INCLINE-101, A Phase 1/2, Open Label, Dose Escalation and Expansion Study of TAC-001 (a TLR9 agonist conjugated to an anti-CD22 antibody) in Patients with Select Advanced or Metastatic Solid Tumor Stages

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BACKGROUND
Accumulating clinical data suggest a critical role for B cell- mediated antitumor immunity. Enrichment of memory B cells, plasma cells and tertiary lymphoid structures (TLS) within tumors is associated with benefit from standard therapy, including checkpoint inhibitors (CI). Recent studies have described B cell infiltration and TLS/TLS-like formation in select tumor types.

MATERIALS
Human peripheral blood mononuclear cells (PBMCs) were isolated from healthy donors and incubated with TAC-001 or control. Intracellular cytokine staining with interferon-γ (IFN-γ) was used to evaluate B cell function.

Methods
A Phase I/II, multicenter Phase 1b/IIb study will be conducted to evaluate the safety, efficacy, pharmacokinetics (PK) and pharmacodynamics (PD) biomarkers of TAC-001 in patients with select advanced or metastatic solid tumors (see Figure 1). The primary objective is to evaluate the safety and tolerability of TAC-001 in patients with select advanced or metastatic solid tumors (see Figure 4).

RESULTS
In preclinical models, TAC-001 administration to murine EMT6 cancers induced robust B cell infiltration and TLS/TLS-like formation (Figure 2). In mice bearing EMT6 tumors, anti-TAC-001 therapy resulted in a reduction in tumor volume (Figure 3A).

CONCLUSIONS
The study results suggest that TAC-001 may provide an immunomodulatory benefit in patients with select advanced or metastatic solid tumors. Further studies are warranted to evaluate TAC-001 in patients with select advanced or metastatic solid tumors.