High rate of IDH1 mutation clearance and measurable residual disease (MRD) negativity in patients with IDH1-mutant newly diagnosed acute myeloid leukemia treated with ivosidenib (AG-120) and azacitidine

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ABSTRACT

To study the impact of ivosidenib + azacitidine on longitudinal IDH1 variant allele frequency (VAF) in both bone marrow mononuclear cells (BMMCs) and peripheral blood mononuclear cells (PBMCs).

METHODS

1. Sample size was estimated from patients with newly diagnosed AML who were ineligible for intensive chemotherapy and treated in a phase 1b/2, open-label, multicenter study (NCT 03177522).

RESULTS

1. IDH1 mutation clearance was defined as MDYH1 VAF below the limit of detection of 0.1% (n=21) or 0.01% (n=2) for at least one on-study time point (Symyx Oncor/BEAMing).

CONCLUSIONS

1. No statistically significant relationship between baseline genetic and clinical characteristics of patients and co-mutations observed.

Figure 1. Study design for phase 1b dose-finding and expansion ivosidenib and azacitidine study (NCT 03177522).

Figure 2. Treatment duration, response, and mutation clearance (N=23).

Figure 3. Multinomial orthogonal scores of MDYH1 in bone marrow samples using the k nearest neighbor.

Figure 4. Multiple orthogonal scores of MDYH1 in bone marrow samples using the k nearest neighbor.

Table 1. Baseline demographic and disease characteristics.

Table 2. IDH1 mutation clearance by best overall response (BEAMing digital PCR).

Table 3. Response parameter.

Table 4. Summary of mutation clearance and MRD assessments.

Table 5. Baseline demographic and disease characteristics.

Figure 5. Cumming baseline mutations identified by NGS 2% VAF cutoff.

Figure 6. Examples of relapse.

Figure 7. Summary of mutation clearance and MRD assessments.

Figure 8. Treatment duration, response, and mutation clearance (N=23).

Figure 9. Cumming baseline mutations identified by NGS 2% VAF cutoff.

Figure 10. Summary of mutation clearance and MRD assessments.