Objective
To evaluate the correlation between labor process and the elastography parameters.

Methods
Prospectively collected clinical data of 60 pregnant women in late pregnancy. E-CervixTM (WS80A; Samsung) elastography was used. Follow up and record the first labor time of all the women.

Results
The average cervical length (CL) of the self-delivered women with normal first stage of labor was lower than that of the prolonged first stage of labor, the average elasticity contrast index (ECI) was higher than the prolonged group, and the average hardness ratio (HR) was lower than that of the prolonged group. The difference of CL, ECL and HR between the two groups was statistically significant (p<0.05). Among 35 self-delivered women, the first stage of labor was negatively correlated with cervical ECI (r=-0.415, p<0.05 ); ECI was negatively correlated with CL and HR (r values were -0.528, -0.374, p<0.05). HR was negatively correlated with IOS and EOS (r = -0.669, -0.558, p<0.01); HR had no significant correlation with CL, p>0.05.

Conclusion
ECI is negatively correlated with the first stage of labor, can be used as a semi-quantitative index to evaluate cervical maturity, which has may objectively predict labor and guide induction of labor.