GYNAECOLOGICAL CANCERS

CERVICAL CANCER Cervical cancer is a cancer arising from the cervix(mouth of the womb). It is due to the abnormal growth of cells that have the ability to invade or spread to other parts of the body.

Worldwide, cervical cancer is both the 4th most common cause of cancer and the fourth-most common cause of death from cancer in women. This is about 8% of the total cases and total deaths from cancer. About 70% of cervical cancers occur in developing countries. In RSA is the 2nd most common female cancer in SA, 1 in 39 are diagnosed with cervical cancer in SA with an average of 7735 new cases and 4200 deaths annually
It is the leading cause of cancer related female deaths in the age between 15-44yrs. World wide it is more common in younger females with the highest incidence occurring in the 30-34 year age group and a further peak in those aged 80-84 years.85% of these tumours are squamous cell carcinoma, 10% adenocarcinomas and others are few rare types.

Some risk factors are:

- Sexual factors - HPV exposure and infection, multiple partners, early sexual intercourse (14 years old or younger), sexually transmitted diseases.
- Risk is reduced by 50% in those whose partner is circumcised (HPV prevalence is lower in circumcised males).
- Hormonal factors- oestrogen-progestagen oral contraceptives.
- Previous genital cancers
- Life style- cigarette smoking, both active and passive, increases the risk of cervical cancer. Among HPV-infected women, current and former smokers have roughly two to three times the incidence of invasive cancer. Passive smoking is also associated with increased risk, but to a lesser extent.
- Immune supression- autoimmune disease, HIV ect..

Cervical cancer symptoms & signs

- There may be no symptoms in the very early stage.
- cancer may be detected at cervical screening.
- Post-menopausal bleeding.
- Irregular bleeding in pre-menopausal women.
- Pain/discomfort during sexual intercourse or bleeding afterwards (post-coital bleeding).
- Foul smelling vaginal discharge.

- Pelvic pain.
- Bleeding after douching or after a pelvic exam is a common symptom of cervical cancer
- A mass inside the vagina can be felt
- In advanced disease, metastases may be present in the abdomen, lungs, or elsewhere.Symptoms of advanced cervical cancer may include: loss of appetite, weight loss, fatigue, pelvic pain, back pain, leg pain, swollen legs, heavy vaginal bleeding, bone fractures, and (rarely) leakage of urine or feces from the vagina.

- **Diagnosis of cervical cancer**

Investigations may include:

- Physical examination (including internal).
- Blood tests.
- Colposcopy: enables a more detailed examination of the cervix, tissue samples may be taken for analysis. If abnormal cells are detected a large loop excision of the transformation zone (LLETZ) may be performed. This involves cutting away the area of the cervix to remove them.
- Cone biopsy: this is a minor operation that involves cutting out a cone of tissue from the cervix (whole area of the cervical canal) and sending it for analysis.

Cervical cancer treatment

Depends on several factors:

- The type of tumour.
- The position of the tumour.
- The stage of the cancer.
- Age and general health.

Surgery

Surgery alone may be adequate to cure stage 1 disease. Surgical choice is dependant stage 1 sub-categories as well as whether reproduction in the future is desired or not.Surgery for early stage usually involves removing the cervix and uterus (hysterectomy) and may include removing the lymph nodes if the disease has spread into the tissues of the cervix.Post-operative radiotherapy may be advised to reduce the risk of recurrence.

Radiotherapy

Radiotherapy is also an effective treatment for early stage cervical cancer and may be used if the patient is unfit for surgery or if she declines it . A combination of chemoradiotherapy is the gold standard of treatment for all cancers above

stage 1. Also, radiotherapy may be advised post-operatively or in the palliative setting.
Radiotherapy can be given externally or internally, external radiotherapy (EBRT) being planned to treat the cervix, uterus and surrounding tissues if main treatment.
Internal radiotherapy(Brachytherapy) involves small radioactive sources being placed inside the vagina to give a high dose of radiation directly to the cervix and uterus.

Chemotherapy
Trials have shown that the combination of radiotherapy
and chemotherapy (chemoradiation) have improved the outlook for locally advanced disease.Chemotherapy increase the sensitivity of the cancer cells to radiotherapy.
In more advanced disease, chemotherapy may be used alone to treat disease that has spread to other parts of the body.

UTERINE CANCER

Facts and figures about uterus cancer

Uterine cancer is the 4th most common female cancer in RSA.
Age related, incidence rises sharply from the age of 40 years with 75% of cases occurring in the 40-74years age group, the highest incidence being in those 70-74 years of age. 95% of these tumours are adenocarcinomas.

Risk factors include:
Genetics
Nulliparous (not had children)
Overweight/obese, diabetes, lack of physical activity,
Hormonal factors - hormone replacement therapy, polycystic ovary syndrome PCOS, polyps, Parkinson's disease and breast cancer patients who have been taking tamoxifen long term.Longer than average oestrogen exposure, therefore an early menarche and/or late menopause will increase risk. Some oral contraceptives reduce the risk.

