# **Diagnostic imaging**

Diagnostic imaging revealed: Your questions answered by a radiographer.

If your doctor has recommended imaging, the reason may be clear, like getting an X-ray for a suspected broken wrist. But sometimes the need for a scan isn't obvious, such as when you're referred for a chest X-ray before starting steroid medication.

Many people feel anxious before imaging appointments, especially when unsure of what to expect. You have the right to be fully informed about any procedure or test, ensuring you can give informed consent.

This article will address common questions about diagnostic imaging, particularly for those with psoriasis, psoriatic arthritis, or other inflammatory conditions.

# A brief history of diagnostic imaging

Diagnostic imaging began in 1895 with Wilhelm Roentgen's discovery of X-rays, allowing doctors to view the body without surgery. Since then, imaging has expanded to include CT, MRI, ultrasound, and nuclear medicine, playing a vital role in modern healthcare.

## What is a radiographer?

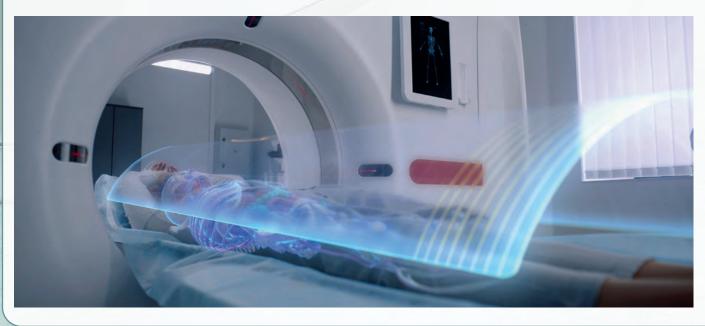
So, who's performing your scan? In most cases, it's a radiographer, a specially trained professional who holds a degree and has completed extensive clinical training. Some radiographers further specialise, gaining titles like senior radiographer, advanced practitioner, or reporting radiographer. You may also meet a sonographer for ultrasound scans, who often starts as a radiographer before undergoing specialised training.

Sometimes, a radiologist, a medical doctor with expertise in diagnostic imaging, will interpret your results.

## Where might you encounter radiographers?

Radiographers work in various hospital areas, including:

- General X-ray: Outpatients, inpatients, GP referrals
- Accident and emergency (A&E): X-ray, CT for trauma
- Theatres/operating rooms: Imaging during surgery
- CT and MRI: Outpatients, inpatients, A&E
- Ultrasound: GP referrals, maternity, community sites
- Nuclear medicine: Imaging with small amounts of radioactive material.





# Types of diagnostic imaging

Here's a quick guide to common imaging types.

- X-Ray: Quick, often used for bones and chest/ lung assessments.
- **CT scan:** Detailed, cross-sectional images, often with contrast dye to highlight structures.
- MRI: Uses magnets and radio waves for detailed images of soft tissues, joints, and organs.
- Ultrasound: Real-time imaging using sound waves, common for abdominal scans and pregnancies.
- **Nuclear medicine:** Involves a small amount of radioactive tracer to assess organ function.

# Radiation risks – Should you be concerned?

Many people worry about radiation. X-rays, CT scans, and nuclear medicine do involve small amounts of ionising radiation, but the risks are low and balanced against the benefits. Before scans, especially for people of childbearing age, you may be asked about pregnancy.

MRI and ultrasound don't use ionising radiation. However, MRI guidelines suggest avoiding non-urgent scans in the first trimester of pregnancy.

# Why are you having this scan? The role of imaging in inflammatory conditions

For conditions like psoriasis and psoriatic arthritis, imaging helps:

- assess joint damage or inflammation (e.g., MRI for soft tissue inflammation)
- track disease progression (e.g., X-ray for joint erosion)
- rule out other conditions with similar symptoms, and
- guide treatment decisions (e.g., lung checks before starting immunosuppressants).

Different scans provide different insights, which is why your doctor chooses a specific modality.

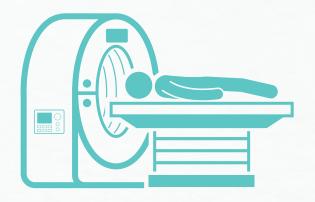
# Choosing the right scan: Why this test?

Doctors select imaging based on various factors, such as the clinical question, patient safety, and prior imaging results. For example:

- Joint inflammation: MRI or ultrasound
- Joint erosions or joint space loss: X-ray
- Soft tissue swelling or fluid: ultrasound
- Internal organ check: chest X-ray or CT
- Joint inflammation extent: MRI or nuclear medicine.

#### Limitations of imaging

Imaging is just one piece of the diagnostic puzzle. While MRI can show joint inflammation, it doesn't always explain why. X-rays might look normal even with early disease, and imaging can't replace clinical exams or blood tests. Your doctor will combine imaging with other tests and your medical history to make a diagnosis and decide on the best treatment.



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#### Common questions radiographers may ask

You might hear questions like:

- "Are you pregnant?" (to avoid unnecessary radiation exposure)
- "Where does it hurt?" (to target the right areas)
- "Have you had this scan before?" (to prevent unnecessary repeat testing)
- "Can you confirm your name and details?" (for accuracy and safety)

## Can I request more areas to be scanned?

If you mention additional pain, the radiographer can't scan other areas without a doctor's request, as imaging is targeted for clarity and safety. Disclose and discuss all pain with your doctor in advance.

# Can the radiographer tell me what they see?

Radiographers may spot abnormalities, but they cannot provide a diagnosis. Your results will be reviewed by a radiologist or your doctor, who will interpret them alongside your medical history.

#### Final thoughts

Diagnostic imaging is a powerful tool in healthcare, helping to rule out, confirm, or monitor conditions. Understanding why certain scans are chosen can

reduce anxiety and make you more informed about your care. If you have any questions or concerns, don't hesitate to ask your radiographer; they're there to help guide you through the process safely.

#### References:

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#### About the author:

Hannah Chandler is a diagnostic radiographer at London North West University Healthcare NHS Trust with 10 years of experience. She holds a BSc in diagnostic radiography and an MSc in nuclear medicine, specialising in compassionate patient care and advanced reporting. Hannah is also passionate about teaching and mentoring in clinical practice.

