Regulatory Science in Determining the Initial TKI Doses for the treatment of Chronic Myeloid Leukemia

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Abstracts

Regulatory Science is the scientific and technical foundations upon which regulations are based in various industries. FDA and MFDS define Regulatory Science as the one that develops new tools, standards and approaches to assess the safety, efficacy, quality and performance of the products regulated by the Agencies. In this presentation, the speaker introduces one of the approaches, for regulatory purpose, that determine the initial dosage regimens of tyrosine kinase inhibitors (TKIs) including imatinib, dasatinib and radotinib in the treatment of Asian patients with chronic myeloid leukemia in chronic phase (CML-CP). Based on the analyses of TKI exposure-efficacy and -safety response relationships using multivaraiate logistic regression, the approved starting doses of such TKIs should be reduced in order to lower the risk of dose limiting toxicities (DLTs) without compromising the major molecular response (MMR) that represents the major surrogate efficacy endpoint, for the treatment of Asian patients with CML-CP. The presenter suggests MFDS to request the pharmaceutical companies that market the TKIs to perform post-marketing clinical trials to redefine appropriate initial TKI doses for the treatment of Korean patients with CML-CP.