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# Interim PK/PD, Safety and Efficacy Data of Monotherapy Dose Escalation of a Phase 1/2 Trial With MDNA11 in Patients With Advanced Solid Tumors

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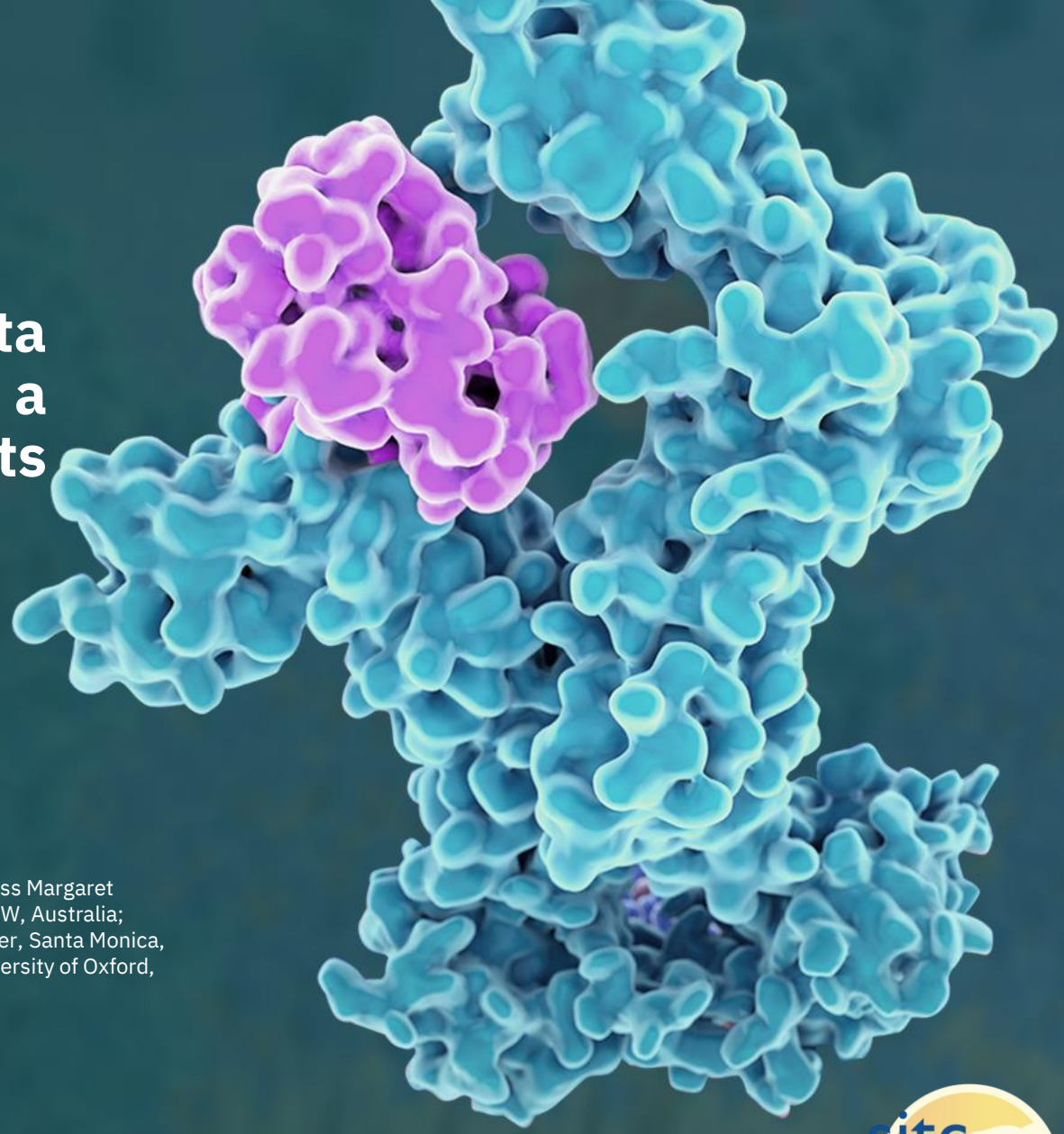

MEDICENNA

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# Overview of MDNA11

**MDNA11 is an albumin-fused long-acting IL-2 agonist with strong activation of CD8⁺ T and NK cells, minimal impact on Treg cells, and reduced toxicity.**

**Enhanced β-binding**

Potentiates activation of anti-cancer immune cells (CD8⁺ T & NK)

