Advanced Accelerator Applications

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RADIOLIGAND THERAPY (RLT)

What is RLT?

Radioligand Therapy, or RLT, is increasingly being explored in the treatment of cancer. RLT combines a targeting compound (ligand) with a therapeutic radioactive particle (radioisotope).[1,2]

How does RLT work?

In radioligand therapy, the targeting compound (ligand) binds to a particular marker or receptor on cancer cells, delivering the radioisotope which damages the cells and can cause cell death.[1,3]

Who may benefit from RLT?

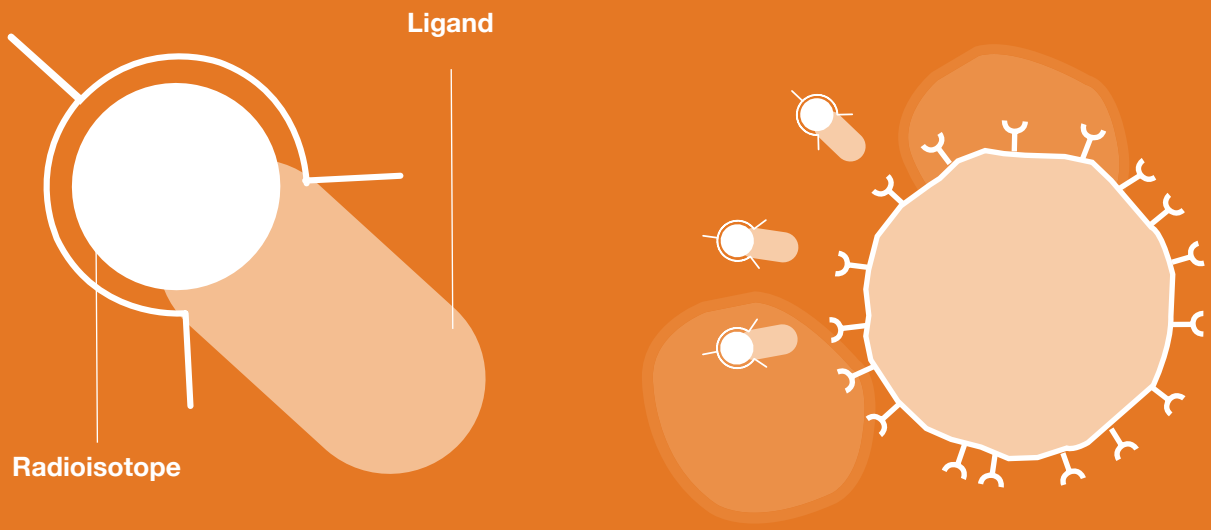
People with cancer or other diseases that express a particular marker, or receptor, that can be targeted by radioligand therapy.[4]

Radioligands are made up of two parts

- **A ligand**: a targeting compound that binds to certain markers or receptors expressed by specific types of cancer cells.[5,6]
- **A therapeutic radioisotope**: a radioactive particle that emits a type of radiation that can cause damage to the target cell.[7]

The ligand binds to the cancerous cells and delivers radiation directly to or near these cells.[2]

As the radiation only travels a certain distance, this treatment approach results in limited damage to surrounding tissues.[1,8]



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