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文 献 委 員 会

21120

Boundaries in the Radiographic Image

I. General Principles for Perception of Boundaries and Their Application to the Image.

Edholm P., *Acta Radiol. (Diag.)*, 22(4), 457-473, (1981).

Summary

Mechanisms underlying the perception of boundaries are discussed. The boundaries seen in the radiographic image are analysed and grouped in a limited number of types according to their formation. Their perception, identification and evaluation are discussed. Possible sources of error are pointed out.

21311

Effervescent Agents in the Double Contrast Examination of the Stomach.

Virkunnen P, et al., *Acta Radiol. (Diag.)*, 22(3A), 261-265, (1981).

Summary

The buffer capacities of the BaSO₄ contrast media are poor. Yet the PH changes caused by effervescent agents or gastric contents are insignificant for mucosal adsorption. The increase of the viscosity decrease of the density impair the results of the examination.

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Image Distortion in Rotational Panoramic Radiography.

I. General Consideration.

Tronje G, et al., *Acta Radiol. (Diag.)*, 22(3A), 295-299, (1981).

Summary

The projection system in rotational panoramic radiography is complex in the respect that there are two projections of the object working simultaneously, one in the horizontal and one in the vertical dimension, giving rise to distortion of three-dimensio-

nal objects in the image. A mathematical method is presented for transforming data from three-dimensional objects to image data. This method may be used when analysing different distortion effects inherent in panoramic films.

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Image Distortion in Rotational Panoramic Radiography.

II. Vertical Distance.

Tronje G, et al., *Acta Radiol. (Diag.)*, 22(4), 449-455, (1981).

Summary

Fims, exposed with rotational panoramic radiography, are generally considered inferior regarding the accuracy of measurements. Theoretic mathematical calculations, confirmed by an experimental test, have been performed in order to evaluate the reliability of measurements of distances that appear vertical in the image. It is demonstrated that, within certain limits, the panoramic film may be used for vertical measurements in clinical practice provided the patient has been properly positioned in the equipment during the exposure.

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Image Distortion in Rotational Panoramic Radiography.

III. Inclined Objects.

Tronje G, et al., *Acta Radiol. (Diag.)*, 22(5), 585-592, (1981).

Summary

Mathematical calculations have been performed to analyse how accurately the angle between objects, inclined in space, is reproduced on panoramic films. A marked tolerance against angle distortion was found. Angular measurements may be performed on correctly exposed panoramic films, and the values obtained are satisfactorily accurate for most clinical purposes.