Label Description: Digital Angiography System Trinias

Founded in 1875, Shimadzu Corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support and applications centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our website at **www.shimadzu.com**

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Management System
ISO 9001:2015
ISO 13485:2016
www.tuv.com
ID 9091004755

Shimadzu Corporation Medical Systems Division has been certified by TÜV Rheinland as a manufacturer of medical systems in compliance with ISO9001:2015 Quality Management Systems and ISO13485:2016 Medical Devices Quality Management Systems.

Remarks:

- Every value in this catalogue is a standard value, and it may vary a little from the actual at each site.
- The appearances and specifications are subject to change for reasons of improvement without notice.
- Items and components in the photos may include optional items. Please confirm with your sales representative for details.
- Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
- Before operating this system, you should first thoroughly review the Instruction Manual.

Scan me, feel Trinias!

6032-04209-ODPTC

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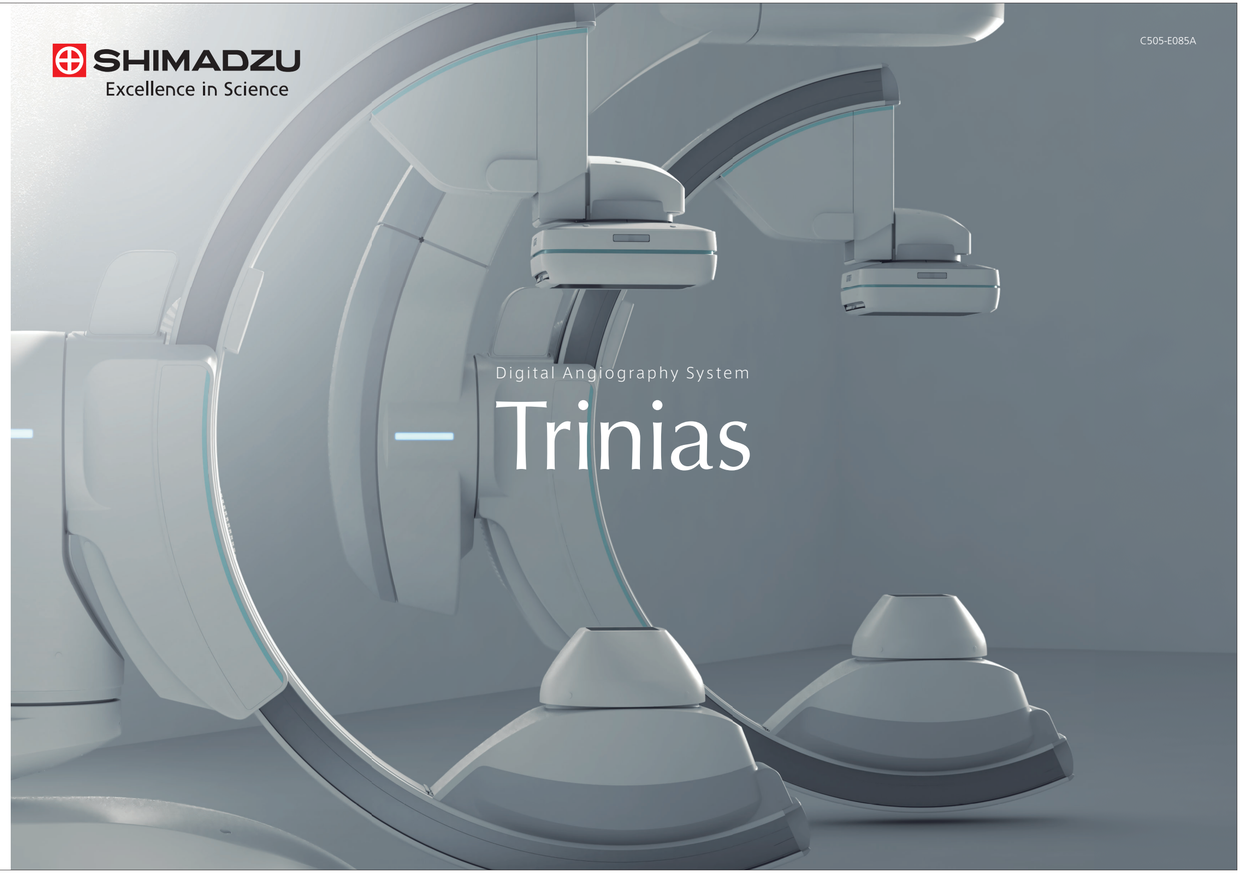
Excellence in Science

