Objectives: To assess clinical and sonographic findings and cancer risk of patients with non-atypical endometrial hyperplasia (NEH) in women with postmenopausal bleeding.

Methods: A retrospective analysis of women, age 55 and older, who underwent endometrial sampling between 1997 and 2008. The study group included patients with current or prior confirmed diagnosis of NEH. The women were followed through 2015 for long-term clinical outcome. Clinical and sonographic data was analyzed and compared between the study group and all other cases with benign endometrial pathology. P < 0.05 was considered statistically significant.

Results: 1808 women were included in the study with mean age of 64.5 (55 to 96 years). Mean surveillance time was 11.0 +/- 2.7 years (range: 6.3 - 17.8). Pathology breakdown showed: 123 (6.5%) cases of endometrial cancer, 20 (1.1%) complex atypical hyperplasia and 73 (4.0%) NEH (51 of the cases were newly diagnosed and 22 had a prior diagnosis of NEH). 26/73 (35.6%) had non-atypical complex hyperplasia (NCH) and 47 (64.4%) had simple hyperplasia (SH). Women with NEH had similar age and significantly higher BMI compared to the rest of the patients (63.4% vs. 64.2% p = 0.85 and 33.9 vs. 31.4, P = 0.01 respectively). On ultrasound, the mean endometrial thickness (EE) of the study group was 11.1mm (1-30mm). 5 women had EE < 5mm but none of them developed cancer.

During long-term surveillance of NEH, 7 (9.6%) cases developed endometrial cancer, 1 (1.4%) developed complex atypical hyperplasia and 16 had persistent NEH (21.9%). 50.4% underwent surgical intervention (67.6% had a hysterectomy).

During long term surveillance of SH subgroup: 3 (6.4%) cases developed cancer and 9 (19.1%) had persistent NEH. 44.7% underwent surgical intervention (57.1% had a hysterectomy).

Conclusions: In our study population of women 55 years and older, NEH is associated with a significant progression to endometrial cancer, persistent hyperplasia and future surgical intervention. Sonography performed well in excluding cases of future cancer, but not as well in excluding hyperplasia.

OC17.04
Intra- and interobserver agreement using the MUSA terminology for ultrasonographic features associated with ill-defined lesions


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Objectives: To evaluate intra- and interobserver agreement in the reporting of ultrasonographic features associated with ill-defined lesions using the Morphological Uterus Sonographic Assessment (MUSA) terms.

Methods: Multicentre clinical study, using three-dimensional (3D) transvaginal ultrasound clips of 30 premenopausal women suffering from abnormal uterine bleeding and/or menstrual pain. All women had transcervical deep resection of the endometrium and inner myometrium (n=25) or hysterectomy (n=5) and histopathological examination for adenomyosis (AM). Twelve women had a confident diagnosis of AM. Thirteen gynecologists with high (n=7) or medium (n=6) experience in TVS evaluated each 3D ultrasound clip in two rounds, with a two months’ interval, blinded to histopathology. The evaluation was managed online with Clinical Data Miner software and the presence of ill-defined lesions and associated features, as defined in MUSA, were recorded. Results are presented as interobserver agreement during the first evaluation and intraobserver agreement between first and second evaluation.
Results: Intraobserver agreement (average kappa) for ill-defined lesions was moderate (0.45) and ranged from fair to moderate (0.29–0.45) for associated features. Interobserver agreement (kappa) for ill-defined lesions was poor (0.18) between all observers and fair (0.24) between highly experienced observers. Interobserver agreement for associated features ranged from poor to fair (0.08–0.32). Excluding medium experienced observers and patients without confident diagnosis of AM, interobserver agreement for associated features ranged from fair to moderate (0.20–0.40).

Conclusions: There was large observer variation between multiple observers for ill-defined lesions and associated features. Presence of well-defined lesions, image orientation and the use of 3D video clips instead of 3D volumes may have influenced the findings. Future studies need to specify ill-defined lesions and the composition of associated features based on histopathology.

OC17.06
2D-TVU is a more accurate modality than 3D-VCI in staging endometrial cancer


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Objectives: To compare diagnostic accuracy of transvaginal (TVS) video clip and 3D-volume contrast imaging (VCI) off-line assessment in endometrial cancer (EC) staging.

Methods: Fifteen gynecologists, with a median of 7 years experience (range 2–22) in EC staging, assessed off-line de-identified TVS video clips and 3D-VCI volumes regarding presence/absence of deep (≥50%) MI and/or CSI in the same set of patients. The patient material was collected from 58 women, with biopsy confirmed EC, examined by a single examiner (consecutive cases, selecting cases to achieve an adequate mix of deep MI (n=22) and CSI (n=9)). Pathological examination after hysterectomy served as ‘gold standard’. Diagnostic accuracy was measured using overall accuracy, sensitivity and specificity and Cohen’s and Fleiss’ kappa when compared to the ‘gold standard’. Kappa (κ) values were denoted ‘Poor’ (<0.2), ‘Fair’ (0.21–0.4), ‘Moderate’ (0.41–0.6), ‘Good’ (0.61–0.8) and ‘Very good’ (0.81–1).

Results: Table 1 shows the diagnostic accuracy measurements for deep MI with TVU and 3D-VCI. For TVU Cohen’s κ was ‘Poor’ ‘Fair’ for 3/15 (20%) and ‘Moderate’ ‘Good’ for 12/15 (80%), with a ‘Moderate’ Fleiss’ κ of 0.41. For 3D-VCI Cohen’s κ was ‘Poor’ ‘Fair’ for 10/15 (67%), ‘Moderate’ ‘Good’ in 5/15 (33%), with a ‘Fair’ Fleiss’ κ of 0.31. In diagnosing CSI with TVS Cohen’s κ was ‘Fair’ for 1/15 (7%) and ‘Moderate’ ‘Good’ for 14/15 (93%), with a ‘Moderate’ Fleiss’ κ of 0.55. With 3D-VCI Cohen’s κ was ‘Poor’ ‘Fair’ in 4/15 (27%) and ‘Moderate’ ‘Good’ in 11/15 (73%), with a ‘Moderate’ Fleiss’ κ of 0.45.

Conclusions: For the off-line assessment of deep MI and CSI in women with EC, TVS video clips provide a higher accuracy than 3D-VCI.

Supporting information can be found in the online version of this abstract