ABSTRACT

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Clinical, Pathological, and Molecular Characteristics of Diffuse Spinal Cord Gliomas.

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Diffuse spinal cord gliomas (SCGs) are rare tumors associated with a high morbidity and mortality that affect both pediatric and adult populations. In this retrospective study, we sought to characterize the clinical, pathological, and molecular features of diffuse SCG in 22 patients with histological and molecular analyses. The median age of our cohort was 23.64 years (range 1-82) and the overall median survival was 397 days. K27M mutation was significantly more prevalent in males compared to females. Gross total resection and chemotherapy were associated with improved survival, compared to biopsy and no chemotherapy. While there was no association between tumor grade, K27M status ($p = 0.366$) or radiation ($p = 0.772$), and survival, males showed a trend toward shorter survival. K27M mutant tumors showed increased chromosomal instability and a distinct DNA methylation signature.

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