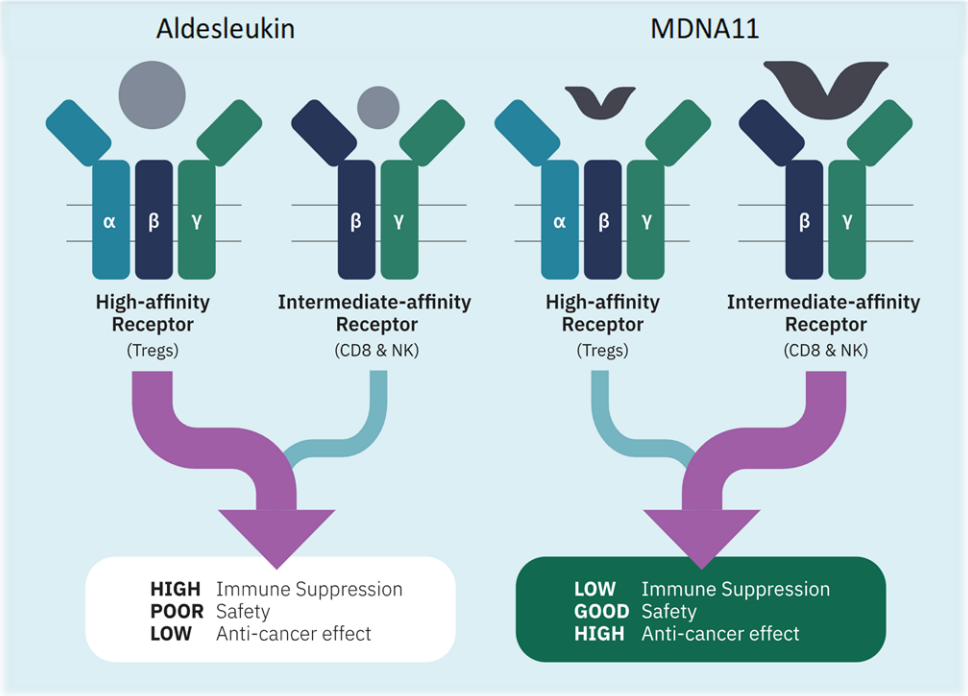
**+**

**Non-α binder**

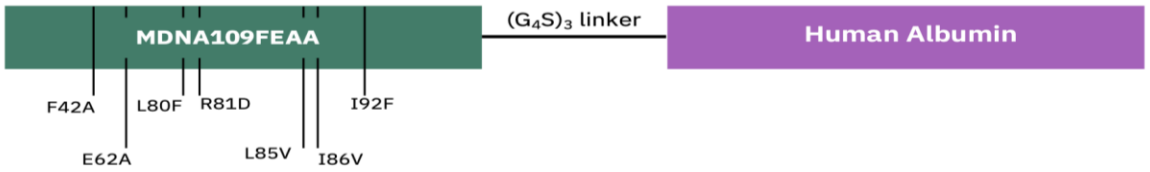
Reduces stimulation of pro-cancer immune cells (Tregs)

**=**

**Superior anti-cancer response**




**MDNA11 is engineered** with targeted mutations to increase IL-2Rβ affinity and eliminate IL-2Rα binding.

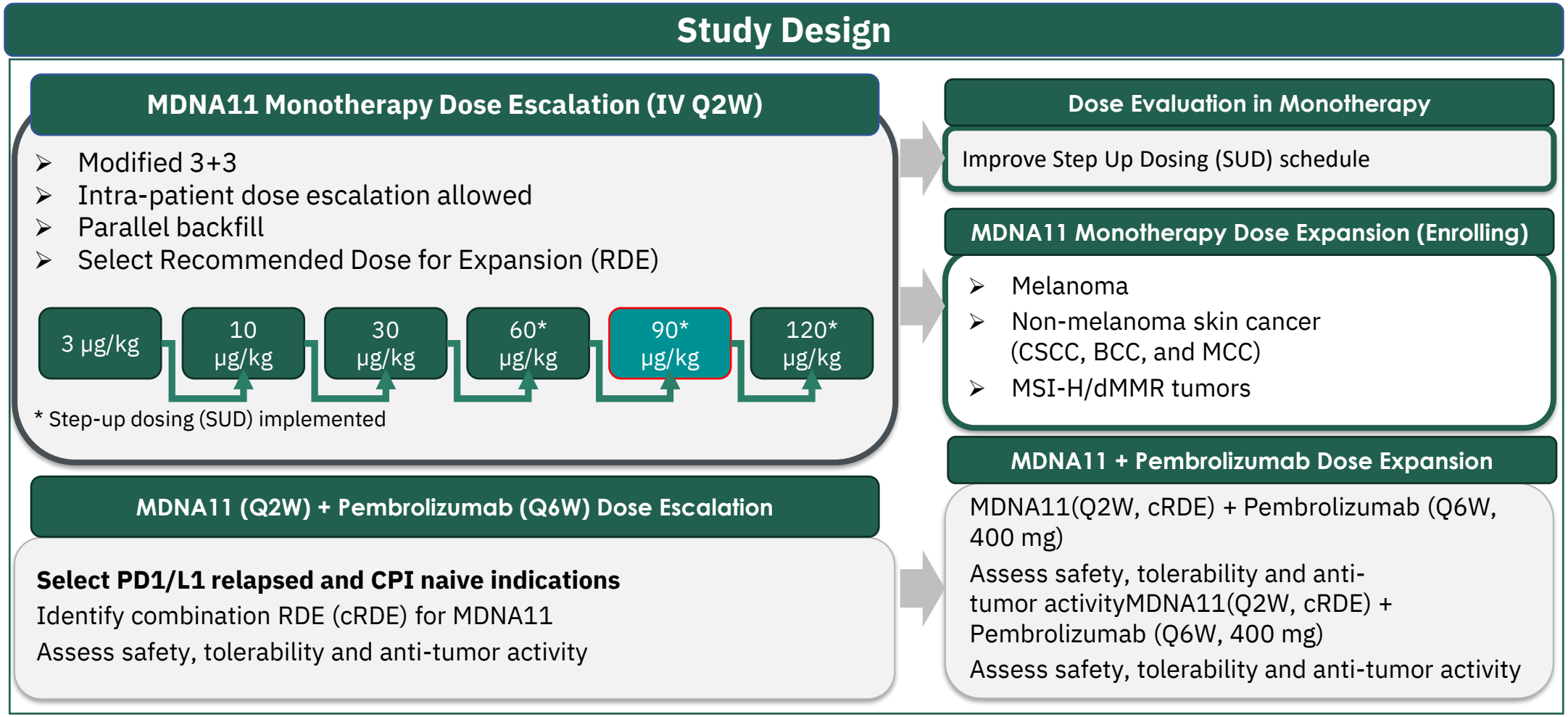



**Fusion to human albumin** extends half-life, overcoming need for frequent dosing, and promotes MDNA11 accumulation in tumors.

