Introduction: Malignant gastrointestinal stromal tumors (GISTs), represent 1% of primary gastrointestinal cancers. The epidemiology, clinical and pathological profile of non metastatic disease were analyzed from various institutions treating GIST with a uniform protocol.

Methods: We evaluated the clinico epidemiological features; including age, sex, tumor location, presentation, mitotic index, Ki-67, expression of c-kit, in a cohort of primary GIST that were completely resected and received adjuvant Imatinib for 3 years. The survival in completely resected patients and independent prognostic factors were analyzed using multivariate analysis.

Results: A total of 81 cases of GIST (36 males, 45 females) mean age 53.3 years (± 14.28), median follow up of 65 months (13–96 months) were analyzed. All patients were C-KIT positive; primary sites – Gastric 42; jejunum & ileum 18, duodenum 5; esophageal -2; colon 6; rectum 3; mesenteric 5 were identified. Seven cases had a margin positive (R1) resection. The 2 year and 5 year survival was 96% and 82%; the best subset being GIST from stomach. Among 15 patients who progressed; liver was most common site (n = 8) of metastasis followed by peritoneum. Univariate analysis showed that each of the following factors had a significant negative influence on prognosis: male sex, tumor size 5 cm or more, margin positivity, mitotic index of more than 5/50 HPF and a ki-67 > 5%. Multivariate analysis showed that male sex, tumor size 5 cm or more and ki-67 > 5% were significant indicators of a poor survival.

Conclusion: Completely resected GIST of the stomach followed by adjuvant Imatinib for 3 years has the best outcome. The site, size, margin positivity and mitosis influence outcome of treatment in these tumors.