Conveniently situated in front of Shin-Tosu Station on the Kyushu Shinkansen line in Tosu, Saga, SAGA HIMAT is ideally situated for easy access both from within Kyushu and other areas of Japan.

SAGA HIMAT is located near both major highways and major train lines. It is immediately accessible via major expressways that connect cities and towns throughout Kyushu, and is only a short walk from Shin-Tosu Station on the JR Kyushu Shinkansen and Nagasaki Main Lines.

[Getting to SAGA HIMAT]
- By train: 3 min.
  - From Hakata Station: Approx. 12 min.
  - From Fukuoka Station: Approx. 15 min.

[For more information, reservations, and reservations]
Reception hours: 9 am to 12 pm and 1 pm to 5 pm weekdays

TEL: 0942-50-8812

SAGA Heavy Ion Medical Accelerator in Tosu

SAGA HIMAT

New choices in cancer treatment.

SAGA Himat
SAGA Heavy Ion Medical Accelerator in Tosu

Welcome

SAGA Heavy Ion Medical Accelerator in Tosu (also known as SAGA HIMAT) is the first heavy ion cancer treatment facility in Kyushu. Since commencing operation in August 2013, SAGA HIMAT has treated over 3,000 patients for a wide variety of cancers, including prostate, head, lung, breast, pancreatic, and bone and soft tissue cancers (as of May 2017). These patients were not only from Kyushu, but included people who came from Tokyo, Osaka, and even as far as Hokkaido and Okinawa, and their willingness to travel from all over the country is a testament to the significance of our facility. To provide patients with an even smoother treatment experience, we will be beginning to use Treatment Room C, which is equipped with a next-generation 3D scanning radiotherapy system, in addition to Treatment Rooms A and B that are currently in use. We plan to continue to demonstrate the efficiency and reliability of treatment through SAGA HIMAT and increase the trust placed in us by both patients and physicians. We thank you for your continued support and partnership.

Heavy ion therapy is exceptionally well suited to selectively targeting cancer structures and due to its highly cytotoxic effect on cancer cells, can be provided in the form of short-term outpatient therapy with minimal side effects.

Heavy ion therapy has been acknowledged to be a highly effective method of treating certain kinds of tumors that use and soft tissue tumors that cannot be surgically removed and, as of April 2016, treatment of these tumors is covered by public medical treatment. Through partnership and cooperation with other medical facilities, especially those in Kyushu, we will continue to strive to provide even more patients with top quality cancer treatment. We will also be working alongside other heavy ion therapy facilities to standardize treatment policies and pool treatment data with the goal of eventually seeing treatment for other cancer cases covered by public insurance.

We are living in an age with even more diversity in cancer treatment options than ever, meaning patients can now choose the treatment method. SAGA HIMAT aims to become a top quality treatment facility that can provide the public with correct information regarding heavy ion therapy and that patients will be glad to have visited and received treatment at.

No surgery. No hospitalization.
Treat cancer with minimal impact on your everyday life.

Introducing heavy ion cancer therapy

Heavy ion cancer therapy is a type of radiation therapy. This cutting-edge technique involves the irradiation of cancer lesions using focused beams of carbon ions accelerated to approximately 70% of the speed of light.

- Surgery
- Particle beams
- Chemotherapy
- Radiation therapy
- Heavy ion beams
- Proton beams
- X-rays
- Gamma rays

Characteristics of heavy ion cancer therapy

- Superior tumor control: SAGA HIMAT's heavy ions provide an extremely effective dose of radiation near the surface of the body and emit energy as they penetrate deeper into the tissue. Heavy ions, however, cause an energy peak at a fixed depth within the body, and emit considerably lower levels of energy below and after this point. By matching this depth to the position of the cancer lesion, it is possible to specifically target the tumor and effectively treat cancer situated deep within the body.

- Minimal side effects: An illustration is superimposed on the cancer lesion, only damage to the surrounding normal cells can be minimized, thereby significantly reducing the likelihood of side effects.

Outpatient treatment made possible

As surgery is not required, patients can be treated on an outpatient basis. Furthermore, treatment can still be provided to patients who are not confident about their physical strength, such as the elderly.

Intractable cancers now treatable

Heavy ion therapy makes it possible to treat a wider range of cancers, including those for which conventional radiation therapy has shown little effect such as esophageal cancer, and cancers that cannot be removed surgically because they have developed in complicated areas.

Short treatment period

Heavy ion beams have two to three times the anti-cancer cytotoxic capacity of proton beams. Results and gamma rays. Since such radiation is more effective, the overall treatment can be shortened significantly.

Examples of the number of rounds of irradiation required

<table>
<thead>
<tr>
<th>Type of cancer</th>
<th>Conventional radiation therapy</th>
<th>Heavy ion therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver cancer</td>
<td>10 to 20 times</td>
<td>2 to 4 times</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>Stage I: 4 to 12 times</td>
<td>12 times</td>
</tr>
<tr>
<td></td>
<td>Locally advanced: 30 to 40 times</td>
<td>16 times</td>
</tr>
<tr>
<td>Prostate cancer</td>
<td>35 to 40 times</td>
<td></td>
</tr>
<tr>
<td>Pancreatic cancer</td>
<td>25 to 30 times</td>
<td>12 times</td>
</tr>
<tr>
<td>Head and neck cancer: 30 to 40 times</td>
<td>16 times</td>
<td></td>
</tr>
</tbody>
</table>
Expanding treatment possibilities.

