

Protocol for the Examination of Specimens From Patients With Primary Carcinoma of the Vulva

Version: Vulva 4.1.0.0 Protocol Posting Date: August 2018

Includes pTNM requirements from the 8th Edition, AJCC Staging Manual, and 2015 FIGO Cancer Report

For accreditation purposes, this protocol should be used for the following procedures AND tumor types:

| Procedure | Description |
|------------|---|
| Resection | Includes vulvectomy (with or without removal of other organs and |
| | tissues) |
| Tumor Type | Description |
| Carcinoma | Includes squamous cell carcinoma, adenocarcinoma and variants, carcinosarcoma, neuroendocrine carcinoma, and mixed epithelial – neuroendocrine tumors |

This protocol is NOT required for accreditation purposes for the following:

| Procedure | |
|---|--|
| Biopsy | |
| Primary resection specimen with no residual cance | er (eg, following neoadjuvant therapy) |
| Cytologic specimens | |

The following tumor types should NOT be reported using this protocol:

| The remarking turner types entered the reported denig time protection |
|---|
| Tumor Type |
| Melanoma (consider the Skin Melanoma protocol) |
| Lymphoma (consider the Hodgkin or non-Hodgkin Lymphoma protocols) |
| Sarcoma (consider the Soft Tissue protocol) |

Authors

Saeid Movahedi-Lankarani, MD*; Uma Krishnamurti, MD, PhD*; Debra A. Bell, MD; George G. Birdsong, MD; Charles V. Biscotti, MD; Christopher N. Chapman Jr, MD; Veronica Klepeis, MD, PhD; Anthony G. Montag, MD

With guidance from the CAP Cancer and CAP Pathology Electronic Reporting Committees.

^{*} Denotes primary authors. All other contributing authors are listed alphabetically.

Accreditation Requirements

This protocol can be utilized for a variety of procedures and tumor types for clinical care purposes. For accreditation purposes, only the definitive primary cancer resection specimen is required to have the core and conditional data elements reported in a synoptic format.

- <u>Core data elements</u> are required in reports to adequately describe appropriate malignancies. For accreditation purposes, essential data elements must be reported in all instances, even if the response is "not applicable" or "cannot be determined."
- <u>Conditional data elements</u> are only required to be reported if applicable as delineated in the protocol. For
 instance, the total number of lymph nodes examined must be reported, but only if nodes are present in the
 specimen.
- Optional data elements are identified with "+" and although not required for CAP accreditation purposes, may be considered for reporting as determined by local practice standards.

The use of this protocol is not required for recurrent tumors or for metastatic tumors that are resected at a different time than the primary tumor. Use of this protocol is also not required for pathology reviews performed at a second institution (ie, secondary consultation, second opinion, or review of outside case at second institution).

Synoptic Reporting

All core and conditionally required data elements outlined on the surgical case summary from this cancer protocol must be displayed in synoptic report format. Synoptic format is defined as:

- Data element: followed by its answer (response), outline format without the paired "Data element: Response" format is NOT considered synoptic.
- The data element should be represented in the report as it is listed in the case summary. The response for any data element may be modified from those listed in the case summary, including "Cannot be determined" if appropriate.
- Each diagnostic parameter pair (Data element: Response) is listed on a separate line or in a tabular format to achieve visual separation. The following exceptions are allowed to be listed on one line:
 - o Anatomic site or specimen, laterality, and procedure
 - o Pathologic Stage Classification (pTNM) elements
 - Negative margins, as long as all negative margins are specifically enumerated where applicable
- The synoptic portion of the report can appear in the diagnosis section of the pathology report, at the end of the report or in a separate section, but all Data element: Responses must be listed together in one location Organizations and pathologists may choose to list the required elements in any order, use additional methods in order to enhance or achieve visual separation, or add optional items within the synoptic report. The report may have required elements in a summary format elsewhere in the report IN ADDITION TO but not as replacement for the synoptic report ie, all required elements must be in the synoptic portion of the report in the format defined

CAP Laboratory Accreditation Program Protocol Required Use Date: April 2019

CAP Vulva Protocol Summary of Changes

Version 4.1.0.0

above.

