

# Carbon Ion Radiation Therapy

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## Welcome to APIS - Your Trusted Facilitator for Carbon Ion Radiation Therapy

At APIS, we are dedicated to connecting patients with the most advanced cancer treatments available today. We facilitate access to state-of-the-art Carbon Ion Radiation Therapy (CIRT), known for its unparalleled precision and effectiveness, particularly for hard-to-treat tumors. This revolutionary treatment is now offered at Yonsei Severance Hospital, one of Korea's leading medical institutions, and we are proud to help patients benefit from this groundbreaking advancement in cancer care.



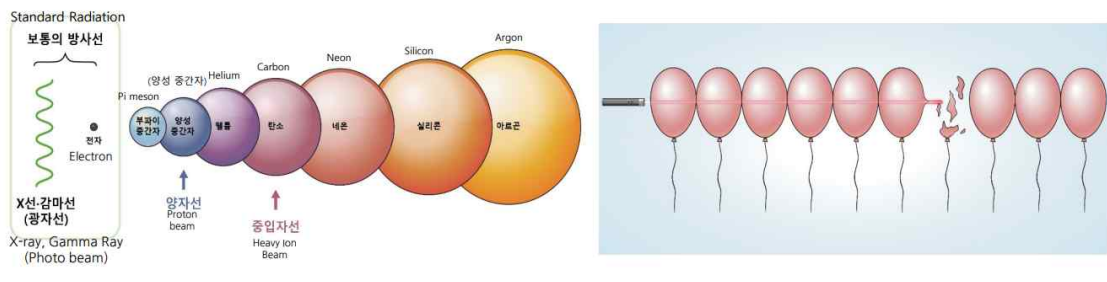
## What is Carbon Ion Radiation Therapy?

Carbon Ion Radiation Therapy is a cutting-edge form of particle therapy that uses carbon ions, which are heavier than the protons used in traditional proton therapy. This advanced treatment delivers a powerful dose of radiation directly to the tumor with minimal impact on surrounding healthy tissues.



### How It Works:

- Precision Targeting: Carbon ions have a higher mass compared to protons, allowing for more focused and effective targeting of cancer cells. This reduces the damage to nearby healthy tissue, which is particularly beneficial for tumors located near critical structures.
- Bragg Peak Effect: Like other forms of particle therapy, CIRT takes advantage of the Bragg Peak phenomenon. The radiation dose increases as the carbon ions travel deeper into the body, peaking at the tumor site and then rapidly decreasing, ensuring maximum impact where it is needed most.



- Treatment Process: Before treatment, detailed imaging and planning are conducted to create a precise map of the tumor. Patients typically undergo several sessions, each lasting about 15-30 minutes, depending on the complexity and location of the tumor.

## Why Choose Carbon Ion Radiation Therapy?

### Advantages:

- Increased Effectiveness: Carbon ions cause more significant damage to the DNA of cancer cells than protons, leading to higher rates of tumor control and potential cure.
- Reduced Side Effects: The precision of CIRT means less radiation exposure to surrounding healthy tissues, resulting in fewer side effects compared to traditional radiation therapy.
- Treatment of Resistant Tumors: CIRT is particularly effective against radioresistant tumors, which do not respond well to conventional X-ray or proton therapies.

### Challenges:

- Limited Availability: As a highly specialized treatment, CIRT is available in only a few centers worldwide. However, with the introduction of this technology at Yonsei Severance Hospital, patients now have access to one of the most advanced cancer treatments available today.
- Cost and Duration: The treatment can be more expensive and time-consuming compared to traditional therapies. However, the benefits often outweigh these considerations, particularly for patients with difficult-to-treat cancers.

## Global and Domestic Installations

Carbon Ion Radiation Therapy is a rapidly growing field, with installations in some of the most advanced cancer treatment centers globally. Countries like Japan, Germany, and Italy have been leaders in adopting this technology, and now Korea joins this elite group with our facility.

### Key Locations:

- National Institute of Radiological Sciences, Japan: Pioneers in carbon-ion therapy, offering treatments since the 1990s.
- Heidelberg Ion-Beam Therapy Center, Germany: One of the largest and most advanced CIRT facilities in Europe.
- Yonsei Severance Hospital, Korea: Newly established facility offering world-class care and expertise in Carbon ion therapy.

## What to Expect

From your initial consultation to the completion of your treatment, our team at [Your Clinic Name] is here to guide you every step of the way. Here's what you can expect during your treatment journey:

1. Consultation and Evaluation: Our specialists will evaluate your medical history and conduct detailed imaging studies to determine if CIRT is the right option for you.
2. Personalized Treatment Plan: A customized treatment plan will be developed using advanced imaging techniques to map out the precise location of the tumor.

3. Treatment Sessions: Each session is painless and typically lasts between 15 to 30 minutes. You can expect to undergo multiple sessions over a few weeks, depending on your specific case.

4. Follow-Up Care: After completing the treatment, regular follow-ups will ensure that the tumor is responding well and that any side effects are managed effectively.

### **Patient Testimonials and Case Studies**

"Thanks to the advanced treatment at [Your Clinic Name], I was able to receive the best care possible. The precision of the therapy and the professionalism of the staff gave me hope when I needed it most." – [Patient Name], [Country]

We invite you to explore more success stories from our international patients who have undergone Carbon Ion Radiation Therapy at Yonsei Severance Hospital.

### **Contact Us**

Ready to learn more about how Carbon Ion Radiation Therapy can help you or your loved ones? Contact us today to schedule a consultation or to get more information about our services.

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