

<https://doi.org/10.29289/259453942022V32S2081>

SENTINEL NODE BIOPSY WITH MAGTRACE® IN A HER2-POSITIVE PATIENT DIAGNOSED DURING PREGNANCY WITH COMPLETE CLINICAL RESPONSE TO NEOADJUVANT TREATMENT

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During the past decades, there has been significant progress in breast cancer diagnosis and treatment, which has led to improvement in overall and breast cancer-specific survival. It has also enabled the possibility of de-escalating the extent of surgeries. There is growing evidence that supports sentinel lymph node biopsy (SLNB) after neoadjuvant treatment, even in cases with positive lymph nodes at diagnosis. One of the key goals is the achievement of low false-negative rates for SLNB detection. Technetium-99 (Tc99) is considered the gold standard tracer worldwide. Nonetheless, access to a nuclear medicine department, the timing of Tc99 injection, operating room schedules, and administrative limitations can cause increased overall costs of care and patient discomfort. There is compelling evidence that supports the use of new tracers; one of these is the superparamagnetic iron oxide (SPIO, Magtrace®). The SPIO allows the detection of the sentinel node marking hot spots and has the advantage of dyeing the nodes with a brownish color. We present a novel experience with this tracer in a Chilean public hospital. A 33-year-old patient was diagnosed with right breast cancer during pregnancy (21 weeks). The core biopsy revealed an invasive ductal carcinoma HER2-positive, cT2N0M0 (25 mm). The patient completed neoadjuvant chemotherapy, and pregnancy interruption was scheduled at 37 weeks by cesarean section. Trastuzumab (TTZ) was initiated right after delivery and breast conservation surgery with SLNB using SPIO, and blue dye was performed thereafter. Intraoperative biopsy revealed three negative nodes, concordant with the hot spots and dyeing seen in surgery. This case shows the efficacy of neoadjuvant treatment and TTZ in HER2-positive patients with a high rate of complete clinical response. In our opinion, this new tracer is an excellent and affordable alternative to Tc99 and could avoid the use of blue dye.

Keywords: Breast cancer. Neoadjuvant treatment. Sentinel node. Pregnancy.