



# Skull: Introduction to Conditions and Procedures

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## Abstract

Increased focal or diffuse uptake in the skull can be observed as an unsuspected incidental finding in many patients caused, for example, by benign or malignant conditions. This chapter introduces common skull pathologies that can be encountered on bone SPECT/CT.

## Keywords

Osteoma · Paget's disease · Hemangioma · Fibrous dysplasia · Hyperostosis frontalis · Primary skull tumors · Bone metastases

Increased focal or diffuse uptake in the skull can be observed as an unsuspected incidental finding in many patients caused, for example, by benign lesions like osteomas, Paget's disease, hemangiomas, fibrous dysplasia, or hyperostosis frontalis. The skull might be affected by malignant lesions like metastases in breast, prostate, or other cancers, e.g., multiple myeloma (Pons Escoda et al. 2020). Rarely primary skull tumors like plasmocytoma, osteosarcoma, or lymphoma

can occur. Osteomyelitis of skull bones are caused by direct spread of adjacent infections like sinusitis, dental infection, otitis externa, or hematogeneous spread. Planar bone scan images or X-rays are sometimes sufficient to establish a final diagnosis. In unclear cases, advanced imaging with CT, MR, or even SPECT/CT is very helpful in clarifying the etiology of skull lesions (Ju and Paycha 2021). Diagnostic CT quality with adequate thin-slice bone window is essential for detailed evaluation of skull lesions together with the metabolic information.

## References

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