Breast Screening

Mammograms can increase Breast Cancer Risk

Mammograms use a form of low dose ionising radiation. While repeat exposure to this form of radiation has been questioned for many years new research now shows a more specific problem for some women, those with a genetic predisposition to the disease.

Generally these women have been screened more often and from an earlier age than the general population. We may now have to rethink this policy. While the research refers to chest X- rays the amount of radiation used in mammograms is much higher.

A study of 1,600 women with BRCA 1 and 2 mutations, defective genes linked to breast cancer, found they were 54 per cent more likely to suffer the disease if they had ever had a chest X-ray.

For women given chest X-rays before the age of 20, the risk of developing breast cancer before their 40th birthday more than doubled.

Dr David Goldgar, who led the investigation while heading the Genetic Epidemiology Group at the International Agency for Research on Cancer in Lyon, France, said: "*This is one of the first studies to demonstrate that women genetically predisposed to breast cancer may be more susceptible to low-dose ionising radiation than other women. If confirmed in prospective studies, young women who are members of families known to have BRCA 1 or BRCA 21 mutations may wish to consider alternatives to X-rays, such as MRI (magnetic resonance imaging).*"

BRCA 1 and 2 are both genes that make proteins involved in repairing damage to DNA in breast cells.

X-rays disrupt DNA, but as long as the radiation dose is not too high, the damage is naturally repaired. Cancer cells do not have the same self-repair ability, which is why X-rays are used in radiotherapy to destroy cancer.

Younger women deemed to be of risk of inherited Breast cancer can be safely screened using Digital Thermography leading to follow up with ultrasound or MRI if required.