ASSOCIATION OF DIRECTORS OF ANATOMIC AND SURGICAL PATHOLOGY
Final Anatomic Diagnosis Checklist

BREAST CARCINOMA

(Ver 1.1, 11-03)

Accession No.: **Part No(s).** **Date:**

Patient Name:

ORGAN,	SITE,	OPERATION
Breast	Left	Needle localization with excisional biopsy
Breast and	Right	Excisional biopsy
axillary lymph nodes		Incisional biopsy
sentinel lymph nodes		Re-excision
		Simple Mastectomy
		Radical Mastectomy
		Modified Radical Mastectomy
		And Lymphadenectomy
		And Sentinel lymph node biopsy
		Other_____

-Primary Tumor Diagnosis *Required*

Infiltrating ductal carcinoma
Infiltrating carcinoma with ductal and lobular features
Infiltrating lobular carcinoma
(specify subtype)_____,
- Classic type
- Signet ring cell type
- Pleomorphic type
- Solid type
- Other_____

Mucinous (colloid) carcinoma
Medullary carcinoma
Tubular carcinoma
Infiltrating cribriform carcinoma
Infiltrating papillary carcinoma
Other_____

Ductal carcinoma in-situ
(specify grade and subtype)
(Low, intermediate, high grade)
- Cribriform type
- Papillary type
- Solid type
- Micropapillary type
- Comedo type

Lobular carcinoma in-situ
With extension into lobules
With extension into ducts
With comedo necrosis
With microinvasion
Other_____

Note: *Definition of microinvasion- Nests of tumor cells immediately adjacent to ducts showing DCIS, not extending more than 1.0 mm from the duct.*

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A. Size of Tumor: *Required*

Gross measurement = _____ x _____ x _____ cm.

Microscopic measurement = _____ x _____ cm.

DCIS is present in ___ blocks out of _____blocks examined histologically and estimated to be _____ cm. in greatest dimension
(use only for pure DCIS or DCIS with microinvasion)

Comment:_____
_____

Note: *MICROSCOPIC MEASUREMENT TAKES PRECEDENCE OVER GROSS MEASUREMENT. Use microscopic measurements when no tumor is grossly evident or if the gross features fail to accurately determine tumor size.*

B. Histologic Grade (Nottingham Histologic Grading): *Required*

Grade I **(score 3,4,5)**

Grade II **(score 6,7)**

Grade III **(score 8,9)**

Guide to Determining Histologic Grade for 40x objective with field area of 0.152 mm^2

Score	Tubule Formation	Mitoses	Cell Pleomorphism
1	> 75%	0-5/10 HPF	No
2	10% to 75%	6-10/10 HPF	Variable
3	< 10%	>10/10HPF	Severe

Note: *The field area varies between microscopes. A different field area may change the mitotic counts. As a general rule, the upper limit of mitoses per 10 HPF may be adjusted according to the following equation:*

$$\left[\left\{ \left[(\text{Ocular field number})/(40/2) \right]^2 \text{ X } \pi \right\} / 0.152 \right] \text{ X 5 for score 1, X 10 for score 2.}$$

Score 3 is defined by greater than the upper limit for score 2.

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C. Extent of tumor: ***Required***

Tumor is solitary
Tumor is multifocal
Tumor is present in the upper outer/upper inner/lower outer/lower inner quadrant
Tumor extends into skin
Tumor is present in dermal lymphatics
Nipple is negative for tumor/is involved by Paget's disease/is involved by infiltrating carcinoma/is involved by in-situ carcinoma in lactiferous ducts
Tumor extends directly into the chest wall through the pectoralis muscle
Skin edema (peau d'orange) is present
Skin ulceration is present
Satellite skin nodules are present
Tumor is present in the skin with clinical presentation of inflammatory carcinoma
Ductal carcinoma in-situ comprises approximately _____% of the tumor
Extensive intraductal component is present (EIC)
Other (specify)_____

Note: *Extensive intraductal component (EIC) is defined as the combination of intraductal carcinoma comprising 25% or more of the area defined by the borders of the infiltrating tumor, and intraductal carcinoma in the adjacent tissue.*
Note**:** *Multifocal is defined as discontinuous tumor growth, presumably arising simultaneously within different lobular units. Some authors use 2 cm between tumors as a criterion for multifocal. Accurate sampling and correlation with the gross appearance of the specimen is essential.*
Note**:** *Inflammatory carcinoma is a clinicopathologic entity characterized by diffuse erythema and edema of the breast often without an underlying palpable mass. These changes should involve the majority of the skin of the breast. Classically, the skin changes arise quickly in the affected breast. Thus, the term inflammatory carcinoma should not be applied to a patient with a neglected locally advanced cancer of the breast presenting late in the course of her disease.*

-Margins of Resection:

Note: *Margin status should be determined for infiltrating carcinoma and in-situ carcinoma if both are present. Margin status should not be reported for LCIS of usual type.*

Distance from DCIS to specified margin: ***Optional***

A. Superior Margin: _____ mm.
B. Inferior Margin: _____ mm.
C. Anterior Margin: _____ mm.
D. Posterior Margin: _____ mm.
E. Lateral Margin: _____ mm.
F. Medial Margin: _____ mm.

Distance from infiltrating (ductal, lobular, _____) carcinoma to specified margin: ***Optional***

A. Superior Margin: _____ mm.
B. Inferior Margin: _____ mm.
C. Anterior Margin: _____ mm.
D. Posterior Margin: _____ mm.
E. Lateral Margin: _____ mm.
F. Medial Margin: _____ mm.

