

```

-----
      name: <unnamed>
      log: /Users/artishah/Desktop/Documents/Documents/Biostat 212/Lab7_ShahA
> _Table_Addendum.smcl
      log type: smcl
      opened on: 13 Sep 2013, 14:55:13

1 .
2 . set more off

3 .
4 . version 13

5 .
6 . /* Lab7 - Table - Addendum
>      Arti Shah
> */
7 .
8 . use "MASALA pilot.dta", clear

9 . describe, short

Contains data from MASALA pilot.dta
  obs:          150
  vars:          765
  size:        239,250
Sorted by:  adipo_three

10 .
11 . **Total number of subjects in study population = 150
12 . **Exclude patients without an adiponectin level
13 .
14 . drop if adipo_three==.
    (1 observation deleted)

15 .
16 . **Total observations left for analysis - 149
17 .
18 . bysort adipo_three: sum totaladiponectin

-----
-> adipo_three = 0

      Variable |      Obs      Mean   Std. Dev.      Min      Max
-----+-----
totaladipo~n |       50     3.444   .9304728        .9     4.6

-----
-> adipo_three = 1

      Variable |      Obs      Mean   Std. Dev.      Min      Max
-----+-----
totaladipo~n |       49     6.114286   .9300537     4.7     7.8

-----
-> adipo_three = 2

      Variable |      Obs      Mean   Std. Dev.      Min      Max
-----+-----
totaladipo~n |       50     12.456   5.367368     8.3    37.9

19 . label define adipo_threelabel 0 "Adipo tertile 1 - 0.9-4.6 ug/ml" 1 "Adipo te

```

```

> rtile 2 - 4.7-7.8 ug/ml" 2 "Adipo tertile 3 - 8.3-37.9 ug/ml"
20 . label values adipo_three adipo_threelabel
21 .
22 . ****Analysis - with testing of pairs; Wilcoxon rank-sum test for Kruskal-Wal
> lis and ttest for ANOVA
23 .
24 . **Basic Characteristics
25 .
26 . sum age, detail

```

age at examination				
	Percentiles	Smallest		
1%	45.12877	45.07397		
5%	45.99178	45.12877		
10%	47.4274	45.15891	Obs	149
25%	50.49589	45.3726	Sum of Wgt.	149
50%	56.31781		Mean	57.20496
		Largest	Std. Dev.	8.089015
75%	63.1726	77.54247		
90%	68.14794	77.5452	Variance	65.43217
95%	72.22466	77.5863	Skewness	.5757217
99%	77.5863	79.00822	Kurtosis	2.701907

```

27 . *Median and mean of age - relatively close to each other, hence use ANOVA
28 . bysort adipo_three: sum age

```

```

--> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
age	50	54.24532	6.708896	45.12877	69.83014

```

--> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
age	49	57.71764	8.01158	45.07397	77.5452

```

--> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
age	50	59.66219	8.624658	45.15891	79.00822

```

29 . anova age adipo_three

```

Number of obs = 149

R-squared = 0.0777

Root MSE = 7.82129

Adj R-squared = 0.0651

Source	Partial SS	df	MS	F	Prob > F
Model	752.753583	2	376.376792	6.15	0.0027
adipo_three	752.753583	2	376.376792	6.15	0.0027
Residual	8931.20689	146	61.1726499		
Total	9683.96047	148	65.4321653		

```

30 . ttest age if adipo_three==0|adipo_three==1, by(adipo_three)

```

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	54.24532	.9487812	6.708896	52.33867	56.15196
Adipo te	49	57.71764	1.144511	8.01158	55.41645	60.01883
combined	99	55.96394	.7587011	7.54898	54.45832	57.46956
diff		-3.472326	1.483976		-6.417607	-.5270442
diff = mean(Adipo te) - mean(Adipo te)				t =	-2.3399	
Ho: diff = 0				degrees of freedom =	97	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0107		Pr(T > t) = 0.0213		Pr(T > t) = 0.9893		

31 . ttest age if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	57.71764	1.144511	8.01158	55.41645	60.01883
Adipo te	50	59.66219	1.219711	8.624658	57.21109	62.11329
combined	99	58.69974	.8383786	8.341762	57.036	60.36347
diff		-1.944551	1.67386		-5.2667	1.377597
diff = mean(Adipo te) - mean(Adipo te)				t =	-1.1617	
Ho: diff = 0				degrees of freedom =	97	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.1241		Pr(T > t) = 0.2482		Pr(T > t) = 0.8759		

32 . ttest age if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	54.24532	.9487812	6.708896	52.33867	56.15196
Adipo te	50	59.66219	1.219711	8.624658	57.21109	62.11329
combined	100	56.95375	.8154983	8.154983	55.33563	58.57188
diff		-5.416877	1.545277		-8.483428	-2.350325
diff = mean(Adipo te) - mean(Adipo te)				t = -3.5054		
Ho: diff = 0				degrees of freedom = 98		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0003		Pr(T > t) = 0.0007		Pr(T > t) = 0.9997		

33 . *Statistically significant difference in age between tertiles 1 and 2 and tertiles 1 and 3

34 .

35 . gen male=1

36 . replace male=0 if phxsex==0
(74 real changes made)

37 . tab male, missing

male	Freq.	Percent	Cum.

0	74	49.66	49.66
1	75	50.34	100.00
Total	149	100.00	

38 . tab male adipo_three, chi2 col

Key
frequency
column percentage

male	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
0	12 24.00	27 55.10	35 70.00	74 49.66
1	38 76.00	22 44.90	15 30.00	75 50.34
Total	50 100.00	49 100.00	50 100.00	149 100.00

Pearson chi2(2) = 22.0245 Pr = 0.000

39 .

40 . tab ever_smoke, missing

ever_smoke	Freq.	Percent	Cum.
0	124	83.22	83.22
1	25	16.78	100.00
Total	149	100.00	

41 . tab ever_smoke adipo_three, chi2 col

Key
frequency
column percentage

ever_smoke	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
0	41 82.00	42 85.71	41 82.00	124 83.22
1	9 18.00	7 14.29	9 18.00	25 16.78
Total	50 100.00	49 100.00	50 100.00	149 100.00

Pearson chi2(2) = 0.3249 Pr = 0.850

42 .

43 . label var tot_drinks "Total alcoholic drinks per week"

44 . sum tot_drinks, detail

Total alcoholic drinks per week					
Percentiles		Smallest			
1%	0	0			
5%	0	0			
10%	0	0	Obs		149
25%	0	0	Sum of Wgt.		149
50%	0	Largest	Mean		2.691275
			Std. Dev.		5.194721
75%	3	21			
90%	10	21	Variance		26.98513
95%	18	24	Skewness		2.651522
99%	24	25	Kurtosis		9.704213

45 . **tot_drinks not normally distributed, hence use Kruskal-Wallis test
 46 . tabstat tot_drinks, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: tot_drinks
 by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	6.420757	1	4.28	0	6
Adipo tertile 2	4.041452	0	1.714286	0	1
Adipo tertile 3	4.510351	0	2.06	0	1
Total	5.194721	0	2.691275	0	3

47 . kwallis tot_drinks, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	50	4430.50
Adipo tertile 2 - 4.7-7.8 ug/ml	49	3467.00
Adipo tertile 3 - 8.3-37.9 ug/ml	50	3277.50

chi-squared = 7.844 with 2 d.f.
 probability = 0.0198

chi-squared with ties = 9.057 with 2 d.f.
 probability = 0.0108

48 . ranksum tot_drinks if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	50	2809	2500
Adipo tertile 2	49	2141	2450
combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -1880.93
 adjusted variance 18535.73

Ho: tot_drinks(adipo_three==Adipo tertile 1 - 0.9-4.6 ug/ml) = tot_drinks(adipo_three==Adipo tertile 2 - 4.7-7.8 ug/ml)
 z = 2.270
 Prob > |z| = 0.0232

```
49 . ranksum tot_drinks if adipo_three==1|adipo_three==2, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	49	2551	2450
Adipo tertile 2	50	2399	2500
combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -4024.37

adjusted variance 16392.30

Ho: tot_drinks(adipo_tertile 2 - 4.7-7.8 ug/ml) = tot_drinks(adipo_tertile 1 - 0.9-4.6 ug/ml)
 > Adipo tertile 3 - 8.3-37.9 ug/ml)
 z = 0.789
 Prob > |z| = 0.4302

```
50 . ranksum tot_drinks if adipo_three==0|adipo_three==2, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	50	2896.5	2525
Adipo tertile 2	50	2153.5	2525
combined	100	5050	5050

unadjusted variance 21041.67
 adjustment for ties -2713.26

adjusted variance 18328.41

Ho: tot_drinks(adipo_tertile 1 - 0.9-4.6 ug/ml) = tot_drinks(adipo_tertile 2 - 4.7-7.8 ug/ml)
 > Adipo tertile 3 - 8.3-37.9 ug/ml)
 z = 2.744
 Prob > |z| = 0.0061

```
51 . *Statistically significant difference in tot_drinks between tertiles 1 and 2
> and tertiles 1 and 3
```

```
52 .
```

```
53 . label var totexmets "Total exercise, MET-min/week"
```

```
54 . sum totexmets, detail
```

Total exercise, MET-min/week				
	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	210	0	Obs	149
25%	682.5	0	Sum of Wgt.	149
50%	1312.5		Mean	2075.638
		Largest	Std. Dev.	2359.372
75%	2497.5	8767.5		
90%	4882.5	11092.5	Variance	5566637
95%	6867.5	11760	Skewness	2.627343
99%	11760	15345	Kurtosis	11.86428

