## CLINICAL PAPER / BRAIN TUMOR



Experience with Novalis stereotactic radiosurgery for vestibular schwannomas

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The Novalis linear accelerator system, a well developed modality, can be used for stereotactic radiosurgery (SRS). The aim of this study was to clarify the efficiency and safety of Novalis SRS in treating vestibular schwannomas.

This 4-year retrospective study enrolled 23 patients with 26 vestibular schwannomas (3 patients suffered from neurofibromatosis Type II). Five patients had undergone tumor resection. All 26 tumors were treated using Novalis SRS, with a prescription dose that varied between 10 and 16Gy (mean,  $11.8\pm1.7$ Gy). The average follow-up period was 56.5±22.1 months (range, 17-87 months). (76.9%), and there was no observed change in the size of 3 tumors (11.5%). Three of 26 tumors (11.5%) enlarged more than 2mm in one direction. Thus the ultimate radiological tumor control rate was 88.5% (23/26). In addition, 20 (87.0%) patients retained their pre-irradiation hearing function. Facial and trigeminal nerve function were both preserved in all patients. No death occurred during the follow-up, and no patient was treated with a second SRS or converted to tumor resection.

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Novalis SRS is a reliable treatment option for vestibular schwannomas. With an optimal radiation dose, satisfactory tumor control can be achieved while preserving cranial nerve function.

## B SUMMARY

There were 9 men and 14 women. Their mean age at the time of treatment was 54.0±14.6 years (range, 27-84 years). On average, the original size of the tumor was 19.0±7.2mm in maximal diameter (range, 4.6-39.9mm). At the last follow-up, 20 tumors had regressed

