Introduction: The marked variability in the contour of the thymus has made it difficult to visualise and determine its normal size. Nomogram of thymus has been constructed in this study.

Objective: To establish sonographic reference ranges of the fetal thymus from second to third trimester.

Methods: Patients who turned up for screening and growth scans were recruited. They all fulfilled the following criteria: (1) known last menstrual period with regular cycles, (2) singleton, (3) no fetal anomalies, (4) no pregnancy complications, (5) live birth at term, (6) birth weight between the 5th and 95th centile for gestation. On a transverse section of the fetal chest, the thymus was identified as a homogeneous hypoechogenic structure in the anterior mediastinum, at the level of the 3-vessel view, and just anterior to the vessels. Measurements performed included: (i) maximum transverse diameter of the thymus, by placing the ultrasound calipers perpendicular to a line connecting the sternum and the spine; (ii) Perimeter of thymus in the same plane. (iii) 3-dimensional volume for every case to facilitate offline checking of measurements. The relationship between the mean of each measurement and gestational age was modelled by a fractional polynomial regression. The procedure for selecting the best fitting model was based on minimising the deviance as in the appendix of Royston and Wright (1998).

Results: Measurements were successful in 82% of patients. Foetuses who persistently present with unfavourable position did not have measurements.

Conclusion: Nomograms of fetal thymus centile charts would be utilised for conditions associated with thymic abnormalities.