The following data elements were modified:

Regional Lymph Nodes - Revised the format to clarify reporting involved and uninvolved nodes

Surgical Pathology Cancer Case Summary

| Protocol posting date: August 2018 |
|--|
| VULVA: |
| Select a single response unless otherwise indicated. |
| Procedure (Note A) Local excision Wide excision Partial vulvectomy Total vulvectomy Radical vulvectomy Other (specify): Not specified |
| Tumor Site (select all that apply) Right vulva + Labium majus + Bartholin gland Left vulva + Labium majus + Labium minus + Bartholin gland Clitoris Other (specify): Not specified |
| Tumor Size (Note B) Greatest dimension (centimeters): cm + Additional dimensions (centimeters): x cm Cannot be determined (explain): |
| Tumor Focality Unifocal Multifocal Cannot be determined (explain): Not specified |
| Histologic Type (Notes C and D) Squamous cell carcinoma, NOS Squamous cell carcinoma, keratinizing Squamous cell carcinoma, nonkeratinizing Squamous cell carcinoma, basaloid Squamous cell carcinoma, verrucous Squamous cell carcinoma, warty Squamous cell carcinoma, papillary Adenocarcinoma, NOS Adenocarcinoma, mammary gland type Adenocarcinoma, skene gland type Adenocarcinoma, sweat gland type Adenocarcinoma, intestinal type Adenocarcinoma, with associated Paget disease |

⁺ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

| Adenosquamous carcinoma Transitional cell carcinoma Adenoid cystic carcinoma Adenoid basal carcinoma Small cell neuroendocrine carcinoma Large cell neuroendocrine carcinoma Undifferentiated carcinoma Other histologic type not listed (specify): Carcinoma, type cannot be determined |
|--|
| Histologic Grade G1: Well differentiated G2: Moderately differentiated G3: Poorly differentiated G4: Undifferentiated Other (specify): GX: Cannot be assessed Not applicable |
| Depth of Invasion (Note E) Specify depth of invasion (millimeters): mm Cannot be determined (explain): |
| + Tumor Border (Note F) + Pushing + Infiltrating Other Tissue/ Organ Involvement (select all that apply) |
| Note: Any organ not selected is either not involved or was not submitted. Not applicable Not identified Vagina, lower one-third Urathra, lower one-third Urethra, upper two-thirds Anus Bladder mucosa Rectal mucosa Pelvic bone Other organs/tissue (specify): Cannot be determined (explain): |
| Margins [#] |
| Peripheral Margin (select all that apply) Cannot be assessed (explain): Uninvolved by invasive carcinoma |
| + Specify location(s): Involved by vulvar intraepithelial neoplasia, differentiated (simplex) type (dVIN) + Specify location(s): |

