

Ultrasound Fetal Cardiac Structured Report Extensions

**Letter Ballot Draft
WG-1/12**

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BACKGROUND

- Fetal Cardiac Assessment using Ultrasound has evolved since Sup78 was published in 2010
- Practice now includes many more measurements beyond visual assessment, such as:
 - measurements of the ventricles, atria, septa and valves,
 - measurements of fetal arrhythmia and hemodynamics,
 - assessment of the fetal cardiovascular profile score (CVPS)
- Many measurements initially specified for pediatric echo are also potentially applicable to late stage fetal development and should be available in the TID.

OVERVIEW

Scope:

- TID 5220 and its sub-templates are extended for fetal echo
- Many new requested measurements (and many similar measurements) are supported by the addition of TID 5302 for fully post-coordinated echo measurements
 - Several new Properties, Anatomical Locations, and Measurements are added to existing CIDs.
 - Guidance on how to use TID 5302 to encode many new fetal measurement examples is provided
- A CID for Fetal Echocardiography Image Views is added
- A new report section for Fetal Cardiovascular Profile Score (CVPS) is added

POST LA SPACE (PLAS) INDEX & LD



Fig. 3 Post LA space index (PLAS index)

Measurement of the left atrium-descending aorta distance (LD) in four-chamber view on fetal echocardiography. (a) Schematic diagram of LD and descending aorta diameter (DA). (b) LD and DA in a normal fetal heart. (c) LD and DA in a fetus with infracardiac total anomalous pulmonary venous connection. LA, left atrium; LV, left ventricle; RA, right atrium; RV, right ventricle. Reproduced with permission from the reference 20).

FETAL ARRHYTHMIA ASSESSMENTS

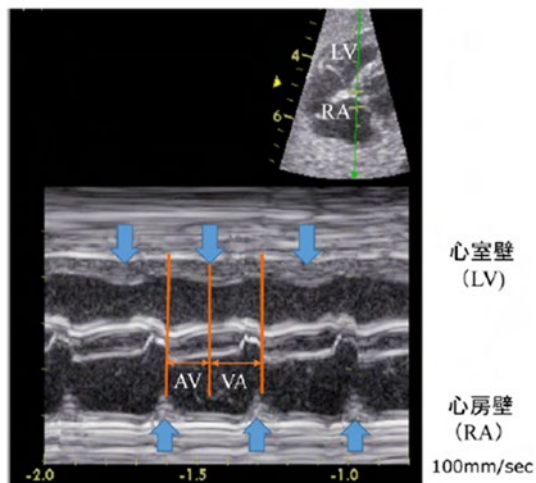


図 25 上室頻拍における VA 時間の計測法 (M モード法)
AV 間隔 < VA 間隔で long VA 上室頻拍と診断された。

- Fetal Echo Guideline Japan (Second edition) 2021
 - Figure showing the atrioventricular (AV) and ventriculoatrial (VA) intervals used in assessment of fetal arrhythmia

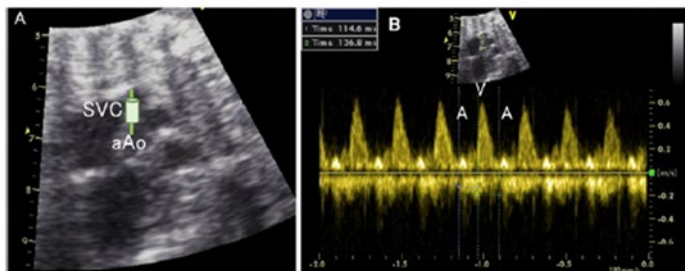


図 26 ドプラ法 (上大静脈・上行大動脈法) による胎児上室頻拍の診断
A 上大静脈と上行大動脈が並行して走行する断面で両血管にまたがる位置にサンプリングボリュームを設定し、両血管の血流波形を同時に記録する。
B A:V=1:1 (230/分) の上室頻拍であり、A 波、V 波の開始点が計測しやすく、AV 時間 114msec、VA 時間 136msec で long VA と診断した。
SVC: 上大静脈 aAo: 上行大動脈