

## Radiation-related Risk of Cancers of the Upper Gastrointestinal Tract in Japanese Atomic Bomb Survivors

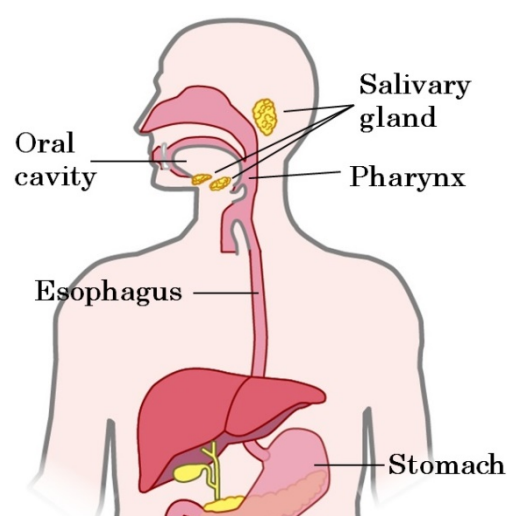
This study examined whether the risk of oral cavity/pharynx cancers, esophagus cancer, and stomach cancer also increases with radiation exposure, using data collected during 1958 to 2009 from 105,444 subjects. The study's analysis also considered effects of smoking and alcohol consumption, which are known to increase cancer risk and potentially affect radiation risk estimates.

The results of this analysis are mainly consistent with the results of prior LSS analyses. Namely, salivary gland, esophagus, and stomach cancers continue to show statistically significant increases in risk as radiation dose increases. On the other hand, oral cavity/pharynx cancer, other than salivary gland, does not show significantly increased risk. Lifestyle factors such as smoking and alcohol consumption had no impact on radiation risk estimates.

Continued follow-up of the LSS cohort is important to further clarify the nature of radiation effects in upper GI cancers, especially oral cavity/pharynx and esophagus cancers, for which detailed dose-response analyses were not possible in this study due to the small numbers of cases.

### \* Life Span Study

The main purpose is to investigate the long-term effects of atomic bomb radiation on the cause of death and cancer incidence. At the time of the 1950 national population census in Japan, about 94,000 atomic bomb survivors were selected from among those who were confirmed to be in Hiroshima and/or Nagasaki at the time of the atomic bombings and about 27,000 who were not in city at the time. This study has tracked about 120,000 subjects.



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RERF's objective with this brief outline is to succinctly explain our research for the lay public. Much of the technical content of the original paper has been omitted. For further details about the study, please refer to the full paper published by the journal.