Characterization of tumor-infiltrating lymphocytes following intratumoral administration of ONCOS-102 for refractory solid tumor cancer patients

INTRODUCTION
ONCOS-102 (Ad5/3-D24-GMCSF) is a tumor-targeted oncolytic adenovirus coding for GM-CSF. Adenovirus can both prime and boost T cell and B cell responses -> optimal for cancer immune therapy

Intratumoral ONCOS-102 induces a systemic CD8+ T cell response against patient’s unique cancer cells:

- Safety and dose finding study with ONCOS-102
- Last-line solid tumor patients (all-comers)
- 3 cohorts with 3 dose levels (3+3+6)

Benign Safety Profile
- Mostly grade 1-2 adverse events: pyrexia, chills, fatigue and injection site pain
- Grade 3 AEs seen in 6 patients
- No grade 4 or 5 AEs

Increase in serum NAb did not prevent the induction of tumor-specific T cell response

CONCLUSIONS
- Treatment was safe and well tolerated, no DLT was seen
- Local ONCOS-102 treatment induced infiltration of Th1 cells expressing cytotoxic molecules into tumors
- Induction of tumor-specific T cells was seen even in the presence of high serum NAb titer
- Association between post-treatment increase in TILs and OS suggest an involvement of systemic immune activation following local ONCOS-102 administration