A PHASE I STUDY OF LFB-R603, A NOVEL ANTI-CD20 ANTIBODY, IN PATIENTS WITH RELAPSED CHRONIC LYMPHOCYTIC LEUKEMIA

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BACKGROUND

LFB-R603 is a chimeric anti-CD20 monoclonal antibody with an improved pharmacokinetic profile leading to a higher affinity for the FcγRIIIa receptor and a stronger antibody-dependent cellular cytotoxicity compared to Rituximab, particularly against tumor cells with low CD20 levels. As a result, LFB-R603 represents a drug candidate in patients (pts) with CLL.

BASELINE PATIENT CHARACTERISTICS

In the all-patients-evaluated analysis, 113 eligible (cohort A: n=25; cohort B: n=10; cohort C: n=51; cohort D: n=12; cohort E: n=20) pts with relapsed CLL (58 male, 55 female; median age 62 years) were included in this study. 28 were in PR at week 16 (11 in cohort A, 9 in cohort C, 5 in cohort D, 3 in cohort E).

SAFETY

Adverse events according to CTCAE v3.0, laboratory and hematologic parameters. A Safety Committee composed of independent experts external to the study met in case of SAE or grade 3-4 non-hematologic AEs within a color and similarity between cohorts.

Efficacy

None of the (COI) involved patients were in PR at week 14. Three of these PR were confirmed at week 24.

Exploratory

Cytogenetics (cohort A: n=25; cohort B: n=10; cohort C: n=51; cohort D: n=12; cohort E: n=20) were analyzed by the investigator according to NC/CG C LL guidelines. A decrease of ≥10% in the (of COI) involved patients was in PR at week 16. 37 of these PR were confirmed at week 24.

RESULTS

Initial Response (cohort A: n=25; cohort B: n=10; cohort C: n=51; cohort D: n=12; cohort E: n=20): Five out of 18 (28%) evaluable patients were in PR at week 16. The patients were PR at week 24 in 3 of these 5 patients. A summary of the efficacy results is shown in the table below.

Lymphocyte blood count deviation was observed at each dose level and was maximal at D29 in most of the patients (see table below). Cytokine lymphocyte deviation was maximal and sustained in cohort B and to a lesser extent in cohort C.

Conclusion

LFB-R603 can induce rapid, profound and sustained lymphocyte depletion in patients with advanced stage CLL. Tractability of LFB-R603 is manageable. Most of the drug-related adverse events are related to the initial infusion, due to cytokine release. LFB-R603 is clinically active in patients with relapsed CLL, and induces partial remissions. An ongoing part 2 of this study will examine the clinical efficacy of an escalating-dose regimen.