

OVARIAN CYST

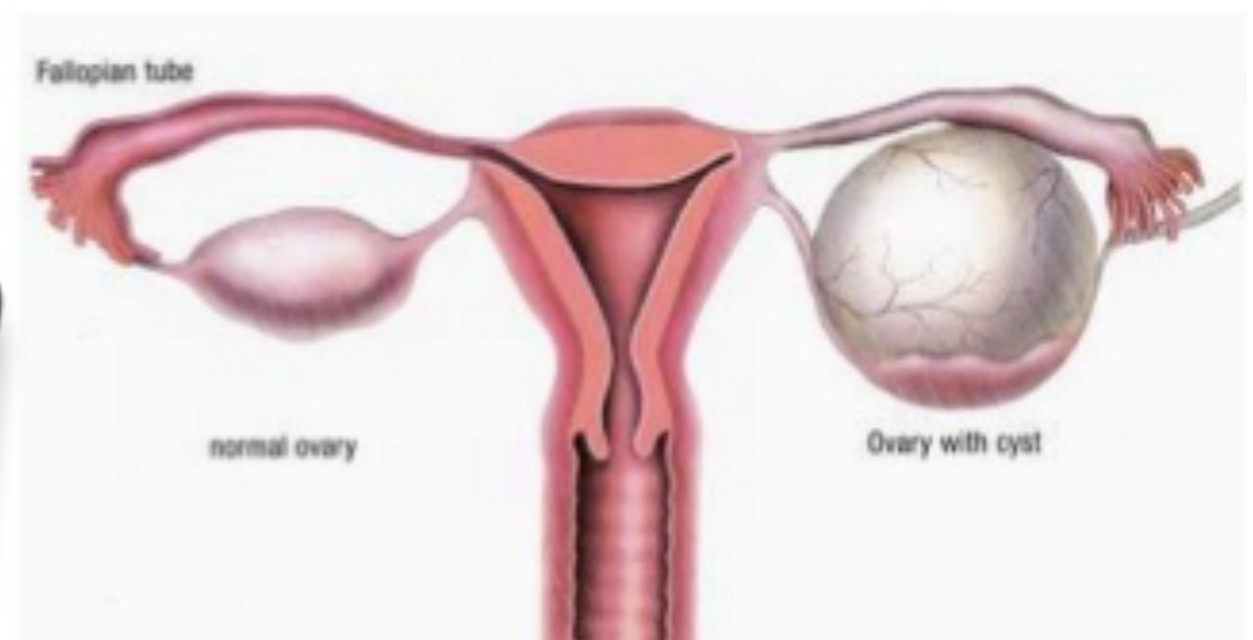
PREPARED BY
Dr.JUSTIN JEYA AMUTHA

OVARIAN CYST

ovarian cyst

Ovarian [cysts](#) are closed, sac-like structures within the ovary that are filled with a liquid or semisolid substance

Ovarian cysts are very common. They can occur during the childbearing years or after **menopause**. Most ovarian cysts are **benign** (not cancer) and go away on their own without treatment. Rarely, a cyst may be **malignant**



CLASSIFICATION

- ❖ **FUNCTIONAL OVARIAN CYSTS** – cysts that develop as part of the menstrual cycle and are usually harmless and short-lived; these are the most common type of ovarian cyst
- ❖ **PATHOLOGICAL OVARIAN CYSTS** – cysts that occur due to abnormal cell growth; these are much less common

What are the different types of ovarian cysts?

