173 **FETAL FIBRONECTIN IS A VALID PREDICTOR OF SPONTANEOUS PRETERM DELIVERY IN PATIENTS WITH CERVICAL CERCLAGES** ANDREI REBARBER[1], ANNA KATERINA SFAKIANAKI[1], EDWARD KUCZYNSKI[1], MICHAEL PAIDAS[1], KAREN RUSSO[1], JEANINE MATURI[1], DANIEL ROSHANFEKR[1], CHARLES LOCKWOOD[1], [1]New York University, Obstetrics and Gynecology, New York, NY

OBJECTIVE: The value of fetal fibronectin (FFN) for the prediction of preterm delivery (PTD) has not been studied in patients who have undergone cervical cerclage. As this cohort of patients is at high risk for PTD, we evaluated the efficacy of vaginal FFN in predicting PTD following cerclage placement.

STUDY DESIGN: An historical cohort of patients was identified which had either prophylactic or ultrasound indicated cerclage procedures performed. Indicated PTDs were excluded from analysis. FFN was measured by ELISA, with > 50 ng/ml indicating a positive result. The control group consisted of singleton patients from previously published literature, which did not have cerclages placed.

RESULTS: There were 49 singleton, 15 twin, and 6 triplet gestations in the cohort of 70 patients identified from 1995 to present. There were 29 prophylactic, 34 ultrasound indicated, and 4 emergent cerclages. An additional 3 cases had cerclages placed as part of a delayed interval delivery. The median gestational age at cerclage placement was 16.4 wks (range 10.4-23.9 weeks). There was a mean of 3.9 FFN assays (range 1-6) performed per patient, indicating overall adherence to the protocol. There were a total of 270 FFN assays performed, 242 negative results and 28 positive results. The median gestational age at delivery for the cohort was 37.1 weeks gestation (range 25.7-41.7). There were 16 PTDs. There were 28 patients who had positive FFN assays. The sensitivity and specificity were 71% and 93%, respectively. The positive and negative predictive values of FFN testing to predict PTD were 26% and 98% respectively. These latter results are similar to our previously published data of 25% and 95%, respectively, for singleton gestation that did not have cerclages placed ($P < .05$).

CONCLUSION: This is the first study to evaluate the use of vaginal FFN assays among patients who had undergone cerclages. We conclude that this is a useful predictor of PTD in these at risk pregnancies.

174 **ULTRASOUND INDICATED SHIRODKAR CERCLAGE PLACEMENT VERSUS EXPECTANT MANAGEMENT IN SINGLETON GESTATIONS: A COMPARISON OF OUTCOMES** ANDREI REBARBER[1], ANNA KATERINA SFAKIANAKI[1], EDWARD KUCZYNSKI[1], MICHAEL PAIDAS[1], JEANINE MATURI[1], KAREN RUSSO[1], DANIEL ROSHANFEKR[1], CARLOS CARRENO[1], CHARLES LOCKWOOD[1], [1]New York University, Obstetrics and Gynecology, New York, NY

OBJECTIVE: To compare pregnancy outcomes among patients with sonographic cervical length < 2.5 cm undergoing modified Shirodkar cerclage versus expectant management.

STUDY DESIGN: We conducted a cohort study of women with singleton gestations who underwent transvaginal ultrasonographic cervical length determinations in the 2nd trimester. The study group, consisting of high risk patients, underwent ultrasound indicated cerclages (UIC) when the residual closed cervical length was < 2.5 cm prior to 24 weeks. The control group consisted of putative low-risk patients who underwent sonographic cervical length measurements blinded to physicians and patients where the cervical length was < 2.5 cm prior to 24 weeks. The outcomes included gestational at delivery and birthweight.

RESULTS: There were 25 patients who had UIC. The median gestational age at cerclage placement in the UIC group was 19.4 wks [range 12.9-23.9]. The median cervical length at placement in the UIC group was shorter than the median cervical length in controls (1.60 cm [range 0.0-2.6] vs. 2.2 [1.1-2.5]; $P < .005$). Median gestational age at delivery in the UIC group was earlier than in the controls (37.0 wks [range 13.0-41.3] vs. 38.7 wks [range 21.1-41.1]; $P = .02$). Moreover, more pregnancies delivered before 37 weeks gestation in the UIC compared with control groups (48.0% vs. 13.6%; $P < .01$). As expected, median birth weights were significantly lower in the UIC patients compared with the control group (2575 [range 817-4120] vs. 3198 [range 440-4420]; $P < .05$). When we analyzed patients with cervices < 2.0 cm in both groups, there were no differences in median cervical length, gestational age at delivery, or birthweight between the two groups.

