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SCREENING for OVARIAN CANCER

Although ovarian cancer is not a common disease, it is a cause of great fear and anxiety and much misinformation in the public media. I hope to shed a little light on the subject.

There are over 35 kinds of ovarian cancer. Some are more common in young women but most strike in the middle years. All together, they amount to about 1 ½ % of cancers in women in the US. Although some are more dangerous than others, the most common kind, serous cystadenocarcinoma is also one of the most aggressive. **Because most of these cancers have already spread when they are first diagnosed, a method of early detection could improve survival.**

The whole point of any screening test is to find disease in an early stage while it is still easy to cure. An ideal test should be inexpensive, have little or no side effects, and should be both sensitive (find most of the disease in the screened population) and accurate (not too many positive tests when there is actually no disease present). Pap smears are a good example. They are easy to do, harmless, and can find very early stages of pre-cancer that can be cured. Let us look at the tests that have been promoted for Ovarian Cancer Screening.

CA-125 is an enzyme produced by the intestine. Many years ago it was discovered that women who had advanced cases of ovarian cancer which had spread metastases throughout the abdomen onto the bowels and liver, had elevated levels of this enzyme. The cancer irritates the intestines, which release the enzyme. It was also noted that after treatment with surgical removal of most of the cancer, followed by chemotherapy or radiation, the levels of the enzyme would fall. CA-125 levels are used to follow the levels of metastatic disease. If levels start to rise again in a treated patient, this could indicate new spread or recurrence of the disease. **Cancer chemotherapy doctors use levels of CA-125 to follow the progress of their therapy.**

In the early 1980s, around the time of the death of the Saturday Night Live comedian Gilda Radner, doctors were experimenting with the possibility of using CA-125 as a screening test for cancer of the ovaries. It was hoped that some patients would show rising levels of the enzyme while the cancers were still small and easier to cure. Gene

Wilder, Ms Radner's husband, went around the US promoting use of CA-125 as a screening test. Unfortunately, things did not work out as hoped.

False Positives: There are many other diseases that can elevate CA-125. It is an intestinal enzyme and anything that irritates the bowels can cause release of the enzyme. Endometriosis, bowel inflammation, colitis, regional enteritis and bowel infections can all cause a false positive test, that is, elevated levels of enzyme when there is no ovary cancer.

False Negatives: It is only when the cancer has spread to the intestine that the CA-125 levels are increased. That means that an early cancer which is still just confined to the ovary, will not have elevated CA-125 levels. An early cancer may be there, yet it is not detected.

Experiments were done in the 1980s where thousands of women were screened with CA-125. Everyone with a positive test received exploratory surgery. The results showed that most positive tests were due to other, benign diseases. The few ovarian cancers found were mostly in the late stages already. **There had been lots of unnecessary surgery and few, if any, lives saved.** The American College of Ob-Gyn no longer recommends the use of CA-125 as a screening test for ovarian cancer.

Vaginal Ultrasound Taking an ultrasound picture of the ovaries with a probe passed through the vagina is safe, usually painless, and convenient. It is more expensive than most blood tests or a Pap smear. The hope is that early cancers can be detected. Normal, postmenopausal ovaries are small and can be hard to find. Cysts and cystic cancers are usually fairly easy to find.

False Positives: It is now known that many menopausal women may have small, simple benign cysts. Old fibroids, cysts of the fallopian tubes and cysts near the tubes can be misinterpreted as cancer, leading to surgery for a benign condition.

False Negatives: It is possible that a small cancer can be missed, hiding amongst the bowels and other organs.

In women with a **strong family history** for some types of cancer or with symptoms of abdominal discomfort or bloating, CA-125 and Vaginal Ultrasound can be obtained, but **it must be understood that they are far from perfect tests.** Suspicious results can occur, possibly leading to surgery, where it may be found that there is no disease or a benign condition. On the other hand, normal tests do not rule out the possibility of a hidden ovarian cancer.

I continue to do CA-125 and Vaginal Ultrasound. They are both safe and can be positive when there is an ovarian cancer. Unfortunately, both tests can have many false positives (they may show a problem when there is actually no cancer) and occasional false negatives (they are interpreted as normal even though there actually is a cancer).

The Future: The search for the "Pap smear" of ovarian cancer, for the near perfect screening test for ovarian cancer, still continues. Currently there is research ongoing at Yale Medical School on a group of **six blood tests all done together.** It is hoped that a computer analysis of the levels of these six tests will prove to be a more accurate screening test than the Ca-125 alone.