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Title **Imatinib Mesylate for Chronic Myeloid Leukemia and Gastrointestinal Stromal Tumors**

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Reference Technology Review Report 001/07, 2007. http://medicaldev.moh.gov.my/uploads/imatinib.pdf

Aim

To determine the safety, effectiveness, and cost effectiveness of imatinib mesylate in treating chronic myeloid leukemia and gastrointestinal stromal tumors (GIST).

Conclusions and results

A fair level of evidence shows that imatinib is safe and well-tolerated in treating chronic myeloid leukemia and gastrointestinal stromal tumors. A good level of evidence shows that imatinib is: effective as first-line treatment in the chronic, accelerated, and blastic phases of chronic myeloid leukemia; effective as second-line treatment in chronic myeloid leukemia patients who are resistant or intolerant to other conventional therapies; and effective in disease progression if the patient has not received imatinib previously. Evidence is insufficient regarding the duration of imatinib therapy for those in the chronic phase of chronic myeloid leukemia.

A good level of evidence shows that imatinib is effective in inducing objective clinical response and durable disease control in patients with metastatic GIST. Evidence is insufficient regarding the optimal duration of therapy in responding GIST patients, or in patients who achieve complete clinical and/or radiological remission. Also, evidence is insufficient to support the use of imatinib as adjuvant therapy in patients who have undergone complete resection of GIST, or as neoadjuvant therapy prior to surgery. A fair level of evidence shows the cost effectiveness of imatinib in treating chronic myeloid leukemia.

Methods

Databases searched included PubMed, Ovid, ProQuest, HTA, and CPG databases. For chronic myeloid leukemia, the search was limited to articles after 2003. One HTA report and several evidence-based guidelines were published in 2004, and these reports were systematically searched for evidence up to 2003. Regarding gastrointestinal stromal tumors, the search was limited to articles after 2004. Two HTA reports were published in 2005, and were systematically searched for evidence up to April 2003 and February 2005.

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