

Stereotactic radiosurgery for intracranial hemangioblastoma

Stereotactic radiosurgery (SRS) for **intracranial hemangioblastoma** is a non-invasive therapeutic technique that delivers highly focused, high-dose **ionizing radiation** to well-defined vascular tumors within the central nervous system—specifically **hemangioblastomas**—without the need for surgical incision. SRS is typically used as a primary or adjuvant treatment in patients with surgically inaccessible lesions, multiple tumors (as in **von Hippel-Lindau disease**), or recurrences, aiming to achieve local tumor control while minimizing damage to adjacent neural structures.

□ Key Features

Target: Intracranial hemangioblastomas (WHO grade I, vascular tumors, often cerebellar or brainstem).

Indications:

Surgically high-risk or inoperable tumors

Residual/recurrent disease

Multiple lesions (e.g., in von Hippel-Lindau syndrome)

Mechanism: Conformally delivered radiation causes endothelial damage, vascular thrombosis, and gradual tumor involution.

Techniques: Performed with Gamma Knife, CyberKnife, or LINAC-based systems.

Outcomes: High rates of local control in solid lesions; reduced efficacy in cystic tumors.

Retrospective, multicenter cohort studies

In a retrospective, multicenter cohort study, Shaaban et al. evaluated outcomes following stereotactic radiosurgery (SRS) for intracranial hemangioblastomas, with participation from the following institutions: the Department of Neurological Surgery, University of Virginia Health (Charlottesville, Virginia, USA); Gamma Knife Center, Nasser Institute Hospital (Cairo, Egypt); Department of Neurological Surgery, Benha University (Qalubya, Egypt); Department of Neurological Surgery and Department of Clinical Oncology, Ain Shams University (Cairo, Egypt); Department of Radiation Oncology, National Cancer Institute, Cairo University (Cairo, Egypt); Department of Neurological Surgery, University of Pittsburgh Medical Center (Pittsburgh, Pennsylvania, USA); Department of Neurological Surgery, Koc University School of Medicine (Istanbul, Turkey); Department of Stereotactic and Radiation Neurosurgery, Na Homolce Hospital (Prague, Czech Republic); Department of Neurological Surgery, Centre de recherche du CHUS, Université de Sherbrooke (Québec City, Canada); Department of Neurological Surgery, Taipei Veterans General Hospital and School of Medicine, National Yang Ming Chiao Tung University (Taipei, Taiwan); Vivian L. Smith Department of

Neurosurgery, University of Texas Health Science Center at Houston (Houston, Texas, USA); Radiosurgery Unit, Hospital Ruber Internacional (Madrid, Spain); Department of Neurological Surgery, IRCCS Humanitas Research Hospital (Milan, Italy); Department of Neurological Surgery, Postgraduate Institute of Medical Education and Research (Chandigarh, India); Department of Neurological Surgery, Dokkyo Medical University (Mibu, Tochigi, Japan); Department of Neurological Surgery, Penn State Health – Hershey Medical Center (Hershey, Pennsylvania, USA); Department of Neurological Surgery and Department of Radiation Oncology, West Virginia University (Morgantown, West Virginia, USA); Radiology Department, CEDIMAT (Santo Domingo, Dominican Republic); Gamma Knife Center, Jewish Hospital, Mayfield Clinic (Cincinnati, Ohio, USA); and the Department of Radiation Oncology, The Ohio State University (Columbus, Ohio, USA).

This study, published in the [Neurosurgery journal](#) ¹⁾, concluded that stereotactic radiosurgery is a safe and effective treatment for intracranial hemangioblastomas, whether associated with Von Hippel-Lindau (VHL) disease or occurring sporadically. The study demonstrated high local tumor control rates, particularly in non-cystic tumors, with superior outcomes in sporadic cases. A margin dose greater than 15 Gy was associated with improved tumor control, while older age, male sex, and multiple tumors were linked to lower control rates, especially in patients with VHL.

1. The Illusion of Scientific Depth Through Institutional Name-Dropping

With over 20 departments spanning the globe, the study wears its international multicenter badge like armor. But beneath this glittering façade lies a retrospective [data dump](#) with no methodological backbone. There's no central [review](#), no protocol [harmonization](#), no prospective design. The participation of so many institutions ends up being an [academic smokescreen](#), creating the illusion of [robustness](#) where there is only disjointed [data collection](#).

2. Recycled Findings with No Added Value

The [conclusion](#) that non-cystic hemangioblastomas respond better to SRS than cystic ones is a textbook-level [truism](#), not a novel insight. This so-called “finding” has been clear in radiosurgical practice for over two decades. The paper essentially revalidates the obvious, draped in statistical [verbosity](#), and calls it a breakthrough.

3. Correlation Masquerading as Causation

The association between a margin dose >15 Gy and improved tumor control is presented with undue [confidence](#). The study fails to control for [confounding](#) factors such as [tumor volume](#), location, radiosurgical platform, and previous interventions. The absence of multivariable adjustment renders these claims scientifically hollow — [retrospective](#) correlations are not clinical recommendations.

4. Statistical Smoke and Mirrors

Reporting decimal-specific 3- and 5-year progression rates in a non-standardized, retrospective, multicenter dataset is a [masterclass](#) in [statistical overreach](#). The authors pretend at precision while ignoring the elephant in the room: inter-institutional variability, observer bias, and unvalidated endpoints.

5. Methodological Drift and Editorial Laxity

There's no mention of blinded radiological review, quality control of data submission, or standard criteria for progression. Yet the paper is published in a flagship journal, *Neurosurgery*, suggesting a failure of editorial scrutiny — more impressed by the author list than the actual science. It's academia-as-performance, not academia-as-truth-seeking.

6. No Clinical Impact, No Algorithm, No Takeaway

Despite the bulk of data, the study offers zero clinical decision support. No stratification tool, no risk-based treatment guidance, no practical utility. What remains is a glorified registry report, bloated with affiliations but starved of clinical insight.

□ Final Verdict

This article exemplifies the modern epidemic of [collaborative mediocrity](#): many authors, many countries, and very little science. It is not a contribution to knowledge but a contribution to [data inflation](#) and [citation padding](#). A missed opportunity turned into a prestige-laundered null result.

1)

Shaaban A, Tos SM, Mantziaris G, Pham D, Dayawansa S, et al. Outcomes After [Stereotactic Radiosurgery](#) for [Intracranial Hemangioblastoma](#) in [Von Hippel-Lindau Disease](#) and [Sporadic Cases](#): An [International Multicenter Study](#). *Neurosurgery*. 2025 Jun 19. doi:10.1227/neu.0000000000003579. Epub ahead of print. PMID: 40536334

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