



SITC 2017

November 8-12
NATIONAL HARBOR
MARYLAND

Gaylord National Hotel
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Society for Immunotherapy of Cancer

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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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Presenter Disclosure Information

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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Presentation Slides

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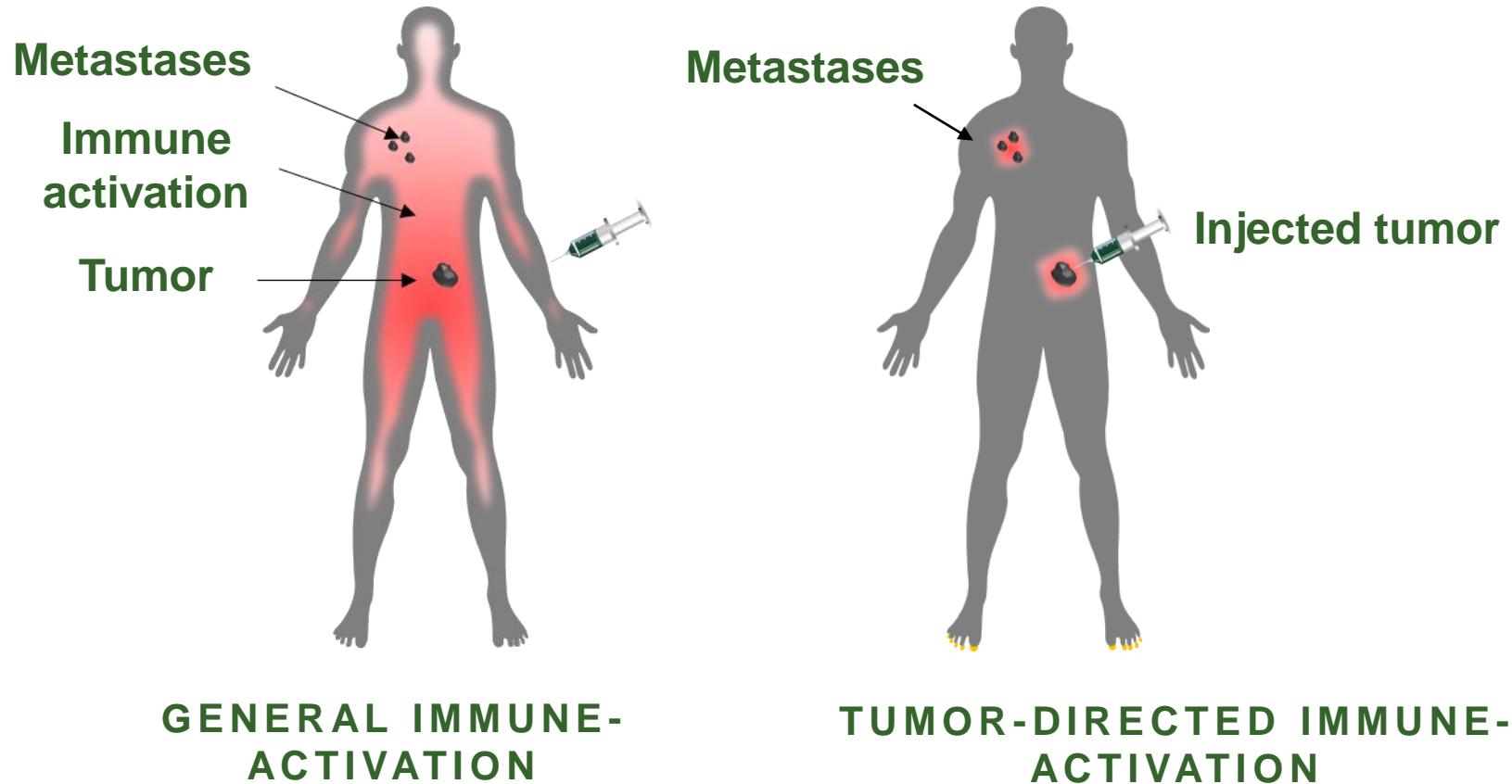
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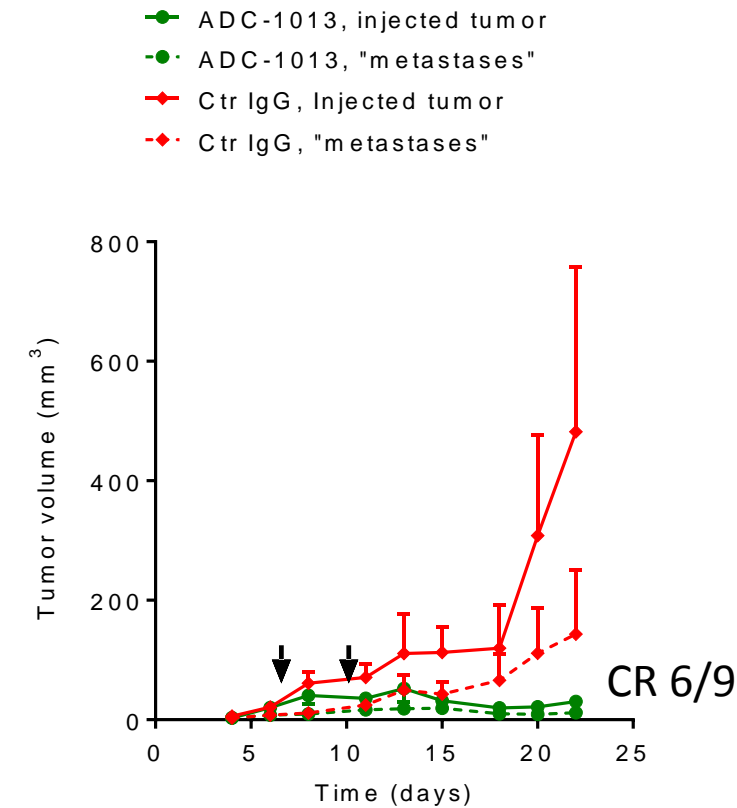
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Tumor-directed immuno-oncology

