Ovarian Cancer Physiology

The ovaries are part of a woman's reproductive system. They are in the pelvis. Each ovary is about the size of an almond. The ovaries make the female hormones - estrogen and progesterone. They also release eggs. An egg travels from an ovary through a fallopian tube to the womb (uterus). When a woman goes through her "change of life" (menopause), her ovaries stop releasing eggs and make far lower levels of hormones.

Cancer begins in cells, the building blocks that make up tissues. Tissues make up the organs of the body. Normally, cells grow and divide to form new cells as the body needs them. When cells grow old, they die, and new cells take their place. Sometimes, this orderly process goes wrong. New cells form when
the body does not need them, and old cells do not die when they should. These extra cells can form a mass of tissue called a growth or tumor.

Ovarian cancer can invade, shed, or spread to other organs. When ovarian Invade, A malignant ovarian tumor can grow and invade organs next to the ovaries, such as the fallopian tubes and uterus. When ovarian cancer shed, Cancer cells can shed from the main ovarian tumor. Shedding into the abdomen may lead to new tumors forming on the surface of nearby organs and tissues. The doctor may call these seeds or implants. When an ovarian cancer Spreads, Cancer cells can spread through the lymphatic system to lymph nodes in the pelvis, abdomen, and chest. Cancer cells may also spread through the bloodstream to organs such as the liver and lungs.

When cancer spreads from its original place to another part of the body, the new tumor has the same kind of abnormal cells and the same name as the original tumor. For example, if ovarian cancer spreads to the liver, the cancer cells in the liver are actually ovarian cancer cells. The disease is metastatic ovarian cancer, not liver cancer. For that reason, it is treated as ovarian cancer, not liver cancer. Doctors call the new tumor "distant" or metastatic disease.

One of the biggest causes of ovarian cancer is a family history. A family history of one affected relative increases the risk of having ovarian cancer. Hereditary ovarian cancer occurs with two or more affected first degree relative, a mother or sister. Even though, we have no control over our family history, we can prevent ovarian cancer by adopting early preventive strategies. These interventions include vaccination, aggressive screening with physical exams, blood tests and ultrasound. Unfortunately many women don’t seek help until the disease has begun to spread, but if detected at its earliest stage, the five-years survival rate is more than 93 percent.
Symptoms of ovarian cancer:

Early ovarian cancer may not cause obvious symptoms. But, as the cancer grows, symptoms may include:

- Pressure or pain in the abdomen, pelvis, back, or legs
- A swollen or bloated abdomen
- Nausea, indigestion, gas, constipation, or diarrhea
- Feeling very tired all the time
- Less common symptoms include:
  - Shortness of breath
  - Feeling the need to urinate often
  - Unusual vaginal bleeding (heavy periods, or bleeding

Treatment methods of ovarian cancer include

- Local therapy
- Intraperitoneal chemotherapy
- Systemic chemotherapy
In Conclusion, The symptoms related to ovarian cancer often go misdiagnosed in the early stages of the disease, because many of the common symptoms are also associated with other less serious conditions. Unfortunately, this is why ovarian cancer goes undiagnosed until it is in the latent and more serious stages of the disease, which is when there are more symptoms observed due to the pressure caused by the cancer growth. Ovarian cancer occurs when malignant cells grow in one or both of the ovaries, and because it does not always occur in both ovaries, normal ovarian functions can be carried out which keeps ovarian cancer flying under the radar. Early diagnose is essential to keeping this disease treatable and under control, which is why recognizing the warning signs for ovarian cancer is important.