Location

45 minutes from Haneda Airport
120 minutes from Narita Airport

i-ROCK is in the city of Yokohama, Kanagawa prefecture, which borders Tokyo.
45 minutes from Tokyo Haneda Airport and 2 hours from Narita International Airport,
i-ROCK is conveniently located for visitors from overseas.

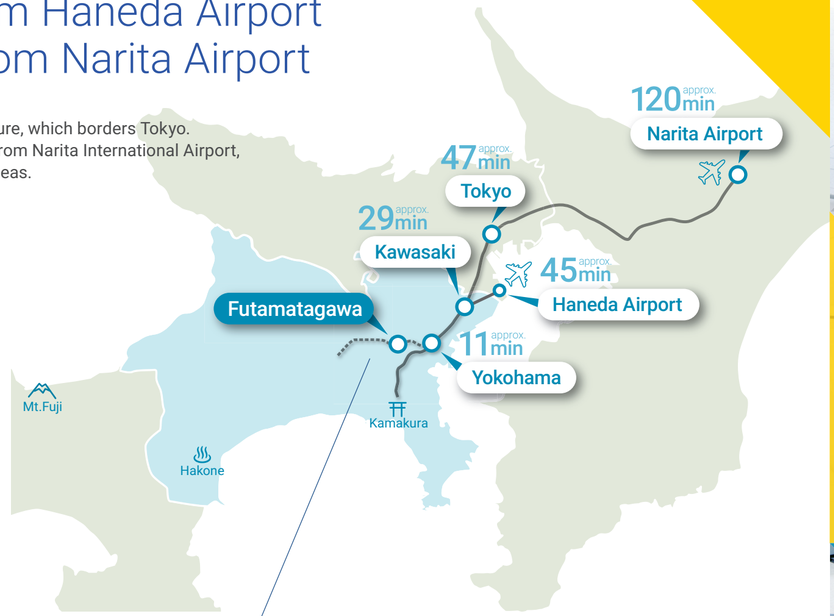
Haneda Airport International Terminal
Airport limousine bus ···> approx. 45min

＊There are Keikyu bus and Sotetsu bus from Haneda airport.

Yokohama Station
Sotetsu Line ···> approx. 11min

Futamatagawa Station
Taxi ···> approx. 5min

For more information, visit
http://kcch.kanagawa-pho.jp/i-rock/



Kanagawa Cancer Center
i-ROCK

i-ROCK
ion-beam Radiation Oncology Center in Kanagawa

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2-3-2 Nakao, Asahi-ku, Yokohama, Kanagawa, Japan 241-8515
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i-ROCK

i-ROCK, short for ion-beam Radiation Oncology Center in Kanagawa, is the carbon ion radiotherapy facility at Kanagawa Cancer Center. It is the fifth carbon ion radiotherapy facility in Japan.

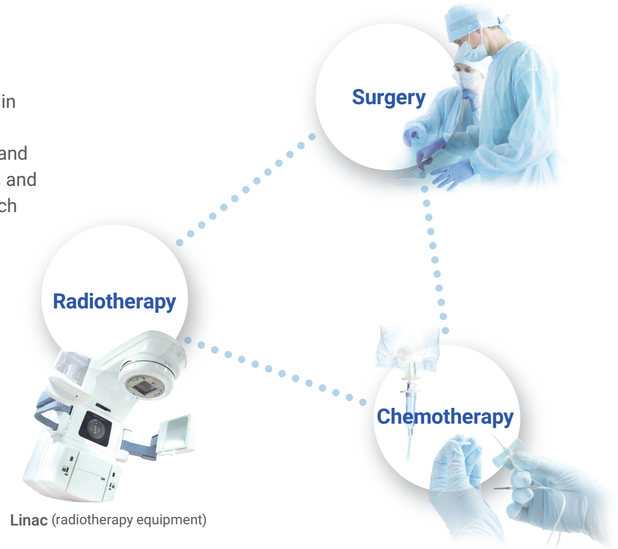
Why i-ROCK?

Cancer Center Expertise
and
State-of-the-art technology

Comprehensive cancer therapy

Multidisciplinary cancer treatment at Kanagawa Cancer Center (KCC)

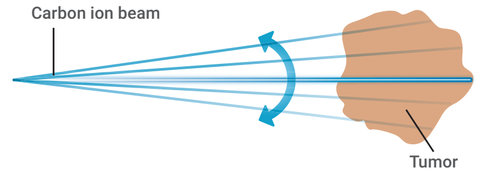
i-ROCK is the carbon ion radiotherapy facility at KCC.
KCC is the Designated Cancer Care Hospital of Japan, located in Kanagawa prefecture.
A multidisciplinary approach combining surgery, radiotherapy and chemotherapy is adopted throughout KCC. Medical specialists and staff at KCC provide comprehensive care, individualized for each patient's disease condition and quality of life.