C505-E085A



Digital Angiography System

Trinias

Solutions for Today's Challenges in the Workplace

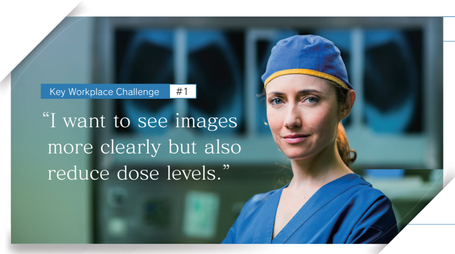
The global shortage of healthcare workers is predicted to reach 18 million[※1] by 2030,
with the cost of labor inefficiencies estimated to be 500 billion dollars[※2] per year.
As a result, the healthcare system, which sustains our lives,
will require greater workplace productivity than ever before.

Shimadzu redesigned the workflow of our Trinias™ angiography systems to
offer improved solutions for the challenges currently facing medical treatment centers
and to address the challenges that they will face in the future.
We started by examining the basic policies about developing angiography products,
which resulted in identifying three key design concepts:
ALARA Design, Lean Design, and Sustainable Design

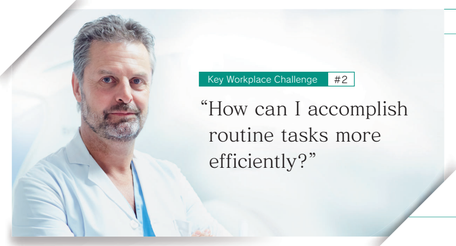
Shimadzu, a leader in healthcare technology,
has moved medical treatment another step closer to the future.

※1,2 WHO (World Health Organization) : refer 29th-June-2021
https://www.who.int/news/item/20-09-2016-un-commission-new-investments-in-global-health-workforce-will-create-jobs-and-drive-economic-growth
http://apps.who.int/iris/bitstream/handle/10665/44371/9789241564021_eng.pdf;jsessionid=04851B39C41643ADB831D97DA14F3E41?s2equence=1

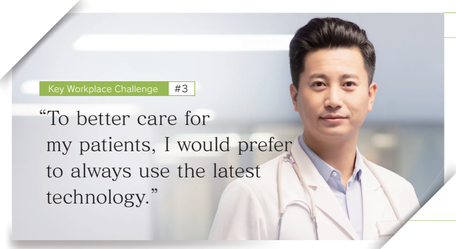
Three Key Concepts to Solve Workplace Challenges



“Interventional procedures involve a series of dilemmas. The most critical of these dilemmas requires using the lowest-dose mode possible without jeopardizing image quality. In some cases, it could actually increase total dose if it requires multiple image acquisitions. Is there any other way to reduce the dose for patients?”



“Despite physicians wanting to operate the system themselves, they need to focus on the catheter and patient, or they struggle with workflow that does not fit with their work practices. Pressing multiple buttons to use a single function is too inefficient.”



“Even products that are not very old can feel like their performance level is from a previous era. It becomes difficult to safely adopt new procedures when the system is not due to be replaced and doesn’t include the latest technology built for the latest procedures.”

Trinias
Concept

ALARA* *Design*

Improving the Quality of Medical Treatment while Fully Protecting the Health of Medical Workers and Patients

Based on the concept “As Low As Reasonably Achievable (ALARA),” the aim is to minimize the mental stress on personnel and patients by not only reducing X-ray dose levels but also by improving treatment precision with improved image quality.

*ALARA: As Low As Reasonably Achievable

Lean *Design*

Offering Stress-Free Operation and Workflow for Medical Workers Involved in a Race where Every Minute and Second Counts

Offer intuitive and flexible operations for achieving optimal workflows and shorter procedure times. Aim to create a comfortable working environment by designing products that support the flexibility needed to be operated by various personnel, regardless of their expertise level.

