


Gynecologic Oncology Team Approach to Patient Care



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Learning Objectives

- ◆ Develop an understanding of gynecologic cancers
- ◆ Identify risk factors for gynecologic cancers
- ◆ Identify screening and/or signs and symptoms that can lead to a diagnosis of gynecologic cancers
- ◆ Access a personal risk assessment tool
- ◆ Understand general treatment of endometrial, ovarian and cervical cancer

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Teachable Moments

- ◆ Seizing the opportunity, by making the time and effort to impart knowledge to our patients.
- ◆ The goal being to increase awareness and provide education, in order to save lives.

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Gynecologic Oncology Cancer Foundation Poll

- ◆ 800 women
- ◆ Nearly half (46%) were not aware of ANY risk factors for developing a gynecologic cancer
- ◆ 19% could not name any test for female reproductive cancers
- ◆ 54% believe they are at personal risk for developing a gynecologic cancer
- ◆ 58% are not aware of any factors that can lower their personal risk

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Team Approach to Gynecologic Cancers

- ◆ Team
 - Gynecologic Oncologist
 - Nurse Clinician
 - Advanced Practice Providers
 - Pathologist
 - Radiation Oncologist
 - Pharmacist
 - Social Services
 - Palliative Care

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Let's get oriented

The diagram shows a frontal view of the female reproductive system. The central organ is the pear-shaped uterus, which is divided into the upper 'Body of uterus' and the lower 'Cervix'. The inner lining is the 'Endometrium', and the muscular wall is the 'Myometrium'. Two fallopian tubes extend from the upper corners of the uterus to the ovaries. The vagina is shown at the bottom, leading from the cervix.

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Estimated Number* of New Cancer Cases and Deaths by Sex, US, 2020

	New Cases	Deaths
Cervix	13,800	4,290
Uterine	65,620	12,590
Ovary	21,750	13,940
Vulva	6,120	1,350
Vagina & other genital	6,230	1,1450

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Origin, Stage and Grade

- ◆ **ORIGIN:**
defines where the cancer started, determines treatment.
- ◆ **STAGE:**
defines the extent or spread of the disease. Different treatment modalities for localized versus metastatic (spread) of disease.
- ◆ **GRADE:**
defines how the cancer cells look under the microscopic. Grade 1,2,3 from the least aggressive to most aggressive (grade 3).

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What is screening?

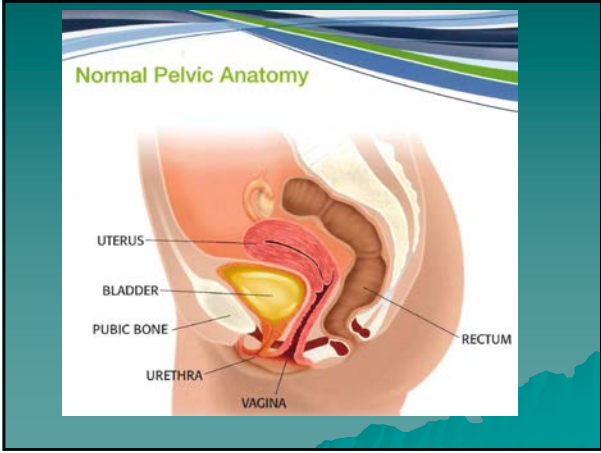
- ◆ Strategy used to detect a disease in individuals without signs or symptoms of that disease. Screening tests are performed on those without any clinical indication of disease.
- ◆ The intention of screening is to identify disease in a community early, thus enabling earlier intervention and management in the hope to reduce mortality and suffering from a disease.
- ◆ Although screening may lead to an earlier diagnosis, not all screening tests have been shown to benefit the person being screened.
- ◆ Overdiagnosis, misdiagnosis, and creating a false sense of security are the hazards of inappropriate screening.
- ◆ A test used in a screening program, must have good specificity in addition to acceptable sensitivity.

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Screening in Gynecologic Oncology

- ◆ Cervix- Pap smear is 90% effective
- ◆ Endometrial- Pap smear can be effective
- ◆ Ovarian- No accurate screening tools

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Endometrial Cancer

- ◆ In the U.S., cancer of the endometrium is the most common gynecologic cancer
- ◆ 65,620 new cases in 2020.
- ◆ Lifetime risk is about 1/41.
- ◆ Average at diagnosis ~ 60 years
- ◆ Endometrial cancer is more common in Caucasians, but African American women are more likely to die from it.
- ◆ Most of these cancers are found early and have a 5-year survival rate of over 90%.
- ◆ Prognosis for any single woman depends on the stage of her cancer as well as several other factors.

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What is a Risk Factor ?

A risk factor is anything that raises your chance of getting a disease.

