Obstetrics and Gynecology
Malignant disease of the myometrium

University Of Fallujah
College Of Medicine

Lecture : 6

Stage : 5th Year

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Department: Obstetrics and Gynecology

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Learning objectives

1. Review types, incidence and main risk factors for endometrial cancer.

2. Know the main modalities of treatment.

3. Understand the managements of the other less common malignancy related to myometrium.

Malignant diseases of uterus

Endometrial cancer

Incidence

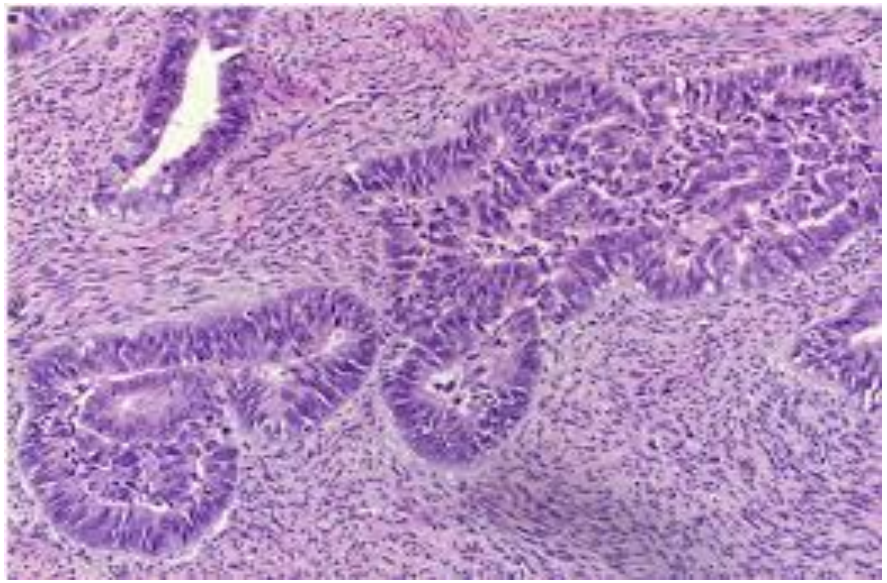
Endometrial cancer is the most common gynecological malignancy affecting UK women with an incidence of 95 per 100,000 women.

The mean age of diagnosis is 62 years.

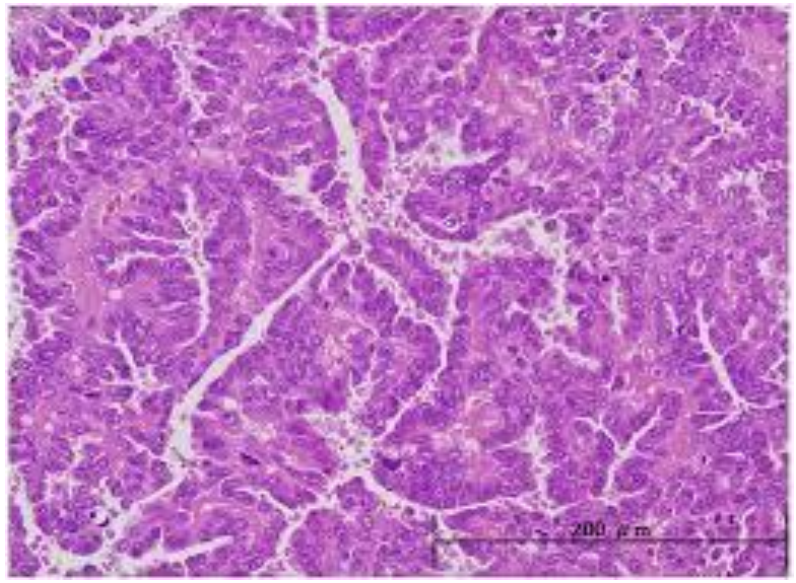
Although cancers can be diagnosed in women throughout their reproductive life. Approximately 25% of endometrial cancers occur before the menopause.

