

KM_model.rmd

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Declaration

Status: *C (censored)*, *CL (censored due to liver transplant)*, or *D (death)*

For survival analysis:

- Status C and CL are classified as **censored** (`event = 0`).
- Status D is classified as **death** (`event = 1`).

Overall Survival Result

Kaplan–Meier Survival Curve

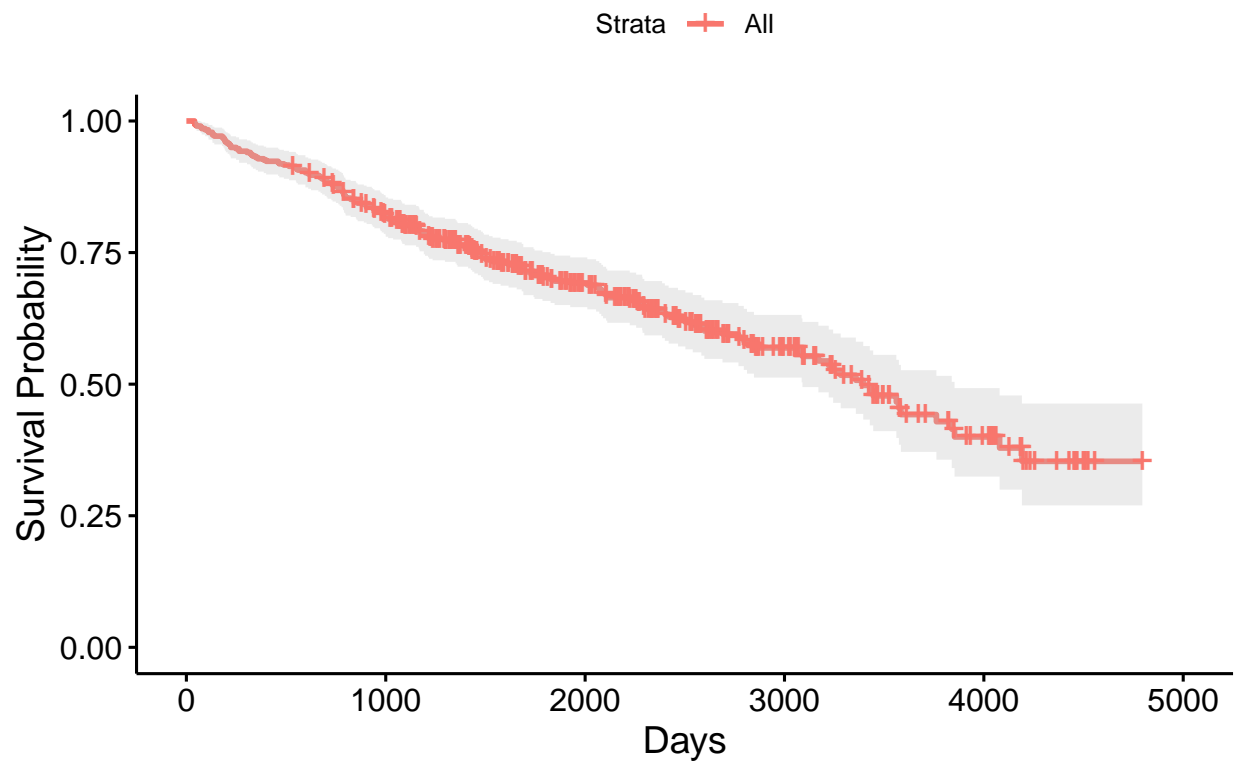


Table 1: Kaplan-Meier Survival Summary by Year

Time Group (Years)	At Risk	Events	Censored	Survival Probability	Lower CI	Upper CI
0.00-1.00	389	30	0	0.93	0.90	0.95
1.00-2.00	366	20	3	0.88	0.85	0.91
2.00-2.98	317	31	18	0.80	0.77	0.84
2.99-4.00	249	19	49	0.75	0.71	0.80
4.00-4.98	200	15	34	0.70	0.66	0.75
4.99-6.00	167	10	23	0.66	0.62	0.72
6.00-6.98	117	11	39	0.61	0.56	0.67
6.99-8.00	85	7	25	0.57	0.51	0.63
8.00-8.98	57	6	22	0.52	0.45	0.59
8.99-10.00	37	7	13	0.44	0.37	0.53
10.00-10.98	28	3	6	0.40	0.32	0.49
NA	15	2	11	0.35	0.27	0.46

