“Effect of Hysterectomy With Ovarian Preservation on Ovarian Function”  
(Patricia G. Moorman, PhD, Evan R. Myers, MD, MPH, Joellen M. Schildkraut, PhD, Edwin S. Iversen, PhD, Frances Wang, MS, and Nicolette Warren, MS)  
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1. Review the authors’ definition of ovarian failure. Discuss possible circumstances that would lead to false positives and false negatives. Would the probabilities of those errors of classification differ between groups? Is there a better way to diagnose ovarian failure? If so, is it practical to use it for this study design?

2. Is the authors’ definition of ovarian failure synonymous with menopause? If not, how do they differ? Discuss whether any of these differences are clinically important for women represented by the study cohort.

3. Discuss whether the authors chose the proper control group to determine the effect of hysterectomy for the subset of women with hysterectomy and unilateral oophorectomy. If not, what would be a better control group?

4. Review the method of recruitment of women who underwent hysterectomy. Compare the method with that used to recruit controls. Are there differences? Do any of those differences have the potential to bias the outcomes of interest? Why or why not?

5. How did the authors determine the number of participants to enroll for this study? Why were women younger than 30 or older than 47 years of age excluded?

6. Review the assumption inherent in Cox proportional hazard modeling. Discuss how the authors eliminated time-dependent covariates in this study. What other ways can be used to exclude a violation of the proportional hazard assumption?

7. The authors adjusted the hazard ratios using the variables shown at the bottom of Table 3. Discuss why the authors chose those particular variables. Do you agree with their selection? Should other variables have been chosen in addition to or instead of these variables?

8. The authors discuss hazard ratios of women younger than 40 years of age. What conclusions do you make from their subgroup analysis?

9. The authors advance hysterectomy as a possible causative factor for ovarian failure. Discuss candidate mechanisms by which hysterectomy may increase the risk of ovarian failure. Would the possible effect vary among types of hysterectomy? Is a history of tubal ligation a confounder? Does the Kaplan-Meier plot and lack of significance of time-dependent variables support or refute an effect from surgery?


11. Using the authors’ model for ovarian failure 4 years after hysterectomy, can you generate a “number needed to harm?” If yes, what is it?