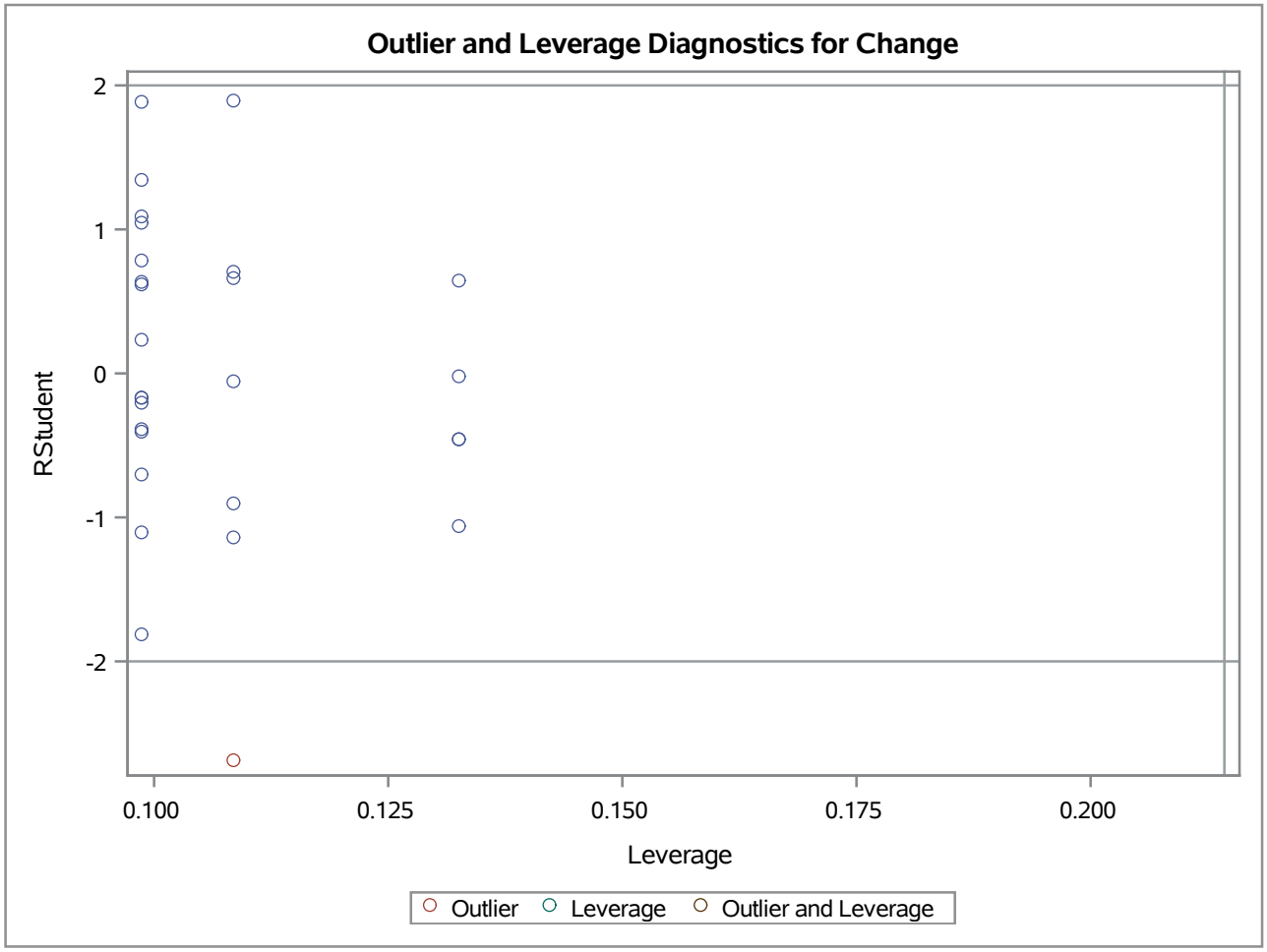
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