Supported by pre-clinical data:

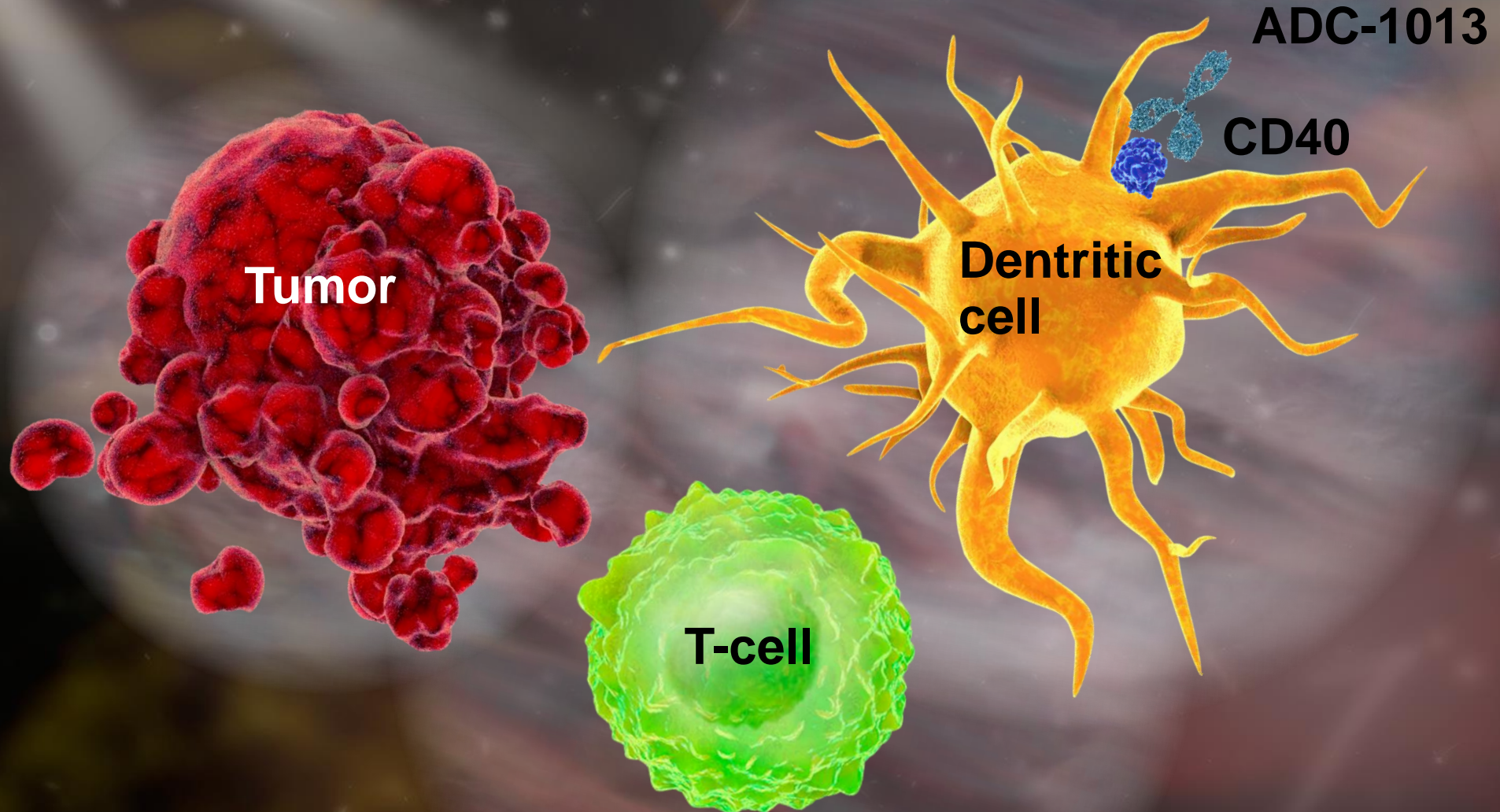


Adapted from Ellmark *et al* 2016, CII



Adapted from Mangsbo *et al* 2015, CCR

CD40 is a key immuno-oncology target



