Carfilzomib, Clarithromycin (Biaxin®), Lenalidomide (Revlimid®), and Dexamethasone [Car-BiRD] for Newly Diagnosed Multiple Myeloma

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BACKGROUND AND RATIONALE

- Carfilzomib (Cfz) synergizes with lenalidomide (Len) and dexamethasone (Dex) or Len-Dex, synergistic immunomodulatory response rates as upfront treatment in patients with multiple myeloma (MM).
- The overall response rate to Cfz + Dex (Car-BiRD) is 91.7%.
- Carfilzomib added to Len-Dex has shown superior time to progression with multiple myeloma (MM).

METHODS

- **Study Design (Figures 1 and 2)**
- **Inclusion Criteria**
  - Age >18 years
  - Refractory MM, not eligible for autologous stem cell transplantation.
- **Exclusion Criteria**
  - Known thrombocytopenia within the previous 3 months.
  - Inability to take prophylactic medications.
  - History of gastrointestinal or pulmonary disease in the previous 3 months.
  - Congestive heart failure as defined by New York Heart Association guidelines.
  - HIV infection or active hepatitis B or C infections.
- **Protocol Schema**

RESULTS

- **Patients**
  - Thirty-nine patients have been enrolled; 36 completed at least 1 cycle of therapy and were evaluable for response. Subject characteristics are listed in Table 1.
- **Study Design (Figure 1 and 2)**
  - CD138+ cells recovered from the patients’ plasma.
  - Elective autologous stem cell collection was then performed per patient and physician discretion, and collection of stem cell was instead. Transplant eligible patients proceeded directly to BiRD.
  - The CI-BD regimen was given as carfilzomib 100 mg twice a day, Len 25 mg daily on days 1 and 2 of the first cycle only and 45 mg/m² IVa on days 1-2-3 of subsequent cycles.
- **Toxicities due to each component of the regimen were manageable**.

CONCLUSIONS

- **This is the first prospective study evaluating the response to infliximab (C-Dex) in patients with MM.**
  - Carfilzomib was safe and active, with an ORR of 57% and a high rate of VGPR or better of 35%, despite the majority having high-risk cytogenetics.
  - Disease progression with subsequent consolidation and maintenance based on Len, with a CR rate >10%.
  - Toxicities due to each component of the regimen were manageable.
- **Baseline hematologic function or bone health change did not predict emerging toxicities**.
  - Stem cell collections were uncomplicated, with a 100% success rate.

REFERENCES


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CONFLICT OF INTEREST DISCLOSURE

Mark, D. Research funding: Speakers Bureau. Millennium: Membership on an entity’s Board of Directors or advisory committees. Speakers Bureau, Celgene: Membership on an entity’s Board of Directors or advisory committees. Research Funding, Speakers Bureau. Mark, D. Risk factor: Carfilzomib is not approved for first-line treatment of myeloma. Rossi, C. Celgene: Speakers Bureau. Miller, R. Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Celgene: Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Perry, A. Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Celgene: Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Jayabalan, D. Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Coleman, M. Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau. Niesvizky, R. Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau, Celgene: Membership on an entity’s Board of Directors or advisory committees, Speakers Bureau.