The PHREG Procedure

Model Information

Data Set	WORK.BCANCER	
Dependent Variable	days	(censored) survival time in days
Censoring Variable	cens	censoring indicator
Censoring Value(s)	0	
Ties Handling	BRESLOW	

Number of Observations Read	905
Number of Observations Used	786

Summary of the Number of Event and Censored Values

Total	Event	Censored	Percent Censored
786	424	362	46.06

Convergence Status

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

Model Fit Statistics

Criterion	Without Covariates	With Covariates
-2 LOG L	5310.169	5226.882
AIC	5310.169	5230.882
SBC	5310.169	5238.981

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	83.2865	2	<.0001
Score	106.8011	2	<.0001
Wald	106.5601	2	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq
nodes	1	0.05314	0.00583	83.0073	<.0001
er	1	-0.42211	0.09973	17.9137	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	Hazard Ratio	Label
nodes	1.055	number of positive nodes
er	0.656	estrogen receptor status

```
proc print data=a;
run;
```


Obs	nodes	er	days	s
1	1	0	0	1.00000
2	1	0	19	0.99889
3	1	0	20	0.99778
4	1	0	24	0.99667
5	1	0	35	0.99556
.	.	.	.	.
396	1	0	5093	0.43298
397	1	0	5185	0.42899
398	1	0	5285	0.42444
399	1	0	5422	0.41903
400	1	0	5495	0.41271
401	1	1	0	1.00000
402	1	1	19	0.99927
403	1	1	20	0.99854
404	1	1	24	0.99782
405	1	1	35	0.99709
.	.	.	.	.
796	1	1	5093	0.57763
797	1	1	5185	0.57412
798	1	1	5285	0.57013
799	1	1	5422	0.56535
800	1	1	5495	0.55975
801	10	0	0	1.00000
802	10	0	19	0.99821
803	10	0	20	0.99642
804	10	0	24	0.99463
805	10	0	35	0.99285
.	.	.	.	.
1196	10	0	5093	0.25914
1197	10	0	5185	0.25529
1198	10	0	5285	0.25094
1199	10	0	5422	0.24580
1200	10	0	5495	0.23985
1201	10	1	0	1.00000
1202	10	1	19	0.99883
1203	10	1	20	0.99765
1204	10	1	24	0.99648

1205	10	1	35	0.99530
.	.	.	.	.
1596	10	1	5093	0.41255
1597	10	1	5185	0.40852
1598	10	1	5285	0.40395
1599	10	1	5422	0.39850
1600	10	1	5495	0.39214

```
title "KM estimate for each category";
proc lifetest plots=(s) graphics notable data=bcancer1;
  time days*cens(0);
  strata nodes er;
  symbol1 v=none color=black line=1;
  symbol2 v=none color=black line=2;
  symbol3 v=none color=black line=3;
  symbol4 v=none color=black line=4;
run;
```

```
title "Survival estimate for each category";
proc gplot data=a1;
  plot s*days=cat;
  symbol1 interpol=join color=black line=1;
  symbol2 interpol=join color=black line=2;
  symbol3 interpol=join color=black line=3;
  symbol4 interpol=join color=black line=4;
run;
```


The LIFETEST Procedure

Summary of the Number of Censored and Uncensored Values

Stratum	nodes	er	Total	Failed	Censored	Percent Censored
1	1	0	56	27	29	51.79
2	1	1	97	37	60	61.86
3	10	0	11	8	3	27.27
4	10	1	12	9	3	25.00
Total			176	81	95	53.98

The LIFETEST Procedure

Testing Homogeneity of Survival Curves for days over Strata

Rank Statistics

Stratum	Log-Rank	Wilcoxon
1	3.288	582.0
2	-12.167	-1791.0
3	4.399	672.0
4	4.480	537.0

Covariance Matrix for the Log-Rank Statistics

Stratum	1	2	3	4
1	16.7383	-14.3485	-1.0597	-1.3301
2	-14.3485	19.2417	-2.1706	-2.7226
3	-1.0597	-2.1706	3.4338	-0.2034
4	-1.3301	-2.7226	-0.2034	4.2561

Covariance Matrix for the Wilcoxon Statistics

Stratum	1	2	3	4
1	302544	-256504	-19874	-26166
2	-256504	347301	-39148	-51648
3	-19874	-39148	63087	-4065
4	-26166	-51648	-4065	81879

