

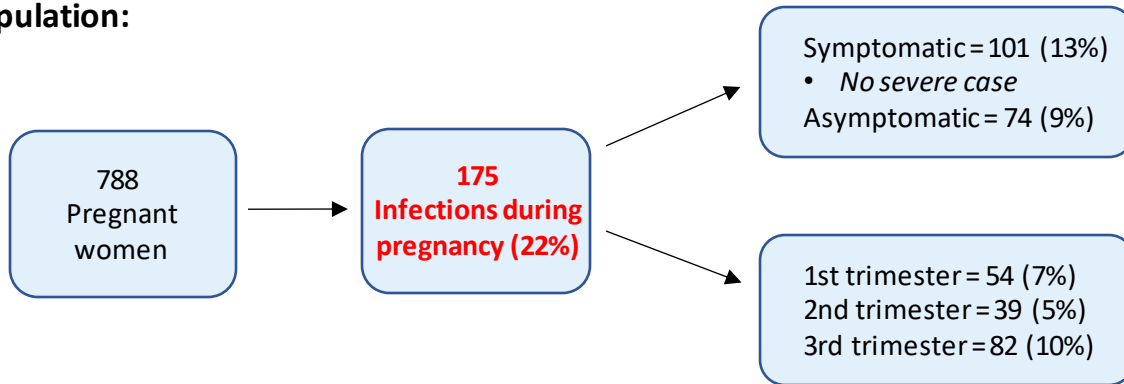
Impact of COVID-19 and vaccination during pregnancy on placenta-mediated complications (COVIGRO study)

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Rationale: COVID-19 has been associated with placenta-mediated complications of pregnancy including preeclampsia and fetal growth restriction.

Objective: To estimate the impact of COVID-19 and vaccination on adverse pregnancy outcomes and on markers of placental function.

Population:



Methods: A prospective cohort study of women recruited in the first trimester of pregnancy during the COVID-19 pandemic. Visits in each trimester of pregnancy included:

- 1) questionnaire: COVID-19 and vaccination status
- 2) maternal blood: measurement PIGF, sFlt-1 and COVID-19 serology
- 3) ultrasound: measurement of UtA-PI

Results: COVID-19 infection was not associated with adverse pregnancy outcomes, fetal growth, sFlt-1/PIGF ratio, or mean UtA-PI. Vaccination during pregnancy did not influence these outcomes either.

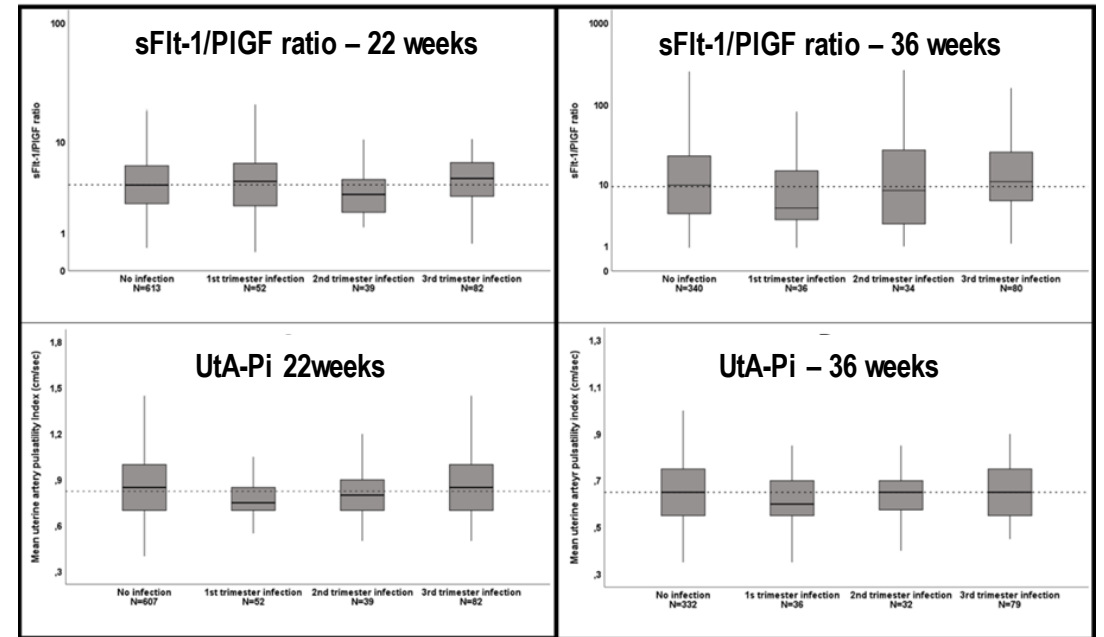


Figure 1: Placental markers at 22 and 36 weeks according to gestational age at SARS-CoV-2 infection. *sFlt-1*: soluble fms-like tyrosine kinase 1; *PIGF*: placental growth factor; *UtA-PI*: uterine artery pulsatility index

Conclusion: Mild symptomatic or asymptomatic COVID-19 during pregnancy did not influence the risk of adverse pregnancy outcomes and the markers of placental function in predominantly vaccinated women. Fetal growth monitoring is unlikely to be necessary for women with mild symptoms of COVID-19.