

Current Status Of PSMA Targeted Therapy

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Prostate cancer has become the 5th common cancer in Korea as of 2010, showing a sharp annual increase of 12.6%. Although localized prostate cancers are well treated and their prognoses are excellent, some of them eventually progress within 2 years from the initiation of the treatment. This progression is known as castration-resistant prostate cancer (CRPC), and it is defined by tumor growth in spite of a testosterone level of less than 50 ng/dL.

Prostate-specific membrane antigen (PSMA) is primarily expressed in normal human prostate epithelium, and overexpressed in prostate cancer. PSMA is further increased in poorly differentiated, metastatic and CRPC. In this regard, PSMA has been developed as a good target for both diagnostics and therapeutics in CRPC patients.

Recently, several clinical trials using PSMA targeting probes labeled with therapeutic radionuclides such as Lu-177 have been conducted for patients with CRPC in Germany and the USA. Promising results are expected based on preliminary clinical studies that were retrospectively performed. To implement PSMA targeted therapy in clinical practice, it is necessary for nuclear medicine physicians and clinicians cooperate closely.