

Outcomes of Multifetal Reduction at a Tertiary Care Institution

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Introduction

- Multifetal gestations are associated with adverse pregnancy outcomes (APOs), including preterm birth, hypertensive disorders, gestational diabetes, fetal growth abnormalities, cesarean/operative delivery, and postpartum hemorrhage
- Multifetal reduction (MFR) by fetocidal potassium chloride injection is used to reduce fetal number, often for genetic indications and/or to mitigate risks of continuing a multifetal pregnancy
- Historical data suggests procedure-related pregnancy loss rate of 5%, among other complications
- We evaluated the procedure-related complications and perinatal outcomes following MFR performed via potassium chloride injection

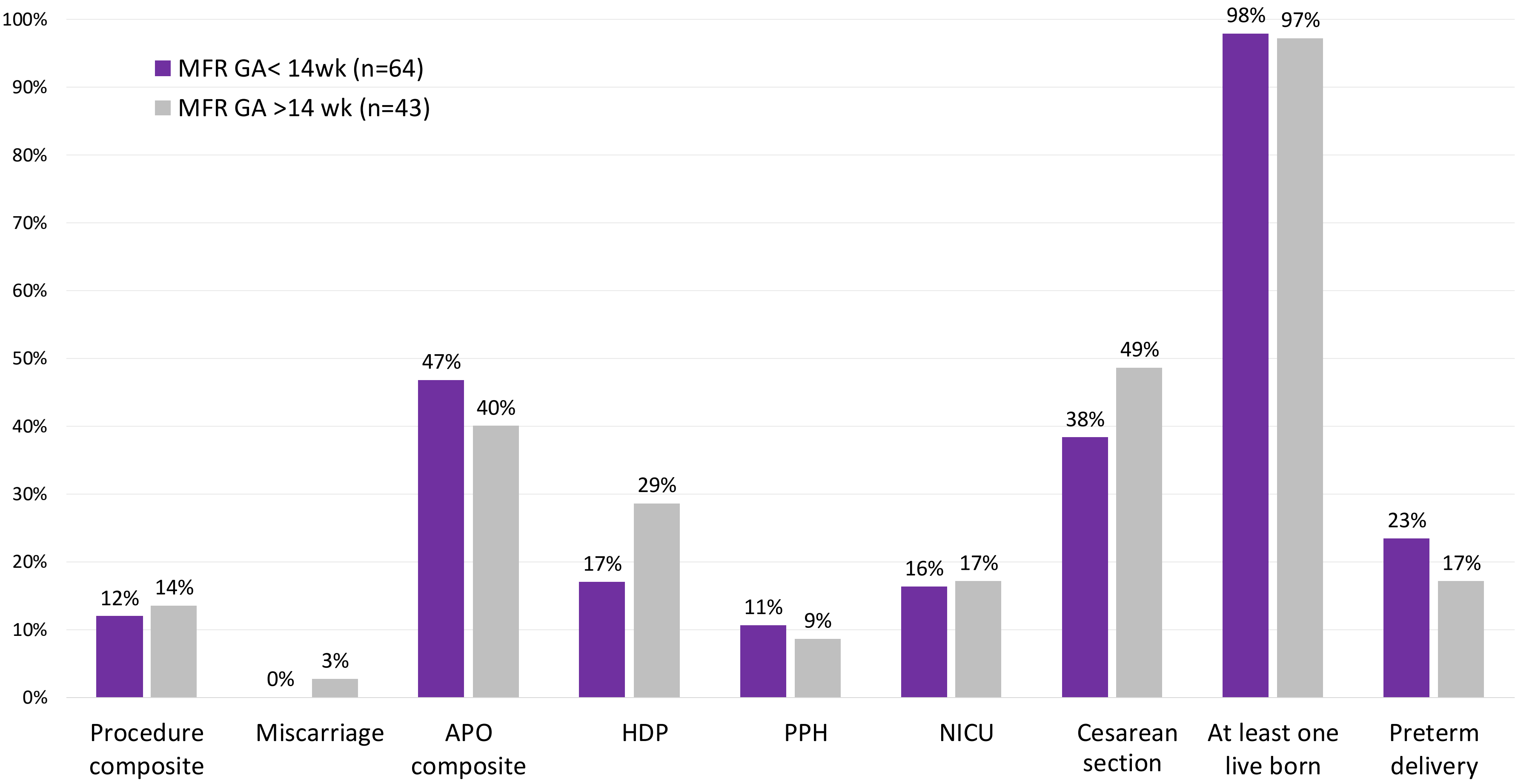
Methods

- Retrospective cohort study of individuals undergoing MFR at a single academic center
- Study period: January 2020 to March 2026
- Outcomes:
 - Procedure-related complications (vaginal bleeding, rupture of membranes, miscarriage, and subchorionic hemorrhage)
 - APOs (hypertensive disorders of pregnancy, gestational diabetes, postpartum hemorrhage, hysterectomy, NICU admission)
 - Delivery route and gestational age at delivery
- Cohorts: Outcomes were compared by gestational age at the time of the reduction, fetal number post reduction, and reduction of the presenting fetus.
- Wilcoxon rank-sum tests were used for continuous variables and Fisher’s exact or chi-squared tests for categorical variables

