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## Volume 16 - Issue 3, 2016 - Point of View

### Increased Functionality in 5D Ultrasound

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With the aim of reducing the time factor and increasing convenience in ultrasound procedures, Samsung keeps expanding its offering in women's healthcare with a novel 5D flagship system WS80A with Elite.

2D offered axial imaging to ultrasound, 3D contributed the capacity for volume and 4D ultrasound combined time and volume. The fifth dimension of ultrasound is all about workflow, which WS80A with Elite virtually automates.

This high-resolution premium system offers enhanced diagnostic capabilities and expanded 5D features – including a new CNS (Central Nervous System) and fetal heart application – building on Samsung's WS80A platform.

The 5D CNS + provides nine planes (axial, coronal, sagittal planes) of the fetal brain with anatomical landmarks and six biometric measurements (BPD, HC, OFD, Cerebellum, Posterior Fossa, Atria lateral ventricle) from the perspective of three transverse views. All of this can be generated from one volume of the fetal brain to enhance measurement reproducibility and streamline workflow.

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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

*Prof. Giuseppe Rizzo, Professor of obstetrics and gynecology, University of Rome Tor Vergata, Rome, Italy; President, Italian Society of Ultrasound Obstetrics and Gynecology*

The 5D Heart Color application generates nine standard fetal cardiac views simultaneously in a single template. Samsung anticipates that the technology will lift the burden of the screening and diagnosis challenge for congenital heart disease, a leading organ-specific birth defect.

"Samsung plans to keep up with delivering solutions that highly benefit professionals in the Obstetrics & Gynecology field. Our WS80A with Elite performance package incorporates the latest innovations including an expanded set of 5D workflow applications", said Insuk Song, Vice President and Head of Marketing for Health and Medical Equipment Business at Samsung Electronics.

Identifying which ultrasounds were the most time consuming and aiming to improve the process were the factors that led Samsung to enter the 5D ultrasound market. A technology that is a form of automation, 5D allows physicians to do a scan and have the results auto-populated. This improves workflow dramatically, said Insuk.

Improved consistency through standardized measuring and data searching is a further advantage of the platform. Samsung is currently the sole player in the 5D ultrasound field. The Samsung WS80A with Elite performance package has received 510(k) clearance.

Our experience with Crystal Vue over the past few months, specifically imaging of the bone and soft tissue interface, leads us to believe that it may offer new opportunities for prenatal imaging, particularly for the skeletal system, but also in facial and brain imaging... We were able to obtain highly detailed images that give particular information on the contour of the ribs and allow inference on mineralization

*Dr. A. Dall'Asta, Dr. G Paramasivam & Dr. Christoph Lees, Centre for Fetal Care, Imperial College Healthcare NHS Trust, London, UK\**

Through this flagship ultrasound equipment from Samsung, users can also gain access to eye-opening imaging solution such as the Crystal Vue. Visualising the interior and exterior structures of the fetus with new volume rendering technology, Crystal Vue provides boundaries of soft tissue and anatomical structure that can help diagnose abnormalities. This recent upgrade from the leader in the women's healthcare was introduced in the Ultrasound in Obstetrics and Gynecology (UOG) March issue as the image of the month.

## Key Features

### Hybrid imaging engine evo

Optimal 2D and color image quality together with a fast frame rate enable powerful processing and reduced noise.

### S-Harmonic

This new harmonic technology improves image clarity, near to far. Reducing signal noise, S-Harmonic provides more uniform ultrasound images.

### ClearVision™

Provides speckle reduction, edge and contrast enhancement.

### Crystal Vue

Crystal Vue is an advanced volume rendering technology that preserves context and surface information of 3D ultrasound. Crystal Vue easily differentiates between the boundaries of soft tissue and anatomical structures and provides additional information for detailed anatomic evaluation to ascertain fetal risk and diagnose abnormalities.

### S-Vue Transducers

Four S-Vue transducers provide broader bandwidth and higher sensitivity, and enable best resolution and great penetration. They are lightweight and ergonomically designed for user comfort.

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### Further Information

For detailed information on Crystal Vue and WS80A, please visit [http://www.samsungmedison.com/micro/WS80A\\_with\\_Elite/main.jsp](http://www.samsungmedison.com/micro/WS80A_with_Elite/main.jsp)

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