^{60}Co γ -rays. When the Bragg peaks were broadened to 10 cm, the RBE at the peak, compared with the entrance region, was significantly higher for carbon ions but nearly the same or even lower for neon and argon ions because of saturation effects at high LET. The RBE for fast neutrons was comparable to that at the peak for carbon ions. The correlation between early skin reaction and foot deformity remained the same for all particle.

140

Leukemia Risk from Neutron

Rossi H.H. and Mays C.W.

Health Phys. 34, 353-369, (1978).

160

The Value of Thermography in Peripheral Vascular Disease.

Henderson, H.P. et al., *Angiology*, 29(1), 65-75, (1978).

160

A New Ultrasonic Real-Time Scanner Featuring a Servo-Controlled Transducer Displaying a Sector Image.

M. Leon Skolnic et al., *Radiology*, 128, 439-445, (1978).

Summary

This paper describes a new real-time servo-controlled sector scanner that produces high-resolution images similar to phased-array systems, but possesses the simplicity of design and low cost best achievable in a mechanical sector scanner. Its unique feature is the transducer head which contains a single moving part—the transducer. Frame rates vary from 0 to 30° and the sector angle from 0 to 60°. Abdominal applications include: differentiation of vascular structures, detection of small masses, imaging of diagonally oriented organs, survey scanning, and demonstration of regions difficult to image with contact scanners. Cardiac uses are also described.

21123, 21251

Detection Accuracy in Chest Radiography.

Groy, J.E. et al., *Amer. J. Roentogenol.* 131(2), 297-298, (1978).

Summary

The detection accuracy of the diagnostic radiologist is important in everyday medical decision making.

However, little work has been done relating the detection accuracy of the radiologist to the quality of the image. This study, using a thorax and lung phantom, simulated tissue-equivalent 6.4 mm lesions, and a 183 cm source-to-image distance, shows that the detection accuracy is not dependent on the focal spot size (over a range of 0.3-2.0 mm). However, the false positive rate increases when using small focal spots. In addition, the detection accuracy decreases with increasing root-mean-square (RMS) noise (a measure of the amount of quantum mottle in the image), while the false positive rate and intraobserver disagreement increase with increasing RMS noise. It is also shown that the nonradiologist responds to changes in noise in exactly the same way as the radiologist.

21244

Proximal Tibiofibular Joint: Anatomic-Pathologic Radiographic Correlation.

Rensnick, D. et al., *Amer. J. Roentogenol.* 131(1), 133-138, (1978).

21215, 21432

Incudostapedial Joint in Health and Disease.

Matsubara, R. et al., *Amer. J. Roentogenol.* 131(2), 307-317, (1978).

21223, 24440, 21270

Improved Visualization of the Lumbar Spine and Sacrum in Pediatric Patients by Use of the Pneumatic Compression Paddle.

James Crowe et al., *Radiology*, 128(3), 812-814, (1978).

Summary

The lumbosacral spine in infants and young children is usually partially obscured on frontal radiographs by gas-filled intestinal loops. Displacement of the intestine by an air-filled balloon compression device improves visualization of the spine.

21262, 24112, 23240

Xeromammographic Cone Edge Pressure to Shift Deep Lesions into View: A Simple Modification and Technique. William A. Goodrich, *Radiology*, 128(3), 809-810, (1978).

Summary

A straight lower edge on the flat side of an open-ended mammographic cone, applied firmly downward along the chest wall, may sometimes displace deep-