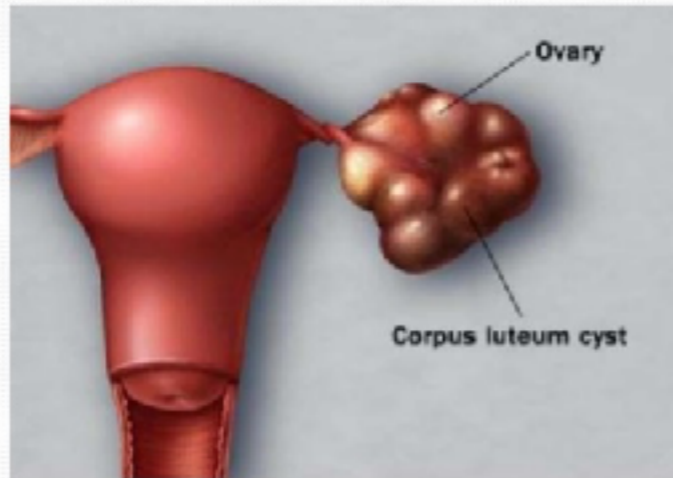


❑ functional cysts

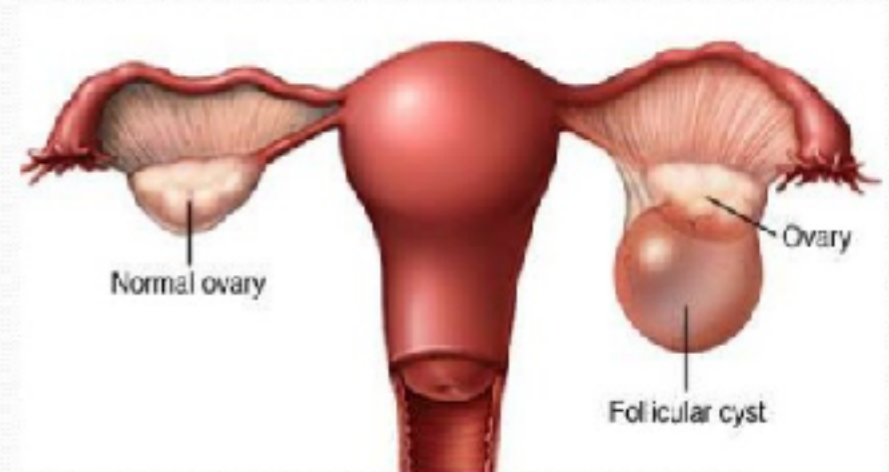
✓ Follicle cysts. In a normal menstrual cycle, the egg grows inside a tiny sac called a follicle. When the egg matures, the follicle breaks open to release the egg. Follicle cysts form when the follicle doesn't break open to release the egg. This causes the follicle to continue growing into a cyst. These cysts often have no symptoms and go away in one to three months.

✓ Corpus luteum cysts. Once the follicle breaks open and releases the egg, the empty follicle sac shrinks into a mass of cells called corpus luteum. Corpus luteum makes hormones to prepare for the next egg for the next menstrual cycle. Corpus luteum cysts form if the sac doesn't shrink. Instead, the sac reseals itself after the egg is released. Then fluid builds up inside. Most corpus luteum cysts go away after a few weeks, but they can grow to almost four inches wide. They also may bleed or twist the ovary and cause pain. And they are most commonly ruptured.

Corpus luteum cyst.

