Q. What is ovarian cancer?

A. There are several types of ovarian cancer. Ovarian tumors are the most histologically diverse group of tumors. At least 80 percent of malignant ovarian tumors arise from the lining of the ovary and are called epithelial carcinomas. The most common type is serous cyst adenocarcinoma, which accounts for 75 percent of cases of epithelial ovarian cancer. The remaining 20 percent of malignant ovarian tumors are germ cell and sex cord-stromal cell tumors, which are non-epithelial in origin, and metastatic carcinoma to the ovary. Germ cell tumors, which arise from the primary germ cells of the ovary, occur in young women and are uncommon in women more than 30 years old.

Q. What are the causes and risk factors for ovarian cancer?

A. It is difficult to discover what actually causes cancer from one person to another, but researchers have discovered several factors that increase a woman’s likelihood of developing ovarian cancer. Some risk factors for ovarian cancer include:

- Most ovarian cancers develop after age 65
- Prolonged use of the fertility drug clomiphene citrate
- Women who started menstruating before age 12, had no children, or had their first child after age 30, and/or experienced menopause after age 50
- Not eating enough fruits, vegetables, whole grain products and eating more high-fat foods, especially those from animal sources
- Women whose mother, sister or daughter have, or have had, ovarian cancer, especially if they developed ovarian cancer at a young age
- Having breast cancer
- Talcum powder applied to the genital area or on sanitary napkins may be carcinogenic to the ovaries

Q. What are the symptoms for ovarian cancer?

A. As a tumor grows, a woman may notice these symptoms:

- Swelling, bloating or general discomfort in the lower abdomen
- Loss of appetite or a feeling of fullness, even after a light meal
- Gas
- Indigestion
- Nausea
- Weight loss
- Diarrhea, constipation or frequent urination caused by a large tumor pressing on nearby organs, such as the bowel or bladder
- Less often, bleeding from the vagina is a symptom of ovarian cancer
Most of these may also be caused by benign (noncancerous) diseases of the ovaries and by cancers of other organs. It is important to see your doctor.

**Q. How will my doctor know if I have ovarian cancer?**

A. Women who have regular pelvic exams increase the chance that, if ovarian cancer occurs, it will be found before the disease causes symptoms. However, pelvic exams often cannot find ovarian cancer at an early stage. Often, the doctor orders a blood test to measure a substance in the blood called CA-125. This substance, called a tumor marker, can be produced by ovarian cancer. However, CA-125 is not always present in women with ovarian cancer, and it may be present in women who have benign ovarian conditions. Thus, this blood test cannot be used alone to diagnose cancer.

A diagnosis can be made only by surgical removal of the mass and/or ovary. Once the mass is removed, a pathologist must examine a sample of the tissue under the microscope to determine the diagnosis. To obtain the tissue, the surgeon does an operation by making an incision. This is called laparotomy. An alternative procedure is laparoscopy, which is surgery performed through small tubes where a camera is used to view the pelvis and abdomen. If cancer is suspected, the surgeon removes the entire ovary. The surgeon should be prepared to perform complete surgical staging if the malignancy appears to be confined to the ovary. A large portion of these patients will have spread that is recognized only by obtaining multiple tissue samples and removing lymph nodes.

**Q. What about treatment? What should I ask?**

A. Ovarian cancer is usually treated with a combination of surgery and chemotherapy. Sometimes surgery alone is sufficient treatment. Here are some questions a woman may want to ask her doctor before treatment begins:

- What is the stage of the disease?
- What are my treatment choices? Which do you recommend for me? Why?
- Do I need comprehensive surgical staging?
- Is it likely that aggressive debulking surgery will be required?
- Am I an individual who may require chemotherapy prior to my definitive surgery (this is called neoadjuvant chemotherapy)?
- Would a clinical trial be appropriate for me?
- What are the expected benefits of each kind of treatment?
- What are the risks and possible side effects of each treatment?

**Q. What are the side effects of treatment?**

A. It is hard to limit the effects of therapy so that only cancer cells are destroyed. Because treatment often damages healthy cells and tissues, it can cause unpleasant side effects.

The side effects of cancer treatment vary, depending on the type of treatment. Also, each woman reacts differently. Doctors try to keep side effects to a minimum, but problems may occur.

*Surgery* for ovarian cancer is a major operation. For several days after surgery, a woman may have difficulty emptying her bladder or having normal bowel movements. Doctors or nurses can administer medicine to relieve pain and/or prevent infection associated with ovarian cancer surgery. For a period of time after surgery, some normal activities are limited to encourage healing. Young women whose ovaries
are removed begin experiencing the side effects of menopause because their body’s natural source of estrogen has been removed. Hormone-replacement therapy is commonly used to lessen these side effects.

With chemotherapy, side effects depend on which drugs the patient receives, as well as personal variance from patient to patient. In general, chemotherapy drugs affect rapidly dividing cells. The drugs kill cancer cells, but also affect other cells in the body, like cells in hair roots and cells that line the digestive tract. As a result, chemotherapy can cause hair loss, nausea, vomiting or mouth sores. Doctors can suggest diet changes or medication to ease these problems, and most side effects of chemotherapy gradually disappear during the recovery period or after treatment stops.

Radiation therapy mainly causes fatigue, especially in the later weeks of treatment. Though resting is important, doctors usually advise patients to stay as active as possible. Skin in the treated area may become red, dry, tender and itchy, and there may be permanent darkening or "bronzing" in the treated area. Radiation therapy in the lower abdomen may cause nausea, vomiting, diarrhea or urinary discomfort. Doctors can usually suggest diet changes or medicines to ease these problems. Radiation therapy for ovarian cancer can also cause vaginal dryness and interfere with intercourse. Women may be advised not to have intercourse during treatment. However, most women are able to resume sexual activity a few weeks after radiation therapy ends.

Q. Will I be able to adjust to this disease well?

A. Each cancer survivor’s recovery is different, and a person’s adjustment after cancer treatment depends on a number of factors. Ovarian cancer can cause major life changes in its survivors. If a woman undergoes removal of the ovaries and/or uterus, she will be unable to become pregnant. Women will also begin menopause if they have not already if they receive this treatment. Chemotherapy may also cause premature menopause or infertility.

It is important for women to seek support during and after cancer treatment. In fact, behavioral scientists have found that women who take advantage of a social support system, such as a cancer support group, survive with a better quality of life. Maintain an open dialogue with your cancer care team to address any concerns you have.

The Gynecologic Cancer Support Group at The James is facilitated by caring healthcare professionals with specific expertise in working with women's cancers. Participants find comfort and assurance as they candidly and confidentially discuss the impact of cancer on their lives.

Q. Are there clinical trials available for ovarian cancer?

A. Yes. For some ovarian cancer patients, treatment may involve a clinical trial. Clinical trials are studies conducted with the consent of patients to evaluate a new treatment. Speak with your doctor. Click here for more information on clinical trials.

Reference: The James Cancer Hospital and Solove Research Institute at Ohio State University at