

- 272 A Summary of Radiation Exposure Received by Workers in Medical X-Ray Departments from 1950-1960. C. K. Spalding and R. F. Cowing. *Health Physics* 8, 499-502 (Oct. 1962).

Exposure to ionizing radiation received by workers in x-ray departments in 106 hospitals in the New England area over the past 10 years has not appreciably changed even though the number of x-ray films taken has increased considerably. Data collected after monitoring a total of 1,200 persons for varying periods of time shows that 4% of the x-ray personnel experience exposure above 100 mr./week. The reasons for these exposures have been tabulated and present a definite need for education and understanding of health physics problems by technical personnel in both fields.

-- Public Health Eng. Absts.

- 273 Susceptibility to Carcinogenesis at Different Ages. R. Doll. *Gerontol. Clin.* 4, 211-221 (1962). (Gerontologica Clinica, Box 352, White Plains, New York*).

The influence of age on induction of cancer by various agents in man and animals is reviewed. It was concluded that although the incidence of cancer increases with age, in general, no clear-cut influence of age can be discerned. This is especially true of induction of cancer by ionizing radiation. Cancer occurs more frequently in the irradiated thyroid gland of children than of adults. On the other hand, the incidence of leukemia among atomic bomb survivors in Hiroshima shows no age dependence; although incidence of other types of cancer in the survivors shows an increase with aging. Incidence of cancer among patients irradiated for ankylosing spondylitis also shows an age-dependent increase.

-- Nuclear Sci. Absts.

- 274 Roentgen Treatment of Chronic Leukemia. W. P. Murphy and Isabel Howard. *Am. J. Roentgenol. Radium Therapy Nuclear Med.* 88, 902-908 (Nov. 1962).

Results are reviewed from an evaluation of the effectiveness of roentgen radiation in the treatment of 107 patients with chronic leukemia. Sixty of the group were classified as granulocytic and 47 as lymphocytic leukemia cases. The number and percentage of 3, 4, 5, and 7 yr. survivors in both groups are tabulated according to the treatment method. Best results were obtained in both groups by use of the spray technique of irradiation, and best results were obtained in the lymphocytic group. The majority of the patients were remarkably well and able to carry on their usual activities throughout most of their illness. The cause of death in 69 of 105 patients was established as other than leukemia.

-- Nuclear Sci. Absts.

- 275 Intestinal Stenosis Following Radiation Therapy. A Roentgenologic-Pathologic Study. D. E. Perkins and H. J. Spjut. *Am. J. Roentgenol. Radium Therapy Nuclear Med.* 88, 953-966 (Nov. 1962).

The clinical entity of radiation stenosis of the bowel is briefly reviewed. Nine new cases are added to the literature. The dangers of mistaking this entity for persistent cancer is noted. The radiologist has jurisdiction over the essential means by which the diagnosis can be made, namely, the barium enema examination. The roentgenographic and pathologic features are presented. The presence of foam cells in the subintimal areas of small arteries is mentioned as being a possible specific finding in vascular damage from radiation. A longer and curved probe scintillation counter rather than those currently in use would give a more accurate location and reading of the highest rectal and sigmoid dose delivered by the radium applicator in the treatment of carcinoma of the cervix.

-- Nuclear Sci. Absts.

- 276 Late Damage to the Spinal Cord after X-Irradiation. A. F. H. Girgenshohn and R. Engel. *Med. Klin. (Munich)* 57, 740-743 (1962). German.

Late x-ray damage to the spinal cord after therapeutic irradiation of neighboring tumors occurs after one to two years, passes through varying, often uncharacteristic neurological symptom complexes, and then changes gradually into a total transverse paralysis. A

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