

EP17.12. Usefulness of the percentage change in cervical length between the first and second trimesters as a predictor of preterm birth before 34 weeks.

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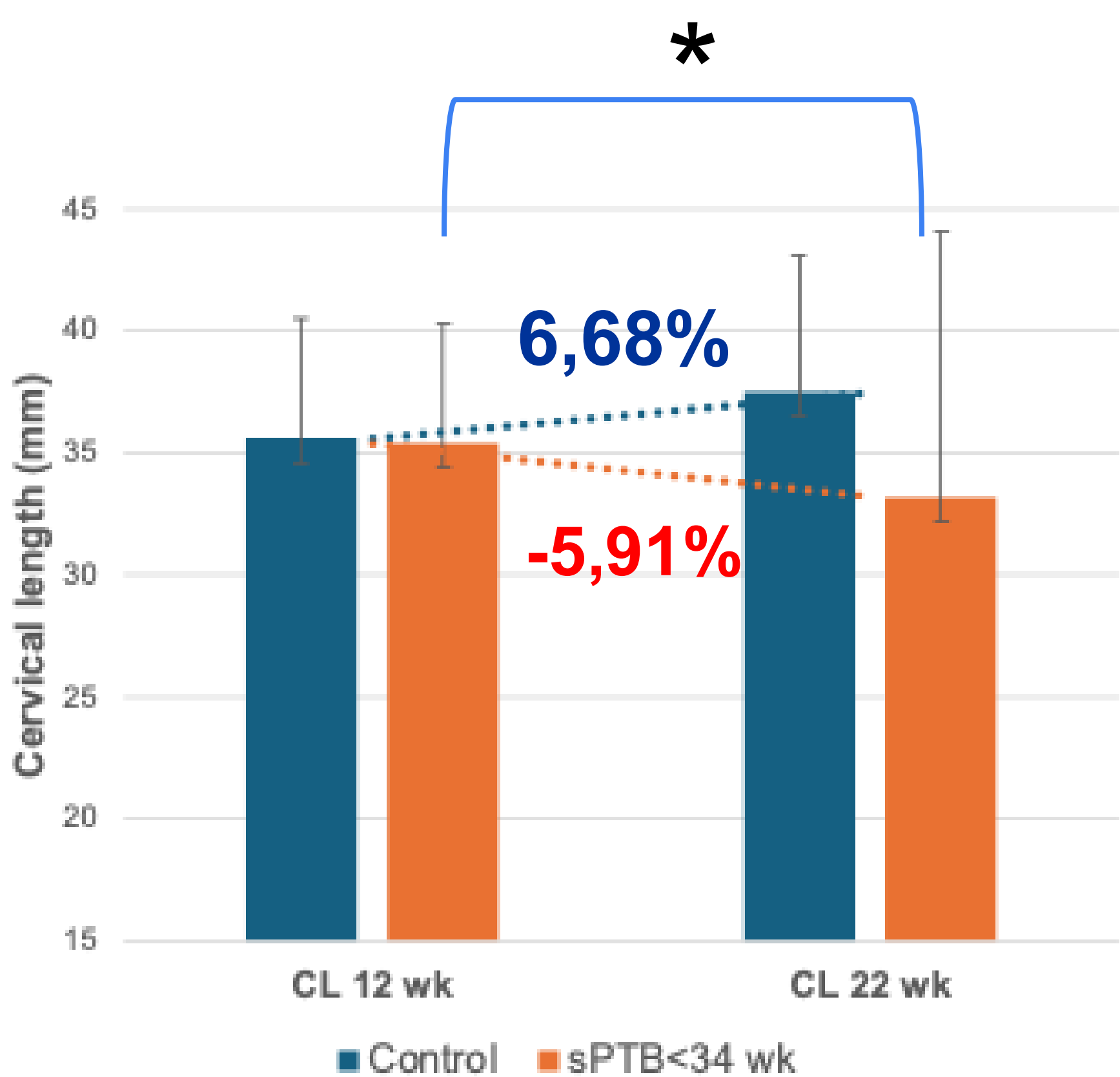
Aims of this study:

to evaluate the usefulness of the percentage change in cervical length (PCCL) between the first and second trimesters in predicting spontaneous preterm birth (sPTB) before 34 weeks.

Subjects and Methods:

- **Population:** 6,982 singleton
- **sPTB < 34 wk=** 78 (1.1%)
- **Variables:**
 - **Dependent:** sPTB < 34 week
 - **Independent:**
 - Maternal characteristics (MCh)
 - Cervical length (CL) at 12 & 22 weeks
 - PCCL
- **Statistics:**
 - Independent variables were compared between sPTB < 34 week and control groups
 - **Logistic regression analysis** was used to evaluate if any variable was significantly associated with sPTB < 34 week

Results: (2)



