

Overview on Gynecologic Oncology

Dong-Ming Kuo, MD

Department of Obstetrics and Gynecology

Chang Gung Memorial Hospital

Gynaecological cancer : new cases and deaths per year in the UK

Site of malignancy	New cases per year	Deaths per year
Ovary	5000	4500
Cervix	4400	2200
Endometrium	4400	1100

Lifetime Incidence of Cancer

- **Breast** 7.1%
- **Ovary** 1.4%
- **Cervix** 1.3%
- **Endometrium** 1.1%.

Five-year Survival Rates In Gynaecological Cancer

- Ovary 25%
- Cervix 55%
- Endometrium 66%.

Vulvar Cancer

- 5% of GYN malignancies
- Post menopausal, >65y/o, obese, hypertension, DM
- Most common primary site : labial major
- Dx : punch Bx, LN : fine needle aspiration
- Tx : <2cm, wide excision(>1cm clear margin)
>2cm, Radical vulvectomy(<1mm invasion)
Radical vulvectomy+inguinal and femoral LN (>1mm invasion)
- R/T : recurrence or nodal disease(LN>3 or pelvic LN+)

Vulval carcinoma : staging

Stage I	Tumour confined to vulva and <2 cm diameter. No nodes palpable
Stage II	Tumour confined to vulva but >2 cm diameter. No nodes palpable
Stage III	Tumour extends to lower urethra, vagina, or anus, or to unilateral inguinal nodes
Stage IVa	Tumour involves upper urethra, bladder, rectum, pelvic side wall, or bilateral inguinal nodes
Stage IVb	Distant spread

Vulval carcinoma : prognosis

Stage	5-year survival
-------	-----------------

I	70%
---	-----

II	50%
----	-----

III	32%
-----	-----

IV	13%
----	-----

Improving The Outlook In Vulval Cancer

- Increased awareness of pruritus as a common presenting symptom
- Urgent biopsy of any suspicious lesion
- Close follow-up of at-risk groups such as those with lichen sclerosus and VIN
- Excision of all tumour with at least 1 cm margin of normal tissue
- Less radical surgery for early disease.

Vaginal Cancer

- Rare, 2% of GYN malignancies
- 2ndary spread from Cx Ca and EM Ca is more common
- Elderly women with PMB and discharge
- Most common site : upper post third, ulcer or polypoid
- Tx : R/T is preferred
- Survival : depends on stage

Pathology of Vaginal Cancer

- Squamous cell carcinoma
- Clear cell carcinoma
- Embryonal rhabdomyosarcoma
(sarcoma botryoides)
- Malignant melanoma.

Vaginal cancer : staging

- Stage I Tumour confined to vaginal wall
- Stage II Tumour involves subvaginal tissues, but not pelvic side wall
- Stage III Tumour extends to pelvic side wall
- Stage IV Tumour involves bladder or rectum, or has extended outside the pelvis

Vaginal carcinoma : survival

Stage	5-year survival
-------	-----------------

I	70%
---	-----

II	45%
----	-----

III	30%
-----	-----

IV	10%
----	-----

Cervical Cancer

- Usually over the age of 47.
- Etiology : HPV
- Screeing : Pap Smear
- Squamous carcinoma : 90%, Adenocarcinoma : most of the rest
- Direct invasion +LN meta, hematogenous spread is rare
- Symptoms occur when the tumor eroded into blood vessels or become infected
- Ia1 : cone, ATH; Ia2 : RAH+BPLD
- R/T : LN (+)
- Death result from uremia or cachexia

Risk Factors For Cancer Of The Cervix

- Early age at first intercourse
- Multiple sexual partners
- Sexually transmitted disease
- Smoking
- Low socioeconomic status.

Cervical carcinoma : staging

Stage Features

0 Pre-invasive disease (CIN)

Ia Superficial invasive cervical carcinoma (microinvasion)

Iai : up to 3 mm depth, < 7 mm wide

Iaii : depth 3-5 mm, < 7 mm wide

Ib Carcinoma confined to cervix

Ibi < 4 cm in size

Ibii > 4 cm in size

IIa Carcinoma extends onto upper vagina

IIb Carcinoma extends into parametrium, but does not reach pelvic side wall

IIIa Carcinoma extends onto lower vagina

IIIb Carcinoma extends to the pelvic side wall or cause ureteric obstruction

IVa Carcinoma involves bladder or rectum

IVb Distant blood-borne spread

Invasive Cervical Cancer Treatment

Advantages of surgery

- Preservation of ovarian function
- Prognostic information from histology
- Easier to detect recurrent disease

Complications of surgery

- Infection
- Bladder or ureteric injury
- Postoperative voiding problems
- Lymphocyst
- Thromboembolism

Advantages of radiotherapy

- Better tolerated by older women
- Major surgery avoided
- Useful in advanced disease