Survival Result by Drug

Survival Curves by Drug Type

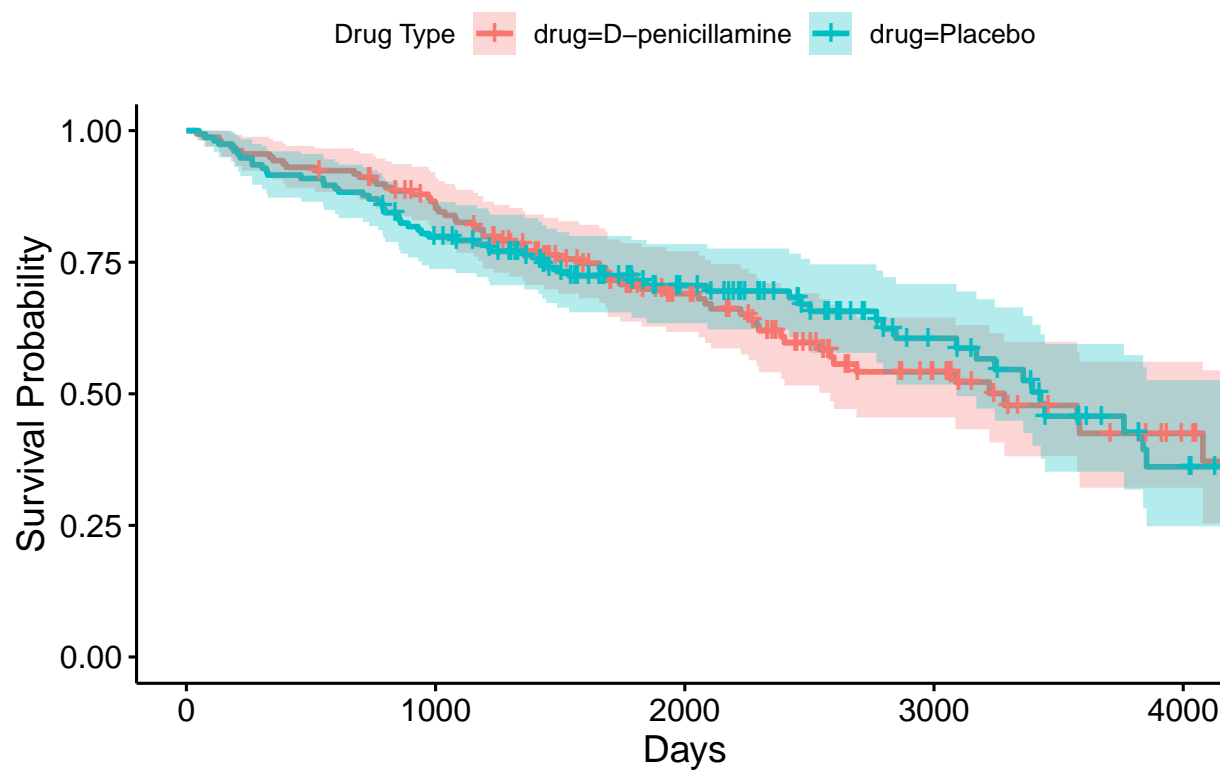


Table 2: Log-Rank Test Results for Drug Groups

Chi-Squared Statistic	Degrees of Freedom	P-Value
0.1017	1	0.7498

Interpretation:

The p-value is 0.7498, which is significantly higher than the threshold of 0.05. This indicates no statistically significant difference in survival between the drug groups. Therefore, the results suggest that D-penicillamine does not demonstrate a statistically significant difference from the placebo group.