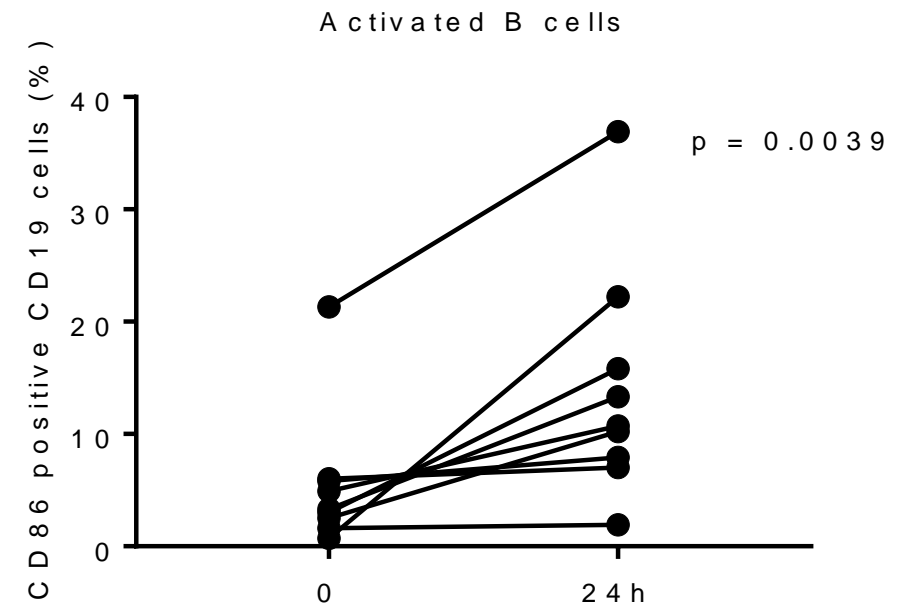
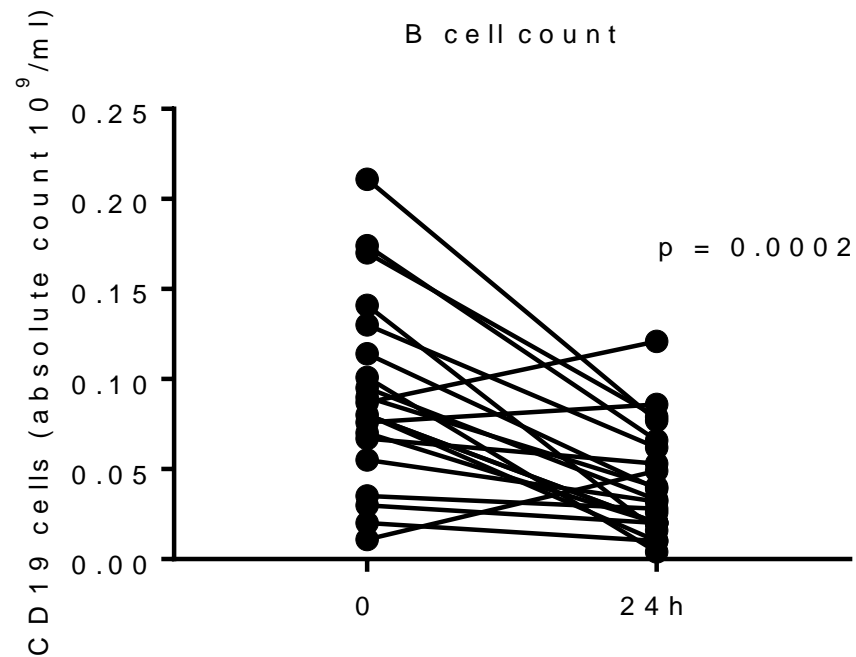
First-in-human clinical phase 1 (NCT02379741)

- **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
