Three-dimensional power Doppler angiography characteristic in validating the preoperative accuracy of myometrial and cervical involvement in women with endometrial cancer: A preliminary study

**Background & Aim:** The lead vessel and infiltrating vessels are findings in endometrial cancer that are well visualized by three-dimensional power Doppler angiography. Vessel diameter and length may be utilized as markers for deep myometrial and or cervical involvement. The purpose of this study is to determine the accuracy of lead vessel and infiltrating vessel dimensions in assessing the depth of myometrial invasion in endometrial cancer and its cervical involvement.

**Participants & Methods:** All women histo-pathologically diagnosed with endometrial cancer, undergoing surgical staging, with informed consent were included. Sonography using GE Voluson S8 system for describing the uterus and endometrial thickness were followed by a 3D power Doppler Angiography to analyze the depth of myometrial invasion and presence or absence of cervical involvement. Vessel diameter and length in transverse and sagittal plane were measured by calipers. Predictive values and operating characteristics (sensitivity, specificity, positive and negative predictive values) were computed.

**Results:** A total of eleven cases (superficial n=5; deep=6) were identified. The cut-off for lead vessel and infiltrating vessel in the sagittal view was (diameter >0.28; length >0.47) and for the transverse view was (diameter >0.36, length >0.5). Among the four measurements, the sagittal diameter (98.3%), sagittal length (100%) and the transverse length (100%) measurements of the lead and infiltrating vessel gives the highest predictive accuracy.

**Conclusion & Significance:** Three-dimensional power Doppler angiography measurement of the lead and infiltrating vessels are associated with improved accuracy and reliability in predicting deep myometrial invasion.

**Biography**

Nelinda Catherine Perez Pangilinan is the Section Head of Ob-Gyn Ultrasound, Rizal Medical Center, Philippines. She is the Vice-President of the Philippine Society of Ultrasound in Obstetrics and Gynecology. Her interests include gynecology & obstetrics, gynecologic oncology and reproductive health.

nelindacatherine@yahoo.com

**Notes:**