Cedars Biostatistics class final project

The final project will be a paper due by December 15, 2025.

Possible projects:

1. Review of the statistical results from an article in the biomedical literature, as in a Journal Club, but focusing on the statistical issues and results. One should comment on the design, the target study population, the outcomes/endpoints, the comparison groups (if any), the covariates /confounders (if appropriate) what statistical methods were used and whether they were appropriate, and interpret the results in context. One should first state the study question(s) and give a **very brief** background.

Example, "the authors wished to determine if elderly adults drinking cranberry juice for one month decreased the risk of a urinary track infection (UTI). The study design is a randomized trial."

2. Presentation of your research results/statistics or that of a colleague. Present the statistical methods used and interpret the results in context. A brief background / introduction should be given.

3. Write a statistical data analysis plan that (for example) would be part of a grant proposal. This should include a sample size / power calculation for the primary outcome including a reference to the data used to make the calculation. One should give the study design, the target study population, the primary and secondary outcomes.

Also good to present results from preliminary data, particularly the data used in the sample size calculation.

4. A report on a statistical method not covered in class. This will be an infrequent option.

You are **strongly encouraged** to discuss this with the instructor by phone or Zoom. This is particularly important if the methods used have not been covered in class. For example, we may not cover Cox proportional hazard regression for survival / death rates. If you choose a paper or issue involving a method we have not covered, I can provide a hopefully quick tutorial and references.

If you are presenting an article, it would be optimal if the instructor could get a copy beforehand, in part to avoid duplication.