

# Fallopian Tube

**Protocol applies to all invasive carcinomas  
of the fallopian tube.**

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*Protocol revision date: January 2005  
Based on AJCC/UICC TNM, 6<sup>th</sup> edition  
and FIGO 2001 Annual Report*

## **Procedures**

- **Cytology** (No Accompanying Checklist)
- **Unilateral Salpingectomy**
- **Salpingo-oophorectomy**
- **Hysterectomy with Salpingo-oophorectomy**

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The College of American Pathologists offers these protocols to assist pathologists in providing clinically useful and relevant information when reporting results of surgical specimen examinations of surgical specimens. The College regards the reporting elements in the "Surgical Pathology Cancer Case Summary (Checklist)" portion of the protocols as essential elements of the pathology report. However, the manner in which these elements are reported is at the discretion of each specific pathologist, taking into account clinician preferences, institutional policies, and individual practice.

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**Summary of Changes to Checklist(s)**

*Protocol revision date: January 2005*

No changes have been made to the data elements of the checklist(s) since the January 2004 protocol revision.

**Surgical Pathology Cancer Case Summary (Checklist)**

*Protocol revision date: January 2005  
 Applies to invasive carcinomas only  
 Based on AJCC/UICC TNM, 6<sup>th</sup> edition  
 and FIGO 2001 Annual Report*

**FALLOPIAN TUBE: Unilateral Salpingectomy,  
 Salpingo-oophorectomy, or Hysterectomy with  
 Salpingo-oophorectomy**

Patient name:

Surgical pathology number:

**Note: Check 1 response unless otherwise indicated.**

**MACROSCOPIC****Specimen Type**

- Right salpingectomy  
 Left salpingectomy  
 Right salpingo-oophorectomy  
 Left salpingo-oophorectomy  
 Hysterectomy with salpingo-oophorectomy  
 Other (specify): \_\_\_\_\_  
 Not specified

**Primary Tumor Site (check all that apply)**

- Right fallopian tube  
 Relationship to ovary  
 Not fused  
 Fused  
 Status of fimbriated end  
 Open  
 Closed  
 Left fallopian tube  
 Relationship to ovary  
 Not fused  
 Fused  
 Status of fimbriated end  
 Open  
 Closed  
 Not specified

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\* Data elements **with asterisks** are **not required** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

**Specimen Integrity**

Specify side: \_\_\_\_\_

- Intact  
 Ruptured  
 Fragmented  
 Other (specify): \_\_\_\_\_

**Tumor Location (check all that apply)**

- Fimbria(e)  
 Ampulla  
 Infundibular portion  
 Isthmus

**Tumor Size**

Greatest dimension: \_\_\_\_ cm

\*Additional dimensions: \_\_\_\_ x \_\_\_\_ cm

\_\_\_\_ Cannot be determined (see Comment)

**MICROSCOPIC****Histologic Type**

- Carcinoma in situ  
 Serous carcinoma  
 Mucinous carcinoma  
 Endometrioid carcinoma  
 Clear cell carcinoma  
 Transitional cell carcinoma  
 Squamous cell carcinoma  
 Undifferentiated carcinoma  
 Other (specify): \_\_\_\_\_  
 Carcinoma, type cannot be determined

**Histologic Grade**

- Not applicable  
 GX: Cannot be assessed  
 G1: Well differentiated  
 G2: Moderately differentiated  
 G3: Poorly differentiated

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**Pathologic Staging (pTNM [FIGO])**Primary Tumor (pT)

