

## Prostate Cancer: Clinical Study Demonstrates Superior Efficacy of Docetaxel Chemotherapy

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The chemotherapy drug docetaxel currently offers the best treatment for androgen-independent prostate cancer. That is the result of a now published clinical trial that compared the efficacy of the two most widely used chemotherapy drugs. When using docetaxel, the risk of disease progression was cut by more than 50% than when using the next-best chemotherapy drug.

The use of chemotherapy to treat prostate cancer has rapidly grown in importance over recent years, with several comprehensive clinical trials helping to drive forward progress. In two of these trials, the chemotherapy drug docetaxel offered patients a significantly improved prognosis. However, other clinical trials indicated that the drug vinorelbine, which like docetaxel acts on cellular microtubuli, also produces impressive results and it is often used as an alternative to docetaxel.

The Medical University of Vienna has now carried out the world's first direct comparison of both drugs, giving doctors valuable support in choosing the appropriate treatment for their patients.

### TWO DRUGS – ONE CLEAR RESULT

The trial clearly demonstrated the superior efficacy of docetaxel by using 40 patients to directly compare the drug against vinorelbine. The initiator and coordinator of the study, Prof. Michael Krainer, oncologist at the Department of Internal Medicine I, Medical University of Vienna, describes the outcome of the trial: "The median time to disease progression in all 20 patients we treated with docetaxel was more than three times longer than in the patients given vinorelbine." Cancerous tumours in patients from the first group did not progress for an average period of 14.5 months. In contrast, the median time to first disease progression in the patients treated with vinorelbine was only 4.4 months.

Values for "prostate-specific antigen" (PSA), an established tumour marker that indicates when a cancer is progressing, were similarly conclusive. While 62.5% of the patients treated with docetaxel exhibited an over 50% reduction in PSA, a reduction of only 11.1% was detected among those treated with vinorelbine. This is a clear indication that docetaxel restricts tumour growth.

Even the team working on the study were surprised at the scale of the reduction in PSA produced by docetaxel. Prof. Krainer explains: "We used a much lower dose than that used during the TAX 327 study, which was the first to demonstrate the efficacy of docetaxel in a phase III trial, and we also chose not to boost the efficacy of the chemotherapy drug with cortisone premedication. Nevertheless, we still achieved a similar effect on PSA." Prof. Krainer believes this effect could be due to the lower toxicity which was produced by using a lower dose and which helped improve the efficacy of the therapy regimen.

Cancer specialist Dr. William K. Oh from the Dana-Farber Cancer Institute at Harvard Medical School also highlights this finding in his editorial comment attached to the publication. In his opinion, the therapy regimen used in Vienna offers a good alternative for patients in whom steroids are contraindicated. He also points out that the study demonstrated a 28.6% reduction of PSA in patients who had stopped responding to docetaxel and were instead using vinorelbine as second line chemotherapy, indicating that this drug will continue to play an important role in cancer treatment.

### SMALL STUDY – BIG ISSUE

This open-label, randomized phase II trial involved a total of 40 chemotherapy-naïve patients with histologically proven androgen-independent prostate cancer. The patients were divided into two groups that were given 25mg/m<sup>2</sup> weekly doses of docetaxel or vinorelbine. Referring to the scope of the trial, Prof. Krainer states: "Of course, smaller studies such as this phase II trial cannot produce definitive conclusions. These can only be generated by major phase III trials conducted at several centres. However, it is extremely important to establish in advance which of the treatments currently in use should be tested in such large-scale and expensive trials. Our impressive findings on docetaxel provide clear data for making this decision."

Original publication: A Prospective, Open Label, Randomized Phase II Trial of Weekly Docetaxel Versus Weekly Vinorelbine as First Line Chemotherapy in Patients with Androgen Independent Prostate Cancer. J. Urol., DOI:10-1016/[j.juro.2007.01.148](https://doi.org/10.1016/j.juro.2007.01.148)

Available to download at: [www.jurology.com/article/PIIS0022534707002868/abstract](http://www.jurology.com/article/PIIS0022534707002868/abstract)

The primary mission of the Medical University of Vienna -autonomous since 1 January 2004 - is to serve research and education in the broadest sense.

It seeks advances in medical science to cure and relieve the symptoms of illnesses, maintain health, and foster social prosperity in a thriving environment.

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