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Endometrial Cancer Risk factors

- ◆ Obesity greater than 50 lbs over ideal body weight (10x)
- ◆ Postmenopausal women
- ◆ Menopause after age 52 (2.4x)
- ◆ Lack of children (2x)
- ◆ Hypertension (2x)
- ◆ Diabetes (2.8x)
- ◆ Estrogen replacement without progesterone (7x)
- ◆ History of pelvic radiation therapy (8x)
- ◆ Women who do not ovulate
- ◆ Diet and Exercise

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Who is at Highest Risk to be Diagnosed with Endometrial Cancer



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Symptoms of Endometrial Cancer

- ◆ Abnormal spotting or bleeding
- ◆ Abnormal spotting or bleeding
- ◆ Abnormal spotting or bleeding

No screening test, Pap may be helpful

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POSTMENOPAUSAL BLEEDING ETIOLOGY

FACTOR	%
HRT	27
Atrophic endometrium	21
Endometrial cancer	15
Endometrial polyp	15
Atrophic vaginitis	10
Cervicitis	9
Cervical cancer	3

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Diagnostic test for Endometrial carcinoma

- ◆ Pap Smear
- ◆ Endometrial biopsy
- ◆ D & C

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Pitfalls in Diagnosis

- ◆ “Change in life” bleeding
- ◆ Bleeding due to hormones
- ◆ Reliance on Pap smear
- ◆ Delay in endometrial sampling

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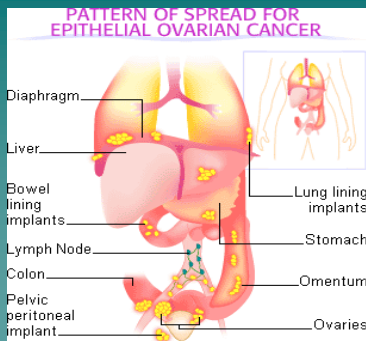
Treatment of Endometrial Cancer

- ◆ Surgical removal of Uterus, cervix, tubes and ovaries
- ◆ Assessment of lymph nodes in the pelvis and aorta
- ◆ Based on surgical findings
 - Surgery may be sufficient
 - High risk patients may receive postoperative radiation therapy and/or chemotherapy

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“Ovarian cancer”

Primary Peritoneal, Fallopian tube carcinomas



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Ovarian Carcinoma

- ◆ Estimated 21,750 new cases in 2020
- ◆ Lifetime risk is about 1 in 71.
- ◆ To date there are no effective screening methods.
- ◆ 75% of ovarian cancers are diagnosed as stage III and IV.
- ◆ Most are 55 or older. It is slightly more common in white women than African-American women
- ◆ If ovarian cancer is found (and treated) before the cancer has spread outside the ovary, the 5-year survival rate is 93%. However, less than 20% of all ovarian cancer is found at this early stage.

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Ovarian Cancer Signs and Symptoms

- ◆ Abdominal bloating
- ◆ Pelvic or abdominal pain or pressure
- ◆ Difficulty eating or feeling full quickly
- ◆ Urinary symptoms – urgency, frequency
- ◆ Change in bowel habits

If symptoms persist for more than a few weeks, see a gynecologist

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CA-125 Tumor Marker

- ◆ Elevated in approximately 80% of advanced staged ovarian cancers
- ◆ Elevated in *less than 50%* of early stage ovarian cancers
- ◆ CA-125 is NOT useful for screening!
- ◆ Can be elevated in a number of benign conditions including endometriosis, fibroids, pregnancy, hepatitis, pelvic inflammatory disease, menses, peritonitis, recent abdominal surgery
- ◆ Can be elevated in other malignancies including breast, colon, pancreas, lung, endometrial

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Risk Factors for Ovarian Cancer

- ◆ Hereditary: BRCA1, BRCA2 gene mutation
- ◆ Age- most ovarian cancers develop after menopause
- ◆ Obesity- higher death rates with ovarian cancer
- ◆ Nulliparous women are at increased risk
- ◆ Family history of breast, ovarian or colon cancer
- ◆ Personal history of breast cancer

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Protective Effects Against Ovarian Cancer

- ◆ Oral contraceptive use for greater than five years
- ◆ Tubal ligation
- ◆ Multiparous women

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Screening?

- ◆ CA-125 is not a screening tool for ovarian cancer and should not be used as such
- ◆ 15% ovarian cancers are hereditary – family history of breast/ovarian should be evaluated for the need for genetic counseling
- ◆ Any patient diagnosed under the age of 50 should be offered genetic counseling

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Types of Ovarian Carcinomas

- ◆ **Epithelial tumors** start from the cells that cover the outer surface of the ovary.
- ◆ **Germ cell tumors** start from the cells that produce the ova (eggs).
- ◆ **Stromal tumors** start from connective tissue cells that hold the ovary together and produce the female hormones estrogen and progesterone.

