Purpose
The aim of our study was to compare thymus sizes in foetuses conceived using assisted reproductive technologies (ART) to those conceived naturally (control group).

Methods
Sonographic foetal thymus size was assessed retrospectively in 162 pregnancies conceived using ART and in 774 pregnancies conceived naturally. The anteroposterior thymic and the intrathoracic mediastinal diameter were measured to calculate the thymic–thoracic ratio (TT-ratio). The ART cases were subdivided into two groups: (1) intracytoplasmic sperm injection (ICSI; n = 109) and (2) in vitro fertilisation (IVF; n = 53).

Results
The TT-ratio was smaller in pregnancies conceived using ART (p < 0.001). In both ART subgroups (ICSI and IVF), the TT-ratio was lower compared to the control group (p < 0.001). However, no difference between the two subgroups could be detected (p = 0.203).

Conclusion
Our data show reduced thymus size in foetuses conceived using ART compared to controls. These findings indicate that the use of ART may lead to certain deviations in organogenesis.