Tumor type					
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



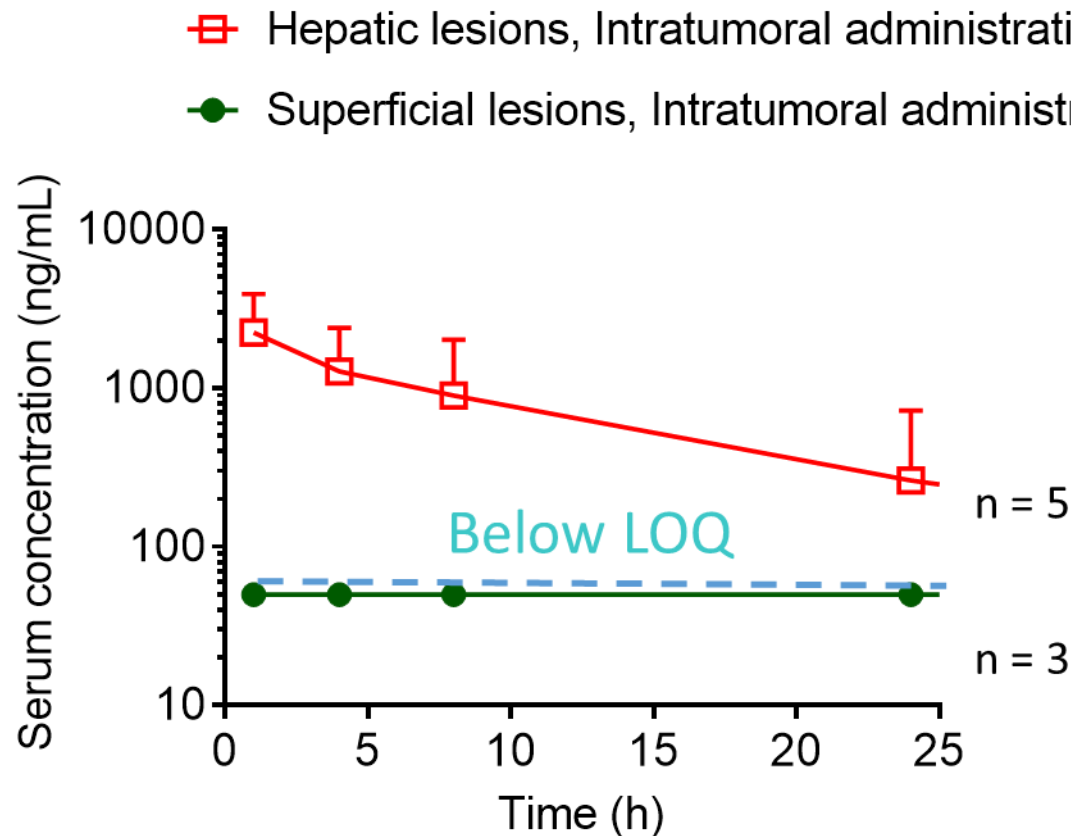
Treatment related adverse events \geq grade 3

