Ten-year relative survival for epithelial ovarian cancer

L. Baldwin¹, R. Ware¹, B. Huang², T. Tucker², S. Goodrich¹, I. Podzielinski¹, C. DeSimone¹, F. Ueland¹, J. van Nagell¹ and L. Seamon¹

¹ University of Kentucky Medical Center, Lexington, KY
² Kentucky Cancer Registry, Lexington, KY

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**Objective:** The overall survival rate of patients with epithelial ovarian cancer (EOC) is poor and most of the patients who are alive at five years have active disease. Thus, 10-year survival may be a more appropriate endpoint. By definition, relative survival (RS) adjusts for the general survival rate of the population for that race, sex, age and date at which the diagnosis was coded. The 10-year RS for ovarian cancer using SEER data has previously been reported, but was not limited to epithelial histologies. Our objective was to measure RS in EOC over 10 years, stratified by stage, race, age, classification of residence and surgery as the first course of treatment.

Using the SEER 1995–2007 database, cases were identified using the International Classification of Diseases codes for EOC. Inclusion criteria included malignant behavior, first primary, actively followed, and age ≥ 20 years. Exclusion criteria included death certificate- or autopsy-only cases. Using the actuarial life table method, RS over 10 years was calculated, stratified by stage, classification of residence, surgery as the first course of treatment, race and age.

**Results:** Forty thousand six hundred ninety-two patients met inclusion criteria. Stage distribution was 20, eight, 39, 27, and 7% for stages I, II, III, and IV, and unknown, respectively. The first course of treatment was surgery in 78%. Overall RS was 65, 44, and 36% at two, five and 10 years, respectively. The slope of decline in RS was reduced for years five–10 as compared with years one–five after diagnosis. RS at five years was 89, 70, 36, and 17% for stages I, II, III, and IV, respectively. RS at 10 years was 84, 59, 23, and 8% for stages I, II, III, and IV, respectively. RS was comparable for patients living in rural and urban settings. At all stages, patients who underwent surgery as their first course of treatment had better RS than those who did not have surgery. When RS was compared between races, blacks had the poorest survival. At all stages, advanced age at time of diagnosis was associated with decreased RS.

**Conclusions:** Although advanced EOC is associated with a poor prognosis, updated data demonstrate that survival rates adjusted for survival in the general population (RS) at five years are improved over historic reports and the 10-year RS for stage III is higher than expected. These data provide the physician and the patient with more accurate prognostic information, particularly for advanced-stage disease.