

# NEW USES FOR RADIOSURGERY RECURRENT HEAD AND NECK CANCER

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Stereotactic radiosurgery is an innovative new procedure for treating small tumors in and about the head using a pencil-thin beam of radiation directed from thousands of different angles.

By attacking from without, high doses of radiation can be targeted to specific areas while surrounding vital tissues receive minimal or no radiation dose.

The head is an ideal area for radiosurgery. The skull offers a stable, firm, consistent reproducible basis for placing a stereotactic head frame. A high resolution CT scan is performed with the head frame in place. Nine carbon rods emanate from the head frame so that computerized planning can, with great precision, localize and find the target repeatedly.

Sophisticated physicians and medical staff train beams from thousands of angles to hit the desired area while minimizing surrounding dose and, therefore, complications.

A new report published in *CANCER* is interesting for its treatment of lesions at the base of the skull secondary to recurrent cancers of the throat and adjacent areas.

Radiation delivered was in the older style single fraction method.

Patients treated numbered seven with actually ten lesions or nodules of cancer being targeted. Of the ten lesions treated in seven patients, three were second recurrences. These three patients previously had radiosurgery elsewhere.

Nine of the nodules were causing symptoms with seven producing cranial nerve abnormalities; two causing pain and a compression of the eye.

One patient only had no symptoms but did have prior radiosurgery and was being followed on routine intervals with scans.

The group reported results one to fourteen months after treatment.

Five of the nine lesions causing symptoms improved. This improvement lasted throughout the period of observation. Symptoms of the remaining four patients stabilized meaning it did not deteriorate, suggesting a degree of success. Because one patient had been treated just prior to publication, results are not available.

Of nine patients' lesions evaluated, five actually decreased in size and four showed no further growth. This is impressive results for previously treated recurrent cancer.

The authors noted that recurrence remains a problem in head and neck cancers even with new radiation and surgical techniques. The role of radiosurgery was to attempt to improve local control. The authors were enthusiastic about using this form of therapy because progressive tumors in the base of skull area can cause pain and nerve damage, resulting in functional impairment. Stereotactic radiosurgery offers an easy treatment option that shrunk or stabilized the otherwise progressive disease.

Our ability to fractionate stereotactic radiosurgery further enhances the safety of the technique by fractionating or dividing up the dose into smaller portions. This helps normal tissues repair effects of radiation .

The authors concluded "radiosurgery is a promising technique for achieving local control in case of recurrent head and neck cancers."

Fractionated stereotactic radiosurgery developed for recurrent nasopharynx carcinoma by our physicians has been highly successful. We have used both fractionated radiosurgery alone and fractionated radiosurgery with concurrent chemotherapy. Superior results have been seen in the chemotherapy-enhanced group. The role of chemotherapy is to make the tumor more susceptible to killing or controlling the tumor by radiosurgery. In general, the patients have tolerated this approach well with long-term control in most patients thus treated.