*Merchant, et. al. JITC (2022).*

# ABILITY-1 (NCT05086692) Study

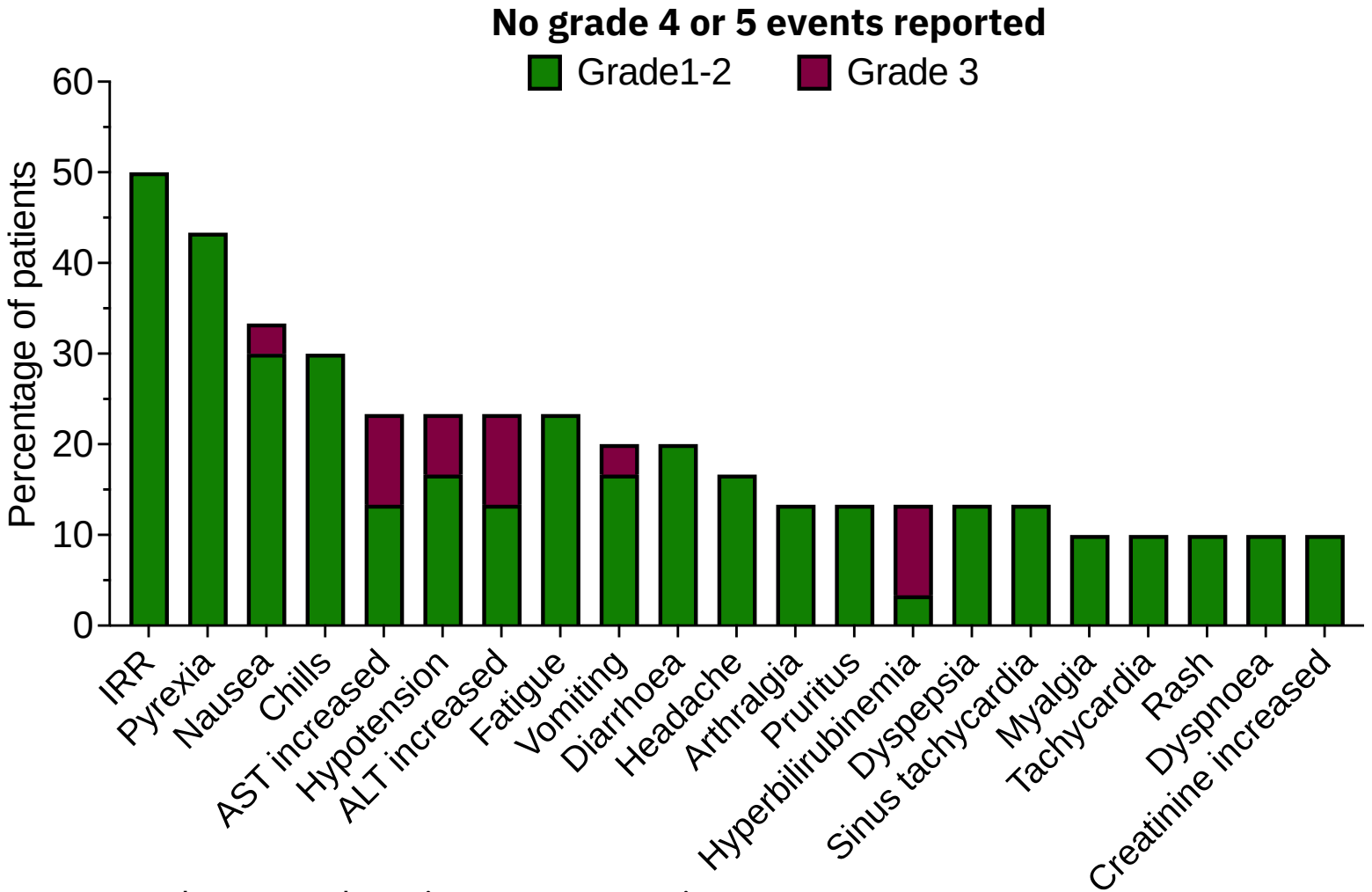
ABILITY-1 is a Phase 1/2 study assessing MDNA11's safety, pharmacokinetics, pharmacodynamics, and preliminary efficacy in advanced solid tumors, as monotherapy and in combination with Pembrolizumab.



# Patient Demographics

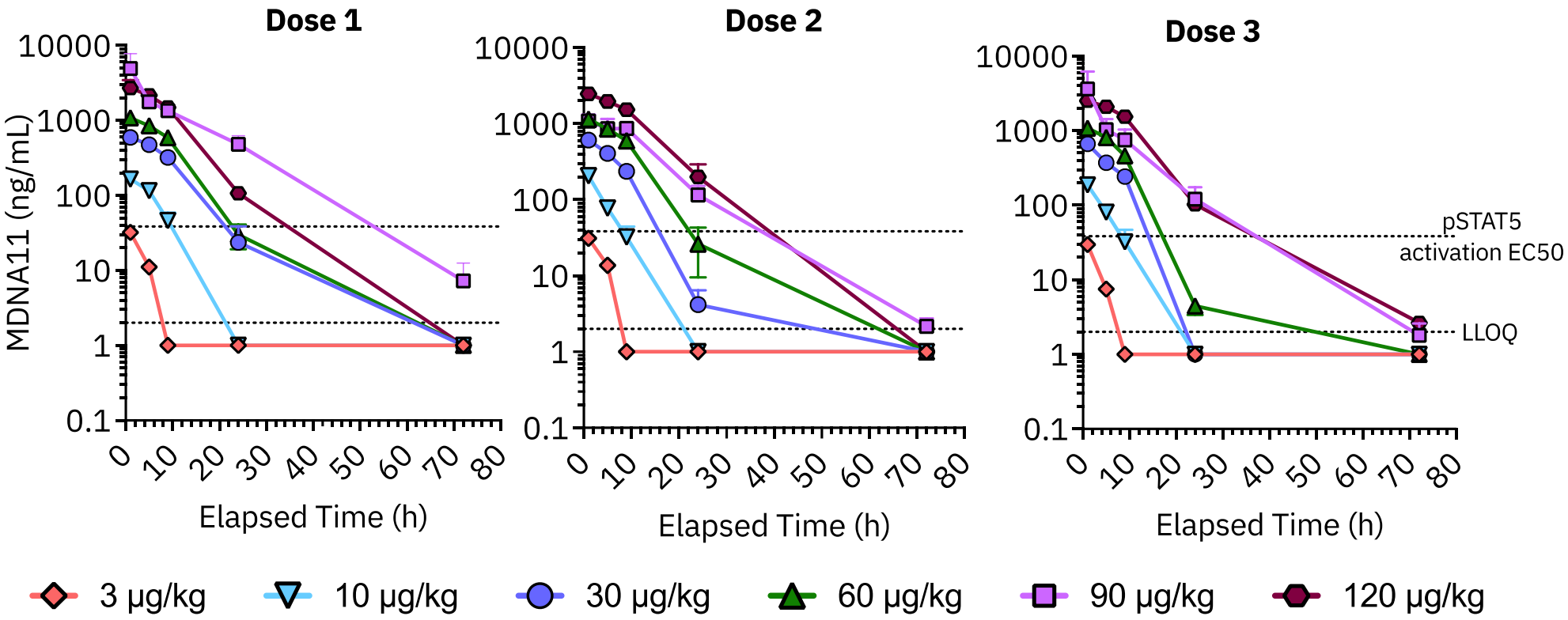
| Baseline Characteristics | N=30 |
|---|---|
| Age, median years (range) | 63 (27-78) |
| Male, N (%) | 22 (73.3%) |
| Baseline ECOG = 0, N (%) | 19 (63.3%) |
| Baseline ECOG = 1, N (%) | 11 (36.6%) |
| **Primary Tumor Type** | **N (%)** |
| Melanoma (14 Cutaneous, 1 Mucosal and 1 Acral) | 16 (53.3 %) |
| Non-small Cell Lung Cancer (NSCLC) | 3 (10%) |
| Pancreatic Ductal Adenocarcinoma (PDAC) | 3 (10%) |
| Renal Cell Carcinoma | 2 (6.6%) |
| Sarcoma (1 Pleiomorphic sarcoma and 1 Leiomyosarcoma) | 2 (6.6%) |
| Ovarian Cancer | 2( 6.6%) |
| Tonsillar Squamous Cell Carcinoma | 1 (3.3%) |
| Gastro-esophageal Adenocarcinoma | 1 (3.3S%) |
| **Prior Anti-cancer Systemic Therapies** | **N (%)** |
| Prior Lines of Therapy: 1-2 | 22 (73.3%) |
| Prior Lines of Therapy: 3-4 | 8 (26.6%) |
| Immunotherapy | 22 (73.3%) |
| Targeted Therapy | 5 (16.6%) |
| Chemotherapy | 15 (50 %) |