- pTX [--]: Primary tumor cannot be assessed  
 pT0 [--]: No evidence of primary tumor  
 pTis [0]: Carcinoma in situ (limited to tubal mucosa)  
 pT1 [I]: Tumor limited to fallopian tube(s)  
\*  pT1a [IA]: Tumor limited to 1 tube without penetrating the serosal surface;  
no ascites  
\*  pT1b [IB]: Tumor limited to both tubes without penetrating the serosal surface;  
no ascites  
\*  pT1c [IC]: Tumor limited to 1 or both tube(s) with extension into or through the tubal  
serosa; or with malignant cells in ascites or peritoneal washings  
 pT2 [II]: Tumor involves 1 or both tube(s) with pelvic extension  
 pT2a [IIA]: Extension and/or metastasis to the uterus and/or ovaries  
 pT2b [IIB]: Extension to other pelvic structures  
\*  pT2c [IIC]: Pelvic extension (T2a or T2b/IIA or IIB) with malignant cells in ascites or  
peritoneal washings  
 pT3 and/or N1 [III]: Tumor involves 1 or both tube(s) with peritoneal implants outside  
the pelvis and/or regional lymph node metastasis  
 pT3a [IIIA]: Microscopic peritoneal metastasis beyond pelvis  
 pT3b [IIIB]: Macroscopic peritoneal metastasis beyond pelvis 2 cm or less in  
greatest dimension  
 pT3c/NI [IIIC]: Peritoneal metastasis beyond pelvis more than 2 cm in greatest  
dimension and/or regional lymph node metastasis  
 Any T/Any N and MI [IV]: Distant metastasis including presence of malignant cells in  
pleural fluid or parenchymal hepatic metastasis

Regional Lymph Nodes (pN)

- pNX: Cannot be assessed  
 pN0: No regional lymph node metastasis  
 pN1 [IIC]: Regional lymph node metastasis  
Specify: Number examined: \_\_\_\_  
Number involved: \_\_\_\_

Distant Metastasis (pM)

- pMX: Cannot be assessed  
 pM1 [IV]: Distant metastasis  
\*Specify site(s), if known: \_\_\_\_\_

**\*Summary of Organs/Tissues Microscopically Involved by Tumor**

- \*  Fallopian tube only  
\*  Other organs/tissues  
\*Specify all: \_\_\_\_\_

6 \* Data elements **with asterisks** are **not required** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

**Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)**

- Absent
- Present
- Indeterminate

**\*Additional Pathologic Findings (check all that apply)**

- \*  None identified
- \*  Salpingitis (type): \_\_\_\_\_
- \*  Dysplasia
- \*  Other (specify): \_\_\_\_\_

**\*Comment(s)**

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## Background Documentation

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Protocol revision date: January 2005

### I. Cytologic Material

#### A. Clinical Information

1. Patient identification
  - a. Name
  - b. Identification number
  - c. Age (birth date)
2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
  - a. Relevant history
    - (1) abnormal uterine bleeding pattern
    - (2) discharge per vaginam (Note **A**)
    - (3) pregnant or nonpregnant
    - (4) prior therapy (hormonal, radiation, chemotherapy)
    - (5) prior tumors and operations of possible relevance
  - b. Other relevant findings (eg, radiologic findings, laboratory data, ascites)
  - c. Clinical diagnosis
  - d. Operative findings
  - e. Type(s) or site(s) of specimen(s)
    - (1) ascitic fluid
    - (2) peritoneal washings (specify site)
    - (3) brushings (specify site)
    - (4) cyst fluid (specify site)
    - (5) fine-needle aspirate (specify site)
    - (6) cytology preparation of tissue (touch preparation) (specify site)
    - (7) other

#### B. Macroscopic Examination

1. Specimen
  - a. Unfixed/fixed (specify fixative)
  - b. Number of slides received, if appropriate
  - c. Quantity and appearance of fluid specimen, if appropriate
  - d. Other (eg, cytologic preparation from tissue)
  - e. Results of intraprocedural consultation
2. Material submitted for microscopic evaluation (eg, smear, cytocentrifuge, touch or filter preparation, cell block)
3. Special studies (specify) (eg, cytochemistry, immunocytochemistry)

#### C. Microscopic Evaluation

1. Adequacy of specimen (if unsatisfactory for evaluation, specify reason)
2. Tumor, if present
  - a. Histologic type, if possible (Note **B**)
  - b. Histologic grade, if possible (Note **C**)
  - c. Other features (eg, necrosis)
3. Additional cytologic findings, if present
4. Results/status of special studies (specify)
5. Comments
  - a. Correlation with intraprocedural consultation, as appropriate
  - b. Correlation with other specimens, as appropriate
  - c. Correlation with clinical information, as appropriate