Classification

1. Type 1 tumours are endometrioid adenocarcinomas that are oestrogen driven and arise from a background of endometrial hyperplasia.
2. Type 2 tumours include high-grade serous and clear cell histological subtypes and arise from an atrophic endometrium.



Endometrial adeno CA



Clear cell CA

Etiology

The risk factors for type 1 endometrial cancer are well established. Most of these reflect an increased lifetime exposure to oestrogen. Oestrogen causes endometrial cells to proliferate when it is unopposed by progesterone.

Therefore, hyperoestrogenic states increase endometrial cancer risk, while cyclical or continuous progestin-containing hormone treatments reduce risk.

Factors that increase endometrial cancer risk

- Nulliparity.
- Late menopause above 52.
- Unopposed estrogen therapy.
- Obesity
- Diabetes
- Tamoxifen therapy
- Family history: The most common association is with Lynch syndrome, an autosomal dominant condition. The lifetime risk of endometrial cancer in women with Lynch syndrome is 40–60%.

Factor that protect against endometrial cancer

1. Hysterectomy.
2. Combined oral contraceptive pills.
3. Progesterone based contraception including injectables.
4. Intrauterine device including cu-IUD and LNG-IUS.
5. Pregnancy.
6. Smoking.

Clinical features

1. Postmenopausal bleeding (PMB)
2. Abnormal bleeding is the most common presenting complaint in premenopausal women too, who variously complain of heavy, irregular or intermenstrual bleeding (IMB).
3. Abdominal pain, urinary dysfunction, bowel disturbances or respiratory symptoms.
4. Sometimes endometrial cancer is picked up incidentally on a cervical smear.
5. Signs of endometrial cancer include bleeding from the cervical os on speculum examination and a bulky uterus on bimanual pelvic examination. In most women with endometrial cancer, however, pelvic examination is completely normal.

Diagnosis and investigation of PMB

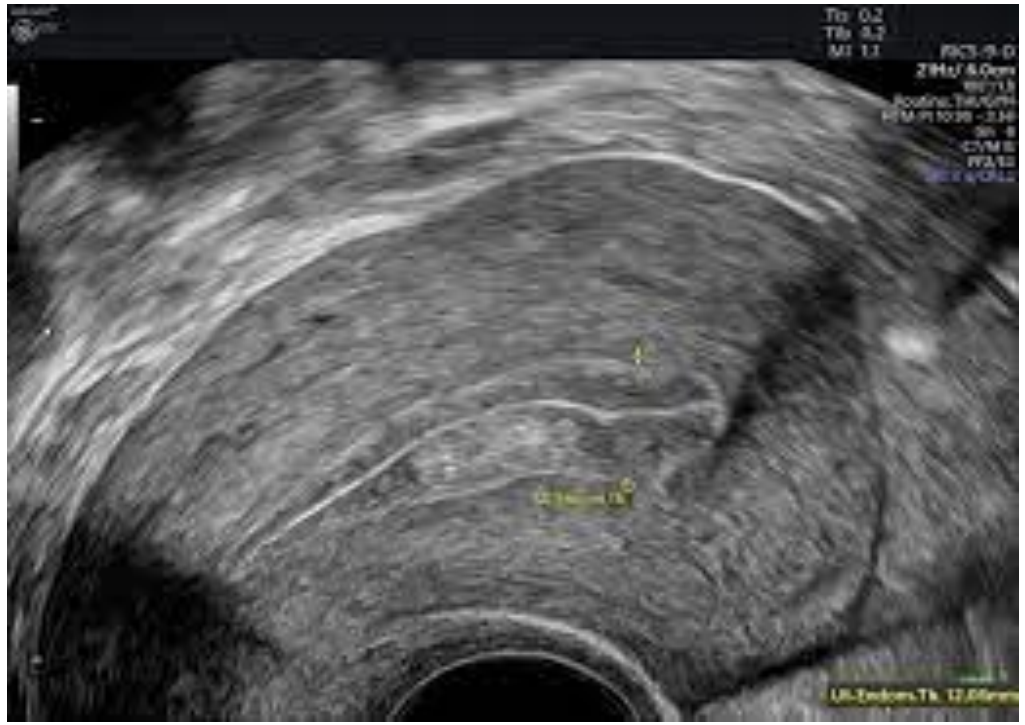
The mainstays of diagnosis are TVUSS, hysteroscopy and endometrial biopsy.

