Tumor Markers for Ovarian Cancer

Tumor markers, also called biomarkers, are substances that are produced by the cancer, or by other cells of the body, in response to cancer. Tumor markers for ovarian cancer can be found in the blood, which are measured using a blood test. Having a high level of a tumor marker suggests that cancer may be present in the body, but by itself, a high tumor marker level is not enough to make a diagnosis.

Tumor markers may be used in conjunction with other tests (scans, biopsies, etc.) to help diagnose a patient who has symptoms suspicious for cancer, to predict prognosis after diagnosis, and assist in making treatment decisions. Tumor markers are most often used to evaluate the patient's response to cancer treatment or to monitor for a recurrence (return of the cancer after treatment). A decrease in a tumor marker may indicate that the cancer is responding to treatment. If there is no change, or the tumor marker increases, this may indicate that the treatment is not working or that the cancer has returned. These results must be evaluated in combination with radiology tests, physical exam and the increase or decrease in any symptoms the patient may be experiencing.

There are some limits to the use of tumor markers. There are non-cancerous conditions that can cause tumor markers to be elevated, so these must also be considered when interpreting the test results. In addition, not everyone with ovarian cancer will have an elevated tumor marker. Your doctor will recommend testing for tumor markers only if you need them.

**Tumor markers used in ovarian cancer include:**

- **CA-125**
  - Used to help in diagnosis, assessment of response to treatment, and monitoring for recurrence.

- **Alpha-fetoprotein (AFP)**
  - Used in ovarian germ cell tumors.
  - Used to assess stage, prognosis, and response to treatment.

- **Beta-hCG (Beta Human Chorionic Gonadotropin)**
  - Used in ovarian germ cell tumors.
  - Used to assess stage, prognosis, and response to treatment.

- **HE4**
  - HE4 can be used to help diagnose ovarian cancer in a woman with symptoms and may be more sensitive than CA125.
  - It can also be used to assess response to treatment and monitor for recurrence.

- **Inhibin A & B**
  - A hormone that is normally produced by ovarian tissue, but may be elevated in certain types of ovarian cancer (mucinous epithelial carcinoma, granulosa cell tumors).
  - Can be used to assess response to treatment and monitor for recurrence.

- **CEA (Carcinoembryonic antigen)**
  - Can be elevated in ovarian tumors and may be used to evaluate response to treatment.