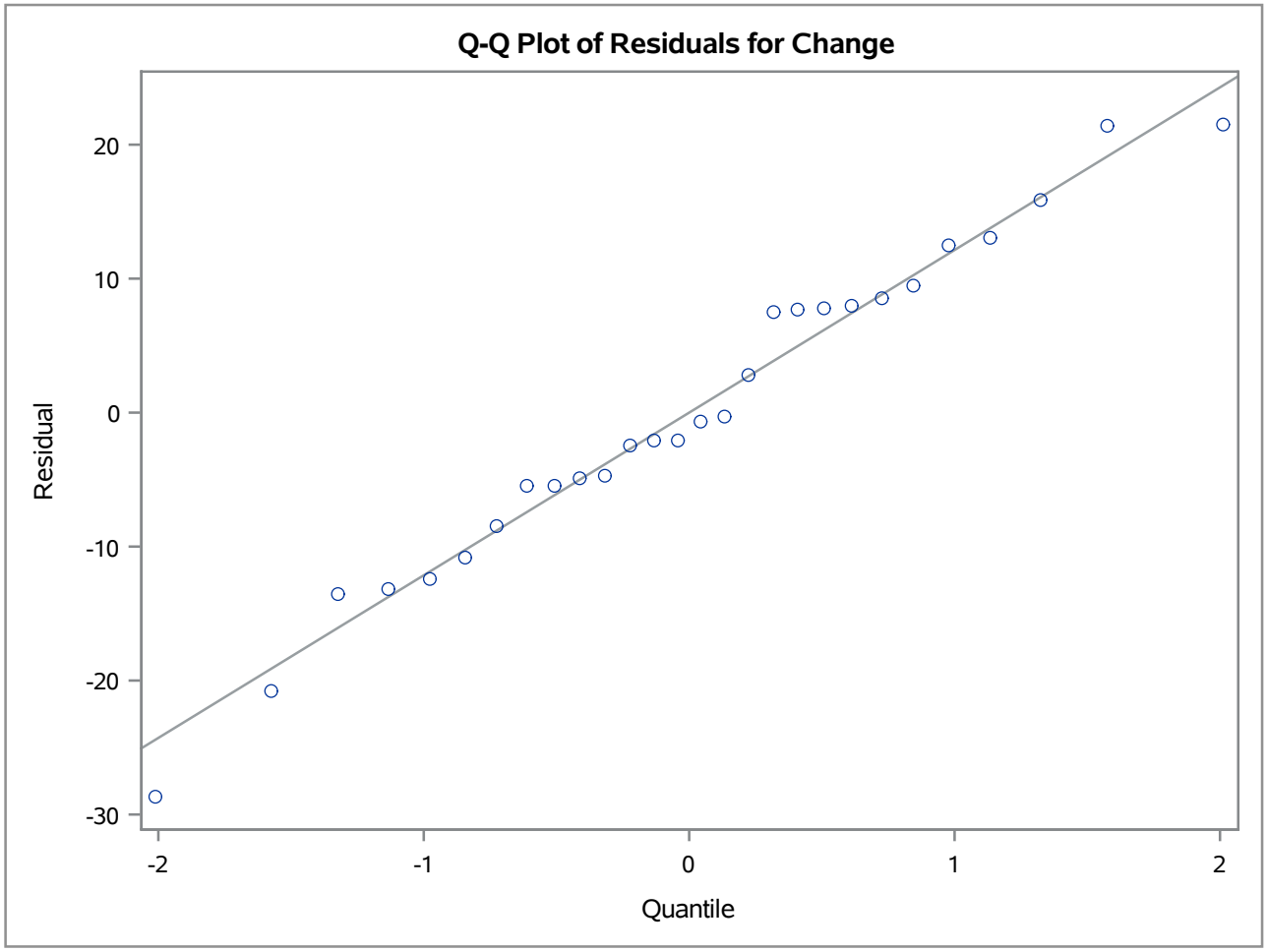
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

