Objectives:
The aim of the study was to determine whether the results of Vascularization Indices (VI) are comparable when using 3D Power Doppler and 4D Power Doppler ultrasound techniques in an ovary as a in vivo model.

Methods:
78 ovaries were evaluated in the first part of the menstrual cycle using Power Doppler (PD) techniques. Two records were made for every ovary: 3D PD and 4D PD record. For every ovary the Vascularisation Indices were calculated using 3D record and then, the same Vascularization Index was calculated as a mean value of two values: VI max and VI min obtained with 4D STIC technology.

Conclusions:
The values of Vascularization Indices obtained using the 4D method as the average value during one heart cycle are statistically comparable to values obtained by the 3D method. There are no statistically significant differences between VI values obtained with 4D PD option and 3D PD option, however the 4D method should be considered as a better option as it is less dependent on acquisition time.