Teaching NeuroImage: Histopathologically Confirmed Intracranial Enchondroma/Low-Grade Chondrosarcoma and *IDH1*-Mutated Diffuse Glioma in Ollier Disease

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Figure MRI Brain and Hand Radiographs

MRI brain shows *IDH1* mutant grade 2 diffuse astrocytoma on fluid-attenuated inversion recovery (A) coexisting with sphenoid enchondroma vs low-grade chondrosarcoma on contrast-enhanced T1 MRI (B). Hand radiographs show enchondromatous digits that required amputation beyond metacarpophalangeal in digits 2–5 (C, D).

A 3-year-old girl presented with leg deformities diagnosed as enchondromatosis (Ollier disease), which is a rare, sporadic, skeletal disorder characterized by hamartomatous growth of cartilage cells within metaphyses of long bones. In 2008, fluid-attenuated inversion recovery signal hyperintensity in her left frontal lobe (Figure, A) and skull-base enchondroma (Figure, B) were discovered. Her enchondromatosis required amputation of digits that were heavy and unusable (Figure, C and D). In 2017, surveillance imaging revealed enlargement of the frontal tumor, leading to craniotomy for a WHO grade 2 astrocytoma. Ollier disease is associated with *IDH* mutations¹ and patients must be monitored for sarcomatous transformation of enchondromas and extraosseous malignancies including gliomas.²

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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Name	Location	Contribution
Timothy A. Gregory, MD	Neurology, Department of Medicine, Madigan Army Medical Center, Joint Base Lewis-McChord, WA	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
Lynne P. Taylor, MD	Seattle Cancer Care Alliance, University of Washington	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data

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