

CAN YOU SPOT A PRIMARY BONE TUMOUR?



CLINICAL PRESENTATIONS

- Constant or intermittent bone pain
- Pain resistant to analgesia
- May increase in intensity
- Mobility issues – unexplained limp, joint stiffness, reduced ROM
- Easy bruising
- Inflammation and tenderness over the bone
- Systemic symptoms (most commonly fatigue)

NICE GUIDELINES RED FLAG SYMPTOMS

- Pain worse at night
- Atypical bony or soft tissue swelling/masses
- Pathological fractures

NOT ALL SYMPTOMS NEED TO BE PRESENT

INVESTIGATIONS

- Plain X-ray in two planes is the first line of investigation
- If pain persists, consider MRI if X-ray is clean
- Bloods: ESR, ALP, LDH, FBC, U&E, Ca²⁺
- If 40+ years, CT Chest, Abdo, Pelvis to rule out source of metastatic bone cancer
- Definitive diagnosis is done by biopsy following referral

IF YOU SUSPECT A BONE SARCOMA

NICE REFERRAL TIMELINES

- Immediate: acute admission or referral occurring within a few hours or quicker
- Urgent: to happen/be performed within 2 weeks
- Very urgent: within 48 hours
- Non-urgent: used for referral or investigation that is not considered very urgent or urgent
- Receiving a diagnosis or ruling out PBC within 28 days of being referred urgently by a primary care provider for suspected cancer

FOR CHILDREN AND YOUNG ADULTS:

- Consider very urgent direct access X-ray performed within 48 hours
- Refer within 48 hours for specialist assessment if X-ray suggests possible bone sarcoma

IF THE RESULTS LOOK INDICATORY OR SUSPICIOUS OF PRIMARY BONE CANCER

- Refer directly to specialists Bone Cancer Centre.
For details see our resources [bcrct.org.uk/resources](https://www.bcrct.org.uk/resources)

THERE ARE 560 NEW PRIMARY BONE CANCER DIAGNOSES EACH YEAR.

THE MOST COMMON TYPES ARE:

CHONDROSARCOMA

- Most common in adulthood
- Highest incidence of 30-60 years of age
- Common sites are long bones, pelvis, and ribs
- Typical radiology of popcorn calcification

OSTEOSARCOMA

- Most common in children and young adults
- Biphasic incidence peak at 15-19 years, 70-89 years of age
- Common sites are long bones, especially around the knee
- Typical radiology of sunray spiculation and Codman triangle

EWING SARCOMA

- Second most common in children and young adults
- Highest incidence of 10-20 years of age
- Common sites are long bones, pelvis, ribs, and vertebrae
- Typical radiology of onion ring sign

OTHER TYPES:

CHORDOMA

- Occurs at the base and length of spine and base of the skull
- Mostly affects adults between 50-60 years of age

SPINDLE CELL SARCOMA OF THE BONE

- Soft-tissue tumours which can start in the bone, often found in the arms, legs, and pelvis
- Most commonly arises in patients over 40

ADAMANTINOMA

- Malignant neoplasm that commonly arises in the tibia, fibula, or both
- Most common in young adults between 20-35 years of age

ANGIOSARCOMA OF THE BONE

- Most common locations are long bones, hip, spine, and bones in the trunk
- Can affect people over 30, but more common between ages 60-80

GIANT CELL TUMOUR OF THE BONE

- Benign, but locally aggressive
- Most tumours affect people aged 20-45



FOR MORE INFORMATION VISIT:
[BCRT.ORG.UK/RESOURCES](https://bcrt.org.uk/resources)



Sources: Bone Cancer Research Trust website; Oxford Handbook of Clinical Specialties, UK guidelines for the management of bone sarcomas (2016, C. Gerrand et al). NICE. Referral for suspected bone and soft tissue sarcoma and Suspected cancer recognition and referral (NG12, 2023) (2015). National Institute for Health Care and Excellence.