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(DCIS, infiltrating ductal carcinoma, infiltrating lobular carcinoma, _____ ___) is _____ mm. to _____ margin. All remaining margins are greater than _____mm to (DCIS, infiltrating ductal carcinoma, infiltrating lobular carcinoma, _____). ***Required***

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-Lymph Nodes: *Required*

A. Number examined_____
B. Number positive_____
C. Comment_____

Isolated tumor cells are identified

Tumor extends into perinodal adipose tissue _____(*specify* grossly or microscopically)

Positive lymph node/nodes contains/contain micrometastasis/micrometastases

-Sentinel Lymph Nodes: *Required*

A. Number examined_____
B. Number positive_____
C. Comment_____

Isolated tumor cells are identified

Tumor extends into perinodal adipose tissue _____(*specify* grossly or microscopically)

Positive lymph node/nodes contains/contain micrometastasis/micrometastases

Notes:

1. Micrometastasis is defined as a metastasis >or = 0.2mm but <2 mm.

2. Isolated tumor cells (ITC) are defined as single tumor cells or small clusters not greater than 0.2 mm, usually detected only by immunohistochemical or molecular methods but which may be verified on H&E stains. ITCs do not usually show evidence of metastatic activity (e.g., proliferation or stromal reaction.). They are not considered metastases and are staged as pN0. Their presence should be noted in the comment section under the lymph node section(s) above.

3. Clinical evidence or lack of evidence for lymph node metastasis may change the pN stage. Please see pTN staging at end of checklist.

4. If particular protocols are being employed for the evaluation of sentinel lymph nodes (for example, multiple H&E slides with intervening antikeratin immunohistochemistry), note this in the comment section

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-Additional Tumor Features *Optional*

A. Lymphatic/Venous vessel invasion:

Identified
- Within the confines of the tumor
- At the border of the tumor mass
- Away from the tumor infiltrate (>2 cm.)

Not Identified

B. Microcalcifications:

Present in infiltrating carcinoma/in-situ carcinoma
Not present in the tumor

-Non-neoplastic breast:

Atypical ductal hyperplasia
Atypical lobular hyperplasia
Ductal hyperplasia mild/moderate/florid without atypia
Microcalcification (specify location)_____
Sclerosing adenosis
Adenosis
Apocrine metaplasia
Fibroadenoma
Duct Papilloma (specify how many)_____
Duct ectasia (Periductal mastitis)
Radial Scar
Complex sclerosing lesion
Fat necrosis
Fibrosis/granulation tissue/fat necrosis at previous _____ biopsy site
Other_____

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-Ancillary Studies: *Optional*

Estrogen receptor expression determined by immunohistochemistry (clone _____) and is positive in invasive/in-situ carcinoma

Progesterone receptor expression determined by immunohistochemistry (clone __) and is positive in invasive/in-situ carcinoma

HER-2/neu expression is determined by immunohistochemistry (clone ___, test __ ___), the result is as follows:
0 HER-2/neu overexpression is not identified
1+ HER-2/neu overexpression is not identified
2+ HER-2/neu overexpression is identified
3+ HER-2/neu overexpression is identified

HER-2/neu gene amplification is determined by fluorescence in-situ hybridization (test __ ___), the result is as follows:
Aneusomy, high amplification
Aneusomy, low amplification
Amplification is not identified
Other:_____

-Additional Comments: *Optional*

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-pTN Stage: *Required*

A. Primary Tumor:

pTX	Primary tumor cannot be assessed
pT0	No evidence of primary tumor
pTis	Carcinoma in situ: DCIS, LCIS, or Paget's disease of the nipple with no invasive tumor
pT1mic	Microinvasion present 0.1cm or less in greatest dimension
pT1a	Tumor more than 0.1 cm. but 0.5 cm or less in greatest dimension
pT1b	Tumor > 0.5 cm. but no more than 1.0 cm. in greatest dimension
pT1c	Tumor > 1.0 cm. but no more than 2.0 cm. in greatest dimension
pT2	Tumor > 2.0 cm. but no more than 5.0 cm. in greatest dimension
pT3	Tumor more than 5cm in greatest dimension
pT4a	Tumor of any size with direct extension to chest wall not including pectoralis muscle
pT4b	Edema (including peau d'orange) or ulceration of the skin of the breast, or satellite skin nodules confined to the same breast
pT4c	Both T4a and T4b
pT4d	Inflammatory carcinoma

B. Regional Lymph Nodes:

pNX	Regional lymph nodes cannot be assessed
pN0	No regional lymph node metastasis histologically, no additional examination for isolated tumor cells (ITC)
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)
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 lymph 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 lymph nodes with microscopic disease detected by sentinel lymph node dissection but not clinically apparent

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
pN3a	Metastasis to ipsilateral internal mammary lymph nodes, 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 then 3 axillary 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.

C. Distant Metastasis

pMX	Cannot be assessed
pM1	Distant metastasis

Notes:

1. *Clinically apparent* is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination.
2. 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., pN0(i+)(sn).
3. Isolated tumor cells (ITC) are defined as single tumor cells or small clusters not greater than 0.2 mm, usually detected only by immunohistochemical or molecular methods but which may be verified on H&E stains. ITCs do not usually show evidence of metastatic activity (e.g., proliferation or stromal reaction.)
4. *Not clinically apparent* is defined as not detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination.
5. If associated with greater than 3 positive nodes, the internal mammary nodes are classified as pN3b to reflect increased tumor burden.
6. T1 includes T1mi

References:
1. AJCC Cancer Staging Manual. Lippincott-Raven Press, 6th edition, 2002 (pg. 223-240).