

# **TNM Staging System for Breast Cancer**

**(AJCC)**

## Staging

### American Joint Committee on Cancer (AJCC)

#### 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 the 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.

<b>TX</b>	Primary tumor cannot be assessed
<b>T0</b>	No evidence of primary tumor
<b>Tis</b>	Carcinoma in situ
<b>Tis (DCIS)</b>	Ductal carcinoma in situ
<b>Tis (LCIS)</b>	Lobular carcinoma in situ
<b>Tis (Paget's)</b>	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.*

<b>T1</b>	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
<b>T2</b>	Tumor more than 2 cm but not more than 5 cm in greatest dimension

##### T3 T4

T3	Tumor more than 5 cm in greatest dimension
T4a	Tumor of any size with direct extension to (a) chest wall or (b) skin, only as described below
T4b	Extension to chest wall, not including pectoralis muscle
T4c	Edema (including peau d'orange) or ulceration of the skin of the breast or satellite skin nodules confined to the same breast
T4d	Both T4a and T4b Inflammatory carcinoma

#### Regional Lymph Nodes (N)

<b>Clinical</b>	<b>NX</b>	Regional lymph nodes cannot be assessed (e.g., previously removed)
	<b>N0</b>	No regional lymph node metastasis
	<b>N1</b>	Metastasis to movable ipsilateral axillary lymph node(s)
	<b>N2</b>	Metastases in ipsilateral axillary lymph nodes fixed or matted, or in <i>clinically apparent*</i> ipsilateral internal mammary nodes in the absence of clinically evident axillary lymph node metastasis

	<b>N2a</b>	Metastases in ipsilateral axillary lymph nodes fixed to one another (matted) or to other structures
	<b>N2b</b>	Metastasis only in <i>clinically apparent*</i> ipsilateral internal mammary nodes and in the absence of clinically evident axillary lymph node metastasis
	<b>N3</b>	Metastasis in ipsilateral infraclavicular lymph node(s) with or without axillary lymph node involvement, or in <i>clinically apparent*</i> 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

<sup>a</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 node dissection is designated (sn)

N3a Metastasis in ipsilateral intraclavicular lymph node(s)

for “sentinel node,” e.g., pN0(i+) (sn).

N3b Metastasis in ipsilateral internal mammary lymph

<sup>b</sup>RT-PCR: reverse transcriptase/polymerase chain reaction.

node(s) and axillary lymph node(s)

N3c Metastasis in ipsilateral supraclavicular lymph node(s)

**pn 1**

Metastasis in 1 to 3 axillary lymph nodes, and/or in

internal mammary nodes with microscopic disease

detected by sentinel lymph node dissection but not

*clinically apparent\*\**

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

but not *clinically apparent\*\**

pn1c Metastasis in 1 to 3 axillary lymph nodes and in

internal mammary nodes with microscopic disease

detected by sentinel lymph node dissection but not

*clinically apparent\*\** (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\** 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\** internal mammary

lymph nodes in the absence of axillary lymph node

metastasis

*\*Clinically apparent is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination or grossly visible pathologically.*

**Pathologic (pN)a**

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

**pnO** No regional lymph node metastasis histologically, no additional examination for isolated tumor cells (ITC)

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 immunohisto-chemical (IHC) or molecular methods but which may be verified on H&E stains. ITCs do not usually show evidence of malignant activity e.g., proliferation or stromal reaction.

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)<sup>b</sup>

pN0(mol+) No regional lymph node metastasis histologically,

positive molecular findings (RT-PCR)<sup>b</sup>

pN3	Metastasis in 1 0 or more axillary lymph nodes, or in infraclavicular lymph nodes, or in <i>clinically apparent</i> * 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	STAGE GROUPING		M0	Stage III B	T4	N0	M0	
		Stage 0	Tis						N0
		Stage I	T1*	N0	M0	T4	N1	M0	
		Stage IIA	T0	N1	M0	T4	N2	M0	
			T1*	N1	M0	Stage III C	Any T	N3	M0
			T2	N0	M0	Stage IV	Any T	Any N	M1
		Stage II B	T2	N1	M0				
			T3	N0	M0	Note: Stage designation may be			
pN3a	Metastasis in 1 0 or more axillary lymph nodes (at least one tumor deposit greater than 2.0 mm), or metastasis to the infraclavicular lymph nodes	Stage III A	T0	N2	M0	changed if post-surgical imaging			
			T1*	N2	M0	studies reveal the presence of			
			T2	N2	M0	distant metastases, provided that			
pN3b	Metastasis in <i>clinically apparent</i> * 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 but not <i>clinically apparent</i> .**		T3	N1	M0	the studies are carried out within 4			
			T3	N2	M0	months of diagnosis in the absence			
		*T1 includes T1 mic				of disease progression and			
						provided that the patient has not received			
						neoadjuvant Therapy.			
pN3c	Metastasis in ipsilateral supraclavicular lymph nodes								

\* *Clinically apparent is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination.*

\*\* *Not clinically apparent is defined as not detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination.*

### Distant Metastasis (M)

MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis