

Incidental meningioma active surveillance

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[Active surveillance](#) is a non-interventional management strategy where the tumor is closely monitored with regular imaging and clinical assessments instead of immediate treatment.

Indications for Active Surveillance

[Asymptomatic](#) patients

Tumor discovered [incidentally](#)

Small [size](#) (< 2–3 cm)

No [mass effect](#) or [brain edema](#)

No radiological signs of aggressiveness (e.g., brain [invasion](#), rapid [growth](#))

The patient has significant comorbidities or advanced [age](#)

The [tumor](#) is located in an [eloquent](#) or high-risk area for surgery

Surveillance Protocol (Typical Schedule)

[Baseline](#) MRI with contrast to characterize the tumor

[Follow-up](#) MRI at 6 months

If stable → annual imaging for 5 years

If still stable → consider imaging every 2–3 years

Lifelong monitoring is most cases, especially in younger patients

Clinical Follow-up

Regular neurological exams

Monitor for new symptoms: headache, seizures, focal deficits, cognitive changes

Reassess management if:

Tumor grows (commonly defined as >2 mm/year)

New or worsening symptoms appear

Advantages of Active Surveillance Avoids risks of surgery or radiation

Preserves the quality of life in asymptomatic individuals

Many meningiomas remain stable for years or a lifetime

When to Reconsider Treatment Radiological progression (volume increase, edema, mass effect)

Symptom development

Patient preference changes

Tumor in surgically accessible location with low expected morbidity

Cohort studies

A population-based [study](#) explores the **prevalence and symptomatology of incidentally found meningiomas** in a specific aging [population](#)—the 70-year-olds participating in the Gothenburg H70 Birth Cohort Study. The authors analyzed MRIs from 792 individuals and found a **1.8% prevalence** of incidental meningiomas, with a notable **gender skew** (12 of the 14 cases were female) ¹⁾

One of the key strengths of this work is its **community-based sampling**, which reduces the [referral bias](#) often present in hospital-based series. It also adds valuable information to the growing body of literature supporting a more **conservative treatment approach** in asymptomatic or minimally symptomatic individuals, especially in the elderly.

The study challenges the reflexive assumption that nonspecific symptoms like [headache](#) or [dizziness](#) are attributable to small, incidentally found meningiomas. This is crucial, as **overattribution can lead to unnecessary neurosurgical interventions**, with accompanying risks and psychological burden.

On the flip side, the small absolute number of identified meningiomas ($n=14$) limits the **statistical power** to detect nuanced associations between clinical variables and tumor presence. Furthermore, the authors did not perform longitudinal follow-up to assess **tumor growth or symptom progression**, which could be relevant in determining the true clinical impact of these incidental findings.

In summary, this study provides solid [evidence](#) that supports **watchful waiting** in many cases of [incidental meningioma](#), particularly in [elderly](#) women. It underscores the need for **clinical restraint** and careful consideration before attributing symptoms or deciding on intervention.

Retrospective Comparative Cohort Study with Propensity Score Matching

Hallak et al. employ a [retrospective study](#) design with [propensity score matching](#) to balance confounding factors between patients undergoing [stereotactic radiosurgery](#) (SRS) and those under [active surveillance](#) ²⁾

Key findings include:

- **Superior radiological control** in the SRS group (97.37%) compared to [observation](#) (71.93%), with a statistically significant advantage ($p < 0.01$).
- **Neurological safety** appears slightly compromised in SRS (1.39% new deficits), while no new deficits occurred under surveillance.
- The **need for surgical resection** was low in both arms, slightly higher in the observation group (3.5% vs 0.9%), though not statistically significant ($p = 0.063$).
- A **trend toward lower mortality** in the SRS group (9.65% vs 18.42%) was noted, yet without reaching statistical significance ($p = 0.06$). Notably, no deaths in the observation group were directly attributed to meningioma progression.

From a clinical [decision making](#) perspective, the study underscores the value of personalized management. While [SRS](#) offers more robust tumor control, the marginal increase in risk of neurological complication, coupled with a non-significant impact on survival or surgical rescue, suggests [watchful waiting](#) remains a valid approach—especially in patients with limited life expectancy or comorbidities.

Future [prospective trials](#) with functional outcomes, quality-of-life metrics, and cost-effectiveness analyses are needed to refine treatment algorithms. Nevertheless, this article adds weight to current trends toward de-escalation in certain low-risk neurosurgical [cases](#).

¹⁾

de Dios E, Näslund O, Choudhry M, Berglund M, Skoglund T, Sarovic D, Rydén L, Kern S, Skoog I, Thurin E. Prevalence and symptoms of incidental meningiomas: a population-based study. *Acta Neurochir (Wien)*. 2025 Apr 3;167(1):98. doi: 10.1007/s00701-025-06506-7. PMID: 40178655.

²⁾

Hallak H, Mantziaris G, Pikis S, Islim AI, Peker S, Samanci Y, Nabeel AM, Reda WA, Tawadros SR, El-Shehaby AMN, Abdelkarim K, Emad RM, Mathieu D, Lee CC, Liscak R, Alvarez RM, Kondziolka D, Tripathi M, Speckter H, Bowden GN, Benveniste RJ, Lunsford LD, Jenkinson MD, Sheehan J. A retrospective comparison of active surveillance to stereotactic radiosurgery for the management of elderly patients with an incidental meningioma. *Acta Neurochir (Wien)*. 2025 Feb 6;167(1):37. doi: 10.1007/s00701-025-06452-4. PMID: 39912992; PMCID: PMC11802698.

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