Cancer

Cancer arises from one single cell
The Science
Understanding Cells and Radiation

Normal cells
- Reproduce themselves exactly
- Stop reproducing at the right time
- Stick together in the right place
- Self destruct if they are damaged
- Become specialised or 'mature'

Cancer Cells
- Don't die if they move to another part of the body
- Don't stop reproducing
- Don't obey signals from other cells
- Don't stick together
- Don't specialise, but stay immature
Cancer is not just one disease but many diseases: over 100 different types of cancer

Most cancers are named for the organ or type of cell in which they start - for example, cancer that begins in the colon is called colon cancer

Not all tumors are cancerous; tumors can be benign or malignant

Benign tumors aren't cancerous. They can often be removed, and, in most cases, they do not come back. Cells in benign tumors do not spread to other parts of the body

Malignant tumors are cancerous. Cells in these tumors can invade nearby tissues and spread to other parts of the body. The spread of cancer from one part of the body to another is called metastasis

Some cancers do not form tumors. For example, leukemia is a cancer of the bone marrow and blood
Main ways used to treat cancer

Surgery
Common treatment option: Surgery removes the tumour and some normal tissue surrounding it.

Chemotherapy
Medicine is used to kill cancer cells. There are over 50 different forms of chemotherapy medication that can be used to treat hundreds of cancer types.

Radiotherapy
Also known as radiation treatment, treats many forms of cancer. It can be given outside the body by using X-rays, or inside the body via a liquid that is either swallowed or injected, or by putting radioactive material close to the tumour.

Other approaches include:
- Hormonal therapy
- Monoclonal antibodies
- Immunotherapy
- Angiogenesis inhibitor therapy
- Second largest cause of death in the developed world
- Annual cancer cases will rise from 14 million in 2012 to 22 within the next two decades (World Health Organisation)
- Number of cases increases due mainly to us living longer - cancer is predominately a disease of old age
- 50% of adult cancer patients diagnosed in 2010 - 2011 in England and Wales are predicted to survive 10 or more years.
- Cancer survival rates in the UK have doubled in the last 40 years (Cancer Research UK)
For further information and support please contact:

http://www.cancerresearchuk.org

http://www.macmillan.org.uk

The greatest glory in living lies not in never falling, but in rising every time we fall.

NELSON MANDELA