



# Neurocirugía

<https://www.revistaneurocirugia.com>



## O-ONC-05 - Meningioma and Breast Cancer: Survival of Patients with Synchronous and Metachronous Breast Cancer and Meningioma

*J.P. Lavrador, M. Valente Pinto, L. Mascarenhas Lemos, C. Ribeiro, E. Oliveira, H. Carvalho and A. Peralta-Santos*

*Departamento de Neurocirurgia, Hospital Santa Maria. Centro Hospitalar Lisboa Norte. Clinical Scholars Research Training, Harvard Medical School Portugal.*

### Resumen

**Objectives:** The prognosis of the association between Breast Cancer (BC) and Meningioma (M) is still unknown. Our aim was to evaluate the survival impact of tumor exposure sequence. in patients with both tumors.

**Material and methods:** Patients were divided in groups according to the tumors sequence: BC before M (group 1), synchronous BC+M (group 2) and BC after M (group 3). The SEER database was used. Demographics, meningioma and breast cancer variables were analyzed. The primary outcome was oncological survival.

**Results:** A total of 1715 patients were followed with a median follow-up of 84 months. Group 2 had the shortest survival (median: 32 months) and group 1 the longest (median: 110 months). Group 3 was the reference group. On the unadjusted analysis group 2 had the shortest survival (HR: 3.13, 95%CI: 1.62-6.04) and adjusted analysis confirmed the previous finding (HR: 3.11, 95%CI: 1.58-6.19), with no statistical difference between the metachronous tumors groups. Increasing age (HR: 1.13, 95%CI: 1.11-1.15,  $p < 0.005$ ) and grade III meningioma (HR: 4.51, 95%CI: 1.90-10.69,  $p < 0.005$ ) were related with lower survival. Meningioma treatment had no influence on the survival ( $p > 0.05$ ). The association between surgery and radiotherapy in BC treatment improved the outcome (HR: 0.37, 95%CI: 0.23-0.93,  $p < 0.05$ ). Grade III meningioma and receptor hormonal status influenced synchronous tumors ( $p < 0.05$ ) but had no influence on metachronous tumors survival ( $p > 0.05$ ) on stratified analysis.

**Conclusions:** Synchronous tumors were associated with lower survival, when compared with metachronous. Increasing age had a negative influence on patient survival. Even though surgery and radiotherapy for breast cancer had a positive influence in the outcome, meningioma treatment was not related with survival. Grade III meningioma and hormonal receptor status only influenced synchronous tumors patient survival.

**Key words:** Meningioma. Breast cancer. Treatment. Survival. Epidemiology.