



# SITC 2017

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Society for Immunotherapy of Cancer

SITC  
2017

# First-in-human study with intratumoral administration of a CD40 agonistic antibody: Preliminary results with ADC-1013/JNJ-64457107 in advanced solid malignancies

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Society for Immunotherapy of Cancer

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*Peter Ellmark*

The following relationships exist related to this presentation:

*I am employed by Alligator Bioscience and hold stocks and stock options in Alligator Bioscience*



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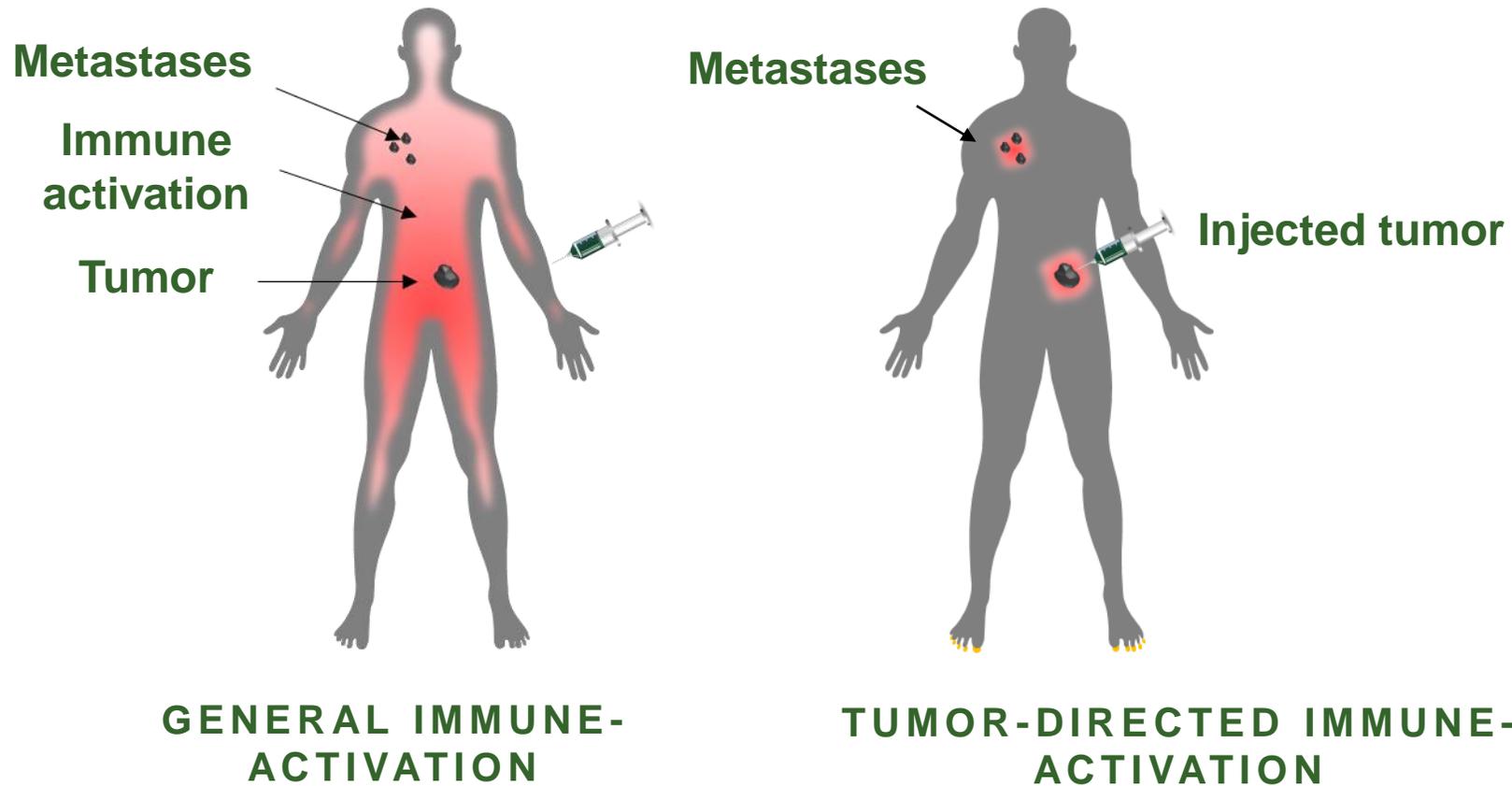
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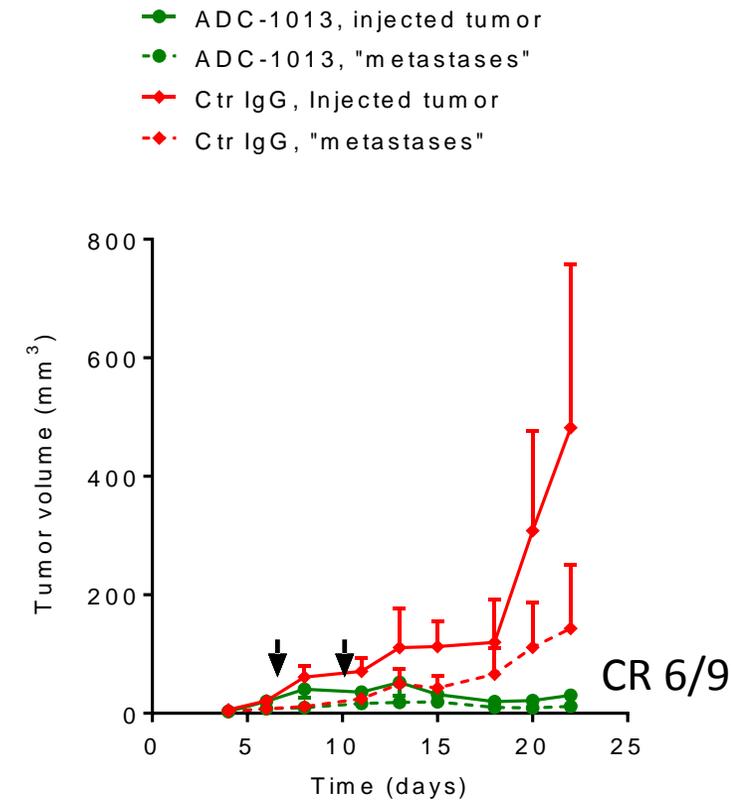
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# Tumor-directed immuno-oncology