## II. Unilateral Salpingectomy or Salpingo-oophorectomy

### A. Clinical Information

1. Patient identification
  - a. Name
  - b. Identification number
  - c. Age (birth date)
2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
  - a. Relevant history
    - (1) abnormal uterine bleeding pattern
    - (2) discharge per vaginam (Note **A**)
    - (3) pregnant or nonpregnant
    - (4) prior therapy (hormonal, radiation, chemotherapy)
    - (5) prior tumors and operations of possible relevance
  - b. Relevant findings (eg, radiologic findings, laboratory data, ascites)
  - c. Clinical diagnosis
  - d. Procedure
  - e. Operative findings
  - f. Anatomic site(s) of specimen(s)

### B. Macroscopic Examination

1. Specimen
  - a. Organs/tissues received
  - b. Unfixed/fixed (specify fixative)
  - c. Number of pieces
  - d. Dimensions (measure attached tissues individually)
  - e. Orientation, if indicated by surgeon
  - f. Results of intraoperative consultation
2. Tube or tube-ovary if fused into single mass<sup>#</sup>

*# If fused ovary and tube are separately identifiable on sectioning, describe tumor in each, including relation to one another.*

  - a. Dimensions
  - b. Outer surface
    - (1) descriptive features (eg, adhesions, roughening, granularity)
    - (2) extent of findings (largest dimension, or proportion of total area involved)
  - c. Fimbriated end of tube (Note **D**)
    - (1) open
    - (2) closed
  - d. Sectioned surface of specimen or opened cyst(s)
  - e. Contents of lumen of tube or cyst(s)
  - f. Tumor
    - (1) location
      - i. fimbria(e)
      - ii. ampulla
      - iii. isthmus
      - iv. infundibular portion
      - v. combination
    - (2) extent of invasion, if discernible
      - i. intraluminal polypoid or papillary and attached to mucosal surface
      - ii. intramural
      - iii. serosal
      - iv. ovarian spread
      - v. combination

- (3) dimensions, if different from size of entire specimen
- (4) descriptive features
- (5) adhesions suspicious for tumor
- g. Resection margins(s), describe relation to or involvement by tumor
- h. Additional pathologic findings, if present
- 3. Non-fused ovary or ovaries
  - a. Dimensions
  - b. Outer surface
  - c. Sectioned surface
  - d. Tumor
    - (1) location
    - (2) dimensions
    - (3) descriptive features
    - (4) relation to tubal tumor, if pertinent
  - e. Additional pathologic findings, if present
- 4. Tissues submitted for microscopic evaluation (Note E)
- 5. Tissues submitted for special studies (specify) (eg, frozen tissue for immunohistochemistry, flow cytometry, electron microscopy)

### C. Microscopic Examination

- 1. Tube or tube-ovary if fused into single mass
  - a. Tumor (Note F)
    - (1) histologic type (Note B)
    - (2) histologic grade (Note C)
    - (3) location
      - i. fimbria(e)
      - ii. ampulla
      - iii. isthmus
      - iv. infundibular portion
      - v. ovarian spread
      - vi. combination
    - (4) depth of invasion
      - i. intraluminal (polypoid or papillary and attached to mucosal surface)
      - ii. intramural
      - iii. serosa
    - (5) venous/lymphatic vessel invasion
    - (6) extent and distribution in tube and ovary if also involved
    - (7) site(s) of origin (Note G)
    - (8) total extent (eg, with invasion of, metastasis to)
  - b. Other features of possible prognostic or therapeutic significance
  - c. Resection margins, as appropriate
  - d. Additional pathologic findings, if present
    - (1) salpingitis (Note H)
    - (2) endometriosis (Note H)
    - (3) relation to tumor, if pertinent
- 2. Non-fused ovary or ovaries
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
    - (3) location
    - (4) relation to tubal tumor
  - b. Resection margins, if pertinent
  - c. Additional pathologic findings, if present
    - (1) endometriosis (Note H)
    - (2) relation to tumor, if pertinent

