

## Abstract Preview - Step 3/4

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Topic: 7.1 Radiosurgery for Intracranial Diseases

Title: **Novalis Stereotactic Radiosurgery for Vestibular Schwannomas: the Toulouse Stereotactic Radiosurgery Unit experience**

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Text: Objective. To determine the outcome of patients treated for sporadic vestibular schwannomas (VS) in the Toulouse Stereotactic Radiosurgery Unit. Patients and Methods. In a retrospective study, we identified those patients treated between January 2008 and December 2012, who had a sporadic VS and at least 36 months follow-up (FU) with MRI scan each 6 months. Results. A total of 119 patients were included. Mean age was 61±13 years; 59.7% were female, 40.4% were male. Mean FU was 75±17 mo. At the time of radiosurgery, 42.6% of patients had serviceable hearing and 8.8% some degree of facial palsy. A previous surgery was found in 15.3% of the population. Mean volume was 1.1 cc ± 1.1 (range: 0.1 - 5.4 cc). Median prescription dose to the tumor margin was 11.1 ± 0.91 Gy. The overall control rate was 91.8%. The results differed with the Koos grade: 100% for grade 1, 92.7% for grade 2, 93.5% for grade 3, 77.8% for grade 4. An increase of tumor volume was found at 6 months in 71.6% of cases. It was predictive of failure if superior to 60% of the initial volume with a sensitivity of 62% and a specificity of 89% on ROC analysis. Serviceable hearing was maintained in 56% of patients (audiometric data available for 25 cases). New or worsening of a pre-existing facial palsy occurred in 5.6% of patients. Trigeminal nerve symptoms appeared in 8.4% of patients but 5/6 patients with pre-treatment symptoms were improved. Both complications were significantly related to the increase of volume at 6 months (respectively p < 0.02 and p < 0.01) and to the KOOS grade (p < 0.04 and p < 0.003). Conclusion. Novalis SRS is an effective treatment for VS with a tumor control obtained in 91.8% of cases, with low morbidity. Size variation at the first MRI FU scan could predict the outcome.

Conflict of interest: Nothing to disclose

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