ORTHOPAEDIC ONCOLOGY · PATIENT GUIDE

Bone Infarct on MRI: What Does the Finding Mean?

Bone infarction | Report terminology

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Published 6 November 2026 · Updated 6 November 2026 · Clinically reviewed 6 November 2026

https://drvishnubaburaj.com/blog/oncology/bone-infarct-mri-meaning/



A medullary bone infarct is an area inside a bone affected by a previous loss of blood supply.[2] Many are found incidentally and cause no symptoms. It differs from osteonecrosis beneath a joint surface, where collapse is a concern.[1] The word “infarct” alone therefore does not mean you need joint replacement or cancer treatment. The location and complete imaging appearance need to be explained.

Where in the bone is the finding?

Here, *medullary* means the marrow-containing shaft or flared part of a long bone. Joint-surface osteonecrosis is often called avascular necrosis or AVN.[1]

Ask the clinician to show you the affected area on the image. It is much easier to understand a report when you can see whether it concerns the inside of the shaft or the part supporting a joint.

Dr. Vishnu's perspective

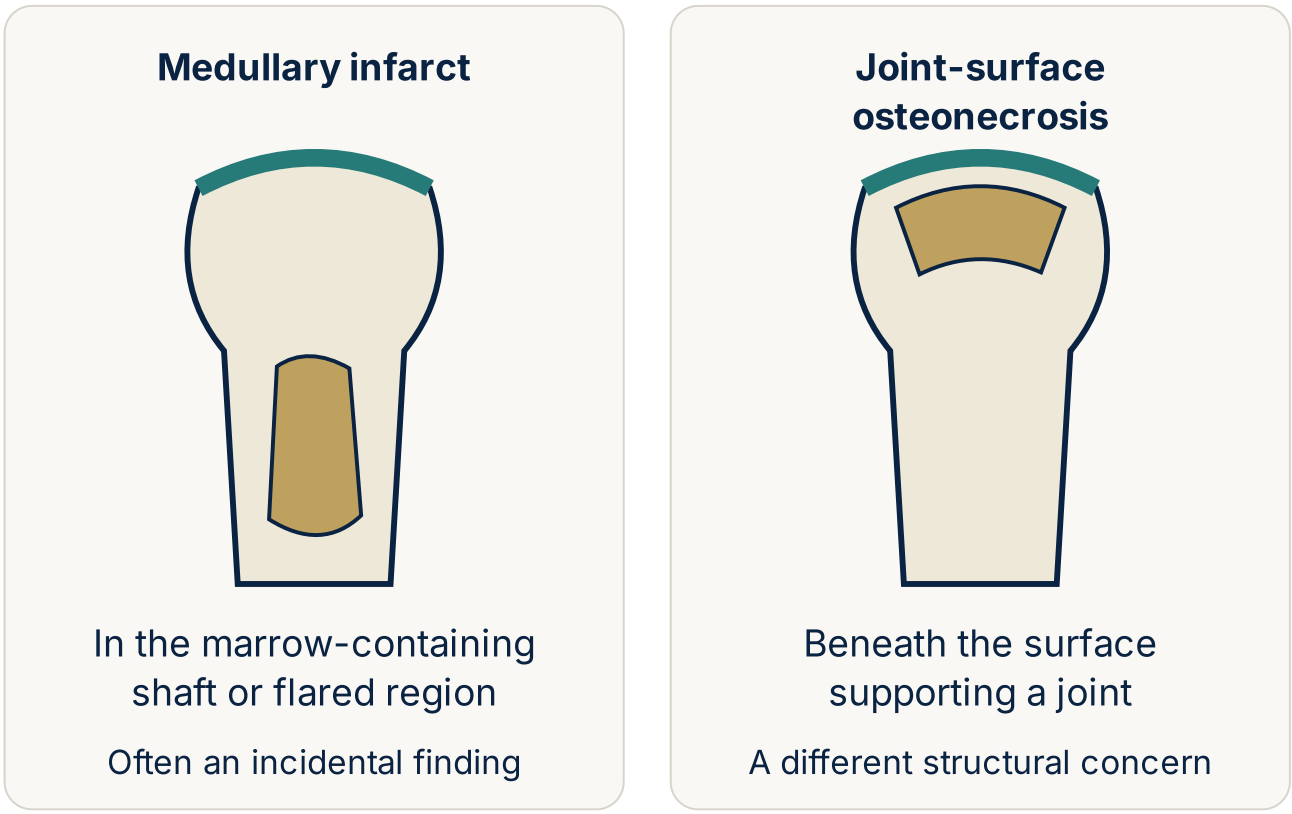
I would first show you where the abnormality sits. A marrow infarct and damage beneath the hip joint surface are different situations.[1] I understand why reading about collapse can make the report frightening. I would not recommend an operation simply because it uses the word ‘infarct’. I want the location, symptoms and effect on the bone to guide our discussion, including whether something else explains the pain.

