

# It's all in your genes

## Interesting facts

Did you know that every woman over the age of 50 in England is offered **screening** for Breast Cancer?

Doctors are able to tell which stage of a cancer, such as breast cancer is, using the **TNM system**. This is a standardised system which is used by doctors in hospitals worldwide:

**T** = how big the tumour is (range 1-4)

**N** = if the cancer has spread to the lymph nodes (range 0-3)

**M** = if the cancer has spread to another part of the body. This is also known as metastasis (range 0-1).

**T2N1M0** means there is a tumour which is between 2-5cm across (**T2**), cancer cells are in the lymph nodes, but restricted to the armpit (**N1**), and there is no sign of cancer spread (**M0**).

**HER2** is a protein and stands for 'Human Epidermal growth factor Receptor 2'. In 30-40% of breast cancer patients, there is a lot of this protein in cancer cells. HER2 makes cancer cells spread quickly.

**Herceptin** is a breast cancer treatment that specifically attacks the HER2 protein. It is very effective, but only works in the cancer cells which have high levels of HER2.

Did you know that every woman diagnosed with breast cancer has her 'HER2 status' assessed? This is done by taking a **biopsy** (tissue sample) and measuring the amount of HER2 protein produced by the cancer cells. If there are high levels then patients can be treated with Herceptin.

**Pathologists** don't all do the same job. There are 19 different specialties. It's the job of a histopathologist to examine a biopsy and make a diagnosis and recommendation for treatment.

A **Multi Disciplinary Team** (MDT) for breast cancer includes, Surgeons, Oncologists (specialist cancer doctors) Radiologists, Pathologists and Nurses.

Breast cancer is not due to a single cause. There are many factors which affect your chances of getting it.

We know some **genes** are linked to an increased risk of getting breast cancer and these can be passed down through families. However, the number of people with these genes is small, and having a faulty gene doesn't always mean that a woman will develop breast cancer.