Welcome! Here's our agenda for today:

- What is ovarian cancer?
- What causes it?
- When does genetic testing come in?
- When are families at risk for ovarian cancer?
- What are the treatments?
- 3 things to remember

Together, Standing Up to Ovarian Cancer

DETERMINING FAMILY RISK

Dr. Joseph Ivy
Highlands Oncology Group
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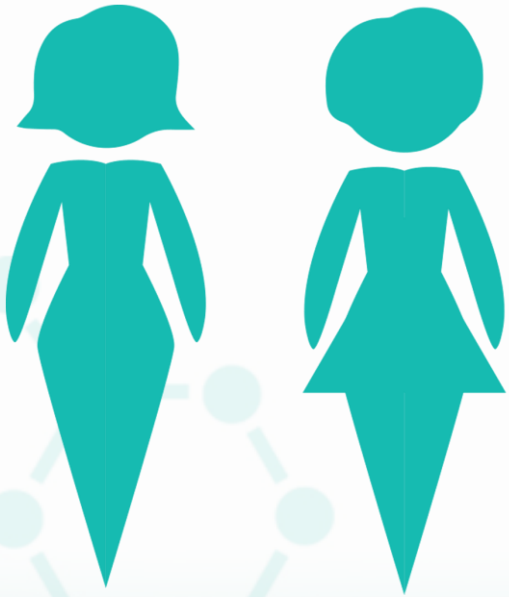
What is ovarian cancer?

Ovarian cancer develops when some cells in the body grow out of control

- Damaged or abnormal cells can divide without stopping, and they may eventually create growths called tumors
- Cancer can begin in almost any area of the body, including the ovaries

Cancer can vary greatly from person to person



- Even though 2 people may get cancer in the same location, such as the ovaries, they may have 2 completely different experiences with their disease
- The more we know about a person's specific type of cancer and risk factors, the better we can diagnose and potentially treat it
- Metastatic ovarian cancer (cancer that has spread to other organs) can carry additional symptoms that differ from those present at initial diagnosis
- Even with no symptoms, a family history of ovarian or breast cancer can warrant a discussion with your doctor about screening

Not all tumors are cancerous, but those that are can spread

- Most tumors that develop in the ovaries are *benign*, meaning they are not considered cancerous and will not *metastasize*, or spread
- *Malignant* ovarian tumors are cancerous and can cause tumors to grow in other parts of the body

Ovarian cancer by the numbers

- In 2016, it is estimated that there will be about 22,280 new diagnoses of ovarian cancer
- Ovarian cancer is the fifth most common cause of death from cancer in woman and the most deadly cancer of the female reproductive system
- All woman are at risk of developing ovarian cancer, but certain factors can increase or decrease the risk
- 20%-25% of woman with diagnosis of ovarian cancer have an inherited family risk of developing cancer

All ovarian cancer is classified by grade and by stage

- *Grade:* How much a tumor resembles normal tissue on a scale of 1 to 3
- *Stage:* How far the cancer has spread in a patient's body on a scale of 1 to 4
- Grade and stage help inform doctors how severe the cancer is—and how to treat it

The stages of ovarian cancer

- *Stage I*: The cancer is only within 1 or both ovaries or fallopian tubes and has not spread to other organs or tissues
- *Stage II*: The cancer is in 1 or both ovaries or fallopian tubes and has spread to other organs within the pelvis
- *Stage III*: The cancer has now spread beyond the pelvis or to the lymph nodes
- *Stage IV*: The cancer has spread to the inside of the spleen, liver, lungs, or other organs

What causes ovarian cancer?

Risk factor: something that increases a person's chance of getting cancer

- Risk factors may be things that we are exposed to during our lives or part of our genes from the moment we're born
- Risk factors don't guarantee that someone will or will not get cancer

External risk factors happen during the course of our lives:

- Age (older women have a higher risk)
- Reproductive history (infertility increases risk)
- Birth control (abstaining from oral contraceptives increases risk)

Internal risk factors can occur in our genes:

- Mutations in certain genes, such as *BRCA1* and *BRCA2*, create a high risk of ovarian cancer
- These mutations can occur spontaneously or be inherited from family members

Why should women with ovarian cancer get genetic testing?