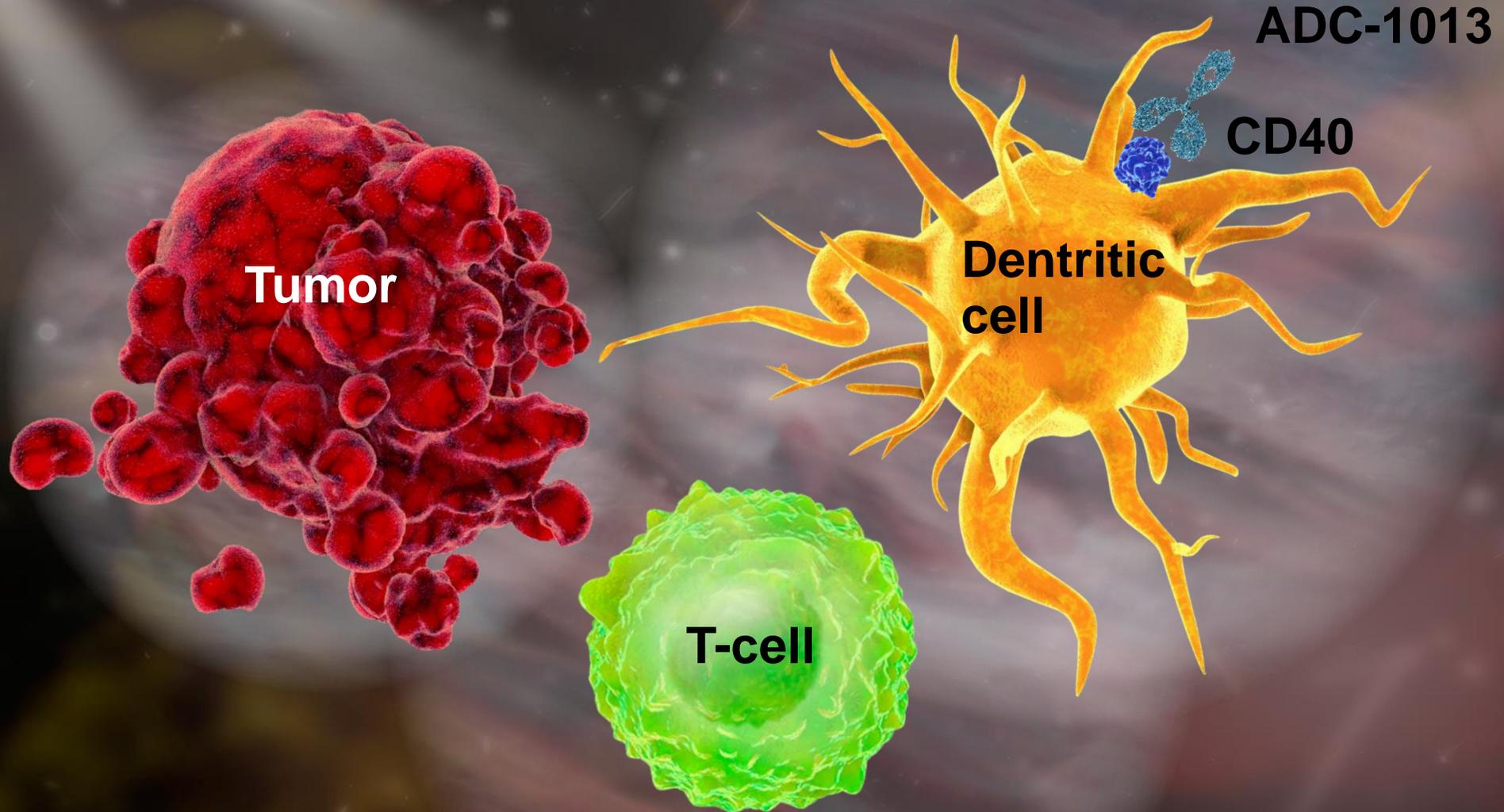
Adapted from Ellmark *et al* 2016, CII

Supported by pre-clinical data:



Adapted from Mangsbo *et al* 2015, CCR

