TERTHERA

TERBIUM THERANOSTICS

OUR MISSION

At TerThera we aim to meet the growing demand in cancer healthcare using Terbium-161 by enabling out-patient Radioligand Therapy (RLT) to treat an increasing number of patients on daily basis.

TERBIUM-161 NCA

Carrier free lanthanide Terbium-161, produced by neutron activation of Gadolinium-160, is a promising radionuclide for RLT exhibiting comparable chemical characteristics to known radiolanthanides. Early research suggests that as much as **16-fold increase in Auger and conversion electrons** is emitted by Terbium-161 resulting in potential **3-fold higher cellular absorbed dose improving anti-tumor capabilities** for primary and (micro)metastasized cancers.

RADIOLIGAND THERAPY

Using PSMA and SST analogues, Tb-161 has shown an **excellent bioequivalence** and may provide for a **higher spatial resolution** SPECT compared to known radiolanthanides leading to the **detection of smaller lesions**. With the cellular absorbed dose increased, as well as for **undetectable (micro)metastasis**, the overall disease control could be improved. And when optimizing the general **radiation safety**, the treatment room capacity may be extended for RLT.

SIGN-UP for the next round of Terbium-161

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References (1/2): [1] Bernhardt et al, Dosimetric Analysis of the Short-Ranged Particle Emitter 161Tb (2021); [2] Marin et al, Establishment of a clinical SPECT/CT protocol (2020); [3] Alcocer-Ávila et al, Radiation doses from 161Tb and 177Lu (2020); [4] Müller et al, Terbium-161 for PSMA-targeted radionuclide therapy of prostate (2019)

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PRODUCT INFORMATION

Potential indications prostate, breast, neuroendocrine and solid cancers

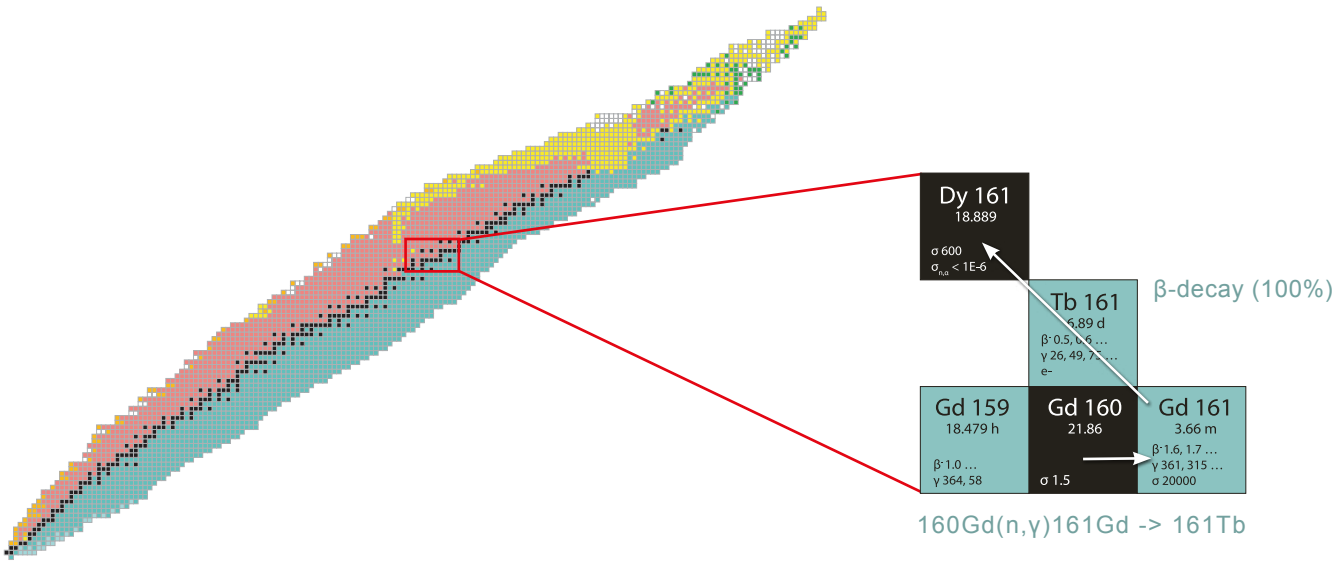
Eβ 154KeV (average)
Eγ 49keV (17%) 75keV (10%)

Product Tb-161 in aqueous 0.05M HCl
Decays to stable Dy-161

Factor 3 higher cellular absorbed dose
High LET Conversion & Auger electrons

Chemical purity >99% (ICP-MS)
Radiochemical purity >99% (TLC)

Global availability from Q1 2023
not for direct administration to humans



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References (2/2): [5] Müller et al, Direct in vitro and in vivo comparison of 161Tb and 177Lu using a tumour-targeting folate conjugate (2013); [6] Grünberg et al, Anti-L1CAM radioimmunotherapy is more effective with the radiolanthanide terbium-161 (2014); [7] Marion de Jong et al, Evaluation in vitro and in rats of 161Tb-DTPA-octreotide (1995)