

## Standard 4.6 – 2015 Pretreatment evaluation and first treatment consistent with nationally recognized guidelines

There is considerable interest in neoadjuvant chemotherapy in the operable breast cancer patient as it offers an opportunity to assess the chemotherapy sensitivity of the cancer and may convert mastectomy only patients to breast preservation. In addition it may eventually provide the opportunity to limit the extent of surgery and/or extent of radiation in those who have good responses to neoadjuvant chemotherapy.

For 2015 standard 4.6, we evaluated the appropriateness of axillary assessment/workup prior to neoadjuvant systemic chemotherapy and the appropriate treatment of the axilla after neoadjuvant chemotherapy utilizing the NCCN guidelines as our benchmark. We extracted from the tumor registry all patient who received neoadjuvant chemotherapy and had operable breast cancer (Stage I, stage IIA: T2N0M0, stage IIB: T2N1M0, T3N0M0, Stage: IIIA T3N1M0 and fulfilled criteria for breast-conserving surgery except for tumor size). This yielded 27 patients. One patient actually had M1 metastatic breast cancer (positive cervical nodes) leaving a total of 26 evaluable patients. Two of these patients had synchronous breast primaries thus there were a total of 28 evaluable breasts/axillae.

### Pretreatment evaluation in adherence to nationally recognized guidelines

The NCCN guidelines state that the workup for preoperative systemic therapy for operable breast cancer must include an evaluation of the axilla:

- 1) Clinically negative nodes (i.e. non palpable)

Clinically negative axillary lymph nodes (i.e. non-palpable) should be considered for axillary imaging with ultrasound and suspicious nodes should be sampled by FNA or core biopsy prior to preoperative systemic therapy

- 2) Clinically positive nodes (i.e. palpable) should be sampled by FNA or core biopsy prior to preoperative systemic therapy.

A review of the 28 breast cancers provided the following data:

22 patients had non-palpable nodes. All 22 patients had radiographic evaluations of their clinically negative axilla with axillary ultrasound, breast MRI or both ultrasound and MRI, as encouraged but not required by the NCCN guidelines. Of these 22 axillas, 11/22 were non-suspicious by imaging and 11 axilla were suspicious by imaging. 10/11 suspicious axillas underwent a FNA or biopsy of a suspicious node, 1 suspicious imaging patient went straight to SLN bx (which was negative) but the nodes were so suspicious on entering the axilla the surgeon proceeded to axillary dissection yielding multiple involved nodes (breast #28)

6 patients had palpable nodes and 5/6 had pre-chemotherapy biopsy as mandated by NCCN guideline. 1 patient with multiple small, hard palpable nodes had no biopsy of the nodes and no imaging of the axilla

pre neoadjuvant drug therapy- she was 88 years old with strongly ER+/PR+ cancer and is the only patient in this analysis who received neoadjuvant hormonal therapy rather than chemotherapy. While this does not conform to NCCN guidelines, this may be an age appropriate tailored treatment. She had a nice response to neoadjuvant hormones and plan was sln bx at time of breast surgery but on entering the axilla multiple small hard nodes were encountered so surgeon proceeded straight to axillary dissection so ax treatment was ultimately appropriate even if the pretreatment w/u was not (breast #2).

In conclusion, all but 1 of our neoadjuvant operable breast cancer patients has appropriate pretreatment axillary workup/evaluation per NCCN guidelines except 1 patient. The one exception was an 88 yo receiving neoadjuvant hormonal therapy and age may have influenced deviating from the guidelines. This axilla ultimately received the correct surgical treatment.

## Treatment in adherence to nationally recognized guidelines

The NCCN guidelines state that patients receiving neoadjuvant chemotherapy who:

#1) have non-palpable axillary nodes or whose FNA or core biopsy was negative should have a sentinel lymph node biopsy before or after preoperative systemic therapy and if SLN + them axillary dissection.

Our review of the 28 breasts receiving neoadjuvant chemotherapy revealed 11/28 axillae with non-palpable nodes and normal imaging, all of whom has sln bx, 8 pre-chemo and 3 post-chemo. Of the 8 who had pre-chemotherapy sln bx, only 1 had a positive node. This patient experienced rapidly enlarging breast mass during chemo, had a mastectomy with rapid resumption of chemotherapy and quickly developed distant metastasis, and thus never had an axillary dissection as appropriate for someone with metastatic disease and non-palpable, asymptomatic axillary nodes. The 3 patients who had sln after chemo had negative sln and none required or had an axillary dissection. Thus all 11 of these patient had the appropriate treatment of the axilla per NCCN guidelines.

#2) patients with positive FNA or core biopsy pre-chemotherapy are to be assessed with restaging of axilla post-chemo and (A) if clinically positive axillary lymph node, axillary dissection should be performed or (B) if axilla clinically negative, SLNB or ALND can be performed

Our review of the 28 breast receiving neoadjuvant chemotherapy revealed 6/28 axillae with palpable nodes and 5 of these 6 had positive biopsy of the nodes. 1 had a negative biopsy but nodes were so suspicious axillary dissection was done revealing 4 nodes grossly involved with tumor. All 6 of these patients had axillary dissection, 5 after neoadjuvant chemotherapy and 1 before neoadjuvant chemotherapy.

11/28 axillae had non-palpable nodes but suspicious nodes on imaging:

10/11 axillae underwent biopsy of the suspicious node. 8/10 biopsies were positive and 1 was negative and 1 was indeterminate on biopsy. The patient with the negative biopsy subsequently had a post chemotherapy sln bx with was negative with no further axillary surgery. Of the 8 positive biopsies, 6/8 went straight to pre-chemotherapy axillary dissection with the breast addressed after neoadjuvant

chemotherapy and 2/8 had sln bx after chemotherapy (1 positive and then had axillary dissection and 1 was negative with no further treatment). The indeterminate biopsy patient then had a pre-chemotherapy sln bx which was negative and no further axillary surgery done. Thus these 10 patients had an appropriate treatment of the axilla per NCCN guidelines.

1/11 axillae did not have biopsy of the suspicious node on imaging but went straight to SLN bx and SLN was negative but surgeon could feel very suspicious nodes, so immediate axillary dissection was completed revealing multiple involved nodes (#28). I cannot ascertain why the suspicious node was not biopsied as per NCCN guidelines but as already noted in the "Pretreatment evaluation and first treatment consistent with nationally recognized guidelines" section above, this patient ultimately had appropriate treatment of her involved axillary nodes in accordance with an NCCN approved option of axillary dissection for positive axillary nodes.

Thus all 11 patients had appropriate treatment of the axilla although one patient in a somewhat roundabout way.

In conclusion our pretreatment assessment of the axillary was in accordance in 27/28 (96%) breasts and our treatment of the axillary conformed to NCCN guidelines 100% of the time.