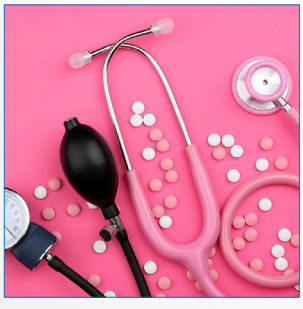
# Keynote
# January 10, 2022

## *Gynecology 2022*

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# The Introduction of 3D/4D Based Spatio – Temporal Image Correlation (STIC) during routine fetal anomaly scan improves rate of completion of fetal cardiac examination and decreases referral for fetal echocardiogram

**Objective:** To evaluate the role of STIC in completing fetal cardiac evaluation, during routine anomaly scan

**Methods:** This is a longitudinal observational study at a single center. All the scans were performed by a single experienced feto - maternal specialist. 8750 patients had Routine anomaly scan including fetal heart examination according to ISUOG practice guidelines. Scan time was kept to the time frame allotted to routine anomaly scan. STIC technique both conventional and Electronic probes were used only when the examiner could not complete all the list recommend by ISUOG (ISUOG practice guidelines) which include demonstration of Situs and general aspect, atrial chambers, ventricular chambers and atrioventricular junction and valves. For the conventional STIC we employed a multiplanar approach, tomographic ultrasound imaging (TUI) and rendering approach. For electronic STIC, in addition to rapid acquisition of the volume we have used Biplane and sonoVCAD.

**Results:** During the study time, 10750 patients were seen for routine anomaly scan. During study time, 52 patients were diagnosed with congenital cardiac defects. The total number of fetal malformations diagnosed during the time of the study was 350 which mean cardiac anomalies constituted (4%) of all fetal malformation in this study.

In 1312 patient (15%) of the total number of patients the examiner could not obtain the full images required as per ISUOG protocol. Accordingly, both conventional and electronic STIC was used in this group, depending on the condition. In all these patients the obstetrician was able to complete the examination.

STIC was also applied to patients where a cardiac anomaly was suspected. More information with regards to these abnormal cases was found in 10% of the cases

**Conclusion:** In this study we have shown that using STIC technique we can obtain a volume of adequate quality which will allow us to complete the cardiac examination and reduce the number of cases referred to fetal cardiologists and hence decrease patient anxiety. STIC did not influence our detection rate of cardiac anomaly, however, when the diagnosis is made STIC added more information which helped us with our initial counseling. (See attached Videos).

## Biography

Ahmed is the Professor of Clinical Obstetrics and Gynecology and the Director of Feto–Maternal Medicine Centre in Doha, Qatar. He also served as Interim Director, Obstetrics and Gynecology Clerkship at Weill Cornell Medicine – Qatar. Additionally, he is a Consultant Obstetrician and Gynecologist (with special interest in perinatal medicine and high-risk pregnancy) at the Dorset County Hospital, Dorchester, Wessex, United Kingdom. Dr. Ahmed served in the capacity of Chairman, Obstetrics and Gynecology Department, Women's Hospital, Hamad Medical Corporation in Doha, Qatar for 10 years. He is a founding member of the 'International Society of Ultrasound in Obstetrics and Gynecology' (ISUOG) and the 'Academy of Medical Educators'. Dr. Ahmed's main areas of interests are fetal medicine and high-risk pregnancies. He has published over 50 papers in peer-reviewed journals. He has written chapters in several books and is the editor for 'Basic Book of Ultrasound in Obstetrics and Gynecology'. Dr. Ahmed has been an invited speaker at several international meetings and is a reviewer for many international peer reviewed journals.

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