Linac (radiotherapy equipment)

State-of-the-art irradiation technology

i-ROCK deploys the most advanced irradiation technology, the high-speed three-dimensional (3D) pencil-beam scanning method, to irradiate tumor tissue with high precision, conforming to the target tumor's unique size and shape while minimizing potential damage to surrounding normal tissue.



A thin carbon ion beam is applied across a cancer tumor at high-speed.

Robotic treatment couch and in-room CT in every treatment room

The six-degrees-of-freedom (6DoF) robotic couch enables quick, smooth and accurate patient positioning for therapeutic irradiation.
The in-room CT monitors the anatomical structure inside the body and checks the position of tumor tissue more accurately, enabling more precise treatment.

What is carbon ion radiotherapy?

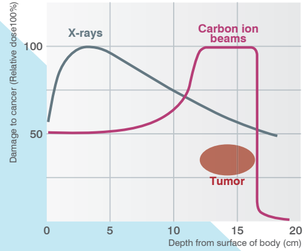
A method of radiotherapy that kills cancer cells by focusing carbon ion beams on the target tumor.

What is carbon ion radiotherapy?

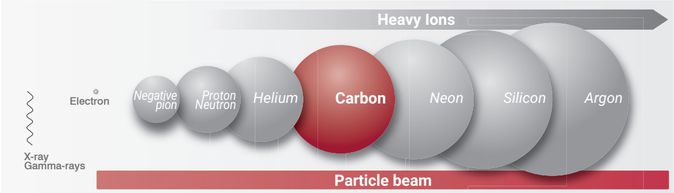
Conventional radiotherapy uses X-rays or gamma rays, which are types of electromagnetic waves.
Carbon ion radiotherapy utilizes carbon ion beams, which are particle beams. Carbon ions accelerated to 70% of the speed of light are irradiated to a tumor locally and intensively.

Precise and intensive irradiation of localized tumor

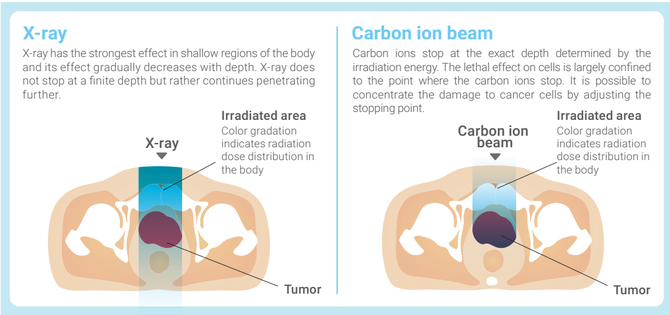
Carbon ion beams can deliver lethal doses to tumor tissue more locally and with greater intensity, while lowering unwanted doses to surrounding normal tissue to reduce potential side effects.



Type of radiation



Comparison of X-ray and carbon ion beam dose distribution



Why carbon ion radiotherapy?

Highly effective and gentle to the patient

Shorter treatment period (Hypo-fractionation)

Since carbon ion radiotherapy causes less damage to surrounding normal tissue, irradiation dose per fraction can be increased, which leads to fewer fractions and a shorter treatment period, thus reducing the physical and social burden on patients.

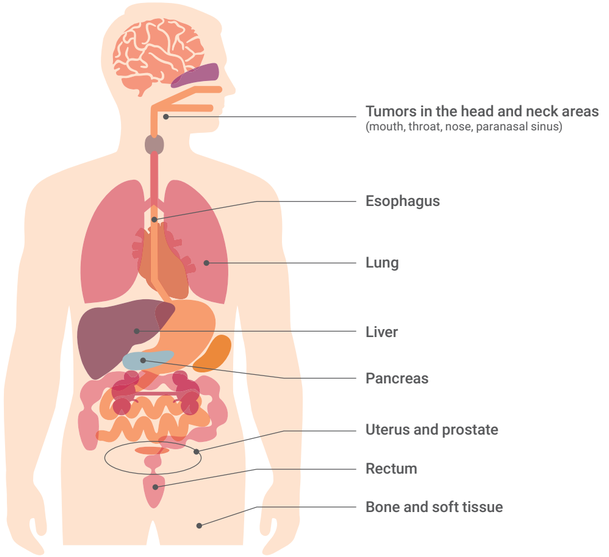
Highly effective against refractory and radio-resistant cancers

The ability of carbon ion beams to eradicate cancer cells is superior to that of X-rays or proton beams. Carbon ion radiotherapy is more effective for treatment of refractory and radio-resistant tumors such as sarcoma, which is difficult to treat with conventional radiotherapy.

