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Effect of exercise on maternal hemodynamics during pregnancy: a longitudinal study

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Aim

To evaluate the association between exercise and maternal hemodynamics across risk groups defined by the Fetal Medicine Foundation first-trimester triple test and the development of preeclampsia (PE).

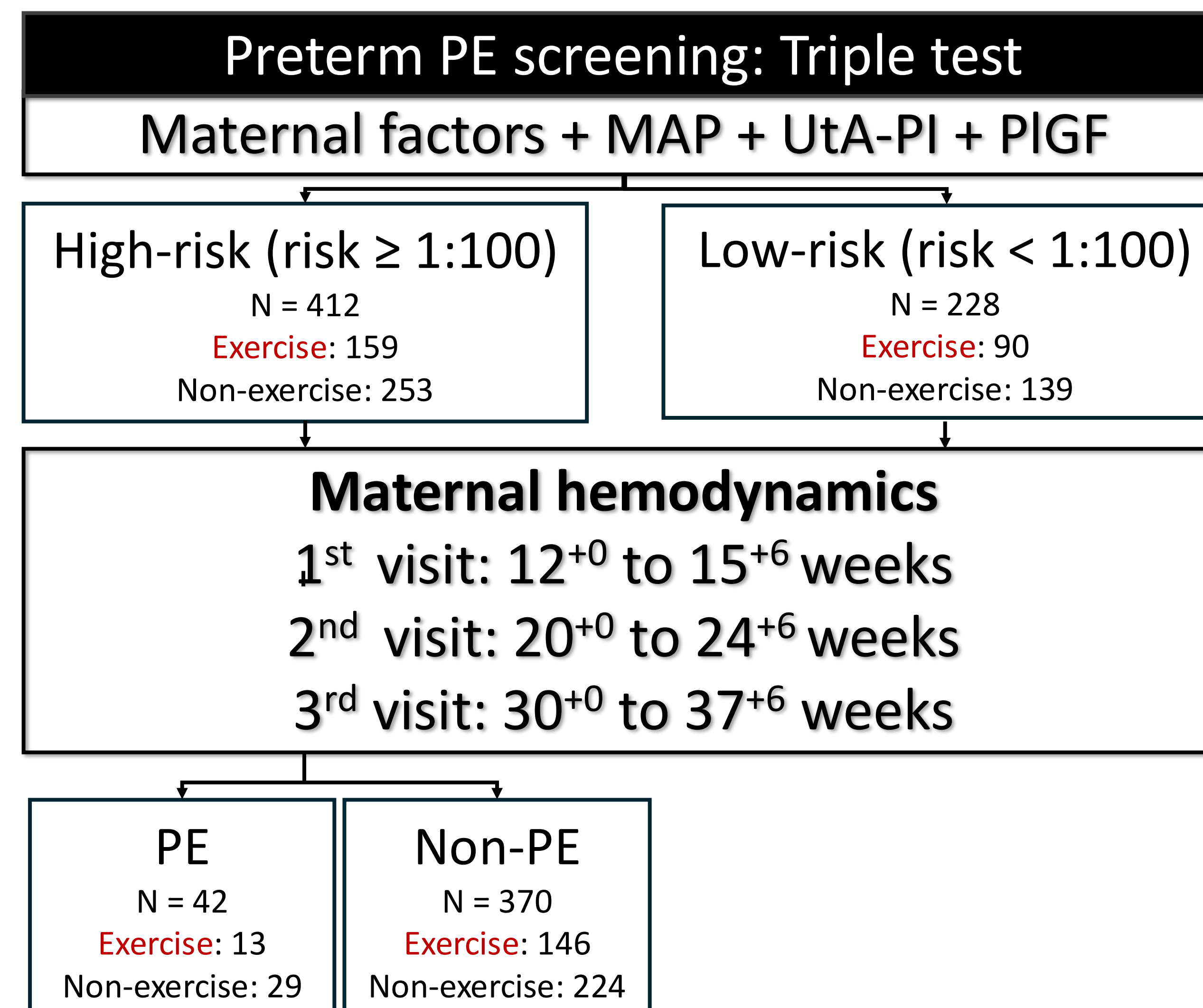
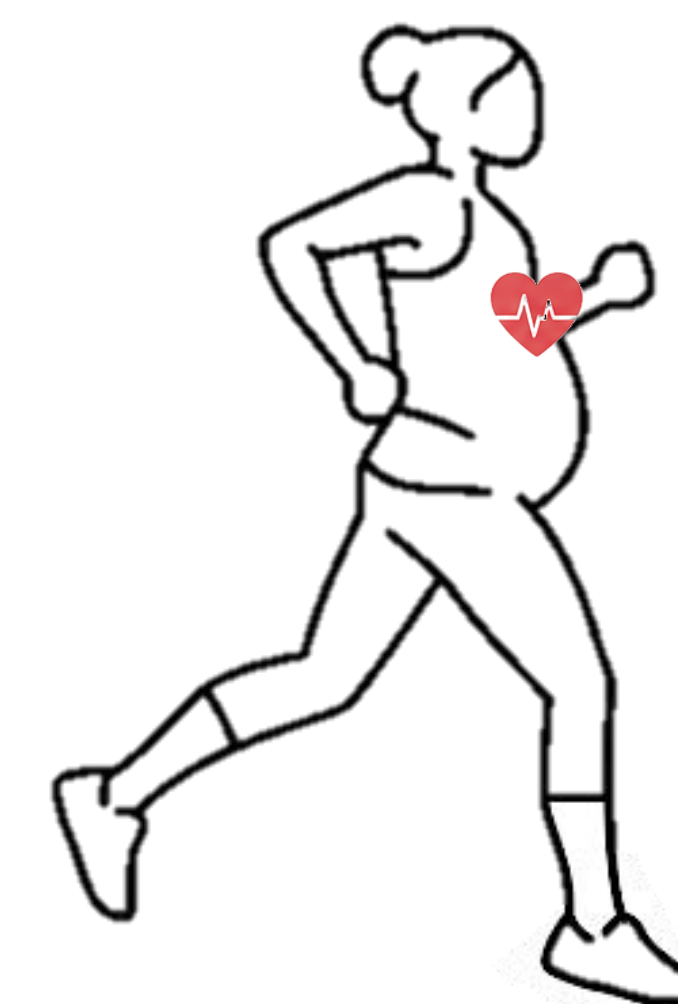
Methods

