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## **Immunohistochemical Characterization of Immune Cells Infiltrate in Gastrointestinal Stromal Tumor GIST and Its Prognostic Correlation.**

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### **Abstract**

**Background:** Gastrointestinal stromal tumor (GIST) is the most common gastrointestinal mesenchymal neoplasm. The challenging dilemma in the management of GIST generally is due to its high tendency of recurrences. A precise prediction of recurrences and prognosis is still not achieved and an accurate definition for what we call “significant risk of relapse” is still unclear. Until now only rare studies have focused on the inflammatory background in GIST and its possible role and significance. **Aim of the work:** To evaluate the possible role of inflammatory cells in relation to the occurrence of recurrences in GIST. **Material and methods:** Sixty-one cases were included in the study from archived cases; 31 case with positive recurrence and 30 were non-recurrent after 3 years follow up. Five unstained sections of 3-5micron thickness were cut and stained for CD3, CD8, CD20, CD163, CD68 and CD56. **Results:** T lymphocytes was the most abundant cells, followed by B lymphocytes, tumor associated macrophages and NK cells. The amount of CD3, CD8, CD20, CD56 cells showed significant association with tumor recurrences, while both CD163 and CD68 showed no significant association with tumor recurrences. B lymphocytes showed the highest sensitivity and specificity in recurrence prediction. **Conclusion:** Immune cell infiltrate may provide important prognostic data for GIST prognosis. Further studies on the standardized immune score for risk determination and the utility of such results on the possible implication of immunotherapy in management of GIST are now required.

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