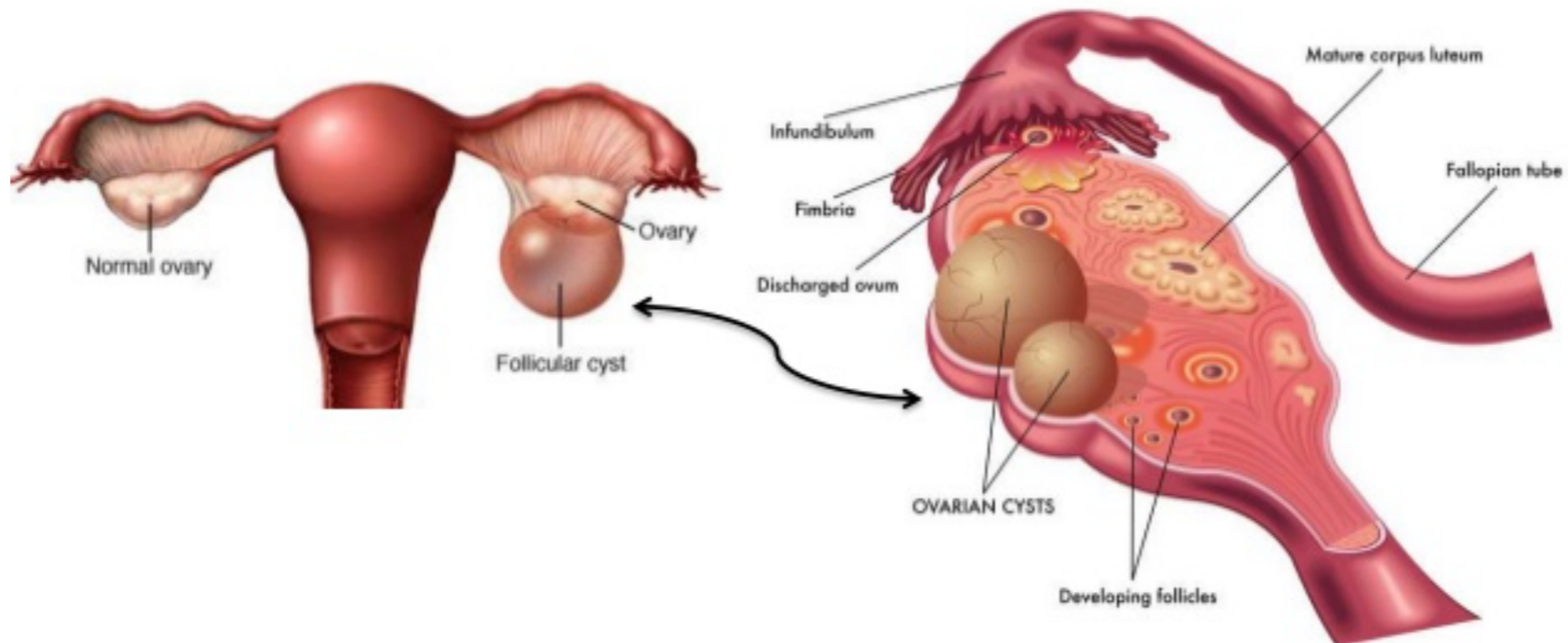


Follicular cyst.



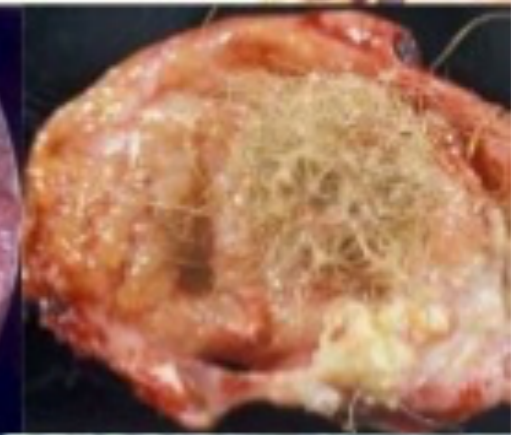
© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Follicle cysts.



Pathological ovarian cyst

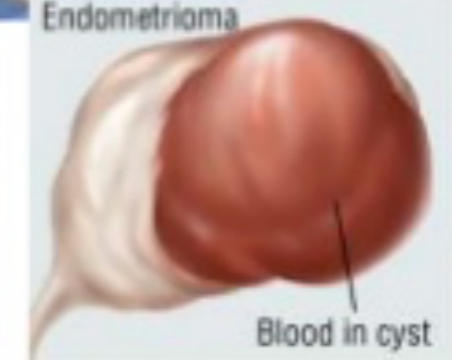
✓ dermoid cysts: sac-like growths on the ovaries that can contain hair, fat, and other tissue



✓ cystadenomas: noncancerous growths that can develop on the outer surface of the ovaries



✓ endometriomas: tissues that normally grow inside the uterus can develop outside the uterus and attach to the ovaries, resulting in a cyst



PATHOLOGICAL CYST

Dermoid cysts.



Cystadenomas.



Endometriomas.



