KONICA MINOLTA

News Release

Konica Minolta Launches AeroDR TX m01, a Mobile X-ray System Enabling Dynamic Digital Radiography at the Bedside

Tokyo (March 11, 2022) – Konica Minolta, Inc. (Konica Minolta) is pleased to announce that the company has launched AeroDR TX m01, a mobile X-ray system featuring a wireless dynamic digital radiography function in Japan. The company will roll out the product in other regions in stages.

AeroDR TX m01 is a mobile X-ray system with dynamic digital radiography capability at the bedside in intensive care units (ICUs), hospital wards, and operating rooms. It enables dynamic radiography in addition to conventional static radiography without having to transfer a patient to an X-ray room, thus helping to provide appropriate treatment and prevent aggravation of symptoms.

Value Proposition of AeroDR TX m01

1. Enabling more detailed management of clinical condition of patients

Mobile X-ray systems have become increasingly important to manage the clinical condition of patients hospitalized in isolation wards due to infectious diseases, including Covid-19, and those receiving treatment in ICUs. In ICUs in particular, the patient's condition may change rapidly, so quick and accurate diagnosis is crucial. However, conducting advanced examinations takes time and effort because it is difficult to transfer a seriously ill patient to an examination room.

AeroDR TX m01 provides dynamic digital radiography by continuous and pulsed X-ray radiation. Dynamic radiography can be performed at the bedside without having to transfer the patient to an X-ray room. In addition to conventional static radiography, it visualizes the movement of the diaphragm and entire lungs associated with the patient's respiration, thus providing more information to physicians. This will improve the ability of physicians to make diagnoses even by bedside radiography, offer appropriate treatment, and prevent symptoms worsening.

2. Improving the safety and work efficiency of medical professionals

AeroDR3 1417HD2/1717HD2, a cassette type digital X-ray system used in combination with AeroDR TX m01, acquired the SIAA mark[*1] of the Society of International sustaining growth for Antimicrobial Articles (SIAA) of Japan. This helps reduce the risk of nosocomial infections caused by this system and improves medical safety.


AeroDR3 1417HD2

AeroDR TX m01 has an alignment function to indicate whether the angle of the X-ray tube, which emits X-rays, matches the angle of

AeroDR3 1417HD2/1717HD2, which receives the X-rays. This function facilitates radiography positioning on soft beds where it is difficult to adjust the angle, thus improving radiography efficiency at the bedside in ICUs and hospital wards.

3. Improving the value of diagnosis by dynamic radiography

The radiography data generated by AeroDR TX m01 undergoes Konica Minolta's proprietary image processing via DI-X1, a dynamic radiography analysis workstation, to offer various types of information.

Visualization of Movement

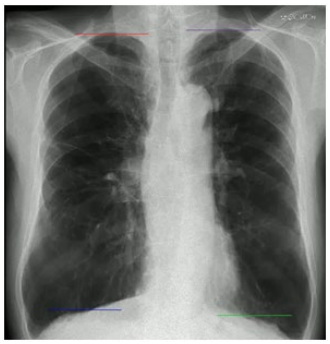
Image processing solutions for improving visibility are also available for dynamic radiography.

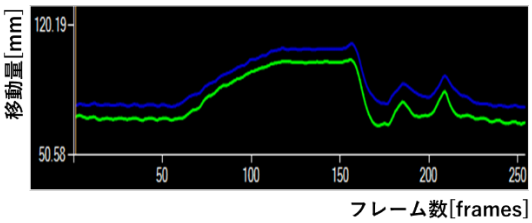
BS-MODE (Bone Suppression Processing)
Suppresses the clavicle and ribs to improve visibility in the lung field

FE-MODE (Frequency Enhancement Processing)
Improves the visibility of each structure to make it easier to observe movement

Quantification of Movement

The movement of structures such as the diaphragm can be quantified and displayed graphically. Quantification of movement helps introduce unconventional perspectives on symptoms and functional evaluation.



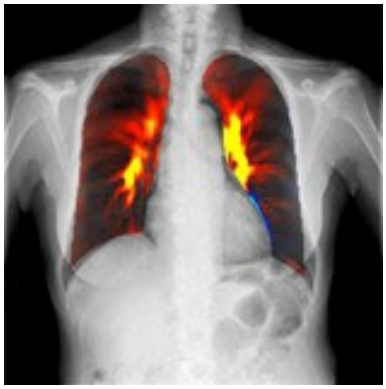


DM-MODE (Diaphragm Movement Processing)
Graphically displays the movement of the diaphragm

Extraction of Changes in Signal Values Associated with the Movement of Lung Tissues

Changes in the signal values associated with the behavior of lung tissues, such as alveoli and pulmonary arteries and veins, are displayed on the monitor to reveal the subtle *in vivo* movement. This will provide useful information for functional evaluations in plain radiography examinations.

PL-MODE
Extracts and displays the changes in density of the lung field associated with respiration



PH2-MODE
Extracts and displays the changes in density of the lung field associated with pulsation of blood vessels

With this dynamic digital radiography system, Konica Minolta hopes to change the conventional view that general radiography examinations are based on static radiography, and to contribute to improving the diagnosis accuracy in screening examinations. The company will promote clinical research at partner facilities in and outside Japan and keep striving to visualize vital functions. It will also provide more efficient diagnosis and treatment for patients by utilizing its proprietary image processing technology, offer new value that helps curb medical expenses, and expand the healthcare business.

External Dimensions of AeroDR TX m01

540 mm (W) × 1,220 mm (D) × 1,290 mm (H) (with the arm folded)

*1: The mark was established by the Society of International sustaining growth for Antimicrobial Articles (SIAA), in which Japanese antibacterial testing institutions and manufacturers of treated antibacterial products participate. The mark is awarded to treated antibacterial products that meet the requirements of antibacterial performance, safety, and appropriate labeling.

AeroDR3 is the commercial product name of SKR3000.
AeroDR3 1417HD2/1717HD2 is the commercial product name of P-65/P-75 of SKR3000.

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