Uterus cancer symptoms

- Post-menopausal bleeding Irregular bleeding in pre-menopausal women.
- Heavier periods.
- Blood stained or watery vagina discharge.
- Pain/discomfort in pelvis, legs or back.
- Pain/discomfort during sex.

Diagnosis of uterus cancer

Investigations may include:

- Physical examination (including internal).
- Blood tests.
- Ultrasound scan (transvaginal).
- Biopsy - tissue samples will be taken for analysis (there are several different ways this may be carried out).

Uterus cancer treatment

Depends on several factors:

- The type of cancer.
- The stage of the cancer.
- Age and general health.

Surgery

Surgery is the main treatment and the extent of this will depend on the stage of the disease. In early stage the uterus will be removed (hysterectomy) and usually both ovaries and fallopian tubes, occasionally in younger women, one ovary may be left. This may be adequate to cure the diseas.In advanced cases, debulking surgery may be performed to remove as much of the cancer as possible to slow down it's progression.

Radiotherapy

Radiotherapy is also a definitive curative treatment in disease that is irresectable (unable to be surgically removed). It is often used post-operatively if a radical hysterectomy was required and/or there is thought to be a risk of recurrence. Radiotherapy may also be used to palliative symptoms in advanced disease. Radiotherapy can consist of a combination of external beam radiation and brachytherapy.

Chemotherapy

Chemotherapy may be given after surgery to reduce the risk of recurrence; this can be with radiotherapy or may be on its own. Chemotherapy is the treatment modality of choice in advanced /medtatstic disease.

Hormone therapy

Hormones may be prescribed for advanced cases or if the disease has recurred as it may help to shrink the tumour and control symptoms.

Ovarian Cancer

Ovarian Cancer is age related, rising sharply from 35 years of age, 75% are diagnosed in the 55+ years age group and an average 25% being 75+ years. 90% are epithelial tumours.

Risk factors
hormone replacement therapy (HRT), smoking, having a first degree relative diagnosed with ovarian cancer, family history of breast cancer, BRCA1 and BRCA2 gene mutation, being nulliparous (not had children), diabetes, endometriosis, previous breast cancer and being overweight/obese may also increase the risk.
Unfortunately, many of these patients are diagnosed at an advanced stage.

Ovarian cancer symptoms

- Pain in the lower back/abdomen.
- Swollen abdomen/feeling bloated.
- Irregular bleeding in pre-menopausal women.
- Post-menopausal bleeding.
- Urinary frequency and/or urgency.
- Changes in bowel habits (constipation or diarrhoea).
- Painful sexual intercourse.
- Weight gain/loss.
- Loss of appetite.
- Unexplained fatigue.

Diagnosis of ovarian cancer
Investigations may include:

- Physical examination (including internal).
- Blood tests (will include CA 125 tumour marker).
- Ultrasound scan.
- CT scan.
- Image guided biopsy- using CT or ultrasound a needle is passed into the ovary to take tissue samples.
- Laparoscopy/Laparotomy- tissue samples will usually be taken during this.

Ovarian cancer treatment
Depends on several factors:

- The type of tumour.
- The grade of the tumour.
- The stage of the cancer.
- General health.

Surgery
Surgery is used in most cases of ovarian cancer. Surgery is used as a diagnostic, staging and treatment modality.Post-operative chemotherapy (adjuvant) will be advised if there is a risk of recurrence due to stage or grade of the tumour. In all cases where the disease has spread from the ovary it is

classified as advanced disease.Surgery may be used to remove as much of the cancer as possible (debulking surgery) depending on the patient's general health and stage of the disease.Post-operative chemotherapy would be advised in the majority of cases either to try and cure the disease or control it.

Radiotherapy
Radiotherapy is rarely used to treat ovarian cancer. Occasionally used to treat recurrences after surgery and chemotherapy. It is usually palliative to treat symptoms such as bleeding or pain.

Chemotherapy
Chemotherapy is commonly used post-operatively. In all cases where the staging is 1C or above and the tumour is high grade, chemotherapy will be utilised. Chemotherapy is the mainstay of advanced mestatstaic disease. It can also be recommended if the tumour has recurred.

Biological therapy
Bevacizumab is a type of monoclonal antibody that blocks the protein to the blood vessels of the cancer cells and consequently stops their growth; this is being used alongside chemotherapy for some patients and is thought to be improving the length of survival.

VAGINAL CANCER
Vaginal cancer

Age related, incidence rises sharply from 45 years of age, 70% are diagnosed in women 60+ years and on average 35% arise in those over 75 years of age. 90% are carcinomas (80% of these are squamous cell carcinomas and 14% adenocarcinomas).

Risk factors
HPV exposure/infection, previous cervical cancer, possibly HIV infection and there are a small proportion of adenocarcinomas that are clear cell carcinomas and these are linked to women who were exposed to the drug diethylstiboestrol (DES) in utero, due to their mothers being prescribed this in pregnancy to reduce the risk of miscarriage. The highest incidence of these cases is in the late teen/early twenties age group.

Vaginal cancer symptoms
- There may be no symptoms, 20% are detected at a very early stage during routine cervical screening.
- Post-menopausal bleeding.

