

## FEATURE ARTICLE

# Hormone-Refractory Prostate Cancer: A Shifting Paradigm in Treatment

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Prostate cancer, the most common male cancer, affects one in eight American men. Risk factors for the disease include increased age, race, and family history of prostate cancer. To date, surgery, radiation, and hormonal therapy have been the mainstays of treatment. In the past, chemotherapy served only a palliative role for men with prostate cancer and failed to produce a survival advantage or any significant measurable disease response. However, for the first time, docetaxel-based regimens have demonstrated improved survival in men with hormone-refractory prostate cancer in two different, large, phase III studies. Additionally, a number of novel agents are being developed with the hope that treatment for men with hormone-refractory prostate cancer will be improved. Oncology nurses provide critical symptom management strategies as well as education to men with prostate cancer and their partners. Therefore, maintaining current state of the knowledge about best practices and treatment for prostate cancer is crucial. This, in turn, directs efforts to educate patients and family members about treatments and management of side effects.

**P**rostate cancer is the most common male cancer and represents a major health issue in the United States. It affects one in eight American men and is the second-leading cause of cancer death after lung cancer. In 2006, approximately 234,460 new cases of prostate cancer will be diagnosed and 27,350 deaths are expected. About a third of newly diagnosed cases are considered locally advanced (American Cancer Society, 2006). At least 30% of men who are treated with local measures such as radiation therapy will relapse (Han et al., 2003; Hanks et al., 1994). Although metastatic prostate cancer usually responds well to androgen-deprivation therapy, androgen-independent (hormone refractory) prostate cancer develops within one to three years (Han et al.).

## Risk Factors

Risk factors associated with prostate cancer include age, geographic location, race, family history or genetic mutations, hormone levels, type of employment, and failure to seek regular screening (see Figure 1). Age appears to be the most important risk factor for developing prostate cancer. As men get older, their risk of developing the disease increases. Very few men in their 20s and 30s are diagnosed with prostate cancer, but, by age 50, nearly 33% of all American men have small prostate tumors. The percentage increases to 75% by age 80 and to about 90% by age 90 (Bostwick et al., 2004). However, the percentages are misleading. Not all men diagnosed with prostate cancer need treatment for the disease. Cancers that require treatment depend on stage at diagnosis, Gleason score, and other comorbidities.

## At a Glance

- ◆ Prostate cancer, the most common male cancer, often is treatable with hormones but usually becomes androgen independent.
- ◆ Two large cooperative group trials demonstrated that docetaxel-based regimens prolong survival in men with hormone-refractory prostate cancer.
- ◆ Many other targeted agents are in development and show promise in the treatment of advanced prostate cancer.

Male relatives of men with prostate cancer have an increased risk of developing the disease. The risk of prostate cancer doubles for men with a first-degree affected relative and quadruples with an additional affected relative, suggesting that a hereditary component exists for some prostate cancers. In addition, BRCA1 and

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