```
55 . **totexmets not normally distributed, hence use Kruskal-Wallis test
```

```
56 . tabstat totexmets, stats (sd median mean p25 p75) by (adipo_three)
```

Summary for variables: totexmets
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	1930.266	1233.75	1816.7	612.5	2415
Adipo tertile 2	1790.215	1225	1757.551	472.5	2415
Adipo tertile 3	3073.471	1470	2646.3	990	3000
Total	2359.372	1312.5	2075.638	682.5	2497.5

57 . kwallis totexmets, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	50	3589.00
Adipo tertile 2 - 4.7-7.8 ug/ml	49	3425.00
Adipo tertile 3 - 8.3-37.9 ug/ml	50	4161.00

chi-squared = 2.777 with 2 d.f.
probability = 0.2494

chi-squared with ties = 2.778 with 2 d.f.
probability = 0.2493

58 . *Kruskal-Wallis not statistically significant, hence Wilcoxon rank-sum test
> ng not needed

59 .

60 .

61 . **For dietary variables (calories, carbohydrate, protein, fat) - mean and med
> ian are relatively close to each other, hence use ANOVA

62 . label var calories "total calories (kcal/day)"

63 . sum calories, detail

total calories (kcal/day)				
Percentiles	Smallest			
1%	832.4	810		
5%	945.1	832.4		
10%	1090.9	859.2	Obs	145
25%	1405.6	871.8	Sum of Wgt.	145
50%	1854.3		Mean	1917.873
			Std. Dev.	695.4805
75%	2321.9	3947.8		
90%	2828.9	3969.4	Variance	483693.2
95%	3090.8	4156.4	Skewness	.8110914
99%	4156.4	4181.4	Kurtosis	3.843988

64 . *Note - 4 observations missing

65 . bysort adipo_three: sum calories

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
calories	48	1823.621	776.4709	832.4	4181.4

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
calories	48	2030.727	706.0753	810	4156.4

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
calories	49	1899.651	592.1305	955.5	3245.1

66 . anova calories adipo_three

Number of obs = 145 R-squared = 0.0151
Root MSE = 695.042 Adj R-squared = 0.0013

Source	Partial SS	df	MS	F	Prob > F
Model	1054006.78	2	527003.392	1.09	0.3387
adipo_three	1054006.78	2	527003.392	1.09	0.3387
Residual	68597813.3	142	483083.192		
Total	69651820.1	144	483693.195		

67 . *ANOVA not statistically significant, hence paired ttest not needed

68 .

69 . label var eacarb "energy adjusted carbohydrate (g/day)"

70 . sum eacarb, detail

energy adjusted carbohydrate (g/day)					
Percentiles		Smallest			
1%	175.6162	142.9668			
5%	237.0829	175.6162			
10%	244.486	197.1455	Obs	145	
25%	260.9102	218.4285	Sum of Wgt.	145	
50%		281.6711		Mean	279.423
		Largest		Std. Dev.	33.65585
75%	294.7698	349.2235			
90%	314.8293	369.6896	Variance	1132.716	
95%	331.9351	392.865	Skewness	.0792335	
99%	392.865	405.4001	Kurtosis	6.392575	

71 . *Note - 4 observations missing

72 . bysort adipo_three: sum eacarb

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eacarb	48	273.8568	33.83818	142.9668	369.6896

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eacarb	48	281.9928	32.58682	218.4285	392.865

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eacarb	49	282.3583	34.50829	175.6162	405.4001

73 . anova eacarb adipo_three

Number of obs = 145 R-squared = 0.0136
Root MSE = 33.6599 Adj R-squared = -0.0002

Source	Partial SS	df	MS	F	Prob > F
Model	2226.29908	2	1113.14954	0.98	0.3769
adipo_three	2226.29908	2	1113.14954	0.98	0.3769
Residual	160884.838	142	1132.99181		
Total	163111.137	144	1132.71623		

74 . *ANOVA not statistically significant, hence paired ttest not needed

75 .

76 . label var eaprot "energy adjusted protein (g/day)"

77 . sum eaprot, detail

energy adjusted protein (g/day)					
	Percentiles	Smallest			
1%	33.95601	28.89093			
5%	49.86039	33.95601			
10%	53.56842	39.9096	Obs	145	
25%	62.71521	47.13358	Sum of Wgt.	145	
50%	68.78442		Mean	70.15679	
			Std. Dev.	14.89998	
75%	76.34274	110.0494			
90%	85.18635	122.0545	Variance	222.0094	
95%	92.3569	132.273	Skewness	1.283381	
99%	132.273	135.2711	Kurtosis	7.706116	

78 . *Note - 4 observations missing

79 . bysort adipo_three: sum eaprot

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eaprot	48	71.53573	16.42583	47.13358	135.2711

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eaprot	48	69.74213	15.03793	28.89093	110.0494

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eaprot	49	69.2122	13.32024	39.9096	122.0545

80 . anova eaprot adipo_three

Number of obs = 145 R-squared = 0.0045
 Root MSE = 14.9709 Adj R-squared = -0.0095

Source	Partial SS	df	MS	F	Prob > F
Model	143.244297	2	71.6221486	0.32	0.7270
adipo_three	143.244297	2	71.6221486	0.32	0.7270
Residual	31826.1117	142	224.127547		
Total	31969.356	144	222.009417		

81 . *ANOVA not statistically significant, hence paired ttest not needed

82 .

83 . label var eatfat "energy adjusted fat (g/day)"

84 . sum eatfat, detail

energy adjusted fat (g/day)					
Percentiles	Smallest				
1%	23.65735	22.18222			
5%	41.31638	23.65735			
10%	48.73448	28.03525	Obs	145	
25%	54.60469	34.22088	Sum of Wgt.	145	
50%	60.61928		Mean	59.77856	
		Largest	Std. Dev.	10.36652	
75%	66.57069	78.07025			
90%	71.06354	78.18399	Variance	107.4646	
95%	75.23942	82.73402	Skewness	-.7629581	
99%	82.73402	85.96131	Kurtosis	4.80077	

85 . *Note - 4 observations missing

86 . bysort adipo_three: sum eatfat

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eatfat	48	58.99747	8.718046	39.36539	76.19773

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eatfat	48	61.27042	11.79763	23.65735	85.96131

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
eatfat	49	59.08229	10.40951	22.18222	78.18399

87 . anova eatfat adipo_three

Number of obs = 145 R-squared = 0.0103
 Root MSE = 10.3852 Adj R-squared = -0.0036

Source	Partial SS	df	MS	F	Prob > F
Model	159.870679	2	79.9353395	0.74	0.4784

adipo_three		159.870679	2	79.9353395	0.74	0.4784
Residual		15315.0368	142	107.852372		

Total		15474.9075	144	107.464635		

```

88 . *ANOVA not statistically significant hence paired ttest not needed
89 .
90 .
91 . **Laboratory measures
92 .
93 . label var t0glu "fasting glucose, mg/dl"
94 . sum t0glu, detail

```

fasting glucose, mg/dl					
Percentiles		Smallest			
1%	69.6	66.8			
5%	77.4	69.6			
10%	82.4	73.9	Obs		149
25%	86.7	75.4	Sum of Wgt.		149
50%	94.6			Mean	102.3275
		Largest		Std. Dev.	24.56558
75%	106	185			
90%	136	188	Variance		603.4678
95%	154	190	Skewness		1.880933
99%	190	208	Kurtosis		6.983919

```

95 . **t0glu not normally distributed, hence use Kruskal-Wallis test
96 . tabstat t0glu, stats (sd median mean p25 p75) by (adipo_three)

```

Summary for variables: t0glu
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three		sd	p50	mean	p25	p75

Adipo tertile 1		28.03528	103	113.182	94.3	124
Adipo tertile 2		18.12414	91.2	96.4551	85	102
Adipo tertile 3		23.10229	88.9	97.228	85.1	99.4

Total		24.56558	94.6	102.3275	86.7	106

```

97 . kwallis t0glu, by (adipo_three)

```

Kruskal-Wallis equality-of-populations rank test

adipo_three Obs Rank Sum			

Adipo tertile 1 - 0.9-4.6 ug/ml		50	4958.50
Adipo tertile 2 - 4.7-7.8 ug/ml		49	3159.50
Adipo tertile 3 - 8.3-37.9 ug/ml		50	3057.00

chi-squared = 23.752 with 2 d.f.
probability = 0.0001

chi-squared with ties = 23.756 with 2 d.f.
probability = 0.0001

```

98 . ranksum t0glu if adipo_three==0|adipo_three==1, by(adipo_three)

```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three		obs	rank sum	expected
-------------	--	-----	----------	----------

Adipo tertile 1	50	3084.5	2500
Adipo tertile 2	49	1865.5	2450
combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -5.43

adjusted variance 20411.24

Ho: t0glu(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t0glu(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml)
 z = 4.091
 Prob > |z| = 0.0000

99 . ranksum t0glu if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	49	2519	2450
Adipo tertile 2	50	2431	2500
combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -4.29

adjusted variance 20412.37

Ho: t0glu(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = t0glu(adipo_~e==Adipo tertile 3 - 8.3-37.9 ug/ml)
 z = 0.483
 Prob > |z| = 0.6291

100 . ranksum t0glu if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	50	3149	2525
Adipo tertile 2	50	1901	2525
combined	100	5050	5050

unadjusted variance 21041.67
 adjustment for ties -4.80

adjusted variance 21036.87

Ho: t0glu(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t0glu(adipo_~e==Adipo tertile 3 - 8.3-37.9 ug/ml)
 z = 4.302
 Prob > |z| = 0.0000

101 . *Statistically significant difference in t0glu between tertiles 1 and 2 and tertiles 1 and 3

102 .

103 . label var t0ins "fasting insulin, uU/ml"

104 . sum t0ins, detail

fasting insulin, uU/ml	
Percentiles	Smallest

1%	2.2	1.8		
5%	4.3	2.2		
10%	5.7	2.4	Obs	149
25%	7.9	3.2	Sum of Wgt.	149
50%	10.3		Mean	13.81342
		Largest	Std. Dev.	13.08263
75%	15.5	41.9		
90%	25.1	43.2	Variance	171.1552
95%	33.7	54.9	Skewness	5.629021
99%	54.9	133	Kurtosis	48.24434

