“Neonatal Outcomes After Demonstrated Fetal Lung Maturity Before 39 Weeks of Gestation”

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1. Describe the trial design. What is a retrospective cohort study? What are the strengths and limitations of this study design? Could this study have been done prospectively? If yes, how, and how might that alter the findings?

2. The authors included only singletons. Why? Since twins or higher order multiples also may face this situation, how would you counsel parents of multiples based on the findings of this study? Can you extrapolate the results? Why or why not?

3. Would you have included multiples if you were designing the study? Why or why not? How might the inclusion of multiples have affected the findings?

4. Pulmonary maturity testing was based on the presence of phosphatidyl glycerol or a lecithin-sphingomyelin ratio of 2.0 or greater if nondiabetic, and 3.5 or greater ratio if diabetic. How do you evaluate for pulmonary maturity? What are the test characteristics of these evaluations? Is it possible for one result to be considered mature and the other not? What do you do in that situation? Review the UpToDate article, “Assessment of Fetal Lung Maturity.” Review the effects of gestational age on assessment and the effects of substances that may interfere with the results.

5. The authors used a composite outcome. What are the benefits and the downsides of a composite endpoint? How do you select the components? What should be considered when selecting variables for a composite endpoint?

6. Of those components selected for this composite, which might be difficult to identify? Why did they include death in the composite? Why were both suspected and proven sepsis included?

7. The authors used the Mantel-Haenszel $\chi^2$ test for trend to assess for linear trends in outcomes. How does this analysis work to evaluate a trend?

8. The authors used logistic regression to adjust for potentially confounding covariates. How are these covariates selected? Are the covariates selected the ones you would have chosen? Are any missing?

9. Were you surprised by the findings of higher rates of adverse outcomes in those neonates delivered at 36 to 38 weeks of gestation? Why or why not?

10. Will the findings of this study alter your clinical practice? Why or why not? If yes, how will you incorporate these findings? If not, why not?

11. Will the findings change how you counsel patients who may deliver at 36 to 38 weeks of gestation? How will you counsel these patients regarding neonatal outcomes?