The survival2 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
```

The SAS code and output:

```
options linesize=70;

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

proc print;

data mypred;
  input treatment age;
  datalines;
  0 25
  0 45
  1 25
  1 45
;

proc phreg data=dancers;
  model months*dancing(0) = age treatment;
```

```
  baseline out=fred covariates=mypred survival=s / nomean;

/*

goptions reset=all;

proc gplot;
  plot s*months;

proc gplot;
    plot s*months=age;

*/

data fred2;
  set fred;
  agetrt=cat(age,"-",treatment);

proc print;

goptions reset=all;
symbol1 c=blue v=triangle i=l;
symbol2 c=cyan v=circle i=l;
symbol3 c=red v=diamond i=l;
symbol4 c=black v=plus i=l;

proc gplot;
  plot s*months=agetrt;

run;
```

Obs	months	dancing	treatment	age
1	1	1	0	16
2	2	1	0	24
3	2	1	0	18
4	3	0	0	27
5	4	1	0	25
6	5	1	0	21
7	11	1	0	55
8	7	1	1	26
9	8	1	1	36
10	10	1	1	38
11	10	0	1	45
12	12	1	1	47

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

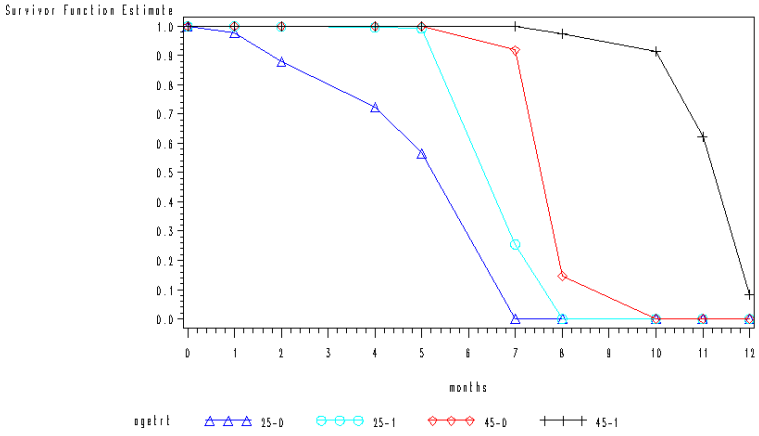
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	21.0016	2	<.0001
Score	14.2093	2	0.0008
Wald	5.5556	2	0.0622

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	treatment	age	months	s	agetrt
1	0	25	0	1.00000	25-0
2	0	25	1	0.97690	25-0
3	0	25	2	0.87856	25-0
4	0	25	4	0.72245	25-0
5	0	25	5	0.56647	25-0
6	0	25	7	0.00000	25-0
7	0	25	8	0.00000	25-0

8	0	25	10	0.00000	25-0
9	0	25	11	0.00000	25-0
10	0	25	12	0.00000	25-0
11	0	45	0	1.00000	45-0
12	0	45	1	0.99998	45-0
13	0	45	2	0.99989	45-0
14	0	45	4	0.99972	45-0
15	0	45	5	0.99951	45-0
16	0	45	7	0.91830	45-0
17	0	45	8	0.14589	45-0
18	0	45	10	0.00134	45-0
19	0	45	11	0.00000	45-0
20	0	45	12	0.00000	45-0
21	1	25	0	1.00000	25-1
22	1	25	1	0.99968	25-1
23	1	25	2	0.99821	25-1
24	1	25	4	0.99552	25-1
25	1	25	5	0.99219	25-1
26	1	25	7	0.25528	25-1
27	1	25	8	0.00000	25-1
28	1	25	10	0.00000	25-1
29	1	25	11	0.00000	25-1
30	1	25	12	0.00000	25-1
31	1	45	0	1.00000	45-1
32	1	45	1	1.00000	45-1
33	1	45	2	1.00000	45-1
34	1	45	4	1.00000	45-1
35	1	45	5	0.99999	45-1
36	1	45	7	0.99882	45-1
37	1	45	8	0.97378	45-1
38	1	45	10	0.91271	45-1
39	1	45	11	0.62315	45-1
40	1	45	12	0.08223	45-1


Survivor Function Estimate
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
1
2
3
4
5
6
7
8
9
10
11
12
months
agetrt
25-0
25-1
45-0
45-1