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We used this only as an example to show the variations in the total blood volume but not as the basis of what to be expected as the norm. We would like to reference Table 2 in our study,¹ where the total blood volume and 5, 10, and 15% volumes were calculated for different body surface area quintiles. That was the main purpose of this article. This was also the reason for not including blood transfusions.

Our future direction would be to validate this with quantified blood loss and assess clinical changes at different percentages of total blood volume lost and blood transfusions. We did group all our pregnant patients together; however, this should not have changed our outcome, because the measurements were all taken on admission and would have been reflective of the patient's current gestational period.

We agree with the authors regarding the existence of multiple confounding factors such as multiple gestation, which was the reason we did not include that group in our study.

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REFERENCES

1. Burtch R, Scott C, Zimmerman L, Patel A. Blood loss as a function of body surface area: redefining parameters of obstetric blood loss. *Obstet Gynecol* 2016;128:1274–80.
2. Feldschuh J, Enson Y. Prediction of the normal blood volume. *Relation of blood*

volume to body habitus. *Circulation* 1977;56(4 pt 1):605–12.

3. Baker RJ, Kozoll DD, Meyer KA. The use of surface area as a basis for establishing normal blood volume. *Surg Gynecol Obstet* 1957;104:183–9.
4. Nadler SB, Hidalgo JU, Bloch T. Prediction of blood volume in normal human adults. *Surgery* 1962;51:224–32.
5. Milosevic N, Popovic J, Grujic Z, Rapaic M. One-compartmental biometric blood loss calculation after cesarean section. *Eur J Drug Metab Pharmacokin* 2011;36:183–8.
6. Wang Y, Moss J, Thisted R. Predictors of body surface area. *J Clin Anesth* 1992;4:4–10.

Interpregnancy Interval After Termination of Pregnancy and the Risks of Adverse Outcomes in Subsequent Birth

We thank the authors for their report¹ but are concerned that the analysis was too simplified to truly understand the association of interpregnancy interval and subsequent preterm birth.

When evaluating the demographic categories, gestational age was grouped as 12 weeks or less compared with more than 12 weeks. This type of categorization fails to allow an analysis reflecting when abortions are performed and to use this analysis, if correct, to properly counsel patients. Approximately 53% of all abortions in the United States are performed at 7 weeks of gestation or less.² Grouping together women who undergo abortion at 10 weeks with those who undergo abortion at 6 weeks is potentially inappropriate statistically. For this analysis to have the ability to guide clinical practice, gestational age categories cannot simply be conveniently packaged into bivariate groups. The authors need to present analyses with clinically applicable gestational age ranges such as 7 weeks or less, 8–10 weeks, and 11–14 weeks (all first trimester) as well as 15–20 and 21–24 weeks or more in the second trimester. Because the primary outcome was preterm birth, gestational age at the time of abortion (as well as type of abortion, especially in the second trimester) is potentially the most important confounder and needs the utmost attention during analysis. If the authors do not have sufficient

numbers in each group to perform such analyses, this very significant limitation needs to be recognized before the information is used clinically for patient counseling, especially given the overly weak adjusted association.

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REFERENCES

1. Männistö J, Bloigu A, Gissler M, Heikinheimo O, Niinimäki M. Interpregnancy interval after termination of pregnancy and the risks of adverse outcomes in subsequent birth. *Obstet Gynecol* 2017;129:347–54.
2. Jatlaoui TC, Ewing A, Mandel MG, Simmons KB, Suchdev DB, Jamieson DJ, et al. Abortion surveillance—United States, 2013. *MMWR Surveill Summ* 2016;65:1–44.

In Reply:

We thank Mitchell D. Creinin and James Trussell for their interest in our work.¹ In the analyses presented in our article, the gestational age at termination of pregnancy and the method of termination (medical compared with surgical) were used to adjust for the confounders and to ensure the comparability of the different termination-to-subsequent conception interval groups. Thus, these variables were included in the models, but the results were not presented according to them. After Drs. Creinin and Trussell raised a concern about the categorization of gestational age at termination of pregnancy, we re-analyzed our data by using a new division of gestational age at termination: 7 weeks or less, 8–12 weeks, 13–20 weeks, and 21–24 weeks. The first two groups represent the first-trimester terminations, and the latter two groups represent the second-trimester terminations. The new categorization of gestational

