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#### 631.MYELOPROLIFERATIVE SYNDROMES AND CHRONIC MYELOID LEUKEMIA: BASIC AND TRANSLATIONAL

## Lenalidomide and Dexamethasone for Patients with Rosai-Dorfman Disease: A Single Arm, Single Center, **Prospective Phase 2 Study**

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## Background

Rosai-Dorfman disease (RDD) is a rare heterogeneous histiocytic disorder. Because of the rarity of RDD and a lack of prospective randomized trials, the treatment strategy for RDD is mostly based on retrospective study. Previous studies showed thalidomide or lenalidomide was effective in recurrent/refractory RDD with skin involvement.

This study was designed to evaluate the efficacy and safety of lenalidomide and dexamethasone (RD) for Rosai-Dorfman Disease.

#### Methods

This phase 2, prospective, single-center study enrolled 13 newly diagnosed and 9 recurrent patients with RDD from June 2021 to August 2022 (NCT 04924647). The RD regimen was lenalidomide 25mg d1-21 and dexamethasone 20-40mg d1,8,15,22 for a cycle and 12 cycles in total. The primary endpoint was event-free survival (EFS). Events were defined as a poor response to RD, reactivation after RD therapy or death from any cause. The secondary endpoint was overall response rate (ORR) and overall survival (OS).

## **Results**

The median age was 44 years (range 21-71 years). Fifteen patients were male (68.2%). All the patients were extranodal RDD (2 unifocal, 3 single-system multifocal and 17 multisystem). The most common organ involved was bones (45.5%) and subcutaneous tissue (45.5%), followed by sinus (37.5%). Four patients (18.2%) had central nervous system (CNS) involvement. MAPK pathway alterations were found in 6/15 (20.0%) of the patients. All patients received at least six courses of RD regimen therapy, with median 12 (6-12) courses. Overall, 18 patients (81.8%) completed protocol treatment, and 4 patients (18.2%) went off protocol (3 patients' decision, 1 poor response). The overall response rate was 86.4% (19/22), including 7 patients (31.8%) achieving complete remission and 12 patients (54.5%) achieving partial remission. After a median follow-up of 22 months (range 8-24 months), 3 patients (13.6%) relapsed. No patients died or lost follow-up. The estimated 2-year EFS and OS was 67.8% and 100.0%, respectively. To evaluate the prognostic factors of EFS using univariate analysis, we found that patients with CNS, respiratory system, multi-system involvement and MAPK pathway gene mutations had similar outcomes. No patients had grade 3-4 adverse effects. 8 patients (36.4%) had grade 1 gastrointestinal complications (vomiting, nausea and diarrhea). 6 patients (27.3%) experienced anemia, neutropenia or thrombocytopenia. Only 1 patient (5.6%) had grade 2 neutropenia. 5 patients (22.7%) experienced rash and 5 patients (22.7%) experienced fatigue with grade 1 events. All complications improved with supportive treatment.

#### Conclusion

Lenalidomide and dexamethasone regimen is an efficient and safe regimen for newly diagnosed and recurrent RDD.

**Disclosures** No relevant conflicts of interest to declare.

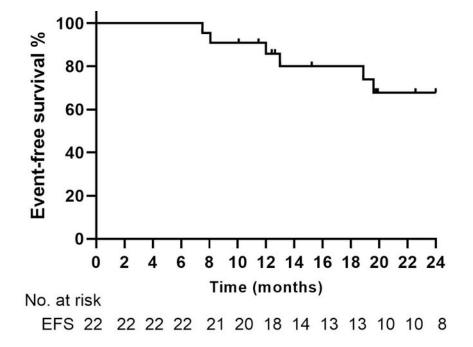


Figure 1 Event-free survival (EFS) of 22 patients with Rosai-Dorfman disease.

Figure 1

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