**Background**

- MEDI1191 is a full-length recombinant IL-12 encoded by plasmid DNA, for intratumoral injection. IL-12 is designed to recruit and activate local CD8+ T cells and CD4+ T cells via IL-12 receptor and IFNγ, respectively, leading to an increased local T cell response with improved tolerability compared with systemic administration. MEDI1191 is also being studied in combination with durvalumab to evaluate if adding an immune checkpoint inhibitor will improve efficacy.

**Methods**

- The trial comprised an initial dose-escalation phase (Part 1, with three sub-parts A, B, and D) followed by a dose-expansion phase (Part 2).

- Patients were randomized to receive intratumoral MEDI1191 (0.3–12 μg) plus durvalumab or daratumumab (NCT03946800).

- The most common AE was fatigue (19.4%), dyspnea (16.1%), pruritus (16.1%), pyrexia (12.9%), diarrhea (12.9%), and headache (10.5%).

- No AEs led to discontinuation of MEDI1191 or durvalumab.

**Results**

- Of 31 patients (2B), 7/14 patients had a ≥2-fold increase from baseline in CD3+ T cells.

- The most common AEs were injection site reactions (ISR), increased transaminases (ALT, AST), diabetes (13%), and dyspnea (10%).

- The most common type of ISR (injected site) was grade 1 (49.1%), grade 2 (32.3%), grade 3 (12.9%), and grade 4 (5.1%).

- Eleven patients (12% of total) had ≥1 doseNECT.

- Fifteen patients (18% of total) had ≥1 dose-limiting toxicity (DLT).

- No patients had a DLT associated with MEDI1191 or durvalumab.

**Conclusions**

- Intratumoral MEDI1191 plus durvalumab was safe and feasible in patients with previously untreated advanced solid tumors.

- Further studies are needed to determine the optimal dose and combination to maximize clinical benefit.

**References**