⁺ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

| Involved by Paget disease |
|---|
| + Specify location(s): |
| Deep Margin (select all that apply) |
| Cannot be assessed (explain): |
| Uninvolved by invasive carcinoma |
| + Distance of invasive carcinoma from margin (millimeters): mm |
| + Specify location: |
| Involved by invasive carcinoma |
| Specify location(s), if possible: |
| Uninvolved by intraepithelial neoplasia |
| Involved by high-grade squamous intraepithelial lesion (VIN 2-3) |
| + Specify location(s): Involved by vulvar intraepithelial neoplasia, differentiated (simplex) type (dVIN) |
| + Specify location(s): |
| Involved by Paget disease |
| + Specify location(s): |
| # High-grade squamous intraepithelial lesion (VIN 2-3), dVIN, and/or Paget disease should be reported if present, even if margin is involved by invasive carcinoma. |
| Lymphovascular Invasion (Note G) |
| Not identified |
| Present |
| Cannot be determined (explain): |
| |
| Regional Lymph Nodes |
| Note: Only inguinal and femoral nodes are considered regional lymph nodes. Any other involved nodes should be categorized as metastases (pM1) and be commented on in the distant metastasis section. Presence of isolated tumor cells no greater than 0.2 mm in regional lymph node(s) is considered N0 (i+). |
| No lymph nodes submitted or found |
| Lymph Node Examination (required only if lymph nodes are present in the specimen) |
| All lymph nodes negative for tumor cells |
| Positive for tumor cells (select all that apply) |
| Number of Nodes with Metastasis 5 mm or Greater: |
| Number of Nodes with Metastasis Less than 5 mm (excludes isolated tumor cells): |
| Number of Nodes with Isolated Tumor Cells (0.2 mm or less) (if applicable): |
| Number cannot be determined (explain): |
| Note: Reporting the number of lymph nodes with isolated tumor cells is required only in the absence of metastasis greater than 0.2 mm in other lymph nodes. |
| + Nodal Site(s) with Tumor Cells (specify): |
| Additional Lymph Node Findings (select all that apply) (required only if applicable) (Note I) |
| None identified |
| Extranodal extension |
| Fixed/ulcerated nodes |
| Other (specify): Cannot be determined (explain): |
| Cannot be determined (explain): |
| Total Number of Lymph Nodes Examined: |
| Number cannot be determined (explain): |
| + Specify Site(s): |

⁺ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

| Number of Sentinel Nodes Examined (if applicable): Number cannot be determined (explain): |
|---|
| Pathologic Stage Classification (pTNM, AJCC 8 th Edition) (Note H) Note: Reporting of pT, pN, and (when applicable) pM categories is based on information available to the pathologist at the time the report is issued. Only the applicable T, N, or M category is required for reporting; their definitions need not be included in the report. The categories (with modifiers when applicable) can be listed on 1 line or more than 1 line. |
| TNM Descriptors (required only if applicable) (select all that apply) m (multiple primary tumors) r (recurrent) y (posttreatment) |
| Primary Tumor (pT) pTX: Primary tumor cannot be assessed pT0: No evidence of primary tumor pT1: Tumor confined to the vulva and / or perineum# pT1a: Lesions 2 cm or less, confined to the vulva and/or perineum, and with stromal invasion of 1.0 mm or less ## pT1b: Lesions more than 2 cm, or any size with stromal invasion more than 1.0 mm, confined to the vulva and/or perineum pT2: Tumor of any size with extension to adjacent perineal structures (lower/distal third of the urethra, lower/distal third of the vagina, anal involvement) pT3: Tumor of any size with extension to any of the following: upper/proximal two-thirds of the urethra, upper/proximal two-thirds of the vagina, bladder mucosa, or rectal mucosa, or fixed to pelvic bone |
| # Multifocal lesions should be designated as such. The largest lesion or the lesion with the greatest depth of invasion will be the target lesion identified to address the highest pT stage. Depth of invasion is defined as the measurement of the tumor from the epithelial–stromal junction of the adjacent most superficial dermal papilla to the deepest point of invasion. ## Note: The LAST definition of superficial invasive squamous cell carcinoma (SISCCA) conforms to AJCC pT1a/FIGO IA |
| Regional Lymph Nodes (pN) (select all that apply) |
| + Modifier + (sn) + (sn)(i-) + (sn)(i+) |
| Category (pN) pNX: Regional lymph nodes cannot be assessedpN0: No regional lymph node metastasispN0(i+): Isolated tumor cells in regional lymph node(s) no greater than 0.2 mmpN1: Regional lymph node metastasis with one or two lymph node metastases each less than 5 mm, or one lymph node metastasis ≥ 5 mmpN1a: One or two lymph node metastasis each less than 5 mm [#] pN1b: One lymph node metastasis ≥ 5 mmpN2: Regional lymph node metastasis with three or more lymph node metastases each less than 5 mm, or two or more lymph node metastases ≥ 5 mm, or lymph node(s) with extranodal extensionpN2a: Three or more lymph node metastases each less than 5 mmpN2b: Two or more lymph node metastases ≥ 5 mmpN2c: Lymph node(s) with extranodal extensionpN3: Fixed or ulcerated regional lymph node metastasis |
| [#] Includes micrometastasis, N1mi and N2mi.The site, size, and laterality of lymph node metastases should be recorded. |

