

# TREATMENT OPTIONS FOR INVASIVE BLADDER CANCER

by: Gil Lederman MD

Historically, surgery has been the preferred option for patients with invasive bladder cancer. There are a variety of bladder cancers including the superficial which are treated superficially. A more serious condition exists when muscle invasion takes place. Muscle invasion denotes a more serious medical condition.

While surgery has been used for the more invasive category, new options developed over the last several decades have shown great benefit for the use of combined chemotherapy and radiation or other combined modality treatments in an attempt to boost results or maintain the use of the bladder.

In light of the controversies, a new study has been presented by the Canada Clinical Trials Group and authored by Coppin et al in [The Journal of Clinical Oncology](#). In this study, Cisplatin was introduced as it is considered one of the most active chemotherapeutic agents for transitional cell carcinoma or cancers that have metastasized or spread. Drugs developed and proven successful for treatment of metastatic cancer are often implemented in potentially curative therapy at later dates.

Also, since chemotherapy and radiation are so commonly used, it is beneficial to add Cisplatin because it is a known radiation sensitizer. The basis of the current Cisplatin-based study is an earlier protocol from Canada used in Vancouver between 1979 and 1984. That earlier study administered Cisplatin every two weeks for three cycles during pre-operative or definitive radiation in 37 patients. Sixty-eight percent of those patients had a clinical complete response meaning no evidence of disease and the three year survival rate was 61% - better than anticipated.

In light of good preliminary results, a randomized study was undertaken by the National Cancer Institute of Canada to determine whether Cisplatin improves outcome.

Ninety-nine patients with locally advanced bladder carcinoma entered into this study. Patients and their doctors chose to have definitive radiation (meaning that would be their primary treatment) or pre-operative radiation (meaning radiation would precede surgery). Patients were randomly allocated to have either Cisplatin every two weeks for three cycles with radiation or to receive radiation with no chemotherapy. Follow-up at the time of publication is 6-1/2 years.

While distant metastases did occur at the same rate in both studies, more than one-half the patients who did not have chemotherapy with radiation had recurrences in the pelvis first compared to less than one-third in the Cisplatin-treated group. The exact number of pelvic occurrences as first site was 25 of 48 in the control group compared to 15 of 51 in the Cisplatin-treated group. Statistical analysis showed this was truly different.

Notes about the study include the fact that in the control group no patient received chemotherapy before relapse. All patients received radiation therapy that were to receive radiation therapy as planned. Complications requiring hospitalization were said to be "infrequent." All patients planning to undergo surgery did so except for three who developed metastases before the time of surgery.

Twenty-four of 51 patients who were evaluated after radiation had a complete clinical response - meaning no evidence of cancer. Of 44 bladders removed, 21 had no cancer detectable or showed non-invasive cancer only. At three years, 47% of patients were alive in the

Cisplatin/radiation group - the group that had been treated with radiation as radical treatment, while 33% of patients were alive in the group that had surgery as their radical or curative therapy.

The authors note, "There have been fewer failures of any type in the Cisplatin arm than in the control arm (29 of 51 versus 36 of 48)." While these numbers may cause some distress, it should be noted that the majority of patients had "locally advanced disease with palpable extravesicle mass or pelvic fixation." This is very advanced disease meaning the cancer has spread beyond the bladder to the surrounding structures.

This study points out the potential treatment options and appeal of a non-invasive treatment. Ongoing studies will continue to determine the best treatment for patients with advanced bladder carcinoma.

The authors noted, "Improved local control might be reflected in bladder preservation for the 52 patients who elected to receive the definitive radiation plan. The chance of bladder preservation at death or last follow-up evaluation after definitive radiation was 70% of the 27 Cisplatin patients compared to 36% of the 25 controls."

Also, what is the likelihood of living one's life with the bladder intact? The authors state that "Five years from definitive radiation with Cisplatin, 7 of 8 patients had functional bladders compared with 3 of 7 treated with radiation alone."

Our special program entitled fractionated stereotactic radiosurgery offers great appeal in the treatment of new or recurrent bladder cancers. For new cases, we are able to direct radiation more precisely to hit the target and try to avoid harm to healthy tissues. For recurrent bladder cancer, body radiosurgery offers a highly accurate and highly effective local non-invasive method of control. It's done with sophisticated technology, high-dose per fraction treatment. We can attack most any site in the abdomen, pelvis, and chest – even lymph node sites. Our experts are available to evaluate each case individually.