202 Effect of Solar UV Light to ESR Dosimetry in Tooth Enamel

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Eighty-one teeth donated by distally exposed atomic-bomb survivors with DS86 doses of less than 50 mGy were ESR examined to assess the effect of solar UV light on tooth enamel. Each tooth was divided into lingual and buccal parts. The mean ESR signal intensities from the lingual parts indicated a dose absorption equivalent to 0.39±0.30 Gy (incisors and canines), 0.27±0.19 Gy (first small molars), 0.10±0.13 Gy (second small molars), and 0.03±0.09 Gy (large molars). The corresponding mean buccal doses were 0.81±0.42 Gy, 0.49±0.35 Gy, 0.22±0.18 Gy, and 0.07±0.11 Gy, respectively. Estimation of A-bomb radiation dose by ESR requires maximal exclusion of effect by solar UV light and the results show that large molars are the best and possibly the only teeth useful for retrospective dosimetry. If the second small molars are to be used, only the lingual halves should be measured.

203 Correlation between lifestyle and mortality in atomic bomb survivors

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Correlation between lifestyle and mortality was studied among atomic bomb survivors in Nagasaki who had responded to mail survey jointly conducted by Nagasaki municipal office, Nagasaki Atomic Bomb Casualty Council and Nagasaki University in October 1984. A questionnaire including items on lifestyle was mailed to 6,007 people selected by stratified random sampling procedure from 74,464 atomic bomb survivors and 4,952 (82.4%) of them responded. The respondents were followed-up from January 1, 1985 to December 31, 1999 and a total of 896 deaths were observed. The analysis by Cox proportional hazard model demonstrated that the mortality was significantly higher in people: (1) who had rated their health as bad and (2) who had the habit of smoking, and that it was significantly lower in people: (3) who had hobby, (4) who had the habit of exercise and (5) who had the habit of drinking, than in those who had not, respectively.