⁺ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

+ Comment(s)

| astasis (pM) (required only if confirmed pathologically in this case) |
|--|
| Distant metastasis (including pelvic lymph node metastasis)# |
| Specify site(s), if known: |
| c/hypogastric, external iliac, and common iliac lymph nodes are considered distant metastasis. |
| ge (2015 FIGO Cancer Report) |
| Tumor confined to the vulva |
| Lesions ≤2 cm in size, confined to the vulva or perineum and with stromal invasion ≤1.0 mm, no nodal metastasis [#] |
| Lesions >2 cm in size or with stromal invasion >1.0 mm, confined to the vulva and/or perineum, with negative nodes |
| Tumor of any size with extension to adjacent perineal structures (lower third of urethra, lower third of vagina, anus) with negative nodes |
| Tumor of any size with or without extension to adjacent perineal structures (lower third of urethra, lower third of vagina, anus) with positive inguinofemoral nodes |
| With 1 lymph node metastasis (≥5 mm) |
| With 1 to 2 lymph node metastasis(es) (<5 mm) |
| With 2 or more lymph node metastases (≥5 mm) |
| With 3 or more lymph node metastases (<5 mm) |
| With positive nodes with extracapsular spread |
| Tumor invades other regional (upper two-thirds urethra, upper two-thirds vagina), or distant structures |
| Tumor invades any of the following: upper urethral and/or vaginal mucosa, bladder mucosa, rectal mucosa, or fixed to pelvic bone, or fixed or ulcerated inguino-femoral lymph nodes |
| Any distant metastasis including pelvic lymph nodes |
| LAST definition of superficial invasive squamous cell carcinoma (SISCCA) conforms to AJCC pT1a/FIGO IA. |
| al Pathologic Findings (select all that apply) (Note I) e identified dyloma accuminatum grade squamous intraepithelial lesion (VIN 2-3) grade squamous intraepithelial lesion (VIN 1) ar intraepithelial neoplasia, differentiated (simplex) type (dVIN) en sclerosus r (specify): |
| |

⁺ Data elements preceded by this symbol are not required for accreditation purposes. These optional elements may be clinically important but are not yet validated or regularly used in patient management.

Explanatory Notes

A. Suggestions for Sampling of Tissue Removed for Diagnosis or Treatment of Vulvar Carcinoma

Tumor

Sections taken will vary with procedure, as designated by the surgeon. Sections to include the following should be taken (if appropriate):

- Tumor, representative sections, including site of deepest invasion and interface of tumor with adjacent epithelium
- Resection margins
- Sections of abnormal epithelium or other tissue remote from tumor
- Sections of areas(s) marked by surgeon
- Sections of prior biopsy or resection site of tumor if no tumor present grossly

Lymph Nodes

The femoral and inguinal lymph nodes are the sites of regional spread.^{1,2} When inguinal-femoral lymphadenectomy is performed, 6 or more lymph nodes will normally be included^{1,2}; 1 or more sections of all lymph nodes identified should be taken, depending on presence or absence of gross tumor as well as size of lymph node. In addition, sections to confirm presence or absence of extranodal extension should be taken.

Other Organs and Tissues

Other organs and tissues may be submitted with the vulva specimen. Sections to include the following should be taken (if appropriate):

- Sections to demonstrate presence or absence of tumor
- Sections to demonstrate its relation, if present, to vulvar tumor (contiguous or metastatic)
- Sections of other lesions, if present
- Resection margins

If frozen section analysis was performed, those tissue fragment(s) should be submitted.

B. Size of Tumor

Assessment of gross size of the tumor is important for staging. The tumor should be accurately measured to determine if its maximum dimension is ≤2 cm or >2 cm.

