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An experimental HIV vaccine has for the first time cut the risk of infection, researchers say. The vaccine - a combination of two earlier experimental vaccines - was given to 16,000 people in Thailand, in the largest ever such vaccine trial. Researchers found that it reduced by nearly a third the risk of contracting HIV, the virus that leads to Aids. It has been hailed as a significant, scientific breakthrough, but a global vaccine is still some way off. The study was carried out by the US army and the Thai government over seven years on volunteers - all HIV-negative men and women aged between 18 and 30 - in parts of Thailand.

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Half of the volunteers were given the vaccine, while the other half were given a placebo - and all were given counselling on HIV/Aids prevention. Participants were tested for HIV infection every six months for three years.

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Question 3: How would you analyze these data using the hypothesis test techniques you've learned in MA 2611?

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Let's use the 5-step method:

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   We will assume the latter.

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$\hat{p} = (74 + 51)/(8198 + 8197) = 0.0076$, so

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Note that we could use the large sample interval, since the numbers of HIV cases and non-cases are large (> 10) in both groups.

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   Statistically, we can say the observed difference is significant at the 0.05 level (and, in fact, at any significance level greater than 0.039).

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