

**TITLE:** A twenty year review of Gastrointestinal Stromal Tumours (GISTs) diagnosed at Royal Devon and Exeter Hospital

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**ABSTRACT:**

**Background:** The development of a novel and effective therapy for GISTs using the receptor tyrosine kinase inhibitor imatinib (Glivec) has led us to review and reclassify mesenchymal tumours of the GI tract presenting to our hospital. The aim was to assess the diagnosis and identify patients that may benefit from imatinib.

**Methods:** The histopathology reports and slides of all cases of mesenchymal tumour of the GI tract were reviewed and patients were stratified into three groups: probably benign, uncertain malignant potential, probably malignant. The slides not previously stained were stained with CD117. Data was collected on demographics, survival, and recurrence.

**Results:** 66 of 78 patients (85%) were CD117 positive, which indicated they were unequivocally GISTs. Of these 25 were benign (38%), 16 uncertain (24%), 25 malignant (38%). The diagnosis was changed to GIST in 32. CD117 was already done in 14. Most of these cases preceded the advent of routine testing for CD117. Median age was 71 (range 16-88); 31 (47%) were male and 35 (53%) were female. Benign Group: 14 alive (0 disease progression (DP)), Malignant Group: 7 alive (2 DP). Uncertain Group: 12 alive (3 DP). 2 patients on imatinib, 1 refused.

**Conclusions:** Our review has revealed 10 patients alive with GIST not currently being followed up, 4 of these are new diagnoses, 2 have metastatic disease, who may benefit from targeted therapy. This highlights the need for clinical and pathological review in light of evolving diagnostic and therapeutic technologies even in smaller hospitals.