# Treatment Related Adverse Events (TRAE) in ≥10% of Patients

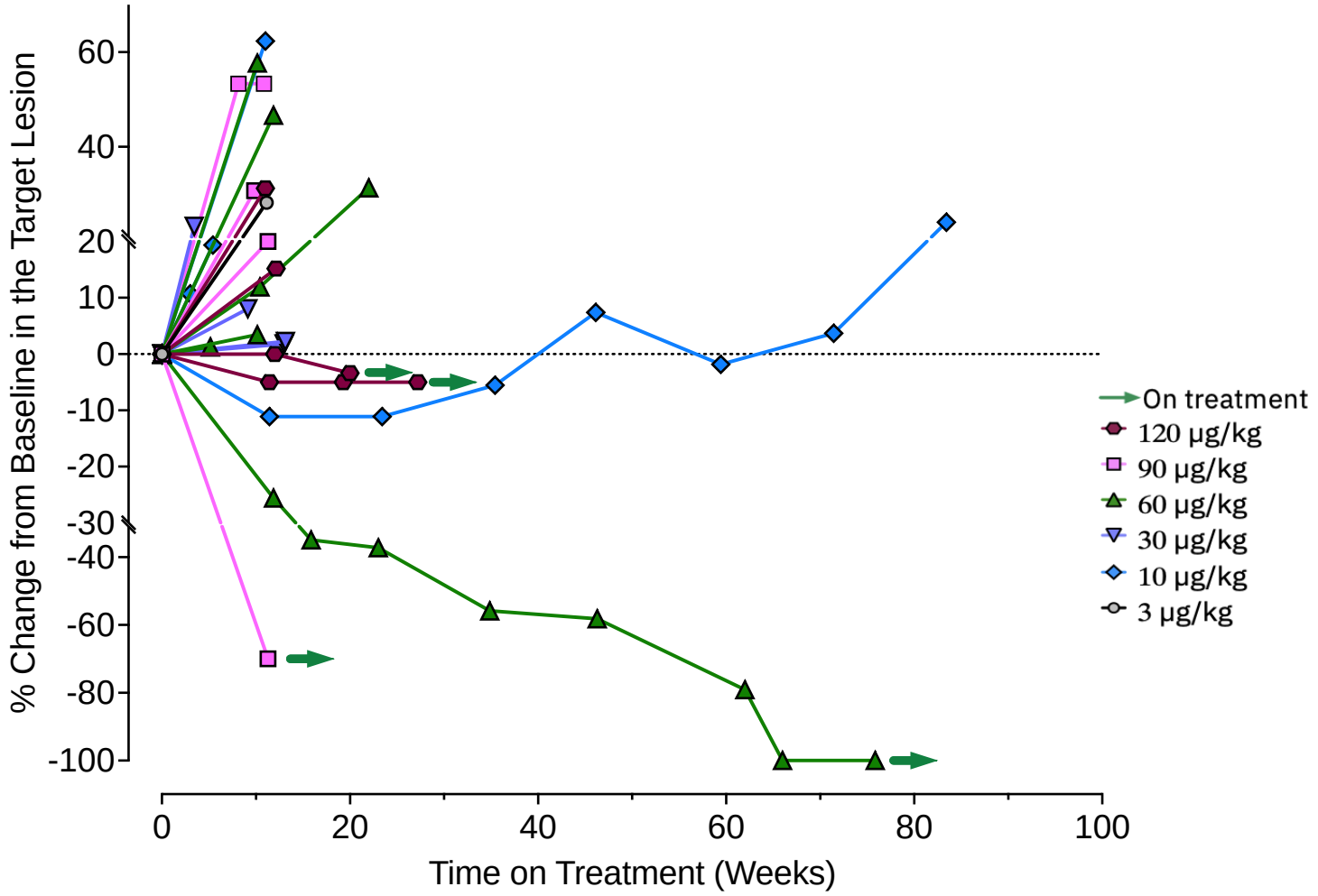



Grade 3 LFT elevations were transient

# PK Profile Shows Dose Dependent Increase of MDNA11 Serum Level

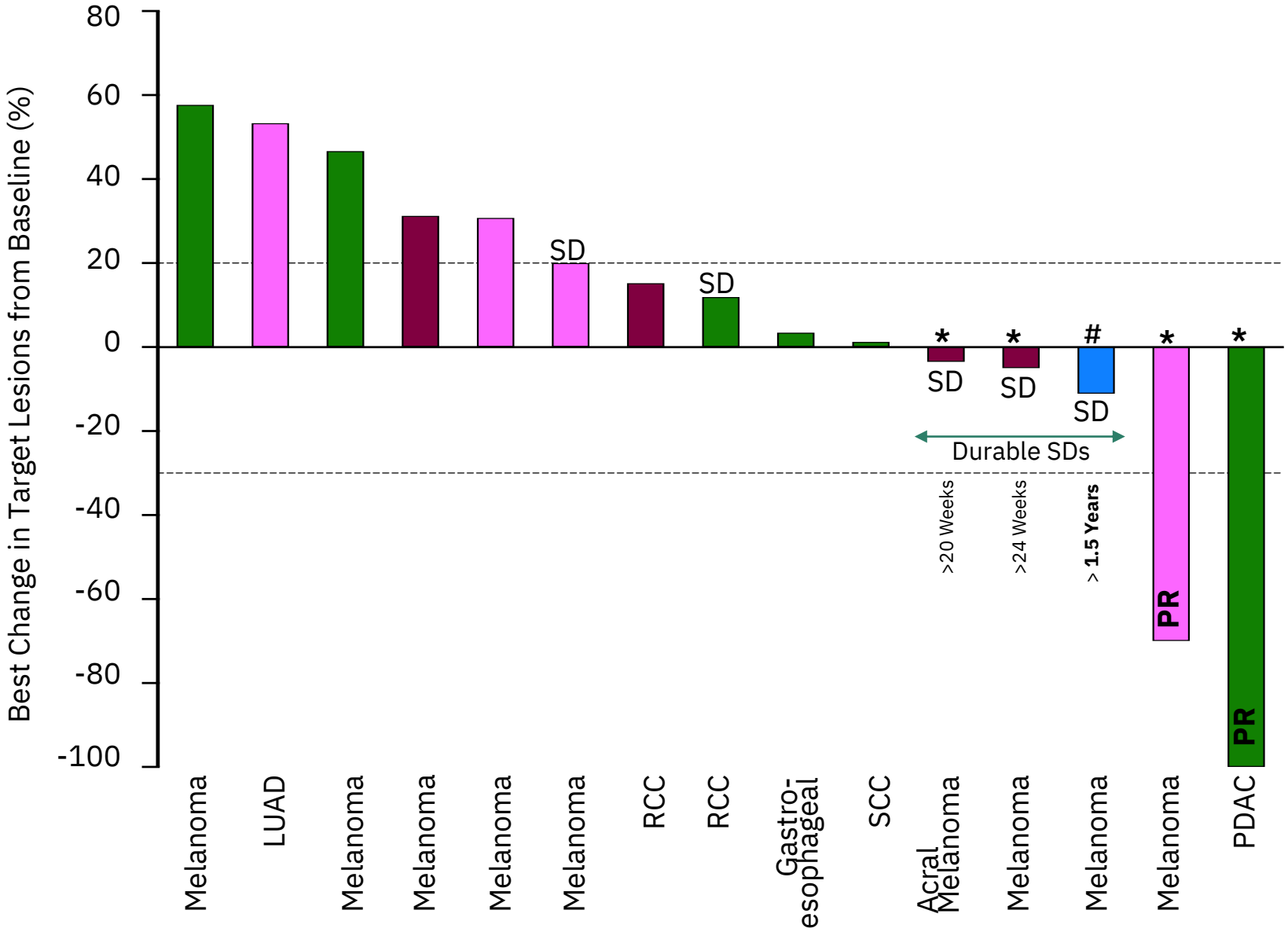