# CD40 is a key immuno-oncology target



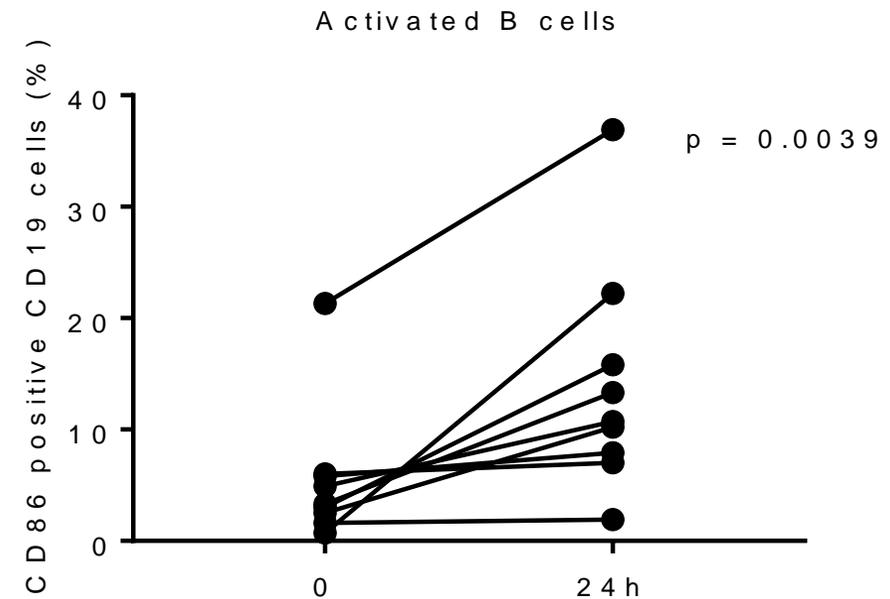
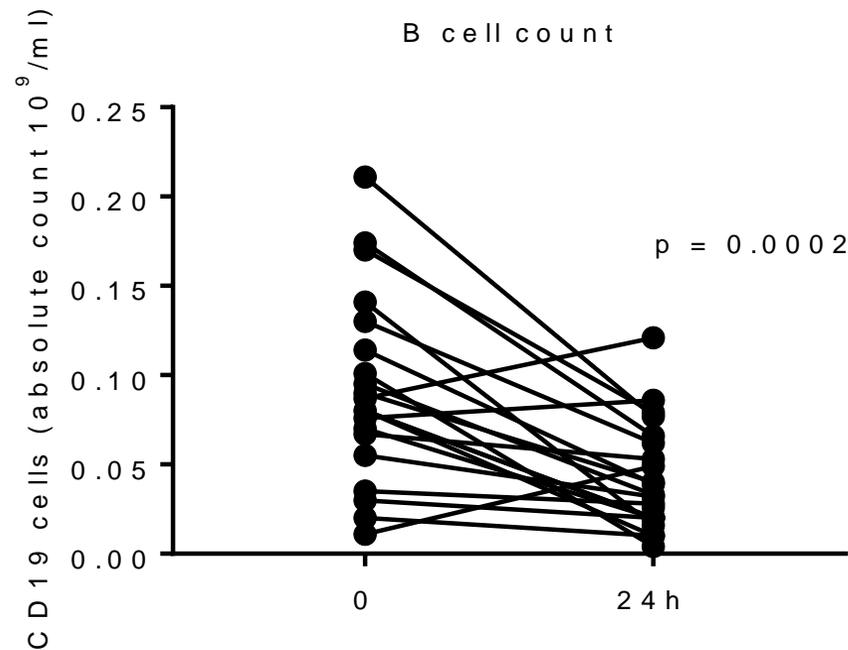
## First-in-human clinical phase 1 (NCT02379741)

