

# CÁNCER CEREBRAL

## MGMT promoter methylation in Peruvian patients with glioblastoma.

Belmar-Lopez C, Castaneda CA, Castillo M, García-Corrochano P, Orrego E, Meléndez B, Casavilca S, Flores C, Orrego E.

Ecancelmedicalsecience. 2018 Feb 14;12:812.

### Abstract

**PURPOSE:** O<sup>6</sup>-methylguanine-DNA methyltransferase (MGMT) promoter methylation predicts the outcome and response to alkylating chemotherapy in glioblastoma. The aim of this study is to evaluate the prevalence of MGMT methylation in Peruvian glioblastoma cases. **PATIENTS AND METHODS:** We evaluated retrospectively 50 cases of resected glioblastoma during the period 2008-2013 at Instituto Nacional de Enfermedades Neoplásicas in Peru. Samples consisted of paraffin embedded and frozen tumour tissue. MGMT-promoter methylation status and the expression level of MGMT gene were evaluated by methylation-specific PCR and real-time PCR, respectively. **RESULTS:** Unmethylated, methylated and partially methylated statuses were found in 54%, 20% and 26% of paraffin-embedded samples, respectively. Methylation status was confirmed in the Virgen de la Salud Hospital and frozen samples. There was an association between the status of MGMT-promoter methylation and the level of gene expression ( $p = 0.001$ ). Methylation was associated with increased progression-free survival ( $p = 0.002$ ) and overall survival (OS) ( $p < 0.001$ ). **CONCLUSION:** MGMT-promoter methylation frequency in Peruvian glioblastoma is similar to that reported in other populations and the detection test has been standardised.

## **Non-Meningothelial Meningeal Tumours with Meningioangiomatosis-like Pattern of Spread.**

Iorgulescu JB, Ferris S, Agarwal A, **Casavilca Zambrano S**, Hill DA, Schmidt R, Perry A.

Neuropathol Appl Neurobiol. 2018 Mar 1.

### Abstract

Meningioangiomatosis (MA) is a rare entity characterized by the perivascular spread of meningotheial and fibroblastic cells along the Virchow-Robin spaces of small leptomeningeal and intracortical blood vessels. In contrast to solitary MA, the perivascular cells in MA associated with meningioma often share the genetic alterations of the meningioma and thus represent an MA-like pattern of spread along perivascular Virchow-Robin spaces. Although a rare phenomenon, herein we demonstrate that a spectrum of non-meningothelial meningeal tumours (e.g. solitary fibrous tumour/hemangiopericytoma, atypical teratoid/rhabdoid tumour, and rhabdomyosarcoma) can similarly be associated with an MA-like pattern of perivascular spread. Analogously, the perivascular components of these tumours retain the signature immunoprofiles of their parent neoplasms, despite the otherwise benign appearing fibroblast-like cytology and marked perivascular hyalinization. Recognition of this morphologic mimicry can help prevent a diagnostic misinterpretation in these rare scenarios. This article is protected by copyright. All rights reserved.

## **Impact of pathological features of brain metastases in prognosis.**

**Castaneda CA, Castillo M, Bernabe LA, Sanchez J, Casavilca S, García-Corrochano P, Ponce J, Villa-Robles MR, Lopez CB, Orrego E.**

Biomark Med. 2018 May;12(5):475-485.

### Abstract

AIM: To evaluate the prognostic value of tumor-infiltrating lymphocytes (TILs) and Ki67 in brain metastasis lesions, and the effect of adding them to variables of graded prognostic assessment score. PATIENTS & METHODS: Clinicopathological information from 111 medical charts of brain metastasis patients was obtained, and TIL distribution (n = 84), Ki67 index (n = 79) and CD3 TIL (n = 64) were prospectively evaluated. RESULTS: Most frequent TIL pattern was perivascular (67.8%), and median Ki67 and CD3 TIL percents were 30 and 4.8%, respectively. Ki67  $\geq 15$  was associated with shorter survival (p = 0.018) but CD3 TIL was not (p = 0.870). The highest graded prognostic assessment score was not associated with survival (p = 0.648), however, those with low Ki67 and high score was associated with better outcome (p = 0.007). CONCLUSION: High Ki67 index in brain metastasis carries a worse prognosis.