

# Use of androgen deprivation therapy increases fracture risk among prostate cancer patients

November 9 2010

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Men with history of fracture and comorbidities are at an increased risk of fracture after long-term use of androgen deprivation therapy, and initiating this therapy should be carefully considered in older men with localized prostate cancer.

In addition, the longer duration of gonadotropin-releasing hormone (Gn-RH) use and history of orchiectomy (removal of the testicles to stop testosterone production, which prostate cancer needs to continue to grow) are also associated with an increased risk of fracture among men with prostate cancer.

These study results were presented at the Ninth Annual AACR Frontiers in Cancer Prevention Research Conference, held here Nov. 7-10, 2010.

Grace Lu-Yao, Ph.D., professor of medicine at The Cancer Institute of New Jersey and UMDNJ-Robert Wood Johnson Medical School, and colleagues analyzed data in the Surveillance, Epidemiology, and End Results-Medicare program to estimate fracture risk among more than 46,500 men aged 66 years and older who were diagnosed with localized prostate cancer.

Participants in this study survived at least five years after diagnosis and received long-term [androgen deprivation therapy](#). Extended use of androgen deprivation therapy is common among older men.

Older men who have more comorbidities are usually prescribed androgen deprivation therapy as their primary treatment because they are not suitable candidates for radical [prostatectomy](#) or [radiation therapy](#), according to Lu-Yao. However, pre-existing conditions are often associated with higher risk of fracture.

"Our results showed that 48 percent of [prostate cancer](#) patients who used androgen deprivation therapy received more than 24 months of Gn-RH or orchiectomy," said Lu-Yao.

Men treated with androgen deprivation therapy had a 20 percent increase in the risk of a first fracture and a 57 percent increased risk of a second fracture after the first two years of treatment. Older age, higher comorbidity, history of fracture and stroke were associated with increased fracture risk.

"Treating men who have pre-existing conditions with longer duration of androgen deprivation therapy exacerbates their risk of fracture, and becomes more pronounced over time" said Lu-Yao. "Careful evaluation of the patient's risk of fracture, while initiating treatment, is important because fracture has a strong impact on quality of life and mortality."

Further, men who were 75 years of age or older and received Gn-RH for more than two years or longer were associated with a 3.63 times risk of having fracture, compared with those aged 66 to 74 who received androgen deprivation therapy less than two years. In addition, men who underwent orchiectomy had a 75 percent higher risk of a hospitalized fracture.

Provided by American Association for Cancer Research

Citation: Use of androgen deprivation therapy increases fracture risk among prostate cancer

patients (2010, November 9) retrieved 21 November 2023 from  
<https://medicalxpress.com/news/2010-11-androgen-deprivation-therapy-fracture-prostate.html>

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