The study design included a single-arm, multicenter phase I study, consisting of a dose-escalation phase and a dose-expansion phase. Dose escalation followed a 3+3 design. Patients were treated with tunlametinib at doses ranging from 0.5 mg to 15 mg BID, together with vemurafenib at 960 mg. The most common TRAEs were anemia, blood creatine phosphokinase increased, and rash. Approximately 60% of patients achieved objective response rates, and median progression-free survival was 11.7 months in NSCLC patients. No dose-limiting toxicities were observed, and the maximum tolerated dose was not reached. Further studies are ongoing.

**Keywords:** Tunlametinib, vemurafenib, phase I trial, efficacy, safety, tolerability.