

Comparison of Incidence Rates in Stata

```
. iri 47 30 9.12 11.415
```

	Exposed	Unexposed	Total	
Cases	47	30	77	
Person-time	9.12	11.415	20.535	
Incidence Rate	5.153509	2.628121	3.749696	
	Point estimate		[95% Conf. Interval]	
Inc. rate diff.	2.525388	.7774871	4.273289	
Inc. rate ratio	1.96091	1.214538	3.211175	(exact)
Attr. frac. ex.	.4900327	.1766414	.6885875	(exact)
Attr. frac. pop	.2991109			
	(midp) Pr(k>=47) =		0.0018	(exact)
	(midp) 2*Pr(k>=47) =		0.0036	(exact)

Nonparametric tests in Stata

Single samples - Wilcoxon Signed Rank

The data below describes paired differences in vitamin B12 measurements on 15 adults by two different assays.

```
. insheet using ../data/raw/np1.raw
(1 var, 15 obs)
. stem diff
Stem-and-leaf plot for diff
```

```
-3* | 2
-2* | 0
-1* |
-0* | 1
 0* | 0017
 1* | 0178
 2* | 49
 3* | 2
 4* | 1
```

. signrank diff = 0

Wilcoxon signed-rank test

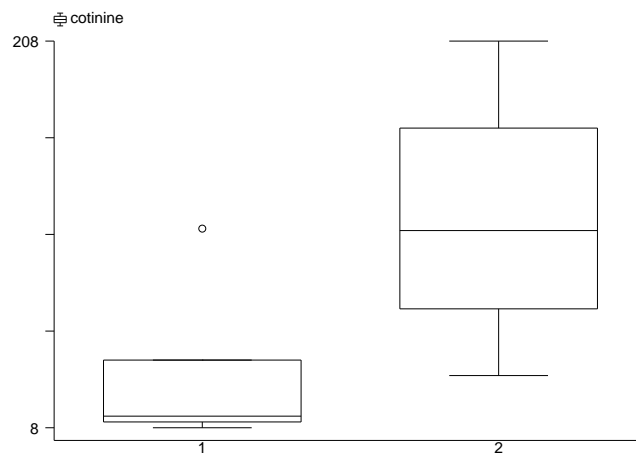
sign	obs	sum ranks	expected
positive	10	90	58.5
negative	3	27	58.5
zero	2	3	3
all	15	120	120

Ho: diff = 0

z = 1.793
 Prob > |z| = 0.0729

Comparing Two Samples - Wilcoxon Rank Sum (a.k.a. Mann-Whitney)

To explore the effects of parental smoking on infants, 7 infants from non-smoking families and 8 infants from smoking households were compared for urinary concentration of cotinine, a major metabolite of nicotine.



```
. clear
. insheet using ../data/raw/np2.raw
(2 vars, 15 obs)
. ranksum cotinine, by(group)
```

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

group	obs	rank sum	expected
1	7	33	56
2	8	87	64
combined	15	120	120

Ho: cotinine(group==1) = cotinine(group==2)

z = -2.662
 Prob > |z| = 0.0078