**Presenter:** NICHOLAS BHOJWANI, MD  

**Title of Abstract:** Clinical utility of 3D T2 SPACE pulse sequence in MR imaging of female pelvis  

**Authors:** NICHOLAS BHOJWANI, MD RAJ MOHAN PASPULATI, MD  

**Modality:** MR  

**Organ System:** GU  

**Purpose:** To evaluate the use of 3D T2 SPACE sequence in MR imaging of the female pelvis  

**Methods Used:**  
- 56 women underwent MR imaging of the pelvis with both traditional T2 weighted TSE sequences and 3D T2 weighted TSE (SPACE) sequence at 3T MR unit (Siemens Trio).  
- The indication for MR imaging included both benign pathology and staging of malignancy. Benign indications included uterine fibroids, adenomyosis, urethral diverticulum, ovarian cysts and endometriosis. Malignant indications included endometrial and cervical malignancy staging.  
- The acquisition time, image quality and diagnostic yield of these two sequences are assessed  

**Results of Abstract:**  
- The mean image acquisition time for 3D T2 SPACE is about 7 minutes and for multiplanar 2D T2 TSE is about 15 minutes.  
- The signal intensity as well as tissue contrast was higher with 2D T2 TSE images especially of fluid and fat. This contrast difference between the 2 sequences minimized with use of fat suppression.  
- The endometrium and junctional zone is better visualized with 3D T2 SPACE images especially in adenomyosis and in uterus with multiple myometrial fibroids.  
- No discrepancy in staging of cervical and endometrial cancers is appreciated between the two sequences.  
- Urethral diverticula, uterine anomalies and adnexal masses had similar diagnostic yield with both sequences.  
- Multiplanar reconstructions following 3D T2 SPACE was more useful in evaluation of uterine anomalies and endometrial lining in the presence of multiple fibroids and adenomyosis.  

**Discussion:**  
- 3D T2 weighted TSE (SPACE) sequence is a useful alternative to traditional 2D T2 TSE in MR imaging of the female pelvis with decrease in scan time. The radiologist must familiarize with the low signal intensity images of 3D T2 space.  

**Scientific and/or Clinical Significance?**  
- Decrease in scan time and no radiologist supervision with use of 3D T2 space sequence in imaging of female pelvis as compared to traditional 2D T2 TSE sequence  

**Relationship to existing work:** Potential replacement of relatively time consuming traditional 2D T2 TSE sequence