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

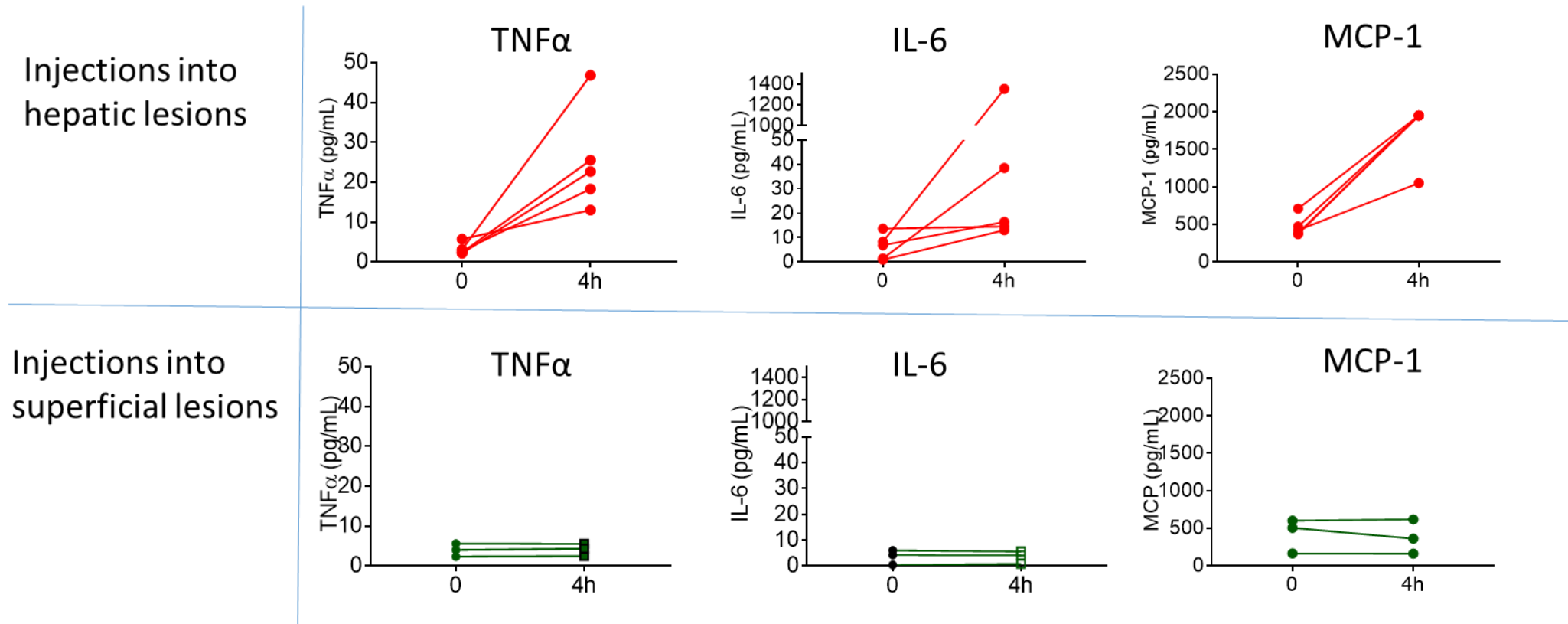
Drug-related adverse events \geq grade 3	Pat ID	Dose level ($\mu\text{g}/\text{kg}$)	Grade	Dose limiting toxicity
Chills	009	200	3	No
Hypotension	011	400	3	No
Cholecystitis	014	400	3	Yes
Shiverings	016*	400	3	No
Abdominal pain	016	400	3	Yes