TVUSS allows a quick and accurate assessment of endometrial thickness. If the endometrium measures less than 4 mm, cancer is very unlikely and further investigation is not needed. Any measurement greater than this requires further evaluation by hysteroscopy and/or biopsy.

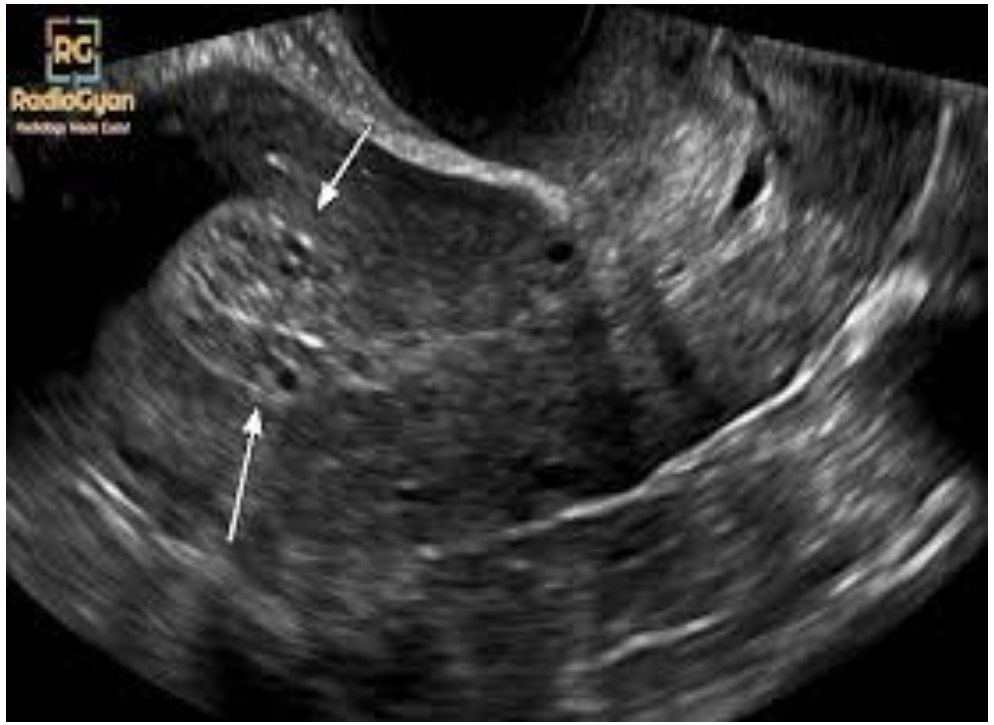
Hysteroscopy is performed in the outpatient setting under local anaesthetic where possible. A general anaesthetic is required in patients with cervical stenosis or where hysteroscopy is poorly tolerated.

The histology report describes the type and grade of tumour.

Complex hyperplasia with atypia is a premalignant condition that frequently coexists with low-grade endometrioid tumours of the endometrium. The risk of progression to endometrial cancer is 25– 50%.



