

## Ovarian, Fallopian Tube, and Primary Peritoneal Carcinoma (ICD-O-3 C56; ICD-O-3 C57)

The definitions of the T, N, and M categories correspond to the FIGO stages. Both systems are included for comparison.

### Rules for Classification

The classification applies to malignant ovarian neoplasms of both epithelial and stromal origin including those of borderline malignancy or of low malignant potential<sup>1</sup> corresponding to 'common epithelial tumours' of the earlier terminology.

The classification also applies to carcinoma of the fallopian tubes and to carcinomas of the peritoneum (Müllerian origin).

There should be histological confirmation of the disease and division of cases by histological type.

The following are the procedures for assessing T, N, and M categories:

- T categories    Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)
- N categories    Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)
- M categories    Clinical examination, imaging, surgical exploration (laparoscopy/laparotomy)

The FIGO stages are based on surgical staging. (TNM stages are based on clinical and/or pathological classification.)

### Regional Lymph Nodes

The regional lymph nodes are the hypogastric (obturator), common iliac, external iliac, lateral sacral, para-aortic, and retroperitoneal nodes\*.

Note

\* including intra-abdominal node such as greater omental nodes.

## TNM Clinical Classification

### T – Primary Tumour

| TNM categories | FIGO Stage       | Definition   |
|----------------|------------------|--|
| TX             |                  | Primary tumour cannot be assessed  |
| T0             |                  | No evidence of primary tumour  |
| T1             | I                | Tumour limited to the ovaries (one or both) or fallopian tube(s)   |
| T1a            | IA               | Tumour limited to one ovary; capsule intact, no tumour on ovarian surface or fallopian tube surface; no malignant cells in ascites or peritoneal washings  |
| T1b            | IB               | Tumour limited to both ovaries or fallopian tubes; capsule intact, no tumour on ovarian or fallopian tube surface; no malignant cells in ascites or peritoneal washings  |
| T1c            | IC               | Tumour limited to one or both ovaries or fallopian tubes with any of the following:  |
| T1c1           |                  | Surgical spill   |
| T1c2           |                  | Capsule ruptured before surgery or tumour on ovarian or fallopian tube surface   |
| T1c3           |                  | Malignant cells in ascites or peritoneal washings  |
| T2             | II               | Tumour involves one or both ovaries or fallopian tubes with pelvic extension (below the pelvic brim) or primary peritoneal cancer  |
| T2a            | IIA              | Extension and/or implants on uterus and/or fallopian tube(s) and or ovary(ies)   |
| T2b            | IIB              | Extension to other pelvic tissues, including bowel within the pelvis   |
| T3 and/or N1   | III <sup>a</sup> | Tumour involves one or both ovaries or fallopian tubes or primary peritoneal carcinoma with cytologically or histologically confirmed spread to the peritoneum outside the pelvic and/or metastasis to the retroperitoneal lymph nodes |

(Continued)

| TNM categories   | FIGO Stage | Definition   |
|------------------|------------|--|
| N1               |            | Retroperitoneal lymph node metastasis only   |
| N1a              | IIIA1i     | Lymph node metastasis not more than 10 mm in greatest dimension  |
| N1b              | IIIA1ii    | Lymph node metastasis more than 10 mm in greatest dimension  |
| T3a any N        | IIIA2      | Microscopic extrapelvic (above the pelvic brim) peritoneal involvement with or without retroperitoneal lymph node, including bowel involvement   |
| T3b any N        | IIIB       | Macroscopic peritoneal metastasis beyond pelvic brim 2 cm, or less in greatest dimension, including bowel involvement outside the pelvis with or without retroperitoneal nodes   |
| T3c any N        | IIIC       | Peritoneal metastasis beyond pelvic brim more than 2 cm in greatest dimension and/or retroperitoneal lymph node metastasis (includes extension of tumour to capsule of liver and spleen without parenchymal involvement of either organ) |
| M1               | IV         | Distant metastasis (excludes peritoneal metastasis)  |
| M1a              | IVA        | Pleural effusion with positive cytology  |
| M1b <sup>b</sup> | IVB        | Parenchymal metastasis and metastasis to extra-abdominal organs (including inguinal lymph nodes and lymph nodes outside the abdominal cavity)  |

**Notes**<sup>a</sup> Liver capsule metastasis is T3/stage III.<sup>b</sup> Liver parenchymal metastasis M1/stage IV.

## N – Regional Lymph Nodes

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis
  - N1 IIIA1 Retroperitoneal lymph node metastasis only
  - N1a IIIA1i Lymph node metastasis no more than 10 mm in greatest dimension
  - N1b IIIA1ii Lymph node metastasis more than 10 mm in greatest dimension

## M – Distant Metastasis

- M0 No distant metastasis
- M1 Distant metastasis

## pTNM Pathological Classification

The pT and pN categories correspond to the T and N categories. For pM see page 8.

pN0 Histological examination of a pelvic lymphadenectomy specimen will ordinarily include 10 or more lymph nodes. If the lymph nodes are negative, but the number ordinarily examined is not met, classify as pN0.

## Stage

|             |       |        |     |
|-------------|-------|--------|-----|
| Stage I     | T1    | N0     | M0  |
| Stage IA    | T1a   | N0     | M0  |
| Stage IB    | T1b   | N0     | M0  |
| Stage IC    | T1c   | N0     | M0  |
| Stage II    | T2    | N0     | M0  |
| Stage IIA   | T2a   | N0     | M0  |
| Stage IIB   | T2b   | N0     | M0  |
| Stage IIC   | T2c   | N0     | M0  |
| Stage IIIA1 | T1/2  | N1     | M0  |
| Stage IIIA2 | T3a   | N0, N1 | M0  |
| Stage IIIB  | T3b   | N0, N1 | M0  |
| Stage IIIC  | T3c   | N0, N1 | M0  |
| -           | any T | any N  | M1  |
| TV          | any T | any N  | M1a |
| TVB         | any T | any N  | M1b |

## Prognostic Factors Grid – Tumours of the Ovary, Fallopian Tube and Peritoneal Carcinoma

Prognostic risk factor for epithelial ovarian cancer

| Prognostic factors | Tumour related  | Host related                                | Environment related  |
|--------------------|---|---|--|
| Essential          | Histological type<br>Grade<br>Surgical stage<br>Residual disease  | Age<br>Co-morbidities<br>Performance status | Maximum diameter of residual disease after optimal debulking |
| Additional         | Nodal involvement<br>Site of metastasis<br>DNA ploidy<br>CA125  | BRCA 1<br>Genetic predisposition            | Type of chemotherapy<br>CA125 fall<br>Ultra-radical surgery  |
| New and promising  | Molecular profile<br>Cellular proliferative activity<br>Tumour angiogenesis markers p53 expression<br>Expression of human kallikrein (hK) genes, particularly hKs 6-10-11 |   | Interval debulking surgery (IDS)<br>Neoadjuvant chemotherapy |

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### Reference

- 1 Tavassoli FA, Devilee P (eds). WHO Classification of Tumours. Pathology and Genetics. Tumours of the Breast and Female Genital Organs. Lyon, France: IACR Press, 2003.