Results

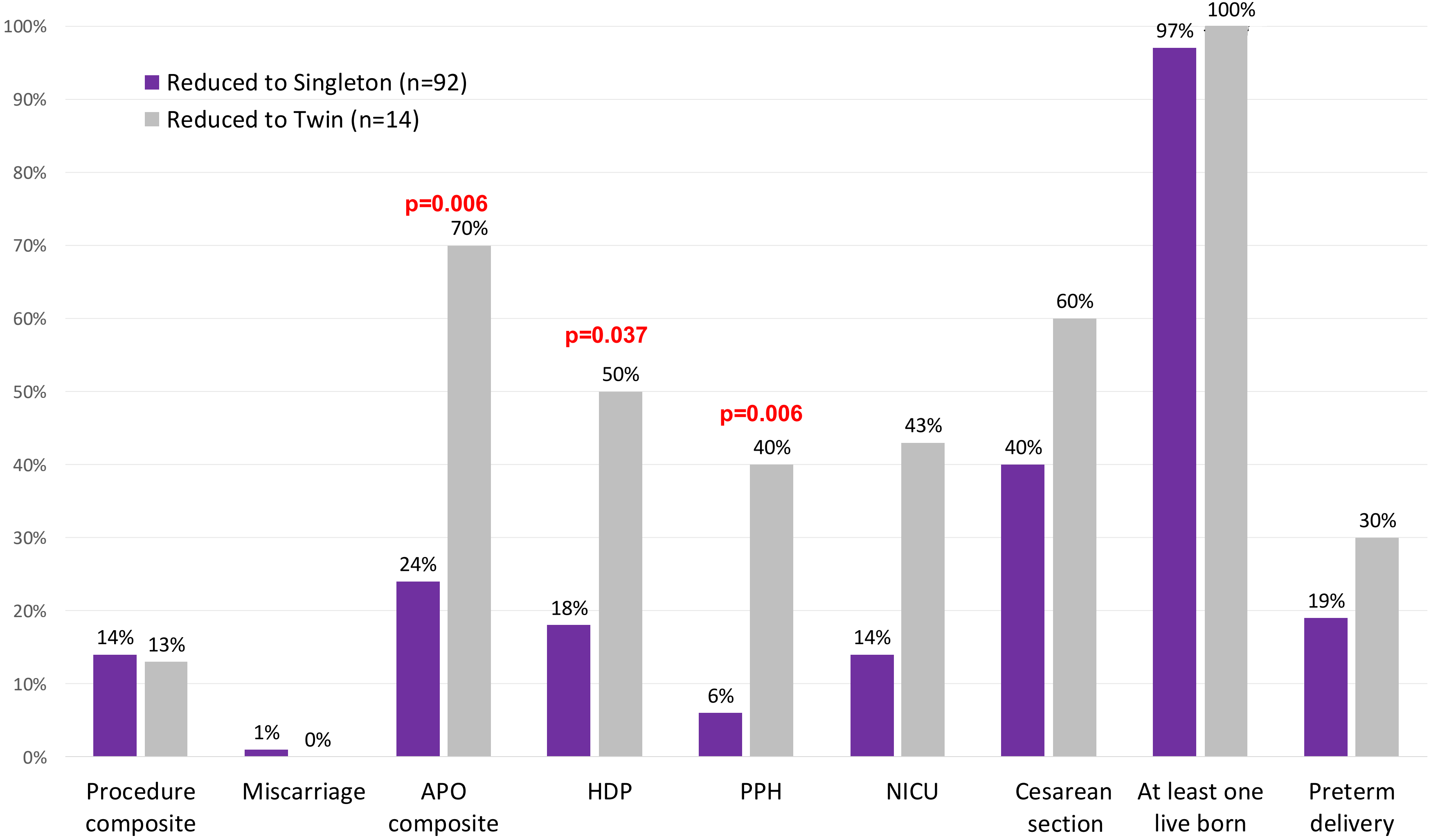
- 107 patients were assessed during the study period
- Maternal demographics were similar between groups, including race/ethnicity, BMI, nulliparity, referral status, and medical comorbidities (all $p>0.05$).
- Conception method differed significantly by gestational age at MFR ($p=0.003$); MFR >14 weeks was more commonly associated with spontaneous conception (57.1% vs 40.3%) and IVF (26.2% vs 9.9%).
- Type of multifetal gestation differed significantly between groups ($p<0.001$); patients undergoing MFR >14 weeks were predominantly twins (95.4% vs 53.2%), whereas those undergoing MFR <14 weeks more frequently had triplet or higher-order gestations (46.8% vs 4.7%).
- Indications for MFR were comparable between groups, with similar proportions undergoing reduction for structural anomalies, genetic indications, or both ($p=0.79$).

Perinatal Outcomes by Gestational Age at Multifetal Reduction



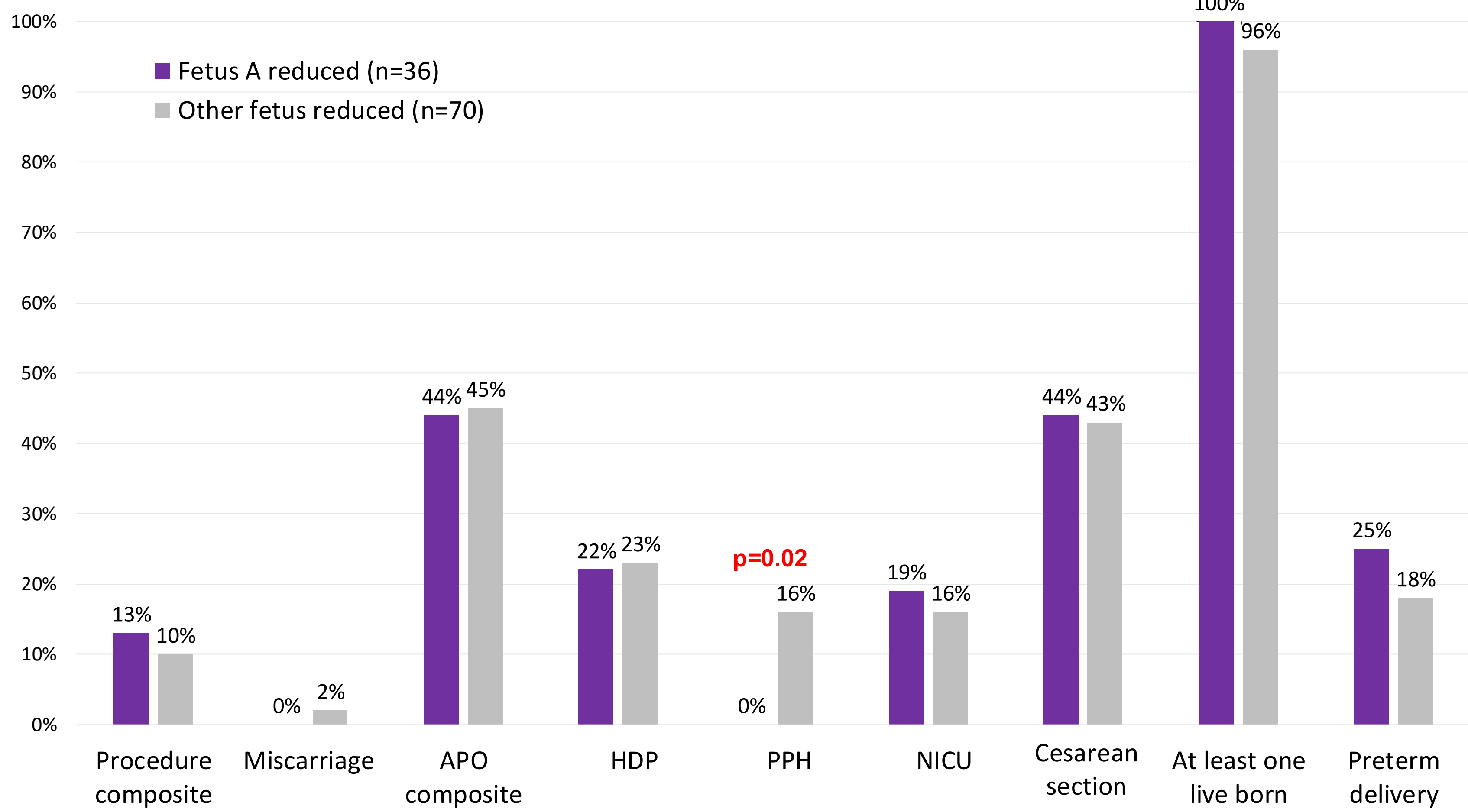
No significant differences in procedure-related complications or perinatal outcomes were observed between MFR performed before versus after 14 weeks' gestation.

Perinatal Outcomes by Fetal Number after Multifetal Reduction



One patient reduced to triplets and was excluded from the analysis

Perinatal Outcomes by Reduction of Presenting Fetus



Conclusion

Multifetal reduction was associated with low complication rates.

Perinatal outcomes were similar when performed before or after 14 weeks and regardless of which fetus was reduced.

However, reduction to twins was associated with higher APO rates compared to reduction to singletons.

Northwestern

