

# Week 4 — Comparing groups: Wednesday exit ticket

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Instructions

Work through each item below. Write your final response in the space provided. Show enough work that another reader can follow your reasoning.

1. The Stanford Heart Transplant Study followed gravely ill patients who were candidates for a heart transplant. A patient was counted in the transplant group only if a compatible donor heart became available while they waited; the others form the comparison group. Patients were **not** randomly assigned to transplant versus no transplant. Of 34 patients who did not receive a transplant, 30 died; of 69 patients who received a transplant, 45 died.
  - (a) What proportion of each group died?
  - (b) A stacked bar chart of counts and a standardized (100%) bar chart of proportions are both drawn. Which makes the difference in death rates easier to compare, and why?
  - (c) The transplant group had the lower death proportion. Because patients were not randomly assigned, is this difference by itself a clean causal conclusion that transplants extended survival? Explain in one or two sentences.