# MDNA11 Monotherapy: Anti-tumor Activity Across All Cohorts



# Best Change in Target Lesions on MDNA11 Monotherapy (≥ 60 µg/kg)

## 2 Partial Responses and 3 Durable Stable Disease (N=15)



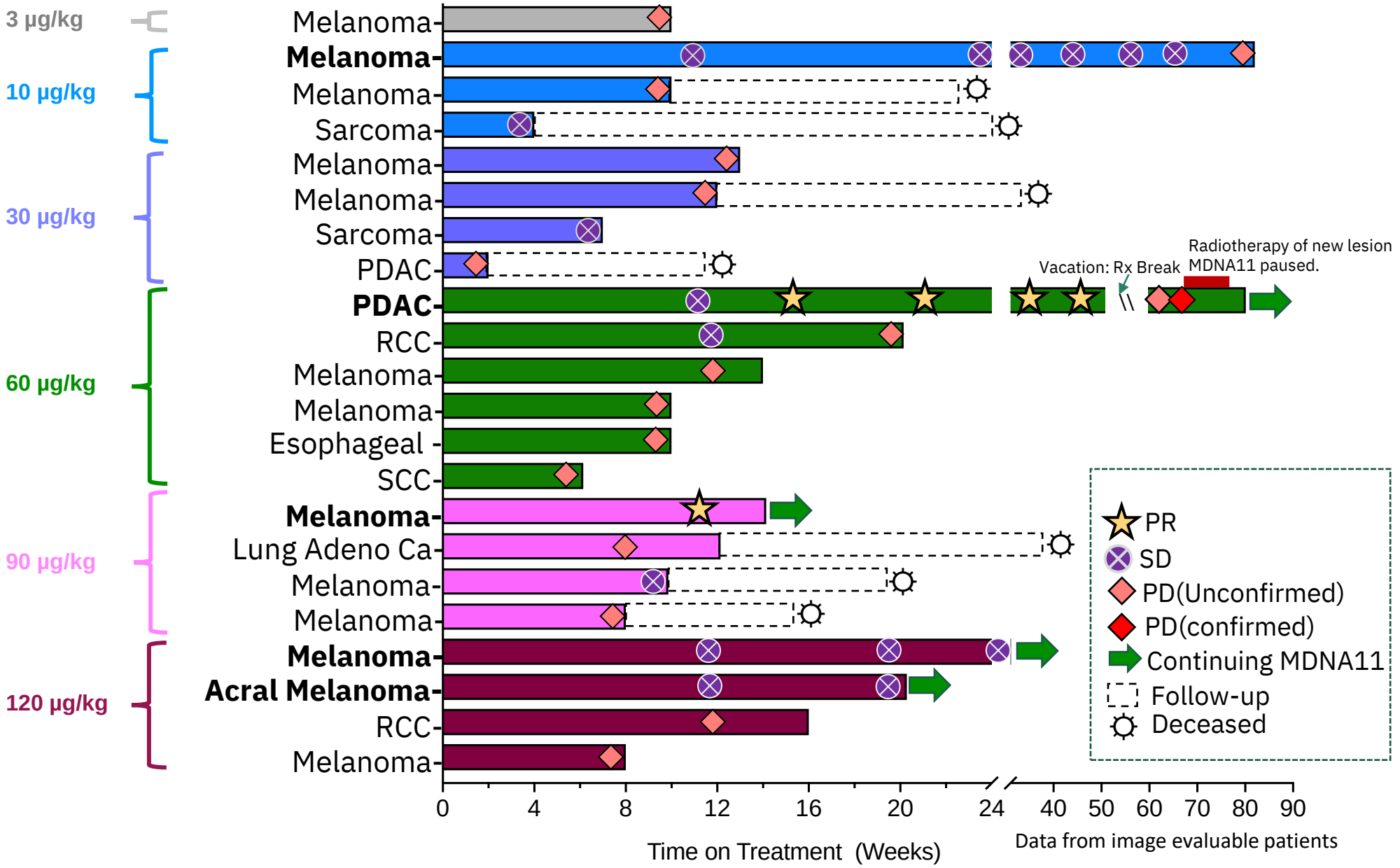

MDNA11 (µg/kg)

