

EVALUATION OF TC-99M SESTAMIBI (MIBI) IN  
PATIENTS WITH BREAST MASS IN COMPARISON WITH  
EARLY AND DELAYED Tl-201 AND ANGIOGENESIS.

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The purpose of the current study was to compare early and delayed Tl-201 imaging and Tc-99m sestamibi (MIBI) imaging in the patients with palpable breast lesion. Axillary disease was also evaluated. We observed also a relationship between the angiogenesis which was the most reliable marker of breast cancer invasiveness and the uptake of the radiotracer in the breast cancer.

Thirty-eight female patients (26-74 y/o = mean age:44) with breast lesion detected by physical examination prior to surgery had Tl-201 and sestamibi scans. Planar images in anterior and lateral views were taken 10min and 3hours after injection of the 2-3mCi Tl-201 followed by an identical 20mCi MIBI study. The angiogenesis was quantitatively assessed by immunohistochemical staining of endothelia for factor VIII.

There were 23 patients with proven breast ca. and 15 patients with benign biopsies. The result were summerized in the following table:

	Breast lesion		Axillary lymph node
	sensitivity	specificity	sensitivity
early Tl-201	23/23 (100%)	11/15 (73%)	5/15 (38%)
delayed Tl-201	18/22 (82%)	12/15 (80%)	2/13 (15%)
MIBI	18/20 (90%)	10/12 (83%)	7/12 (58%)

In conclusion, the early Tl-201 and MIBI imaging had a high sensitivity. But the MIBI imaging was higher specificity than early Tl-201 imaging and better sensitivity to detect axillary lymph node involvement than early Tl-201 imaging. The delayed Tl-201 imaging didn't help to detect the breast cancer. The uptake of Tl-201 and MIBI in the breast cancer wasn't related with the number of microvessel.