Introduction
Artificial reproductive techniques (ART)-pregnancies have an higher risk on impaired placentation, leading to adverse pregnancy complications and perinatal outcomes. The aim of this study was to investigate if culture medium influences impaired placental vascularization displayed by 3D Power Doppler measurements.

Materials and methods
Cross-sectional study. Culture media, Vitrolife(VG5) and Continuous Single Culture Medium(CSCM), were random assigned during the ART-treatment. At 12 and 16 weeks of gestation a 3D Power Doppler sweep of the placenta was obtained; peripheral and at umbilical cord insertion. Vascularization index(VI) was calculated using 4D-view.

Results
In total 30 subjects were included. No differences were observed in maternal characteristics. Twenty one embryos were cultures in CSCM and 9 in VG5. Placental vascularization tend to be higher at both 12 and 16 weeks of gestation, when VG5 was used however, not statistically different (insertion $P=0.374$, $P=0.560$ and peripheral $P=0.363$ and $P=0.245$, respectively).

Conclusion
Placental vascularization tend to be higher in VG5 culture medium compared to CSCM culture medium.