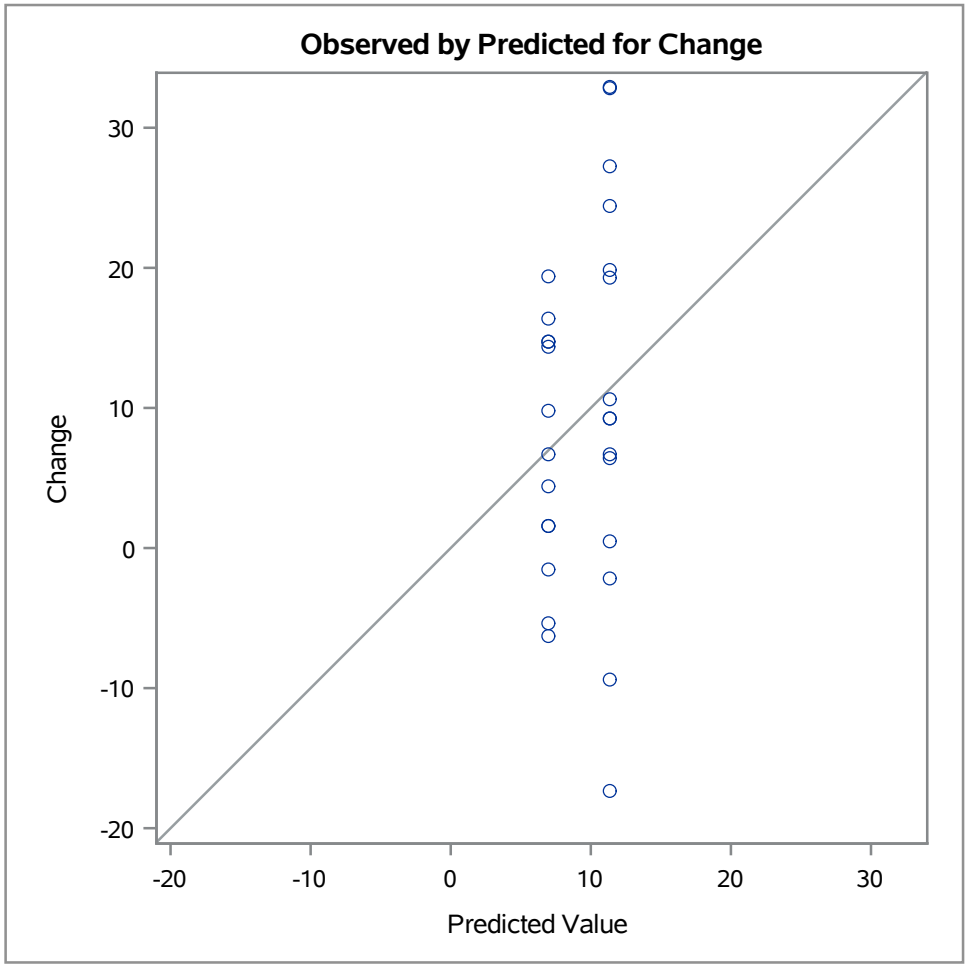
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

