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# Organ-Preservation with Concurrent Immunotherapy and Radiotherapy in Bladder Cancer

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#### **Abstract**

#### Objectives:

To assess acute and chronic toxicity in patients treated with Immunotherapy (IT) and External Radiotherapy (ERT) and compare them with standard bladder preservation treatment (CDDP and ERT). As secondary objectives we will assess local and distant relapse.

#### Methods:

Retrospective clinical study of 13 patients with muscle invasive bladder cancer with a mean age of 67.8 years, ECOG 0 84.6% and stage II-III 92.3%. They were treated with IT (durvalumab plus tremelimumab, a total of 3 cycles) and two weeks later, treatment with concurrent IT-ERT, using helical tomotherapy and IGRT. The ERT schedule used was 46 Gy in the lesser pelvis and 64-66 Gy in the bladder.

### Results:

After a median follow-up of 19.5 months, 10 (76.9%) patients are still alive and 3 (23.1%) died, only 1 (7.7%) of oncological cause. Regarding tolerability, 23 acute toxicity events were experienced with the most relevant being colitis (6;  $\diamondsuit$ 26.1%O) and dysuria (6;  $\diamondsuit$ 26.1%O) and only 4 (17.4%) were grade 3. Chronic toxicity events were recorded with 4 events and 1 (25%) was grade 3. Median progression-free survival (PFS) is 15.6 months. Median overall survival (OS) is 22.5 months.

## Conclusion(s):

After reviewing the literature we can state that treatment of muscle invasive bladder cancer with IT and ERT has similar tolerability compared to standard treatment.