

Radioisotope

At-211, astatine-211
halogen nonmetal
T_{1/2}: 7.2 hours

Production

In cyclotron, from the
natural target of Bi-209
Reaction: ²⁰⁹Bi(α,2n)²¹¹At

Radiation

alpha particle (α)
Positron (β⁺)

Use

In study for adjunctive treatment
of Relapsed or Refractory High-
Risk Acute Leukemia;
Myelodysplastic syndrome
before stem cell transplantation.

Target/Mechanism

Anti-CD45 monoclonal antibody. This
antigen is expressed on leukemia and
lymphoma cells and normal immune
cells, it is not expressed on red blood
cells or platelets.

Insight

Study Phase 1/2 (NCT03670966) in progress, expected to end in 2024.

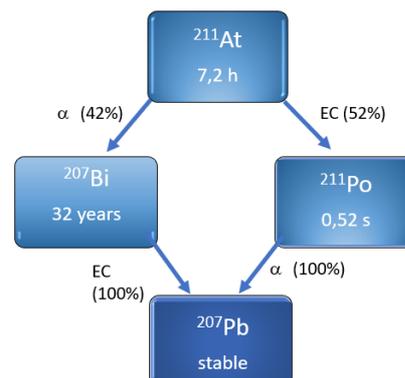
N patients: 30 patients with Leukemias: acute lymphoblastic; acute myeloid due to myelodysplastic syndrome; acute myeloid; chronic myelomonocytic; neoplasia of hematopoietic and lymphoid cells; myelodysplastic syndrome with excess blasts.

Purpose: Dose escalation study of ²¹¹At-BC8-B10

Design:

Preparation: Patients receive ²¹¹At-BC8-B10 infusion over 6-8 hours on day (-8), IV fludarabine over 30 minutes on days (-6) through (-2), and cyclophosphamide IV over 1 hour on days (-2). -6) and (-5). Patients also undergo total irradiation on the day (-1).

Transplantation: Patients undergo peripheral blood stem cell (PBSC) or bone marrow transplantation on day 0.



At-211 decay scheme