```
105 . **t0ins not normally distributed, hence use Kruskal-Wallis test
106 . tabstat t0ins, stats (sd median mean p25 p75) by (adipo_three)
```

Summary for variables: t0ins
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	19.19664	13.6	17.56	9.2	18.7
Adipo tertile 2	9.673896	11.2	15.2102	9	17
Adipo tertile 3	3.714478	8.25	8.698	6.4	10.6
Total	13.08263	10.3	13.81342	7.9	15.5

```
107 . kwallis t0ins, by (adipo_three)
```

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	50	4477.50
Adipo tertile 2 - 4.7-7.8 ug/ml	49	4210.50
Adipo tertile 3 - 8.3-37.9 ug/ml	50	2487.00

chi-squared = 25.955 with 2 d.f.
probability = 0.0001

chi-squared with ties = 25.958 with 2 d.f.
probability = 0.0001

```
108 . ranksum t0ins if adipo_three==0|adipo_three==1, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	50	2579	2500
Adipo tertil	49	2371	2450
combined	99	4950	4950

unadjusted variance 20416.67
adjustment for ties -3.28

adjusted variance 20413.38

Ho: t0ins(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t0ins(adipo_~e==Adipo te
> rtile 2 - 4.7-7.8 ug/ml)

z = 0.553
Prob > |z| = 0.5803

```
109 . ranksum t0ins if adipo_three==1|adipo_three==2, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	49	3064.5	2450
Adipo tertile 2	50	1885.5	2500
combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -4.67

adjusted variance 20411.99

Ho: t0ins(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = t0ins(adipo_~e==Adipo tertile 3 - 8.3-37.9 ug/ml)

z = 4.301
 Prob > |z| = 0.0000

110 . ranksum t0ins if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	50	3173.5	2525
Adipo tertile 2	50	1876.5	2525
combined	100	5050	5050

unadjusted variance 21041.67
 adjustment for ties -4.04

adjusted variance 21037.63

Ho: t0ins(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t0ins(adipo_~e==Adipo tertile 2 - 8.3-37.9 ug/ml)

z = 4.471
 Prob > |z| = 0.0000

111 . *Statistically significant difference in t0ins between tertiles 1 and 3 and t0ins between tertiles 2 and 3

112 .

113 . label var t120glu "2hr glucose post-OGTT, mg/dl"

114 . sum t120glu, detail

2hr glucose post-OGTT, mg/dl				
Percentiles			Smallest	
1%	70.4		52.2	
5%	86.2		70.4	
10%	94.8		76.6	Obs 147
25%	115		82.3	Sum of Wgt. 147
50%	148			Mean 170.6054
		Largest		Std. Dev. 79.14052
75%	202	375		
90%	302	384	Variance	6263.223
95%	343	394	Skewness	1.181453
99%	394	412	Kurtosis	3.569017

115 . *Note - 2 observations missing

116 . **t120glu not normally distributed, hence use Kruskal-Wallis test

117 . tabstat t120glu, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: t120glu
 by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	85.307	178.5	199.88	134	257
Adipo tertile 2	63.09915	141.5	155.4104	116.5	170.5
Adipo tertile 3	79.81414	130	155.6184	106	166
Total	79.14052	148	170.6054	115	202

118 . kwallis t120glu, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	50	4502.50
Adipo tertile 2 - 4.7-7.8 ug/ml	48	3322.50
Adipo tertile 3 - 8.3-37.9 ug/ml	49	3053.00

chi-squared = 11.405 with 2 d.f.
probability = 0.0033

chi-squared with ties = 11.407 with 2 d.f.
probability = 0.0033

119 . ranksum t120glu if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	50	2848.5	2475
Adipo tertil	48	2002.5	2376
combined	98	4851	4851

unadjusted variance 19800.00

adjustment for ties -2.90

adjusted variance 19797.10

Ho: t120glu(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t120glu(adipo_~e==Adip
> o tertile 2 - 4.7-7.8 ug/ml)

z = 2.655

Prob > |z| = 0.0079

120 . ranksum t120glu if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	48	2496	2352
Adipo tertil	49	2257	2401
combined	97	4753	4753

unadjusted variance 19208.00

adjustment for ties -3.03

adjusted variance 19204.97

Ho: t120glu(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = t120glu(adipo_~e==Adip
> o tertile 3 - 8.3-37.9 ug/ml)

z = 1.039

Prob > |z| = 0.2988

121 . ranksum t120glu if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertile 1	50	2929	2500
Adipo tertile 2	49	2021	2450
combined	99	4950	4950

unadjusted variance 20416.67
adjustment for ties -1.64

adjusted variance 20415.03

Ho: t120glu(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t120glu(adipo_~e==Adipo tertile 3 - 8.3-37.9 ug/ml)

z = 3.002

Prob > |z| = 0.0027

122 . *Statistically significant difference in t120glu between tertiles 1 and 2 and
> tertiles 1 and 3

123 .

124 . label var t120ins "2hr insulin post-OGTT, uU/ml"

125 . sum t120ins, detail

2hr insulin post-OGTT, uU/ml					
Percentiles		Smallest			
1%	14	9.3			
5%	21.9	14			
10%	29.2	14.1	Obs	147	
25%	49.4	18	Sum of Wgt.	147	
			Mean	119.0272	
50%	84.3		Std. Dev.	113.0006	
			Largest		
75%	150.1	541.4			
90%	212.4	610.5	Variance	12769.15	
95%	308.7	625.2	Skewness	2.583879	
99%	625.2	634.4	Kurtosis	10.92354	

126 . *Note - 2 observations missing

127 . **t120ins not normally distributed, hence use Kruskal-Wallis test

128 . tabstat t120ins, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: t120ins

by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	97.88081	108.75	134.248	63.9	180.3
Adipo tertile 2	151.2736	120.95	160.8854	69.3	187.1
Adipo tertile 3	37.36316	53	62.49184	39.4	76.9
Total	113.0006	84.3	119.0272	49.4	150.1

129 . kwallis t120ins, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum

Adipo tertile 1 - 0.9-4.6 ug/ml	50	4275.00
Adipo tertile 2 - 4.7-7.8 ug/ml	48	4283.50
Adipo tertile 3 - 8.3-37.9 ug/ml	49	2319.50

chi-squared = 29.010 with 2 d.f.
probability = 0.0001

chi-squared with ties = 29.010 with 2 d.f.
probability = 0.0001

130 . ranksum t120ins if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	50	2407	2475
Adipo tertil	48	2444	2376
combined	98	4851	4851

unadjusted variance 19800.00
adjustment for ties -0.13

adjusted variance 19799.87

Ho: t120ins(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t120ins(adipo_~e==Adip
> o tertile 2 - 4.7-7.8 ug/ml)
z = -0.483
Prob > |z| = 0.6289

131 . ranksum t120ins if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	48	3015.5	2352
Adipo tertil	49	1737.5	2401
combined	97	4753	4753

unadjusted variance 19208.00
adjustment for ties -0.13

adjusted variance 19207.87

Ho: t120ins(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = t120ins(adipo_~e==Adip
> o tertile 3 - 8.3-37.9 ug/ml)
z = 4.787
Prob > |z| = 0.0000

132 . ranksum t120ins if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	50	3143	2500
Adipo tertil	49	1807	2450
combined	99	4950	4950

unadjusted variance 20416.67
adjustment for ties -0.13

adjusted variance 20416.54

```

Ho: t120ins(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = t120ins(adipo_~e==Adip
> o tertile 3 - 8.3-37.9 ug/ml)
      z = 4.500
Prob > |z| = 0.0000

133 . *Statistically significant difference in t120ins between tertiles 1 and 3 and
> tertiles 2 and 3
134 .
135 . label var homair "homeostatic model assessment for insulin resistance"
136 . sum homair, detail

```

homeostatic model assessment for insulin resistance				

	Percentiles	Smallest		
1%	.49	.35		
5%	.86	.49		
10%	1.31	.52	Obs	149
25%	1.87	.68	Sum of Wgt.	149
50%	2.51		Mean	3.671141
		Largest	Std. Dev.	4.231813
75%	3.99	12.16		
90%	6.85	13.87	Variance	17.90824
95%	8.92	17.6	Skewness	5.981083
99%	17.6	42.98	Kurtosis	52.176

```

137 . **homair not normally distributed, hence use Kruskal-Wallis test
138 . tabstat homair, stats (sd median mean p25 p75) by (adipo_three)

```

Summary for variables: homair
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75

Adipo tertile 1	6.32274	3.56	5.1468	2.31	5.77
Adipo tertile 2	2.904164	2.65	3.759796	2.08	3.92
Adipo tertile 3	1.062951	1.97	2.1086	1.41	2.51

Total	4.231813	2.51	3.671141	1.87	3.99