3. Results/status of special studies (specify)
4. Pathologic stage
5. Comments
  - a. Correlation with intraoperative consultation, as appropriate
  - b. Correlation with other specimens, as appropriate
  - c. Correlation with clinical information, as appropriate

### III. Hysterectomy with Salpingo-oophorectomy (With or Without Pelvic Exenteration)

#### A. Clinical Information

1. Patient identification
  - a. Name
  - b. Identification number
  - c. Age (birth date)
2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
  - a. Relevant history
    - (1) abnormal uterine bleeding pattern
    - (2) discharge per vaginam (Note **A**)
    - (3) pregnant or nonpregnant
    - (4) prior therapy (hormonal, radiation, chemotherapy)
    - (5) prior tumors and operations of possible relevance
  - b. Other relevant findings (eg, radiologic findings, laboratory data, ascites)
  - c. Clinical diagnosis
  - d. Procedure
  - e. Operative findings
  - f. Anatomic site(s) of specimen(s)

#### B. Macroscopic Examination

1. Specimen
  - a. Organs/tissues received (specify)
  - b. Unfixed/fixed (specify fixative)
  - c. Number of pieces
  - d. Dimensions (measure attached tissues individually)
  - e. Orientation, if indicated by surgeon
  - f. Results of intraoperative consultation
2. Tube or tube-ovary if fused into single mass<sup>#</sup>

*# If fused ovary and tube are separately identifiable on sectioning, describe tumor in each, including relation to one another.*

  - a. Dimensions
  - b. Outer surface
    - (1) descriptive features (eg, adhesions, roughening, granularity)
    - (2) extent of findings (largest dimension or proportion of total area involved)
  - c. Fimbriated end of tube (Note **D**)
    - (1) open
    - (2) closed
  - d. Sectioned surface of specimen or opened cyst(s)
  - e. Contents of lumen of tube or cyst(s)
  - f. Tumor
    - (1) location
      - i. fimbria(e)
      - ii. ampulla
      - iii. isthmus

- iv. infundibular portion
    - v. combination
  - (2) depth of invasion, if discernible
    - i. intraluminal polypoid or papillary and attached to mucosal surface
    - ii. intramural
    - iii. serosal
    - iv. ovarian spread
    - v. combination
  - (3) dimensions, if different from size of entire specimen
  - (4) descriptive features
  - (5) adhesions suspicious for tumor
  - g. Resection margin(s), describe relation to or involvement by tumor
  - h. Additional pathologic findings, if present
- 3. Contralateral fallopian tube
  - a. Dimensions
  - b. Tumor
    - (1) dimensions
    - (2) location
    - (3) descriptive features
  - c. Additional pathologic findings, if present
- 4. Non-fused ovary or ovaries
  - a. Dimensions
  - b. Outer surface
  - c. Sectioned surface
  - d. Tumor
    - (1) dimensions
    - (2) location
    - (3) descriptive features
    - (4) relation to tubal tumor, if pertinent
  - e. Additional pathologic findings, if present
- 5. Uterus
  - a. Dimensions
  - b. Tumor
    - (1) dimensions
    - (2) location
    - (3) descriptive features
    - (4) relation to tubal tumor (separate or continuous)
  - c. Additional pathologic findings, if present
- 6. Omentum
  - a. Dimensions
  - b. Tumor
    - (1) number of nodules, if easily counted
    - (2) size range
    - (3) descriptive features
    - (4) size and gross appearance of confluent mass(es)
  - c. Additional pathologic findings, if present
- 7. Regional lymph nodes
  - a. Number and size range at each designated location
  - b. Tumor
    - (1) dimensions
    - (2) location
    - (3) descriptive features
  - c. Additional pathologic findings, if present
- 8. Other staging biopsy specimens (label separately if so designated)

