1. Need to fix the HCC stage distribution upon diagnosis
   1. Early stage HCC (BCLC 0-A) is asymptomatic so without screening there is no way patients can get diagnosed at early stage without screening. In the Baher 2024 study, we don’t know how they defined screening vs not. The results don’t look right
   2. Joanne: Use the [Huang 2018](https://journals.lww.com/jcge/fulltext/2018/07000/rate_of_nonsurveillance_and_advanced.17.aspx) study’s stage distribution. This one provides data for screening vs incomplete screening. Use the data for the screening group. For no screening group, use the incomplete screening group data to extrapolate and estimate the stage distribution.
      1. For control group, Dr. Nguyen thinks early stage should be no more than 10%, 30% intermediate, 60% late.
      2. After estimating the data, ask Dr. Nguyen to double check (will she talk to Dr. Cheung?)
         1. FU with Dr. Nguyen about this if she doesn’t get back to me about it?? Or just ask about this after I extrapolate new values
2. Auditing inputs
   1. Dr. Nguyen will ask someone to audit these inputs
   2. Double check the utilities we used for early and intermediate stage used by Singal 2024. Do they seem valid?
3. Combined subgroups
   1. Send Sovann link for TreeAge resource page: <https://www.treeage.com/help/Content/71-Advanced-Markov-Models/2-Probability-Rate-conversions.htm>
   2. Send Sovann the following data and he will derive combined values:
      1. What subgroups we want
      2. The HRs
      3. What probabilities we want
   3. Joanne: Look into finding cirrhosis incidence rate in Dr. Rongtao Lai’s paper. If we can’t find, we may need to estimate this. -- checked, can’t find
   4. Dr. Nguyen says males are 4x more likely to get HCC than females
4. More detailed utility analysis
   1. Ask Malvyn to add the following in the verification outputs:
      1. Average number of years lived for overall cohort
      2. Average undiscounted utilities for overall cohort
      3. Average discounted utilities for overall cohort