and post menopausal bleeding in menopause. Call-Exner Bodies: granulose cells taken micro follicular pattern.

2. Theca Cell T.M: Usually benign solid unilateral and 10% bilateral. Hard, mobile,

often with as cites and hydrothorax in RT side like in fibroma. Meigs Syndrome: ascites and pleural effusion in 1%. Theca cells contain lipid rich contents.

3. Sertoli –Ledig T.M (Androblastoma): Low grade malignancy, unilateral, may produce androgen lead to sign of virilazation, 1-3% bilateral.

- Ovarian Metastases: 8-10% presented with adenxal mass,

is metastatic from primary site in GIT or breast, tubes, vulva, vagina, and cervix.

Kruken berg T.M: metastatic tumors from primary site in stomach, colon or breast, contain signet-ring cells with

peripheral nucleus and mucous spongy or vacuolated cytoplasm which stain for mucin.

Spread:

1. Direct: peritoneal fluid flowing to the lymphatic channel on the under surface of diaphragm carries malignant cells to omentum,

peritoneal surface of smalal and large bowel, liver, parietal peritoneum and surface of diaphragm.

2. Lymphatic: pelvic and par aortic lymph node and to nodes in neck or inguinal region.

3. Haematogenous spread: occur late, main area involve are liver, lung, bone and brain.

Presentation:

- Asymptomatic
- Pain due to:

I. Torsion.

II. Rupture.

III. Infection.

- Abdominal swelling.
- Pressure effects.
- Hormonal effects: Estrogen.
  - Androgen → hirustism, acne, virilism with deepening of voice.
  - Thyroid hormone → thyrotoxicosis

D.DX: According to pain:

1. Ectopic pregnancy.
2. Spontaneous abortion.
3. PID.
4. Meckles diverticulum.
5. Diverticulitis.
6. Appendicitis.

Abdominal swelling:

1) Pregnant uterus.
2) Fibroid uterus.
3) Full bladder.
4) Distended bowel.
5) Colo-rectal ca.

Pressure Effects:

A. UTI.

B. Constipation.

Hormonal Effects: from all causes of irregular bleeding.

Genetic Predisposing: BRCA1 GENE on chromosome 17. BRCA2 on chromosome 13 Q, associated with breast / ovarian syndrome.

Women with family HX of ovarian ca:

1. Annular ovarian U/S+ color flow Doppler.
2. CA 125 every 6-12 moths.
3. Prophylactic oophorectomy +TAH for high risk group at 45 yr. + complete her family.

Staging of Tumours: (FIGO Stage)

I. Growth limited to ovaries.

a. Tumor in ovary no ascites, capsule intact, no tumour on surface.

b. As in a but tumour on both ovaries.

c. Either Ia or Ib, but as cites with cancer cells or capsule rupture or tumour on surface or positive peritoneal washing.

II. Growth on one or both ovaries with peritoneal implants within pelvis:

a. Extension to uterus or fallopian tubes.

b. Extension to other pelvic organs.

c. As in II a or II b but with findings in Ic.

III. Tumour in one or both ovaries with peritoneal implants outside the pelvis or retroperitoneal node metastases. Superficial liver metastases equal to stage III.

IV. Tumour involving one or both ovaries with distant metastases, malignant pleural Fluid, parenchyma liver metastases. Most epith. T.M is not discovered until stage III and IV.

MX:

1. History → Gynecological HX, family HX and general HX.
2. Examination general and specific.

Investigations:

- Trans vaginal and Tran's abdominal U/S.
- Color flow Doppler U/S.

3. C.T scans.
4. MRI.
5. U/S –guided diagnostic ovarian cyst aspiration not recommended due to:

- False –ve. rate 71%.
- False +ve. rate 2%.
- Risk of disseminating malignant cells along the needle track or into peritoneal cavity.

Radiological Ix:

1. Chest X-ray → pleural effusion.
2. Abdominal X-ray → calcification.
3. I.V.U.
4. Barium enema if Bowel symptoms.
5. C.T scan.

Blood Tests:

- Hb=anemia.
- WBC=↑=Infection.
- Platelet count, clotting screen.
- Renal function test.
- Liver function test.

Serum Markers:

a. CA 125.

b. BHCG.

Oestradiol Level ↑ in:

1. Physiological follicular cyst.
2. Sex cord stroma tumours.

- Androgen ↑ in Sertoli –ledge T.M.
- Alpha –feto protein ↑ in yolk sac T.M.

R. Depend on:

I. Severity of the symptoms.

II. Age of patient.

III. Risk of malignancy.

IV. Her desire for further children.

- R-of asymptomatic patients

Conservative Treatment:

1. If unilateral T.M.
2. Unilocular cyst without solid elements.
3. Premenopausal women size of tumors no more than 10cm.

4. Post menopause women: 2-6cm.
5. Normal CA 125.
6. No free fluid or masses suggesting omental lack or matted bowel loops. In all may be need follow up by monthly U/S +CA125 for at least 6 months.

Laparoscopy indications:

1. Uncertainty about nature of mass.
2. Simple ovarian cyst.
3. If u\s show no solid component.
4. Age less than 35 yr.
5. Endometrioma.

- Therapeutic U/S guided cyst aspiration: it can perform in young women with unilateral, unilocular, thin wall cyst, if surgery is contraindicated, if co-existing medical problems or dens pelvic adhesions envelop the ovaries.

Advantage:

1. Avoidance of surgery.
2. Reduction in cyst accidents.
3. Cytological assessment of aspirated fluid is performed.

Advantage of laparoscopy:

1. Less post operative pain.
2. Shorter hospital stay.
3. Quicker return to normal activities.
4. Less adhesion formation.

Disadvantage of laparoscopy:

1. Spillage of cyst contents.
2. Incomplete excision of the cyst wall.
3. Unexpected histological DX of malignancy.

Treatment:

I. Primary Surgery.

a. Total abdominal hysterectomy.

b. Bilateral sapling- oophorectomy.

c. Infracolic omentectomy.

d. Appendectomy.

e. Pelvic +Para-aortic lymph adenectomy.

f. Bowel surgery when indicated.

II. Conservative primary surgery:

a. Young nulliparous women with stage Ia.
b. No evidence of synchronous endometrial cancer.
c. Unilateral sapling - oophorectomy.

III. Interval debunking surgery:

a) Women with bulky disease after primary surgery.

b) Must responds after 2-4 courses of chemotherapy.

*Chemotherapy resumed after surgery.

Second –lock surgery: at the end of chemotherapy, now not used.

Principle of ovarian surgery:

a) All visible cancer should be removed.

b) The primary routes of spread should be assessed.
c) Staging of cancer should be performed accurately.
d) Bowel and other organ resection should be performed to achieve the removal of all visible cancer.

If border line tumours, ovarian cystectomy or oophorectomy adequate in young women.

Hysterectomy +bilateral sapling - oophorectomy in old women.

Chemotherapy it's given to:

1. Prolong clinical remission and survival.

2. Palliation in advanced and recurrent disease (stage Ic, II-IV)

A. **Cisplatin** →very toxic:

1. Nausea and vomiting.
2. Permanent renal damage can be prevented with adequate hydration and IV. Fluids.

3. Nausea and vomiting.
4. Electrolyte disturbance like hypo Mg.

B. **Carboplatin:** effective less S/E rare toxicity.

C. **Taxol (Paclitaxel):** Standard treatment Cause sensory neuropathy and neutropenia are common with higher doses.