```

139 . kwallis homair, by (adipo_three)

```

Kruskal-Wallis equality-of-populations rank test

-----+-----			
adipo_three	Obs	Rank Sum	
-----+-----			
Adipo tertile 1 - 0.9-4.6 ug/ml	50	4653.50	
Adipo tertile 2 - 4.7-7.8 ug/ml	49	4016.50	
Adipo tertile 3 - 8.3-37.9 ug/ml	50	2505.00	
-----+-----			

chi-squared = 26.688 with 2 d.f.
probability = 0.0001

chi-squared with ties = 26.690 with 2 d.f.
probability = 0.0001

```

140 . ranksum homair if adipo_three==0|adipo_three==1, by(adipo_three)

```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
-----+-----			

Adipo tertil	50	2709.5	2500
Adipo tertil	49	2240.5	2450

combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -1.26

adjusted variance 20415.40

Ho: homair(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = homair(adipo_~e==Adipo
 > tertile 2 - 4.7-7.8 ug/ml)

z = 1.466
 Prob > |z| = 0.1426

141 . ranksum homair if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected

Adipo tertil	49	3001	2450
Adipo tertil	50	1949	2500

combined	99	4950	4950

unadjusted variance 20416.67
 adjustment for ties -2.65

adjusted variance 20414.02

Ho: homair(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = homair(adipo_~e==Adipo
 > tertile 3 - 8.3-37.9 ug/ml)

z = 3.856
 Prob > |z| = 0.0001

142 . ranksum homair if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected

Adipo tertil	50	3219	2525
Adipo tertil	50	1831	2525

combined	100	5050	5050

unadjusted variance 21041.67
 adjustment for ties -1.26

adjusted variance 21040.40

Ho: homair(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = homair(adipo_~e==Adipo
 > tertile 3 - 8.3-37.9 ug/ml)

z = 4.784
 Prob > |z| = 0.0000

143 . *Statistically significant difference in homair between tertiles 1 and 3 and
 > tertiles 2 and 3

144 .

145 .

146 . **For lipid measures - mean and median are relatively close to each other, he
 > nce use ANOVA

147 . label var totchol "total cholesterol, mg/dl"

148 . sum totchol, detail

total cholesterol, mg/dl

Percentiles		Smallest		
1%	117	96		
5%	138	117		
10%	146	122	Obs	149
25%	164	127	Sum of Wgt.	149
50%	185	Largest	Mean	188.2081
			Std. Dev.	33.53624
75%	212	261		
90%	232	268	Variance	1124.679
95%	251	269	Skewness	.2340579
99%	269	275	Kurtosis	2.876079

149 . bysort adipo_three: sum totchol

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
totchol	50	190.68	36.24094	122	269

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
totchol	49	183.6531	29.53779	96	253

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
totchol	50	190.2	34.61037	117	275

150 . anova totchol adipo_three

Number of obs = 149 R-squared = 0.0091
Root MSE = 33.6106 Adj R-squared = -0.0044

Source	Partial SS	df	MS	F	Prob > F
Model	1520.56829	2	760.284147	0.67	0.5117
adipo_three	1520.56829	2	760.284147	0.67	0.5117
Residual	164931.982	146	1129.67111		
Total	166452.55	148	1124.67939		

151 . *ANOVA not statistically significant, hence paired ttest not needed

152 .

153 . label var trig "triglycerides, mg/dl"

154 . sum trig, detail

triglycerides, mg/dl				
Percentiles		Smallest		
1%	45	41		
5%	55	45		
10%	63	45	Obs	149
25%	89	48	Sum of Wgt.	149
50%	119		Mean	133.3826

		Largest	Std. Dev.	62.99942
75%	161	301		
90%	221	311	Variance	3968.927
95%	277	324	Skewness	1.078556
99%	324	331	Kurtosis	3.876107

155 . bysort adipo_three: sum trig

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
trig	50	158.52	73.1005	45	331

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
trig	49	141.0612	59.10105	48	311

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
trig	50	100.72	37.81644	41	215

156 . anova trig adipo_three

	Number of obs =	149	R-squared =	0.1495
	Root MSE =	58.4957	Adj R-squared =	0.1379

Source	Partial SS	df	MS	F	Prob > F
Model	87825.8183	2	43912.9092	12.83	0.0000
adipo_three	87825.8183	2	43912.9092	12.83	0.0000
Residual	499575.376	146	3421.74915		
Total	587401.195	148	3968.92699		

157 . ttest trig if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te	50	158.52	10.33797	73.1005	137.7451 179.2949
Adipo te	49	141.0612	8.443007	59.10105	124.0854 158.037
combined	99	149.8788	6.711695	66.78052	136.5596 163.1979
diff		17.45878	13.37614		-9.089167 44.00672

diff = mean(Adipo te) - mean(Adipo te) t = 1.3052
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0	Ha: diff != 0	Ha: diff > 0
Pr(T < t) = 0.9025	Pr(T > t) = 0.1949	Pr(T > t) = 0.0975

158 . ttest trig if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	141.0612	8.443007	59.10105	124.0854	158.037
Adipo te	50	100.72	5.348052	37.81644	89.97269	111.4673
combined	99	120.6869	5.353022	53.2619	110.064	131.3098
diff		40.34122	9.951651		20.58995	60.0925

diff = mean(Adipo te) - mean(Adipo te) t = 4.0537
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9999 Pr(|T| > |t|) = 0.0001 Pr(T > t) = 0.0001

159 . ttest trig if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	158.52	10.33797	73.1005	137.7451	179.2949
Adipo te	50	100.72	5.348052	37.81644	89.97269	111.4673
combined	100	129.62	6.4779	64.779	116.7664	142.4736
diff		57.8	11.63939		34.70202	80.89798

diff = mean(Adipo te) - mean(Adipo te) t = 4.9659
Ho: diff = 0 degrees of freedom = 98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

160 . *Statistically significant difference in trig between tertiles 1 and 3 and te
> rtiles 2 and 3

161 .

162 . label var hdl "hdl, mg/dl"

163 . sum hdl, detail

hdl, mg/dl				
Percentiles		Smallest		
1%	26	21		
5%	28	26		
10%	33	27	Obs	149
25%	39	27	Sum of Wgt.	149
50%	47		Mean	48.89933
			Std. Dev.	13.58096
75%	56	82		
90%	67	84	Variance	184.4425
95%	75	87	Skewness	.658226
99%	87	89	Kurtosis	3.280303

164 . bysort adipo_three: sum hdl

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
hdl	50	42.3	9.150109	21	63

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
hdl	49	45.65306	12.38203	26	87

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
hdl	50	58.68	13.06099	36	89

165 . anova hdl adipo_three

Number of obs = 149 R-squared = 0.2739
Root MSE = 11.6515 Adj R-squared = 0.2640

Source	Partial SS	df	MS	F	Prob > F
Model	7477.00789	2	3738.50395	27.54	0.0000
adipo_three	7477.00789	2	3738.50395	27.54	0.0000
Residual	19820.482	146	135.756726		
Total	27297.4899	148	184.4425		

166 . ttest hdl if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	42.3	1.294021	9.150109	39.69957	44.90043
Adipo te	49	45.65306	1.768861	12.38203	42.09653	49.2096
combined	99	43.9596	1.10002	10.94506	41.77664	46.14255
diff		-3.353061	2.1851		-7.68988	.9837577

diff = mean(Adipo te) - mean(Adipo te) t = -1.5345
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0641 Pr(|T| > |t|) = 0.1282 Pr(T > t) = 0.9359

167 . ttest hdl if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	45.65306	1.768861	12.38203	42.09653	49.2096
Adipo te	50	58.68	1.847103	13.06099	54.96811	62.39189
combined	99	52.23232	1.43281	14.25628	49.38896	55.07569
diff		-13.02694	2.558863		-18.10557	-7.948303

diff = mean(Adipo te) - mean(Adipo te) t = -5.0909
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

168 . ttest hdl if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	42.3	1.294021	9.150109	39.69957	44.90043
Adipo te	50	58.68	1.847103	13.06099	54.96811	62.39189
combined	100	50.49	1.391496	13.91496	47.72897	53.25103
diff		-16.38	2.255278		-20.85553	-11.90447
diff = mean(Adipo te) - mean(Adipo te)				t = -7.2630		
Ho: diff = 0				degrees of freedom = 98		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr(T > t) = 0.0000		Pr(T > t) = 1.0000		

```

169 . *Statistically significant difference in hdl between tertiles 1 and 3 and ter
    > tiles 2 and 3
170 .
171 . label var ldl "ldL, mg/dL"
172 . sum ldl, detail

```

ldL, mg/dL					
Percentiles			Smallest		
1%	48		34		
5%	70		48		
10%	77		53	Obs	149
25%	90		54	Sum of Wgt.	149
50%	109			Mean	112.4161
				Std. Dev.	30.21345
75%	137		181		
90%	151		183	Variance	912.8527
95%	165		191	Skewness	.3094183
99%	191		197	Kurtosis	2.945526

```

173 . bysort adipo_three: sum ldl

```

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
ldL	50	116.1	31.97974	54	181
-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
ldL	49	109.6939	26.80656	34	183
-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
ldL	50	111.4	31.75287	48	197

