

An open-label, phase Ib dose-expansion study to assess the efficacy of CD137/FAP agonist BI 765179 plus pembrolizumab as a first-line treatment in metastatic or incurable, recurrent programmed cell death ligand-1 (PD-L1)-positive head and neck squamous cell carcinoma (HNSCC).

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Background: HNSCC is the seventh most common cancer globally and is often associated with poor quality of life and a dismal prognosis. Median overall survival for advanced HNSCC with first-line standard-of-care pembrolizumab ± chemotherapy is approximately 13 months, highlighting the need for new therapies. Fibroblast activation protein (FAP)-positive fibroblasts are frequently present in the tumor stroma of HNSCC tumors, representing a potential therapeutic target. BI 765179 is a bispecific antibody that simultaneously binds to FAP and CD137 expressed on T-cells, leading to local activation of tumor-specific CD137-positive T-cells. The Phase Ia part of the present study (NCT04958239) determined safety and doses for dose escalated BI 765179, both as monotherapy and in combination with an anti-programmed cell death protein 1 (PD-1) antibody in patients with advanced solid tumors. Here we present the design of the Phase Ib dose-expansion part, which aims to assess the preliminary efficacy of two doses of BI 765179 in combination with pembrolizumab in patients with metastatic or incurable, recurrent HNSCC whose tumors express PD-L1. **Methods:** In the Phase Ib dose-expansion part, approximately 60 patients with a histologically or cytologically confirmed diagnosis of metastatic or incurable, recurrent HNSCC will be enrolled. Key inclusion criteria are: no prior systemic therapy administered in the metastatic or incurable recurrent setting; primary tumor locations of oropharynx, oral cavity, hypopharynx, or larynx; at least one measurable lesion outside of the central nervous system (modified RECIST v1.1); a PD-L1-positive tumor (combined positive score ≥ 1 , local assessment); and Eastern Cooperative Oncology Group performance status 0–1. Patients who have previously received CD137-targeted or anti-PD-1/PD-L1 agents are not eligible. Patients will be randomized 1:1 to receive either Dose 1 or Dose 2 of BI 765179 intravenously in combination with pembrolizumab. The primary endpoint is objective response (OR), defined as best overall response of confirmed complete or partial response (RECIST v1.1). Secondary endpoints include occurrence of adverse events (AEs) and serious AEs, OR (immune-related RECIST v1.1), duration of response, progression-free survival, and overall survival. Copyright 2025 AACR. Reused with permission. Clinical trial information: NCT04958239. Research Sponsor: Boehringer Ingelheim.