THERANOSTICS INSIGHTS

^{225}Ac-FPI-1434

Radioisotope

Ac-225 Actinium-225
actinide metal
T½ : 9.9 days

Production

Th229 / Ac-225 generators.
Other methods under development

Radiation

Alpha particle (α)

Use

In study for the treatment multiple advanced solid cancers: cervical, endometrial, ovarian, breast (triple negative and HER2-negative), head and neck squamous cell, adrenocortical carcinoma, uveal melanoma.

Target/Mechanism

^{225}Ac-FPI-1434 contains a humanized monoclonal antibody moiety that targets the insulin-like growth factor-1 receptor (IGF-1R). IGF-1R is a tyrosine kinase receptor expressed in numerous chemo and radio-resistant cancers. ^{225}Ac-FPI-1434 internalization causes cell death primarily through double-stranded DNA breaks induced by alpha particles emitted from the decay of Ac-225.

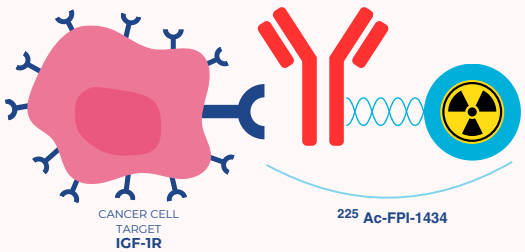
Insight

A Clinical Phase I/II study with ^{225}Ac-FPI-1434 using the indium analogue for SPECT imaging and selection of patients, ^{111}In-FPI-1547 was initiated in January 2019 (NCT03746431).

N patients: 253 participants

Design: first-in-human Phase I/II, non-randomized, multi-center, open-label clinical study to investigate safety, tolerability, PK, and preliminary anti-tumor activity in patients with solid tumors;

Single dose-ascending cohorts and multi-dose ascending cohorts of ^{225}Ac-FPI-1434 and Multi-dose ascending cohorts evaluating administration of FPI-1175 (cold mAb), followed by, ^{225}Ac-FPI-1434 (cold + hot), with cycles repeating every 42 days



Preliminary results: 225Ac-FPI-1434 demonstrated a manageable safety profile with no drug-relatedserious adverse events and/or dose limiting toxicity in administered activity up to 25 kBq/kg body-weight.