

## **Endometriosis-associated Ovarian Cancer is a Subset With a More Favorable Outcome and Distinct Clinical-pathologic Characteristics.**

Bassiouny D, El-Baz MA, Gamil TM, Shams N, Ismiil N, Dubé V, Han G, Cesari M, Lu FI, Slodkowska E, Chiu HF, Naeim M, Li N, Nofech-Mozes S, Khalifa MA.

### Abstract

There is a controversy about whether endometriosis-associated ovarian cancer (EAOC) might represent a different entity from the corresponding ovarian cancer occurring de novo, in the absence of endometriosis. This study investigated the clinical-pathologic characteristics and outcome of EAOC compared with other ovarian carcinomas that are not associated with endometriosis (non-EAOC) in a large cohort. Seven hundred two patients meeting the inclusion criteria were further subclassified as group I when patients had ovarian carcinoma associated with or arising within endometriosis (EAOC) and group II when patients had non-EAOC. Age, gross features, histologic type, International Federation of Gynecology and Obstetrics stage, and disease-free survival (DFS) were compared between the groups. One hundred sixty-eight (23.9%) patients had EAOC, whereas 534 (76.1%) patients had non-EAOC. EAOCs were mostly endometrioid and clear cell type. Patients with EAOC were younger, present early, and had a lower rate of recurrence when compared with patients with non-EAOC,  $P < 0.001$ . Patients with EAOC had longer DFS time, 51.9 mo (95% confidence interval, 44.9-58.8) versus 30.5 mo (95% confidence interval, 27.7-33.3) in non-EAOC patients. The 5 yr Kaplan-Meier estimate of DFS rate was 70% in 166 patients of group I and was 39.3% in 532 patients of group II,  $P < 0.001$ . On multivariate analysis, International Federation of Gynecology and Obstetrics staging, histologic type, and treatment were the only significant factors affecting the hazards of recurrence. Patients with tumors associated with endometriosis are usually, younger, present early, have lower rate of recurrence, longer DFS, and their tumors are of lower grade and are more likely endometrioid or clear cell carcinoma.