#757P

USFDA Authorized Compassionate Use of SNK01 (Autologous Non-Genetically Modified Natural Killer Cells With Enhanced Cytotoxicity) and Immune Checkpoint Inhibitors in Advanced Heavily Pre-treated Sarcoma. A Promising Regimen.

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INTRODUCTION

- For patients with advanced sarcomas, in the refractory setting, there are few if any effective salvage options. The likelihood of response and/or tumor control further diminishes with each subsequent line of therapy.
- Natural Killer (NK) cells have recently been implicated in the antitumor response to immune checkpoint inhibitors (ICIs) with some evidence suggesting a positive role in PD-L1 negative tumors.
- SNK01 is a first-in-kind autologous, non-genetically modified, NK cell therapy in which NK cells from heavily pre-treated cancer patients are consistently expanded, cytotoxicity is greatly increased, and activating receptor expression is over 90%. Neither lymphodepletion or cytokine support are required.

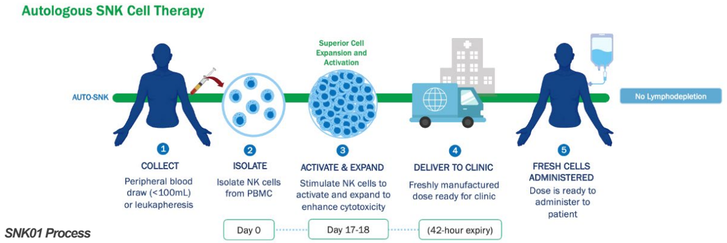
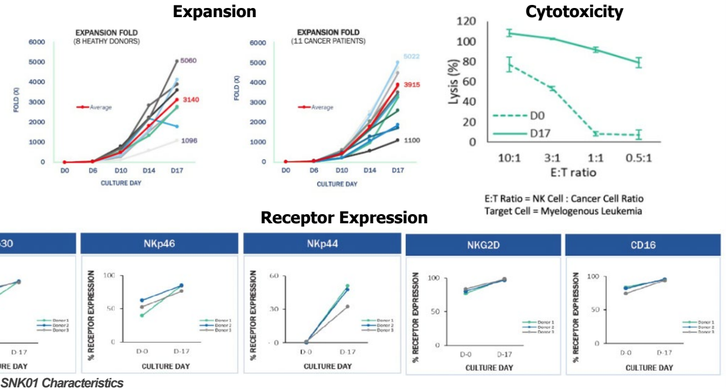


Figure 1. SNK01 Process



Figures 2-4. SNK01 Characteristics

RESULTS

Patient Population

- The US FDA granted 8 compassionate use INDs for patients with advanced refractory sarcomas. Seven patients received a dose of pembrolizumab 200 mg followed by pembrolizumab + SNK01 (2 x 10^9 cells) every 3 weeks, and one patient received a dose of nivolumab 240 mg followed by nivolumab + SNK01 (2 x 10^9 cells) every two weeks.
- Median age is 58.5 years (range 16 – 75).
- 5 patients were male.
- Patients had a median 4.5 lines of prior therapy (range 3– 10).
- All patients received their first dose of ICI, but only 5 of the 8 patients were able to receive the ICI + SNK01 combo dose.

Case	Stage	Cancer Dx	Age (Gender)	# Prior Tx	PD-L1 Status	ICI	# Combo Doses	Comments
1	IV	Chondrosarcoma	58 (M)	3	10%	pembrolizumab	12	Partial response, died of complications from surgery
2	IV	Small Round Cell Sarcoma	32 (M)	5	PDL1-	pembrolizumab	36	Sustained remission with no evidence of disease
3	IV	Leiomyosarcoma	46 (F)	4	PDL1+	pembrolizumab	0	Passed away prior to first combination dose
4	IV	Pleomorphic Sarcoma	75 (M)	5	20%	pembrolizumab	4	Disease progression
5	IV	Uterine Sarcoma	63 (F)	4	PDL1-	nivolumab	10	Best response of partial response
6	IV	Osteosarcoma	16 (M)	10	PDL1-	pembrolizumab	0	Passed away prior to first combination dose
7	IV	Mucinous Adenocarcinoma	64 (F)	4	25%	pembrolizumab	2	Disease progression
8	IV	Sarcoma, NOS	59 (M)	7	PDL1-	pembrolizumab	0	Passed away prior to first combination dose

Table 1. Patient Characteristics

CONCLUSIONS

- SNK01 combined with ICIs appears to be safe and have some clinical activity against heavily pre-treated advanced sarcomas independent of PD-L1 status and warrants further investigation.

Efficacy/Safety

- As of August 2022, Case #2 has been on pembrolizumab + SNK01 for 34 months (receiving 36 doses) and has achieved a sustained remission with no evidence of disease without any toxicity.
- Case #1 had PR but died of complications from surgery.
- Case #5 had a best response of PR.
- No Grade 2 or 3 toxicities reported in patients who received ICI + SNK01.

Case #2

Diagnosed 2017

Disease included abdomen and pelvis with extensive disease in abdominal/pelvic lymph nodes and liver

TUMOR is PD-L1 NEGATIVE

Failed Therapies
1. doxorubicin, cytoxan, and vincristine
2. etoposide and ifosfamide
3. aldoxorubicin and ifosfamide
4. irinotecan, vincristine, and Temodar®
5. Yondelis® and Keytruda®

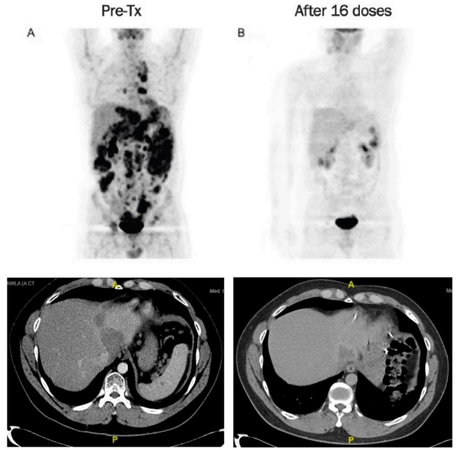


Figure 5 – 6. Case #2 Imaging

Case #1

Diagnosed 2019

Disease included lung, abdomen and pelvis with extensive liver disease. Non-healing large pelvic wound due to tumor progression.

<10% PD-L1+, Microsatellite stable

Failed Therapies
1. Opdivo®
2. Ibrance®
3. panzopanib

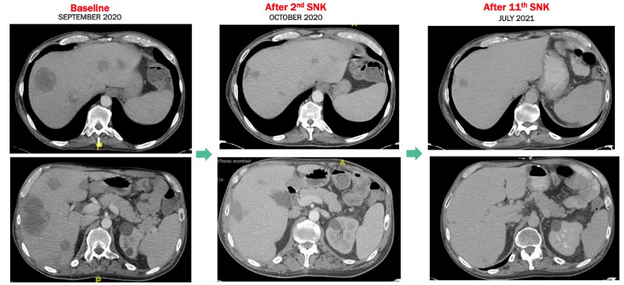


Figure 7 . Case #1 Imaging

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