

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: REPAIRING BRITTLE BONES: FIXING BONE CYSTS IN KIDS
REPORT: **MB #5091**

BACKGROUND: Bone cysts are fluid- filled areas inside of a growing bone that has yet to develop into an actual bone. They are benign, which means not cancerous, and develop in children and young adults mostly. Although it can involve any bone, the most common sites are the distal femur, proximal humerus, the proximal tibia, and the spine. Most cases cause mild pain, but the rapid growth of a lesion may mimic malignancy. Symptoms of a bone cyst generally do not cause pain but if they are large enough, they can cause the bone to become weaker and fracture much easier. This type of fracture is called a pathologic fracture.

(Source: <https://www.ncbi.nlm.nih.gov/books/NBK539849/>
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/bone-cysts#:~:text=Bone%20cysts%20are%20fluid%2Dfilled,when%20it%20otherwise%20wouldn't.>)

DIAGNOSING: Bone cysts are diagnosed mainly by X-ray, CT scan or an MRI. The MRI is the preferred choice of the three as it can give a more complete assessment of a bone cyst and the structures surrounding it. The MRI detects multiple blood-filled cystic spaces and walls. Together with the internal lining of a cyst wall it represents the solid elements of the destructive tumor. After discovering on an X-ray or MRI, a biopsy is performed to confirm the diagnosis.

(Source: <https://www.nationwidechildrens.org/conditions/aneurysmal-bone-cyst>)

TREATMENT: Bone cysts can be treated with injections, which can be effective. Sometimes a surgery called a curettage is another option; a surgeon opens the cyst and scrapes out its contents and lining. Surgeons also may apply certain substances such as ethanol to the inside the open cavity to destroy the remaining cyst. The recovery time if you choose surgery is about three to six months, which is similar to the timeline of someone who breaks their arm. Physical therapy will help patients return to normal activities.

(Source: <https://my.clevelandclinic.org/health/diseases/22412-unicameral-bone-cyst>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com