Suitable and effective for treating localized and solid cancer

Carbon ion radiotherapy is unsuitable for treating certain types of cancer, such as broad metastases or leukemia and other blood cancers.

Tumor sites suitable for carbon ion radiotherapy



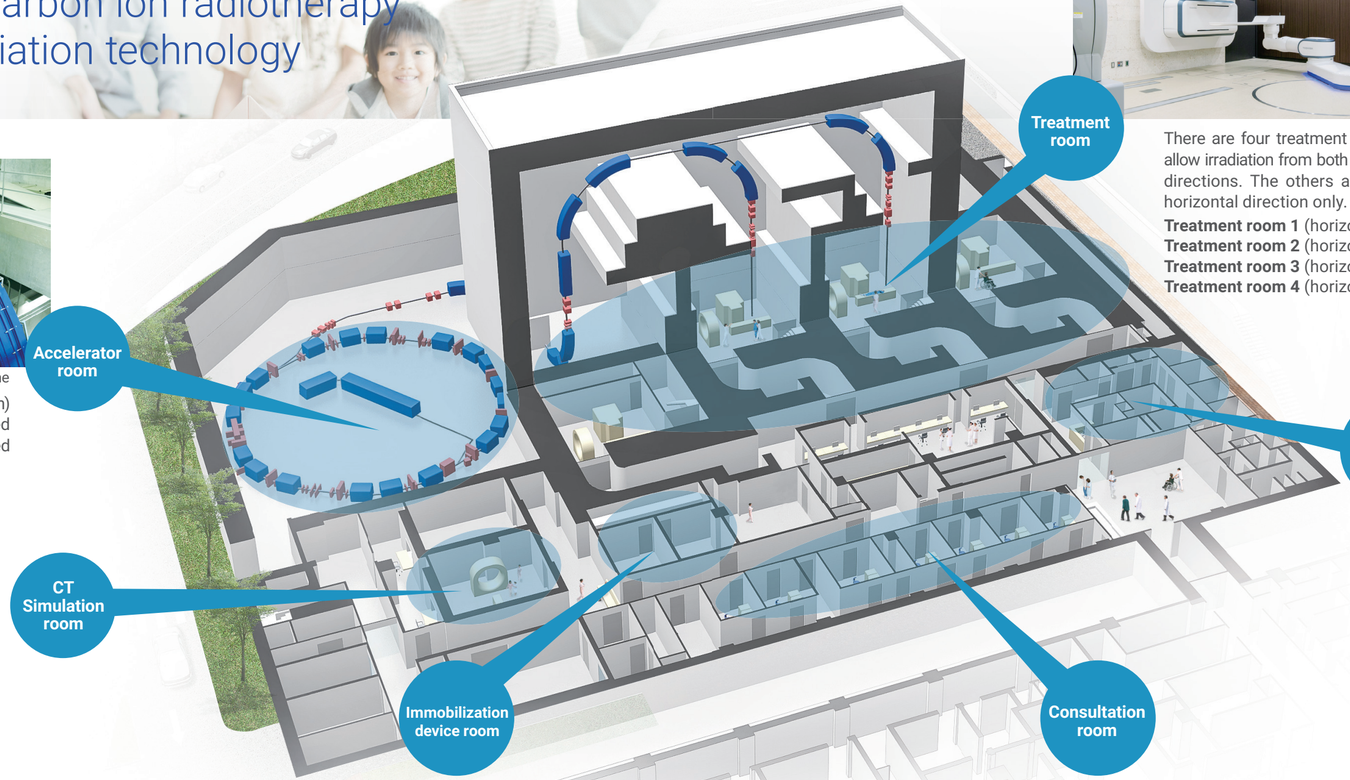
Equipment and technology

High-precision cancer treatment using state-of-the-art carbon ion radiotherapy system and irradiation technology

Synchrotron

Vertical beam transport line

The accelerator room accommodates a circular accelerator (synchrotron) where carbon ions are circulated until they are accelerated to 70% of the speed of light. Ion beams are extracted from the synchrotron and transported through the beam line to each treatment room.



Entrance to the treatment room

There are four treatment rooms, two of which allow irradiation from both vertical and horizontal directions. The others allow irradiation from horizontal direction only.

Treatment room 1 (horizontal)
Treatment room 2 (horizontal + vertical)
Treatment room 3 (horizontal + vertical)
Treatment room 4 (horizontal)

8 private rooms are available for patients awaiting carbon ion radiotherapy.