

Jean Delaire's Cephalometry. From 2D to 3D

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Initially, Delaire's analysis was designed in two dimensions (2D) and projected onto a lateral telerradiography. Today the digital world comes in three dimensions (3D). Several independent researchers have proposed for 20 years to transpose in 3D the ideas of Professor Delaire on skulls and virtual faces. What are the current lines of research in Delaire 3D analysis? Do we have a single or multiple approach? How to transform, transpose points and lines from lateral telerradiography into points placed on 2D CT scanner sections or on 3D virtual reconstructions of skulls? How to faithfully rearrange the cranial and facial planes, which reproducibility and scientific validation tests should be used? What would or are the clinical indications and uses of Delaire 3D analysis? What are the challenges in the development of Delaire 3D analysis: Personal choices, limitations, radiation protection, establishment of clinical standards and ethics committee, ionizing radiological modalities (CT scan, CBCT), international cooperation, open access software? Finally, do we really need the 3rd dimension to perpetuate the transcendent concepts of Delaire's analysis?