* Final project for class, Biostatistics & Survival Analysis.
* Data given was about survival times comparing chemotherapy versus chemotherapy and a novel agent drug.
* Data was provided by the University of Massachusetts’s stat data website. Composed of a subset of patients who had an oropharynx cancer.
* 195 observations, 11 variables including the **dependent variable**.
  + 100 in chemo alone
  + 95 in chemo + chemo agent drug.

|  |  |  |  |
| --- | --- | --- | --- |
| Gender | Treatment (chemo vs. chemo + agent) | Grade (how different are patient’s normal cells to cancer cells) | Age |
| Disabled | Cancer site | T\_Stage (Stage of primary tumor) | N\_Stage (if cancer metastasized) |
| Date the patient entered study | Status (censored, died) | **Survival\_time** |  |

* Used SAS and the lifereg procedure with the log-log procedure. Significant variables:
  + Disabled
  + T\_Stage
  + N\_stage
* Something of note, the treatment were not statistically significant (p = 0.2997)
* Ran the proportional hazard procedure (proc phreg) to find hazard ratio.
  + Disabled – 2.3
  + T\_Stage – 1.2
* PH of N-stage was violated, appeared as 0.
* Chemotherapy plus the agent drug was found to not have a significant effect on survival time compared to chemotherapy alone.