Sustainable *Design*

Always Providing a State-of-the-Art Medical Environment without Compromising that Sense of Satisfaction by the Users after Introducing a New System

Always achieve a state-of-the-art environment by offering a platform for growth that can maintain pace with rapid technological advances and ensure products do not become obsolete before the end of their service life. Aim to support hospital management by offering future expandability while minimizing operating costs and downtime with product design that eliminates waste and provides continuous after-sales services.

ALARA *Design*

Improving the Quality of Medical Treatment while Fully Protecting the Health of Medical Workers and Patients

Low Doses but Clear Images

AI-based image processing achieves the Visibility of fluoroscopy images needed to perform procedures while reducing dose levels.

The use of AI (deep learning) technology has enabled the successful achievement of both noise suppression and enhanced device Visibility of fluoroscopy images. Operators can clearly see what they want to see while achieving lower dose levels.

Dose rate ↓40%* / Visibility ↑25%**

Fewer Errors for Shorter Procedure Times

Better imaging solutions provide improved real time guidance, contributing to error prevention on minimally invasive procedures.

Unnecessary repeat acquisitions are reduced as low as possible using unique applications to help compensate for devices that are difficult to visualize, movement of the beating heart or from breathing, and patient body movement. Improved imaging helps shorten procedure times and reduces stress and dose levels for medical workers and patients.

Real-time Image Guidance ‘15’

User aids to Reduce Dose Level Even Further

The specifications and design encourage awareness of dose reduction, thus lowering exposure levels to medical workers and patients.

The system presents the cumulative dose values for each X-ray exposure area and notifies operators of the total dose applied during each examination. Providing total dose values calculated based on the trends of similar procedures can further increase awareness about minimizing dose levels during procedures.

Dose concierge

* : Comparison with our conventional system under standard dose ratio(Air Kerma) at 7.5pps and 10pps. ** : Comparison with our conventional system under the equivalent dose ratio (Contrast Noise Ratio)

Lean *Design*

Offering Stress-Free Operation and Workflow for Medical Workers Involved in a Race where Every Minute and Second Counts

Perform Operations with a Single Action

Complex operations can be combined into a single-step function. It enables intuitive and smooth operations.

Complex operations can be executed in a single step. Single step operations reduce the number of operations and it enables assigning easy-to-grasp icons which allows first-time users to learn quickly.

Design includes over 100 single-step functions

Freely Customizable to Meet Users' Needs

Simple operation and customizability help users achieve their optimal workflow.

Optimal workflow depends on the user. The system is designed for extremely simple operation while also being flexible enough to allow each user to create their ideal flow. Users can achieve the best possible user environment for themselves.

The number of configurations is infinite

Comfortable Operations for Both Team Operation and Single User Operation

This design feature provides an operating environment suitable for any team environment and helps improve work efficiency.

In addition to providing an environment where all operations can be completed from the tableside, improved functionality supports concurrent operations by multiple people and achieves an operating environment that allows interchangeable user operation. Team operation makes it possible to work comfortably and efficiently.

Supports single or multiple operators

Sustainable *Design*

Always Providing a State-of-the-Art Medical Environment without Compromising that Sense of Satisfaction Felt after Introducing a New System

Periodic Updates Keep the System Up-to-Date

Periodic updates to the software package ensure the latest functionality is always available.

Software update packages are also available on fixed-term contracts. Functionality can be updated based on the changing needs in the workplace, allowing institutions to access a state-of-the-a rt treatment environment while minimizing cost.

Subscription

After-Sales Services Ensures Systems Will Provide Long Life Cycles

System design provides powerful support to reduce downtime, reduce installation and maintenance time and to ensure a continuously reliable operation.

Improvements to our delivery process will shorten the time between delivery and startup. A simplified design is robust and easy to maintain, and when combined with after-sales-service solutions, ensures high performance for the product's lifetime.

Remote Maintenance Support

Eco-design for Future Expandability

The highly expandable platform design makes it easy to accommodate changes in clinical practices.

In addition to the versatile hardware design, the functionality of the system can be easily expanded or upgraded. It can smoothly keep pace with changes, such as offering new types of procedures or entering new clinical services as a result of changing hospital strategies.

eBORN program*

* : This program may not be applicable due to the regulations of each country. Please contact our sales parson to clarify its availability.