CONCLUSION: Pregnancy outcomes appear worse with UIC compared with expectant management using a UIC cutoff of 2.5 cm. Pregnancy outcomes were not improved even using a UIC cutoff of < 2.0 cm.

175 **VBAC IN WOMEN WITH 2 PRIOR C-SECTIONS: ASSESSMENT OF RISKS AND BENEFITS** GEORGE MACONES[1], SAMUEL PARRY[1], ERIKA STEVENS[1], SERDAR URAL[1], JEFFREY PEIPERT[2]; [1]University of Pennsylvania, Obstetrics and Gynecology, Philadelphia, PA; [2]Women and Infants Hospital, OB/GYN, Providence, RI

OBJECTIVE: To assess the efficacy and safety of VBAC vs repeat C-S among women with 2 prior C-S.

STUDY DESIGN: A record-based retrospective cohort study of over 25,000 women with a prior cesarean delivery was performed at 16 community and tertiary care institutions. Data was abstracted by trained nurse abstractors. From this initial cohort, we identified 4776 women who had 2 prior c-sections and a subsequent delivery. We then compared the outcomes of those who opted for a VBAC attempt versus those who opted for a repeat c-section, using bivariate and multivariate techniques.

RESULTS: Of the 4776 women with 2 prior LTS c-sections, 1144 (23.9%) opted for a VBAC attempt. 74% of the VBAC attempts in this group were successful (similar to that observed in women with only 1 prior c-section).

CONCLUSION: In women with 2 prior c-sections, an increased risk of uterine rupture/dehiscence was observed in those who attempt VBAC. Other clinical outcomes, including major operative injuries and blood transfusions, were similar between the 2 groups. Based on the risks and benefits, women with 2 prior c-sections should still be counseled and offered a VBAC attempt.

Table

Clinical outcomes

	VBAC ATTEMPT	ELECTIVE C-SECTION	RELATIVE RISK	95% CI
Rupture/dehiscence	2.5%	1.3%	1.9	1.2-3.0
Major operative injury	0.5%	0.6%	0.8	0.3-1.9
Transfusion	0.9%	1.3%	0.7	0.4-1.3
Postpartum infection	2.2%	3.9%	0.6	0.4-0.9

176 **UTERINE SCAR RUPTURE DURING VBAC: CONTRACTILITY OR BIOCHEMISTRY?** CATALIN BUHIMSCHI[1], IRINA BUHIMSCHI[1], JERRIE REFUERZO[1], EMMANUEL BUJOLD[1], YORAM SOROKIN[1], CARL WEINER[2]; [1]Wayne State University, Ob/Gyn/Maternal Fetal Med, Detroit, MI; [2]University of Maryland at Baltimore, OB/Gyn, Baltimore, MD

OBJECTIVE: The incidence of C/S in the US approximates 25%. A trial of labor (VBAC) has been advocated to reduce the overall rate. Several studies suggest an increased rate of uterine rupture in women receiving prostaglandins (PG) in preparation for labor possibly secondary to hypertonic contractions. However, we hypothesized that analogous to the cervix, PG induces biochemical changes in the uterine scar that favors rupture at the site. We sought to test whether the use of PG was more frequently associated with rupture at the old scar as opposed to the site found with other pro-contractile agents.

STUDY DESIGN: Retrospective review of all uterine ruptures between 1991-2001 following VBAC at our institution. We compared the site of rupture during a VBAC in patients receiving PG for cervical ripening to the site of rupture in women undergoing oxytocin only induction/augumentation.

RESULTS: 32 uterine ruptures were identified, of which 18 occurred during VBAC. Seven women received PG (dinoprostone: n = 5 or misoprostol: n = 2) for cervical ripening followed by spontaneous contractions (n = 2) or oxytocin augumentation (n = 5). Eleven women progressed spontaneously (n = 4) or received oxytocin (n = 7) without prior PG placement. There were no differences in age, body mass index (BMI), parity, gestational age, fetal weight, or cord pHs between the two groups. There was no difference in the maximal dose of oxytocin (PG: 8 ± 3 vs no-PG: 11.2 ± 3 mU, $P = .5$). Patients receiving PG ruptured at the site of the previous scar more frequently compared with the no-PG group where rupture occurred more often at distance (scar rupture PG: 86% vs no-PG 45%; OR: 13.2, RR: 2.75, 95%CI: 1.248-6.027, $\chi^2 = 5.789$, $P < .01$).

CONCLUSION: Women undergoing cervical ripening with PG are more likely to rupture at the site of the old scar than women augumented by non-PG methods. We hypothesize that PGs induce local biochemical modifications in the inferior uterine segment that weakens the scar and favors rupture.