

Feasibility of Administering Anti-CD45 Iodine (^{131}I) Apamistamab [Iomab-B] for Targeted Conditioning in Older Patients with Active, Relapsed or Refractory AML without Lead-Lined Rooms: Ongoing Phase III Sierra Trial Experience at 6 Study Sites

Rajneesh Nath, MD • Bae Chu, MPH • Lingyun Chen, PhD • ... Sandy Konerth • Misty Liverett • Boglarka Gyurkocza, MD • [Show all authors](#)

DOI: <https://doi.org/10.1016/j.bbmt.2019.12.687>

Introduction

Patients ≥ 55 years of age with active, relapsed or refractory acute myeloid leukemia (AML) who have failed standard induction and salvage therapies do not routinely undergo allogeneic hematopoietic cell transplantation due to their inability to receive myeloablative conditioning. The SIERRA trial is a prospective, randomized, phase 3, open-label, multicenter trial designed to address this significant unmet need. Preliminary results have shown that targeted conditioning with Iomab-B can lead to successful engraftment.

Due to the activity level of infused ^{131}I (300-1030 mCi, mean ~ 600 mCi), patients are shielded from the public in a hospital room for 3-7 days. As a dedicated lead-lined isolation room is not always available, we present our experience from 6 SIERRA study sites demonstrating the feasibility of using mobile shielding in standard inpatient rooms to comply with radiation safety regulations.

Methods

Six hospitals (1. Memorial Sloan Kettering Cancer Center, 2. Banner MD Anderson Cancer Center, 3. Medical College of Wisconsin, 4. Weill Cornell Medical Center, 5. University of Nebraska Medical Center, and 6. Stony Brook University Hospital) out of 20 sites have identified regular corner inpatient rooms (4 of them are on top floor) for isolation after Iomab-B therapeutic infusion. Shielding calculations were performed taking into consideration the patient room layout, bed position, surrounding areas (hall way, nursing station and adjacent rooms) and their occupancy to determine placement of mobile shielding. Radiation surveys were performed in identified areas following Iomab-B infusion and during the isolation period.

Results

As shown in Table 1, both calculation with 800 mCi of ^{131}I and the survey immediately following therapeutic (time of maximum exposure) have shown that appropriate use of mobile shields can effectively decrease the exposure rate in surrounding public accessible areas to be less than the regulated limit of 2 mR/hour.

Conclusion

Lead-lined rooms are not required for treating R/R AML patients with Iomab-B. The use of mobile shields enables treatment of patients in regular inpatient rooms.