Conclusions: Transvaginal ultrasound-guided trucut biopsies were successful in 80% of patients. The success rate was related to indication, among patients with suspicion of ovarian cancer the success rate was 85% (33/49), but in sarcoma the success rate was 65% (9/14) \((p=0.0011\text{ (Fisher's exact test))}\). Recurrent biopsies in three patients with primarily insufficient biopsy led only to diagnosis in one. One patient, 1.6% (1/64) had a pulmonary embolism after the biopsy was performed due to anticoagulant therapy was paused in accordance with National guidelines.

Results: 64 patients had a total of 67 biopsies. Indications for biopsies were suspicion of ovarian cancer (n=39), uterine sarcoma (n=14), metastasis from gastrointestinal cancer (n=5), peritoneal cancer (n=4) and other pelvic cancer (n=2). Age range 22-90, median 58. In 80% of the patients (51/64) the biopsies were sufficient for diagnosis. The failures were not operator or time associated. Success rate was related to indication, among patients with suspicion of ovarian cancer the success rate was 85% (33/49), but in sarcoma the success rate was 65% (9/14) \((p=0.0011\text{ (Fisher's exact test))}\). Recurrent biopsies in three patients with primarily insufficient biopsy led only to diagnosis in one. One patient, 1.6% (1/64) had a pulmonary embolism after the biopsy was performed due to anticoagulant therapy was paused in accordance with National guidelines.

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Results: (1) CL was lower and CIS was higher in the study group (2.67±0.76 vs 3.85±0.65), (0.53±0.35 vs 0.27±0.24). (2) In the study group CIS was negatively correlated with CL, \(r = -0.404\), \(P = 0.404\). (3) AUC of CL, CIS, CS, CCS, ACS and ES in the assessment of the risk of premature birth of pregnant women was 0.877, 0.792, 0.607, 0.597, 0.545 and 0.528, respectively. (4) After combining CL and CIS, the result of AUC, sensitivity, specificity, accuracy, positive predictive value and negative predictive value (0.891, 73.3%, 91.3%, 84.9%, 80.0%, 86.9%) was increased, the cut-off in the CL and CIS was 3.1 cm and 0.35%. (5) Combination of CL and CIS was more valuable than CL in predicting the risk of a preterm birth.

Conclusions: The shortening of CL and the increasing of CIS are closely related to the occurrence of premature birth and can be used as the indexes to predict the preterm labour. There is a significant negative correlation between and CL and CIS. The combination of CL and CIS can be more effective in assessing the risk of preterm birth.

OP09.02
Interobserver variability of elasto strain ratio in the assessment of the uterine cervix in pregnancy

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Objectives: The role of elastography of the uterine cervix in screening for preterm delivery has been shown. However, the main concern is the reproducibility of elastographic measurements. This is particularly a matter of concern for strain elastography, where the tissues are compressed by the sonographer with the probe. Many new techniques have been developed to overcome this issue. The aim of this study was to evaluate the interobserver variability of strain elastogram imaging modalities.

Methods: Thirty-nine pregnant patients (gestational age ranging from 12 to 39 weeks) were examined by 2 experienced sonographers. Elastographic measurements were performed using an Alpinion E-Cube 15 Platinum equipped with elasto strain ratio software. The software provides a pressure bar, showing whether the compression and image quality are sufficient for the image to be reliable. After visualising the entire length of the cervical canal the cervix was gently compressed until achieving a satisfactory score on the pressure bar indicator (at least 5 out of 6). The area of the internal opening of the cervix as well as the hardest area of the posterior cervical lip were marked to calculate the strain ratio. The values of strain ratio obtained by both operators were compared and the intraclass correlation coefficient was calculated.

Results: All 39 patients satisfactory images were obtained by both sonographers. Median elastography strain ratio was 0.83 (range 0.2 - 1.66) for operator A, and 0.675 (range 0.25 - 1.45). Intraclass correlation coefficient was calculated at 0.85 (95% CI 73 - 92%), indicating a good intraobserver agreement.

Conclusions: Elasto strain ratio showed a good intraobserver agreement and seems a promising tool for further studies involving elastographic assessment of the uterine cervix in pregnancy.

OP09.03
Serial cervical length as a predictor of histologic chorioamnionitis in late preterm birth

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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 analysed the difference in cervical length and change of cervical length between histologic chorioamnionitis group and normal group.

Results: The cervical length at mid trimester in histologic chorioamnionitis group (32.9±9.3mm) was shorter than that of normal histologic group (36.0±8.0mm) (p=0.049). On the other hand, the cervical lengths measured at 32 to 34 weeks of gestation were not significantly different between the two groups. (27.3±9.7mm v 25.2±10.7, respectively, p=0.313) The change of cervical lengths were greater in chorioamnionitis group compared to that in normal group. (10.9±9.2mm vs 4.8±7.3mm, respectively, p=0.01). 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 (AOR 2.799(95% CI 1.352–5.796)) (p=0.006).

Conclusions: 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.

OP09.04
The cervical sliding sign: a new ultrasound tool in the assessment of threatened preterm labour

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Objectives: To assess the impact of the cervical sliding sign (CSS) in case of threatened preterm labour (TPL).

Methods: Single centre prospective study. A non-consecutive series of pregnant women between 24 and 36 weeks presenting with TPL were assessed by transvaginal ultrasound (TVU) to obtain cervical length (CL) measurement. TPL was defined as evidence of > 6 contractions/hour + CL modifications at the digital examination. The CSS was defined as the sliding of the anterior cervical lip on the posterior one under gentle pressure of the TV probe. The time-to-delivery (TtD – days) was recorded in each case. Treatment (tocolysis + steroid prophylaxis) was offered in case of CL <20mm or 20-30 mm + positive fibronectin test. The main outcomes were: delivery before 34wks, within 7days and 14 days.

Results: We recruited 75 patients. Of these, 15 delivered <34wks (26%) and the average TtD was 36.5 ± 28.4 days. Among the patients with CL >20mm, compared with cases with shorter cervix, delivery <34wks occurred less frequently (3/31 or 9.7% vs 12/44 or 27.3%, p=0.06) and TtD was longer (45.8 ± 25.7 vs 30.0 ± 28.6, p<0.05). The CSS was negative in all but 2 of the 31 cases with CL>20mm and positive in all 4 cases with CL<10mm. In the subgroup of remaining 40 patients (CL 10-20mm) the CSS was found in half, and was associated with shorter TtD (21.1 ± 20.2 vs 43.3 ± 33.1 days, p<0.05) and with higher risk of delivery <34wks (8/20 or 40% CSS positive vs 2/20 or 10% CSS negative, p<0.05),