- **Study therapy:** ADC-1013 intratumoral (or IV) every 14 days
- **Study design:** ADC-1013 dose escalation in subjects with advanced stage solid tumors to evaluate safety and tolerability
- **Status:**
  - 1st patient dosed April, 2015
  - Five clinical centers in Sweden, Denmark and UK
  - Study completed, 24 subjects enrolled

# Demographics

Administration route	Intratumoral				IV
Dose level (µg/kg)	22.5	75	200	400	75
Number of patients dosed	3	4	3	8	5
Age median (years)	67.0	62.5	74.0	59.0	60.0
Sex: Male/Female	3/0	2/2	2/1	3/5	4/1
<b>Tumor type</b>					
Colon/Rectal cancer		1	3	3	2
Melanoma	1			1	
Kidney	2			2	
Bile duct				1	1
Breast				1	
Ovarian		1			
Lung Cancer		2			
Peritoneal Cancer					1
Oesophageal Cancer					1

# ADC-1013 mediates CD40 agonistic responses in advanced stage cancer patients



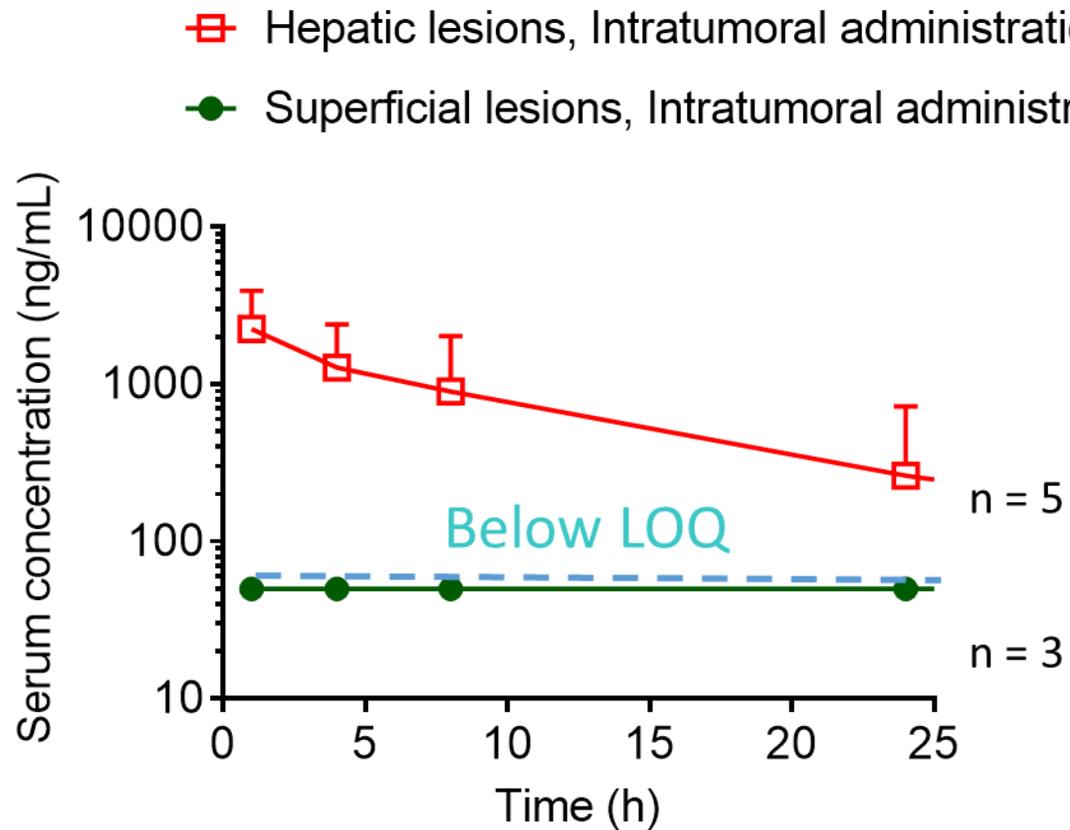
# Treatment related adverse events $\geq$ grade 3

