

#### 14. FETAL FIBRONECTIN AND SPONTANEOUS PRETERM BIRTH.

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**OBJECTIVE:** To evaluate the presence of cervical (C) and vaginal (V) fetal fibronectin (FF) as a screening test for spontaneous preterm birth (SPB).

**STUDY DESIGN:** 2208 women at 10 centers were routinely screened every 2 wks from 24 to 30 wks for C and V FF. A positive (+) test was defined as a value  $\geq 50$  ng/mL. Multivariate analyses adjusting for potential confounders were performed to calculate the odds ratios (OR) for SPB associated with a + FF using 4 definitions of SPB: 24-29 wks, 24-31 wks, 24-34 wks and 24-36 wks.

**RESULTS:** In each testing period 3-4% of the C or V FF tests were +. The correlation between C and V FF at the same visit was always about 0.7 ( $p=.0001$ ) and between C or V FF in different periods between 0.1 and 0.2 ( $p=.0001$ ). The rates of SPB using the various definitions are shown in the Table as are the OR and sensitivity for a SPB associated with a +C or a +V FF at 24 wks. The specificity was always 97-98%, while the positive predictive value (PPV) rose from 13%, to 19%, to 28% to 36% as the upper limit of PTB was increased from 29 to 36 wks. The OR for SPB for a +FF compared to a -FF varied substantially by testing period, SPB definition and source of specimen, but always remained  $>2$  and significant.

**Table**

	24-29 wks		24-31 wks		24-34 wks		24-36 wks	
SPB	0.95%		1.7%		4.7%		10.5%	
	OR	Sens.	OR	Sens.	OR	Sens.	OR	Sens.
C	41.5	52%	23.2	37%	10.9	20%	4.9	10%
V	36.2	52%	17.2	38%	7.7	18%	3.8	10%

**CONCLUSION:** A positive C or V FF at 24 wks predicted more than half the SPB 24-29 wks (sensitivity 52%) with an OR of approximately 40. As the definition of SPB was extended to include later GA's or when the FF test was performed later in pregnancy, the level of association between a +FF test and SPB, while remaining highly significant, tended to decrease.