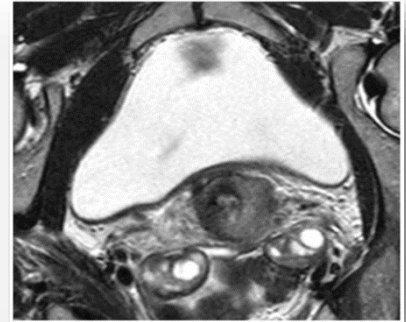


Welcome to the gynaecological oncology clinic. In this clinic you will see mainly patients being considered for chemotherapy and radiotherapy treatments for their tumours, and patients being followed up after treatment.

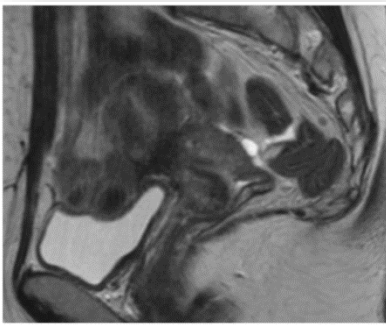
Cervical Cancer

- Majority is squamous carcinoma arising in transition zone of glandular & squamous cervix
- Caused by persisting infection by Human Papilloma Virus serotypes 16 & 18
- Major risk factors are markers for exposure (early intercourse, multiple partners)
- Other predisposing factors are smoking and immunodeficiency
- Asymptomatic women aged 25-64 are invited for cervical screening
- Aim is to detect pre-malignant disease - dysplasia or Cervical Intra-epithelial Neoplasia
- This is managed by cone biopsy or LLETZ – Large Loop Excision of Transition Zone
- Teenage girls are now vaccinated against HPV and rates of cervical SCC are likely to fall
- Adenocarcinoma and cell types are also seen



Axial MRI scan showing cervical cancer as non-concentric thickening of the cervix

Invasive Malignancy



Sagittal MRI showing cervical tumour and associated anatomy

- Presents with intermenstrual, post-coital or post-menopausal bleeding or vaginal discharge
 - Advanced disease with lymphadenopathy presents with back pain or obstructive renal failure. Staging uses the FIGO system (Fédération Internationale de Gynécologie et d'Obstétrique)
 - Investigations: MRI pelvis, CT abdomen/pelvis and EUA with cystoscopy
 - Locally advanced disease is treated with radical concomitant radiotherapy and chemotherapy
 - Small tumours confined to cervix can be managed by radical hysterectomy, but if at high risk of recurrence (eg close margins) will need chemo-radiotherapy post-operatively

- Radiotherapy comprises 5 weeks of daily external beam treatment to the whole pelvis
- The para-aortic lymph nodes are irradiated if they are at high risk of being involved
- Weekly low-dose cisplatin chemotherapy enhances the effect of radiotherapy
- Intensity-Modulated RadioTherapy (IMRT) can be used to reduce dose to organs at risk
- Acute toxicity includes skin reaction, fatigue, diarrhoea and dysuria.



Apparatus used for brachytherapy treatment

- There is a 5-10% risk of permanent damage to bowel and bladder function necessitating surgery
- External-Beam Radiotherapy is followed by image-guided intra-cavitary brachytherapy
- Hollow tubes are inserted into the vagina and uterus in theatre under general anaesthetic
- Up to four treatments are given in 48 hours, guided by MRI of the tumour & equipment in situ
- High-Dose Rate (HDR) radioactive sources are placed into the hollow tubes by computer-controlled equipment in a process known as remote afterloading
- Combined treatment achieves high local control rates even in advanced disease
- Recurrent disease in the pelvis may be salvaged by surgical exenteration
- Metastatic disease has a poor prognosis but may be palliated with systemic chemotherapy

Key learning points

- Even locally advanced disease can be cured with combined chemo-radiotherapy
- Brachytherapy enables dose escalation to the tumour & minimises normal tissue toxicity
- Treatment may lead to significant and permanent problems with bladder or bowel function

Endometrial Cancer

- Incidence rising with rates of obesity - commonest subtype is endometrioid
- Mainstay of treatment is total hysterectomy with bilateral salpingo-oophorectomy.
- Risk factors for relapse are high grade and myometrial invasion of over 50%
- Patients with both risk factors should be offered adjuvant radiotherapy to the whole pelvis
- This reduces the risk of recurrence but does not alter overall survival
- Patients at intermediate risk should be offered HDR brachytherapy to the vaginal vault alone.
- Other subtypes such as serous papillary and clear-cell have a worse overall prognosis
- Ongoing trials are investigating the role of post-operative chemotherapy

Vulval Cancer

- Typically squamous carcinoma the mainstay of treatment is surgical excision
- Traditional radical 'butterfly' vulvectomy with bilateral inguinal lymphadenectomy caused high rates of toxicity and modern surgical technique is wide-local excision
- There may be a role for sentinel-lymph-node biopsy for small tumours
- Risk of lymph node involvement correlates to depth of primary tumour invasion
- Adjuvant radiotherapy is recommended to the primary site if resection margins are close, and to the inguinal and pelvic lymph nodes if there is histological evidence of nodal involvement

Further Reading

Tan L, Shafi M & Earl H. Gynaecological Oncology. 2nd Ed. Cambridge University Press; 2009.