```

174 . anova ldl adipo_three

```

Number of obs =		149	R-squared =		0.0081
Root MSE =		30.2964	Adj R-squared =		-0.0055
Source	Partial SS	df	MS	F	Prob > F

Model	1093.29318	2	546.64659	0.60	0.5526
adipo_three	1093.29318	2	546.64659	0.60	0.5526
Residual	134008.908	146	917.869234		
Total	135102.201	148	912.852712		

175 . *ANOVA not statistically significant, hence paired ttest not needed

176 .

177 . label var alt "alanine aminotransferase, mg/dl"

178 . sum alt, detail

alanine aminotransferase, mg/dl					
Percentiles		Smallest			
1%	7	7			
5%	9	7			
10%	11	8	Obs		149
25%	14	8	Sum of Wgt.		149
50%	18		Mean		21.99329
		Largest	Std. Dev.		15.2464
75%	25	54			
90%	34	102	Variance		232.4527
95%	39	114	Skewness		4.033566
99%	114	114	Kurtosis		23.53674

179 . **alt not normally distributed, hence use Kruskal-Wallis test

180 . tabstat alt, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: alt
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	19.05292	21	25.92	16	32
Adipo tertile 2	8.789827	19	21.77551	15	25
Adipo tertile 3	15.28243	15.5	18.28	12	19
Total	15.2464	18	21.99329	14	25

181 . kwallis alt, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	50	4398.00
Adipo tertile 2 - 4.7-7.8 ug/ml	49	4050.00
Adipo tertile 3 - 8.3-37.9 ug/ml	50	2727.00

chi-squared = 17.288 with 2 d.f.

probability = 0.0002

chi-squared with ties = 17.328 with 2 d.f.

probability = 0.0002

182 . ranksum alt if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
-------------	-----	----------	----------

Adipo tertil	50	2603	2500
Adipo tertil	49	2347	2450
combined	99	4950	4950

unadjusted variance 20416.67
adjustment for ties -44.57

adjusted variance 20372.10

Ho: alt(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = alt(adipo_~e==Adipo tertil
> e 2 - 4.7-7.8 ug/ml)
z = 0.722
Prob > |z| = 0.4705

183 . ranksum alt if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	2928	2450
Adipo tertil	50	2022	2500
combined	99	4950	4950

unadjusted variance 20416.67
adjustment for ties -68.94

adjusted variance 20347.73

Ho: alt(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = alt(adipo_~e==Adipo tertil
> e 3 - 8.3-37.9 ug/ml)
z = 3.351
Prob > |z| = 0.0008

184 . ranksum alt if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	50	3070	2525
Adipo tertil	50	1980	2525
combined	100	5050	5050

unadjusted variance 21041.67
adjustment for ties -49.24

adjusted variance 20992.42

Ho: alt(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = alt(adipo_~e==Adipo tertil
> e 3 - 8.3-37.9 ug/ml)
z = 3.762
Prob > |z| = 0.0002

185 . *Statistically significant difference in alt between tertiles 1 and 3 and ter
> tiles 2 and 3

186 .

187 . label var cr "creatinine, mg/dl"

188 . sum cr, detail

creatinine, mg/dl	
Percentiles	Smallest

1%	.5	.4		
5%	.6	.5		
10%	.7	.5	Obs	149
25%	.8	.5	Sum of Wgt.	149
50%	.9		Mean	.9181208
		Largest	Std. Dev.	.2221071
75%	1.1	1.5		
90%	1.2	1.6	Variance	.0493316
95%	1.3	1.6	Skewness	.5798954
99%	1.6	1.6	Kurtosis	3.644849

189 . *Mean and median of cr are relatively close - hence, use ANOVA
 190 . bysort adipo_three: sum cr

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
cr	50	1.006	.255079	.4	1.6

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
cr	49	.8938776	.2183348	.5	1.6

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
cr	50	.854	.1567658	.5	1.2

191 . anova cr adipo_three

Number of obs = 149 R-squared = 0.0850
 Root MSE = .21391 Adj R-squared = 0.0725

Source	Partial SS	df	MS	F	Prob > F
Model	.620510594	2	.310255297	6.78	0.0015
adipo_three	.620510594	2	.310255297	6.78	0.0015
Residual	6.68056362	146	.045757285		
Total	7.30107421	148	.049331583		

192 . ttest cr if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	1.006	.0360736	.255079	.9335073	1.078493
Adipo te	49	.8938776	.0311907	.2183348	.8311645	.9565906
combined	99	.9505051	.0244238	.2430141	.9020367	.9989734
diff		.1121225	.0477634		.0173254	.2069195

diff = mean(Adipo te) - mean(Adipo te) t = 2.3475
 Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9895 Pr(|T| > |t|) = 0.0209 Pr(T > t) = 0.0105

193 . ttest cr if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	.8938776	.0311907	.2183348	.8311645	.9565906
Adipo te	50	.854	.02217	.1567658	.8094477	.8985523
combined	99	.8737374	.0190793	.1898366	.8358751	.9115996
diff		.0398776	.0381424		-.0358246	.1155797

diff = mean(Adipo te) - mean(Adipo te) t = 1.0455
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8508 Pr(|T| > |t|) = 0.2984 Pr(T > t) = 0.1492

194 . ttest cr if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	1.006	.0360736	.255079	.9335073	1.078493
Adipo te	50	.854	.02217	.1567658	.8094477	.8985523
combined	100	.93	.0224058	.2240581	.885542	.974458
diff		.152	.0423417		.0679744	.2360257

diff = mean(Adipo te) - mean(Adipo te) t = 3.5898
Ho: diff = 0 degrees of freedom = 98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9997 Pr(|T| > |t|) = 0.0005 Pr(T > t) = 0.0003

195 . *Statistically significant difference in cr between tertiles 1 and 2 and tert
> iles 1 and 3

196 .

197 .

198 . **Body composition variables

199 . label var bmi "body mass index, kg/m^2"

200 . sum bmi, detail

body mass index, kg/m^2

Percentiles		Smallest		
1%	17.56899	16.56144		
5%	19.69204	17.56899		
10%	21.50395	17.64987	Obs	149
25%	22.97871	18.67785	Sum of Wgt.	149
50%	25.33556		Mean	26.17888
		Largest	Std. Dev.	4.641984
75%	28.41041	38.93478		
90%	32.30798	39.08902	Variance	21.54802
95%	34.82001	41.38368	Skewness	.9638938
99%	41.38368	43.72855	Kurtosis	4.49976

201 . *Mean and median of bmi are relatively close - hence, use ANOVA

202 . bysort adipo_three: sum bmi

```
-----> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml
```

Variable	Obs	Mean	Std. Dev.	Min	Max
bmi	50	26.15753	3.547344	16.56144	34.82001

```
-----> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml
```

Variable	Obs	Mean	Std. Dev.	Min	Max
bmi	49	27.94986	5.411716	20.13546	43.72855

```
-----> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml
```

Variable	Obs	Mean	Std. Dev.	Min	Max
bmi	50	24.46467	4.204267	17.56899	38.93478

203 . anova bmi adipo_three

Number of obs = 149 R-squared = 0.0943
Root MSE = 4.44793 Adj R-squared = 0.0819

Source	Partial SS	df	MS	F	Prob > F
Model	300.630595	2	150.315297	7.60	0.0007
adipo_three	300.630595	2	150.315297	7.60	0.0007
Residual	2888.47622	146	19.7840837		
Total	3189.10682	148	21.548019		

204 . ttest bmi if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	26.15753	.5016702	3.547344	25.14939	27.16568
Adipo te	49	27.94986	.7731023	5.411716	26.39543	29.50429
combined	99	27.04464	.465448	4.631149	26.12098	27.96831
diff		-1.792328	.9178629		-3.614032	.0293755

diff = mean(Adipo te) - mean(Adipo te) t = -1.9527
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0269 Pr(|T| > |t|) = 0.0537 Pr(T > t) = 0.9731

205 . ttest bmi if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	27.94986	.7731023	5.411716	26.39543	29.50429
Adipo te	50	24.46467	.5945732	4.204267	23.26983	25.65951
combined	99	26.18966	.514926	5.123449	25.16781	27.21152
diff		3.485189	.9728394		1.554372	5.416006

```

-----
diff = mean(Adipo te) - mean(Adipo te)          t = 3.5825
Ho: diff = 0                                     degrees of freedom = 97

Ha: diff < 0          Ha: diff != 0          Ha: diff > 0
Pr(T < t) = 0.9997    Pr(|T| > |t|) = 0.0005    Pr(T > t) = 0.0003

```

206 . ttest bmi if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	26.15753	.5016702	3.547344	25.14939	27.16568
Adipo te	50	24.46467	.5945732	4.204267	23.26983	25.65951
combined	100	25.3111	.39624	3.9624	24.52488	26.09733
diff		1.692861	.7779397		.1490649	3.236657

```

-----
diff = mean(Adipo te) - mean(Adipo te)          t = 2.1761
Ho: diff = 0                                     degrees of freedom = 98

Ha: diff < 0          Ha: diff != 0          Ha: diff > 0
Pr(T < t) = 0.9840    Pr(|T| > |t|) = 0.0320    Pr(T > t) = 0.0160

```

207 . *Statistically significant difference in bmi between tertiles 1 and 3 and ter
> tiles 2 and 3

208 . *Association between tertiles 1 and 2 approaches significance

209 .

210 . label var waist "waist circumference, cm"

211 . sum waist, detail

waist circumference, cm					
Percentiles		Smallest			
1%	67.35	67.1			
5%	78.95	67.35			
10%	82.1	75.25	Obs		149
25%	86.7	76.55	Sum of Wgt.		149
50%	94.75		Mean		96.22718
		Largest	Std. Dev.		12.42197
75%	104.75	125.05			
90%	111.65	125.9	Variance		154.3052
95%	115.7	139.35	Skewness		.6610519
99%	139.35	140.95	Kurtosis		4.131173

212 . *Mean and median of waist are relatively close – hence, use ANOVA

213 . bysort adipo_three: sum waist

