117.7 mcg/l, IQR 72.4-231.8) were separately compared to controls (P = .04 and P<.001, respectively). Crude OR for PTD in the highest TAT quartile relative to the lowest one was 2.56 (95% CI, 1.40-4.86; P = .003). This point estimate was only minimally reduced in multivariable analysis controlling for history of PTD and gestational age at collection (adjusted OR 2.29, 95% CI 1.17-4.62; P =.01). Despite these distinct differences, the area under the ROC curve was only .62 (95% CI, .56-.69), indicating poor performance of TAT concentration as a risk discriminator.

CONCLUSION: Amniotic fluid level of TAT complexes in the second trimester is elevated in women who subsequently deliver preterm, suggesting that thrombin generation may be involved in the various etiopathogenic mechanisms leading to PTD. However, second trimester amniotic fluid TAT level is not a useful independent predictor of PTD.

11 The accuracy of fetal fibronectin and cervical length in women with signs of preterm labor before 34 weeks: a nationwide cohort study in The Netherlands (APOSTEL1 study)

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OBJECTIVE: We estimated the accuracy of cervical length (CL) and fetal fibronectin (fFN) measurement in predicting preterm delivery within 7 days among women with signs of preterm labor.

STUDY DESIGN: We performed a nationwide cohort study in all 10 perinatal centers in the Netherlands between December 2009 and May 2012. We obtained fFN status and CL in women with threatened labor between 24 and 34 weeks gestational age with intact membranes. The study group consisted of women admitted directly to tertiary hospitals and women referred from secondary centers. Aim of the risk assessment was to correctly identify women who will not deliver, without too many unnecessary referrals. We estimated accuracy of fFN and CL separately, and then compared strategies that combine fFN and CL measurements in different ways, in which we varied CL cut-off values. The accuracy of different strategies and cut-offs was assessed using receiver operating curve analysis.

RESULTS: We report on 559 of the 660 included women (85%). Full data will be presented at the congress. In total 87 (16%) women delivered within 7 days after inclusion. fFN only had a sensitivity of 76% (95%CI: 66-83%) and a specificity of 58% (95%CI: 54-62%). At the same sensitivity level as fFN, CL had a higher specificity of 80% (95%CI: 76-84%, p<0.001). Combining fFN with CL improved overall accuracy compared to single testing. CL measurement, and subsequent fFN testing in case of a CL between 15 mm and 30 mm had the same high negative predictive value as several other strategies (98%; 95%CI: 96-99%), at the highest specificity 67% (95%CI: 62-71%). The positive predictive value was 34% (95%CI: 28-40%), thus reducing unnecessary referrals from 209 of 472 with CL only to 157 of 472 (p<0.001).

CONCLUSION: In women with signs of preterm labor, the optimal work-up is CL measurement, and fFN testing in case of a CL between 15 mm and 30 mm, reducing unnecessary referrals and treatment.

Prognostic accuracy

Test strategy positive test if:	sensitivity	95% confidence interval	specificity	95% confidence interval	PPV	95% confidence interval	NPV	95% confidence interval
CL < 25 mm	0,93	0,86 - 0,97	0,56	0,51 -0,60	0,28	0,23 -0,33	0,98	0,95 - 0,99
CL < 30 mm	0,97	0,90 - 0,99	0,43	0,38 - 0,47	0,24	0,20 - 0,28	0,99	0,96 - 1,00
CL < 10 mm, or CL 10 - 30 mm and fFN+	0,90	0,81 - 0,94	0,69	0,64 - 0,73	0,35	0,29 - 0,41	0,97	0,95 - 0,99
CL < 10 mm, or CL 10 - 25 mm and fFN+	0,87	0,79 - 0,93	0,74	0,69 - 0,77	0,38	0,31 - 0,45	0,97	0,95 - 0,98
CL < 15 mm, or CL 15 - 30 mm and fFN+	0,92	0,84 - 0,96	0,67	0,62 - 0,71	0,34	0,28 - 0,40	0,98	0,96 - 0,99
CL < 15 mm, or CL 15 - 25 mm and fFN+	0,90	0,81 - 0,94	0,72	0,67 - 0,75	0,37	0,31 - 0,43	0,97	0,95 - 0,99
CL < 20 mm, or CL 20 - 30 mm and fFN+	0,92	0,84 - 0,96	0,60	0,56 - 0,64	0,30	0,25 - 0,36	0,98	0,95 - 0,99
CL <15 mm or fFN+	0,95	0,88 - 0,98	0,57	0,52 - 0,61	0,28	0,23 - 0,33	0,98	0,96 - 0,99
CL <20 mm or fFN+	0,95	0,88 - 0,98	0,50	0,45 - 0,54	0,27	0,22 - 0,32	0,98	0,95 - 0,99
CL <25 mm or fFN+	0,99	0,94 - 1,00	0,40	0,36 - 0,44	0,24	0,20 - 0,29	0,99	0,97 - 1,00
CL <30 mm or fFN+	1,00	0,96 - 1,00	0,32	0,28 - 0,36	0,22	0,18 - 0,26	1,00	0,98 - 1,00
CL <25 mm and fFN+	0,83	0,73 - 0,89	0,75	0,71 - 0,79	0,38	0,31 - 0,45	0,96	0,93 - 0,98
CL <30 mm and fFN+	0,85	0,76 - 0,91	0,70	0,66 - 0,74	0,34	0,28 - 0,41	0,96	0,94 - 0,98
fFN+	0,76	0,66 - 0,83	0,58	0,54 - 0,62	0,25	0,21 - 0,31	0,93	0,89 - 0,95

NPV, negative predictive value; *PPV*, positive predictive value.

12 Genetic variation associated with preterm birth in black women

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OBJECTIVE: Black race is one of the strongest risk factors for preterm birth (PTB). Recently published data supports the hypothesis that genetic variation is a critical component in the pathogenesis of PTB and may account, in part, for the differences in PTB among different racial groups. We sought to identify single nucleotide polymorphisms (SNPs) associated with PTB within a cohort of black women.

STUDY DESIGN: This is a secondary analysis of a randomized trial that evaluated the effect of periodontal disease treatment on PTB. Women were enrolled between 6-20 weeks gestation at three prenatal care clinics between 2004-2007. Maternal DNA samples were collected and analyzed using a custom 1536-SNP chip designed to specifically assess genes involved in inflammation. The association between PTB <37 weeks and PTB <34 weeks with each SNP was assessed among black women enrolled in the study (significance considered p<0.001). Dominant, codominant, additive and recessive inheritance models were considered. History of prior spontaneous PTB was controlled for in adjusted analyses.

RESULTS: Of the 1,061 black women in the study with SNP data, 142 (13.4%) had a PTB <37 weeks gestation and 57 (5.4%) women delivered at <34 weeks gestation. Two SNPs in the PRKCA gene (rs6504424, rs7225452) as well as SNPs in the MMP2 gene (rs11639960) and C6 gene (rs6883180) were associated with an increased risk of PTB <37 weeks. A SNP in the IL17A gene (rs4711998) was found to be significantly associated with both PTB <34 weeks and <37 weeks. Additional SNPs in the PGR gene (rs11571275) and FLT1 gene (rs12428494) were associated with PTB <34 weeks but not <37