

Astatine to emerge as Japan-originated therapy for prostate cancer patients

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Prostate cancer is on the rise worldwide and is the most commonly diagnosed new cancer in men in Japan



A research team at Osaka University, Japan will start an investigator-initiated clinical trial for refractory prostate cancer patients after successful development of a new alpha-ray therapeutic agent ([At-211] PSMA-5) and confirmation of its efficacy in animal models. This will be a world-first in-human clinical trial with [At-211] PSMA-5.

Astatine (At-211) is a nuclide that emits alpha rays with higher energy than conventional radiation and is expected to be effective even in patients exhibiting beta-ray treatment resistance. Since astatine can be produced using an accelerator, it enables domestic production without the need to import the radionuclide from abroad. A new cyclotron dedicated to its production will be installed at Osaka University with financial support by the Ministry of Economy and Industry, allowing for large-scale astatine supply.

"Astatine can be manufactured domestically using an accelerator, and by establishing a manufacturing base, it is expected that a number of patients will be able to receive the treatment without hospitalisation," says Tadashi Watabe, the principal investigator of the study. "In the future, it is expected that astatine will be used as a Japan-originated therapy for prostate cancer patients in need of treatment around the world."