Intramural G100 Induces Systemic Tumor Regression And Abscopal Tumor Remission In Patients With Follicular Lymphoma

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Purpose of the Study: Abscopal responses are emerging as an important mechanism of systemic tumor regression in the clinical setting. Here we report the preliminary data from a phase I trial testing the intratumoral injection of G100 (ImmGenesis), a synthetic adjuvant secreted by the human papillomavirus (HPV)-positive cervical cancer cell line 308-021, in 20 patients with low-grade lymphoma (LGL) who had failed standard therapy at the time of enrollment.

Methods: This was an open-label, non-randomized, phase I trial to determine the maximum tolerated dose of G100 in patients with refractory IgM+LGL. Patients with uniformly IgM+ lymphoma were enrolled; 10µg was the starting dose and was increased to 20µg for the expansion cohort. Tumor response was assessed with 12-month progression-free survival (PFS) as the primary end point. Abscopal responses (ARs) were defined as a ≥25% decrease in target tumor size at ≥5 cm from the index lesion. For safety and tolerability assessment, adverse events (AEs) were collected and graded according to CTCAE v5.0.

Results: Enrollment was ongoing with an expansion cohort receiving the higher dose of 20µg IT. A total of 19 patients were enrolled (nine at 10µg IT and 10 at 20µg IT). One patient enrolled at 10µg IT was enrolled at the wrong dose. Eight (40%) patients had a confirmed partial response (PR) and two (10%) had a confirmed complete response (CR). Fifteen (79%) patients had a PR or CR. Fourteen (74%) patients had ARs and one (5%) had no ARs. A total of 24% patients had ARs in the abscopal site. The median PFS was 27 months (95% CI: 16–40 months). All patients had at least one TEAE. The most common TEAEs occurring in >5% of patients were lymphocyte decrease (11%), local pain/discomfort (16%), and fever (16%). One patient had severe skin rash, another patient had grade 3 respiratory distress with an allergic reaction to G100, and one patient developed grade 3 hypokalemia. One patient had a grade 3 proteinuria. One patient had a grade 4 thrombocytopenia and one patient had a grade 3 pneumonitis. There were no treatment-related deaths.

Conclusions: G100 induced systemic tumor regression, clinical benefit, and ARs in patients with IgM+LGL who had failed standard therapy. The PFS of all patients was ≥27 months. The maximum tolerated dose of G100 was ≥20µg. The TEAEs were manageable. No treatment-related deaths occurred. G100 was well tolerated and clinically active in this patient population. Intratumoral G100 induced systemic tumor regression in patients with refractory IgM+LGL. The PFS of all patients was ≥27 months. The maximum tolerated dose of G100 was ≥20µg. The TEAEs were manageable. No treatment-related deaths occurred. G100 was well tolerated and clinically active in this patient population.

IV. SUMMARY AND FUTURE PLANS

G100 is an active agent in clinical trials with initial therapy resulting in a systemic response as evidenced by abscopal tumor shrinkage. Responses were observed at 10µg, 20µg, and 30µg doses in mice. In clinical trials, responses were noted at 10µg and were sustained.

Conclusions: Abscopal responses were noted in both murine and clinical models. G100 induced systemic tumor regression in both murine and clinical models.

G100 resulted in systemic changes in tumor microenvironment that likely mediated systemic tumor regression. G100 induced a systemic antitumor response that likely mediated systemic tumor regression.

In summary, G100 induced systemic tumor regression in patients with refractory IgM+LGL and demonstrated clinical benefit. G100 was well tolerated and clinically active in this patient population. Intratumoral G100 induced systemic tumor regression in patients with refractory IgM+LGL. The PFS of all patients was ≥27 months. The maximum tolerated dose of G100 was ≥20µg. The TEAEs were manageable. No treatment-related deaths occurred. G100 was well tolerated and clinically active in this patient population.

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