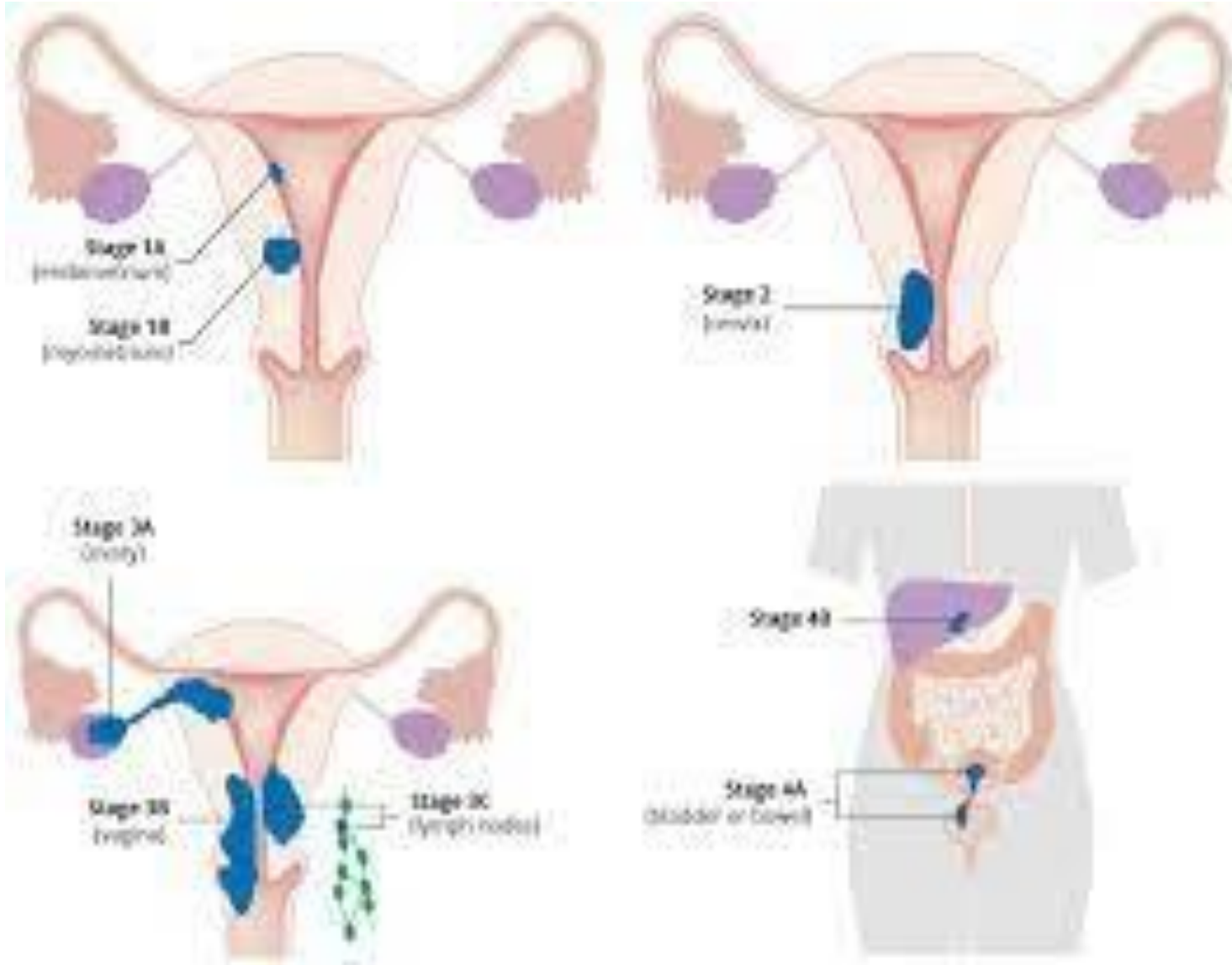
Thin endometrium by TVUS



Thick endometrium by TVUS

FIGO staging

I	Confined to uterine body
IA	Less than 50% invasion
IB	More than 50% invasion
II	Tumour invading cervix
III	Local or regional spread of tumour
IIIA	Invades serosa of uterus
IIIB	Invade vagina and/or parametrium
IIIC	Metastases to pelvic and/or para-aortic LN
IV	Tumour invade bladder, bowel and distant metastasis


Stage 2
Stage 3A
Stage 4B
Stage 4A

Management

Surgery

Standard surgery is total hysterectomy and removal of both Fallopian tubes and ovaries (bilateral salpingo-oophorectomy, BSO). This can be performed abdominally or laparoscopically (total, vaginally assisted or robotically).

