ภาคผนวก

TNM Staging System for Breast Cancer (AJCC)

Staging

Table 1

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 0.1cm 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 0.1cm or less in greatest dimension
	T1a	Tumor more than 0.1cm but not more than 0.5cm in greatest dimension
	T1b	Tumor more than 0.5cm but not more than 1cm in greatest dimension
	T1c	Tumor more than 1cm but not more than 2cm in greatest dimension
T2		Tumor more than 2cm but not more than 5cm in greatest dimension
T3		Tumor more than 5cm 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

Regional Lymph Nodes (N)

Clinical

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

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

N2b Metastasis only in *clinically apparent** 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** ipsilateral internal mammary node (s) and in the presence of clinically evident axillary 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 node(s) and axillary lymph node (s)

N3c Metastasis in ipsilateral supraclavicular lymph node(s)

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

Pathology (pN)[a]

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

pN0 No regional lymph node matastasis 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 immonohistochemical (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 0.2mm

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

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

[a]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) for "sentinel node," e.g., pNo(i+) (sn).

[b]RT-PCR: reverse transcriptase/polymerase chain reaction.

pN1 Metastasis in 1 to 3 axillary lymp nodes, and/or in internal mammary nodes with microscopic disease detected by sentinel lymph node dissection but not clinically apparent**

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

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 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 2.0mm)

pN2b Metastasis in *clinically apparent** internal mammary lymph nodes in the absence of axillary lymph node metastasis

pN3 Metastasis in 10 or more axillary lymph nodes, or in infraclavicular lymph nodes, or in *clinically apparent** 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** 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 *clinically apparent***

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

STAGE GROUPING

StageO	Tis	N0	M0	**Stage IIIB**	T4	N0	M0
Stage I	T1*	N0	M0		T4	N1	M0
Stage IIA	T0	N1	M0		T4	N2	M0
	T1*	N1	M0	**Stage IIIC**	AnyT	N3	M0
	T2	N0	M0	**Stage IV**	AnyT	N3	M0
Stage IIB	T2	N1	M0	**Stage IIIA**	T0	N2	M0
	T3	N0	M0		T1*	N2	M0
					T2	N2	M0
					T3	N1	M0
					T3	N2	M0

* T1 includes T1 mic

Note: Stage designation may be changed if post – surgical Imaging studies reveal the presence of distant metastases,Provided that the studies are carried out within 4 months of diagnosis in the absence of disease progression and provided that the patient has not received neoadjuvant therapy.

HISTOPATHOLOGIC TYPE

The histopathologic types are the following:

In situ Carcinomas

NOS (not otherwise specified) Intraductal

Paget's disease and intraductal

Invasive Carcinomas

NOS

Ductal

Inflammatory

Medullary, NOS

Medullary with lymphoid stroma

Mucinous

Papillary (predominantly micropapillary pattern)

Tubular

Lobular

Paget's disease and infiltrating

Undifferentiated

Squamous cell

Adenoid cystic

Secretory

Cribriform

HISTOPTHOLOGIC GRADE (G)

All invasive breast carcinomas with the exception of medullary carcinoma should be graded. The Nottingham combined histologic grade (Elston-Ellis modification of Scarff - Bloom -Richardson grading system) is recommended.[1,2] The grade for a tumor is determined by assessing morphologic features (tubule formation, nuclear pleomorphism, and mitotic count), assigning a value of 1 (favorable) to 3 (unfavorable) for each feature, and adding together the scores for all three categories. A combined score of 3-5 points is grade 1; a combined score of 6-7 points is grade 2; a combined score of 8-9 points is grade 3.

[1,2]Elston CW, Ellis IO. Pathological prognostic factors in breast cancer. I. The value of histologic grade in breast cancer: experience from a large study with long-trem follow-up. Histopathology 1991;19:403-410.

[2]Fitzgibbons PL, Page DL, Weaver D et al. Prognosis factors in breast cancer. College of American Pathologists consensus statement 1999. Arch Pathol Lab Med 2000; 124:966-978.

HISTOLOGIC GRADE (NOTTINGHAM COMBINED HISTOLOGIC GRADE IS RECOMMENDED)

GX	Grade cannot be assessed
G1	Low combined histologic grade (favorable)
G2	Intermediate combined histologic grade (moderately favorable)
G3	High combined histologic grade (unfavorable)

ขั้นตอนการดำเนินงานจัดทำแนวทางการตรวจวินิจฉัย และรักษาโรคมะเร็งเต้านม

1. วางแผนการจัดทำแนวทางการตรวจวินิจฉัย และรักษาโรคมะเร็งเต้านม โดยเชิญประธานจากราชวิทยาลัยรังสีแพทย์ ราชวิทยาลัยพยาธิแพทย์ มะเร็งวิทยาสมาคมแห่งประเทศไทย ราชวิทยาลัยศัลยแพทย์แห่งประเทศไทย และสมาคมรังสีรักษาและมะเร็งวิทยาแห่งประเทศไทย ร่วมเป็นคณะทำงานเพื่อพิจารณาเสนอชื่อผู้เชี่ยวชาญ และผู้ทรงคุณวุฒิทางด้านการตรวจวินิจฉัยและรักษาโรคมะเร็งเต้านม

2. ประชุมจัดทำแนวทางดังกล่าวร่วมกับผู้เชี่ยวชาญ และผู้ทรงคุณวุฒิโดยใช้เอกสารอ้างอิงจาก Breast Cancers: CPG version 2. 2006 ของ National Comprehensive Cancer Network (NCCN) ของสหรัฐอเมริกาและเอกสารแนวทางการรักษาพยาบาลโรคมะเร็งเต้านมฉบับเดิมนำมาปรับปรุงให้ทันสมัยและเหมาะสมกับการปฏิบัติงานในประเทศไทย โดยผ่านขบวนการพิจารณาและเสนอแนะจากผู้เชี่ยวชาญ และผู้ทรงคุณวุฒิ

3. สถาบันมะเร็งแห่งชาติ ทำการรวบรวมข้อมูลทั้งหมดและดำเนินการจัดทำเป็นแนวทางการตรวจวินิจฉัยและรักษาโรคมะเร็งเต้านม “ฉบับร่าง” แล้วส่งให้ผู้เชี่ยวชาญแต่ละสาขาตรวจและแก้ไขเพิ่มเติมก่อนจะส่งให้คณะทบทวน (Peer reviewers) พิจารณาและวิเคราะห์วิจารณ์

4. ให้คณะผู้ทบทวนดำเนินการวิพากษ์แนวทางการตรวจวินิจฉัย และรักษาโรคมะเร็งเต้านม

5. สถาบันมะเร็งแห่งชาติดำเนินการแก้ไข และจัดพิมพ์เป็นรูปเล่มเพื่อใช้เป็นแนวทางการตรวจวินิจฉัยและรักษาโรคมะเร็งเต้านมในประเทศไทยต่อไป