**Objective:** To determine the differences in labor progress by the use of serial transperineal ultrasound assessment of fetal head descent between women having vaginal (VD) and Cesarean delivery (CD) following induction of labor.

**Method:**
- A prospective longitudinal study
- 315 Chinese women with singleton pregnancy undergoing IOL at term
- Serial paired assessment of cervical dilatation and fetal head station by VE and transperineal USS assessment of fetal head descent
- Repeated measures data were analyzed by mixed effect models
- Significance of the interaction term between each mode of delivery and fetal head station or cervical dilatation was determined
- AUROC was used to evaluate performance of serial intrapartum USS in predicting women with CD or those requiring CD due to failure to progress (FTP).

Serial intrapartum transperineal USS of fetal head descent can objectively assess the differences in labor progress between VD and CD. It is potentially predictive of women requiring CD due to FTP.