- Irregular bleeding in pre-menopausal women.
- Blood stained or foul smelling vaginal discharge.
- Bleeding after sexual intercourse (post-coital bleeding).
- Pain during sexual intercourse.
- Persistent irritation in the vagina.
- Lump or growth in the vagina that is sometimes detected during an internal pelvic examination.

More advanced symptoms may be:

- Constipation.
- Swelling in the legs (oedema).
- Persistent pelvic pain or pain when passing urine.
- Urinary frequency and/or blood in the urine.

Many of these symptoms can be caused by other conditions such as infections.

Diagnosis of vaginal cancer

Investigations may include:

- Cervical screening.
- Physical examination (including internal and possibly rectal).
- Colposcopy and biopsy.
- Chest X-ray.
- Ultrasound scan.
- CT scan.
- PET-CT scan.
- MRI scan.

Vaginal cancer treatment

Depends on several factors:

- The type of tumour.
- The stage of cancer.
- Age and general health.

Surgery

Surgery is frequently used to treat vaginal cancer; in cases of pre-cancerous vaginal intraepithelial neoplasia (VAIN), laser surgery is an effective treatment. The extent of surgery depends on the stage of the disease, in early stage a wide local excision to remove the tumour and surrounding tissue will be performed. In some cases part or all of the vagina will be removed (reconstruction may be possible) or if the disease has spread outside of the vagina, a radical hysterectomy may be advised.

Radiotherapy

Radiotherapy may be the main treatment, may be post-operative or may be given in combination with chemotherapy. It may be external or internal radiotherapy.

External radiotherapy will involve treating the pelvis with external radiation where internal radiotherapy can be interstitial or intracavity. Interstitial is the implantation of radioactive wires or seeds into the tumour for a few days, intracavity is where a radioactive source is placed in the vagina for a specifically calculated period of time.Internal radiotherapy is sometimes given after a course of external radiotherapy to give an additional dose of radiation to the site of the primary tumour.
Radiotherapy is the treatment of choice if the patient is unfit for surgery and for some younger women. It is sometimes advised after surgery to reduce the risk of recurrence, particularly if malignant cells are found in the lymph nodes at surgery or if it was not possible to remove all the disease.In advanced cases, palliative radiotherapy may be prescribed to help shrink the cancer and relieve symptoms.

Chemotherapy
Chemotherapy combined with radiotherapy (chemoradiation) is proving to be effective and it is thought that the chemotherapy makes the cancer cells more susceptible to radiation. Chemotherapy is used in caner that has spread to other systems and organs.

Vulval cancer

Vulval Cancer is the 20th most common female cancer in the UK, accounting for 0.7% of all new female cancer cases.
Age related, approximately 73% diagnosed are in those aged 60+ years and an average of 46% arise in those aged over 75 years. 85% are squamous cell carcinomas and 10% are malignant melanomas.

Risk factors
Smoking, HPV exposure/infection (the younger patients tend to be HPV positive), genital warts, previous cervical cancer or having a first degree relative that has been diagnosed with cervical cancer, HIV infection.

Vulval cancer symptoms

- Persistent irritation, burning sensation or soreness of the vulva.
- Lump, swelling, wart-like growth or ulcer on the vulva.
- Thickened, raised red, white or dark patches of skin.
- Post- menopausal bleeding or blood stained discharge.
- Irregular bleeding or blood stained discharge in pre-menopausal women.
- Tenderness or pain in the area.
- Burning sensation when passing urine.
- Lump in the groin.
- Changes in a mole on the vulva.

Some of these conditions can be caused by other conditions such as infection.

Diagnosis of vulval cancer

Investigations may include:

- Physical examination.
- Biopsy: tissue samples will be taken for analysis.
- Chest X-ray.
- Cytoscopy: examination of the inside of the bladder.
- Proctoscopy: examination of the rectum.
- CT scan.
- MRI scan.

Vulval cancer treatment

Depends on several factors:

- The type and size of the tumour.
- The stage of the cancer.
- Age and general health.

Surgery

Surgery is usually the first treatment for vulval cancer, in precancerous vulval intraepithelial neoplasia (VIN) laser surgery or a combination of laser and regular surgery is an effective treatment.
In early stage disease, surgery will usually involve removing the affected tissue with some of the surrounding healthy skin. It is likely that some of the groin lymph nodes will be removed during surgery for analysis.In advanced cases, part or all of the vulva may need to be removed (vulvectomy), reconstruction is sometimes possible. More advanced cases may require more extensive surgery.

Radiotherapy

Radiotherapy may be the main treatment if surgery is not possible. Also, it may be advised post-operatively if the lymph nodes are found to contain malignant cells or if the cancer was found to be deeper than 5cms or not adequately cleared at surgery to reduce the risk of recurrence.Occasionally it is used to reduce the tumour prior to surgery. In advanced disease it may be used to relieve symptoms.

Chemotherapy

Chemotherapy is used if the disease has spread to other parts of the body. Its also used in combination with radiotherapy