

Brain metastases treatment guidelines

- [Population-Based Real-World Outcomes of Post-Operative Adjuvant Brain Cavity Radiotherapy Versus Observation](#)
- [Surgical tumor volume reduction in patients with brain metastases: A systematic review and meta-analysis](#)
- [Genetic analysis of a child with gastrointestinal hemorrhage and Cerebroretinal microangiopathy with calcifications and cysts and a literature review](#)
- [Clinical impact following the establishment of a specialized brain metastases tumor board](#)
- [Matching-Adjusted Indirect Comparison of Sotorasib Versus Adagrasib in Previously Treated Advanced/Metastatic Non-Small Cell Lung Cancer Harboring KRAS G12C Mutation](#)
- [Brain metastasis organoids: A systematic review of their methods and clinical application](#)
- [Long-term neurocognitive and behavioral outcomes in survivors of pediatric brain tumors: a systematic review](#)
- [Characteristics and Outcomes of Patients With IDH-Mutant Grade 2 and 3 Gliomas After Deferred or Adjuvant Radiotherapy](#)

[Brain metastases treatment](#) can vary depending on the type of cancer, the number and location of tumors, and the patient's overall health. However, there are several general [guidelines](#) that are commonly followed for the treatment of brain metastases.

It's important to note that brain metastases treatment guidelines change over time as new treatments become available and more data on the safety and effectiveness of different treatments are obtained.

ASCO-SNO-ASTRO Guideline 2022

https://ascopubs.org/doi/10.1200/JCO.21.02314?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed

EANO-ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up of patients with brain metastasis from solid tumours 2021

[https://www.annalsofoncology.org/article/S0923-7534\(21\)02214-6/fulltext](https://www.annalsofoncology.org/article/S0923-7534(21)02214-6/fulltext) Published: August 05, 2021

Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Role of Surgery in the Management of Adults With Metastatic Brain Tumors 2019

Please see the full-text version of this guideline

<https://www.cns.org/guidelines/browse-guidelines-detail/guidelines-treatment-of-adults-with-metastatic-brain-tumors>

[c-bra-2](#) for the target population of each recommendation listed below.

SURGERY FOR METASTATIC BRAIN TUMORS AT NEW DIAGNOSIS QUESTION: Should patients with newly diagnosed [metastatic brain tumors](#) undergo [Brain metastases surgery](#), [Stereotactic radiosurgery for brain metastases](#) (SRS), or [whole brain radiotherapy](#) (WBRT)?

RECOMMENDATIONS:

Level of Evidence 1: Surgery + [WBRT](#) is recommended as first-line treatment in patients with single [brain metastases](#) with favorable [performance status](#) and limited [extracranial disease](#) to extend [overall survival](#), [median survival](#), and [local control](#).

Level of Evidence 3: Surgery plus [SRS](#) is recommended to provide survival benefit in patients with metastatic brain tumors

Level of Evidence 3: Multimodal treatments including either surgery + WBRT + SRS boost or surgery + WBRT are recommended as alternatives to WBRT + SRS in terms of providing overall survival and local control benefits.

SURGERY AND RADIATION FOR METASTATIC BRAIN TUMORS QUESTION: Should patients with newly diagnosed metastatic brain tumors undergo surgical resection followed by WBRT, SRS, or another combination of these modalities?

RECOMMENDATIONS:

Level 1: Surgery + WBRT is recommended as superior treatment to WBRT alone in patients with single brain metastases.

Level 3: Surgery + SRS is recommended as an alternative to treatment with SRS alone to benefit overall survival.

Level 3: It is recommended that SRS alone be considered equivalent to surgery + WBRT.

SURGERY FOR RECURRENT METASTATIC BRAIN TUMORS QUESTION: Should patients with recurrent metastatic brain tumors undergo surgical resection?

RECOMMENDATIONS:

Level 3: Craniotomy is recommended as a treatment for intracranial recurrence after initial surgery or SRS. **SURGICAL TECHNIQUE AND RECURRENCE QUESTION A:** Does the surgical technique (en bloc resection or [piecemeal resection](#)) affect recurrence?

RECOMMENDATION:

Level 3: [En bloc resection](#) of the tumor, as opposed to piecemeal resection, is recommended to decrease the risk of postoperative leptomeningeal disease when resecting single brain metastases.

QUESTION B:

Does the extent of surgical resection (gross total resection or subtotal resection) affect recurrence?

RECOMMENDATION:

Level 3: **Gross total resection** is recommended over **subtotal resection** in **Recursive partitioning analysis class 1** class I patients to improve **overall survival** and prolong time to **recurrence**. ¹⁾

Consensus by the Spanish Society of Neurosurgery Tumor Section

In this document, the following topics are developed: selection of the **cancer patient** candidate for surgical **resection** and the role of the **neurosurgeon** in the **multidisciplinary team**, the importance of immunohistological and **molecular diagnosis**, **neurosurgical techniques**, **radiotherapy** techniques, treatment **updates** of **chemotherapy** and **immunotherapy** and management **algorithms** in **brain metastases**. With this **consensus manuscript**, the tumor group of the **Spanish Society of Neurosurgery** (GT-SENEC) exposes the most relevant neurosurgical issues and the fundamental aspects to harmonize multidisciplinary treatment, especially with the medical specialties that are treating or will treat these patients ²⁾

¹⁾

Nahed BV, Alvarez-Breckenridge C, Brastianos PK, Shih H, Sloan A, Ammirati M, Kuo JS, Ryken TC, Kalkanis SN, Olson JJ. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Role of Surgery in the Management of Adults With Metastatic Brain Tumors. *Neurosurgery*. 2019 Mar 1;84(3):E152-E155. doi: 10.1093/neuros/nyy542. PubMed PMID: 30629227.

²⁾

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