C. Etiology/Pathogenesis

Two pathways have been elucidated in the pathogenesis of invasive vulvar carcinoma. ⁵⁻⁷ The first pathway involves classic vulvar intraepithelial neoplasia (VIN), which is associated with high-risk human papillomavirus (HPV) subtypes (16 > 18) and is histologically similar to dysplasia seen in the cervix. It tends to be multifocal and more common in younger women, with a relatively low risk of progression into an invasive squamous cell carcinoma. It is usually diffusely positive with p16 immunostain (reflecting HPV association). The associated invasive component is often basaloid or warty in morphology. The second pathway is referred to as differentiated or simplex VIN (dVIN). dVIN is not associated with HPV, but instead with vulvar dystrophy such as lichen sclerosus, lichen simplex chronicus, and squamous cell hyperplasia. The morphologic features are more subtle, with atypia noted in the parabasal cells. The associated invasive component is keratinizing and can be associated with p53 mutations. This subtype usually occurs in older women. Of note, overlap does exist between the 2 pathways, with some tumors exhibiting morphologic and/or clinical features of each.

| | Keratinizing Squamous Carcinoma | Basaloid Squamous Carcinoma |
|---|---|---------------------------------|
| Prevalence | More common (approximately 80%) | Less common (approximately 20%) |
| Age | Older females | Younger females |
| Distribution | Usually unifocal, may be multifocal | Often multifocal |
| Association with multifocal lower genital tract neoplasia | Rare | Common |
| Morphology | Keratinizing | Warty |
| Associated vulvar intraepithelial neoplasia (VIN) | Uncommon: differentiated type | Common: classic type |
| Association with high risk human papillomavirus (HPV) | No | Yes Type 16>18 |
| Association with vulvar dystrophy | Common | Rare |
| Immunohistochemistry | p53: Some cases positive p16: Negative or focally positive at stromal interface | p53: Negative p16: Positive |

Adapted from McCluggage.5

D. Histologic Type

The following is an abbreviated, slightly modified version of the World Health Organization (WHO) classification of histologic types of malignant and premalignant vulvar epithelial tumors. 3,9,10

WHO and Lower Anogenital Squamous Terminology (LAST) Classification of Vulvar Epithelial Tumors and Related Lesions

Squamous Intraepithelial Lesions

Low-grade squamous intraepithelial lesion (VIN 1)

High-grade squamous intraepithelial lesion (VIN 2-3)

Differentiated (simplex) vulvar intraepithelial neoplasia (dVIN)

Invasive Carcinomas

Squamous cell carcinoma

Superficially invasive (LAST classification, not WHO)¹¹

Keratinizing

Nonkeratinizing

Basaloid

Warty

Verrucous

Glandular Tumors

Invasive Paget disease/Adenocarcinoma with associated Paget disease

Bartholin gland tumors

Adenocarcinoma

Squamous cell carcinoma

Adenoid cystic carcinoma

Adenosquamous carcinoma

Transitional cell carcinoma

Adenocarcinoma

Mammary gland type Skene gland origin Sweat gland type Intestinal type

Neuroendocrine Tumors

Small cell neuroendocrine carcinoma Large cell neuroendocrine carcinoma Merkel cell carcinoma

Undifferentiated carcinoma

E. Depth of Invasion

Tumor thickness and depth of invasion are separate measurements. Tumor thickness of a squamous cell carcinoma is measured in millimeters from the surface of the tumor or, if there is surface keratinization, from the bottom of the granular layer, to the deepest point of invasion.^{3,4} Tumor thickness is NOT a parameter used in staging.

The depth of invasion of squamous cell carcinoma is defined as the measurement in millimeters from the epithelial-stromal junction of the adjacent, most superficial dermal papilla to the deepest point of invasion.²⁻⁴ This parameter is important for tumor staging, especially for small tumors.

