



October 19, 2006

Dear Healthcare Professional,

Re: Severe Congestive Heart Failure and Left Ventricular Dysfunction in Gleevec Treated Patients

We are writing to provide you information regarding Gleevec and an article published online in Nature Medicine¹, which recently received media coverage. As this article may generate questions from your patients, we wanted to provide you with an overview of the information that is available.

The authors report 10 Gleevec treated patients who developed severe congestive heart failure and left ventricular dysfunction. Supplemental data available on the Nature Medicine website show that prior to Gleevec treatment all 10 patients had New York Heart functional class 1 and normal left ventricular ejection fractions. Most of these patients had pre-existing conditions including hypertension, diabetes and coronary artery disease. The Nature Medicine article also reports on preclinical studies showing that Gleevec treated mice develop left ventricular contractile dysfunction. Gleevec also induces cell death in isolated cardiomyocytes. The authors hypothesize that development of cardiac dysfunction is related to inhibition of the Abl tyrosine kinase and may be a possibility with any drug that targets the Abl tyrosine kinase.

Subsequent to the publication of this article Novartis has further evaluated all available data from clinical trials and spontaneous reporting. While cardiac events remain uncommon, severe congestive heart failure and left ventricular dysfunction have occasionally been reported. As such we believe any patients with known cardiac disease or risk factors for cardiac failure should be monitored carefully, and any patient with symptoms consistent with cardiac failure should be evaluated and treated.

The labeling is being revised to include the following information in the Precautions Section:

Severe congestive heart failure and left ventricular dysfunction:

Severe congestive heart failure and left ventricular dysfunction have occasionally been reported in patients taking Gleevec. Most of the patients with reported cardiac events have had other co-morbidities and risk factors, including advanced age and previous medical history of cardiac disease. In an international randomized phase 3 study in 1,106 patients with newly diagnosed Ph+CML in chronic phase, severe cardiac failure and left ventricular dysfunction was observed in 0.7% of patients taking Gleevec compared to 0.9% of patients taking IFN+Ara-C. Patients with cardiac disease or risk factors for cardiac failure should be monitored carefully and any patient with signs or symptoms consistent with cardiac failure should be evaluated and treated.

Novartis is committed to the safety of your patients and will continue to inform Health Authorities of any new information that becomes available. Healthcare professionals should continue to report all serious adverse events suspected to be associated with the use of Gleevec to: 1-888-NOW-NOVA (1-888-669-6682). Alternatively, this information may be reported to the FDA's MedWatch Adverse Event Reporting program online at www.fda.gov/MedWatch/report.htm, by phone at 1-800-FDA-1088, or by sending a completed FDA form 3500 (downloaded from the above website) by postage-paid mail or by fax.

Please see the enclosed currently approved prescribing information (PI) for Gleevec.

Sincerely,

John Hohneker, MD

Vice President, US Clinical Development and Medical Affairs – Oncology

Novartis Pharmaceuticals Corporation

References:

- (1) Cardiotoxicity of the cancer therapeutic agent imatinib mesylate. Kerkela R, Grazette L, Yacobi R et al. Nature Medicine; advance online publication July 23rd. 2006.
- (2) Impact of Angiotensin Converting Enzyme Inhibitors & Carvedilol on Recovery of Cardiac Function in Imatinib Associated Cardiomyopathy. Iliescu C, Wamique Yusuf S, Auerbach L, et al. Journal of Cardiac Failure 2005; 40 No. 6 Suppl. Abstract 054. 9th Annual Scientific Meeting of the Heart Failure Society of America, Sept 18-21st 2005.