Imaging in Female Genital Tract cancer
- Ultrasound
- Computed tomography (CT)
- Magnetic resonance imaging (MRI)
Ultrasound

- Transabdominal
- Transvaginal
CT scan

- Oral contrast medium:
  - is given 1 hour prior to pelvic imaging to aid the differentiation of bowel loops from adnexal structures.

- Intravenous contrast medium is given to differentiate:
  - between vessels and lymph nodes,
  - to assess the enhancement pattern of a mass.
pelvic anatomy: excellent soft tissue contrast

3 plane: Axial and Sagittal and Coronal but may be supplemented by oblique images, particularly for the examination of the cervix or endometrium.

With IV Contrast
Carcinoma of the cervix and body of the uterus

- **Carcinoma of the cervix** is a malignancy arising from the cervix and is considered the third commonest gynaecologic malignancy.

- The diagnosis of carcinoma of the cervix
  - Cytology or biopsy
  - Physical examination
- In order to be radiographically visible, tumours must be at least stage Ib or above.
- MRI is the imaging modality of choice to depict the primary tumour and assess local extent.
MRI:
- Determine the extent of carcinoma of the cervix pre-operatively, because the extent (or tumour stage) determines whether the patient is managed with surgery, or with radiotherapy and chemotherapy.
- MRI is very accurate in assessing the local extent of the tumour.
- CT and MRI also enable detection of dilatation of the ureters in cases where the tumour has caused ureteric obstruction.
CT:
- Not very useful in assessment of the primary tumor
- Assessed distant metastatic disease
- Planning the placement of radiation ports, and guiding percutaneous biopsy

Ultrasound
- May be seen as a hypoechoic mass involving the cervix.
- Ultrasound does not play a role in the clinical assessment of suspected cervical carcinoma.
MRI - advanced cervix cancer invading the bladder
Endometrial carcinoma

- Endometrial carcinoma is generally considered the commonest gynaecological malignancy
Transvaginal ultrasound:

- *initial imaging investigation* of choice for patients presenting with the usual symptom of a postmenopausal bleed.
- A thickened endometrium requires endometrial sampling.
- Sonographic features are non-specific.
- Confirmation of the diagnosis is based on *histology*.
Endometrial carcinoma

- **CT**
  - CT has a role in assessing for distant metastases.

- **Pelvic MRI**
  - MRI is considered superior to CT for local staging. Contrast enhanced MRI imaging improves accuracy in detecting myometrial invasion.
The role of imaging in ovarian cancer:
- Detection
- Characterization
- Staging

**Ultrasound**
- This is often the first test done if a problem with the ovaries is suspected
- Ultrasound can be useful finding an ovarian tumor and seeing if it is a solid mass (tumor) or a fluid-filled cyst
Computed tomography (CT) scans

- staging of advanced ovarian cancer
- enlarged lymph nodes
- signs of cancer spread to liver or other organs
- signs that an ovarian tumor is affecting kidneys or bladder.
- used to biopsy a suspected metastasis
- Magnetic resonance imaging (MRI)
  - staging of advanced ovarian cancer
  - helpful to examine the brain and spinal cord
Thank you for your attention.