- majority of adverse events were grade 1 and 2 and transient

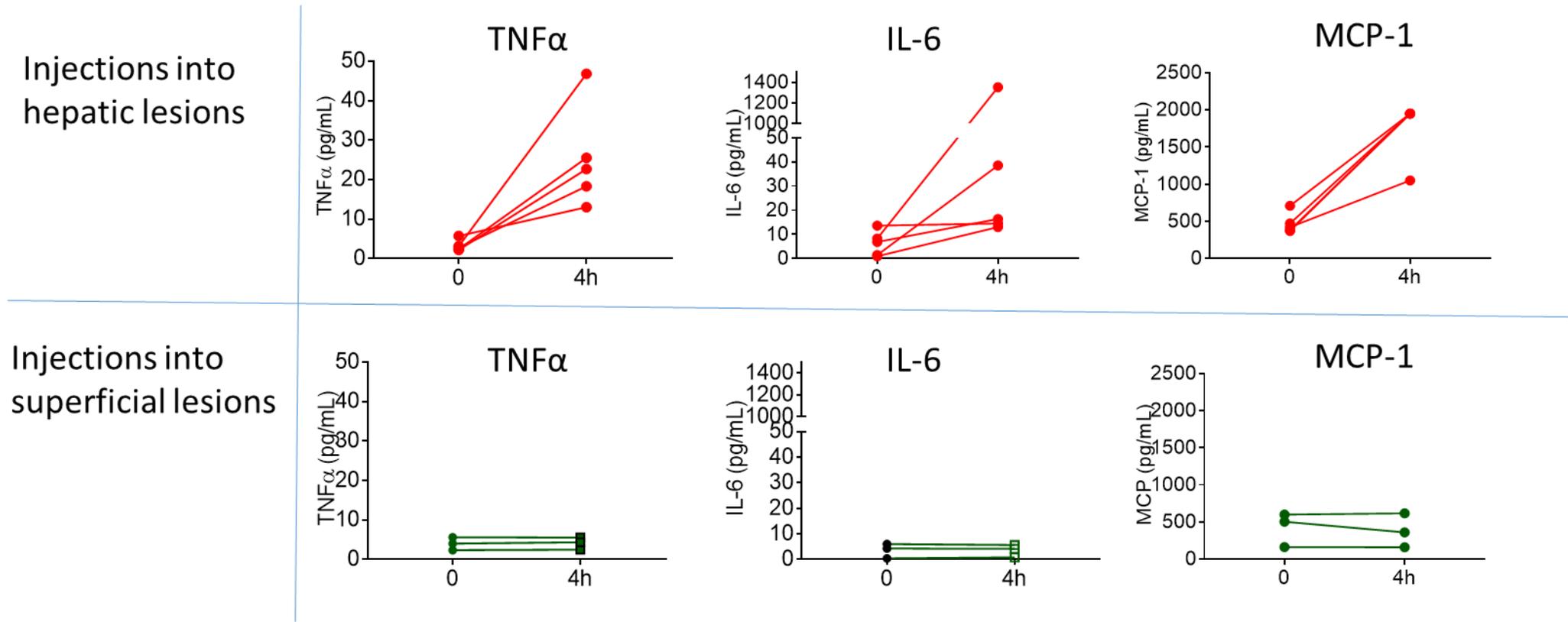
Drug-related adverse events $\geq$ grade 3	Pat ID	Dose level ( $\mu\text{g}/\text{kg}$ )	Grade	Dose limiting toxicity
Chills	009	200	3	No
Hypotension	011	400	3	No
Cholecystitis	014	400	3	Yes
Shiverings	016*	400	3	No
Abdominal pain	016	400	3	Yes

