# Treatment Plan

Patients will be assigned to a treatment arm based on their baseline renal function; i.e., patients eligible for Cisplatin (creatinine clearance > 50 ml/min) will be randomized to Arm A or B; patients ineligible for Cisplatin (creatinine clearance > 15 and ≤ 50 ml/min) will be on Arm C.

1 cycle = 14 days; repeat for 4 cycles

- **Arm A**: neoadjuvant aMVAC + MEDI4736 (1500 mg IV over 60 mins) prior to radial nephroureterectomy with template lymph node dissection (RNU)
- **Arm B**: neoadjuvant aMVAC prior to radical nephroureterectomy with template lymph node dissection (RNU)

**NOTE:**
- Cisplatin is 70 mg/m² over at least 2 hours or 35 mg/m² on days 1 and 2
- aMVAC to be administered per institutional standard; time window is -2/+4 days

1 cycle = 21 days; repeat for 4 cycles

- **Arm C**: neoadjuvant MEDI4736 (1500 mg) + Gemcitabine (1000 mg/m² IV over 30 mins) prior to radical nephroureterectomy

**Surgery details** (identical on all arms) - patients with continued lack of radiographic presence of metastatic or unresectable disease following neoadjuvant chemotherapy will proceed to nephroureterectomy and lymph node dissection.

- The surgery must take place 21-60 days from completion of Step 1 neoadjuvant systemic therapy
- The surgical approach is left at the surgeon's discretion as long as protocol criteria are met.

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**Patient Population**

See Section 3.0 for Complete Eligibility Details

- Age ≥ 18 years, adequate lab values, body weight of > 30 kg, life expectancy of ≥ 12 weeks
- Must have diagnosis of high grade upper tract urothelial carcinoma proven by biopsy within 60 days prior to registration with either:
  - Upper urinary tract mass on cross-sectional imaging
  - Tumor directly visualized during upper urinary tract endoscopy before referral to medical oncology
- Must not have any component of small cell carcinoma
- Must have no evidence of metastatic disease or clinically enlarged lymph nodes on imaging required within 28 days prior to registration (see protocol for details)
- Must not have another active (or within 2 years) second malignancy other than those permitted per protocol
- Must not have any uncontrolled illness per protocol
- Must not have received prior radiation therapy to ≥ 25% of the bone marrow for other diseases, or prior systemic anthracycline therapy
- Must not have an active autoimmune disease requiring immunosuppressive therapy within 2 years prior to registration or a history of inflammatory bowel disease, systemic lupus erythematosus, Sarcoidosis syndrome, Wegener syndrome or immune-related pneumonitis or interstitial lung disease (see protocol)
- Must not be on or have used immune suppressive medication within 14 days prior to the first dose of MEDI4736 (see protocol for exceptions)
- Must not have a concomitant primary urothelial carcinoma of the bladder and/or urethra
- Must not have prior history of muscle-invasive urothelial carcinoma with/without systemic chemotherapy (T2-4a and/or N1) within 2 years prior to registration
- NYHA class 2B or better (if cardiac history/symptoms)
- No major surgery within 28 days of registration
- No history of allogeneic organ transplantation

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**Patient Enrollment**
All Sites: Oncology Patient Enrollment Network (OPEN) [https://open.ctsu.org](https://open.ctsu.org)

**Protocol Information**
ECOG-ACRIN Operations-Boston: 857-504-2900, [http://ecog-acrin.org](http://ecog-acrin.org) (Member Login)

Please Enroll Your Eligible Patients!
EA8192 Available Through ECOG-ACRIN Cancer Research Group

Phase II/III Trial of MEDI4736 (Durvalumab) and Chemotherapy for Patients with High Grade Upper Tract Urothelial Cancer Prior to Nephroureterectomy

Schema

Registration/Randomization

Cisplatin eligible cohort (N=220) (CrCl > 50)

Stratification Factors:
- Sessile architecture present vs absent
- Ureter vs renal pelvis vs multi local tumor location

Phase III

Arm A
aMVAC + Durvalumab

Surgery → Follow up

Phase III

Arm B
aMVAC

Surgery

Cisplatin ineligible cohort (N=29)

Phase II

Arm C
Gemcitabine + Durvalumab

Surgery → Follow up

1. SCC biopsy and upper urinary tract mass on cross sectional imaging or directly visualized during upper tract endoscopy.
2. Cisplatin-Eligible (CrCl > 50) will be randomized between Arms A and B; Cisplatin-Eligible (CrCl > 15 & ≤50, hearing loss grade ≥3, neuropathy grade ≥2, and/or ECOG PS=2) will be assigned to Arm C. See Section 3.2 for full eligibility criteria.
3. aMVAC = accelerated methotrexate, vinblastine, doxorubicin and cisplatin with pegfilgrastim for 4 cycles; each cycle is 14 days.
4. Durvalumab: 1500 mg IV every 28 days in Arm A, 1500 mg IV every 21 days in Arm C.
5. Surgery = Radical nephroureterectomy and lymph node dissection (RNU).
6. Follow up every 3-6 months for 5 years after surgery.