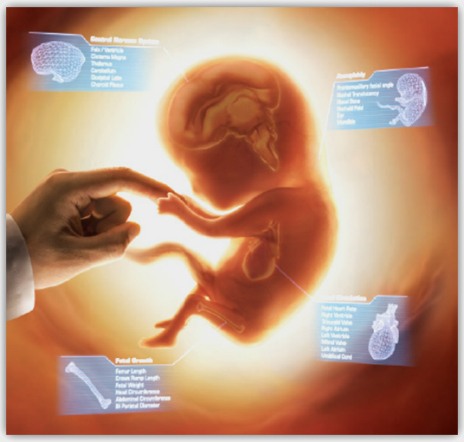
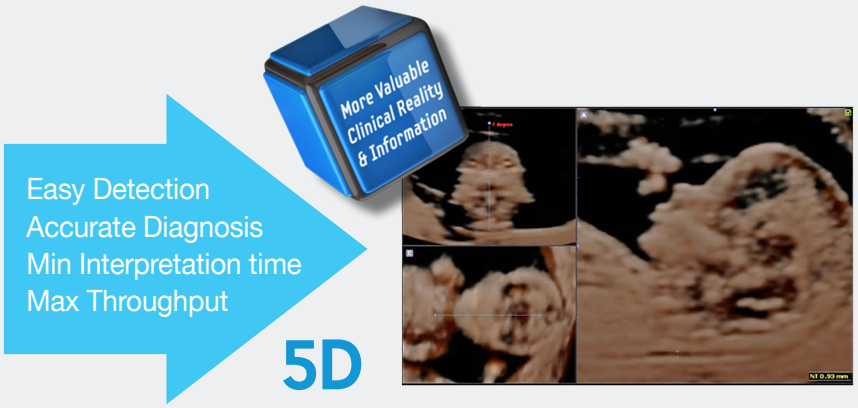
Article # CL201402-5DNT / Issue Date 09 Feb, 2014

Novel Measurement of Nuchal Translucency, 5D NT

Intuitive Solution and Confirmation of Nuchal Translucency





Key Advantages

Easy Detection	»	Locate true mid-sagittal plane from volume data
Improved Accuracy	»	Increase Herman Score[1] (Excellent level: up to 8)
Operator Independency	»	Decrease inter-user variability

5D NT

Nuchal Translucency (NT) measurement at 11-13^{+6} weeks scan with maternal age is a highly sensitive means of screening for trisomy for earlier diagnosis of fetal aneuploidy.[2-3] In order to reduce variability and maximize reliability of NT measurements, the Fetal Medicine Foundation (FMF) has provided technical guidelines.[4] Furthermore, Herman et al. developed a novel method of image-scoring for NT measurement for the purposes of training and audit – called Herman score – which is calculated based on criteria such as section, caliper placement, skin line, image size, amnion and head position.[1] However, of the standards for measuring NT, delineation of a good fetal sagittal section, proper placement of caliper and measurement at the maximum distance of NT are difficult to perform without proper training and thus often operator-dependent.[5] This situation led to the development of a new measurement technology, 5D NT.

5D NT is an intuitive solution resolving operator dependency to recognize the correct mid-sagittal plane during volume data acquisition and providing improved Herman score.

SAMSUNG MEDISON

"**5D NT** is a new technology that offers reliable NT measurement with **improved visualization** by FRV™ and auto zooming for **improved Herman score**."

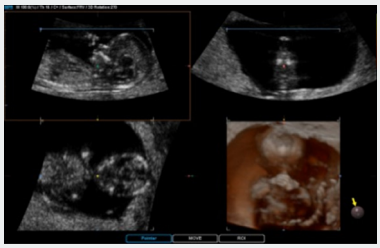
By Joon SunWoo, MD

A novel technology, 5D NT, automatically finds the mid-sagittal plane from an acquired volumetric data and measures the maximum NT distance in as few as 4 seconds upon the operator's selection of region-of-interest over the nuchal area[6].

5D NT showed a high inter- and intra-observer reproducibility between experienced and inexperienced sonographers and could reduce the number of erroneous risk calculations by inexperienced sonographers.

Easy and Accurate operation

- B-mode image scan and acquire volumetric data near selected ROI
- Press 5D NT Button to extract Nuchal Translucency
- User Operation: manual Diencephalon Point
- Automatically find mid-sagittal plane & Zoom Up
- Set Measurement box



Reference

(1) Herman A et al. Ultrasound Obstet Gynecol 1999;14:388–392.
(2) Malone FD et al. N Engl J Med. 2005;353(19):2001-11.
(3) Wald NJ et al. J Med Screen. 2003;10(2):56-104.
(4) Snijders RJ et al. Lancet 1998;352:343-6.
(5) Braithwaite JM et al. Ultrasound in obstetrics & gynecology 1996;8:192-5.
(6) Cho HY et al. Ultrasound Obstet Gynecol. 2012;39(2):175-80.

Please visit http://www.samsung.com/global/business/healthcare

SAMSUNG SAMSUNG MEDISON