Anifrolumab reduces disease activity in multiple organ domains in patients with moderate to severe systemic lupus erythematosus

Background Anifrolumab was evaluated in a Phase IIb study of adults with moderate to severe systemic lupus erythematosus (SLE), in which 305 patients received intravenous infusions of anifrolumab (300 mg, 1000 mg) or placebo for 48 weeks. Global disease activity was reduced in both dose groups compared with placebo, although a more favourable risk-benefit profile was observed with the 300-mg dose. This analysis of the Phase IIb study compared the impact of anifrolumab on individual organ domains in patients.

Materials and methods Changes from baseline in organ domain activity were assessed at Week 52 using the SLE Disease Activity Index 2000 (SLEDAI-2K) and British Isles Lupus Assessment Group (BILAG). SLEDAI domain improvement required a lower score representing the development of a new anti-dsDNA or hypocomplementemia compared with baseline (Table 1).

Results The majority of patients had baseline involvement of the mucocutaneous and/or musculoskeletal domains of SLEDAI-2K and BILAG. A greater percentage of anifrolumab-treated patients demonstrated improvement in these frequently involved domains compared with placebo (Table 1). Potential benefits were observed in most of the other less frequently active domains, including SLEDAI-2K cardiorespiratory, vascular, haematological, and constitutional; and BILAG cardiorespiratory and constitutional domains. In patients with baseline involvement in the SLEDAI-2K immunological domain (positive anti–double-stranded DNA [anti-dsDNA] and/or low complement level), normalisation of anti-dsDNA and/or hypocomplementemia were seen more frequently at Day 365 in patients receiving anifrolumab compared with placebo (Table 1).

Conclusions Treatment with anifrolumab resulted in greater rates of improvement in multiple organ domains compared with placebo. The greatest impact was seen with 300-mg anifrolumab.
immunologic criteria requirement under SLICC, it can be challenging to determine an SLE diagnosis retrospectively. Overall, DLE/SLE patients were more likely than DLE-only patients to exhibit hematologic and immunologic criteria with respect to leukopenia (ACR p < 0.0001; SLICC p < 0.0001), + anti-dsDNA (ACR p < 0.0001; SLICC p < 0.0001), and + ANA (ACR p < 0.0001; SLICC p < 0.0001) under both criteria. Furthermore, DLE/SLE patients were more likely than DLE-only patients to exhibit significant systemic symptoms with regard to arthritis (ACR 72% vs. 9%, p < 0.0001; SLICC 70% vs. 18%, p < 0.0001), serositis (ACR 21% vs. 0%, p < 0.0001; SLICC 22% vs. 3%, p < 0.0001), renal disorder (ACR 27% vs. 2%, p < 0.0001; SLICC 33% vs. 0%, p < 0.0001) using both criteria. DLE/SLE patients were more likely to have worse skin disease compared to DLE-only patients when classified according to the ACR criteria, with 40.8% of DLE/SLE patients having CLASI™ activity ≥ 10 and 24.2% of DLE-only patients having CLASI™ ≥ 10 (Table 1).

Conclusion These findings suggest that DLE patients who meet SLE criteria are more likely than their DLE-only counterparts to have more significant internal disease. Both ACR and SLICC criteria are useful in distinguishing DLE patients with internal organ involvement from those without. DLE-only patients may have significant skin disease with 25% of DLE-only patients having moderate to severe skin disease.

Abstract CT-05 Figure 1 Temporal patterns in response status (Light = Response; Dark = No Response)

CT-05 LONGITUDINAL PATTERNS IN SLE RESPONSE TO STANDARD OF CARE THERAPY: IMPLICATIONS FOR CLINICAL TRIAL DESIGN

Background Most clinical trials of new treatments for systemic lupus erythematosus (SLE) have shown weak discrimination between investigational agents and placebo when added to standard of care (SOC). The design of future SLE trials may be improved by considering strategies for reducing placebo response rates and better understanding the within-patient variability in disease activity during follow-up. We evaluated longitudinal patterns of response in SLE patients who received placebo plus SOC in two completed 52-week clinical trials. Baseline characteristics that discriminated persistent responders from non-responders were also examined, with the goal of identifying characteristics that may define patient populations with unmet medical need who should be targeted for enrollment in future trials.

Materials and methods Data was obtained from the Collective Data Analysis Initiative (CDAI) of the Lupus Foundation of America.