

## Sentinel lymphoscintigraphy in patients with breast cancer undergoing excisional biopsy

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Some small tumors of the breast cannot be diagnosed by needle biopsy, and an excisional biopsy is occasionally needed for the diagnosis. Sentinel node navigation surgery is frequently suitable for patients with such small breast cancers. The purpose of this study was to compare sentinel lymphoscintigrams in breast cancer patients who had previously undergone excisional biopsy with sentinel lymphoscintigrams in patients undergoing no excisional biopsy. We also investigated the possibility of clinical application of the sentinel node navigation procedure in the former group of patients. **Methods:** Sentinel lymphoscintigrams of 43 patients with breast cancer undergoing excisional biopsy were compared to those of 116 patients without excisional biopsy. Lymphoscintigrams were obtained by using intradermal and/or subdermal injections of technetium-99m labeled phytate at 2 points on each side of the dermal incision in patients after excisional biopsy. Injections were performed at 2 points of the skin over the tumor in the patients who had not undergone excisional biopsy. **Results:** Axillary lymph nodes were visualized in 42 of 43 patients undergoing excisional biopsy (98%) and in 115 of 116 patients without excisional biopsy (99%). The number of visualized axillary nodes was 1 to 5 (mean  $\pm$  SD =  $2.1 \pm 1.0$ ) and 1 to 5 (mean  $\pm$  SD =  $1.9 \pm 1.0$ ) in the two groups, respectively. No significant difference was determined between the two groups. Parasternal lymph nodes were depicted in 3 patients after excisional biopsy who had the tumor in the outer half of the breast, in contrast to 4 without excisional biopsy who had the tumor in the inner half. Intramammary hot spots were observed in 5 patients after excisional biopsy and in 2 without excisional biopsy. Lymphatic vessels were observed in 23 patients (53%) who had the excisional biopsy, and in 37 (32%) who did not have the biopsy. The former figure was significantly higher than the latter ( $p < 0.02$ ). **Conclusion:** Sentinel node navigation surgery for axillary nodes was shown to be possible in patients undergoing excisional biopsy. However, the visualization of parasternal nodes, intramammary hot spots and lymphatic vessels tended to increase in number, and care must be exercised in the management of these patients.

**Key words:** breast cancer, excisional biopsy, sentinel node, lymphoscintigraphy