\* At two occasions

# Serum concentration of ADC-1013 (400 $\mu\text{g}/\text{kg}$ dose) - low systemic exposure following injections into superficial lesions

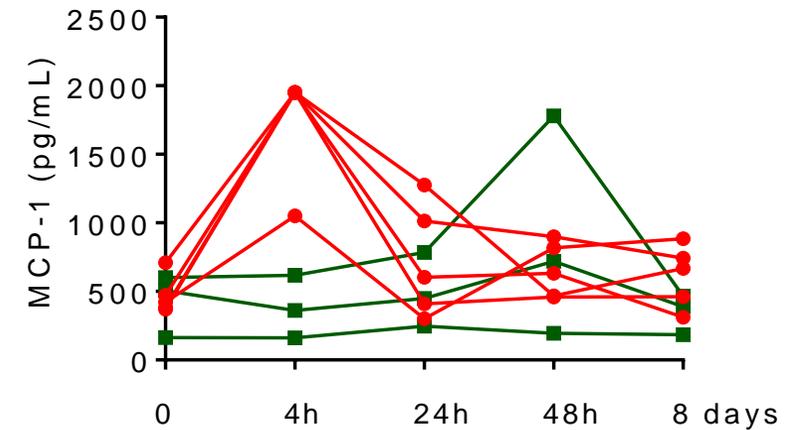
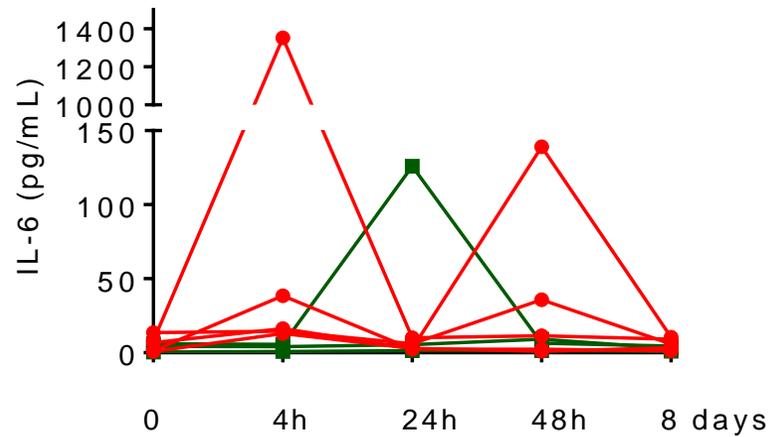
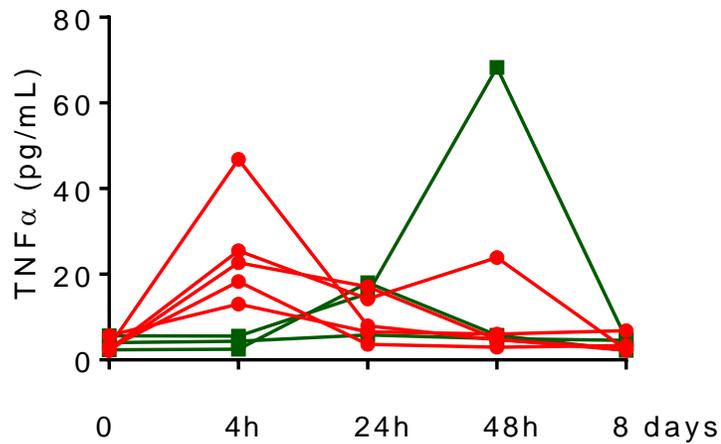


