

Symptomatic mammography (breast radiology)

Information for patients

This sheet aims to provide you with information about your mammography (X-ray) examination. If you have any other questions or concerns, please do not hesitate to speak to the team caring for you.

Confirming your identity

Before you have a treatment or procedure, our staff will ask you your name and date of birth and address. If we do not ask these questions, then please ask us to check. Ensuring your safety is our primary concern.

Background

Your doctor or healthcare professional has referred you for a mammography examination based on your clinical details. This is done so that they can make a diagnosis or monitor the progress of your treatment.

You can discuss with your doctor or healthcare professional how information from the examination will help them in your diagnosis or treatment.

Mammography uses X-rays, a type of ionising radiation, to create an image of the breast. The x-rays interact with the different tissues of the breast they pass through to form a shadow image.

The Ionising Radiation (Medical Exposures) Regulations 2017 govern the safe use of ionising radiation in hospitals so your mammogram is justified before it goes ahead.

This means the benefits from having the examination and making the right diagnosis or providing the correct treatment outweigh the low risk involved with the radiation.

The mammogram

A mammogram is a series of detailed X-ray images of your breasts taken using a mammography machine. The member of staff taking your images is the mammographer.

The mammographer will position your breast on the machine and will lower a plastic plate onto it. Your breast will be firmly held in position for a short period of time to keep your breast still and to ensure a clear image.

Usually two X-ray images of each breast are taken, one from above and one from the side. Sometimes more images are required.

The mammography machine is regularly serviced and checked to make sure that it is safe and works correctly.

The mammographers are trained to take the best possible images using the lowest amount of radiation practicable. They can also explain the benefits and risks of the scan you are undergoing.

Will I be exposed to radiation?

Each mammogram examination involves exposure to radiation but the amount of radiation is kept to a minimum. The amount of radiation received is equivalent to a few months of natural background radiation.

At these low doses, there is a very small increase in the risk of cancer occurring many years or decades after the X-ray scan. These risk levels are very small, around 1 in 30,000, when compared to the natural risk of getting cancer (1 in 2 people).

Mammography doses in perspective

We are all exposed to natural background radiation every day of our lives. Radiation exposure is measured in a unit called sieverts (Sv). The average annual background radiation exposure in the UK is 2.7 millisieverts (mSv) (source: Public Health England, 2011). It comes from the earth and building materials around us, the air we breathe, the food we eat and even from outer space (cosmic rays).

For example, a one-way transatlantic flight can provide a radiation dose of about 0.08mSv, or approximately 11 days of natural background radiation. Each medical examination involving radiation adds a small dose on top of this natural background radiation.

Results of your mammogram

The mammographer who performs the mammogram will not know the results straightaway. A consultant radiologist needs to report on the results. The results will be sent to the doctor looking after you who will discuss them with you.

Dose and risks examples

| Exam | Typical effective doses (mSv) | Equivalent natural background radiation | Lifetime additional risk of fatal cancer per examination |
|-------------|-------------------------------|---|--|
| Mammogram | 0.5 | 3 months | Very low risk (1 in 30,000) |
| Chest X-ray | 0.02 | A few days | Negligible risk (less than 1 in a million) |
| Chest CT | 8 | A few years | Low risk (1 in 10,000 to 1 in 1,000) |

For more information, please visit

- [NHS breast screening: helping you decide \(www.gov.uk\)](http://www.gov.uk)
- [Patient dose information: guidance \(www.gov.uk\)](http://www.gov.uk)
- [X-ray \(www.nhs.uk\)](http://www.nhs.uk)
- [Medical radiation: uses, dose measurements and safety advice \(www.gov.uk\)](http://www.gov.uk)

Useful contacts

If you have any further questions please email the department at kch-tr.kings-breastradiology@nhs.net

Sharing your information

We have teamed up with Guy's and St Thomas' Hospitals in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at Guy's or St Thomas'. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Care provided by students

We provide clinical training where our students get practical experience by imaging patients. Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

PALS

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. They can also pass on praise or thanks to our teams.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS

Tel: 020 3299 3601

Email: kch-tr.palsdh@nhs.net

PALS at Princess Royal University Hospital, Farnborough Common, Orpington, Kent BR6 8ND

Tel: 01689 863252

Email: kch-tr.palspruh@nhs.net

If you would like the information in this leaflet in a different language or format, please contact our Communications and Interpreting telephone line on 020 3299 4826 or email kch-tr.accessibility@nhs.net