The next part of the explanation should address what, if anything, that finding changes for you.

Inside the shaft is different from beneath a joint

Two separate anatomical examples, not a sequence of progression.

Swipe across the illustration to see all labels.



The word “infarct” alone does not predict collapse or a need for joint replacement. Location, symptoms and the full image pattern matter. Separate anatomical examples, not stages of one process. No probability of collapse is shown.[1]

Why might it have happened?

Possible associations include previous injury, long-term corticosteroid treatment and some blood disorders. Sometimes no cause is identified.[1] Your medical and medicine history can help put the finding in context. A scan report is not a reason to stop prescribed treatment on your own.

What are the radiologist's clues?

A mature infarct can have a winding, hardened border and preserved marrow fat inside. “Serpiginous” means winding. Early changes may be less specific.[1]

The distribution of mineral can help distinguish an infarct from a cartilage-containing lesion.[1] The whole study matters more than an isolated report term.

Does it explain the pain?

A typical medullary infarct is often silent.[1] If you had the scan because of pain, the consultation still needs to address that pain. Describe its exact location and how it has changed. The useful question is whether the symptoms and images fit together.

Reassurance should leave you with a plan for the original problem. It should not mean that every future symptom is automatically attributed to an old scan finding.

Which changes need reassessment?

Increasing local pain or swelling deserves review, particularly if there is a new mass, bone destruction or a break in the previously established border on imaging. These are reasons to reconsider the diagnosis and arrange specialist assessment.[2]

Rare infarct-associated sarcomas, meaning malignant bone tumours, are described in the literature. The available reports do not provide a reliable cancer percentage for someone with a typical incidental infarct.[2] A list of unusual cases online cannot tell you what will happen to your own finding.

If imaging raises concern about a primary bone tumour, any biopsy should follow appropriate imaging and be planned with the specialist team responsible for treatment.[3] A biopsy is a tissue sample, not an automatic next step for every infarct.

What should the plan explain?

A characteristic medullary infarct does not automatically require an operation. Many are incidental findings, while the symptoms and any atypical features determine whether more assessment is needed.[1][2] If no intervention is advised, the explanation should still address the reason for your scan and whether a review is needed.

- Which part of the bone is involved?
- Are the images characteristic or still uncertain?
- What is the explanation and treatment plan for my pain?
- If review is advised, who will arrange it and what change should bring me back sooner?

Frequently Asked Questions

Is a bone infarct a tumour?

The term describes a change caused by reduced blood supply to bone and marrow. It is not itself a tumour diagnosis. An atypical or changing area still needs assessment. [2]

Will a bone infarct collapse like hip avascular necrosis?

A medullary infarct in the shaft or flared part of a long bone is anatomically different from osteonecrosis beneath a joint surface. Advice about joint collapse should not automatically be applied to it. [1]

Can a bone infarct be associated with cancer?

Rare sarcomas associated with bone infarcts have been reported. Small, selected reports cannot tell us the cancer risk for a typical incidental infarct. New pain or destructive imaging changes should be assessed. [2]

Your consultation

Discuss a bone infarct report in Kannur

To discuss the location of a bone infarct and whether further assessment is needed, you can book a consultation with Dr. Vishnu Baburaj at Aster MIMS Kannur.

Book a consultation Plan your visit

The evidence behind this article

1. Pattamapaspong N, Peh WCG. Benign incidental do-not-touch bone lesions. *British Journal of Radiology.* 2023;96:20211334. Full imaging review.
2. Konarski W, Poboży T, Hordowicz M, et al. Bone Infarcts and Tumorigenesis: Is There a Connection? A Mini-Mapping Review. *International Journal of Environmental Research and Public Health.* 2022;19:9282. Full review.
3. Gerrand C, Amary F, Anwar HA, et al. UK guidelines for the management of bone sarcomas. *British Journal of Cancer.* Published online 16 November 2024; 2025 journal issue. Specialist guidance.

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