# An Audit of Stereotactic Radiosurgery for Vestibular Schwannoma: Early toxicity and dosimetry data

**Descriptor:**

An audit to assess the introduction of CyberKnife therapy for vestibular schwannoma and compare with the previous local standard of BrainLab.

**Background:**

Management of vestibular schwanomma (VS) includes observation, surgical resection or stereotactic radiosurgery (SRS). In June 2013, the SRS programme switched to Cyberknife at University Hospital Birmingham (UHB). The aim of this audit was assess dosimetry and toxicity with CyberKnife using in-house historic Brainlab data as the standard.

## The Cycle

**The standard:**

The aim of this audit was to assess dosimetry and toxicity with CyberKnife using in-house historic Brainlab data as the standard.

**Target:**

To audit the toxicity and early dosimetric findings of the treatment of vestibular schwannoma using CyberKnife.

## Assess local practice

**Indicators:**

• The previous system of SRS used BrainLab. CyberKnife was introduced in June 2013 and this audit compares the new system with BrainLab

• CyberKnife is the indicator to be measured in terms of toxicty and dosimetry

• The comparator is BrainLab (standard)

**Data items to be collected:**

• Trigeminal and facial nerve toxicity at baseline, 6 weeks post-SRS and 12 months post-SRS

• Conformity and gradient indices

• Maximum doses to OAR's including brainstem, trigeminal nerve and cochlear

**Suggested number:**

50 patients.

**Suggestions for change if target not met:**

Re-evaluation of dose constraints to OAR's and review of how toxicity can be reduced possible by reducing the total dose delivered.

[**benghiat et al 2014.pdf**](https://www.rcr.ac.uk/sites/default/files/audit_template/benghiat%20et%20al%202014.pdf)PDF - 844.75 KB

**References:**

1. Benghiat H, Heyes G, Nightingale P, Hartley A, Tiffany M, Spooner D, Geh JI, Cruickshank G, Irving RM, Sanghera P. Linear accelerator stereotactic radiosurgery for vestibular schwannomas: a UK series. Clin Oncol (R Coll Radiol). 2014 Jun;26(6):309-15.

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