Complications of radiotherapy

- Vaginal stenosis
- Haematuria
- Dysuria
- Diarrhoea

Cervical carcinoma : 5-year survival by stage

Stage	5-year survival
-------	-----------------

I	80%
---	-----

II	50%
----	-----

III	30%
-----	-----

IV	5%
----	----

Endometrial Cancer

- A disease of postmenopausal women (median : 60,rare below 40)
- Tend to present at an early stage with PMB
- Better prognosis then Cx Ca and Ovarian Ca, but 25% die within 5 years of Dx
- Tx : Stage I : ATH+BSO+LN sampling , post OP R/T when poorly differentiated or penetrating the myometrium
Advanced stage : post OP R/T
Recurrent : palliative R/T, C/T

Malignant Tumours of The Uterus

Common

- Endometrial carcinoma

Rare

- Leiomyosarcoma
- Endometrial stromal sarcoma
- Mixed mesodermal tumour
- Gestational trophoblastic disease

Risk Factors for Endometrial Carcinoma

- Obesity
- Nulliparity
- Late menopause
- Unopposed oestrogen stimulation
- Diabetes mellitus

Endometrial carcinoma : staging

- Stage Ia Tumour confined to endometrium
- Stage Ib Tumour invades myometrium, less than 50% penetration
- Stage Ic Tumour invades myometrium, more than 50% penetration
- Stage II Tumour involves the cervix
- Stage III Spread to involve lymph nodes, uterine serosa, adnexae or vagina
- Stage IV Tumour involves bladder or rectum, or Spread out of pelvis

Endometrial carcinoma : 5-year survival by stage

Stage	5-year survival
I	75%
II	50%
III	30%
IV	10%

Trophoblastic disease : classification

Benign

- Hydatidiform mole
- Partial mole

Malignant(gestational trophoblastic disease)

- Invasive mole
- Choriocarcinoma

Gestational Trophoblastic Neoplasia (GTN)

- Benign hydatidiform moles, invasive mole, choriocarcinoma
- Tumor marker : β -hCG
- Incidence : 1/1500-2000 pregnancies.
- Increase in Asian women (Far East Asian > Asian Americans)
- \downarrow folic acid and β -carotene

Molar Pregnancy

- PIH < 24 wks, hyperemesis, hyperthyroidism, 1st trimester bleeding
- Uterus > dates, theca-lutein cysts, snowstorm appearance β -hCG \uparrow , no fetus, CXR R/O lung meta
- Suction D&C + Sharp D&C
- Serial β -hCG follow-up + effective contraception for 1 year

Invasive Mole

- May enter the myometrium or uterus and cause hemorrhage
- β -hCG titers tend to remain even after an evacuation
- Treat with hysterectomy
- Usually not associated with metastasis

Choriocarcinoma

- A malignant GTN
- Can display hematogenous spread to the lungs, vagina, brain, and GI tract
- Appears as : vaginal bleeding, hemoptysis (lung meta), dizziness (brain meta)and GI bleeding (GI meta)
- C /T : MAC (Methotrexate, Actinomycin-D, Cyclophosphamide)
- Follow the β -hCG titers during treatment

Ovarian tumours : classification by tissue of origin

Pathological type

- Epithelial tumours
- Sex cord tumours
- Germ cell tumours
- Metastatic tumours

Tissue of origin

Surface epithelium of the ovary

Sex cord cells of ovarian cortex

Primordial germ cells

Gastrointestinal or breast

Ovarian Cancer Epithelial in Origin 90%

- The most common cause of death from cancer of the genital tract .
- Peak at 60-70 years of age, Nulliparity, early menarche, late menopause .
- Oral pill offers protection .
- Familial and genetic origin : small percentage
- Death : cachexia 2ndary to chronic bowel dystunctim
- Dx : PV + sonar + Ca-125
- Tx : Ia : USO or ATH+BSO, Ib,Ic : ATH+BSO+C/T or R/T
Advanced : cytoreductive OP + C/T or R/T .

Ovarian cancer : spread

Method of spread

- Local infiltration
- Transcoelomic spread
- Lymphatic
- Blood spread

Site

Pelvic

Any peritoneal surfaces

Pelvic and para-aortic
lymph nodes

Lung, liver

Ovarian cancer : staging

Stage IA	Tumour confined to one ovary
Stage IB	Tumour involving both ovaries
Stage IC	Tumour on one or both ovaries, with ascites or positive peritoneal washings
Stage II	Tumour spread beyond the ovaries but confined to the pelvis
Stage III	Spread outside the pelvis but confined to the abdominal cavity . Retroperitoneal spread to pelvic or para-aortic lymph nodes
Stage IV	Distant spread

Symptoms of Ovarian Cancer

- Loss of appetite
- Weight loss
- Indigestion
- Abdominal bloating
- Pelvic discomfort
- Vaginal bleeding.

The Role Of Surgery In Advanced Ovarian Cancer

- Diagnosis
- Staging
- Cytoreduction of tumour masses
- Drainage of ascites
- Relief of bowel or urinary obstruction
- Second look laparotomy / laparoscopy

Ovarian cancer : 5-year survival by stage

Stage	5-year survival
I	70%
II	40%
III	20%
IV	5%

