Tumour grade (Required or recommended)

Reason/Evidentiary Support

Assessment of histological grade is important for patient management and prognosis and is a required element.\(^1\) Although some universal grading systems, for example the Shimizu-Silverberg system,\(^2\) are in use which are applicable to all ovarian epithelial malignancies, the ICCR recommends that different grading systems should be used for the different morphological subtypes.

Serous carcinoma (Required)

Improvements in the understanding of the natural history and molecular pathology of serous carcinoma have demonstrated that high-grade serous carcinoma and low-grade serous carcinoma are different tumour types with a different underlying pathogenesis and associated with different molecular events and prognosis.\(^2,5\) Serous carcinomas are now classified as low-grade or high-grade and this has been endorsed by WHO 2014,\(^6\) with the recognition that these are two different tumour types rather than low-grade and high-grade variants of the same tumour type.

Endometrioid carcinoma (Required)

Grading of endometrioid carcinomas is identical to that of uterine endometrioid carcinomas\(^7-12\) and is of prognostic and therapeutic significance. A significant majority of ovarian endometrioid carcinomas is grade 1 and 2. However, there is a subset of grade 3 endometrioid carcinomas which should be diagnosed with caution, since a significant proportion of such tumours are in fact high-grade serous carcinomas with a glandular growth pattern. Immunohistochemistry is useful in this regard (see Note 20 IMUUNOHISTOCHEMICAL MARKERS). The 1988 International Federation of Gynaecology and Obstetrics (FIGO) grading system is widely used for grading endometrioid carcinomas and is recommended by the ICCR. The FIGO system is based on architecture; tumours with <5% solid glandular component are grade 1, those with 5-50% solid areas are grade 2, and tumours with >50% of solid glandular component are classified as grade 3. When grade 1 and 2 tumours show notable nuclear atypia, the histological grade is increased by one.

Clear cell, undifferentiated carcinoma, carcinosarcoma (Required)

Clear cell and undifferentiated carcinomas and carcinosarcomas are high-grade tumours by definition. Although some publications suggest that clear cell carcinomas should be graded according to a three-tier system,\(^13\) there is no consensus about this.

Mucinous carcinoma (Recommended)

There is also little evidence for grading mucinous carcinomas, although oncologists often ask for a tumour grade. The ICCR panel suggests that if grading of these neoplasms is undertaken (a recommended rather than required element in the case of mucinous carcinomas), the same grading system for endometrioid carcinomas should be used (see next paragraph). Malignant mural nodules in ovarian mucinous neoplasms are automatically grade 3.

There are no published recommendations for the grading of seromucinous carcinomas and malignant Brenner tumours, two rare ovarian malignancies, which are included in the recent WHO Classification and for which no grading recommendations have been provided.\(^6\) Since seromucinous carcinomas have some features in common with endometrioid carcinomas the ICCR recommends that they should be graded in the same way as endometrioid ovarian carcinomas, i.e. according to the 1988 FIGO grading system.\(^7\)

If chemotherapy has been administered, tumour grading (and typing) may need to be based on the pre-chemotherapy biopsy.

References:


Prognostic significance and interobserver variability of histologic grading system for endometrial carcinoma. Gynecol Oncol 92:119-123.
