Short Communication

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Diagnostic challenges in pediatric round blue cell tumors of the bone

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Abstract

Bone lesions, both neoplastic and non-neoplastic, are common in children. The accurate diagnosis is usually established following tissue sampling with histopathologic examination. However, those entities with predominant small round blue cell morphology can be diagnostically challenging. This review highlights distinctive morphologic and molecular features that can help pathologists when encountering these cases. Bone lesions are frequent in the pediatric age group and include both neoplastic and non- neoplastic conditions. In fact, about half of all bone lesions are encountered in the first two decades of life. During childhood, the most common benign entities are represented by osteomyelitis, bone cysts (either aneurysmal or unicameral bone cyst), osteochondroma or non-ossifying fibroma. Malignant lesions are usually represented by osteosarcoma and Ewing sarcoma. In many instances, the diagnosis is established aier tissue sampling and pathologic examination. Although some entities, such as conventional-type osteosarcoma, have straightforward histologic features, those cases with predominant small round blue cell morphology can be diagnostically challenging and their correct classification usually requires additional ancillary/molecular studies. His review highlights the distinctive morphological and molecular features of such neoplasms that can help pathologists when encountering these cases.

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Biography

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