Abstract N°: 3027

A First-in-Human Phase 1a Randomized, Double-Blind Single-Ascending Dose Study of NAV-240, an anti-OX40L/TNF-a Bispecific Antibody, in Healthy Volunteers

Dana McClintock*[1], Tim Mack[1], Lara Pupim[1], William Bonificio[1], Naveen Daryani[1], Stephen Thomas[1]

[1]Navigator Medicines, Scotch Plains , United States

Introduction & Objectives: Hidradenitis suppurativa is a chronic, relapsing inflammatory skin disease associated with comorbidities and detrimental impact on the quality of life of patients. Painful inflammatory nodules, abscesses and draining tunnels are the manifestations of HS, which affects 0.4-1% of the global population. Targeting TNF-alpha has become a preferred therapy for primary HS, but this strategy fails to induce clinical responses in >50% of patients. NAV-240 is a tetravalent bispecific antibody capable of binding both TNF-alpha and OX40L that has demonstrated synergy of dual-targeting in preclinical models of inflammation, including potential enhanced activity against Th1 cells, Th17 cells, and B-cells, all of which are key contributors to disease pathogenesis. We present the results of a Phase 1a dose escalation study of NAV-240 in healthy volunteers.

Materials & Methods: This was a Phase 1a, single-center, randomized, double-blind, placebo-controlled, sequential SAD study.

Results: Forty healthy volunteers were enrolled in the study: NAV-240, n=30; placebo, n=10. NAV-240 was administered as an IV infusion and all cohorts completed dosing as planned. Adverse events observed were infrequent and self-limited. Pharmacokinetic analyses showed that exposure increased in a dose proportional manner. Phase 1b dose selection will be informed by modeling and simulations leveraging the PK, PD, and safety data obtained from the Phase 1a study.

Conclusion: Treatment with NAV-240 in healthy volunteers was safe and well tolerated. The exposure profile of NAV-240 supports once-monthly dosing in patients. Collectively, these data support the continued development of NAV-240 in complex autoimmune conditions like hidradenitis suppurativa.