**Cancer**

* Not just one disease but many.
* All result from a situation where a normal cell differentiation goes wrong.
* Abnormal mass of tissue is called a tumour.
* Results from uncontrolled division of cells.
* Don’t appeaar or act the same as normal cells.
* Can easily be identified with a microscope.

Malignant tumours:

* Cancerous cells are able to spread around the body – a process called metastasis.
* Causes secondary cancers to develop in other parts of the body.

Benign tumours:

* Cells are unable to spread around the body – capsule forms around them, making them easier to remove.
* Can grow and press on surrounding tissues – can become dangerous e.g., brain tumours.

Causes of cancer:

* Long exposure to external factors called carcinogens.
* Carcinogens.
* UV radiation.
* X-rays.
* Ionising radiation – May result in the onset of leukemia.
* Viruses and HPV causes cervical cancer in women.
* Chemical carcinogens.

Prevention of cancer:

* Education.
* Legislation.

Steps to take:

* Avoid smoking.
* Use sunscreens, sunglasses, long-sleeved clothing, shade and hats.
* Stay out of direct sunlight between 1000 and 1500.
* Adequate low fat diet.
* Avoid obesity and becoming overweight.
* Limit alcohol intake.
* Full PPE when handling chemicals.

Early detection of cancer:

Cervical cancer:

* HPV transmitted during sexual intercourse through skin contact.
* In most women the virus will clear in 8-14 months.
* Some viruses don’t clear as quickly and can lead to abnormal development of cells of the cervix.
* Pap smear – Cells collected from the cervix checked for abnormalities.
* Tests every 2 years can prevent up to 90% of most cervical cancer forms.

Breast cancer:

* The most common cancer affecting women in Australia.
* The second most common cause of cancer-related death.
* Breast-screening – X-ray to determine the presence of cancerous growths (called mammography) which produces a mammogram – X-ray picture can be stored on a computer for reference.

Bowel cancer:

* Screening through FOBT (Fecal Occult Blood Test) – blood in faeces is tested at home and sent off for analysis.
* Presence of blood in faeces may indicate presence of polyps or cancer.
* Coloscopy – Polyps can be removed before they become cancerous.

Prostate cancer:

* No test available to distinguish the presence of slow-developing or aggressive prostate cancers.
* Diagnostic methods: DRE (Digital Rectal Examination), PSA (Prostate Specific Antigen), blood test and biopsy (performed when there’s a positive result from either of the previous 2).