F. Tumor Growth Pattern

Vulvar squamous cell carcinomas can generally be separated into those tumors that have a predominately infiltrating (finger-like) pattern and those that invade with a broad, pushing front (verrucous carcinoma). In some studies, infiltrating invasion is associated with a higher frequency of regional lymph node metastasis and should be noted in the report.¹²

G. Lymphatic/Blood Vessel Invasion

Vascular space invasion by squamous cell carcinoma has been associated with a poorer prognosis, including a risk factor for regional lymph node metastasis, and should be noted in the report. 13-15

H. Pathologic Stage Classification

The TNM staging system of the American Joint Committee on Cancer (AJCC) and the International Union Against Cancer (UICC) for carcinoma of the vulva is recommended and is shown below.^{2,16} Comparison with FIGO staging is also shown.¹⁷⁻¹⁹

According to AJCC/UICC convention, the designation "T" refers to a primary tumor that has not been previously treated. The symbol "p" refers to the pathologic classification of the TNM, as opposed to the clinical classification, and is based on gross and microscopic examination. pT entails a resection of the primary tumor or biopsy adequate to evaluate the highest pT category, pN entails removal of nodes adequate to validate lymph node metastasis, and pM implies microscopic examination of distant lesions. Clinical classification (cTNM) is usually carried out by the referring physician before treatment during initial evaluation of the patient or when pathologic classification is not possible.

Pathologic staging is usually performed after surgical resection of the primary tumor. Pathologic staging depends on pathologic documentation of the anatomic extent of disease, whether or not the primary tumor has been completely removed. If a biopsied tumor is not resected for any reason (eg, when technically infeasible) and if the highest T and N categories or the M1 category of the tumor can be confirmed microscopically, the criteria for pathologic classification and staging have been satisfied without total removal of the primary cancer.

TNM Descriptors

For identification of special cases of TNM or pTNM classifications, the "m" suffix and "y," "r," and "a" prefixes are used. Although they do not affect the stage grouping, they indicate cases needing separate analysis.

<u>The "m" suffix</u> indicates the presence of multiple primary tumors in a single site and is recorded in parentheses: pT(m)NM.

The "y" prefix indicates those cases in which classification is performed during or after initial multimodality therapy. The cTNM or pTNM category is identified by a "y" prefix. The ycTNM or ypTNM categorizes the extent of tumor actually present at the time of that examination. The "y" categorization is not an estimate of tumor before multimodality therapy.

<u>The "r" prefix</u> indicates a recurrent tumor when staged after a disease-free interval and is identified by the "r" prefix: rTNM.

The "a" prefix designates the stage determined at autopsy: aTNM.

Additional Descriptors

Residual Tumor (R)

The absence or presence of residual tumor after treatment. In some cases treated with surgery and/or neoadjuvant therapy there will be residual tumor at the primary site after treatment because of incomplete resection or local and regional disease that extends beyond the limit of ability of resection.

- RX Presence of residual tumor cannot be assessed
- R0 No residual tumor
- R1 Microscopic residual tumor
- R2 Macroscopic residual tumor

For the surgeon, the R classification may be useful to indicate the known or assumed status of the completeness of a surgical excision. For the pathologist, the R classification is relevant to the status of the margins of a surgical resection specimen. That is, tumor involving the resection margin on pathologic examination may be assumed to correspond to residual tumor in the patient and may be classified as macroscopic or microscopic according to the findings at the specimen margin(s).

T Category Considerations

Lymphovascular Invasion

Lymphovascular invasion (LVI) indicates whether microscopic lymphovascular invasion is identified. LVI includes lymphatic invasion, vascular invasion, or lymphovascular invasion. According to AJCC/UICC convention, LVI does not affect the T category indicating local extent of tumor unless specifically included in the definition of a T category.

N Category Considerations

Isolated tumor cells (ITCs) are single cells or small clusters of cells not more than 0.2 mm in greatest dimension. Lymph nodes or distant sites with ITCs found by either histologic examination (eg, immunohistochemical evaluation for cytokeratin) or nonmorphological techniques (eg, flow cytometry, DNA analysis, polymerase chain reaction [PCR] amplification of a specific tumor marker) should be so identified. There is currently no guidance in the literature as to how these patients should be coded; until more data are available, they should be coded as "N0(i+)" with a comment noting how the cells were identified.

