

Tumor infiltrating cytotoxic CD8 T-cells predict clinical outcome of neuroblastoma in children

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Neuroblastoma is often infiltrated by inflammatory cells. One possible role of these inflammatory cells is that they represent a cell-mediated immune response against cancer. CD8⁺ lymphocytes are a known crucial component of cell-mediated immunity. This study was to explore the prognostic value of tumor-infiltrating CD8⁺ cytotoxic lymphocytes in Neuroblastoma. Tumor-infiltrating CD8⁺ lymphocytes were assessed by immune-histochemical staining of tumor tissue from 36 neuroblastoma from April 2008 to May 2015. The number of CD8⁺ T-cells was counted in tumor nest (intra-tumoral) and in the perivascular stroma of tumor (peritumoral) and their relationship with clinicopathologic outcome was determined.

The total number of CD8⁺ cells was inversely correlated with tumor histology grade ($P<0.001$), vascular invasion ($P<0.001$), capsular invasion ($P<0.002$), calcification ($P<0.005$), necrosis of tumor ($P<0.001$), regional lymph nodes invasion ($P<0.003$), distant metastasis ($P<0.003$), stage ($P<0.003$) and was positive correlated with N-myc oncogene presentation ($P<0.002$) in