Pathological cyst



CLASSIFICATION

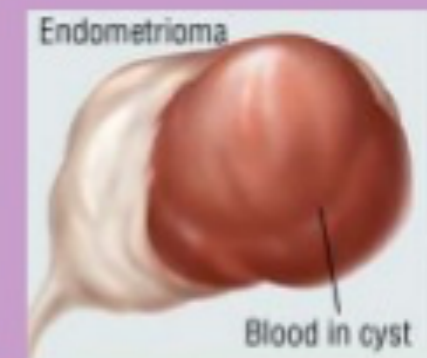
- *Dermoid Cysts :*
 - Dermoid cysts may be present from birth but grow during a woman's reproductive years.
 - These cysts may be found on one or both ovaries.





CLASSIFICATION

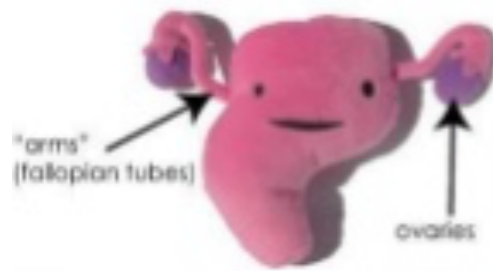
- Endometriomas :
 - Endometriomas are ovarian cysts that form as a result of endometriosis (a condition in which tissue similar to that is normally found in the uterus is found outside of the uterus, usually in the ovaries, fallopian tubes etc...).
 - This tissue responds to monthly changes in hormones. Eventually, a cyst may form as the endometrial tissue continues to bleed with each menstrual cycle.
 - These cysts are sometimes called “chocolate cysts” because they are filled with dark, reddish-brown blood.





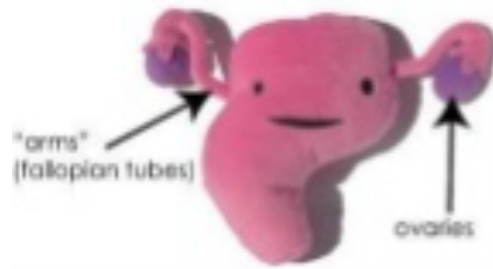
RISK FACTORS

- Risk factors for ovarian cyst formation include the following:
 - Infertility treatment - Patients being treated for infertility by ovulation induction with gonadotropins or other agents, such as clomiphene citrate or letrozole, may develop cysts as part of ovarian hyperstimulation syndrome
 - Pregnancy - In pregnant women, ovarian cysts may form in the second trimester, when hCG levels peak^[5]
 - Hypothyroidism - Because of similarities between the alpha subunit of thyroid-stimulating hormone (TSH) and hCG, hypothyroidism may stimulate ovarian and cyst growth^[8]
 - Maternal gonadotropins - The transplacental effects of maternal gonadotropins may lead to the development of neonatal and fetal ovarian cysts^[9]
 - Cigarette smoking - The risk of functional ovarian cysts is increased with cigarette smoking; risk from smoking is possibly increased further with a decreased body mass index .
 - Tubal ligation - Functional cysts have been associated with tubal ligation sterilizations



SYMPTOMS

- Benign cysts can cause pain and discomfort related to pressure on adjacent structures, torsion, rupture, and hemorrhage (within and outside of the cyst). Morbidity also includes menorrhagia, an increased inter menstrual interval, dysmenorrhea, pelvic discomfort, and abdominal distention. Benign cysts rarely cause death.
- Ovarian cysts, and more specifically corpus luteal cysts, can rupture, causing hemo peritoneum, hypotension, and peritonitis. This can be exacerbated in women with bleeding dyscrasias, such as those with von Willebrand disease and those receiving anticoagulation therapy.
- Ovarian torsion can complicate ovarian cysts and can result in ovarian infarction, necrosis, infertility, premature ovarian menopause, and preterm labor



SYMPTOMS

- Malignant ovarian cystic tumors can cause severe morbidity, including the following:
 - Pain
 - Abdominal distension
 - Bowel obstruction
 - Nausea
 - Vomiting
 - Early satiety
 - Wasting
 - Cachexia
 - Indigestion
 - Heartburn
 - Abnormal uterine bleeding
 - Deep venous thrombosis
 - Dyspnea

Others

SIGNS & SYMPTOMS

- ❖ **abdominal bloating or swelling**
- ❖ **painful bowel movements**
- ❖ **pelvic pain before or during the menstrual cycle**
- ❖ **painful intercourse**
- ❖ **pain in the lower back or thighs**
- ❖ **breast tenderness**
- ❖ **nausea and vomiting**

Cont...