Cite: Prince of Wales Hospital, Hong Kong SAR

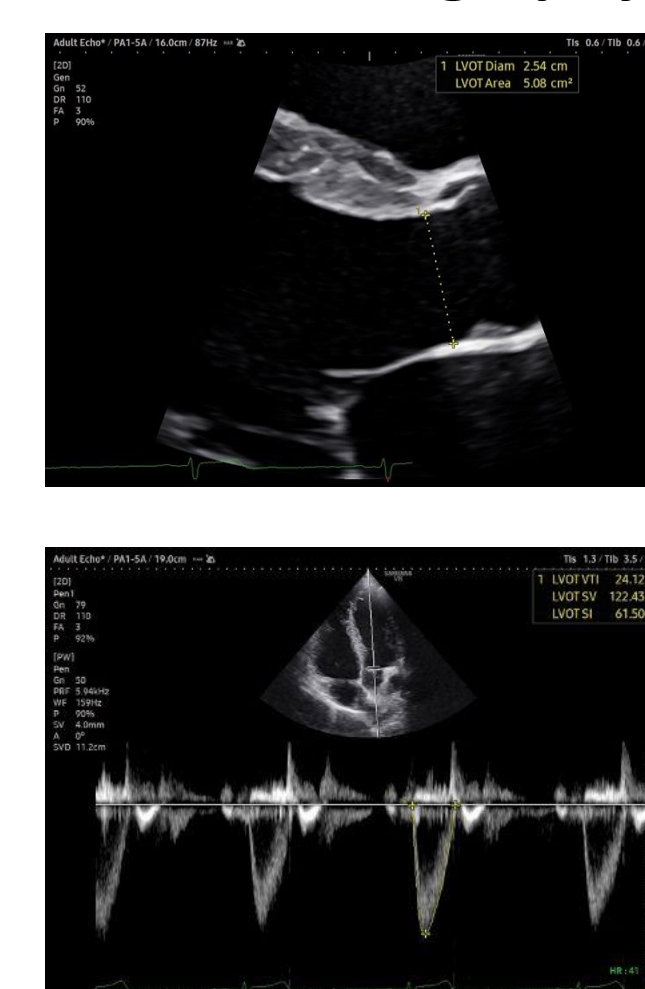
Period: January 2020–May 2024

Study design: Longitudinal study

Method: Multilevel linear mixed-effects analysis

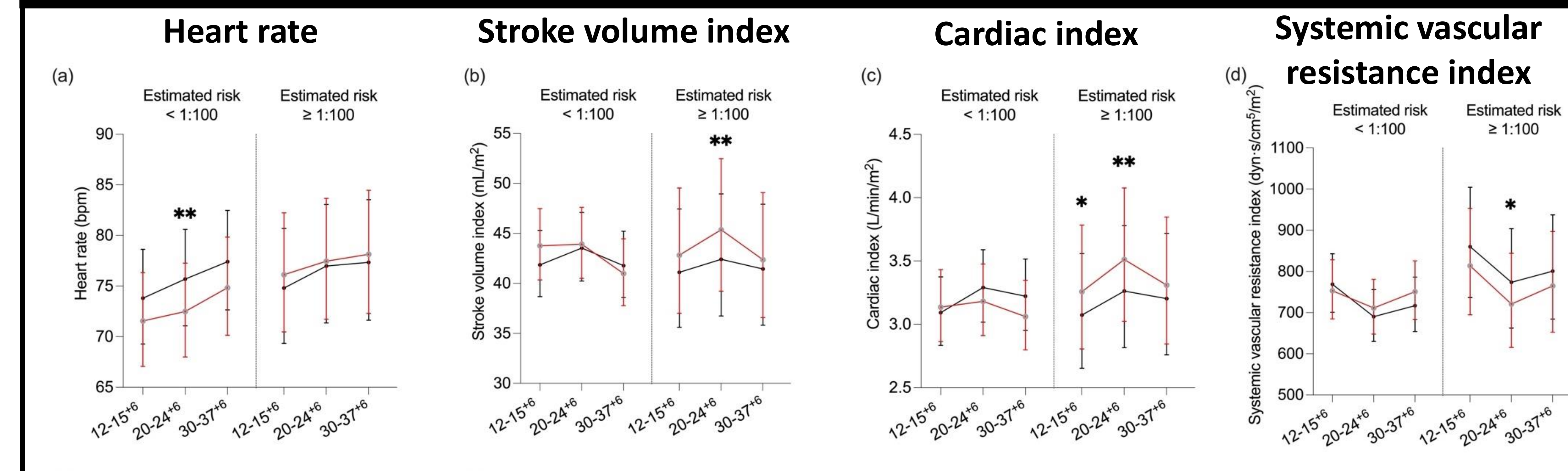


Transthoracic echocardiography



Results

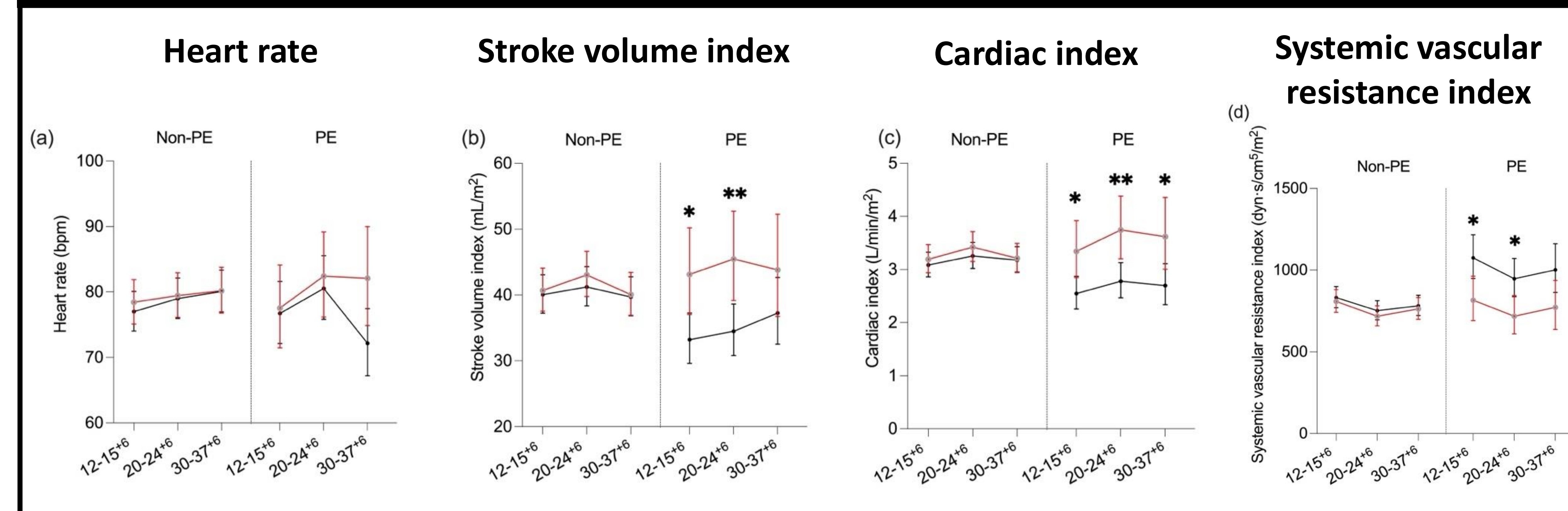
Effect of exercise on hemodynamic profiles in high- and low-risk groups



Conclusion:

Exercise during pregnancy is associated with favorable cardiovascular adaptations, particularly in high-risk women, characterized by higher CI and lower SVR, while in low-risk women, it is associated with a lower HR.

Effects of exercise on hemodynamic profiles in high-risk women stratified by PE status



Conclusion:

In high-risk women who develop PE, exercise is associated with a more favorable hemodynamic profile (higher SVI and CI, and lower SVRI), suggesting a potential role in improving maternal cardiovascular adaptation during pregnancy.