

Digitization of gastric mass screenings enhances examination efficiency and quality Near-optimal image quality



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Digitization of gastric mass screenings allows data sharing with the parent hospital

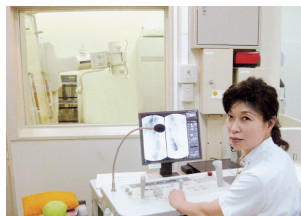
The clinic is located inside the Tsurumi Engineering and Manufacturing Center of JFE Engineering Corporation and mainly handles medical checkups. Of the approximately 3,000 persons who should undergo gastric checkups, we examined about 2,000 last year. Due to the deterioration of the current equipment, we investigated new examination systems. We decided to adopt the Shimadzu FLEXAVISION as a gastric examination system due to the good reputation of Shimadzu R/F system at our parent institution, Nihon Koukan Hospital, and because it is desirable to stick with one manufacturer to facilitate operation by the staff rotating between the clinic and hospital. Digitization was essential for filmless diagnosis on monitors and data sharing to allow data taken at the clinic to be sent to the hospital for interpretation. An R/F system and a general radiography system are installed at the hospital. The FLEXAVISION FD Package for I.I. digital was selected, as it permits CR imaging and allows general radiography and chest and abdomen radiography with a single R/F table in the event that the general radiography system goes out of operation.

Links to the ordering system enhance work efficiency

A reservation system was introduced this year and the situation has improved with 12 or 13 subjects examined per day, on average. Digitization simplifies image management for numerous examinations. For example, reading a subject's data from the ordering system significantly simplifies confirmation of the patient's name and pasting it on the images. When images from the previous year are required, past data can be easily called up to rapidly complete examination set-up. What's more, troublesome film management is no longer required.

Instant observation of radiographic images enhances examination efficiency

One of the good things I felt about using a digital system is the ability to immediately check radiographic images on a monitor. Previously, if the subject's body moved during a breath-hold examination with the tabletop reverse tilted, for example, after the images were developed it could be discovered that the subject was not located in the field of view or that the images were otherwise unsatisfactory. Now, the images can be checked on a monitor and imaging repeated, if necessary. Another great benefit is the ability to supply barium and take additional images of positions of interest. The regions visible on the monitor can be carefully examined for problems. The examination time seems to have slightly increased, due to the more detailed information, but the quality of examinations has also improved.



Pursuing optimal image quality

From the outset, this clinic aimed for soft, detailed images, similar to analog images, rather than hard, sharp digital images. Repeated image adjustments by Shimadzu achieved such images, which are always highly regarded by people from other facilities. Shimadzu staff members were extremely helpful in making these adjustments. The efforts of the user alone are not sufficient to produce good images. Cooperation between the user and manufacturer is needed to obtain the best results for the patients. I am grateful to Shimadzu for their helpful advice about taking good images.

Low-dose examinations are gentle on the patients

After starting to use this system, I immediately noticed the shorter exposure times and lower X-ray dose than conventional systems. This has the additional benefit of taking stable images with little patient movement. Pulsed fluoroscopy is used to reduce the X-ray exposure due to X-ray technologists' concerns about X-ray exposure dose. I hope that Shimadzu will continue to improve the system in the future to obtain the maximum information from the lowest X-ray dose possible.

Functions ensure patient safety

The bedside controller allows the X-ray technologist to operate the system while making explanations to the patient. It is extremely convenient and we use it often. For example, it saves a lot of time if the table has to be tilted, as it removes the need to move back and forth from the operation room. Moreover, the proximity of the X-ray technologist makes the patient feel more comfortable. Another point I appreciate is that the tabletop is designed to prevent fingers getting trapped. When we moved the table on our previous system, the patient would often grasp the tabletop and was in danger of getting their fingers pinched. This is not a concern with the new system. I think this system is excellent for ensuring safety of the patients undergoing examinations.



Compact design improves the flow of people in the examination room

When several patients have to be examined in a short time, a large system can restrict the flow of people. However, the compact FLEXAVISION system makes it easy to move around the examination room. Even in the restricted space of an X-ray fluoroscopy room, the X-ray tube can be extended 1.5 m to allow chest radiography. This contributes to the compact feel of the system. A compact system is desirable, as a large system can be quite imposing and stressful for the patient. I also think that the system design is quite attractive.

**A word to doctors
thinking of introducing
this system:**

Each facility may have different requirements. However, Shimadzu offers a comprehensive hardware and software support structure to meet your requirements and deliver the kind of images you require. I am very glad that we introduced FLEXAVISION at our clinic.