Early-phase trial demonstrates the safety of neoadjuvant PD-1 blockade with preserved QOL when administered to patients with non-metastatic high-risk ccRCC.

Data suggest a proportion of patients may experience an immunologic response to treatment despite small impact on tumor volume with a short course of therapy.

METHODS

- Prospective, open-label, single-arm early-phase trial (NCT02575222) evaluating primary outcome of safety & tolerability of neoadjuvant nivolumab for non-metastatic high-risk RCC.
- T2a-T4N0M0
- Nivolumab (3 mg/kg) on day 1 of each of 3 consecutive 14-day cycles of therapy for a total of 3 doses followed by surgery within 7 days of completion of cycle 3.
- Endpoints:
  - Primary: CTCAE v4.03, Clavien
  - Secondary: RECIST v1.1, IRC, QOL (NCCN-FACT FKSI-19), MFS, OS
  - Exploratory: immune-related pathologic response (irPR)

Figure 1. % change in long axis tumor diameter after treatment with neoadjuvant nivolumab for 15 ccRCC patients completing restaging imaging prior to surgery. One (6.7%) patient (R15) demonstrated features of an irPR as shown in Figure 3. All patients had stable disease by radiographic criteria.

Figure 2. Change in patient quality of life over time measured by the NCCN-FACT FKSI-19 questionnaire (means with 95% confidence intervals).

RESULTS

- 16 ccRCC, 1 papillary RCC
- 15 cT3a, 2 cT3b, all cN0
- Grade 3 AEs (non-4Ss): 2/17 (11.8%)
- Neither attributable to nivolumab
- Any AE: 1/17 (5.8%)
- No delay in surgery or Clavien grade ≥III postoperative complications
- 24.7 months median follow-up
- 2-year MFS 85.1%, OS 100%

REFERENCES


DEFINITIONS

- PD-1: Programmed death protein 1
- PD-L1: Programmed death ligand 1
- PD-L2: Programmed death ligand 2
- irPR: Immune-related pathologic response
- AE: Adverse event
- MFS: Metastasis-free survival
- OS: Overall survival
- CTCAE: Common Terminology Criteria for Adverse Events
- Clavien: Perioperative clinical assessment of Clavien-Dindo severity of adverse events