Cancers that can be treated using heavy ion cancer treatment

**Target sites**
Cancers that are suitable for heavy ion cancer treatment are solid tumors localized to a single site.

- Skull base neoplasms
- Head and neck cancers
- Esophageal cancer
- Breast cancer (*)
- Lung cancer
- Liver cancer
- Pancreatic cancer
- Renal cancer
- Uterine cancer
- Rectal cancer (pelvic recurrence)
- Prostate cancer
- Bone and soft tissue tumors

(*) Type of cancer currently being treated at the National Institute of Radiological Sciences Hospital.

Cancers that cannot be treated using heavy ion therapy

- Blood cancers such as leukemia
- Cancers with extensive metastases
- Cancers in organs with irregular movement, such as gastric and colon cancers
- Cancers at sites that have previously been exposed to radiation therapy

First, discuss treatment options with your doctor.

The treatment process

In order to be treated at SAGA HIMAT, you will need to have completed the required tests at another medical institution, have been diagnosed with cancer, and your attending physician will need to refer you as a patient who wishes to undergo heavy ion therapy.

- **Patient**
  - Examination
  - Medical institution making the referral
    - A facility that treats cancer such as a university hospital or one of the designated regional cancer centers and hospitals.
  - Examination and selection of treatment
  - Patient referral

**SAGA Heavy Ion Medical Accelerator in Tozu**

- Recepticle for initial examination
  - Confirm that the patient has undergone the necessary tests and explain the treatment and any possible side effects to the patient.

- Examination
  - During this stage, patients to hold the body in place during treatment are created. Needle-like CT scans are used to position the patient in such a treatment plan can be approved. There may also be a treatment rehearsal.
  - Preparation for treatment is generally expected to take approximately one to two weeks.

- Preparation for treatment
  - Treatment is administered once daily, and the duration of radiation is approximately one in five minutes. Including the preparation time needed to position the patient for irradiation, a session takes a total of approximately twenty to forty minutes.

- Radiation therapy

Medical institution making the referral

Following completion of treatment, the clinical course is observed and assessed in collaboration with the medical institution that referred the patient to SAGA HIMAT.

* Actual treatment may differ from the above example in some cases.
State-of-the-art treatment spaces.

In contrast to the gigantic circular accelerator (synchrotron) measuring twenty meters in diameter used to generate the heavy ions beams used in treatment, the entrance areas and treatment rooms used by patients are welcoming spaces furnished with wood to provide a feeling of warmth and to help patients relax.

**Treatment areas**

- Treatment Hall
- Treatment Room A
- Treatment Room B
- Treatment Room C

SAGA HIMAT has three treatment rooms (Treatment Room A, B, and C). Treatment Room A is equipped with state-of-the-art treatment machines (synchrotron and linear accelerator). The treatment rooms are designed to accommodate the space and comfort for patients.

**Equipment Area**

- Synchrotron: 20 m in diameter
- Linear accelerator
- Treatment Hall: 30 m in diameter

**Waiting areas**

- Reception-lobby
- Stained-glass installation
- Waiting area

**Examinations**

- Room 1: Radiology Department
- Room 2: Medical Department
- Room 3: General Internal Medicine
- Room 4: Outpatient Department
- Room 5: University Hospital Radiology Department

**Commuting for treatment**

- All transport to and from the hospital parking lot is available. The first parking lot is on the left, and the second parking lot is on the right.

**Treatment**

- The hospital does not include a hospital, so patients are required to arrange for their own transportation. The patients should be transferred to and from the treatment rooms and to and from the hospital.

**Other**

- University hospitals have partnerships with private hospitals throughout the region and can provide patients interested in private hospital treatment with information about which private hospitals offer appropriate treatment options.

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**[Getting to SAGA HIMAT]**
- **By Shinkansen**: The fastest train in Shin-Tosu Station.
  - Approx. 15 min.
- **From Hakamacho Station**: Approx. 24 min.
- **From Kōrakucho Station**: Approx. 1 hr 17 min.
- **From Hikoshima Station**: Approx. 1 hr 35 min.
- **By car**
  - From Kyushu International Airport: Approx. 1 hr 30 min.
- **By airplane**
  - From Fukuoka Airport by car: Approx. 30 min.
  - From Kyushu International Airport by car: Approx. 35 min.

**New choices in cancer treatment.**

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**TEL:** 0942-50-8812

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E-mail: sagahimat@sagahimat.jp
Website: www.sagahimat.jp

[Request for donations] SAGA HIMAT has received many donations from individuals and organizations that support our work and funding objective of providing better cancer treatment not only to Kyushu, but throughout all of Japan. We continue to seek donations to support the work of SAGA HIMAT and we ask that you please consider partnering with us as a donor.