```

-----
-> adipo_three = Adipo tertile 1 – 0.9–4.6 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
waist	50	96.394	9.072687	78.95	114.1

```

-----
-> adipo_three = Adipo tertile 2 – 4.7–7.8 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
waist	49	101.2908	14.40473	75.25	140.95

```

-----
-> adipo_three = Adipo tertile 3 – 8.3–37.9 ug/ml

```

Variable	Obs	Mean	Std. Dev.	Min	Max
waist	50	91.098	11.31262	67.1	123.25

214 . anova waist adipo_three

Number of obs = 149 R-squared = 0.1127
Root MSE = 11.7811 Adj R-squared = 0.1005

Source	Partial SS	df	MS	F	Prob > F
Model	2573.19635	2	1286.59817	9.27	0.0002
adipo_three	2573.19635	2	1286.59817	9.27	0.0002
Residual	20263.9768	146	138.794362		
Total	22837.1732	148	154.305224		

215 . ttest waist if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	96.394	1.283072	9.072687	93.81557	98.97243
Adipo te	49	101.2908	2.057818	14.40473	97.1533	105.4283
combined	99	98.81768	1.226158	12.20012	96.38441	101.2509
diff		-4.896817	2.414388		-9.688708	-.1049254

diff = mean(Adipo te) - mean(Adipo te) t = -2.0282
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0226 Pr(|T| > |t|) = 0.0453 Pr(T > t) = 0.9774

216 . ttest waist if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	49	101.2908	2.057818	14.40473	97.1533	105.4283
Adipo te	50	91.098	1.599846	11.31262	87.88299	94.31301
combined	99	96.14293	1.392092	13.85114	93.38037	98.90549
diff		10.19282	2.600256		5.032029	15.35361

diff = mean(Adipo te) - mean(Adipo te) t = 3.9199
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9999 Pr(|T| > |t|) = 0.0002 Pr(T > t) = 0.0001

217 . ttest waist if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Adipo te	50	96.394	1.283072	9.072687	93.81557	98.97243
Adipo te	50	91.098	1.599846	11.31262	87.88299	94.31301

combined	100	93.746	1.054349	10.54349	91.65394	95.83806
diff		5.296	2.0508		1.226255	9.365745

diff = mean(Adipo te) - mean(Adipo te) t = 2.5824
Ho: diff = 0 degrees of freedom = 98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9944 Pr(|T| > |t|) = 0.0113 Pr(T > t) = 0.0056

218 . *Statistically significant difference in waist between tertiles 1 and 2, tert
> iles 2 and 3 and tertiles 1 and 3

219 .

220 . label var totfat "total fat, grams"

221 . sum totfat, detail

total fat, grams				
	Percentiles	Smallest		
1%	9783.5	5562		
5%	13651.5	9783.5		
10%	15345.7	11565.2	Obs	149
25%	18901.2	11904	Sum of Wgt.	149
50%	23502.3		Mean	24597.99
		Largest	Std. Dev.	8124.053
75%	28208.4	43133.4		
90%	35124.4	50669.4	Variance	6.60e+07
95%	40522.1	51309.9	Skewness	.891156
99%	51309.9	52108.1	Kurtosis	4.266023

222 . gen totfatkg=totfat/1000

223 . label var totfatkg "total fat, kg"

224 . sum totfatkg, detail

total fat, kg				
	Percentiles	Smallest		
1%	9.7835	5.562		
5%	13.6515	9.7835		
10%	15.3457	11.5652	Obs	149
25%	18.9012	11.904	Sum of Wgt.	149
50%	23.5023		Mean	24.59799
		Largest	Std. Dev.	8.124053
75%	28.2084	43.1334		
90%	35.1244	50.6694	Variance	66.00024
95%	40.5221	51.3099	Skewness	.8911561
99%	51.3099	52.1081	Kurtosis	4.266023

225 . *Mean and median of totfatkg are relatively close - hence, use ANOVA

226 . bysort adipo_three: sum totfatkg

```
-----
-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml
```

Variable	Obs	Mean	Std. Dev.	Min	Max
totfatkg	50	23.13742	6.146089	11.904	40.7151

```
-----
-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml
```

Variable	Obs	Mean	Std. Dev.	Min	Max
----------	-----	------	-----------	-----	-----

```
-----
```


totfatkg	49	28.07773	9.450407	15.1941	52.1081
----------	----	----------	----------	---------	---------

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
totfatkg	50	22.64843	7.478099	5.562	40.5221

227 . anova totfatkg adipo_three

Number of obs =	149	R-squared =	0.0911
Root MSE =	7.79797	Adj R-squared =	0.0787

Source	Partial SS	df	MS	F	Prob > F
Model	890.023603	2	445.011802	7.32	0.0009
adipo_three	890.023603	2	445.011802	7.32	0.0009
Residual	8878.01173	146	60.8082995		
Total	9768.03533	148	66.0002387		

228 . ttest totfatkg if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te	50	23.13742	.8691883	6.146089	21.39072 24.88412
Adipo te	49	28.07773	1.350058	9.450407	25.36325 30.7922
combined	99	25.58262	.8336016	8.294231	23.92837 27.23688
diff		-4.940308	1.599029		-8.113938 -1.766679

diff = mean(Adipo te) - mean(Adipo te)	t =	-3.0896
Ho: diff = 0	degrees of freedom =	97

Ha: diff < 0	Ha: diff != 0	Ha: diff > 0
Pr(T < t) = 0.0013	Pr(T > t) = 0.0026	Pr(T > t) = 0.9987

229 . ttest totfatkg if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te	49	28.07773	1.350058	9.450407	25.36325 30.7922
Adipo te	50	22.64843	1.057563	7.478099	20.52317 24.77368
combined	99	25.33566	.8941365	8.896545	23.56127 27.11004
diff		5.429302	1.710944		2.033553 8.825052

diff = mean(Adipo te) - mean(Adipo te)	t =	3.1733
Ho: diff = 0	degrees of freedom =	97

Ha: diff < 0	Ha: diff != 0	Ha: diff > 0
Pr(T < t) = 0.9990	Pr(T > t) = 0.0020	Pr(T > t) = 0.0010

230 . ttest totfatkg if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
-------	-----	------	-----------	-----------	----------------------

Adipo te	50	23.13742	.8691883	6.146089	21.39072	24.88412
Adipo te	50	22.64843	1.057563	7.478099	20.52317	24.77368
combined	100	22.89292	.6814349	6.814349	21.54081	24.24504
diff		.4889938	1.368915		-2.227573	3.205561

diff = mean(Adipo te) - mean(Adipo te) t = 0.3572
Ho: diff = 0 degrees of freedom = 98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6391 Pr(|T| > |t|) = 0.7217 Pr(T > t) = 0.3609

231 . *Statistically significant difference in totfatkg between tertiles 1 and 2 and
> d tertiles 2 and 3

232 .

233 . label var percfat "percent body fat"

234 . sum percfat, detail

percent body fat					
Percentiles		Smallest			
1%	18.7	11.1			
5%	21.9	18.7			
10%	24.6	18.7	Obs	149	
25%	29.2	18.9	Sum of Wgt.	149	
50%	34.6		Mean	35.04483	
			Std. Dev.	8.038685	
75%	41.4				
90%	46.2		Variance	64.62045	
95%	47.5		Skewness	-.1321336	
99%	50.4		Kurtosis	2.54527	

235 . *Mean and median of percfat are relatively close - hence, use ANOVA

236 . bysort adipo_three: sum percfat

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
percfat	50	31.282	6.572847	18.7	47.5

-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
percfat	49	37.66898	7.296414	24.6	53.6

-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml

Variable	Obs	Mean	Std. Dev.	Min	Max
percfat	50	36.236	8.777517	11.1	50.4

237 . anova percfat adipo_three

Number of obs = 149 R-squared = 0.1167
Root MSE = 7.60656 Adj R-squared = 0.1046

Source	Partial SS	df	MS	F	Prob > F
--------	------------	----	----	---	----------

Model		1116.3107	2	558.155349	9.65	0.0001
adipo_three		1116.3107	2	558.155349	9.65	0.0001
Residual		8447.51627	146	57.8597005		

Total		9563.82697	148	64.6204525		

238 . ttest percfat if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample t test with equal variances

Group		Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te		50	31.282	.929541	6.572847	29.41402 33.14998
Adipo te		49	37.66898	1.042345	7.296414	35.5732 39.76475
combined		99	34.44323	.7652697	7.614338	32.92458 35.96189
diff			-6.38698	1.395131		-9.155929 -3.618031

diff = mean(Adipo te) - mean(Adipo te) t = -4.5780
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

239 . ttest percfat if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group		Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te		49	37.66898	1.042345	7.296414	35.5732 39.76475
Adipo te		50	36.236	1.241328	8.777517	33.74146 38.73054
combined		99	36.94525	.8110134	8.069481	35.33582 38.55468
diff			1.432979	1.623945		-1.790101 4.65606

diff = mean(Adipo te) - mean(Adipo te) t = 0.8824
Ho: diff = 0 degrees of freedom = 97

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8101 Pr(|T| > |t|) = 0.3797 Pr(T > t) = 0.1899

240 . ttest percfat if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample t test with equal variances

Group		Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Adipo te		50	31.282	.929541	6.572847	29.41402 33.14998
Adipo te		50	36.236	1.241328	8.777517	33.74146 38.73054
combined		100	33.759	.8106402	8.106402	32.15051 35.36749
diff			-4.954	1.550788		-8.031488 -1.876513

diff = mean(Adipo te) - mean(Adipo te) t = -3.1945
Ho: diff = 0 degrees of freedom = 98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0009 Pr(|T| > |t|) = 0.0019 Pr(T > t) = 0.9991

241 . *Statistically significant difference in percfat between tertiles 1 and 2 and
> tertiles 1 and 3

242 .

243 . label var subqfat "abdominal subcutaneous fat area, cm^2"

244 . sum subqfat, detail

abdominal subcutaneous fat area, cm^2					
Percentiles			Smallest		
1%	83.6		32.43		
5%	111.35		83.6		
10%	133.81		94.36	Obs	148
25%	171.885		99.95	Sum of Wgt.	148
50%	230.56			Mean	251.9966
				Std. Dev.	113.5173
75%	286.315		Largest		
			513.72		
90%	404.39		522.27	Variance	12886.19
95%	469.57		657.21	Skewness	1.50374
99%	657.21		807.93	Kurtosis	6.837175

245 . *Note - 1 observation missing

246 . **subqfat not normally distributed, hence use Kruskal-Wallis test

247 . tabstat subqfat, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: subqfat
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	77.15374	222.32	227.9412	169.73	273.67
Adipo tertile 2	143.1914	270.4	298.58	194.14	373.63
Adipo tertile 3	97.44731	217.14	229.9192	168.79	271.78
Total	113.5173	230.56	251.9966	171.885	286.315

248 . kwallis subqfat, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	49	3309.00
Adipo tertile 2 - 4.7-7.8 ug/ml	49	4362.00
Adipo tertile 3 - 8.3-37.9 ug/ml	50	3355.00

chi-squared = 8.407 with 2 d.f.
probability = 0.0149

chi-squared with ties = 8.407 with 2 d.f.
probability = 0.0149

249 . ranksum subqfat if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	2068	2425.5
Adipo tertil	49	2783	2425.5
combined	98	4851	4851

unadjusted variance 19808.25
adjustment for ties -0.13
adjusted variance 19808.12

