Men with prostate cancer may be at increased risk for metabolic syndrome, cardiovascular disease, and diabetes from androgen deprivation therapy (ADT). This article reviews current literature related to potential adverse effects of using ADT for localized prostate cancer. The use of gonadotropin-releasing hormone agonist therapy for prostate cancer in the early 1990s compared to the late 1990s is addressed. Oncology nurses play an important role in educating men about strategies for preventing and reducing side effects of cancer treatment. Therefore, having knowledge regarding the impact of hormone therapy on men’s health will be important to prostate cancer survivors.

**At a Glance**

- Localized prostate cancer increasingly is managed with androgen deprivation therapy.
- Patients who receive hormone therapy for prostate cancer may have an increased risk of developing metabolic syndrome, cardiovascular disease, and diabetes early in the treatment period.
- Educating men about potential adverse effects of using hormone therapy for prostate cancer is vital.

Prostate cancer is the most frequently diagnosed malignancy in men. In the United States, an estimated 186,320 men will be diagnosed with this type of cancer in 2008. The vast majority of these men are older than 64. Incidence rates are significantly higher for African Americans compared to whites (Ries, Melbert, Krapcho, Stinchcomb, Howlader, Horner, et al., 2007). Men with a strong family history (e.g., with two or more first-degree relatives) of prostate cancer are considered high risk (Bratt, 2002). Approximately 86% of men with prostate cancer are diagnosed with localized disease; those men can expect a five-year relative survival rate of almost 100% (Surveillance, Epidemiology, and End Results [SEER] Program, 2007).

Hormone therapy or androgen deprivation therapy (ADT), either gonadotropin-releasing hormone (GnRH) agonists (see Figure 1) or bilateral orchiectomy, is used in the treatment of high-risk localized prostate cancer (Shahinian, Kuo, Freeman, Orihuela & Goodwin, 2005). The goal of ADT is to control prostate cancer by shrinking or slowing the growth of the tumor (Cooperberg, Grossfeld, Lubeck, & Carroll, 2003). The National Comprehensive Cancer Network ([NCCN], 2008) practice guidelines for treating high-risk localized prostate cancer (clinical stage Ta3, Gleason score 8–10, or prostate-specific antigen > 20 ng/ml) is ADT for at least two to three years plus radiation therapy, radiation therapy with or without neoadjuvant and concurrent short-term (four to six months) ADT for selected patients, or radical prostatectomy for selected patients. Grades of a prostate cancer tumors are described in Table 1.