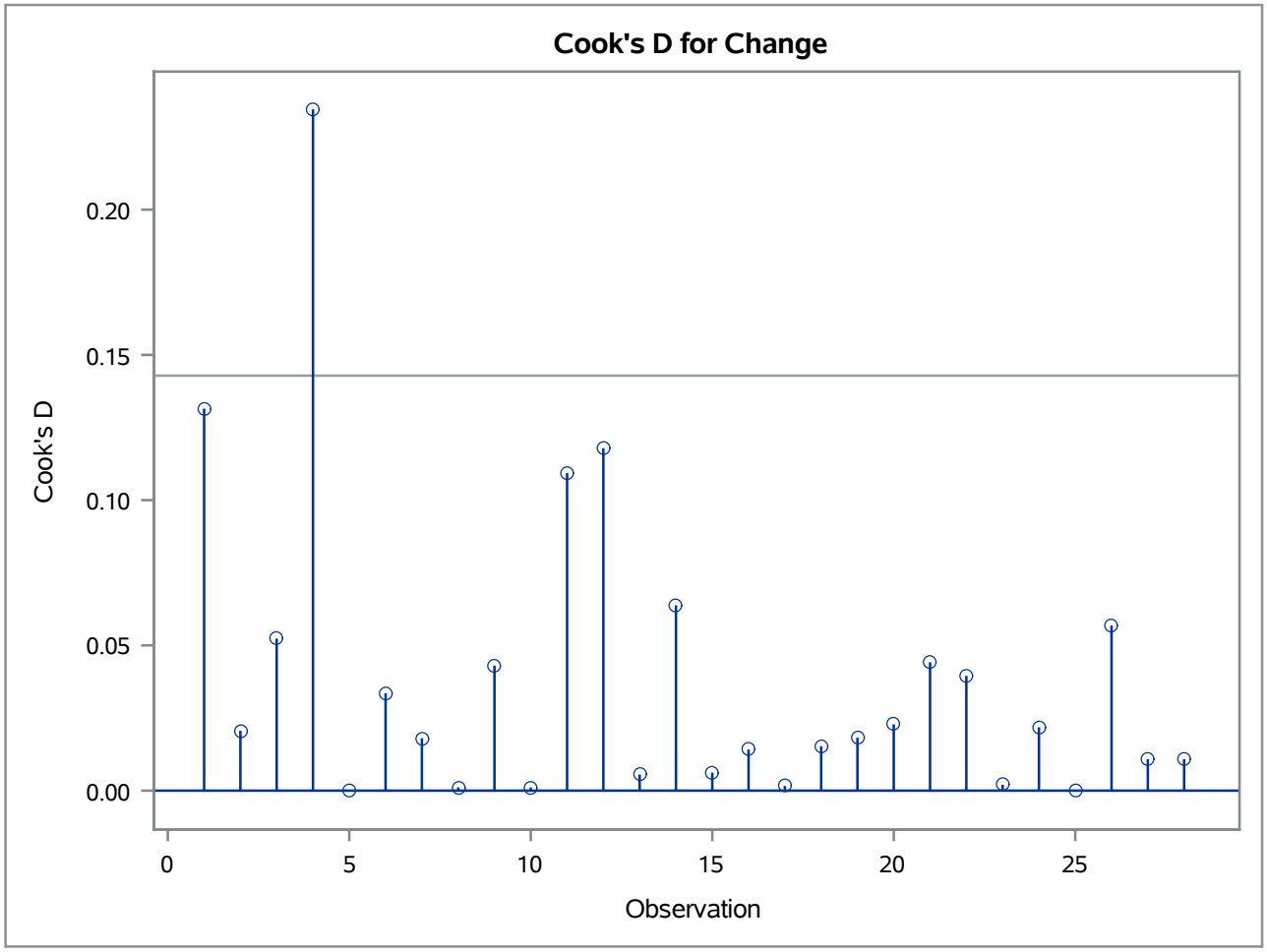
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

