

## DIAGNOSTIC VALUE OF THE TUMOR MARKER HE -4 AS A PROGNOSTIC FACTOR FOR SURVIVAL IN OVARIAN CANCER

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### Relevance:

Currently, carbohydrate antigen 125 (CA 125) remains the marker of choice for ovarian cancer diagnosis and monitoring, and dynamic determination of its concentration is part of standard screening. However, in some patients, this marker loses diagnostic sensitivity after chemotherapy courses, necessitating the search for new markers to assess treatment effectiveness in this patient population.

**Objective:** to evaluate the significance of dynamic determination of tumor marker in the blood HE 4 (**human epididymal secretory protein 4**) as a prognostic factor for progression-free survival in ovarian cancer patients with normal CA 125 values after 3 courses of chemotherapy.

### Material and methods:

The study included 41 patients with morphologically verified ovarian cancer stages IA-IV, whose CA 125 marker values after 3 courses of chemotherapy were <35 U/ml. All patients underwent primary cytoreductive interventions and 6 courses of adjuvant polychemotherapy (APCT) including taxanes and platinum derivatives. HE 4 was determined in the blood serum before the start of treatment and during the dynamics of antitumor therapy (after surgery and then before each course of APCT). All patients were divided into 2 groups depending on the HE 4 level after 3 courses of APCT: group 1 - with normal HE 4 values (n=15) and group 2 - with elevated HE 4 values (n=26) according to the age limits of the tumor marker. Sixteen patients were diagnosed with tumor progression, while 25 showed no signs of progression. The observation period was two years.

### Results:

The study revealed a statistically significant decrease in the concentration of HE 4 during the treatment ( $p$  Conover<0.001).

No significant differences were found between marker levels after the 3rd and 6th courses of APCT ( $p$  Conover=0.870). In the group of patients with normal HE 4 values after 3 courses of APCT, the 1-year progression-free survival rate was 100%. Only 1 of 15 patients in this group showed disease progression during the second year of observation. In the group with elevated HE 4 values, 44% of patients showed tumor progression within the first year after

After completion of APCT, the 2-year progression-free survival rate was 37.9%. Statistically significant differences in 1- and 2-year progression-free survival between the study groups (p log-rank=0.005 and p log-rank=0.002, respectively) suggest an unfavorable prognosis in patients with normalized CA 125 levels and elevated HE 4 levels during treatment. Research in this area will be continued.

### **Conclusions:**

The obtained data indicate the importance of dynamic determination of the concentration of the tumor marker HE 4 in patients with normal CA 125 values after 3 courses of APCT, which can serve as a prognostic factor in this category of patients.