Week 5 Summary

# Randomized Trials

**What are the three major points made in the paper?**

* RCT should be designed with one or few goals in mind to avoid vaguely answering multiple disparate questions.
* Can be classified by:
  + Study Design
    - Uncontrolled clinical trials (weak)
      * No concurrent comparison group exists and controls are implicit
    - Nonrandomized controlled trials (medium)
      * There is a concurrent control group, but patients are not allocated randomly into the two groups.
    - Randomized controlled trials
      * Individuals are allocated into two or more treatment groups (one of them being control) randomly
  + Objective and Phase
    - Not all RCTs are Phase III, but most Phase III studies are RCTs.
    - Randomized trials in Phase I and II studies is sometimes seen as more equitable spreading of a drug in limited supply.
    - To speed up development researchers sometimes adopt mulip-pahse studies
* Equipoise
  + In essence, no more harm that must be done should be done. The best “standard treatment” available should be used, i.e., an inferior treatment or no treatment cannot ever be used as one of the arms in the study.
* Radomization
  + Not everyone is in favor.
  + To protect against unbalanced groups during a random split, patients can presorted before being assigned to study groups. This reduces randomness, but ensure a more balanced distributions of features.
* Placebos and Double-blinding
  + When the outcome of an experiment is subjective, it is better to prevent biased thinking influenced by a patient’s own knowledge that he was treated with placebo drugs. This practice is called double-blinding, and the studies are called double-blinded RCTs.

**What are the possible future directions of the study?**

This is not a study but a summary, so there are no future directions.

**What could have been done better?**

I believe while explaining the double-blinding of RCTs, they could have gone more in depth about how you compensate for not being able to double blind the study when it is physically impossible to do so (certain treatments the patient is going to know if they had it or no).