# Early cytokine release only detected following hepatic injection of ADC-1013 (400 $\mu\text{g}/\text{kg}$ dose level)



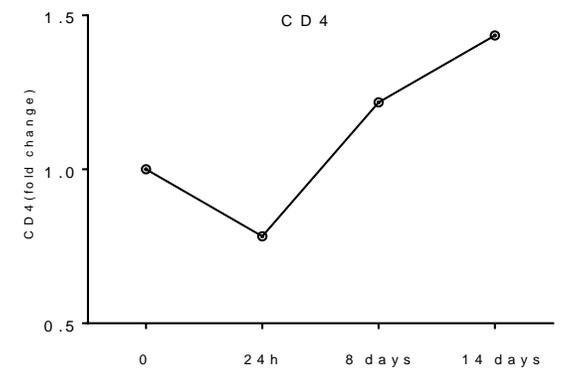
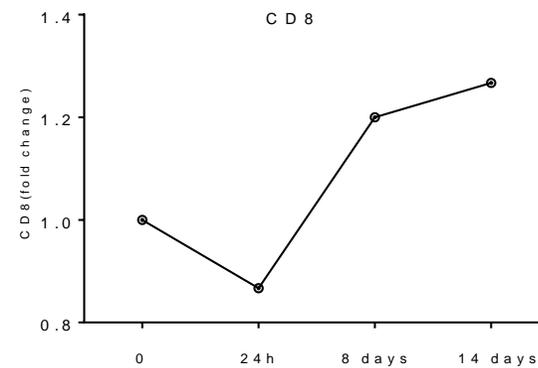
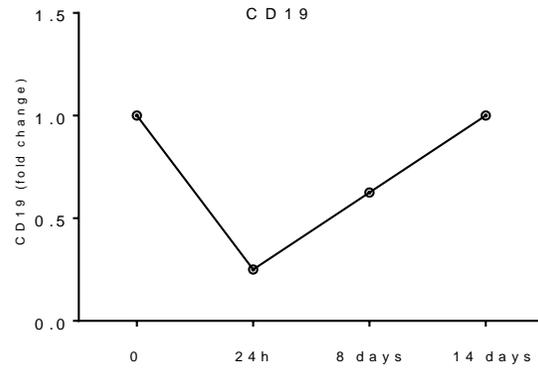
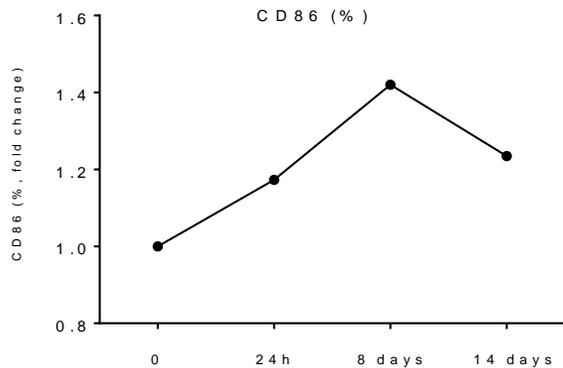
# ADC-1013-mediated cytokine release over time following the first dose (400 $\mu\text{g}/\text{kg}$ dose level)

- Cytokine levels following injection into Hepatic lesions
- Cytokine levels following injection into Superficial lesions



# Tumor effects – case study (Patient ID 015)

- Best response in study: Stable disease (12 months on study)
- Male 57 year, metastatic kidney cancer
- 7 treatment cycles: 400 µg/kg, 600 µg/kg and 900 µg/kg, no severe AE
- Indication of pharmacodynamic responses, including B cell activation



## Lessons and Take Home Messages

- ADC-1013 induces CD40-mediated pharmacodynamics effects
- Injection into superficial lesions results in low systemic exposure, but with indications of systemic pharmacodynamic responses
- Intratumoral administration is well tolerated in superficial lesions at least up to 400  $\mu\text{g}/\text{kg}$  (MTD 200  $\mu\text{g}/\text{kg}$  in hepatic lesions)

# Current development, Janssen Phase 1 study (NCT02829099)

- **Study Therapy:** JNJ-64457107 (ADC-1013) IV every 14 days (75 µg/kg starting dose)
- **Study design:**
  - Part 1: JNJ-64457107 (ADC-1013) dose escalation in subjects with advanced stage solid tumors
  - Part 2: JNJ-64457107 (ADC-1013) dose expansion: NSCLC, pancreatic cancer, and cutaneous melanoma.
- **Status:**
  - 1<sup>st</sup> patient dosed on October 26, 2016
  - Currently 52 subjects enrolled

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Sara Mangsbo

## **Janssen**

## **Participating patients**

**Meet us at Poster: O24**

# Serum concentration of ADC-1013 (400 $\mu\text{g}/\text{kg}$ dose) - low systemic exposure following injections into superficial lesions

