

220

### Malignant Mesothelioma and Sarcoma of Chest / Abdomen in Japanese Thorotrast Patients

Yuichi ISHIKAWA<sup>1</sup>, Takesaburo MORI<sup>2</sup>, Yutaka OKUMURA<sup>3</sup> and Rikuo MACHINAMI<sup>4</sup>;  
<sup>1</sup>Cancer Inst., Toshima-ku, Tokyo 170, <sup>2</sup>Natl. Inst. Radiol. Sci., <sup>3</sup>Nagasaki Univ., <sup>4</sup>Univ. Tokyo

Injection of Thorotrast, an X-ray contrast medium used in 1930-50, is known to cause liver cancer and blood disease including leukaemia. However, German and Danish epidemiological studies have shown excess malignancies of pleura and/or peritoneum. We examined these malignancies in Japanese cohort and autopsy files (cases with vascular injection: n=370). (1) 1 mesenteric sarcoma was seen among follow-up cases (n=258) whereas there were no such cases among control (n=1630). (2) 4 malignant peritoneal or retroperitoneal tumours observed among 370 autopsy cases with vascular injection whereas 344 such cases among matched general autopsy cases in Japan (n=162,000). We found 5 times more such cases than control.

221

### Epidemiological study of cancer risk among the children of the members of the Japanese Society of Radiological Technology (Part I)

Takashi AOYAMA<sup>1</sup>, Kaoru MORIKAWA<sup>2</sup>, Tadashi SUNAYASHIKI<sup>3</sup>, Motohiro NISHITANI<sup>4</sup>, and Shigefumi OKADA<sup>5</sup>; <sup>1</sup>Shiga Univ. of Med. Sci. Otsu 520-21, <sup>2</sup>Osaka Univ. Faculty of Med. School of Allied Health Sci., Toyonaka 560, <sup>3</sup>Hiroshima Pref. College of Health and Welfare, Mihara 723, <sup>4</sup>Kyoto College of Med. Tech. Sonobe 622, <sup>5</sup>Nucl. Sys. Assoc. Tokyo 105.

To confirm the findings of Gardner et al on the significant association between paternal radiation exposure and childhood cancer, the data on the occupational radiation exposure and deaths of children of the members of the Japanese Society of Radiological Technology, which were obtained through questionnaires sent by the society between August and November, 1994 were analyzed. The society consists of radiological technicians, radiologists and radiation engineers. The number of replies to the questionnaire was 2,458 which contained the information on 4,420 children. We divided the members of the society into two groups; those born before 1937 and after 1938. The mean estimated occupational dose before child's conception was 192.3 mGy for the 1st group and 44.7 mGy for the 2nd. We could not find any significant increase of SMR for all malignant neoplasms and leukemia in the both groups, but find a significant increase for lymphoma in the 1st group. We could not conclude, however, whether the paternal exposure was responsible for this increase.

222

### Possible Increase of AIDS by Ultraviolet Radiation

Kazuto OKAMOTO and Shin TANIMOTO; Toyo Gakuen University, 1660, Hiregasaki, Nagareyama, Chiba 270-01

Possible increase of AIDS by ultraviolet radiation (UV) is recently suggested. This problem is investigated epidemiologically. AIDS incidence rates of world countries of population of more than 1 million are plotted against latitude  $\theta$  and  $\cos\theta$ . A trend of concentrating to low  $\theta$ , where UV is strong, is observed, and at about the same  $\theta$  incidence rates seem to be higher for Caucasians than for non-Caucasians. Regression analyses are made for the mankind as a whole, Caucasians and non-Caucasians, and significant correlations are found between incidence rates and  $\theta$  and  $\cos\theta$  for all of them. Maxima of intervals of  $\theta$  (1, 3, 5°) are taken and analyses are repeated. Highly significant correlations are found between the maxima and  $\theta$  and  $\cos\theta$ . These results suggest that the hypothesis of possible increase of AIDS by UV is true.