

## Table 2

### TNM Staging System for Breast Cancer

**Primary tumor (T)** Definitions for classifying the primary tumor (T) are the same for clinical and for pathologic classification. If the measurement is made by physical examination, the examiner will use the major headings (T1, T2, or T3); if other measurements, such as mammographic or pathologic measurements, are used, the subsets of T1 can be used. Tumors should be measured to the nearest 0.1-cm increment

TX Primary tumor cannot be assessed

T0 No evidence of primary tumor

Tis Carcinoma in situ

Tis(DCIS) Ductal carcinoma in situ

Tis(LCIS) Lobular carcinoma in situ

Tis(Paget's) Paget's disease of the nipple with no tumor (**Note:** Paget's disease associated with a tumor is classified according to the size of the tumor)

T1 Tumor 2 cm or less in greatest dimension

T1mic Microinvasion 0.1 cm or less in greatest dimension

T1a Tumor more than 0.1 cm but not more than 0.5 cm in greatest dimension

T1b Tumor more than 0.5 cm but not more than 1 cm in greatest dimension

T1c Tumor more than 1 cm but not more than 2 cm in greatest dimension

T2 Tumor more than 2 cm but not more than 5 cm in greatest dimension

T3 Tumor more than 5 cm in greatest dimension

T4 Tumor of any size with direct extension to (a) chest wall or (b) skin, only as described below

T4a Extension to chest wall, not including pectoralis muscle

T4b Edema (including peau d'orange), or ulceration of the skin of the breast, or satellite skin nodules confined to the same breast

T4c Both T4a and T4b

T4d Inflammatory carcinoma defined as sudden onset of skin erythema and peau d'orange in a previously normal breast.

### Regional lymph nodes—Clinical (N)

NX Regional lymph nodes cannot be assessed (e.g., previously removed)

N0 No regional lymph node metastasis

N1 Metastasis to movable ipsilateral axillary lymph node(s)

N2 Metastases in ipsilateral axillary lymph nodes fixed or matted, or in clinically apparent<sup>a</sup> ipsilateral internal mammary nodes in the absence of clinically evident axillary lymph node metastasis

N2a Metastasis in ipsilateral axillary lymph nodes fixed to one another (matted) or to other structures

N2b Metastasis only in clinically apparent<sup>a</sup> ipsilateral internal mammary nodes and in the absence of clinically evident axillary lymph node metastasis

N3 Metastasis in ipsilateral infraclavicular lymph node(s) with or without axillary lymph node involvement, or in clinically apparent<sup>a</sup> ipsilateral internal mammary lymph node(s) and in the presence of clinically evident axillary lymph node metastasis; or metastasis in

ipsilateral supraclavicular lymph node(s) with or without axillary or internal mammary lymph node involvement

N3a Metastasis in ipsilateral infraclavicular lymph node(s)

N3b Metastasis in ipsilateral internal mammary lymph nodes(s) and axillary lymph node(s)

N3c Metastasis in ipsilateral supraclavicular lymph node(s)

### **Regional lymph nodes—Pathologic (pN)**

pNX Regional lymph nodes cannot be assessed (e.g., previously removed, or not removed for pathologic study)

pN0<sup>b</sup> No regional lymph node metastasis histologically, no additional examination for isolated tumor cells (**Note:** Isolated tumor cells (ITC) are defined as single tumor cells or small cell clusters not greater than 0.2 mm, usually detected only by immunohistochemical (IHC) or molecular methods but which may be verified on H&E stains;

pN0(i-) No regional lymph node metastasis histologically, negative IHC

pN0(i+) No regional lymph node metastasis histologically, positive IHC, no IHC cluster greater than 0.2 mm

pN0(mol-) No regional lymph node metastasis histologically, negative molecular findings (RT-PCR)

pN0(mol+) No regional lymph node metastasis histologically, positive molecular findings (RT-PCR)

pN1 Metastasis in 1 to 3 axillary lymph nodes, and/or in internal mammary nodes with microscopic disease detected by sentinel lymph nodes dissection, not clinically apparent<sup>c</sup>

pN1mi Micrometastasis (greater than 0.2 mm, none greater than 2.0 mm)

pN1a Metastasis in 1 to 3 axillary lymph nodes

pN1b Metastasis in internal mammary nodes with microscopic disease detected by sentinel lymph node dissection, not clinically apparent<sup>c</sup>

pN1c Metastasis in 1 to 3 axillary lymph nodes and in internal mammary lymph nodes with microscopic disease detected by sentinel lymph node dissection but not clinically apparent<sup>c</sup> (if associated with greater than 3 positive axillary lymph nodes, the internal mammary nodes are classified as pN3b to reflect increased tumor burden)

pN2 Metastasis in 4 to 9 axillary lymph nodes, or in clinically apparent<sup>a</sup> internal mammary lymph nodes in the absence of axillary lymph node metastasis

pN2a Metastasis in 4 to 9 axillary lymph nodes (at least one tumor deposit greater than 2.0 mm)

pN2b Metastasis in clinically apparent<sup>a</sup> internal mammary lymph nodes in the absence of axillary lymph node metastasis

pN3 Metastasis in  $\geq 10$  axillary lymph nodes, or in infraclavicular lymph nodes, or in clinically apparent<sup>a</sup> ipsilateral internal mammary lymph nodes in the presence of 1 or more positive axillary lymph nodes; or in more than 3 axillary lymph nodes with clinically negative microscopic metastasis in internal mammary lymph nodes; or in ipsilateral supraclavicular lymph nodes

pN3a Metastasis in 10 or more axillary lymph nodes (at least one tumor deposit greater than 2.0 mm), or metastasis to the infraclavicular lymph nodes

pN3b Metastasis in clinically apparent<sup>a</sup> ipsilateral internal mammary lymph nodes in the presence of 1 or more positive axillary lymph nodes; or in more than 3 axillary lymph

nodes and in internal mammary lymph nodes with microscopic disease detected by sentinel lymph node dissection, not clinically apparent<sup>c</sup>  
pN3c Metastasis in ipsilateral supraclavicular lymph nodes

**Distant metastasis (M)**

MX Distant metastasis cannot be assessed

M0 No distant metastasis

M1 Distant metastasis

<sup>a</sup>*Clinically apparent* is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination or grossly visible pathologically.

<sup>b</sup>Classification is based on axillary lymph node dissection with or without sentinel lymph node dissection. Classification based solely on sentinel lymph node dissection without subsequent axillary lymph node dissection is designated (sn) for "sentinel node" e.g., pN-(1+) (sn).

<sup>c</sup>*Not clinically apparent* is defined as not detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination.

RT-PCR = reverse transcriptase polymerase chain reaction.

SOURCE: Modified with permission from American Joint Committee on Cancer: *AJCC Cancer Staging Manual*, 6th ed. New York: Springer, 2002, pp 227-228.