Sentinel Lymph Nodes

The sentinel lymph node is the first node to receive drainage from a primary tumor. There may be more than 1 sentinel node for some tumors. If a sentinel node contains metastatic tumor, it indicates that other more distant nodes may also contain metastatic disease. If sentinel nodes are negative, other regional nodes are less likely to contain metastasis. 1,14

Extranodal Extension/Nodal Replacement

Both extranodal extension and the size of lymph node metastasis have been shown to reflect prognosis and should be noted in the report. ^{2,14,20,21}

TNM and FIGO Staging Systems for Vulvar Carcinoma

Primary Tumor (T)

| | - (- / | |
|------------|--------------|--|
| TNM | FIGO | |
| Categories | Stages | |
| TX | - | Primary tumor cannot be assessed |
| T0 | | No evidence of primary tumor |
| T1a | IA | Lesions 2 cm or less in size, confined to the vulva or perineum and with stromal invasion 1.0 mm or less** |
| T1b | IB | Lesions more than 2 cm in size or any size with stromal invasion more than 1.0 mm, confined to the vulva or perineum |
| T2 | II | Tumor of any size with extension to adjacent perineal structures (lower/distal one-third urethra, lower/distal one-third vagina, anal involvement) |
| Т3 | IVA | Tumor of any size with extension to any of the following: upper/proximal two-thirds of urethra, upper/proximal two-thirds vagina, bladder mucosa, rectal mucosa, or fixed to pelvic bone |

The depth of invasion is defined as the measurement of the tumor from the epithelial-stromal junction of the adjacent most superficial dermal papilla to the deepest point of invasion.

Regional Lymph Nodes (N)

| _ | , , | \ |
|------|------|---|
| NX | | Regional lymph nodes cannot be assessed |
| N0 | | No regional lymph node metastasis |
| N1 | | 1 or 2 regional lymph nodes with the following features |
| N1a* | IIIA | 1 or 2 lymph node metastasis each less than 5 mm |
| N1b | IIIA | 1 lymph node metastasis 5 mm or greater |
| N2 | IIIB | Regional lymph nodes metastasis with the following features |
| N2a* | IIIB | 3 or more lymph node metastases each less than 5 mm |
| N2b | IIIB | 2 or more lymph node metastases 5 mm or greater |
| N2c | IIIC | Lymph node metastasis with extracapsular spread |
| N3 | IVA | Fixed or ulcerated regional lymph node metastasis |
| | | |

^{*}Includes micrometastasis, N1ami and N2ami and nodes with ITC.

Only femoral and inguinal lymph nodes are considered regional nodes in vulvar cancers. An effort should be made to describe the site and laterality of lymph node metastases.

Distant Metastasis (M)

M0 No distant metastasis

M1 IVB Distant metastasis [includes tumor involvement of pelvic lymph nodes (such as internal

iliac/hypogastric, external iliac, and common iliac nodes)]

I. Additional Pathologic Findings

Presence of adjacent lesions such as lichen sclerosus has been shown to increase risk of recurrence and development of new primary tumors in patients with vulvar squamous cell carcinoma.²² Therefore, presence of such a finding is recommended.

^{*}The LAST definition of superficial invasive squamous cell carcinoma (SISCCA) conforms to AJCC T1a/FIGO 1A

