

Level of tumor-infiltrating lymphocytes and density of infiltrating immune cells in different malignancies.

Castaneda CA, Castillo M, Aliaga K, Bernabe LA, Casavilca S, Sanchez J, Torres-Cabala CA, Gomez HL, Mas L, Dunstan J, Cotrina JM, Abugattas J, Chavez I, Ruiz E, Montenegro P, Rojas V, Orrego E, Galvez-Nino M, Felix B, Landa-Baella MP, Vidaurre T, Villa MR, Zevallos R, Taxa L, Guerra H.

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Abstract

Aim: To correlate levels of tumor-infiltrating lymphocytes (TIL) evaluated using the International Immuno-Oncology Biomarker Working Group methodology, and both density of tumor-infiltrating immune cell and clinicopathological features in different malignancies. **Methods:** 209 pathological samples from gastric cancer, cervical cancer (CC), non-small-lung cancer, cutaneous melanoma (CM) and glioblastoma were tested for TIL in hematoxylin eosin, and density of CD3+, CD4+, CD8+, CD20+, CD68+ and CD163+ cells by digital analysis. **Results:** TIL levels were higher in invasive margin compartments (IMC). TIL in IMC, intratumoral and stromal compartments predicted survival. CC and gastric cancer had higher TIL in intratumoral; CC and CM had higher TIL in stromal compartment and IMC. CM had the highest density of lymphocyte and macrophage populations. CD20 density was associated with survival in the whole series. **Conclusion:** Standardized evaluation of TIL levels may provide valuable prognostic information in a spectrum of different malignancies.