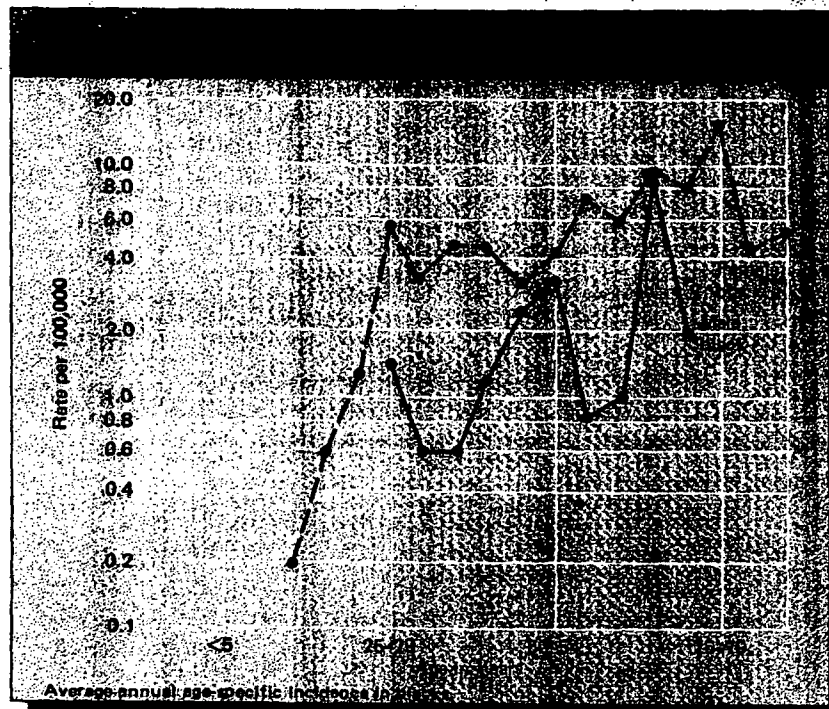




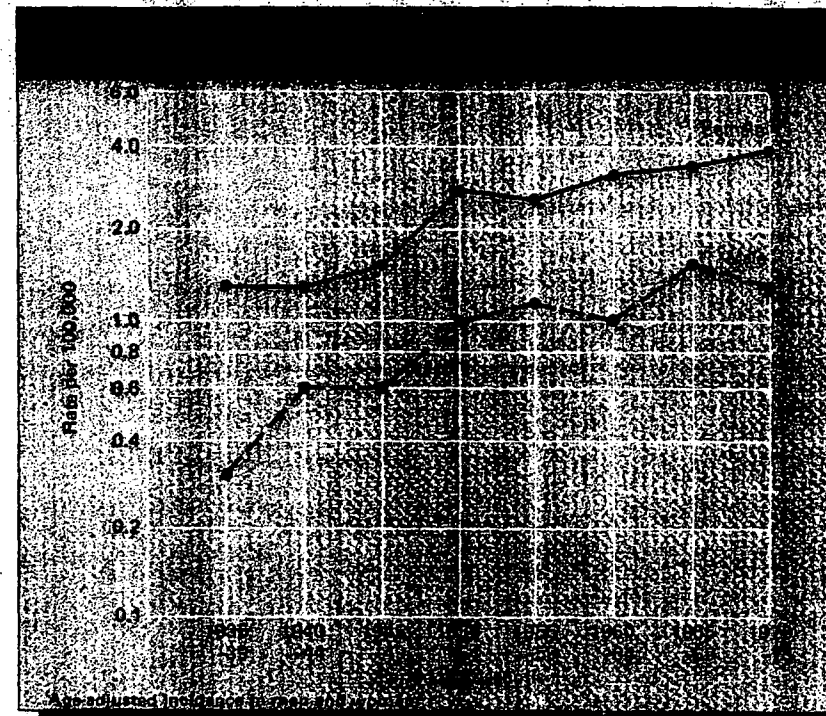
oid hyperplasia and cervical lymphadenitis in infancy and early childhood, and was consistent with the hypothesis that ionizing radiation was a cause of thyroid cancer in children and young adults.

Whether increasing incidence rates are real or artifactual depends upon the degree to which they have been influenced by changing diagnostic criteria and completeness of reporting. For example, the occult sclerosing non-encapsulated papillary carcinomas and intraglandular encapsulated follicular carcinomas with minimal vascular invasion have received increasing recognition during the past 20 years. In their review of thyroid cancer in Olmsted County (1935-1965), Verby et al.⁶ attributed the observed substantial increase in incidence to the greater recognition of occult papillary tumors during the 1955-1965 decade.

Variations in the incidence of clinically

apparent thyroid cancer by country and race may reveal important interactions between host and environmental factors. However, such comparisons must be interpreted cautiously since they are subject to variations in the procedures used for neoplastic classification and registration and in the quality of diagnostic and therapeutic services. The pattern of geographic and racial differences in the incidence of clinical thyroid cancer should be distinguished from that observed for occult thyroid cancer.

In 5,636 consecutive autopsies on cancer patients at Memorial Hospital, the prevalence ratio of occult thyroid cancer as an independent primary cancer was 6.4 per 1,000 autopsies. The method of examination consisted usually of a single section from each lobe when no tumor was grossly visible. The peak prevalence in women was 19.6 per 1,000 at 20-29 years of age,



and 10.4 per 1,000 in men at 30-39 years. Unlike most carcinomas, there was no indication that subclinical thyroid cancer increases with increasing age.⁷ Sampson et al.⁸ arrived at a similar conclusion in their autopsy study in Hiroshima and Nagasaki. In autopsy studies conducted in the United States where the thyroid gland was examined meticulously, the observed prevalence of occult thyroid cancer varied between 1.0-5.7 percent. Whereas the prevalence due to clinically apparent thyroid carcinoma predominates in women, occult thyroid cancer occurs almost as frequently in men.⁹⁻¹⁰

The prevalence of latent thyroid cancer (i.e., 1.5 cm. or less in maximum dimension) diagnosed at autopsy in the Hawaiian Japanese and native Japanese (17.9-24 percent) is at least four times that observed in comparable autopsy studies from Canada and the continental United States.^{11, 12}

However, clinically apparent thyroid cancer incidence rates in the Hawaiian Japanese and the native Japanese are not significantly different from those in the Hawaiian whites and the continental United States whites (Table I).¹³⁻¹⁵ The age-adjusted incidence in the Hawaiian Chinese women is greater than that observed in the Japanese and Caucasian groups in Hawaii and is almost 18 times that reported in Singapore Chinese women.

More recent information on this finding has been furnished by Kolonel and Reilhan from the Hawaii Tumor Registry (Table II).¹⁶ These rates were based upon a total of 110 patients in 1960-1964 and 184 patients in 1968-1972. The small number of cases in each racial group allowed for wide sampling fluctuations. The rates in the Chinese and Hawaiian women were in contrast to those seen in the Japanese and Caucasian women. For