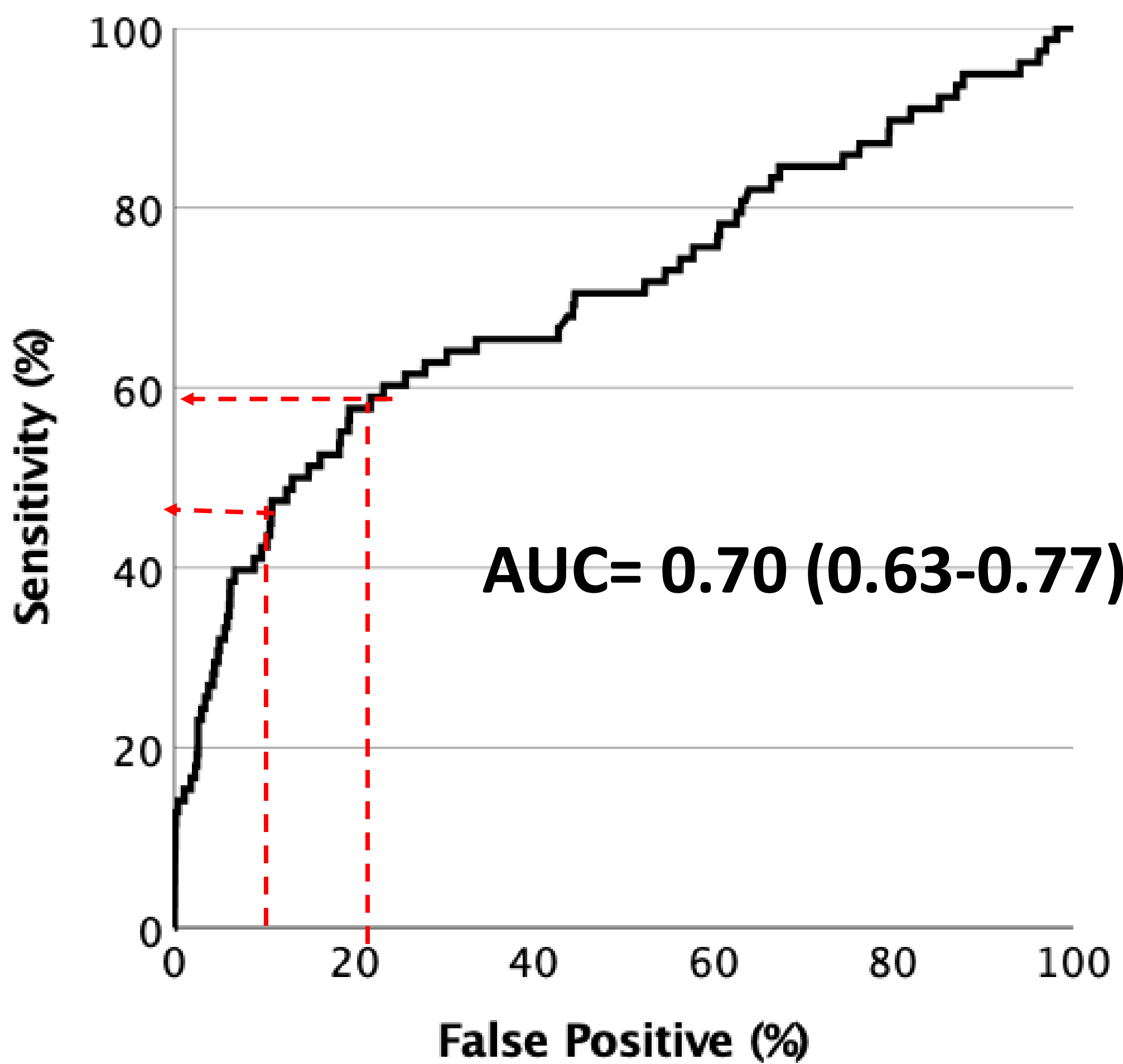
Groups	Percentage Change in CL (%)
Control	6.68 ± 0.22
sPTB < 34 wk	-5.91 ± 3.56 *

Results: (3)

Multivariate Logistic Regression

Variable	OR (CI 5-95)	P
Percentage of change in CL	0.98 (0.96-0.99)	<0.001
Maternal Height	0.95 (0.92-0.99)	0.016
Previous history sPTB	3.08 (1.54-6.15)	0.001
Immune disease	4.78 (1.78-12.83)	0.002
Cerclage	20.25 (6.67-61.44)	<0.001

Results: (4)



sPTB < 34 week

DR 43.6% & FPR 10%
DR 57.7% & FPR 20%

Results: (1)

Variables	Control (n=6,740)	sPTB < 34 wk (n=78)
Maternal age	30.6 ± 6.1	32.0 ± 6.2
Maternal Height	159.8 ± 6.0	158.3 ± 6.2*
Previous sPTB	3.9%	16.7%*
Immune disease	1.5%	6.4%*
Cerclage	0.2%	11.5%*

CONCLUSION

This study demonstrates that a lower percentage change in CL between the first and second trimesters is a strong predictor of sPTB <34 weeks. The combination of this ultrasound parameter with maternal characteristics can predict approximately half of early sPTB, with only a 10% FPR.