Genetic testing is an important part of the ovarian cancer journey

- A genetic test means that DNA is collected from a blood or saliva sample to be sent to a laboratory
- This sample will be tested for possible mutations that can increase the risk of developing ovarian cancer
- Genetic counselling is recommended before and after any genetic test for an inherited cancer syndrome to discuss certain topics, such as medical implications and family risk

There are several benefits to knowing if you have a genetic mutation

- If you have a family history of cancer, but don't have cancer, knowing about a genetic mutation can prompt proactive cancer screenings
- If you have a diagnosis of cancer, discovering a genetic mutation can influence your treatment plan and inform family risk
- If your cancer comes back, uncovering a genetic mutation can open up other potential treatment options that specifically target mutations

All women with ovarian, fallopian tube, or peritoneal carcinoma should get genetic testing

- 3 medical advocacy organizations recommend *BRCA* testing for all women with ovarian cancers, including the National Comprehensive Cancer Network (NCCN), American Society of Clinical Oncology, and Society of Gynecologic Oncology
- If you weren't tested at diagnosis, know that there is no "wrong" time to get tested
- Talk to your doctor about genetic testing if you have ovarian cancer

"The NCCN Guidelines also recommend that all patients with ovarian cancer, Fallopian tube cancer, or primary peritoneal cancer be referred for genetic risk evaluation"

Genetic testing may reveal a mutation in key genes related to ovarian cancer: *BRCA*

- When *BRCA* genes do not work properly, abnormal cells are more likely to form and spread
- Mutations in the *BRCA1* and *BRCA2* genes account for about 15% of all ovarian cancers
- *BRCA* genes normally help prevent cancer by repairing damaged DNA—an important part of keeping cells normal and unaltered
- It's possible for woman with *BRCA* mutations to develop a recurrent cancer, meaning their cancer has come back after treatment
- Other hereditary genes are also associated with a higher risk of ovarian cancer, such as *PTEN*, *STK11*, and *MUTYH*

Knowing about *BRCA* mutations can help doctors treat cancer

- Cancer cells with a harmful mutation in *BRCA* genes may be more sensitive to anticancer agents
- If a woman tests positive for a *BRCA* mutation, her doctor may be able to give her certain treatments that specifically target a cause of her cancer and help temporarily slow its progression
- If a woman tests negative for a *BRCA* mutation and her close relative is known to have one, then she does not carry a *BRCA* mutation
- If a woman tests negative for a *BRCA* mutation, but her family history suggests otherwise, it's possible that she has a mutation that is not yet known

Knowing your *BRCA* status could help determine your eligibility for certain treatments

When are families at risk for ovarian cancer?

Genetic testing also reveals a family's risk of ovarian cancer

- Certain *BRCA1* and *BRCA2* mutations called germline mutations can be inherited from a person's mother or father—and passed along to his or her children
- These mutations raise the risk of developing ovarian cancer
- Germline testing is used to find germline mutations, which can help inform treatment decisions

Getting tested can help families

- A woman with ovarian cancer may opt for a genetic test for *BRCA 1 and 2* mutations to help inform her family members about their own risk for developing cancer
- A healthy woman who has a *BRCA* mutation may choose to begin early cancer screenings, because detecting ovarian cancer early can increase the chance of survival

If you have ovarian cancer, family history may warrant genetic testing

- If you are living with ovarian cancer, and you have a family history of ovarian cancer, talk to your doctor about getting tested for a *BRCA* mutation
- Your doctor may recommend a genetic test for *BRCA 1 or 2* mutations

What are the treatments for ovarian cancer?

Surgery is the main treatment for ovarian cancer

- The goal is to remove as much tumor tissue from the body as possible.
  This can include removal of the ovaries and uterus

Other treatments may be necessary

- If the cancer returns in other parts of the body, or if surgery cannot remove all tumor tissue, there are other treatment options available
- *Chemotherapy:* Uses drugs to treat cancer, sometimes through the bloodstream to reach all areas of the body
- *Radiation Therapy:* Uses high energy X-rays or particles to kill cancer cells

Some treatments are specific to certain patients

- *Hormone Therapy:* Uses hormones or hormone-blocking drugs to fight cancer
- *Targeted Therapy*: Uses infusions or pills to block specific pathways that kill cancer cells
- Certain types of hormonal and targeted therapies work by using particular hormones or genes in the body
- Genetic testing can help determine if these treatment options are appropriate for a particular patient

3 things to remember

3 things for women with ovarian cancer to remember

1. **Get genetic testing.** All women with ovarian cancer should get tested. Finding out about a genetic mutation early on may help identify potential treatment options and family risk
2. **Inform your family.** If you have a *BRCA* mutation, others in your family may have it, too—meaning they may be at higher risk for certain cancers, including breast, ovarian, pancreatic, and prostate
3. **Spread the word.** Help spread the word about early detection in families. Early detection of ovarian cancer is proven to increase the chance of survival. Get tested–not only for yourself, but for your family

Together let's stand up to ovarian cancer!

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