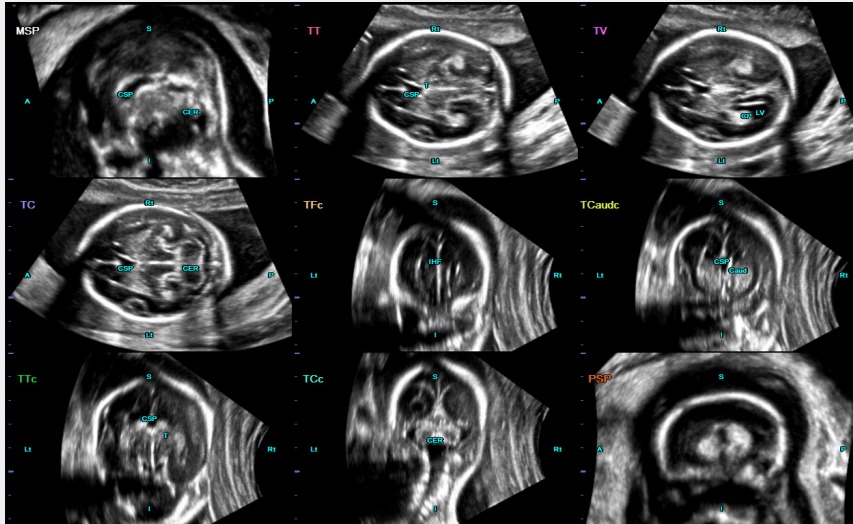## WS80A with Elite

5D CNS+ : Advanced semi-automatic method for biometric measurement of the fetal brain

Key Advantages

Diagnostic efficacy »» Provides additional anatomic information to identify the structural anomalies and defects

Easy of Use »» Simplifies fetal brain assessment and improves workflow efficiency

Standardization »» Reduces inter-observer variability of acquiring 9 diagnostic planes

5D CNS+

Central nervous system (CNS) malformations are the most common defects of all congenital abnormalities. Basic examination of the fetal brain includes the evaluation of low risk pregnancies with three axial planes commonly referred to as the transventricular plane, the transcerebellar plane and transthalamic plane. The detailed evaluation (fetal neurosonogram) of the fetal CNS is useful in the evaluation of an increased risk of CNS anomalies including cases in which the basic examination identifies suspicious findings. However, this examination requires a grade of expertise and sophisticated ultrasound system.

A semi-automated technology, **5D CNS+ of WS80A with Elite**, provides nine planes (axial, coronal, sagittal planes) of fetal brain and biometric measurments. Especially, in addition of sagittal and coronal planes in the screening evaluation of fetal CNS anatomy, **5D CNS+** helps to improve the diagnostic efficacy and provide capability of diagnosing anomalies of the midline and posterior fossa which cannot be seen by the axial planes. **5D CNS+** will give further benefits on prenatal diagnosis, management and prognosis of fetal central nervous system.

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"**5D CNS+** has the potential to provide to the sonographers accurate and reproducible measurements of the fetal CNS and to automatically retrieve the diagnostic planes of the fetal brain"

- Dr. Giuseppe Rizzo, University of Rome Tor Vergata, Rome, Italy

Exclusive Technologies

5D CNS+ extracts all diagnostic planes with anatomical landmarks and biometric measurements

- Axial Planes : Trans-Ventraicular axial plane (TV), Trans-Thalamic axial plane (TT), Trans-Cerebellar axial plane (TC)

- Coronal Planes : Trans-Frontal coronal plane (TFc), Trans-Caudate coronal plane (TCaudc), Trans-Thalamic coronal plane (TTc), Trans-Cerebellar coronal plane (TCc)

- Sagittal planes : Mid-Sagittal plane (MSP), Para-Sagittal plane (PSP)

- Biometric measurements : Head Circumference (HC), Bi-Parietal Diameter (BPD), Occipito-Frontal Diameter (OFD), thickness of the atrium of the lateral Ventricles (Vp), transverse cerebellar diameter (CEREB), size of the Cisterna Magna (CM)
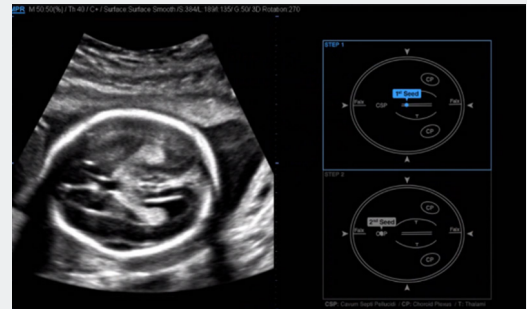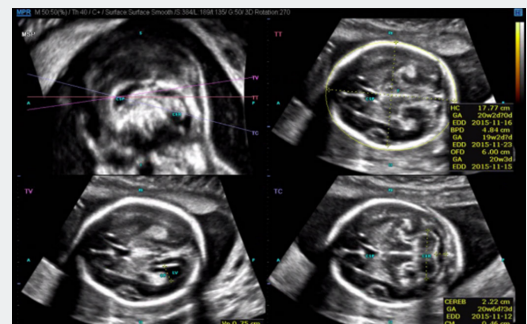

Figure 1. Selection of two seed points

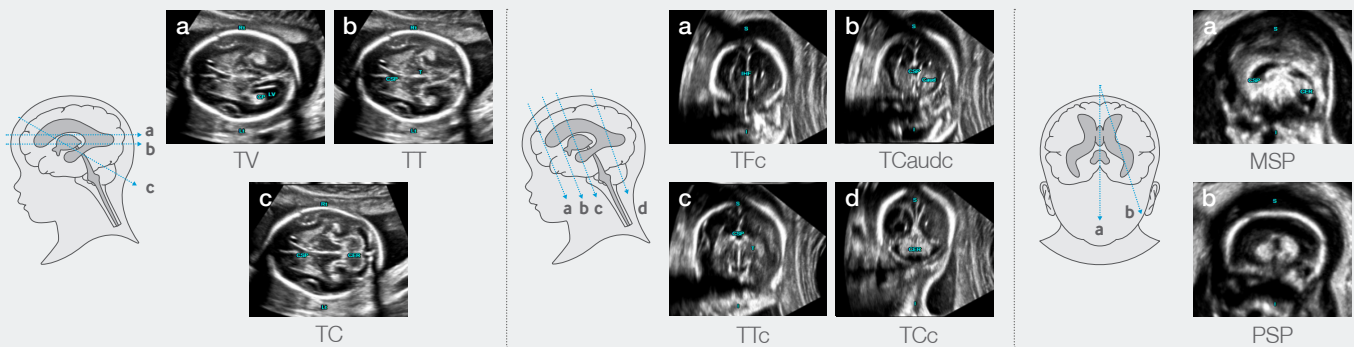**Figure 2.** Automated biometric measurements

Figure 3. Diagnostic planes by 5D CNS+; Axial Planes(3); Coronal Planes(4); Sagittal Planes(2)

Reference

1. International Society of Ultrasound in Obstetrics & Gynecology Education Committee. Sonographic examination of the fetal central nervous system: guidelines for performing the basic examination and the fetal neurosonogram. Ultrasound Obstet Gynecol 2007; 29: 109-116

* This feature may not be available in some countries or regions.

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