We sought to identify MDS subtypes who may benefit from rigosertib for a future clinical trial by defining a prospective patient population based on data from ONTIME and biological rationale.

ONTIME demonstrated a 2.3-month benefit ONTIME was the first randomized study in patients with MDS failing hypomethylating agents (HMAs), with overall survival (OS) as the primary endpoint. ONTIME enrolled RAEB-1, RAEB-2, RAEB-t, and CMMML patients previously treated with HMAs, with marrow blast count at entry of 5-30%. Thus, it included a heterogeneous population of MDS patients. When the study was designed, little information was available regarding the prognosis for patients with MDS failing HMAs. Subsequently, Prebet and others showed a short survival expectancy (<6 months) for these patients (Prebet, JCO 2011; Jabbour, Cancer 2010).

We sought to identify MDS subtypes who may benefit from rigosertib for a future clinical trial by defining a prospective patient population based on data from ONTIME and biological rationale.

We conducted in-depth analysis of ONTIME, and found that patients with the worst prognosis at entry, and thus with the greatest unmet medical need, appeared to benefit most from rigosertib treatment; namely, those with Primary AZA Failure, VHR-IPSS-R, and monosomy 7. The analyzed duration of prior HMA treatment inversely correlated with survival benefit.

Based on these results, a new randomized prospective controlled study in this high-risk MDS patient population comparing rigosertib to physician’s choice will be conducted to confirm these important observations.

**REFERENCES**


**METHODS**

Distribution of OS in each risk category and each arm was estimated by Kaplan-Meier method and log-rank test was used for treatment effect. Hazard ratio was estimated by Cox regression.