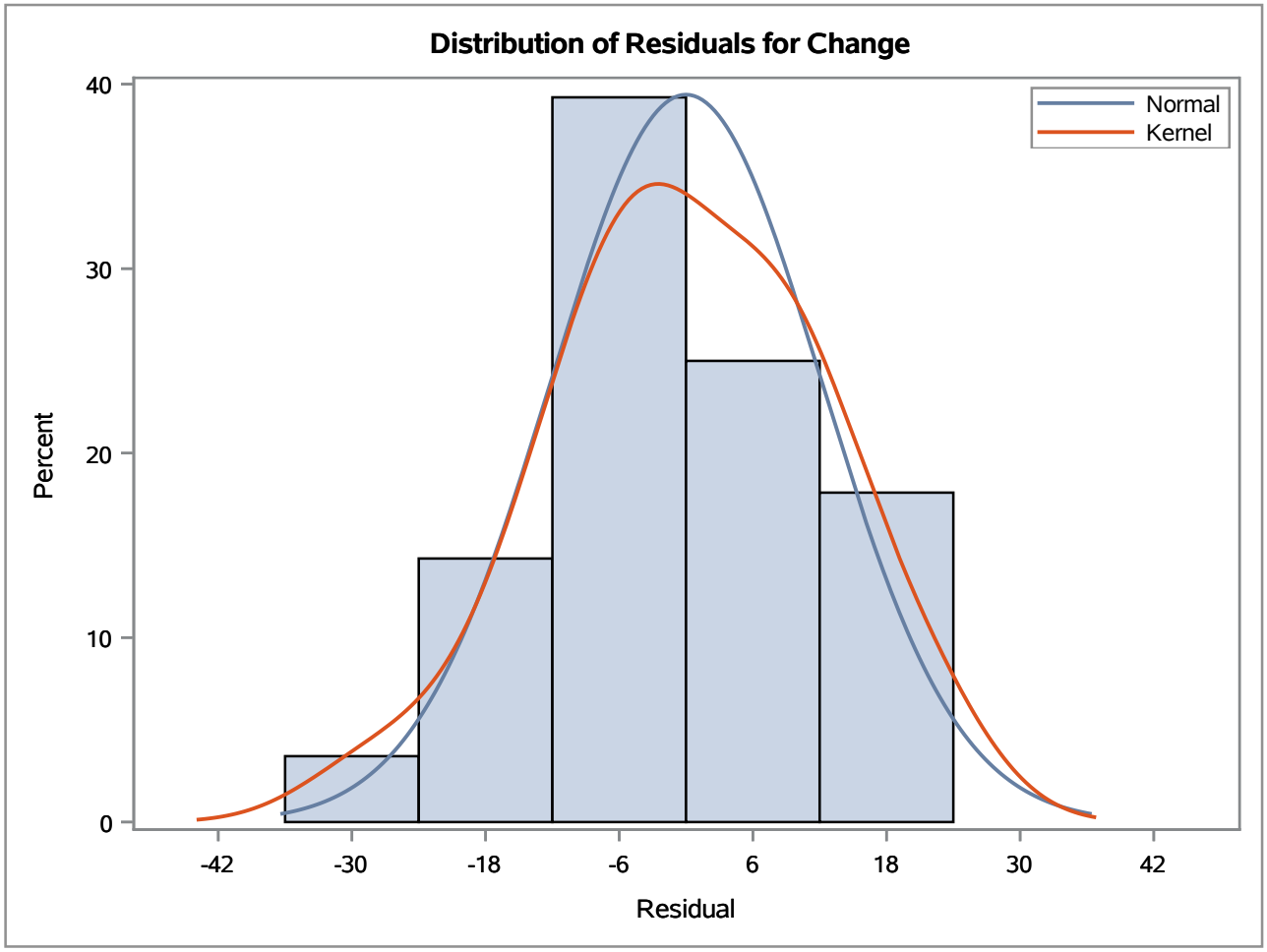
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