* At two occasions

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

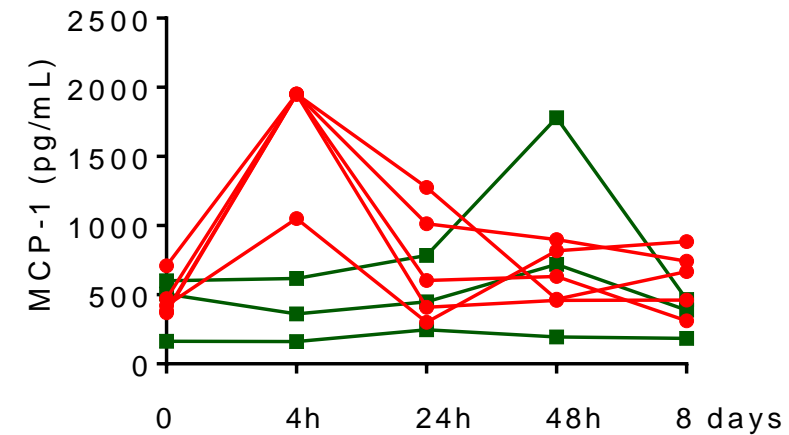
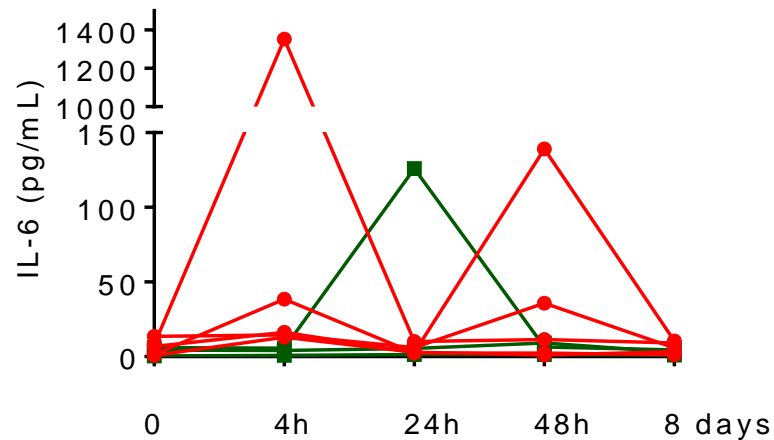
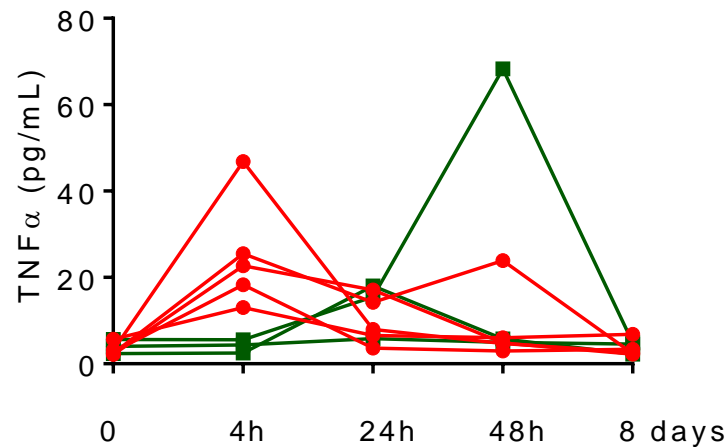


