Objectives
To determine whether cervical lengths in mid-trimester and the third trimester are associated with increased risks of subsequent histologic chorioamnionitis in late preterm birth.

Methods
This is a retrospective cohort study including 175 women with late preterm birth. We identified the cervical length measured at 24 to 27 weeks’ gestation and at 32 to 34 weeks’ gestation and histologic finding of placenta. We analyzed the difference in cervical length and change of cervical length between histologic chorioamnionitis group and normal group.

Results
1. The cervical length at mid trimester in histologic chorioamnionitis group (32.9±9.3mm) was shorter than that of normal histologic group (36.9±8.0mm)(p=0.049).

2. The cervical lengths measured at 32 to 34 weeks’ gestation were not significantly different between the two groups (27.3±9.7mm vs. 25.2±10.7mm, respectively, p=0.313)

3. The change of cervical lengths were greater in chorioamnionitis group compare to that in normal group. (10.9±9.2mm vs. 4.8±7.3mm, respectively, p=0.01)

4. Multivariate analysis revealed change of the cervical length between mid-trimester and early third trimester were independently associated with an increased risk for histologic chorioamnionitis in late preterm birth. (adjusted odds ratio(OR) 2.799(95% confidence interval(CI) 1.352-5.796), p=0.006)

Conclusion
In late preterm birth, greater change of cervical length between mid-trimester and early third trimester is independently associated with an increased risk of histologic chorioamnionitis.