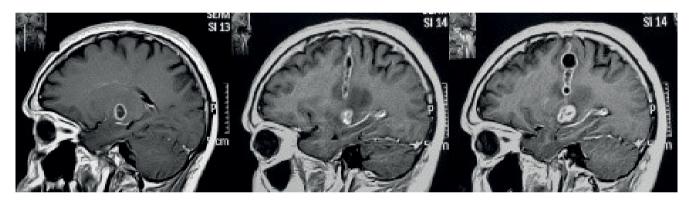
## Metastatic seeding after a stereotactically-guided biopsy followed by gamma knife surgery

Diseminación metastásica luego de una biopsia guiada por estereotaxia, seguida por cirugía con bisturí de rayos gamma

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Gamma knife surgery is often used for treatment of brain metastases. A stereotactically-guided biopsy is performed to confirm the diagnosis in doubtful cases. Tumor cells that may spread as a result of the biopsy may survive and grow after gamma knife surgery, leaving a metastatic seeding through the biopsy tract. In this 45-year-old man, with a biopsy-proven metastatic adenocarcinoma, seeding was noticed after gamma knife surgery (Figure). This rare complication should be kept in mind when evaluating patients with brain metastases undergoing stereotactic biopsy followed by gamma knife surgery and not conventional radiation<sup>1</sup>.



**Figure.** Tumor seeding developing within the tract of a stereotactically-guided biopsy in a patient with metastatic adenocarcinoma from lung cancer further submitted to gamma knife surgery. Basal MRI shows a thalamic metastasis (*left*). Increasing tumor seeding along the surgical tract was noted four (*center*) and six months (*right*) after the procedure.

## References

Karlsson B, Ericson K, Kihlstrom L, Grane P.
Tumor seeding following stereotactic biopsy of

brain metastases. J Neurosurg 1997 Aug;87(2):327-30. https://doi.org/10.3171/jns.1997.87.2.0327

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