BLADDER CANCER

The selection, dosing, and administration of anti-cancer agents and the management of associated toxicities are complex. Drug dose modifications and schedule and initiation of supportive care interventions are often necessary because of expected toxicities and because of individual patient variability, prior treatment, and comorbidities. Thus, the optimal delivery of anti-cancer agents requires a healthcare delivery team experienced in the use of such agents and the management of associated toxicities in patients with cancer. The chemotherapy regimens below may include both FDA-approved and unapproved uses/agents and are provided as references only to the latest treatment strategies. Clinicians must choose and verify treatment options based on the individual patient.

General treatment notes:
• NCCN recommends considering neoadjuvant and adjuvant chemotherapy based on risk factors and nodal status.1
• No standard second-line therapy exists for metastatic bladder cancer; enrollment in clinical trials recommended.

REGIMEN DOsing

First-Line Chemotherapy (Neoadjuvant, Adjuvant, and Metastatic)

Gemcitabine (Gemzar) + cisplatin (Platinol; CDDP)1,2

**Days 1, 8 and 15:** Gemcitabine 1,000mg/m² IV over 30–60 min, plus
Day 2: Gemcitabine 1,000mg/m² IV over 30–60 min + cisplatin 70mg/m².
Repeat cycle every 4 weeks.
* Standard first-line regimen for most patients; similar ORR, PFS and overall survival as MVAC, but more favorable safety profile.

MVAC (methotrexate [MTX]) + vinblastine [Velban] + doxorubicin [Adriamycin]1,2

**Days 1, 15 and 22:** Methotrexate 30mg/m² IV, plus
Days 2, 15 and 22: Vinblastine 3mg/m² IV, plus
Day 2: Doxorubicin 30mg/m² IV and cisplatin 70mg/m² IV as a 1–8 hr infusion.
Repeat cycle every 4 weeks.

CMV (cisplatin + methotrexate + vinblastine)3

**Day 1:** Methotrexate 30mg/m² IV bolus + vinblastine 4mg/m² IV bolus, followed by
Day 2: Cisplatin 100mg/m² IV infusion before hydration; followed by
folinic acid 15mg IV or orally after hydration, administered 24 hrs after methotrexate every 6 hrs for 4 doses, followed by
Day 8: Methotrexate 30mg/m² IV bolus + vinblastine 4mg/m² IV bolus, followed by
Day 9: Cisplatin 15mg IV or orally every 6 hrs for 4 doses.
Repeat cycle 3 weeks for 3 cycles.

Renal Impairment or Comorbidities

Split dose cisplatin1

**Days 1 and 2 OR Days 1 and 8:** Cisplatin 35mg/m².
* For patients with borderline/minimal renal dysfunction.

Doxorubicin + gemcitabine and paclitaxel (Taxol) + carboplatin (Paraplatin)4

Sequential doublets of doxorubicin 50mg/m² IV + gemcitabine 2,000mg/m² IV every other week for 5 cycles followed by
Paclitaxel 65mg/m² IV + carboplatin AUC=1.7mg/mL/min IV weekly for 12 cycles.

Second-Line Chemotherapy (Metastatic)

Palliative single-agent treatment1

Bleomycin (Blenoxane)
Carboplatin
Docetaxel (Taxotere)
Doxorubicin
Gemcitabine
Methotrexate
Paclitaxel
Pemetrexed (Almita)
Vinblastine

First-Line Radiosensitizing Chemotherapy (Concurrent with radiotherapy for selective bladder preservation)

Cisplatin ± 5-FU ± paclitaxel1,5

**Age ≥70 and Karnofsky performance status (KPS) <80**
Days 1 and 8: Cisplatin 35mg/m² IV + 5-FU 2,000mg/m² IV + leucovorin 300mg/m² IV as a continuous infusion for 24 hrs.
Repeat every 3 weeks for 3 cycles.

**Age <70 and Karnofsky performance status (KPS) ≥80**
Days 1 and 8: Paclitaxel 70mg/m² IV over 1 hr, plus
Days 2 and 9: Cisplatin 35mg/m² IV + 5-FU 2,000mg/m² IV + leucovorin 300mg/m² IV as a continuous infusion for 24 hrs.
Repeat every 3 weeks for 3 cycles.

Mitomycin C (Mutamycin; MTC) + 5-FU1,6,7

**Day 1 of radiotherapy:** Mitomycin 12mg/m² IV, plus
Week 1 (fi1–5) and Week 4 (fi16–20) of radiotherapy: 5-FU 500mg/m² continuous IV infusion (10 days total).

References


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References


