

**Homeworks are due in Wednesday lecture and will be returned the following week in the discussion section.**

1. You and a friend were reading a paper in the *Journal of the American Medical Association* regarding the effect of treatment with allopurinol on blood pressure in adolescents. The article reported that the 95% confidence interval for the effect of treatment on systolic blood pressure was  $-4.5$  to  $-9.3$  mm Hg.

Your friend interpreted this by saying, “There’s a 95% chance that the true effect is between  $-4.5$  and  $-9.3$  mm Hg.” **Is this a correct interpretation? Answer yes or no and explain briefly.**

2. In discussing the article on allopurinol and blood pressure, your friend noted that the significance test of whether the treatment affected blood pressure gave a P-value of 0.009.

Your friend interpreted this by saying, “There’s a 99.1% chance that the treatment affects blood pressure.” **Is this a correct interpretation? Answer yes or no and explain briefly.**

3. 10.5 (pg 400)

4. 10.26 (pg 412)

5. 10.46 (pg 428): Use R to test for an association between type of therapy and psychotic relapses using:

(a) A  $\chi^2$  test (with `chisq.test`).

(b) Fisher’s exact test (with `fisher.test`).