Survival Result by Other Covariates

Edema

Survival Curves by Edema

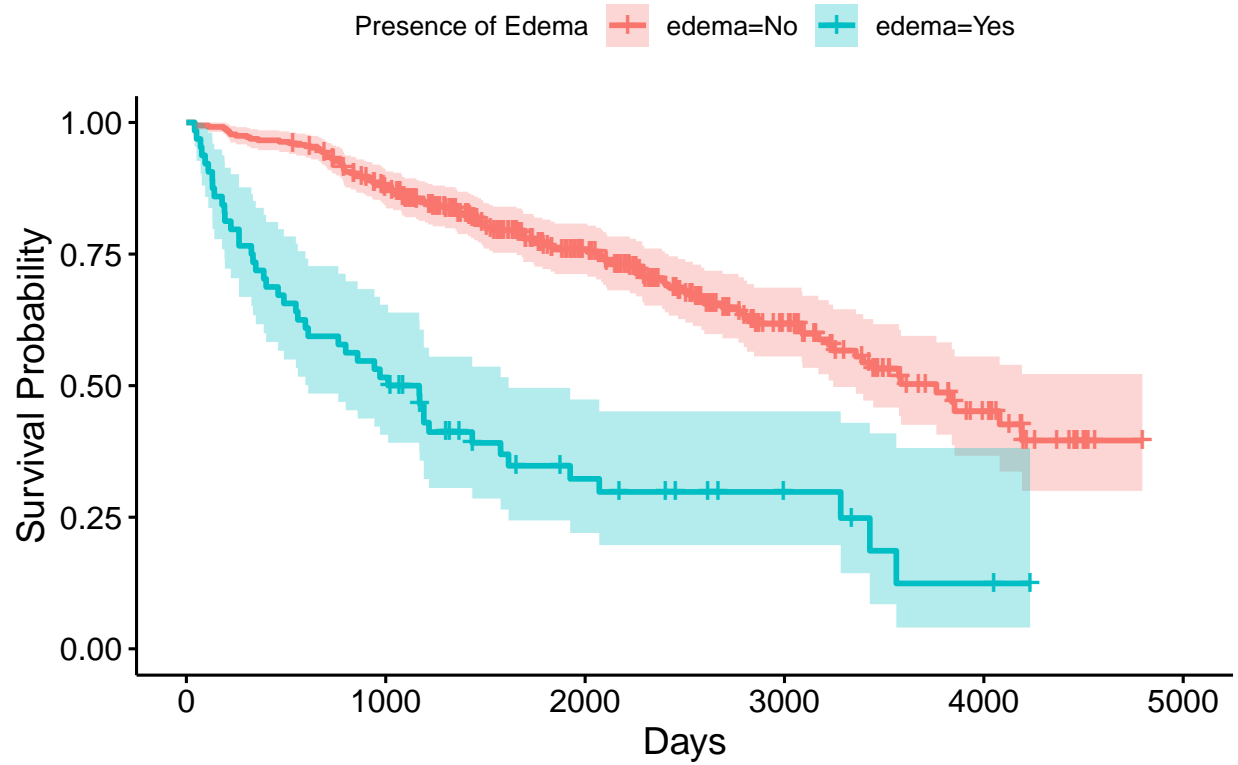


Table 3: Log-Rank Test Results for Edema Groups

Chi-Squared Statistic	Degrees of Freedom	P-Value
62.332	1	<0.0001

The log-rank test for edema groups reveals a Chi-Squared statistic of 62.332 with 1 degree of freedom and a highly significant p-value (<0.0001), indicating a statistically significant difference in survival curves between the groups. This result suggests that presence of edema plays a critical role in influencing survival outcomes, with distinct survival probabilities observed across the groups.

Stage

histologic stage of disease (1, 2, 3, or 4)

Survival Curves by Stage

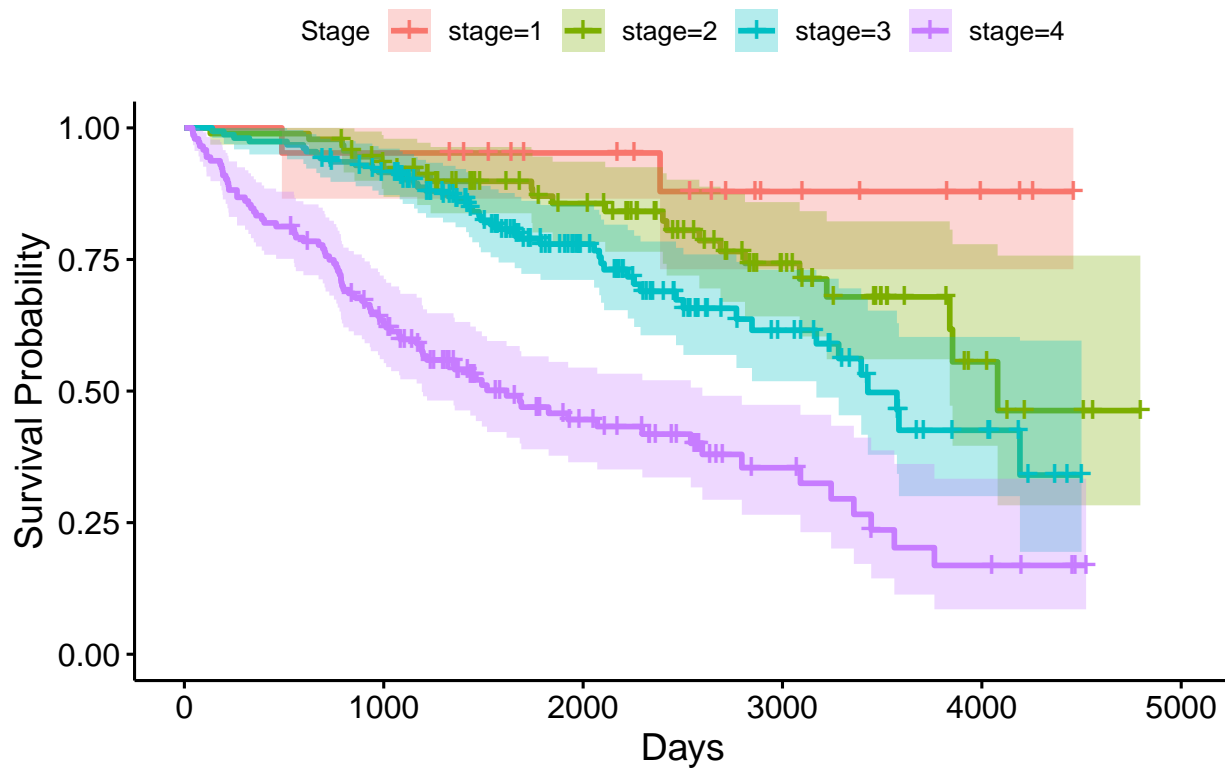


Table 4: Log-Rank Test Results for Stage Groups

Chi-Squared Statistic	Degrees of Freedom	P-Value
70.0762	1	<0.0001

The log-rank test for stage groups shows a Chi-Squared statistic of 70.0762 with 1 degree of freedom and a highly significant p-value (<0.0001). These results strongly indicate that there is a statistically significant difference in survival curves between the stage groups. This suggests that the stage of the disease has a significant impact on survival outcomes.