

Radioisotope

Lu-177, lutetium-177
Transition metals
T $\frac{1}{2}$: 6.71 days

Production

In nuclear reactor:
 $^{176}\text{Yb} (n, \gamma) ^{177}\text{Yb} (\beta^-)^{177}\text{Lu}$

Radiation

Beta particles (β^-)
Gamma photons (γ)

Use

Potential treatment of advanced metastatic castrate-resistant prostate cancer (mCRPC)

Target/Mechanism

¹⁷⁷Lu-DOTA- rosopatamab is a radioimmunoconjugate composed of a monoclonal antibody to PSMA receptor.
¹⁷⁷Lu-DOTA- rosopatamab is internalized in the tumor cell and induces DNA breakage causing cell death.

Insight

The PROSTACT trial is multinational, multicenter, prospective, randomized, controlled, open label Phase 3 study designed to investigate and confirm the benefits and risks associated with the PSMA-targeted antibody, ¹⁷⁷Lu-DOTA-rosopatamab administered together with Standard of Care (SoC), as compared to the best SoC alone.

N patients: ~390 patients with mCRPC that expresses PSMA and has progressed despite prior treatment with a novel androgen axis drug (NAAD).

Treatment:

Group A: Two single intravenous (IV) injections of 76 mCi each (equivalent to a 45 mCi/m² dose in a standard 1.7 m² individual) of ¹⁷⁷Lu-DOTA-rosopatamab, given 14 days apart, plus best SoC

Group B: Best SoC determined by the Principal Investigator

