



The Next Generation: Radioligand Therapies

Radioligand Therapies Provide Life-Enhancing Treatments for Patients with Advanced Prostate Cancer

External beam radiotherapies (EBRT) use an external radioactive beam to treat cancer. However, with this approach:

- The **radiation beam** not only kills cancerous tissue but also *damages nearby healthy tissues*.
- The **radiation beam** is *not capable of locating and targeting cancerous cells* that have moved to other parts of the patient's body; thereby allowing cancer cells to continue growing.

Radioligand therapies (RLT) are a novel class of therapies, which address these issues. RLT locate and bind to cancerous cells not only at the site of cancer origin, but also at sites where the cancer has moved. RLT clinical trials have shown significant improvement in survival and **quality of life** (QoL) for people with aggressive and advanced cancers. RLT work by delivering radiation to cancer cells in a targeted and precise method, thus allowing for the identification and/or killing of cancer cells and limiting exposure of radiation to healthy cells (Figure 1). Clinical trials have reported that the targeted RLT treatments are well tolerated with manageable side effects.

PSMA is overexpressed on prostate cancer cells

Radiation kills the tumor cell, while lessening damage to healthy tissue



BEFORE TREATMENT
PSMA-PET Scan



After 3 ¹⁷⁷Lu-PSMA Treatments
PSMA-PET Scan

Figure 1. RLT target the primary cancer site and cancer that has

The FDA has approved Pluvicto, the first RLT for prostate cancer patients with prostate-specific membrane antigen (PSMA) positive metastatic hormone sensitive prostate cancer (mHSPC)¹. It delivers the therapeutic radioisotope (Lutetium 177) to PSMA-expressing cancer cells.

In addition to Pluvicto RLT, other RLT are being studied in clinical trials. An example of another clinical trial is SPLASH, a multi-center metastatic castrate resistant prostate cancer (mCRPC) clinical trial. This clinical trial compares ¹⁷⁷Lu-PNT2002 PSMA therapy to that of Abiraterone or Enzalutamide after second-line hormonal treatment.

1. Pluvicto (prescribing information). Millburn, NJ: Advanced Accelerator Applications USA, Inc. 2022

To learn more about this clinical trial and others, please review the trials below.

- **[SPLASH](#)**: This clinical trial is for men with mCRPC who have progressed novel hormone treatment.
- **[PSMAfore](#)**: This clinical trial is for men with PSMA-positive metastatic castration resistant prostate cancer (mCRPC).
- **[PSMAAddition](#)**: The clinical trial is for men with PSMA-positive metastatic hormone sensitive prostate cancer (mHSPC).

**Learn more about Radioligand Therapies at upcoming Webinar
Wednesday May 11th, 2022, at 6:30pm EST**

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