



Published in final edited form as:

Obstet Gynecol. 2014 July ; 124(1): 163. doi:10.1097/AOG.0000000000000354.

Loop Electrosurgical Excision Procedure and Risk of Preterm Birth

Shayna N. Conner, M.D.¹, Heather A. Frey, M.D.¹, and Methodius G. Tuuli, M.D., M.P.H.¹

¹Department of Obstetrics and Gynecology, Washington University in St. Louis

In Reply

We thank Danhof et al for their interest in our work and welcome the opportunity to clarify our methodology. (1) First, we excluded four of the studies after diligent review against explicit inclusion and exclusion criteria. The studies by Albrechtsen et al and Kristensen et al were excluded because we were unable to isolate data of women who had LEEP from other cervical excision procedures, which would not answer our question of the association between LEEP and preterm birth. (2,3) Further, we excluded the studies by Jakobsson et al and Bruinsma et al because they included women with cervical cancer in whom treatment and outcomes are clearly different from patients with dysplasia only. (4,5) Finally, the study by Ortoft et al was, in fact, included in our meta-analysis. (6)

The authors' approach to calculating relative risk (RR) with these additional studies deserves comment. While it is tempting to simply combine outcomes from the different studies, the pooled RRs in meta-analyses are not a direct combination of outcomes. Rather, the RR is calculated for each study and weighted, then pooled together. This is the preferred methodology, because combining numbers from the different studies produces spurious results known as the Simpson's paradox. In summary, we are confident in our findings from our meticulously conducted study, showing no significant increase in preterm birth in women with LEEP compared to those with dysplasia but no LEEP. We encourage continued research using carefully designed, well-powered studies to verify these novel findings.

References

1. Werner CL, Lo JY, Heffernan T, Griffith WF, McIntire DD, Leveno KJ. Loop electrosurgical excision procedure and risk of preterm birth: a systematic review and meta-analysis. *Obstet Gynecol.* 2014; 123:752–61. [PubMed: 24785601]
2. Albrechtsen, et al. Pregnancy outcomes in women before and after cervical conisation: population based cohort study. *BMJ.* 2008; 337:a1343. [PubMed: 18801869]
3. Kristensen, et al. Increased risk of preterm birth in women with cervical conisation. *Obstet Gynecol.* 1993; 81:1005–8. [PubMed: 8497340]
4. Jakobsson, et al. Loop electrosurgical excision procedure and the risk for preterm birth. *Obstet Gynecol.* 2009; 114(3):504–10. [PubMed: 19701027]
5. Bruinsma, et al. Precancerous changes in the cervix and risk of subsequent preterm birth. *BJOG.* 2007; 114:70–80. [PubMed: 17083653]

Financial Disclosure: The authors did not report any potential conflicts of interest.

6. Ortoft, et al. After conisation of the cervix, the perinatal mortality as a result of preterm delivery increases in subsequent pregnancy. *BJOG*. 2010; 117:258–267. [PubMed: 19943823]