BACKGROUND: Brachytherapy is a well-established and effective primary treatment modality for low- and favorable intermediate-risk prostate cancers. Although the benefits of brachytherapy in unfavorable intermediate- and high-risk prostate cancers have not been as clear, research suggests that brachytherapy boost may improve biochemical progression-free survival in these patients.

OBJECTIVES: This article aims to discuss evidence for the revival of brachytherapy use in unfavorable intermediate- and high-risk prostate cancers and specific nursing implications in the management of these patients.

METHODS: The literature on brachytherapy and its use to treat localized prostate cancers was reviewed.

FINDINGS: Nurses should be knowledgeable about the indications for brachytherapy, patient eligibility, anticipated side effects, and symptom management.

IN THE UNITED STATES, PROSTATE CANCER IS THE MOST COMMON solid organ cancer in men and the second leading cause of cancer-related deaths in men (American Urological Association, 2020). An estimated 248,530 men are expected to be diagnosed with prostate cancer in 2021 (American Cancer Society [ACS], 2021). The incidence of prostate cancer increases with age, and the average age at diagnosis in the United States is 66 years. About 76% of prostate cancers are detected when the disease is localized to the prostate (Rawla, 2019). In the United States, the five-year relative survival rate for men diagnosed with prostate cancer is 97.5% (National Cancer Institute [NCI] Surveillance, Epidemiology, and End Results Program, n.d.). As clinical research advances, recommendations for the treatment of localized prostate cancer are becoming more refined.

This article will focus on brachytherapy, a long-established treatment modality for localized prostate cancer. Brachytherapy use peaked at 16.7% in 2002 and then declined to a low of 8% by 2010 (Brookland & Mallin, 2019). Select evidence for the revival of brachytherapy, specifically for unfavorable intermediate- and high-risk prostate cancers, will be reviewed, along with implications for nursing in the management of patients receiving this therapy. A review of the literature was performed to identify the use and evolution of brachytherapy in the treatment of localized prostate cancers.

Prostate Cancer
Diagnosis and Risk Determination
Early-stage prostate cancer is often asymptomatic. Most prostate cancers are detected based on elevated prostate-specific antigen (PSA) levels or abnormal digital rectal examination (DRE). Cancer staging is used for treatment planning and to predict prognosis. For localized prostate cancer, staging is used to determine a patient’s overall risk group. Localized prostate cancer is divided into six risk groups: very low, low, favorable intermediate, unfavorable intermediate, high, or very high risk.

Clinical T, PSA level, and Gleason score determine a patient’s risk group. For details of initial risk stratification for localized prostate cancer, go to www.nccn.org. Clinical T describes the extent of the main tumor based on DRE findings or imaging (ACS, n.d.).

PSA is a protein made by prostate gland cells that can be measured in the blood. Generally, a PSA greater than 4 ng/ml is considered abnormal. Although PSA levels can vary because of age, medications, certain activities, and the presence of genitourinary infections, usually the higher the PSA levels, the higher the clinical stage of the prostate cancer.