Introduction: Before the treatment of gastrointestinal stromal tumor (GIST), performing the pathological diagnosis including the immunohistochemistry of c-kit is essential. However, it is sometimes difficult to get the specimen of GIST owing to the localization. We have experienced a case that huge GIST difficult to get the biopsy specimen was completely resected with the aid of diagnostic injection of imatinib.

Clinical course: A 60 years of age male noticed large mass in his abdomen since August 2013. Therefore he visited to our department. We palpated approximately 20 cm huge hard mass without mobility in his lower abdomen. A CT scan showed 17 cm homogeneous enhanced mass with relatively clear border and including necrotic components spreading lower abdomen to pelvis. This tumor was most probably suspected intestinal GIST as imaging. However, it is difficult to perform EUS-FNA or echo-guided biopsy owing to the localization. If we performed surgery, huge blood loss and loss of function was anticipated. Therefore we tried the diagnostic treatment with imatinib 400 mg/day. Severe adverse events were not observed. Tumor progression was not observed by palpitation, furthermore CT showed tumor shrinkage after two weeks administration of imatinib. We continued imatinib treatment, however he suffered whole body diffuse itching skin rash about two months after this treatment. This was diagnosed toxic eruption due to imatinib. Although the CT scanning showed more shrinkage, we could not continue imatinib. We performed an operation on December 6. This surgery attained the curative en bloc resection. The pathological findings showed that this tumor was malignant jejunum GIST with c-kit positive and 45/50 HPF mitotic counts. Post operative course was good and the recurrence was not observed at this writing.

Summary: The diagnostic imatinib treatment is considered to be one of the treatment choice, when GIST is suspected by the imaging and biopsy specimens are difficult to acquire.