Segmentation model

Schematic illustration of the anatomical axis and segmentation planes as described in the main manuscript. Auxiliary landmarks (e.g., acromion, olecranon, patella, and malleoli) were used to define reproducible central axes, with orthogonal planes dividing each limb into proximal and distal compartments. This visualization serves as an example segmentation mask illustrating the standardized workflow applied across all measurements.



Auxiliary points defined by anatomical landmarks for constructing central axes

Construction guidelines used for geometric axis alignment and segment definition



Primary measurement points used for circumference and volume quantification

Anatomical axes or segmentation planes used for volumetric division









