Men with advanced or metastatic prostate cancer commonly receive long-term treatment with luteinizing hormone-releasing hormone (LHRH) agonist therapy. This prolonged treatment causes a hypogonadal state of chronic testosterone deficiency. Similar to estrogen deficiency in postmenopausal women, testosterone deficiency among these men negatively affects bone metabolism through a complex self-regulating, negative feedback system and subsequent reduction in bone formation. If left undetected or untreated, the risk for osteoporosis rises. Osteoporosis increases the likelihood of fracture, especially of the hips. Researchers are studying the effects of LHRH agonist therapy on osteoporosis and other related conditions to determine whether interventions, such as pharmacologic agents (e.g., bisphosphonates), dietary supplements (e.g., calcium, vitamin D), and exercise, can slow or prevent the process and assist healthcare providers in knowing how to counsel patients. Current recommendations are found in the literature on glucocorticoid-induced and menopausal osteoporosis. Nurses need to stay abreast of current knowledge in this area, as it is expanding rapidly.

Osteoporosis

Osteoporosis is the most common bone disorder in the United States today, affecting about 15–20 million individuals (Mundy, 1995). A metabolic disorder characterized by decreased bone mass and mechanical support of the skeleton, osteoporosis occurs when the rate of bone resorption greatly exceeds the rate of bone formation. The primary bones affected are the hips, pelvis, wrists, and vertebral column. Although osteoporosis occurs more commonly in postmenopausal women, more than two million men have been diagnosed with the disease (National Osteoporosis Foundation, 1995). Approximately 18 million adults have decreased levels of bone mass, which places them at risk of developing osteoporosis (Lindsay, 2001). The incidence of osteoporosis increases significantly with aging, particularly among men and women over the age of 70 (Zilkoski & Morrow, 1987). Osteoporosis is a major risk factor in fractures (National Institutes of Health [NIH], 2000). When it results in fractures,