```

Ho: subqfat(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = subqfat(adipo_~e==Adip
> o tertile 2 - 4.7-7.8 ug/ml)
      z =  -2.540
Prob > |z| =  0.0111

```

```
250 . ranksum subqfat if adipo_three==1|adipo_three==2, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	2804	2450
Adipo tertil	50	2146	2500
combined	99	4950	4950

unadjusted variance 20416.67

adjustment for ties -0.13

adjusted variance 20416.54

```

Ho: subqfat(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = subqfat(adipo_~e==Adip
> o tertile 3 - 8.3-37.9 ug/ml)

```

z = 2.477

Prob > |z| = 0.0132

```
251 . ranksum subqfat if adipo_three==0|adipo_three==2, by(adipo_three)
```

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	2466	2450
Adipo tertil	50	2484	2500
combined	99	4950	4950

unadjusted variance 20416.67

adjustment for ties -0.25

adjusted variance 20416.41

```

Ho: subqfat(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = subqfat(adipo_~e==Adip
> o tertile 3 - 8.3-37.9 ug/ml)

```

z = 0.112

Prob > |z| = 0.9108

```
252 . *Statistically significant difference in subqfat between tertiles 1 and 2 and
```

```
> tertiles 2 and 3
```

```
253 .
```

```
254 . label var viscfatarea "abdominal visceral fat area, cm^2"
```

```
255 . sum viscfatarea, detail
```

abdominal visceral fat area, cm^2

Percentiles			Smallest	
1%	31.97	27.62		
5%	47	31.97		
10%	58.28	35.46	Obs	148
25%	94.2	36.54	Sum of Wgt.	148
50%	130.76		Mean	133.5503
		Largest	Std. Dev.	56.66158
75%	166.65	279.96		
90%	208.39	292.02	Variance	3210.535
95%	233.06	293.67	Skewness	.5664635

99% 293.67 302.07 Kurtosis 3.275751

256 . *Note - 1 observation missing
 257 . **viscfatarea not normally distributed, hence use Kruskal-Wallis test
 258 . tabstat viscfatarea, stats (sd median mean p25 p75) by (adipo_three)

Summary for variables: viscfatarea
 by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	50.39772	153.77	148.5096	112.46	170.27
Adipo tertile 2	54.40345	147.56	154.15	117.68	183.93
Adipo tertile 3	48.54795	91.745	98.7026	71.21	116.98
Total	56.66158	130.76	133.5503	94.2	166.65

259 . kwallis viscfatarea, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	49	4286.00
Adipo tertile 2 - 4.7-7.8 ug/ml	49	4444.00
Adipo tertile 3 - 8.3-37.9 ug/ml	50	2296.00

chi-squared = 33.702 with 2 d.f.
 probability = 0.0001

chi-squared with ties = 33.702 with 2 d.f.
 probability = 0.0001

260 . ranksum viscfatarea if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	2384	2425.5
Adipo tertil	49	2467	2425.5
combined	98	4851	4851

unadjusted variance 19808.25
 adjustment for ties 0.00

adjusted variance 19808.25

Ho: viscfa~a(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = viscfa~a(adipo_~e==Ad
 > ipo tertile 2 - 4.7-7.8 ug/ml)
 z = -0.295
 Prob > |z| = 0.7681

261 . ranksum viscfatarea if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	49	3202	2450
Adipo tertil	50	1748	2500
combined	99	4950	4950

```
unadjusted variance    20416.67
adjustment for ties    0.00
```

```
-----
adjusted variance      20416.67
```

```
Ho: viscfa~a(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = viscfa~a(adipo_~e==Ad
> ipo tertile 3 - 8.3-37.9 ug/ml)
```

```
z = 5.263
Prob > |z| = 0.0000
```

```
262 . ranksum viscatarea if adipo_three==0|adipo_three==2, by(adipo_three)
```

```
Two-sample Wilcoxon rank-sum (Mann-Whitney) test
```

adipo_three	obs	rank sum	expected
Adipo tertil	49	3127	2450
Adipo tertil	50	1823	2500
combined	99	4950	4950

```
unadjusted variance    20416.67
adjustment for ties    0.00
```

```
-----
adjusted variance      20416.67
```

```
Ho: viscfa~a(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = viscfa~a(adipo_~e==Ad
> ipo tertile 3 - 8.3-37.9 ug/ml)
```

```
z = 4.738
Prob > |z| = 0.0000
```

```
263 . *Statistically significant difference in viscatarea between tertiles 1 and 3
> and tertiles 2 and 3
```

```
264 .
```

```
265 . label var livminussp "liver-spleen attenuation, HU"
```

```
266 . sum livminussp, detail
```

```
liver-spleen attenuation, HU
```

Percentiles			Smallest	
1%	-17.5		-32.5	
5%	-12.5		-17.5	
10%	-5		-16	
25%	5.75		-15.5	
				Obs 136
				Sum of Wgt. 136
50%	12			Mean 10.25
				Std. Dev. 10.89682
75%	17.5			
				Variance 118.7407
90%	21.5			
				Skewness -1.030421
95%	24.5			
				Kurtosis 4.183714
99%	27			

```
267 . *Note - 13 observations missing
```

```
268 . **livminussp not normally distributed, hence use Kruskal-Wallis test
```

```
269 . tabstat livminussp, stats (sd median mean p25 p75) by (adipo_three)
```

```
Summary for variables: livminussp
```

```
by categories of: adipo_three (rank for variable totaladiponectin)
```

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	12.0054	9.5	6.866667	-.5	15
Adipo tertile 2	11.49253	10.5	9.388889	1	18
Adipo tertile 3	7.506012	15.75	14.40217	11	19
Total	10.89682	12	10.25	5.75	17.5

270 . kwallis livminussp, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	45	2529.50
Adipo tertile 2 - 4.7-7.8 ug/ml	45	2976.00
Adipo tertile 3 - 8.3-37.9 ug/ml	46	3810.50

chi-squared = 10.629 with 2 d.f.
probability = 0.0049

chi-squared with ties = 10.635 with 2 d.f.
probability = 0.0049

271 . ranksum livminussp if adipo_three==0|adipo_three==1, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	45	1917.5	2047.5
Adipo tertil	45	2177.5	2047.5
combined	90	4095	4095

unadjusted variance 15356.25
adjustment for ties -9.86

adjusted variance 15346.39

Ho: livmin~p(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = livmin~p(adipo_~e==Ad
> ipo tertile 2 - 4.7-7.8 ug/ml)
z = -1.049
Prob > |z| = 0.2940

272 . ranksum livminussp if adipo_three==1|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	45	1833.5	2070
Adipo tertil	46	2352.5	2116
combined	91	4186	4186

unadjusted variance 15870.00
adjustment for ties -13.14

adjusted variance 15856.86

Ho: livmin~p(adipo_~e==Adipo tertile 2 - 4.7-7.8 ug/ml) = livmin~p(adipo_~e==Ad
> ipo tertile 3 - 8.3-37.9 ug/ml)
z = -1.878
Prob > |z| = 0.0604

273 . ranksum livminussp if adipo_three==0|adipo_three==2, by(adipo_three)

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

adipo_three	obs	rank sum	expected
Adipo tertil	45	1647	2070

Adipo tertil	46	2539	2116
combined	91	4186	4186

unadjusted variance 15870.00
adjustment for ties -13.27

adjusted variance 15856.73

Ho: livmin~p(adipo_~e==Adipo tertile 1 - 0.9-4.6 ug/ml) = livmin~p(adipo_~e==Ad
> ipo tertile 3 - 8.3-37.9 ug/ml)

z = -3.359

Prob > |z| = 0.0008

274 . *Statistically significant difference between tertiles 1 and 3

275 . *Association between tertiles 2 and 3 approaches significance

276 .