9. Other organ(s)/tissue(s) removed
  - a. Type, dimensions, and other gross features
  - b. Tumor
    - (1) location and relation to tubal tumor (separate or adherent)
    - (2) size and distribution within organ or tissue
  - c. Resection margins, if applicable
  - d. Additional pathologic findings, if present
10. Tissues submitted for microscopic evaluation (Note E)
11. Tissues submitted for special studies (specify) (eg, frozen tissue for immunohistochemistry, flow cytometry, electron microscopy)

### C. Microscopic Examination

1. Tube or tube-ovary if fused into single mass
  - a. Tumor (Note F)
    - (1) histologic type (Note B)
    - (2) histologic grade (Note C)
    - (3) location
      - i. fimbria(e)
      - ii. ampulla
      - iii. isthmus
      - iv. infundibular portion
      - v. ovarian spread
      - vi. combination
    - (4) depth of invasion
      - i. intraluminal polypoid or papillary and attached to mucosal surface
      - ii. intramural
      - iii. serosa
    - (5) venous/lymphatic vessel invasion
    - (6) extent and distribution in tube and ovary if also involved
    - (7) site(s) of origin (Note G)
    - (8) total extent (eg, with invasion of, metastasis to)
    - (9) other features of possible prognostic or therapeutic significance
  - b. Status of resection margins, as appropriate
  - c. Additional pathologic findings, if present
    - (1) salpingitis (Note H)
    - (2) endometriosis (Note H)
    - (3) relation to tumor, if pertinent
2. Non-fused ovary or ovaries
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
    - (3) location
    - (4) relation to tubal tumor
  - b. Additional pathologic findings, if present
    - (1) endometriosis (Note H)
    - (2) relation to tumor, if pertinent
3. Uterus
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
    - (3) location
    - (4) relation to tubal tumor
  - b. Status of resection margins, if pertinent

- c. Additional pathologic findings, if present
    - (1) endometriosis (Note H)
    - (2) relation to tumor, if pertinent
  - d. Endometrium uninvolved by tumor
- 4. Omentum
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
  - b. Additional pathologic findings, if present
- 5. Lymph nodes at each location, if separately designated (Note F)
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
  - b. Additional pathologic findings, if present (eg, inclusion glands or cysts [endosalpingiosis])
- 6. Other staging biopsy specimens at each location, if so designated
  - a. Tumor, if present
    - (1) histologic type
    - (2) histologic grade
  - b. Additional pathologic findings, if present (eg, endosalpingiosis)
- 7. Other organ(s) or tissue(s) removed
  - a. Tumor, if present (Note F)
    - (1) histologic type
    - (2) histologic grade
    - (3) location
    - (4) extent
    - (5) distribution
  - b. Resection margins, if applicable
  - c. Additional pathologic findings, if present (specify)
- 8. Results/status of special studies (specify)
- 9. Pathologic stage
- 10. Comments
  - a. Correlation with intraoperative consultation, as appropriate
  - b. Correlation with other specimens, as appropriate
  - c. Correlation with clinical information, as appropriate

## Explanatory Notes

### A. Discharge Per Vaginam

The occurrence of a gush of cholesterol-rich, clear fluid per vaginam accompanied by abdominal pain and reduction in the size of an abdominal mass is suggestive of but not specific for carcinoma of the fallopian tube.

### B. Histologic Type

The histologic classification proposed by the World Health Organization (WHO) is recommended as shown below.<sup>1</sup>

### World Health Organization (WHO) Classification of Carcinoma of the Fallopian Tube

Carcinoma in situ

Serous carcinoma

Mucinous carcinoma

Endometrioid carcinoma

Clear cell carcinoma  
Transitional cell carcinoma  
Squamous cell carcinoma  
Undifferentiated carcinoma

### C. Histologic Grade

No specific grading system for tubal cancers is recommended. For the sake of uniformity, however, it is suggested that 3 grades be used.

GX     Cannot be assessed  
G1     Well differentiated  
G2     Moderately differentiated  
G3     Poorly differentiated

Undifferentiated carcinoma equals grade 4, and it is applied to tumors with no differentiation or minimal differentiation that is discernible in only rare tiny foci.