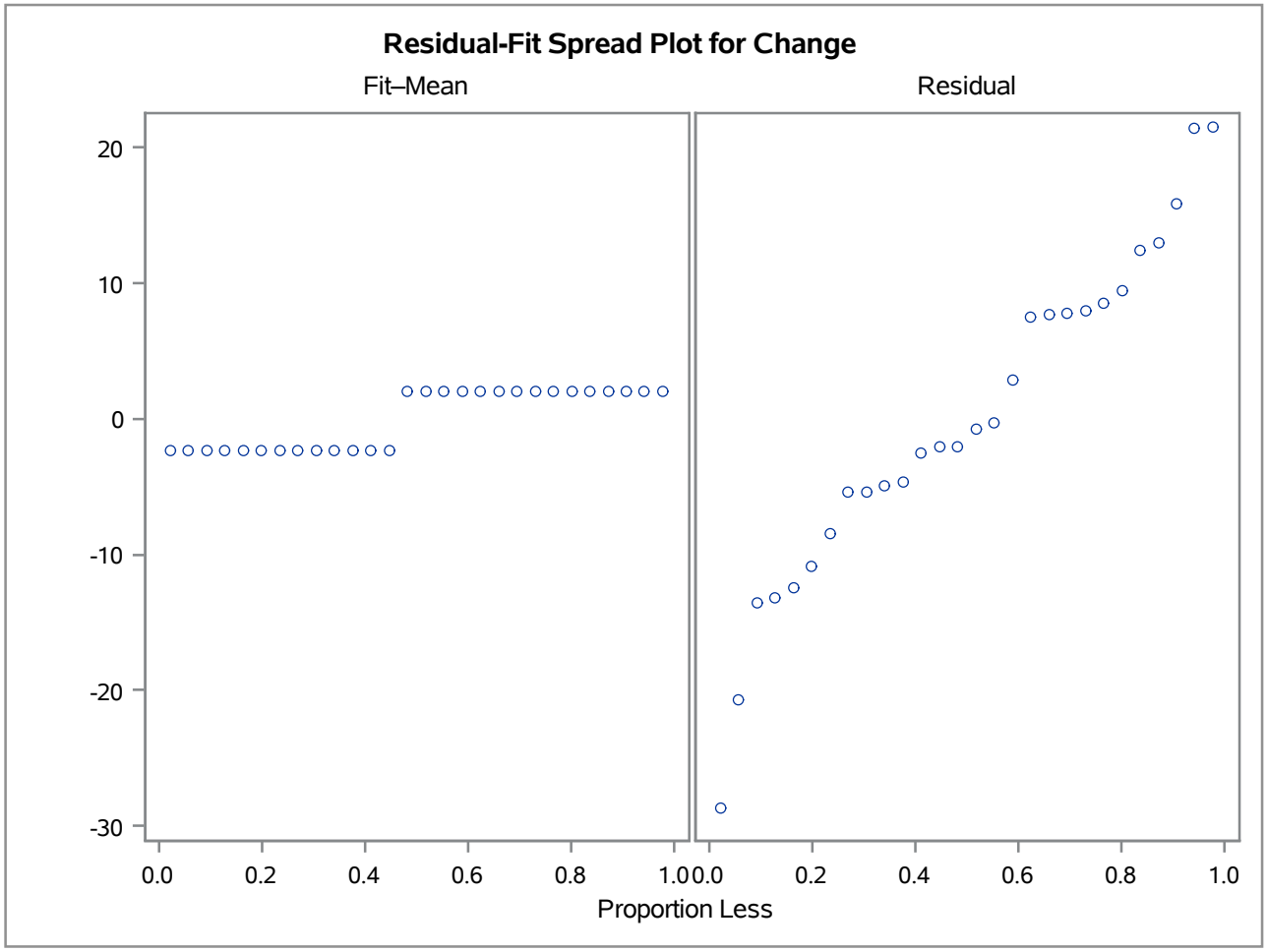
Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM Two Way ANOVA

