

Panoramic Radiograph Interpretation: Systematic Approach & Key Findings

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Malpractice arising from misinterpretation of panoramic radiographs—resulting in failure to provide appropriate treatment or omission of necessary treatment—can largely be attributed to two main causes.

First, even when the interpreter detects an abnormal finding on the image, they may misdiagnose the condition responsible for that finding. Second, the interpreter may fail to detect the abnormal finding. In the latter case, this may occur either because the interpreter does not recognize the finding as abnormal despite having seen it, or because the interpreter focuses only on the area related to the patient's chief complaint and fails to examine the rest of the image.

Therefore, in order to avoid missing diseases that are already present and to ensure timely and appropriate treatment, panoramic radiographs must be interpreted systematically so that even subtle abnormalities that could easily be overlooked are identified at an early stage.

To achieve this, a systematic interpretation method is proposed in which the panoramic radiograph is divided into several zones, with key checkpoints identified for each zone that should be carefully reviewed.

Zone 1: both maxillary sinuses, upper anterior region, hard palate - grey level of maxillary sinus, change of antral wall, nasopalatine canal, and hard palate

Zone 2: mandibular contour and cortical bone thickness

Zone 3: mandibular cancellous bone and cortical bone: rarefaction or sclerosis of cancellous bone, thinning, expansion, or destruction of cortical bone

Zone 4: soft tissue area below the mandibular body and angle: sialolith, calcified carotid artery atheroma

Zone 5: dentition and alveolar bone

Profile

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