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Diagnosis of Ovarian Carcinoma

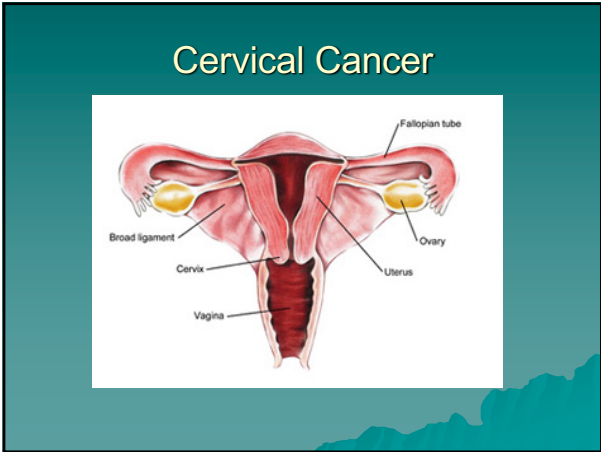
- ◆ Suspected based on suspicious findings
 - Vague GI, abdominal, pelvic symptoms
 - Enlarged ovary, pelvic/abdominal mass, ascites
 - Ultrasound, CT scan characteristics
- ◆ Usually diagnosed at surgery

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Treatment of Ovarian Carcinoma

- ◆ Goals of surgery
 - Diagnosis (frozen section)
 - Staging: search for spread
 - “Debulking”: remove as much tumor as possible
- ◆ Postoperative chemotherapy
- ◆ Survival at 5 years
 - Stage I 90%
 - Stage III-IV 30-50%

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Cervical Carcinoma

- ◆ Third leading cause of cancer death for women in the world
- ◆ Five year survival rates by stage, range from 92% for women with local disease to 55% with regional spread and 14.5% with distant spread

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Cervical Cancers


- ◆ Human Papilloma Virus (HPV) causes cervical cancer
- ◆ HPV is sexually transmitted
- ◆ 80% start in the squamous cells that cover the surface of the exocervix.

- ◆ Cervical cancer could be nearly eliminated
 - IF women had appropriate Pap Smear screening
 - Were vaccinated for HPV

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Heroes

◆ Dr. George Papanicolaou



Saving millions of lives of women around the world by early detection of cancer of the cervix

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Pap Smear

- ◆ Dr. Papanicolaou founder of exfoliative cytology and microscopic examination of cells shed from the surface of the body
- ◆ Pap smear enabled detection of cellular abnormalities before cancer becomes invasive
- ◆ The cervical cancer death rate declined by 74% between 1955 and 1992, in large part due to the effectiveness of Pap smear screening.
- ◆ About 55 million Pap tests are performed each year in the United States. Of these, approximately 3.5 million (6 percent) are abnormal
- ◆ Between 60% and 80% of American women with newly diagnosed invasive cervical cancer have not had a Pap smear in the past 5 years

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Who should get a Pap smear

ACOG Guidelines (Highlights)

Test	Age <21	Age 21-24	Age 25-29	Age 30-65	Age >65
Pap	Not recommended for screening	Screen every 3 years	Screen every 3 years	Screen every 3 years	Screening should be discontinued if patient has had adequate negative prior screening results and no history of CIN+. See ACOG Practice Bulletin No. 168 for management of patient with history of CIN+.
HPV	Not recommended for screening	Refer to high-risk HPV when Pap is ASCUS is acceptable	Refer to high-risk HPV is preferred when Pap is ASCUS	Screen every 5 years if both HPV and Pap are negative.	
HPV genotyping	Not recommended for screening	Not recommended for screening	Not recommended for screening	If Pap is normal and HPV positive, reflex to HPV genotyping	If Pap is normal and HPV positive, reflex to HPV genotyping
Ct/Ng	If 24 years of age or younger and sexually active	If 24 years of age or younger and sexually active	If 25 years of age and older and have risk factors	If 25 years of age and older and have risk factors	Not recommended for screening

Note: ACOG guidelines address frequency at which cervical cancer and STD testing should be ordered based on test results. Clinicians should determine the appropriate frequency for their patients.

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Risk Factors for Cervical Carcinoma

- ◆ Women sexually active before age 16
- ◆ Women with multiple sexual partners
- ◆ Smoking
- ◆ Obesity
- ◆ African Americans
- ◆ Low socioeconomic status
- ◆ Certain strains of HPV
- ◆ HIV patients
- ◆ Hx DES exposure

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Human Papilloma Virus

- ◆ What is HPV?
- ◆ Should I get the HPV vaccine? [Learn More](#)
- ◆ HPV is the most common sexually transmitted infection (STI). HPV is a different virus than HIV and HSV (herpes). There were about 43 million HPV infections in 2018, many among people in their late teens and early 20s. There are many different types of HPV. Some types can cause health problems including genital warts and cancers. But there are vaccines that can stop these health problems from happening.
- ◆ infected.