When a cyst ruptures from the ovary, there may be

- ❖ **severe or sharp pelvic pain in lower abdomen in one side.**
- ❖ **fever**
- ❖ **faintness or dizziness**
- ❖ **rapid breathing**

Diagnosing an ovarian cyst

INVESTIGATIONS

- **History collection**
- **Physical examination**
- **Ultrasound scan, CT scan, MRI.**
- **Blood test: CA-125 blood test** : to screen for ovarian cancer
- **Pregnancy test** : A positive pregnancy test result may suggest the patient has a corpus luteum cyst.
- **Laparoscopy**





DIAGNOSIS

- As most ovarian cysts present no signs or symptoms, they frequently go undiagnosed. This also makes it difficult to accurately estimate incidence and prevalence of the condition. Sometimes, even without symptoms, a cyst may be diagnosed during an unrelated pelvic examination or ultrasound scan.
- In determining a diagnosis, doctors need to know:
 - The shape of the cyst.
 - The size of the cyst.
 - The composition of the cyst - is it filled with solid, fluid or both? In most cases fluid-filled cysts are not cancerous. Some may require further tests to find out.



DIAGNOSIS

- The following diagnostic tests may also be ordered:
 - **Ultrasound scan** - A wand-like scanner probe (transducer) is placed on the abdomen, over where the ovaries are. Sometimes the probe may be placed inside the vagina. In both cases, the doctor is observing the ovaries on a video screen. This test can help the doctor determine whether there is a cyst, and whether it is solid, filled with fluid (or both).
 - **Blood test** - if there is a tumor present blood levels of CA125 (a protein) will be elevated. High CA125 levels could also mean the patient has ovarian cancer. If a woman develops an ovarian cyst that is partially solid she may have ovarian cancer. High CA125 levels may also be present in other conditions, including endometriosis, uterine fibroids or pelvic inflammatory disease.



DIAGNOSIS

- **Pregnancy test** - a positive result may suggest the patient has a corpus luteum cyst.
- **Laparoscopy** - a thin, lighted instrument (laparoscope) is inserted into the patient's abdomen through a small incision (skin cut). If the doctor spots an ovarian cyst he/she may also remove it there and then.



TREATMENT

- **Watchful waiting** (observation) - sometimes watchful waiting, also known as observation is recommended, especially if the woman is pre-menopausal and she has a small functional cyst (2cm to 5cm). An ultrasound scan will be carried out about a month or so later to check it, and to see whether it has gone.
- **Birth control pills** - to reduce the risk of new cysts developing in future menstrual cycles, the doctor may recommend birth control pills. Oral contraceptives also reduce the risk of developing ovarian cancer.



TREATMENT

- **Surgery** - if there are symptoms, the cyst is large, does not look like a functional cyst, is growing, or persists through two or three menstrual cycles, the doctor may recommend that the patient have it surgically removed.
 - **Laparoscopy** (key hole surgery) - two small cuts are made in the lower abdomen and one in the belly button. Gas is blown into the pelvis to raise the wall of the abdomen, away from the internal organs. A small tube with a light on the end (a laparoscope) is inserted into the abdomen. The surgeon can see the internal organs. With very small tools the surgeon is able to remove the cyst through the small incisions. In some cases a sample (biopsy) of the cyst is taken to determine what type it is. In most cases the patient can go home the same day. This type of surgery does not usually affect a woman's fertility, and recovery times are much faster.

Surgical management

✓ Laparoscopy (keyhole surgery)





TREATMENT

- **Laparotomy** - this is a more serious operation and may be recommended if the cyst is cancerous. A longer cut is made across the top of the pubic hairline, giving the surgeon better access to the cyst. The cyst is removed and sent to the lab. The patient usually has to remain in hospital for at least a couple of days.

Cont..

✓ Laparotomy



Complication

- Infertility
- Ovarian torsion.



© Mayo Foundation for Medical Education and Research. All rights reserved.

