1. Review the various criteria used in the last 20 years to define polycystic ovary syndrome (PCOS). Discuss the differences among the National Institutes of Health (NIH), Rotterdam, and Androgen Excess-Polycystic Ovary Syndrome Society criteria. Which criteria do you prefer and why? Discuss whether the use of diagnostic criteria is as important in clinical care of individual patients as it is in clinical research.

2. What is the study design employed by the authors? What level of evidence was assigned to this study design?

3. Review the clinical records of some of your patients with PCOS. How complete is the documentation for hyperandrogenism, hyperandrogenemia, menstrual history, and polycystic ovaries? Twenty years from now would a clinical investigator reviewing your records agree with your diagnosis? Why or why not?

4. What is the STROBE Statement? Why does the Green Journal require the use of a STROBE checklist for observational studies? Review the Methods section of the STROBE checklist for cohort studies and determine which, if any, of the items are missing from the report.

5. What is the quantitative insulin sensitivity check index (QUICKI)? What serum analytes are used in the formula? What does the QUICKI result represent? Explore possible reasons why the authors used this test rather than other methods of estimating insulin resistance. What are normal values for QUICKI? Are any of the means for the four PCOS phenotypes normal?

6. Review the clinical data for the control group. Identify similarities and differences with the women with PCOS. Discuss whether the differences are important confounders of the analysis.

7. Compare the baseline and follow-up body mass index (BMI) of the women with PCOS. Do any differences with your patients’ BMI limit the generalizability of the authors’ observations?

8. List the types of treatments these women may have received. Discuss whether the treatments may have had an effect on the severity of the PCOS phenotype and whether it is likely that the women in each phenotype received similar treatments.

9. Recall the assumptions underlying the t test. Have the authors shown that these assumptions have been met?

10. The authors observed that the PCOS phenotype improved with aging but the metabolic abnormalities did not. Develop testable hypotheses that could explain these observations.