

<https://doi.org/10.29289/259453942025V35S1039>

# Accuracy of multidetector computed tomography with a dedicated protocol in the locoregional staging of breast cancer

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**Objective:** To evaluate the accuracy of multidetector computed tomography (MDCT) with a dedicated protocol for locoregional breast cancer staging. **Methods:** This was a retrospective, single-center study that included female patients diagnosed with breast cancer who underwent contrast-enhanced MDCT for staging purposes. Patients who underwent neoadjuvant chemotherapy were excluded. Some scans were performed using a conventional protocol, with patients in the supine position. In contrast, others were performed using a dedicated protocol in the prone position. MDCT results were compared to surgical pathology findings (gold standard). **Results:** A total of 95 patients were included, with a mean age of 54 years (32–85). Most tumors were of no special type (66.3%) and luminal (86.3%). The majority of patients underwent breast-conserving surgery (58.9%) and sentinel lymph node biopsy (84.2%). Of the CT scans, 47 (49.5%) were performed in the supine position and 48 (50.5%) in the prone position, using the dedicated breast evaluation protocol. The primary tumor was detected on CT in 85 patients (89.5%), occurring more frequently in prone-position scans (93.8%) than in supine-position scans (85.1%). Tumors most commonly appeared as masses on CT (68.4%) or masses associated with non-mass enhancement areas (11.6%). Tumor size assessed on prone-position CT showed a stronger correlation with the tumor size in the surgical specimen ( $r=0.662$ ;  $p<0.001$ ) compared to the supine position ( $r=0.176$ ;  $p=0.298$ ). Prone-position CT showed a significant association with pathological analysis for the detection of multifocality/multicentricity (accuracy of 73%;  $p=0.032$ ) and the presence of metastatic axillary lymph nodes (accuracy of 75%;  $p=0.003$ ), while supine-position CT did not show a significant association. **Conclusion:** MDCT with a dedicated protocol is a feasible method for evaluating breast lesions and axillary lymph nodes and can provide additional information for locoregional staging, especially in settings where breast magnetic resonance imaging is not routinely performed.

**Keywords:** breast cancer; neoplasm staging; multidetector computed tomography.