- 120
- 90
- 60
- 10, 30, 60, & 90#

* Continuing MDNA11 treatment

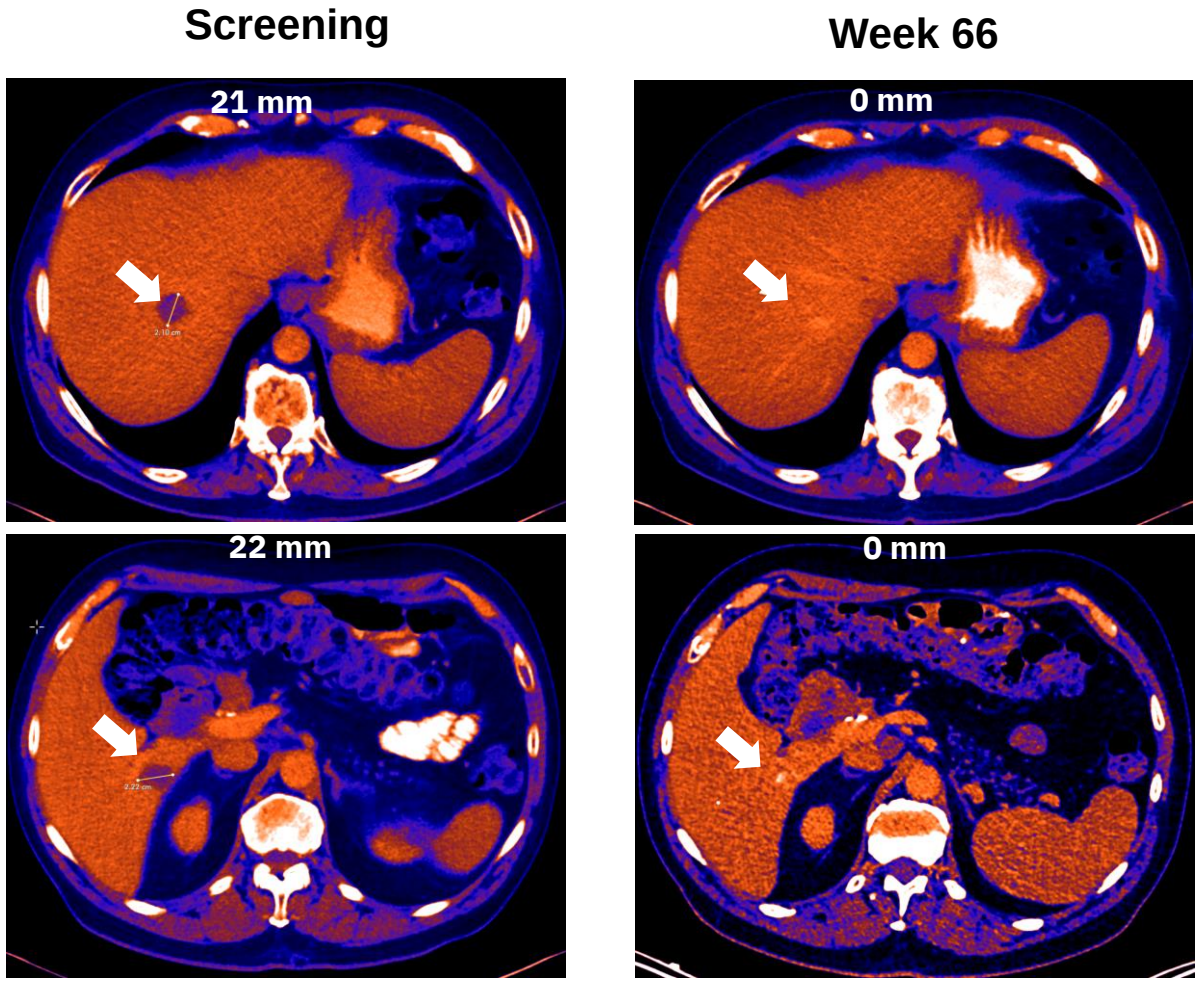
# Intra-patient dose escalation

# MDNA11 Monotherapy: Duration of Treatment and Anti-tumor Activity



# PR Achieved in 2 of 15 (13.3%) Patients in Higher Dose Cohorts (≥60 µg/kg)

## 100% Regression of Target Lesions in PDAC Patient

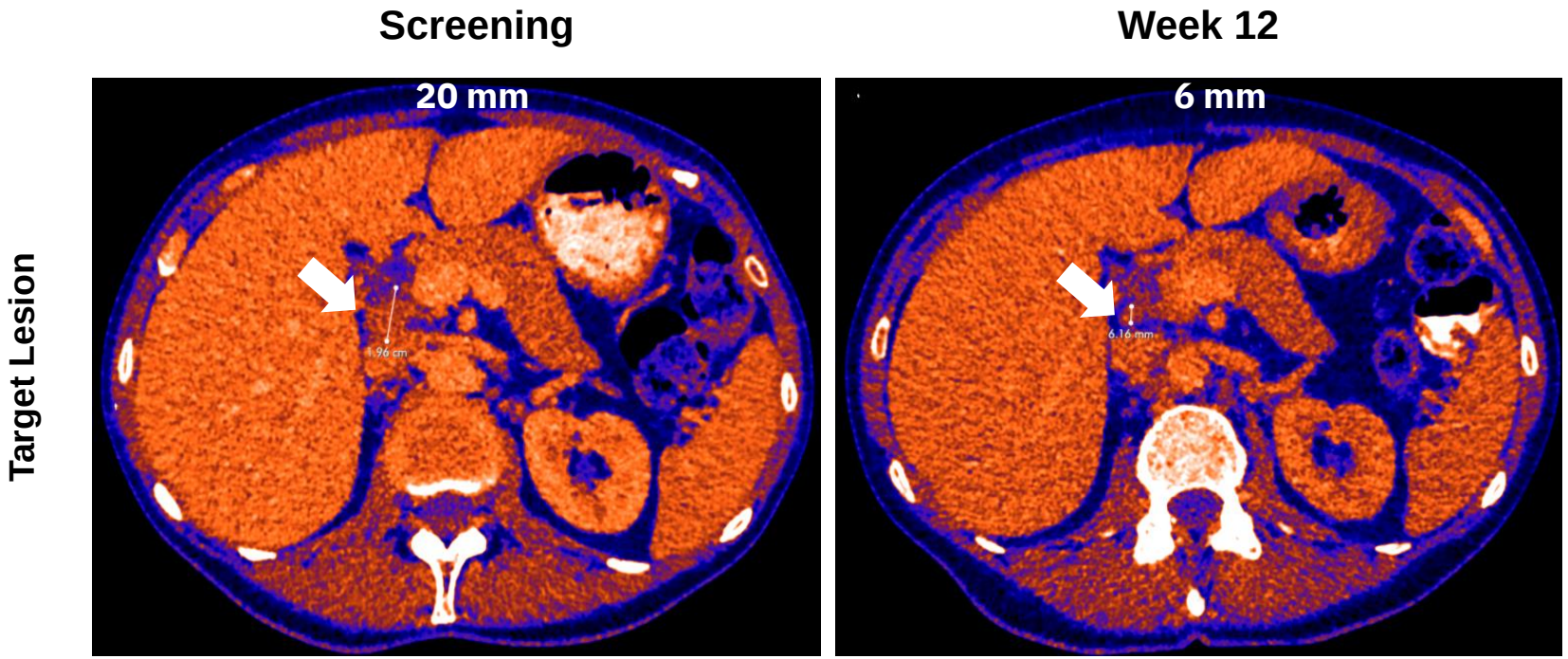



**PR at 60 µg/kg :**

- Pancreatic ductal adenocarcinoma (PDAC, MSI-H) treated with two prior lines.
  - Whipple procedure + Adj FOLFIRINOX
