CA 125 and Ovarian Cancer

Information for Patients

Introduction

- CA 125 is a marker in the blood that is known to be elevated in women with ovarian cancer, but also in people with other medical conditions and in some healthy people.
- CA 125 is a "tumor marker" since it can correlate with the amount of tumor growth in a woman with a known diagnosis of ovarian cancer.
- When it was discovered in 1983, 35 U/mL was made the normal value, since only 1% of a large group of healthy people had a CA 125 greater than 35 U/mL.
- CA 125 is not a perfect test for ovarian cancer, and its use is controversial in some settings.

CA 125 and Screening for Ovarian Cancer

- In medicine, a screening test is one that is used to detect a precursor or early form of a disease so that it can be treated before the disease progresses and becomes life-threatening. (Examples include mammograms for breast cancer and Pap smears for cervical cancer.)
- Screening tests are given to people who have no symptoms.
- CA 125 should not be considered a screening test because:
  - CA 125 can be elevated in many other conditions, so some women without ovarian cancer can have an elevated CA 125.
  - Many women with an early ovarian cancer do not have an elevated CA 125.
- Research has shown that checking CA 125 levels in all women does not find very many ovarian cancers, but it does lead to many women having unnecessary surgery and other testing procedures to investigate the high CA 125.

CA 125 and Diagnosis of an Ovarian Mass

- CA 125 can be useful when an ovarian mass is felt on exam or seen on ultrasound and the physician is unsure whether it is ovarian cancer.
- The CA 125 test is better for women who have gone through menopause because they do not have as many non-ovarian cancer conditions that can raise a CA 125 level.
- It is recommended that all women with an ovarian mass get a CA 125 level test:
  - Postmenopausal women should be sent to a gynecologic oncologist if their level is over 35 U/mL.
  - Premenopausal women should not see a gynecologic oncologist unless the level is very high, since they are more likely to have a noncancer cause of an elevated CA 125.

CA 125 and Monitoring Response to Ovarian Cancer Treatment

- While undergoing treatment for ovarian cancer, CA 125 levels are checked often to help doctors determine whether the cancer is responding to treatment (surgery and chemotherapy).
- A good response to treatment is when the CA 125 level drops to half of its highest level.
- The cancer is getting worse or progressing when the CA 125 level remains double the normal value or double the lowest level it has ever been.
- During treatment, doctors should not rely solely on the changes in CA 125. Treatment changes or adjustments should be based on physical exam and imaging evaluation (such as computed tomography [CT] scans), with additional information gained by changes in the CA 125 levels.

CA 125 and Surveillance

- Surveillance is the time after ovarian cancer has been successfully treated the first time.
- Many women worry a lot about their CA 125 level rising and feel anxious before every visit.
- CA 125 levels can rise in the blood prior to recurrent cancer showing up on a scan or causing symptoms, such as pain or bloating.
- There appears to be no survival benefit to testing CA 125 in someone without symptoms or clinical suspicion that cancer has recurred. Also, there are more side effects in tested patients, as they spend more time on chemotherapy since relapses are picked up sooner.
- However, the preference of the woman undergoing surveillance after treatment for ovarian cancer needs to be taken into account. Studies show that during surveillance:
  - Some women would rather not know that their cancer has come back until it causes symptoms, and pursue treatment at that time.
  - Some women feel better knowing right away when their CA 125 rises, and want to start treatment again before they have any symptoms.
  - Both types of patients live the same amount of time.

For printouts, please download the PDF at www.ajho.com/go/Ovarian

Appendix to: Pepin K, del Carmen M, Brown A, Dizon, DS. CA 125 and epithelial ovarian cancer: role in screening, diagnosis, and surveillance. Am J Hematol Onc. *2014;10(6):22-29. Reprinted with permission of the* American Journal of Hematology/Oncology. *Copyright 2014.*