Abstract #582

QUILT-88: NANT Pancreatic Cancer Vaccine in 3rd, 4th , & 5th Line Advanced Disease

Open-label, randomized, comparative phase 2 study of combination immunotherapy plus standard-of-care chemotherapy and SBRT versus standard-of-care chemotherapy for the treatment of locally advanced or metastatic pancreatic cancer

Tara Seery[1], Chaitali Nangia[1], Heide McKean[2] Leonard Sender[3], Sandeep Reddy[3], Patrick Soon-Shiong[3]

[1]Hoag Cancer Center, Newport Beach, CA; [2] Avera Cancer Institute, Sioux Falls, SD [3] ImmunityBio Inc. Culver City, CA.

NCT04390399

BACKGROUND

Pancreatic cancer will claim an estimated 47,050 lives in the USA in 2020, with an expected 5 year survival of 10%. In patients with advanced disease (>3rd line) the median overall survival is 3 months. Thus there is an urgent need for novel treatment options in this disease. We hypothesize that effective response against pancreatic cancer requires a coordinated approach that orchestrates both the innate and adaptive immune system. We further hypothesize that by orchestrating the activation of the entire immune system, we could accomplish immunogenic cell death with durable responses in this disease. We describe a novel combination immunotherapy protocol of low-dose chemo-radiation, cytokine-induced NK and T cell activation via N-803 (Anktiva, IL-15 cytokine fusion protein), and off-the-shelf PDL1-targeted high-affinity NK cell (PDL1 t-haNK) infusion.

STUDY EXPERIMENTAL TREATMENT

Days 1 and 15, every 4 weeks:
- Nab-paclitaxel
- Gemcitabine

Days 1–5 and 15–19, every 4 weeks:
- Cyclophosphamide

Days 1, 8, 15, and 22; for first cycle only:
- SBRT (not to exceed 8 Gy, exact dose to be determined by the radiation oncologist)

Day 8, every 4 weeks:
- Aldoxorubicin HCl
- N-803 (15 µg/kg SC)

Days 1, 8, and 15; every 4 weeks:
- PD-L1 t-haNK (~2 × 109 cells/dose IV)

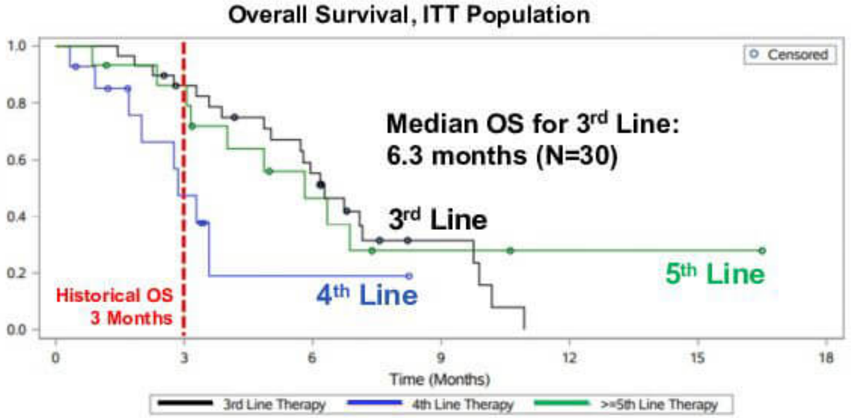
STUDY DESIGN

3rd, 4th, & 5th Line Pancreatic Cancer

Locally Advanced or Metastatic Pancreatic Cancer Treated with at Least 2 Lines of Therapy

Experimental Arm
Nab-paclitaxel + Gemcitabine + Cyclophosphamide
N-803
Aldoxorubicin
PD-L1 t-haNK*

RESULTS



Median OS for ITT (≥ 3rd, 4th and 5th line): 5.8 months (N=61)

TABLE 1

Demographics	N / (%)
Age	62 (24, 78)
Age≥65	39%
M:F	62/38
ECOG≥2	6%
Metastasis	93%

TABLE 2

Any grade AE >10%	%
Chills	53
Pyrexia	52
injection site rxn	45
fatigue	40
anemia	53
neutropenia	23
thrombocytopenia	17
vomiting	32
nausea	27
stomatitis	12
decreased appetite	17
infusion rxn	13
dyspnea	12

TABLES 1,2,3: **Demographics, Treatment related Adverse Events (AEs), TR G3+AEs:** Median 3 cycles (1,18), 95% with any grade AE, 8% TR SAE

TABLE 3

Grade ≥3 TR AEs	%
anemia	47
neutropenia	23
thrombocytopenia	13
fatigue	7

KEY FINDINGS

- Nant Cancer Vaccine (NCV) **more than doubled median OS** versus historical OS (Manax ASCO GI 2019) of 3 months after >2L
- In QUILT 88 median OS in **3rd line** subjects (n=30) was **6.3 months** (95% CI: 5.0, 9.8)
- Overall survival for ITT population (N=61) of **3rd, 4th and 5th line is 5.8 months** (95% CI: 3.9, 6.9)
- Treatment related (TR) SAE's were uncommon (8%), no TR deaths were reported
- All treatments were performed as outpatient

CONTACT

info@immunitybio.com 310-883-1300 Main

REFERENCES

1. Fabian KP, Padget MR, Donahue RN, Solocinski K, Robbins Y, Allen CT, Lee JH, Rabizadeh S, Soon-Shiong P, Schlom J, Hodge JW. PD-L1 targeting high-affinity NK (t-haNK) cells induce direct antitumor effects and target suppressive MDSC populations. J Immunother Cancer. 2020 May;8(1):e000450. doi: 10.1136/jitc-2019-000450. PMID: 32439799; PMCID: PMC7247398.
2. Lee MY, Robbins Y, Sievers C, *et al.* Chimeric antigen receptor engineered NK cellular immunotherapy overcomes the selection of T-cell escape variant cancer cells. *Journal for ImmunoTherapy of Cancer* 2021;9:e002128. doi: 10.1136/jitc-2020-002128
3. Wolfson B, Franks SE, Hodge JW. Stay on Target: Reengaging Cancer Vaccines in Combination Immunotherapy. Vaccines (Basel). 2021 May 15;9(5):509. doi: 10.3390/vaccines9050509. PMID: 34063388; PMCID: PMC8156017.
4. Chu Y, Nayyar G, Jiang S, Rosenblum JM, Soon-Shiong P, Safrit JT, Lee DA, Cairo MS. Combinatorial immunotherapy of N-803 (IL-15 superagonist) and dinutuximab with ex vivo expanded natural killer cells significantly enhances in vitro cytotoxicity against GD2+ pediatric solid tumors and in vivo survival of xenografted immunodeficient NSG mice. J Immunother Cancer. 2021 Jul;9(7):e002267. doi: 10.1136/jitc-2020-002267. PMID: 34244307; PMCID: PMC8268924.

© 2022 ImmunityBio

ASCO GI Meeting
January 2022