The GLM Procedure

Dependent Variable: Change



Testing for Equality of Treatment group against Gender on Change using PROC GLM
Two Way ANOVA

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Gender	Change LSMEAN	H0:LSMean1=LSMean2 Pr > |t|
Female	9.19751506	0.9896
Male	9.13405120	

The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
Group	2	Control Treatment
Gender	2	Female Male

Number of Observations Read	28
Number of Observations Used	28

The GLM Procedure

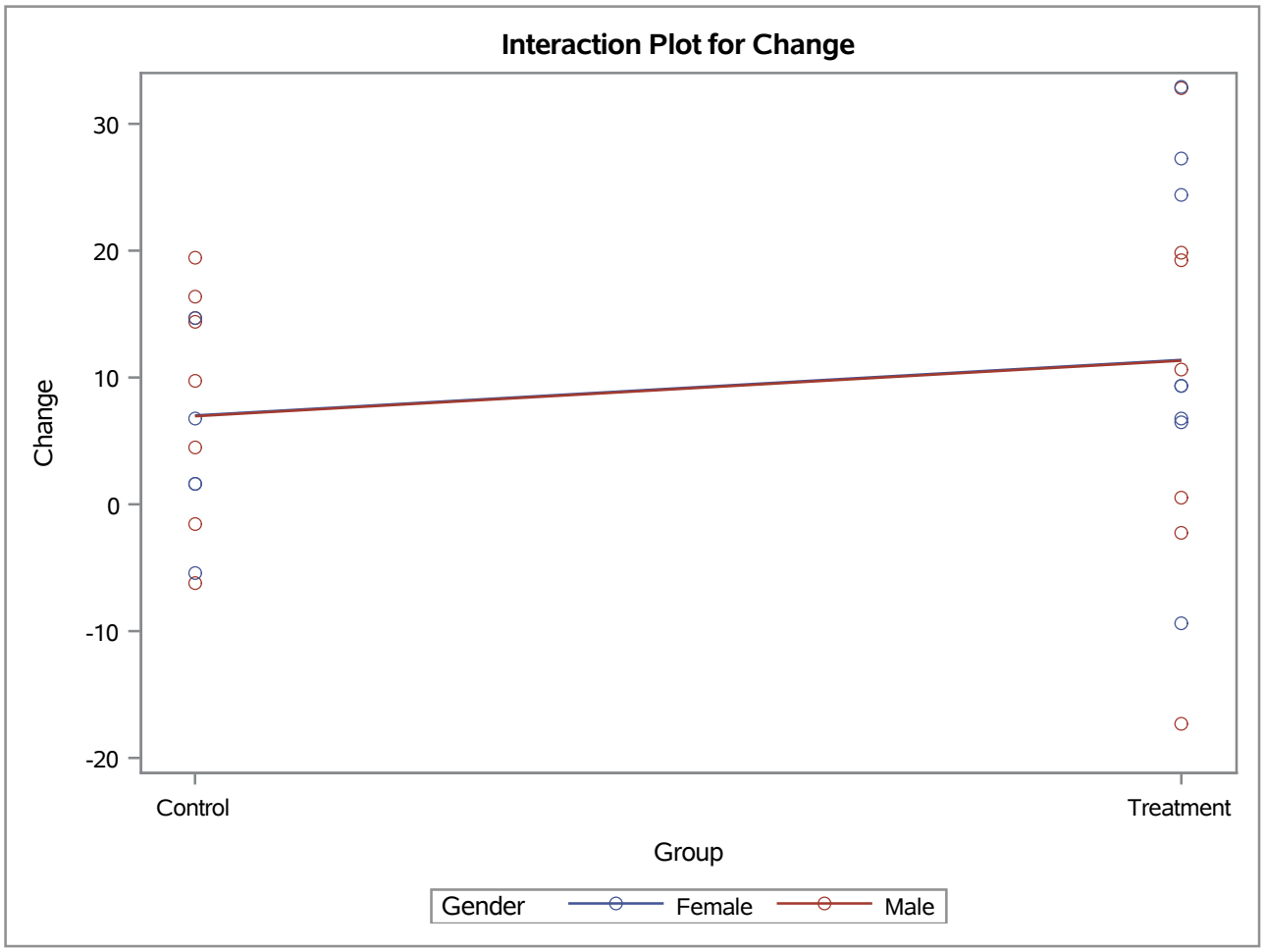
Dependent Variable: Change

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	134.303425	67.151713	0.42	0.6604
Error	25	3979.708975	159.188359		
Corrected Total	27	4114.012400			

R-Square	Coeff Var	Root MSE	Change Mean
0.032645	135.3754	12.61699	9.320000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Group	1	134.2759959	134.2759959	0.84	0.3672
Gender	1	0.0274294	0.0274294	0.00	0.9896

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Group	1	130.7423422	130.7423422	0.82	0.3735
Gender	1	0.0274294	0.0274294	0.00	0.9896



Obs	_NAME_	_SOURCE_	_TYPE_	DF	SS	F	PROB
1	Change	ERROR	ERROR	25	3979.71	.	.
2	Change	Group	SS1	1	134.28	0.84350	0.36717
3	Change	Gender	SS1	1	0.03	0.00017	0.98963
4	Change	Group	SS3	1	130.74	0.82131	0.37345
5	Change	Gender	SS3	1	0.03	0.00017	0.98963

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable Change Classified by Variable Gender					
Gender	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
Male	15	219.50	217.50	21.696408	14.633333
Female	13	186.50	188.50	21.696408	14.346154
Average scores were used for ties.					

Wilcoxon Two-Sample Test					
				t Approximation	
Statistic	Z	Pr < Z	Pr > |Z|	Pr < Z	Pr > |Z|
186.5000	-0.0691	0.4724	0.9449	0.4727	0.9454
Z includes a continuity correction of 0.5.					

Kruskal-Wallis Test		
Chi-Square	DF	Pr > ChiSq
0.0085	1	0.9266

pvalue1 data set - non-normal distribution of errors, use of Kruskal-Wallis test P_KW
Two-Way ANOVA

Obs	_VAR_	_WIL_	Z_WIL	PL_WIL	PR_WIL	P2_WIL	PTL_WIL	PTR_WIL	PT2_WIL	_KW_	DF_KW	P_KW
1	Change	186.5	-0.069136	0.47244	.	0.94488	0.47270	.	0.94539	.008497366	1	0.92655