### D. Fimbriated End

Although most investigators have not commented on the possible prognostic significance of the status of the fimbriated end, in 2 series of cases of tubal carcinoma,<sup>2,3</sup> closure of the fimbriated end was associated with lower stage of the tubal carcinoma.

### E. Selection of Specimens for Microscopic Examination

#### Primary Tumor

- Sections adequate to demonstrate extent of tumor, including maximal depth of invasion.
- Adhesions of tumor and resection margins, if pertinent, sampled and labeled specifically if necessary for microscopic identification.
- Sections to determine relation of tubal and ovarian or tubal and uterine components, if present.
- Tissue fragments frozen for intraoperative consultation.

#### Uterus

- Tumor grossly present: sections necessary to determine its extent, including depth of invasion of myometrium if tumor originates in endometrium, and to determine relation to tubal tumor (for primary tumors of endometrium, see endometrium protocol).

#### Non-fused Ovary or Ovaries

- No tumor or other abnormalities: single representative section.
- Tumor: sections to determine relation to tubal tumor(s).

#### Omentum

- Representative sampling of grossly identifiable tumor.  
(Multiple sections are generally optimal when no tumor is detected grossly because of the possible impact of microscopically detected disease on prognosis and therapy).

#### Lymph Nodes

- Representative sections of grossly positive lymph nodes are generally adequate.  
(If lymph nodes appear to be free of tumor, an attempt should be made to identify and sample every node in the specimen[s].)

**Other Staging Biopsy Specimens**

- Submit entirely (unless grossly positive, in which case a representative section usually suffices).

**Other Excised Organ(s) or Tissue(s)**

- Sections adequate to determine presence or absence, and location and extent of tumor, if present.
- Resection margins, if applicable.

**F. TNM and Stage Groupings**

The TNM staging system for fallopian tube endorsed by the American Joint Committee on Cancer (AJCC) and the International Union Against Cancer (UICC), and the parallel system formulated by the International Federation of Gynecology and Obstetrics (FIGO) are recommended as shown below.<sup>4-7</sup>

By 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 unfeasible) 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.

**Primary Tumor (T)**

TNM Category	FIGO Stage	Definition
TX	(--)	Primary tumor cannot be assessed
T0	(--)	No evidence of primary tumor
Tis	Stage 0	Carcinoma in situ (limited to tubal mucosa)
T1	Stage I	Tumor limited to fallopian tube(s)
T1a	Stage IA	Tumor limited to 1 tube without penetrating the serosal surface; no ascites
T1b	Stage IB	Tumor limited to both tubes without penetrating the serosal surface; no ascites
T1c	Stage IC	Tumor limited to 1 or both tube(s) with extension onto or through the tubal serosa, or with malignant cells in ascites or peritoneal washings
T2	Stage II	Tumor involves 1 or both fallopian tube(s) with pelvic extension
T2a	Stage IIA	Extension and/or metastasis to the uterus and/or ovaries
T2b	Stage IIB	Extension to other pelvic structures
T2c	Stage IIC	Pelvic extension (T2a or T2b/IIA or IIB) with malignant cells in ascites or peritoneal washings

T3 and/or N1	Stage III	Tumor involves 1 or both fallopian tube(s) with peritoneal implants outside of the pelvis and/or positive regional lymph nodes
T3a	Stage IIIA	Microscopic peritoneal metastasis outside the pelvis
T3b	Stage IIIB	Macroscopic peritoneal metastasis outside the pelvis 2 cm or less in greatest dimension
T3c and/or N1	Stage IIIC	Peritoneal metastasis more than 2 cm in greatest dimension and/or positive regional lymph nodes
M1	Stage IV	Distant metastasis (excludes peritoneal metastasis)

*Note:* Liver capsule metastasis is T3/stage III; liver parenchymal metastasis is M1/stage IV. Pleural effusion must have positive cytology for M1/stage IV.

