Diagnostic accuracy and interrater agreement of sonographers in evaluating the pouch of Douglas for obliteration using the sliding sign technique

**PRESENTER:** Mathew Leonardi

**AIM**
- Evaluate the accuracy of sonographers in classifying POD obliteration state and their interrater agreement with the reference standard senior sonologist

**METHODS**
Seven sonographer observers were provided with a short educational program on POD obliteration and the sliding sign technique. None were routinely utilizing the technique in practice.
Over two months, sonographers prospectively and consecutively performed, recorded, and interpreted the state of the POD as positive, negative or indeterminant.
Senior sonologist was the reference standard and blinded to the sonographers’ classification.
Diagnostic accuracy, 95% confidence intervals, and interrater agreement using Cohen’s kappa were calculated.

**RESULTS**
- 819 patients underwent TVS sliding sign assessment
- Reference standard prevalence of a negative sliding sign was 43/819 (5.3%).

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- Acc (%): 84.4, 92.5, 95.3, 97.3, 96.5, 94.3, 100
- Prev (%): 5.8, 7.5, 4.2, 2.7, 6.4, 6.6, 3.1
- Sens (%): 50.0, 80.0, 37.5, 50.0, 44.4, 28.6, 100
- Spec (%): 98.2, 93.6, 97.8, 98.6, 100, 99.0, 100
- PPV (%): 62.5, 50.0, 42.9, 50.0, 100, 66.7, 100
- NPV (%): 97.0, 98.3, 97.3, 98.6, 96.4, 95.2, 100
- LR+: 27.2, 12.4, 17.3, 36.5, N/A, 28.3, N/A
- LR-: 0.51, 0.21, 0.64, 0.51, 0.56, 0.72, 0.00
- Inter-rater Agree (κ): 0.53, 0.58, 0.38, 0.49, 0.60, 0.38, 1.0

- **AUTHORS:** Mathew Leonardi1,2, Gillian Profaca1, Jodi Trace1, Brendan Mein3, Lisa Feldman4, Sadaf Asad1, Jennifer Kokoszka1, Alison Crawford1, Mercedes Espada1,2, George Condous1,2.

1OMNI Ultrasound & Gynaecological Care, Sydney, NSW, Australia.
2Acute Gynaecology, Early Pregnancy and Advanced Endosurgery Unit, Sydney Medical School Nepean, University of Sydney, Nepean Hospital, Sydney, New South Wales, Australia.

There is a low prevalence of a negative sliding sign in a broad gynae ultrasound practice.
As such, it is difficult to evaluate a sonographers’ ability to correctly classify this abnormal state.