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Treating Chronic Myeloid Leukemia:
Improving Management Through Understanding of the Patient Experience

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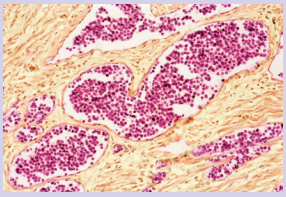

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The tremendous progress made in chronic myeloid leukemia (CML) treatment affords patients more options than ever. Five currently available BCR-ABL inhibitors form the mainstay of CML treatment, including first-generation imatinib and more potent second-generation BCR-ABL inhibitors dasatinib and nilotinib, with bosutinib and ponatinib having been recently approved for market inclusion. Studies show that dasatinib and nilotinib exhibit greater efficacy than imatinib in first-line chronic-phase CML (CML-CP), allowing more patients to achieve deeper, more rapid responses associated with improved outcomes. With alternatives to imatinib for first-line CML-CP and the wealth of information (and misinformation) on the Internet, a tremendous need exists for clear, accurate facts to assist patients in making treatment decisions. Patients appreciate the guidance of their oncology nurse in providing disease, treatment, and monitoring information tailored to meet their needs. Oncology nurses who are able to clearly explain emerging data, including the meaning and significance of faster, deeper responses, will be a valuable resource to their patients.

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Chronic myeloid leukemia (CML) is characterized by excess proliferation of hematopoietic stem cells triggered by a constitutively active tyrosine kinase encoded by the BCR-ABL oncogene on the Philadelphia chromosome, an abnormal chromosome created by reciprocal translocation of the *ABL* gene from chromosome 9 onto the *BCR* gene on chromosome 22 (Goldman, 2007). The BCR-ABL protein inhibits cell apoptosis and DNA repair, leading to genomic instability and further genetic abnormalities. Most patients (60%) are diagnosed in the initial chronic phase (CP) of the disease, in which patients experience night sweats, general malaise, diminished appetite (caused by a swollen spleen), fatigue, and breathlessness. The remaining 40% of patients are asymptomatic and identified by a routine blood test. If left untreated, CML-CP progresses to the accelerated phase (AP) and then to the fatal blast phase (BP) in three to five years (Sawyers, 1999; Vardiman, 2009).

The CML treatment landscape has evolved tremendously when imatinib was approved for market inclusion in 2001, leading to additional development of BCR-ABL tyrosine kinase inhibitors, both for newly diagnosed patients (first-line treatment) and for those switching treatment because of side effects or lack of response (second- or third-line treatment) (Ariad Pharmaceuticals Inc., 2012; Bristol-Myers Squibb, 2011; Novartis Pharmaceuticals, 2012a, 2012b; Pfizer Inc., 2012). As more effective treatment options arise, patients are keen to receive the best therapy. Information on the Internet enables patients to be proactive in their treatment, even referring themselves to clinical trials using www.clinicaltrials.gov or online resources provided by national cancer support organizations (e.g., www.trialcheck.org). Although the Internet provides a plethora of resources, misinformation makes the need for clear patient information about current CML treatments greater than ever.