Some authors recommend a modified FIGO staging system for fallopian tube carcinomas subdividing stage IA and IB in 3 subcategories as they found depth of invasion to be a very important prognostic factor in these tumors.<sup>8</sup> Those include:

- Stage IA-0: Growth limited to 1 tube with no extension into lamina propria
- Stage IA-1: Growth limited to 1 tube with extension into the lamina propria, but no extension into muscularis
- Stage IA-2: Growth limited to 1 tube with extension into muscularis

The same substagings are applied to stage IB tubal carcinomas.

Some authors also recommend to use stage IF for fimbrial carcinomas as they seem to be associated with worse prognosis because the tumor cells are exposed directly to the peritoneal cavity even though they do not invade the tubal wall.<sup>2</sup>

The above proposals for altering the FIGO classification are particularly important in staging of early carcinomas such those that have been detected in salpingo-oophorectomy specimens from BRCA-positive patients undergoing prophylactic oophorectomy.<sup>9,10</sup>

#### **Regional Lymph Nodes (N) (TNM Staging System)**

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph nodes metastasis
- N1 Regional lymph node metastasis

#### **Distant Metastasis (M) (TNM Staging System)**

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

#### **TNM Stage Groupings**

Stage 0	Tis	N0	M0
Stage IA	T1a	N0	M0
Stage IB	T1b	N0	M0
Stage IC	T1c	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T2b	N0	M0
Stage IIIC	T2c	N0	M0

Stage IIIA	T3a	N0	M0
Stage IIIB	T3b	N0	M0
Stage IIIC	T3c	N0	M0
	Any T	N1	M0
Stage IV	Any T	Any N	M1

### 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.

The “m” suffix 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 following initial multimodality therapy (ie, neoadjuvant chemotherapy, radiation therapy, or both chemotherapy and radiation 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 prior to multimodality therapy (ie, before initiation of neoadjuvant therapy).

The “r” prefix indicates a recurrent tumor when staged after a documented 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)

Tumor remaining in a patient after therapy with curative intent (eg, surgical resection for cure) is categorized by a system known as R classification, shown below.

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).

#### **Vessel Invasion**

By AJCC/UICC convention, vessel invasion (lymphatic or venous) does not affect the T category indicating local extent of tumor unless specifically included in the definition of a T category. In all other cases, lymphatic and venous invasion by tumor are coded separately as follows.

Lymphatic Vessel Invasion (L)

- LX Lymphatic vessel invasion cannot be assessed
- L0 No lymphatic vessel invasion
- L1 Lymphatic vessel invasion

Venous Invasion (V)

- VX Venous invasion cannot be assessed
- V0 No venous invasion
- V1 Microscopic venous invasion
- V2 Macroscopic venous invasion

**G. Site(s) of Origin of Tumor**

When a tumor involves both the fallopian tube and the ovary, it may be difficult to determine the primary site of the tumor in some cases. Typically, the primary tumor predominates and obviously originates from one or the other organ. Occasionally, however, the tube and ovary are fused to form a solid or cystic mass, with destruction of most or all landmarks. In such cases, the tumor is almost always assumed to be a primary ovarian cancer because its frequency is much greater than that of tubal cancer. Microscopic examination may be helpful because most tubal cancers resemble serous carcinomas of the ovary, with tubal carcinomas of other cell types being relatively rare. Finding what appears to be in situ carcinoma in the tube adjacent to the main tumor mass is not always a reliable criterion for origin in the tube since carcinoma that has extended into the tube from elsewhere can grow along its mucosal surface and closely simulate carcinoma in situ. One group of investigators concluded that the true primary site of origin of some tumors classified as widely disseminated ovarian cancer is in the fallopian tube<sup>11</sup> because in a large screening study they detected a higher ratio of tubal to ovarian carcinoma among the early carcinomas that were found.

**H. Other Lesions**

Severe salpingitis, including tuberculous salpingitis, can be associated with pseudocarcinomatous changes in the tube.<sup>12</sup> Carcinoma is rarely associated with severe salpingitis. Therefore, the presence of severe salpingitis should alert the pathologist to the possibility of a pseudocarcinomatous change. Endometriosis may be present in the background of endometrioid carcinoma of the tube.<sup>8,13,14</sup>

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