277 . tab fattyliver, missing

fattyliver	Freq.	Percent	Cum.
0	112	75.17	75.17
1	24	16.11	91.28
.	13	8.72	100.00
Total	149	100.00	

278 . *Note - 13 observations missing

279 . tab fattyliver adipo_three, chi2 col

Key
frequency
column percentage

	rank for variable totaladiponectin			
fattyliver	Adipo ter	Adipo ter	Adipo ter	Total
0	33	34	45	112
	73.33	75.56	97.83	82.35
1	12	11	1	24
	26.67	24.44	2.17	17.65
Total	45	45	46	136
	100.00	100.00	100.00	100.00

Pearson chi2(2) = 11.5279 Pr = 0.003

280 .

281 .

282 . **Traditional CV Risk Factors

283 . label var htn "hypertension"

284 . tab htn, missing

hypertensio n	Freq.	Percent	Cum.
0	86	57.72	57.72
1	63	42.28	100.00
Total	149	100.00	

285 . tab htn adipo_three, chi2 col

Key
frequency
column percentage

hypertensi on	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
0	22 44.00	34 69.39	30 60.00	86 57.72
1	28 56.00	15 30.61	20 40.00	63 42.28
Total	50 100.00	49 100.00	50 100.00	149 100.00

Pearson chi2(2) = 6.6966 Pr = 0.035

```
286 .
287 . label define diabeteslabel 0 "normal glucose tolerance" 1 "pre-diabetes" 2 "d
> iabetes"

288 . label values diabetes diabeteslabel

289 . tab diabetes, missing
```

diabetes	Freq.	Percent	Cum.
normal glucose tolerance	51	34.23	34.23
pre-diabetes	55	36.91	71.14
diabetes	40	26.85	97.99
.	3	2.01	100.00
Total	149	100.00	

```
290 . *Note - 3 observations missing
291 . tab diabetes adipo_three, chi2 col
```

Key
frequency
column percentage

diabetes	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
normal glucose tolera	9 18.00	18 37.50	24 50.00	51 34.93
pre-diabetes	17 34.00	23 47.92	15 31.25	55 37.67
diabetes	24 48.00	7 14.58	9 18.75	40 27.40
Total	50 100.00	48 100.00	48 100.00	146 100.00

Pearson chi2(4) = 21.2893 Pr = 0.000

```
292 .
293 . label var metsyn "metabolic syndrome"
```

```
294 . tab metsyn, missing
```

metabolic syndrome	Freq.	Percent	Cum.
0	84	56.38	56.38
1	65	43.62	100.00
Total	149	100.00	

```
295 . tab metsyn adipo_three, chi2 col
```

Key
frequency
column percentage

metabolic syndrome	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
0	19 38.00	26 53.06	39 78.00	84 56.38
1	31 62.00	23 46.94	11 22.00	65 43.62
Total	50 100.00	49 100.00	50 100.00	149 100.00

Pearson chi2(2) = 16.5906 Pr = 0.000

```
296 .
297 . label var microalbcr "urine albumin:creatinine ratio"
```

```
298 . sum microalbcr, detail
```

urine albumin:creatinine ratio				
Percentiles		Smallest		
1%	1.4	1.2		
5%	2.2	1.4		
10%	2.6	1.7	Obs	148
25%	4	1.7	Sum of Wgt.	148
50%	6.5		Mean	22.55608
		Largest	Std. Dev.	94.75593
75%	12.25	113.7		
90%	27.4	178	Variance	8978.686
95%	63.4	457.1	Skewness	9.370082
99%	457.1	1049	Kurtosis	97.39426

```
299 . *Note - 1 observation missing
300 . **microalbcr not normally distributed, hence use Kruskal-Wallis test
301 . tabstat microalbcr, stats (sd median mean p25 p75) by (adipo_three)
```

Summary for variables: microalbcr
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	160.9821	6.1	43.22245	4	16.9
Adipo tertile 2	27.58368	6.1	13.61633	4	10.7

Adipo tertile 3		12.7514	6.8	11.064	4.1	12
Total		94.75593	6.5	22.55608	4	12.25

302 . kwallis microalbcr, by (adipo_three)

Kruskal-Wallis equality-of-populations rank test

adipo_three				Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml				49	3712.50
Adipo tertile 2 - 4.7-7.8 ug/ml				49	3523.00
Adipo tertile 3 - 8.3-37.9 ug/ml				50	3790.50

chi-squared = 0.270 with 2 d.f.
probability = 0.8738

chi-squared with ties = 0.270 with 2 d.f.
probability = 0.8737

303 . *Kruskal-Wallis not statistically significant, hence Wilcoxon rank-sum test
> not needed

304 .

305 . gen anycac=1

306 . replace anycac=0 if totalcac==0
(88 real changes made)

307 . tab anycac, missing

anycac		Freq.	Percent	Cum.
0		88	59.06	59.06
1		61	40.94	100.00
Total		149	100.00	

308 . tab anycac adipo_three, chi2 col

Key	
frequency	
column percentage	

anycac	rank for variable totaladiponectin			Total
	Adipo ter	Adipo ter	Adipo ter	
0	33 66.00	27 55.10	28 56.00	88 59.06
1	17 34.00	22 44.90	22 44.00	61 40.94
Total	50 100.00	49 100.00	50 100.00	149 100.00

Pearson chi2(2) = 1.5071 Pr = 0.471

309 .

310 . label var commimt "common carotid intimal medial thickness, mm"

311 . sum commimt, detail

common carotid intimal medial thickness, mm					
Percentiles		Smallest			
1%	.59	.55			
5%	.7	.59			
10%	.73	.64	Obs	146	
25%	.78	.66	Sum of Wgt.	146	
50%	.88			Mean	.9213014
75%	1.01	Largest		Std. Dev.	.1872055
90%	1.16	1.39			
95%	1.26	1.42	Variance	.0350459	
99%	1.47	1.47	Skewness	1.234066	
		1.79	Kurtosis	5.686431	

312 . *Note - 3 observations missing
313 . **Mean and median are relatively close - therefore use ANOVA
314 . bysort adipo_three: sum commimt

-> adipo_three = Adipo tertile 1 - 0.9-4.6 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
commimt	49	.9318367	.1947292	.55	1.47
-> adipo_three = Adipo tertile 2 - 4.7-7.8 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
commimt	48	.9304167	.2154654	.59	1.79
-> adipo_three = Adipo tertile 3 - 8.3-37.9 ug/ml					
Variable	Obs	Mean	Std. Dev.	Min	Max
commimt	49	.9018367	.14801	.68	1.39

315 . anova commimt adipo_three

		Number of obs = 146		R-squared = 0.0055	
		Root MSE = .18799		Adj R-squared = -0.0084	
Source	Partial SS	df	MS	F	Prob > F
Model	.027991683	2	.013995841	0.40	0.6737
adipo_three	.027991683	2	.013995841	0.40	0.6737
Residual	5.05366101	143	.035340287		
Total	5.08165269	145	.035045881		

316 . *ANOVA not statistically significant, hence paired ttest not needed
317 .
318 . label var internimt "internal carotid intimal medial thickness, mm"
319 . sum internimt, detail

internal carotid intimal medial thickness, mm		
Percentiles		Smallest
1%	.58	.56
5%	.63	.58

10%	.67	.6	Obs	146
25%	.74	.6	Sum of Wgt.	146
50%	.88		Mean	1.000274
		Largest	Std. Dev.	.3719454
75%	1.18	1.96		
90%	1.57	2.27	Variance	.1383434
95%	1.66	2.31	Skewness	1.564063
99%	2.31	2.51	Kurtosis	5.543857

```

320 . *Note - 3 observations missing
321 . **internimt not normally distributed, hence use Kruskal-Wallis test
322 . tabstat internimt, stats (sd median mean p25 p75) by (adipo_three)

```

Summary for variables: internimt
by categories of: adipo_three (rank for variable totaladiponectin)

adipo_three	sd	p50	mean	p25	p75
Adipo tertile 1	.3287413	.93	.9971429	.78	1.12
Adipo tertile 2	.4418826	.84	1.026875	.735	1.295
Adipo tertile 3	.3426294	.88	.9773469	.72	1.2
Total	.3719454	.88	1.000274	.74	1.18

```

323 . kwallis internimt, by (adipo_three)

```

Kruskal-Wallis equality-of-populations rank test

adipo_three	Obs	Rank Sum
Adipo tertile 1 - 0.9-4.6 ug/ml	49	3820.00
Adipo tertile 2 - 4.7-7.8 ug/ml	48	3466.50
Adipo tertile 3 - 8.3-37.9 ug/ml	49	3444.50

chi-squared = 0.870 with 2 d.f.
probability = 0.6472

chi-squared with ties = 0.871 with 2 d.f.
probability = 0.6471

```

324 . *Kruskal-Wallis test not statistically significant, hence Wilcoxon rank-sum
> test not needed

```

```

325 .

```

```

326 . **End analysis

```

```

327 .

```

```

328 . log close

```

```

      name: <unnamed>
      log: /Users/artishah/Desktop/Documents/Documents/Biostat 212/Lab7_ShahA
> _Table_Addendum.smcl
      log type: smcl
      closed on: 13 Sep 2013, 14:55:13

```