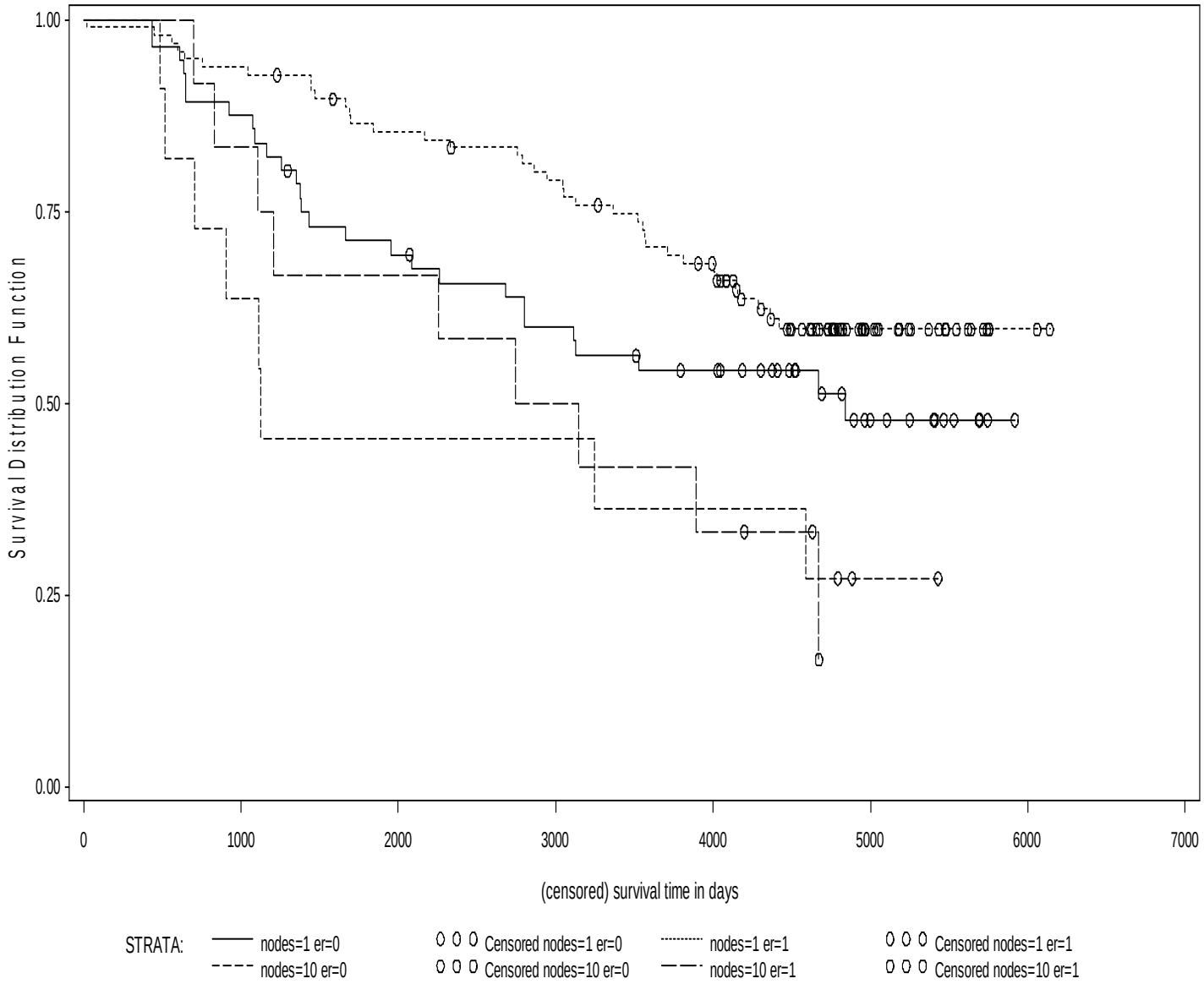
Legend for Strata

Stratum	nodes	er
1	1	0
2	1	1
3	10	0
4	10	1

Test of Equality over Strata

Test	Chi-Square	DF	Pr > Chi-Square
Log-Rank	13.3411	3	0.0040
Wilcoxon	14.6904	3	0.0021
-2Log(LR)	11.1974	3	0.0107

KM estimate for each category



Survival estimate for each category