

## The usefulness of photodynamic eye for sentinel lymph node identification in patients with cervical cancer

Naoto Furukawa, Hidekazu Oi, Shozo Yoshida, Hiroshi Shigetomi, Seiji Kanayama, and Hiroshi Kobayashi

*Department of Obstetrics and Gynecology, Nara Medical University 840 Shijo-cho, Kashihara, Nara 634-8522, Japan*

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### ABSTRACT

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**Aims and background.** We studied the potential use of sentinel lymph node identification using a near-infrared fluorescence imaging technique in the treatment of cervical cancer.

**Methods and study design.** Directly before the start of the operation, 0.2 ml of 5 mg/ml indocyanine green was prepared and injected into 4 sites in the cervix using a 26-gauge standard needle, at 3, 6, 9 and 12 o'clock positions. When the operation was advanced to the pelvis, near-infrared fluorescence imaging was performed using photodynamic eye (Hamamatsu Photonics Co., Japan). The sentinel lymph nodes and other dissected lymph nodes were histologically examined to find any metastases.

**Results.** Twelve patients were examined. Their ages ranged from 36 to 68 years (median, 58). Sentinel lymph nodes were identified in 10 patients (83%), and all were bilaterally identified. The median maximum tumor diameter of dissected cervical tumors was 35 mm (22-65); histology was squamous cell carcinoma in 8 patients and adenocarcinoma in 2 patients. Capillary lymphatic space involvement was found in 8 of the 10 patients. The site of the sentinel lymph node was the right external iliac node in 8 patients, the right obturator node in 8, the left external iliac node in 9, and the left obturator node in 8. Lymph node metastasis was found in 2 of the 12 patients, and all were sentinel lymph nodes. No metastasis from lymph nodes other than sentinel lymph nodes was observed.

**Conclusions.** Photodynamic eye achieved a detection rate similar to that obtained with the blue dye and radioisotope method. It is also easier to use than the other two methods. Free full text available at [www.tumorionline.it](http://www.tumorionline.it)

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**Key words:** cervical cancer, indocyanine green, sentinel lymph node.

*Correspondence to:* Naoto Furukawa, Department of Obstetrics and Gynecology, Nara Medical University, 840 Shijo-cho, Kashihara, Nara 634-8522, Japan.

Tel +81-744-22-3051;  
fax +81-744-23-6557;  
e-mail [furunao@hotmail.com](mailto:furunao@hotmail.com)

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