

## RADIOGUIDED OCCULT LESION LOCALIZATION – A NEW METHOD OF MARKING NONPALPABLE BREAST CANCER

**Anna Szalcunas-Olsztyn, Hanna Bartnikowska, Dariusz Michalik,  
Elżbieta Stefanowicz, Jerzy Badowski**

*Division of Radiology and Diagnostic Imaging, Provincial Specialist Hospital in Olsztyn*

**Introduction.** Due to popularized ultrasonography and mammography examinations, as well as to the increasing number of mammography screening, nonpalpable breast lesions are diagnosed more often in their early stages. Radioguided Occult Lesion Localization (ROLL) benefits from interdisciplinary cooperation (a team consisting of radiologists, surgeons, nuclear medicine physicians, pathomorphologists) and enables such a team to take maximum advantage of modern medicine in fighting against breast cancer.

**Aim.** To introduce the effectiveness and advantages of the employment of ROLL in patients who need to undergo an open biopsy; in many cases it simultaneously becomes breast conserving treatment.

**Materials and methods.** ROLL involves the administration of approx. 3 mL of <sup>99</sup>Tc-labelled albumine directly to the focal lesion under control of USG, or following stereotactic mammography. Marked tissue is localized with a gamma camera and then removed. In the Division of Radiology and Diagnostic Imaging at the Provincial Specialist Hospital in Olsztyn, between March 2009 and January 2010 we performed ROLL in 73 patients (52 under control of USG, 21 under control of mammography). Indications for this procedure included: suspect microcalcifications, radial scars, masses. The minimal diameter of the lesion was approx. 4 mm.

**Results and discussion.** Histological examinations confirmed the presence of cancer in 37 (50.68%) cases. Marked lesions were removed with the surgical margins being 0.1–3.6 cm (on average up to 2 cm).

**Conclusions.** ROLL provides greater possibilities to mark the lesions having difficult access in comparison to other methods (e.g. wire localization biopsy). Regardless of the patients' behavior and waiting time for the operation, the administered radioisotope does not become displaced. ROLL enables the surgeon to access the lesion

freely, from all directions, and to minimize the amount of removed tissue, facilitating an excellent cosmetic effect. This procedure also allows for removing the lesion along with the surgical margins, which significantly reduces the necessity of resection's extension.