

The survival1 data

February 3, 2011

The data:

```
1 1 0 16
2 1 0 24
2 1 0 18
3 0 0 27
4 1 0 25
5 1 0 21
11 1 0 55
7 1 1 26
8 1 1 36
10 1 1 38
10 0 1 45
12 1 1 47
3 . 0 25
6 . 0 25
9 . 0 25
12 . 0 25
3 . 1 25
6 . 1 25
9 . 1 25
12 . 1 25
3 . 0 45
6 . 0 45
9 . 0 45
12 . 0 45
3 . 1 45
6 . 1 45
9 . 1 45
12 . 1 45
```

The SAS code and output:

```
data dancers;
  infile "survival1.dat";
  input months dancing treatment age;
```

```

proc phreg;
  model months*dancing(0) = age treatment;
  output out=fred survival=s;

proc print data=fred;

run;

```

The PHREG Procedure

Model Information

| | |
|--------------------|--------------|
| Data Set | WORK.DANCERS |
| Dependent Variable | months |
| Censoring Variable | dancing |
| Censoring Value(s) | 0 |
| Ties Handling | BRESLOW |

| | |
|-----------------------------|----|
| Number of Observations Read | 12 |
| Number of Observations Used | 12 |

Summary of the Number of Event and Censored Values

| Total | Event | Censored | Percent Censored |
|-------|-------|----------|------------------|
| 12 | 10 | 2 | 16.67 |

Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

| Criterion | Without Covariates | With Covariates |
|-----------|--------------------|-----------------|
| -2 LOG L | 33.573 | 12.572 |
| AIC | 33.573 | 16.572 |
| SBC | 33.573 | 17.177 |

Testing Global Null Hypothesis: BETA=0

| Test | Chi-Square | DF | Pr > ChiSq |
|------------------|------------|----|------------|
| Likelihood Ratio | 21.0016 | 2 | <.0001 |
| Score | 14.2093 | 2 | 0.0008 |
| Wald | 5.5556 | 2 | 0.0622 |

Analysis of Maximum Likelihood Estimates

| Parameter | DF | Parameter Estimate | Standard Error | Chi-Square | Pr > ChiSq | Hazard Ratio |
|-----------|----|--------------------|----------------|------------|------------|--------------|
| age | 1 | -0.35284 | 0.14973 | 5.5532 | 0.0184 | 0.703 |
| treatment | 1 | -4.28283 | 2.54084 | 2.8412 | 0.0919 | 0.014 |

| Obs | months | dancing | treatment | age | s |
|-----|--------|---------|-----------|-----|---------|
| 1 | 1 | 1 | 0 | 16 | 0.57151 |
| 2 | 2 | 1 | 0 | 24 | 0.83172 |
| 3 | 2 | 1 | 0 | 18 | 0.21643 |
| 4 | 3 | 0 | 0 | 27 | 0.93807 |
| 5 | 4 | 1 | 0 | 25 | 0.72245 |
| 6 | 5 | 1 | 0 | 21 | 0.09720 |
| 7 | 11 | 1 | 0 | 55 | 0.36576 |
| 8 | 7 | 1 | 1 | 26 | 0.38310 |
| 9 | 8 | 1 | 1 | 36 | 0.52937 |
| 10 | 10 | 1 | 1 | 38 | 0.33973 |
| 11 | 10 | 0 | 1 | 45 | 0.91271 |
| 12 | 12 | 1 | 1 | 47 | 0.29126 |