Early cytokine release only detected following hepatic injection of ADC-1013 (400 µg/kg dose level)



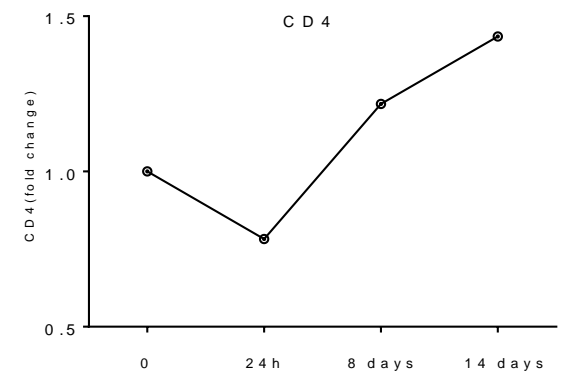
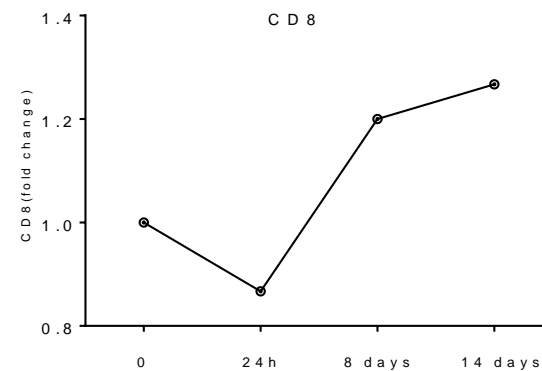
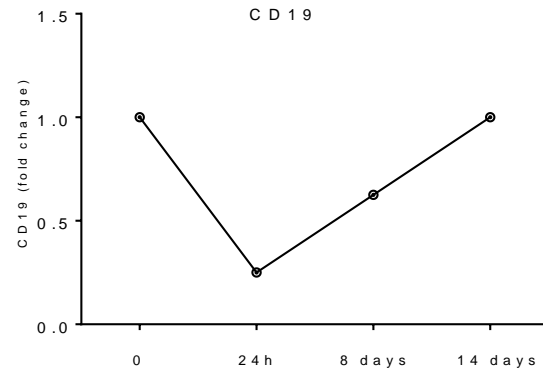
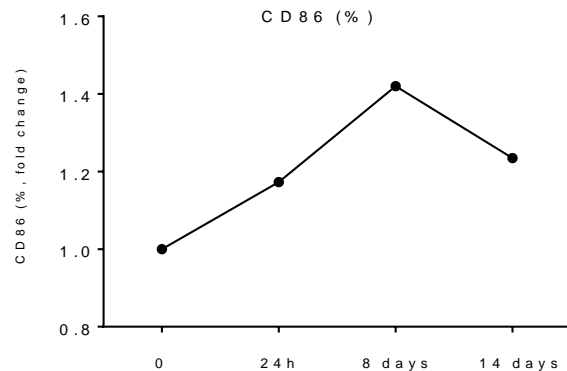
ADC-1013-mediated cytokine release over time following the first dose (400 $\mu\text{g/kg}$ dose level)

- 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:**
 - 1st patient dosed on October 26, 2016
 - Currently 52 subjects enrolled

Acknowledgements

Investigators

Dorte Nielsen
Gustav Ullenhag
Jeffrey Yachnin
David Palmer
Yuk Ting Ma

Alligator Bioscience

Camilla Wennersten
Per Norlén
Adnan Deronic
Niina Veitonmäki
Anneli Nilsson

Scientific advisors

Jeffrey Weber
Thomas Tötterman
Sara Mangsbo

Janssen

Participating patients

Meet us at Poster: O24

Serum concentration of ADC-1013 (400 $\mu\text{g/kg}$ dose)

- low systemic exposure following injections into superficial lesions

