# Avelumab First-Line Maintenance Therapy: Managing Patients With Advanced Urothelial Carcinoma

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**BACKGROUND:** The phase 3 of JAVELIN Bladder 100 trial demonstrated that avelumab first-line (1L) maintenance in addition to best supportive care significantly prolonged overall survival compared to best supportive care alone. It is now the standard of care for platinum-eligible patients with locally advanced or metastatic urothelial carcinoma that has not progressed with 1L platinum-containing chemotherapy.

**OBJECTIVES:** This article provides considerations for oncology nurses to effectively implement avelumab 1L maintenance treatment in the clinical setting.

**METHODS:** This article reviews clinical evidence and implications for oncology nurses caring for patients receiving avelumab 1L maintenance treatment.

**FINDINGS:** Oncology nurses can provide comprehensive care for patients with advanced urothelial carcinoma and ensure the safe and appropriate use of avelumab 1L maintenance treatment by educating patients and caregivers, ensuring correct administration, and promptly recognizing and managing immune-related adverse events.

**KEYWORDS**
avelumab first-line maintenance; bladder cancer; immune-related adverse events

**DIGITAL OBJECT IDENTIFIER**
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**BLADDER CANCER IS THE 10TH MOST COMMON CANCER** worldwide (Sung et al., 2021), and U.S. patients with metastatic disease have a five-year overall survival (OS) rate of less than 8% (National Cancer Institute, n.d.). Urothelial carcinoma (UC) is the most common type of bladder cancer (American Cancer Society, 2019; National Cancer Institute, 2022). For patients with unresectable locally advanced or metastatic UC (generally termed advanced UC), platinum-containing chemotherapy followed by avelumab maintenance is the standard-of-care therapy (National Comprehensive Cancer Network [NCCN], 2022a; Powles et al., 2022; Witjes et al., 2022).

Avelumab is an anti–programmed cell death-ligand 1 (PD-L1) antibody. Like other immune checkpoint inhibitors (ICIs), avelumab was designed to help the body's immune system recognize and eliminate cancer cells (Grivas et al., 2019; Siefker-Radtke & Curti, 2018). Interactions between PD-L1 and programmed cell death protein 1 (PD-1) contribute to tumor cell survival by suppressing T-cell activity (Siefker-Radtke & Curti, 2018). By inhibiting PD-L1–PD-1 interactions, avelumab activates T cells and stimulates immune responses against tumor cells (Grivas et al., 2021; Siefker-Radtke & Curti, 2018).

Maintenance treatment is a strategy to maintain or improve the effects of chemotherapy, thereby preventing tumors from regrowing and extending OS (Grivas et al., 2019). Patients are first treated with a specified number of chemotherapy cycles (termed induction chemotherapy), and patients who do not experience disease progression are switched to a therapy with a different mode of action, which serves as an extension of first-line (1L) therapy (Grivas et al., 2019; Powles, Park, et al., 2020). Avelumab was approved in the United States in June 2020 as 1L maintenance treatment for patients with advanced UC that has not progressed with 1L platinum-containing chemotherapy; it was subsequently approved in multiple other countries for the same indication (EMD Serono, 2021, 2022; Pfizer, 2021; U.S. Food and Drug Administration, 2020). According to NCCN (2022a) treatment guidelines for bladder cancer, avelumab is the only ICI with a category 1 recommendation (i.e., based on high-level evidence with uniform consensus that the intervention is appropriate) for maintenance therapy in patients with advanced UC that has not progressed with 1L

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