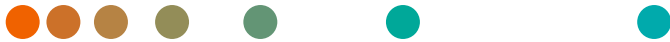


SOMATOM Definition Flash eco

ecoline enabled the implementation

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千葉県立中央医療センター
千葉メディカルセンター



The Dual Source system exhibits clear advantages in the cardiovascular domain

Chiba Medical Center relocated to a new facility on the lot adjacent to the old hospital on 12/1/2014. With the establishment of the new hospital, the cardiovascular center (cardiovascular surgery, circulatory organ surgery) was relocated from the Chiba Central Medical Center of the same medical corporation, newly strengthening the Center's cardiovascular region. In conjunction with the move, the implementation of Dual Source CT "SOMATOM Definition Flash eco" has demonstrated its effectiveness in the cardiovascular domain with its high temporal resolution. Siemens Healthineers' refurbished brand ecoline made this implementation possible. We asked Mr. Takuya Ueda from the radiology department and Chief Radiology Technician Mr. Satoshi Mizuno about the operation status up to the present, and the changes made to the operation system since the implementation.

Medical Corporation Association:

Medical Corporation Seikeikai Chiba Medical Center
Location: Minami-cho 1-11-12, Chuo-ku, Chiba, Chiba

Interviewed doctors:

Radiology Division
Takuya Ueda Manager
Radiology Department
Tetsu Mizuno Manager

Main introduced equipment:

SOMATOM Definition Flash eco,
SOMATOM Definition AS+,
syngo.via, syngo.plaza,
SIREMOBIL Compact L

Create a centralized management system under radiology, which is the essence of team medical care



Medical Corporation Seikeikai Chiba Medical Center

Specialities:
Neurosurgery and secondary emergency facility

Beds: 315

Founded as Kawasaki Steel Health Insurance Union Chiba Hospital in 1966 after being renamed JFE Health Insurance Union Kawatetsu Chiba Hospital in 2003, the hospital was transferred to Medical Corporation Keiseikai in 2011, at which point it became the current Chiba Medical Center. "It is probably a current trend that health insurance hospitals

"I feel a system finally come into shape"

are disappearing. Our hospital was particularly aging and was greatly impacted by the 2011 off the Pacific coast of Tohoku Earthquake, so rebuilding was an urgent issue and fund procurement was absolutely necessary," Mizuno said, reminiscing about the circumstances leading to the hospital's transfer over to Keiseikai. "The hospital has the characteristics of a health insurance hospital, often treating chronic diseases, but switched to being an acute care hospital upon the establishment of a new hospital, and is currently functioning as Chiba's fundamental emergency center, complementing the Chiba Emergency Hospital, which is a tertiary emergency medical institution."

Ueda, who was appointed as a manager when the new hospital was established in 2014, was the first radiologist at the hospital. "First, with the help of each department, I built a management system for safely using contrast agents and a system to keep track of whether diagnostic results were understood by the

doctors who requested them. Previously, each department managed this and the technicians backed it up, but by forming an independent image diagnosis department, I managed it to unite these processes under the radiology department. I think the radiology department is involved with many other departments through its images, so I think it plays a key role in facilitating team medical treatment. As a facility for emergency medical care, and also from an operating cost basis, examinations should be done safely and optimally without delay. I feel a system that allows for that has finally come into shape," mentioned Ueda. As a result of working diligently to construct the system as the first radiologist at the hospital, a system that is comparable to those of a national level is currently in operation and supports daily medical practices. "At the old hospital, because of the many annexes, the operating room for the radiology department was spread apart, and both the patient traffic flow and workflow were very inefficient. With the new hospital, the function of the radiology department was centralized on one floor, and the operation room was deployed around it, so the technicians can help each other immediately, making work very efficient," Mizuno said in a satisfied manner.

Takuya Ueda
Radiology Division Manager



High temporal resolution of 75 ms enables high-definition images even at high heart rate

Chiba Medical Center's newly implemented CT for the newly established hospital was the Dual Source CT "SOMATOM Definition Flash eco" (hereafter Definition Flash eco). According to Mizuno, "our hospital has historically used Siemens CT, starting with SOMATOM DR3, then SOMATOM PLUS4, SOMATOM Volume Zoom, SOMATOM Definition AS+, so we had unwavering confidence in the device.

Since the cardiovascular center was relocated from the Chiba Central Medical Center within the same corporation, our hospital focused on the cardiovascular domain, so we decided to select the Definition Flash eco from the Siemens Healthineers unique Dual Source CT line. The cardiovascular center responds 24 hours per day, 365 days per year to emergency situations, so it was necessary for the radiology department to implement a duty system upon its relocation. And the Siemens Healthineers syngo common operation platform helped the transition because we were able to operate them without any problem. Prior to the Definition Flash eco, the SOMATOM Definition AS+ was installed. In 2012, and currently those 2 pieces of equipment are used for examinations, and we have about 80~90 examinations per day and 2~4 cardiovascular examinations per day," he continued, explaining the history of the implementation of the equipment and its current operational status.

