An exploratory, open-label, multicenter study to evaluate safety and efficacy of a two-dose regimen of ATIR101 in patients with a hematologic malignancy, who received a CD34-selected hematopoietic stem cell transplantation from a haploidentical donor

Stephan Mielke1, Denis-Claude Roy2, Raquel Freudenthal3, Lisya Gerez2, Karen Reitsma3, Manfred Rüdiger3, Jeroen Rovers3

1Division of Hematology and Oncology, Department of Medicine II, Julius-Maximilian-University, Würzburg, Germany, 2Blood and Marrow Transplantation Program, Div. of Hematology-Oncology, Hôpital Maïkonneuve-Rosemont, University of Montreal, Quebec, Canada, 3Kiadis Pharma, Amsterdam-Duivendrecht, Netherlands

INTRODUCTION

Previous studies demonstrated that donor lymphocytes, selectively depleted of alloreactive T-cells (ATIR101), could be given safely in the haploidentical HSCT setting up to 2x10^6 viable T-cells/kg. In 42 patients a single dose of ATIR101 was given without causing grade III/IV acute GVHD, without the use of prophylactic immunosuppression. This confirms efficacy of the (photo)depletion method used and attributes to its beneficial safety profile of ATIR101. In an ongoing phase II study, CR-AIR-007 (NCT01794299)(Abstract #O042), preliminary data shows that addition of ATIR101 28 days post-HSCT results in a reduction of transplant-related mortality (TRM) and improvement of overall survival and event-free survival, compared to a T-cell depleted haploidentical HSCT without DLI add-back. Incidence of life threatening infections and as a result TRM might be further reduced with infusion of additional doses of ATIR101.

RESULTS

The study has been accepted by Regulatory authorities in Belgium, Canada, Germany, United Kingdom and United States of America and it currently enrolling patients. First data on safety of the additional dose administration of ATIR101 will be expected 2H 2016. This study will be used to confirm safety of the second dose administration of ATIR101, which will subsequently be used in a randomized, phase III study, comparing T-cell depleted HSCT + ATIR101 versus T-cell replete HSCT using post transplantation cyclophosphamide (PTCy).

For more information on this clinical trial and other clinical trials from Kiadis pharma, please contact us at clinicaltrials@kiadis.com

MATERIALS & METHODS

In an open-label, multicenter phase 2 study (CR-AIR-008; NCT02500550), 15 patients with acute myeloid leukemia (AML), acute lymphoblastic leukemia (ALL) or myelodysplastic syndrome (MDS) were given prophylactic ATIR101 HSCT with adjuvant administration of ATIR101. Conditioning regimen consists of either TBI (1200 cGy in 6 fractions) or melphalan (60 mg/m² once daily for 2 days), in combination with thiotepa (10 mg/kg), fludarabine (30 mg/m² once daily for 5 days) and ATG (2.5 mg/kg once daily for 4 days). Patients will receive a T-cell depleted graft (CD34+ selection) from a haploidentical donor. In 42 patients a single dose of ATIR101 was given without causing grade III/IV acute GVHD, without the use of prophylactic immunosuppression. This confirms efficacy of the (photo)depletion method used and attributes to its beneficial safety profile of ATIR101. In an ongoing phase II study, CR-AIR-007 (NCT01794299)(Abstract #O042), preliminary data shows that addition of ATIR101 28 days post-HSCT results in a reduction of transplant-related mortality (TRM) and improvement of overall survival and event-free survival, compared to a T-cell depleted haploidentical HSCT without DLI add-back. Incidence of life threatening infections and as a result TRM might be further reduced with infusion of additional doses of ATIR101.

[Image 230x2245 to 466x2410]