

# Flexible magnifying endoscopy with narrow band imaging versus colposcopy for diagnosing uterine cervical neoplasms: a multicenter, prospective, non-randomized, paired comparison study

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## Abstract

**Objective** To investigate the detection ability of flexible magnifying endoscopy with narrow band imaging (ME-NBI) for cervical intraepithelial neoplasia grade two or worse (CIN2+) compared with colposcopy. **Design** Multicenter, prospective, non-randomized, paired comparison study. **Setting** Three Japanese medical centers. **Population** Japanese women. **Methods** Eligible patients had positive PAP smear test results, suspicious high-grade CIN in previous colposcopy, or definitive CIN3 diagnosed previously. A gastrointestinal endoscopist examined the cervix using ME-NBI in an endoscopy room and, subsequently, a gynecologist blinded to the ME-NBI findings performed colposcopy in a different room. CIN2+ locations were documented in a scheme immediately after each examination. Punch biopsy samples were obtained from all areas diagnosed as CIN2+ with both methods and from one normal area. The reference standard was the presence of at least one histological diagnosis of CIN2+ among all biopsy specimens. **Main outcome measures** The primary outcome was the detection sensitivity of patients with CIN2+, comparing ME-NBI and colposcopy. **Results** We enrolled 88 patients. The detection sensitivity for patients with CIN2+ was not statistically different between the two methods (both: 79%, 95% CI: 66%–88%). For diagnosing CIN2+, ME-NBI tended to show a higher sensitivity than colposcopy (69% vs. 58%, respectively), while its specificity tended to be lower vs. colposcopy (55% vs. 70%, respectively). Patients reported significantly less discomfort and embarrassment with ME-NBI vs. colposcopy. **Conclusion** ME-NBI showed comparable sensitivity to colposcopy for detecting CIN2+ lesions, and ME-NBI was more patient-acceptable.

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