The Definition Flash eco was implemented to strengthen the cardiovascular domain of the hospital, demonstrating a high temporal resolution of 75 ms with its non-divisional half Reconstruction mode. Since the coronary artery can be drawn even at high heart rates, it is possible to perform low-exposure cardiac CT examinations without using β -blockers. "I used to research using Dual Source systems at Stanford University, and since then, I have felt the heart was easier to image using Dual Source CT. After returning, the facility I used a 320 row CT, but I didn't feel satisfied with imaging from a Single Source scanner. Particularly when evaluating valvular diseases, the high temporal resolution of the Dual



Satoshi Mizuno
Radiology Department Manager

Source CT is effective. In the cardiovascular domain, I think the superiority of the Dual Source CT is considerably high. Also, even if the heart rate is not very strictly controlled, it is a huge merit to be able to obtain high-definition images and detailed information. Even for Single Source CT with 320 rows, the images become blurry if you don't control the heart rate to under 65, so I remember it took time to do examinations," said Ueda, explaining the superiority of the Dual Source CT based on his experience. In addition, he went on to discuss

"I believe we are currently at a level at which we can utilize high-functioning pieces of equipment"

building a management system for the radiology department after his arrival. "At our hospital, since we did not have a radiologist at the time, to tell the truth, we were technically behind in the way we did CTs and contrast radiography until the reconstruction. Thanks to the cooperation of the technicians, I believe we are currently at a level at which we can utilize high-functioning pieces of equipment," said Ueda, who also explained that reflecting on the history of the hospital, they can understand the 3 year struggle to construct a "smooth, high-quality operation system" for the radiology department.

Realized by implementing ecoline, providing secondhand pricing and first-class functionality

Definition Flash eco, which was implemented by Chiba Medical Center, is a product from the Siemens Healthineers ecoline refurbished brand, under which Siemens Healthineers is constantly aiming to develop environmentally friendly solutions, launching the refurbished business in 2001. The RS (Refurbished Systems) division was established in November of 2000, and the philosophy of being socially

responsible is realized through ecoline. All ecoline systems are manufactured following independently certified processes. In addition, they are products that satisfy strict quality assurance standards. The same services can be provided when buying a new Siemens Healthineers system.

"if I were to become involved in a the selection, ecoline would have no doubt been my first choice"

Equipment:

2 pieces of equipment are used for examinations



80~90
examinations
per day

2~4
cardiovascular examinations
per day



24 hours
per day



365 days
per year

"In the past 3 years, almost no problems have occurred. Looks-wise, they are indistinguishable from new products, and to be honest, I usually forget they are ecoline products when operating them. From the person in charge at the time, I heard that we could not reach an agreement on the prices, so we were about to give up on a Definition Flash, but Siemens Healthineers proposed ecoline, so we were able to implement the equipment we wanted. Since we trusted the equipment from Siemens Healthineers, it was a great proposal. I would not propose ecoline for price competition with other manufacturers, but I would recommend it to someone who understands the superiority of Siemens Healthineers equipment, and to those like me who 'must have Siemens Healthineers equipment'".

"I hope we can get a proposal for ecoline during our next renewal," Mizuno said about ecoline. Ueda mentioned, "I have used various pieces of equipment until now, but I really feel I have less trouble with this equipment. We have used a number of devices that become unstable

"I have used various pieces of equipment until now, but I really feel I have less trouble with this equipment"

after maintenance, so I am very satisfied with the stability of the Definition Flash eco. I can say that it supports our hospital's examinations without causing any delays. Also, there are not many facilities that can secure the budgets needed for high-end equipment like university hospitals. Even at our hospital, if it weren't for the introduction of ecoline, we would not

have a Dual Source CT. This makes it a really meaningful choice, as we can get first-class functionality at the price of secondhand equipment. I was not involved in its selection, but since we were able to implement high-spec equipment on such a limited budget, if I were to become involved in the selection, ecoline would have no doubt been my first choice," Ueda continued, emphasizing the usefulness of ecoline.

Lastly, I asked what Ueda expected from Siemens Healthineers in the future. "I feels like the innovation of CT hardware has hit a ceiling, so I think development will shift towards software.

I would like Siemens Healthineers to develop a more diverse information provision and support system for image analysis, using deep learning and utilizing AI."

Interview date:

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Staff from the Radiology division



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