  - 1L: Gemcitabine + nab-Paclitaxel
  - 2L: Pembrolizumab (PD-primary resistant)
- PR first observed at week 16
- **100% reduction of target and non-target lesion at week 66 on MDNA11 alone.**
- Patient developed a single new lesion while on treatment break (vacation) and continues to receive MDNA11

# PR Achieved in 2 of 15 (13.3%) Patients in Higher Dose Cohorts (≥60 µg/kg)

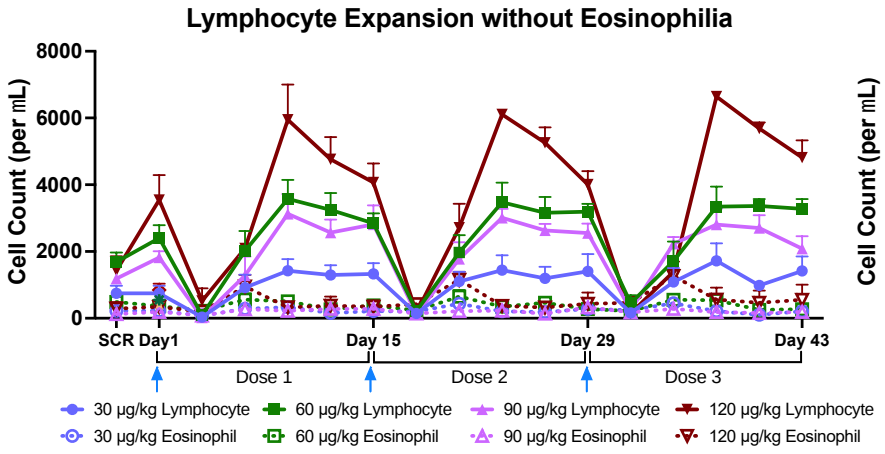
## 70% Reduction of Target Lesion in Cutaneous Melanoma Patient at First Scan