References

- 1. Rouzier R, Haddad B, Atallah D, Dubois P, Paniel BJ. Surgery for vulvar cancer. *Clin Obstet Gynecol.* 2005;48:869-878.
- 2. Vulva. in: Amin MB, Edge SB, Greene FL, et al, eds. *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017.
- 3. Tavassoli FA, Devilee P, eds. World Health Organization Classification of Tumours: Pathology and Genetics of Tumours of the Breast and Female Genital Organs. Lyon, France: IARC Press; 2003.
- 4. Yoder BJ, Rufforny I, Massoll NA, Wilkinson EJ. Stage 1A vulvar squamous cell carcinoma: an analysis of tumor invasive characteristics and risk. *Am J Surg Pathol.* 2008;32:765-772.
- 5. McCluggage WG. Recent developments in vulvovaginal pathology. *Histopathology*. 2009;54:156-173.
- 6. Hart WR. Vulvar intraepithelial neoplasia: historical aspects and current status. *Int J Gynecol Pathol.* 2001;20:16-30.
- 7. Chiesa-Vottero A, Dvoretsky PM, and Hart WR. Histopathologic study of thin vulvar squamous carcinomas and associated cutaneous lesions. *Am J Surg Pathol.* 2006;30:310-318.
- 9. Kurman RJ, Norris HJ, Wilkinson EJ. *Atlas of Tumor Pathology: Tumors of the Cervix, Vagina, and Vulva.* 3rd Series. Fascicle 4. Washington, DC: Armed Forces Institute of Pathology; 1992.
- 10. Kurman RJ, Carcangiu ML, Harrington CS, Young RH, eds. *WHO Classification of Tumors of the Female Reproductive Organs*. Geneva, Switzerland: WHO Press; 2014:307. *World Health Organization Classification of Tumors*. 4th edition.
- 11. Darragh TM, Colgan TJ, Cox JT, et al. The Lower Anogenital Squamous Terminology Standardization Project for HPV-Associated Lesions: background and consensus recommendations from the College of American Pathologists and the American Society for Colposcopy and Cervical Pathology. *Arch Pathol Lab Med.* 2012;136(10):1266-1297.
- 12. Drew PA, Al-Abbadi MA, Orlando CA, Hendricks JB, Kubilis PS, Wilkinson EJ. Prognostic factors in carcinoma of the vulva: a clinicopathologic and DNA flow cytometric study. *Int J Gynecol Pathol*. 1996;15:235-241.
- 13. Chan JK, Sugiyama V, Pham H, et al. Margin distance and other clinico-pathologic prognostic factors in vulvar carcinoma: a multivariate analysis. *Gynecol Oncol.* 2007;104:636-641.
- 14. Raspagliesi F, Hanozet F, Ditto A, et al. Clinical and pathologic prognostic factors in squamous cell carcinoma of the vulva. *Gynecol Oncol.* 2006;102:333-337.
- 15. Hauspy J, Beiner M, Harley I, et al. Sentinel lymph node in vulvar cancer. Cancer. 2007;110:1015-1022.
- 16. Brierley JD, Gospodarowicz M, Wittekind Ch, eds. *TNM Classification of Malignant Tumors*. 8th ed. Oxford, UK: Wiley; 2016.
- 17. Pecorelli S, Denny L, Ngan H et al. Revised FIGO staging for carcinoma of the vulva, cervix, and endometrium. *Int J Gynecol Obstet.* 2009;105:103-104.
- 17. Hacker N. Revised FIGO staging for carcinoma of the vulva. Int J Gynecol Obstet. 2009;105:105-106.
- 18. Oncology FCoG. FIGO staging for carcinoma of the vulva, cervix, and corpus uteri. *International J Gynaecol Obstet.* 2014:125:97-98.
- 19. Paladini D, Cross P, Lopes A, Monaghan JM. Prognostic significance of lymph node variables in squamous cell carcinoma of the vulva. *Cancer.* 1994;74:2491-2494.
- 20. van der Velden J, van Lindert AC, Lammes FB, et al. Extracapsular growth of lymph node metastases in squamous cell carcinoma of the vulva: the impact on recurrence and survival. *Cancer.* 1995;75:2885-2890.
- 22. Yap JK, Fox R, Leonard S, et al. Adjacent lichen sclerosis predicts local recurrence and second field tumour in women with vulvar squamous cell carcinoma. *Gynecol Oncol.* 2016;142(3):420-426.