If the MRI suggests cervical involvement, a modified radical hysterectomy is performed, which also removes a cuff of vagina, paracervical and parametrial tissue to ensure adequate excision margins.

If the tumour is high grade (grade 3) or of type 2 histology, many centers perform pelvic and para-aortic node dissection because nodal disease (to either pelvis or para-aortic lymph node chains) is seen in one-third of patients.


a
b

Adjuvant treatment

Postoperative radiotherapy reduces local recurrence rate but does not improve survival.

Different units treat following surgery or only treat if the cancer recurs. Strategies include local radiotherapy to the vaginal vault over a short period of time (brachytherapy) for local disease, or brachytherapy combined with external beam radiotherapy for locally advanced disease (stage III).

Chemotherapy is given for advanced or metastatic disease, although there is currently little evidence to support its use.

Hormone treatment

Some women are not fit for surgery and others wish to avoid it for fertility-sparing reasons.

Treatment with high-dose oral or intrauterine progestins is successful for some women with complex atypical hyperplasia and low-grade stage IA endometrial tumours, but relapse rates are high.

Prognosis

The overall 5-year survival rate for endometrial cancer is 80%, although this varies depending on tumour type, stage and grade of tumour.

stage	5-years survival (%)
I	88
II	75
III	55
IV	16

Adverse prognostic features include:

- ❑ Advanced age
- ❑ Grade 3 tumours
- ❑ Type 2 histology
- ❑ Deep myometrial invasion
- ❑ Lymphovascular space invasion
- ❑ Nodal involvement
- ❑ Distant metastasis.

Sarcoma of uterus

These are rare tumours accounting for approximately 5% of all uterine cancers.

They classified into:

- pure sarcomas
- mixed epithelial sarcomas
- heterologous sarcomas.

The most common types are leiomyosarcomas and carcinosarcomas.

Pure sarcomas

This group includes:

- endometrial stromal sarcomas: occur in perimenopausal women presenting with irregular bleeding and a soft, enlarged uterus. The majority are low grade and surgery is the main treatment
- Leiomyosarcomas: are rare tumours of the myometrium. Rarely (0.75%), they are associated with malignant transformation of benign fibroids and present with a rapidly growing pelvic mass and pain. Preoperative diagnosis is difficult, but may be aided by MRI. The uterus is enlarged and soft on palpation. Surgery is the main treatment. Metastatic spread is usually vascular to distant sites, such as lung and brain.

Mixed epithelial sarcomas (carcinosarcomas)

This group of tumours, formerly known as malignant mixed Müllerian tumours, contain both carcinomatous and sarcomatous elements. The carcinomatous component is usually glandular and the sarcomatous component is homologous (endometrial, stromal and/or smooth muscle) or heterologous (tissues not normally found in the uterus, including bone, cartilage and skeletal muscle).

The majority present after the menopause and sometimes there is a history of previous pelvic irradiation. There is usually a history of PMB and a fleshy mass is often seen protruding from the cervix along with an enlarged soft uterus.

Treatment is surgery followed by postoperative radiotherapy. The 5-year survival is 73% if confined to the uterus, but only 25% if the tumour has spread outside the uterus.

Heterologous sarcomas

This rare group of tumours consists of sarcomatous tissue not usually found in the uterus, such as striated muscle, bone or cartilage.

The most common is rhabdomyosarcoma, which may present in children as a grape-like mass protruding from the cervix with a watery discharge.

Histology reveals primitive rhabdomyoblasts.

Recurrence rates are high with distant metastases.

Thank you