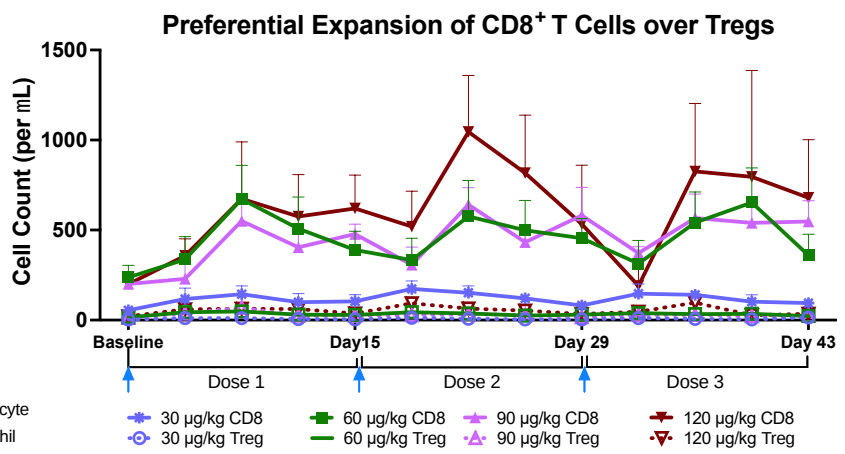


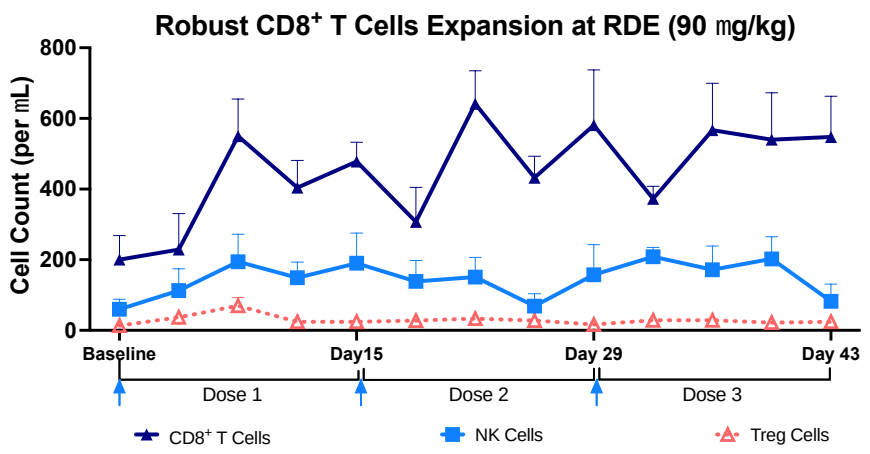

**PR at 90 µg/kg :**

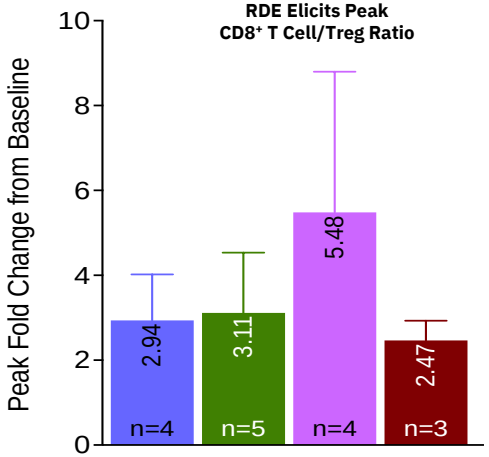
- Cutaneous melanoma progressed on prior line of dual checkpoint inhibitors
- 70% reduction of the target lesion at week 12
- Patient continues to receive MDNA11

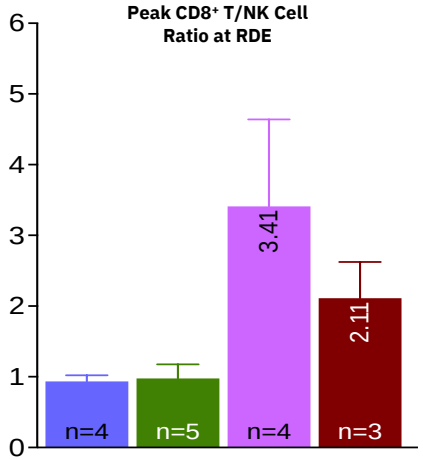
# Optimal Anti-tumor Immune Response at Recommended Dose for Expansion (90 µg/kg)

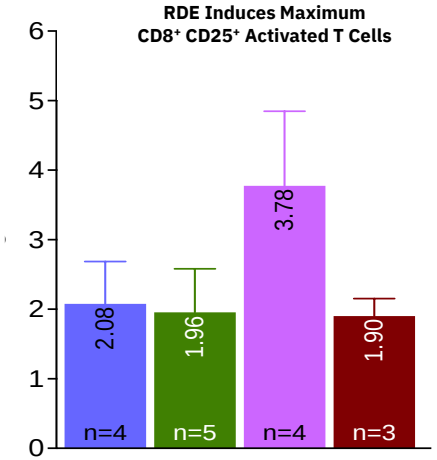


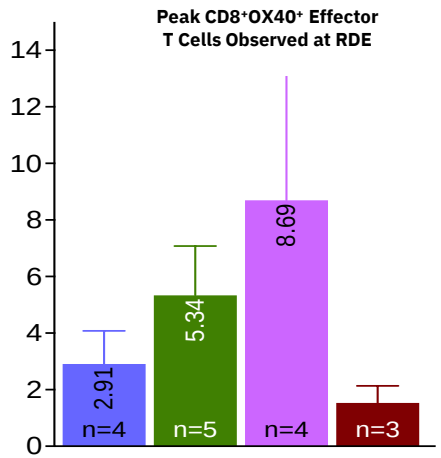



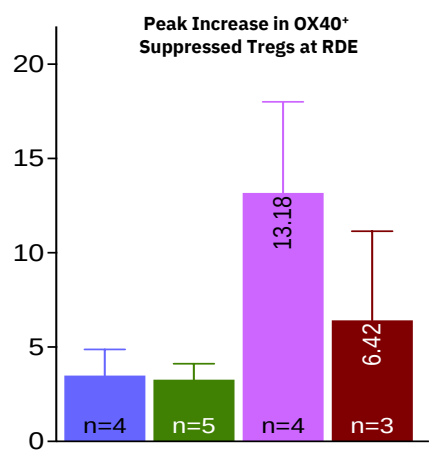




30 µg/kg 60 µg/kg 90 µg/kg 120 µg/kg

# Conclusions

- No dose limiting toxicities reported
- 95.6% of TRAE were of grade 1-2 severity; no grade 4 or 5 events.
- 90 µg/kg declared as monotherapy RDE
- 2 Partial Responses in Pancreatic Cancer and Cutaneous Melanoma
- 7 patients with Stable Disease in all cohorts
- Early signs of MDNA11 monotherapy efficacy during dose escalation
- MDNA11 shows dose-dependent increase in PD parameters; activation markers peak at RDE
- Monotherapy dose-expansion currently enrolling
- Combination with Pembrolizumab to begin end of 2023