

Proton beam therapy shows encouraging long-term outcome for patients with locally advanced sinonasal cancers

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Proton beam radiation therapy shows encouraging results for patients with locally advanced sinonasal malignancies, according to a study presented at the Multidisciplinary Head and Neck Cancer Symposium.

Sinonasal cancers are very rare but aggressive types of cancer. Patients usually present with advanced stage with tumors involving normal structures in the skull base such as eyes, optic nerves, brain. Between 1991 and 2003, 99 patients with newly diagnosed sinonasal cancers were treated with proton beam therapy at Massachusetts General Hospital in Boston. Sixty-seven percent of the patients had some type of surgery prior to their radiation. The median total dose to the primary tumor was 70 Gray. After a median follow-up of 8.5 years, the local control rates at five and eight years were 87 percent and 83 percent, respectively, and there was no statistically significant difference in local control per histological subtype, T stage, and surgery vs. biopsy.

"Due to the anatomical location of sinonasal cancers, conventional radiation therapy results in very poor local control and is associated with significant treatment-related toxicity," Annie Chan, M.D., a radiation oncologist and the principal investigator of the study at Massachusetts General Hospital, Harvard Medical School, said. "Proton beam [radiation therapy](#), with its superior dose distribution, allows the delivery of higher doses of radiation to the tumor while sparing more of the healthy surrounding tissues. This study showed very encouraging results for

these patients and now prospective multi-institutional studies are being planned to further study the use of [proton therapy](#) in the treatment of this rare but aggressive [malignancy](#)."

Provided by American Society for Radiation Oncology

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