Performance of dynamic spectral imaging colposcopy depends on indication for referrals

Objective: Dynamic Spectral Imaging (DSI) colposcopy increases the sensitivity of the colposcopic examination in women with an indication for colposcopy as previous studies have demonstrated. In this study we have re-analyzed the performance of DSI and conventional colposcopy for low grade cytology referrals versus high grade cytology referrals and for two new referral conditions.

Methods: The performance of DSI in different cytology groups was assessed using data from the previous validation trial. We analyzed the clinical performance by appropriate filtering of patients to replicate two different referral strategies currently being implemented in screening programs. Furthermore, women referred with BMD (borderline and mild dyskaryosis) or with >BMD cytology either hrHPV positive or negative were separately analyzed.

Results: The sensitivity of DSI and conventional colposcopy to detect high grade (CIN2+) lesions in women referred with BMD cytology is 82% and 44% respectively (p=0.001) and in the >BMD group 77% and 64% respectively (p=0.24). If the two techniques are combined the sensitivity is 85%. When the conditions of new screening strategies are applied DSI colposcopy has a higher sensitivity to detect CIN2+ than conventional colposcopy.

Conclusion: We found that in most cases DSI colposcopy has a higher sensitivity than conventional colposcopy, even when referral criteria are changed. Unlike conventional colposcopy, the sensitivity of colposcopy with DSI in low grade cytology referrals was found similar to the sensitivity in high grade cytology referrals. This suggests that baseline colposcopy sensitivity may be possible with the adjunctive use of the DSI map, irrespective of referral cytology.

Biography
Jacqueline Louwers has been trained as a Gynecologist in the VU University Medical Center in Amsterdam and in the Diakonessenhuis in Utrecht, both in the Netherlands. She has been working on various research projects on colposcopy and premalignant cervical lesions since 2012. Currently she is working as a Gynecologist in the Diakonessenhuis in Utrecht and specializes in colposcopy and minimal invasive surgery.

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