

IS THERE A NEED FOR MOLECULAR CRITERIA TO CHOOSE TYROSINE KINASE INHIBITORS IN CML?

Simona Soverini

Department of Hematology/Oncology “L. and A. Seragnoli” of the University of Bologna, in Italy

Over the last decade, the treatment of chronic myeloid leukemia (CML) has progressed tremendously. The first-generation tyrosine kinase inhibitors imatinib is now flanked by two second-generation molecules, dasatinib and nilotinib, and at least two more (bosutinib and ponatinib) are in advanced clinical development. The focus has now moved on the best use of these 'weapons' to defeat CML in 100% of our patients. Failure or suboptimal response to imatinib remain a key problem and BCR-ABL kinase domain mutations may develop. The optimal therapeutic decision algorithm must include molecular response level and BCR-ABL KD mutation status. The issue of how to best integrate molecular criteria in the optimal clinical management of CML patients will be addressed in light of the more recent scientific acquisitions and technological advancements. The European LeukemiaNet recommendations for BCR-ABL KD mutation analysis will also be critically discussed.