

**IDENTIFICATION OF PELVIC LYMPH NODES WITH  
CHLOROPHYLLIN AFTER INJECTION INTO THE UTERINE  
CERVIX: AN EXPERIMENTAL AND CLINICAL STUDY**

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*ABSTRACT*

*We investigated the value of staining retroperitoneal lymph nodes with chlorophyllin in normal dogs and in women with malignant uterine tumors undergoing lymphadenectomy. In dogs, after 0.3% chlorophyllin (sodium copper chlorophyllin) was injected into the canine uterus, the concentration of dye in the bloodstream was measured with a spectrophotometer and sections of stained retroperitoneal lymph nodes were examined using light and electron microscopy. The highest blood levels were detected at 4 hrs and nearly all of the chlorophyllin was gone from the bloodstream by 18 hrs but was retained in and nodal macrophages for at least 4 days. No morphological changes were founded in the excised lymph nodes. Twenty-four patients with cervical carcinoma and 20 patients with endometrial carcinoma undergoing radical hysterectomy and lymphadenectomy were divided into a lymphatic coloration group (23 patients) and a non-coloration (control) group (21 patients). In the lymphatic coloration group (0.3% chlorophyllin) was injected into the cervix 5 days before elective lymphadenectomy. There were no complications attributed to injection of the chlorophyllin. The number of dissected lymph nodes in the coloration group were greater than the control group ( $p < 0.01$ ) and the time of operation was shorter ( $p < 0.01$ ). These results suggest that chlorophyllin is safe and facilitates identification of retroperitoneal lymph nodes, allows more complete nodal excision and shortens the time of operation in patients undergoing radical hysterectomy with lymphadenectomy.*