Ivosidenib (AG-120) in IDH1-mutant newly diagnosed myeloid leukemia: Updated results from a phase 1 study

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Background: Inhibitors of IDH1 have clinical activity in nonresponders (NR) to chemotherapy, including those who are molecularly defined elderly population with a poor prognosis.

Methods: This phase 1 study assessed ivosidenib (AG-120) as monotherapy in patients with IDH1-mutant AML who are ≥75 years of age or have comorbidities precluding chemotherapy.

Results: A total of 33 patients were enrolled (median age 78 years; 24 men, 9 women) across 144 cycles of treatment. Median duration of treatment was 3.8 months. Median VAF was 4.9%. The most frequent co-occurring mutations included TP53 (75%), IDH2 (73%), CBL (39%), and RUNX1 (33%). Overall CR+CRh rate was 42.4% (median duration not estimable, lower bound of 95% CI 4.6 months). The most frequent SAEs included nausea (42%), abdominal pain (29%), and anemia (27%). One patient died of treatment-related complications.

Conclusions: Ivosidenib induced molecular remission in patients with a best overall response of CR+CRh with patients with other co-occurring mutations.

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