



¹Performed at initial presentation in all patients suspected of having MAS. ²Areas of clinically significant FD will be apparent on bone scan by age 5 years. Prior to age 5, a normal Tc99 does not rule out the possibility of significant FD. ³TRP = tubular reabsorption of phosphate = $1 - \frac{Uphos}{Sphos} \times \frac{Scr}{Ucr \times 1000}$. Calculated from a spot urine collection. FGF23-mediated phosphate wasting is associated with high FD burden; may worsen during rapid skeletal growth, and improve or resolve in adulthood as FD becomes less active. ⁴Consider performing ⁹⁹Tc-MDP bone scan in children < 5 years regardless of clinical suspicion for bone disease in instances where establishing the diagnosis of MAS may alter management – i.e. patients for whom diagnostic surgery is being considered, such as oophorectomy or skeletal biopsy. ⁵Significance of FD is determined by both the amount and location of affected bone. Clinically significant disease is frequently associated with the craniofacial area, proximal femurs and spine. ⁶A normal ⁹⁹Tc-MDP bone scan at age 5 years or older effectively rules out clinically significant FD, and no further radiologic monitoring is required.

References

- Collins MT, Kushner H, Reynolds JC, Chebli C, Kelly MH, Gupta A, Brillante B, Leet AI, Riminucci M, Robey PG, Bianco P, Wientroub S, Chen CC. An instrument to measure skeletal burden and predict functional outcome in fibrous dysplasia of bone. *J Bone Miner Res.* 2005;20:219-26.
- Hart ES, Kelly MH, Brillante B, Chen CC, Ziran N, Lee JS, Feuillan P, Leet AI, Kushner H, Robey PG, Collins MT. Onset, progression, and plateau of skeletal lesions in fibrous dysplasia and the relationship to functional outcome. *J Bone Miner Res.* 2007;22:1468-74
- Leet AI, Chebli C, Kushner H, Chen CC, Kelly MH, Brillante BA, Robey PG, Bianco P, Wientroub S, Collins MT. Fracture incidence in polyostotic fibrous dysplasia and the McCune-Albright syndrome. *J Bone Miner Res.* 2004;19:571-7.

Legend

⁹⁹Tc-MDP = technetium-99 conjugated with methylene diphosphonate; CT = computed tomography; FD = fibrous dysplasia; H&P = history & physical exam; TRP = tubular reabsorption of phosphate; XR = x-ray