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How is HPV Spread

You can get HPV by having vaginal, anal, or oral sex with someone who has the virus. It is most commonly spread during vaginal or anal sex. HPV can be passed even when an infected person has no signs or symptoms.

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HPV transmission

Anyone who is sexually active can get HPV, even if you have had sex with only one person. You also can develop symptoms years after you have sex with someone who is infected. This makes it hard to know when you first became infected

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HPV

Almost females and males will be infected with at least one type of HPV at some point in their lives

- Estimated 79 million Americans currently infected
- 14 million new infections/year in the US
- HPV infection is most common in people in their teens and early 20s

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HPV in USA

Nearly 50% of high school students have already engaged in sexual (vaginal-penile) intercourse

- 1/3 of 9th graders and 2/3 of 12th graders have engaged in sexual intercourse
- 24% of high school seniors have had sexual intercourse with 4 or more partners

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Cancer Prevention

HPV vaccination is cancer prevention.

HPV is estimated to cause nearly 36,000 cases of **cancer** in men and women every year in the United States.

HPV vaccination can prevent more than 32,000 of these **cancers** from ever developing by **preventing** the infections that cause those **cancers**

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HPV and Cervical Cancer

- ◆ Cervical cancer is the most common HPV-associated cancer among women
- ◆ 500,000+ new cases and 275,000 attributable deaths world-wide in 2008
- ◆ 25.9% cervical cancers occur in women who are between the ages of 35 and 44
- ◆ 14% between 20 and 34
- ◆ 23.9% between 45 and 54

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Human Papillomavirus Vaccine

- ◆ Efficacy
 - High efficacy among females without evidence of infection with vaccine HPV types (>95%)
 - No evidence of efficacy against disease caused by vaccine types participants were infected with at the time of vaccination
 - Prior infection with one HPV type did not diminish efficacy of the vaccine against other vaccine HPV types

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HPV

- ◆ For most women HPV clears on its own, but for some it can develop to cancer
- ◆ There are 9 types of HPV that cause the most diseases
- ◆ HPV can cause genital warts
- ◆ In a study of female college students, 60% were infected with HPV during their first four years of college
- ◆ Many women with HPV were probably became infected in their teens and 20's

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Cervical Cancer Screening

- Revised in 2018
- Screening should begin at age 21 years
- Screen women 21 to 29 years of age with Pap test every 3 years
- Screen women 30 to 65 years of age with Pap test every 3 years; HPV test every 5 years; or Co-testing (Pap and HPV testing) every 5 years

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When to be Vaccinated for HPV

Routinely vaccinate boys and girls at 11–12 years of age*

- ◆ Catch-up those previously unvaccinated or are missing doses
- ◆ including:
 - ◆ • Females age 13 through 26 years
 - ◆ • Males age 13 through 21 years
 - ◆ • High-risk males age 22 through 26 years
- ◆ Men who have sex with men and immunocompromised men (including HIV-infected men)
- ◆ Males aged 22 through 26 years of age may be vaccinated

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Adverse Events Following Any Dose of HPV Vaccination

Adverse Event :	2vHPV	4vHPV	9vHPV
Pain	92%	84%	89%
Swelling	44%	29%	40%
Erythema	48%	25%	34%
Fever	13%	13%	5%
Nausea	7%	28%	4%
Headache	12%	55%	11%

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Diagnosis of Cervical Cancer

- ◆ Pap smear is a screening tool, **not** a diagnostic tool
- ◆ Diagnosis is made by biopsy

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Symptoms of Cervical Cancer

- ◆ None
- ◆ Unusual vaginal discharge
- ◆ Postcoital bleeding
- ◆ Painful intercourse

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Treatment for Cervical Cancers

- ◆ EARLY
Radical hysterectomy, performed by a gynecologic oncologist vs. pelvic radiation therapy.
- ◆ ADVANCED
Radiation therapy
Chemotherapy

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Teachable moments

- ◆ Evaluate family history
- ◆ Positive spin for treatments
- ◆ Teach the patient and her family about the nature of the disease

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Hey, how about you?

- ◆ Caring for ourselves
- ◆ Risk assessment tool

Women's Cancer Network
http://www.wcn.org/risk_assessment/
101 *brief* questions assessing your personal risk for a variety of cancers

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Challenges

We still have a *long* way to go on behalf of our gynecologic oncology patients



With knowledge and understanding we can help them in their journey

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UNC: always looking to celebrate a win



Thank you for being part of the team!

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