Background
- Oncolytic viruses induce systemic immunological effects with minor adverse events
- Systemic effects are achievable with local treatments
- Arming oncolytic viruses with interleukin-2 (IL-2) and tumor necrosis factor alpha (TNFα) enhance immunological antitumor effects and improve adoptive T cell therapies (Havunen et. al 2016; Siurala et. al 2016)
- Here we analyzed the systemic antitumor effects (the abscopal effect) induced by armed adenoviruses with regard to adoptive T cell therapy

The oncolytic virus is present in non-treated tumors but to minor extent in the organs.

Treatment with oncolytic Ad5/3-E2F-d24-TNFα-IRES-IL2 reduces the growth of non-injected tumors.

Treatment with armed viruses affects the immune cell compartments in both injected and non-injected tumors.

Conclusions
- Local treatment with armed adenoviruses induces antitumor effects systemically (so called abscopal effect)
- Oncolytic adenovirus Ad5/3-E2F-d24 is able to travel to distant tumors but the spread to organs is minimal
- Arming the virus induces favorable changes in immune cell compartments in both injected and non-injected tumors

References