

## The manifestations of dysostosis multiplex<sup>1</sup>

<i>Skeletal region</i>	<i>Dysostosis multiplex manifestations</i>
Skull	Abnormal J-shaped turcica Thickened diploic space
Thorax	Short, thick clavicles Paddle/oar-shaped ribs
Spine	Several superiorly notched (inferiorly beaked) vertebral bodies Posterior scalloping of vertebrae Middle beaked vertebral bodies (common in MPS IVA)
Pelvis/hips	Rounded iliac wings Inferior tapered ilia
Long bones	Mildly hypoplastic epiphyses (often generalized) Hypoplastic, displastic, or fragmented CFE Proximal humeral notching Long, narrow femoral necks Hypoplastic distal ulnae Thick short diaphyses
Hands	Proximally pointed metacarpals Short, broad metacarpals with thin cortices Irregular/hypoplastic carpal bones
Feet	Tarsal bones with irregular contours

Adapted from Lachman, *Skeletal Radiol*, 2014.

Abbreviations: MPS, mucopolysaccharidosis; CFE, capital femoral epiphysis.

**Reference: 1.** Lachman RS, Burton BK, Clarke LA, et al. Mucopolysaccharidosis IVA (Morquio A syndrome) and VI (Maroteaux-Lamy syndrome): under-recognized and challenging to diagnose. *Skeletal Radiol*. 2014;43(3):359-369. doi:10.1007/s00256-013-1797-y.