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**Targeted Alpha Therapy: The US DOE Tri-Lab (ORNL, BNL, LANL) Research Effort to Provide Accelerator-Produced  $^{225}\text{Ac}$  for Radiotherapy**

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Targeted radiotherapy is an emerging discipline of cancer therapy that exploits the biochemical differences between normal cells and cancer cells to selectively deliver a lethal dose of radiation to cancer cells, while leaving healthy cells relatively unperturbed. A broad overview of targeted alpha therapy including isotope production methods, and associated isotope production facility needs, will be provided. A more general overview of the US Department of Energy Isotope Program's Tri-Lab (ORNL, BNL, LANL) Research Effort to Provide Accelerator-Produced  $^{225}\text{Ac}$  for Radiotherapy will also be presented focusing on the accelerator-production of  $^{225}\text{Ac}$  and final product isolation methodologies for medical applications.