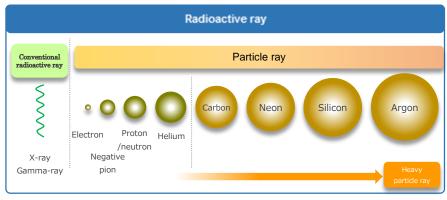
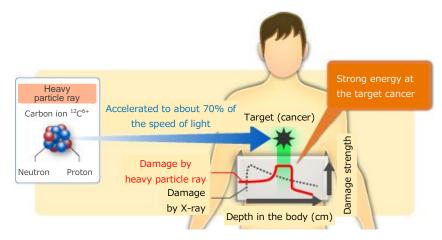


Concept of Heavy Particle Radiotherapy

Radioactive rays heavier than electrons are called particle rays and those heavier than helium ion rays are called heavy particle rays. Heavy particle radiotherapy utilizes heavy particle rays, particularly carbon ions.



Heavy particle radiotherapy accelerates heavy particle rays (carbon ions) to about 70% of the speed of light and radiate to attack the cancer in deep body sites. In conventional radiotherapy with X-rays, the effects (damage strength) are weaker in the deeper body sites. Heavy particle radiotherapy, however, can set its peak effect (degree of damage) at the inner body site, focusing on the cancer lesion to radiate effectively.



Particle radiotherapy provides concentrated radiation according to the shape and position (depth) of the cancer focus. A specialized instrument, a collimeter, and a compensation filter allow radiation according to the cancer focal shape. The personalized radiation treats cancer while preventing impacts on the important organs such as the spinal cord.

