



Non-Profit Organization

Medical Shinansha

The knowledge and experience of top specialists
are now within your reach!

Diagnostic Imaging Knowledge Service



Diagnostic Imaging Tutor

Chest Radiography

Abdominal Ultrasonography
(Under Development)

Diagnostic imaging knowledge service built around a tutorial database called d-Core.

Diagnostic Imaging Tutor

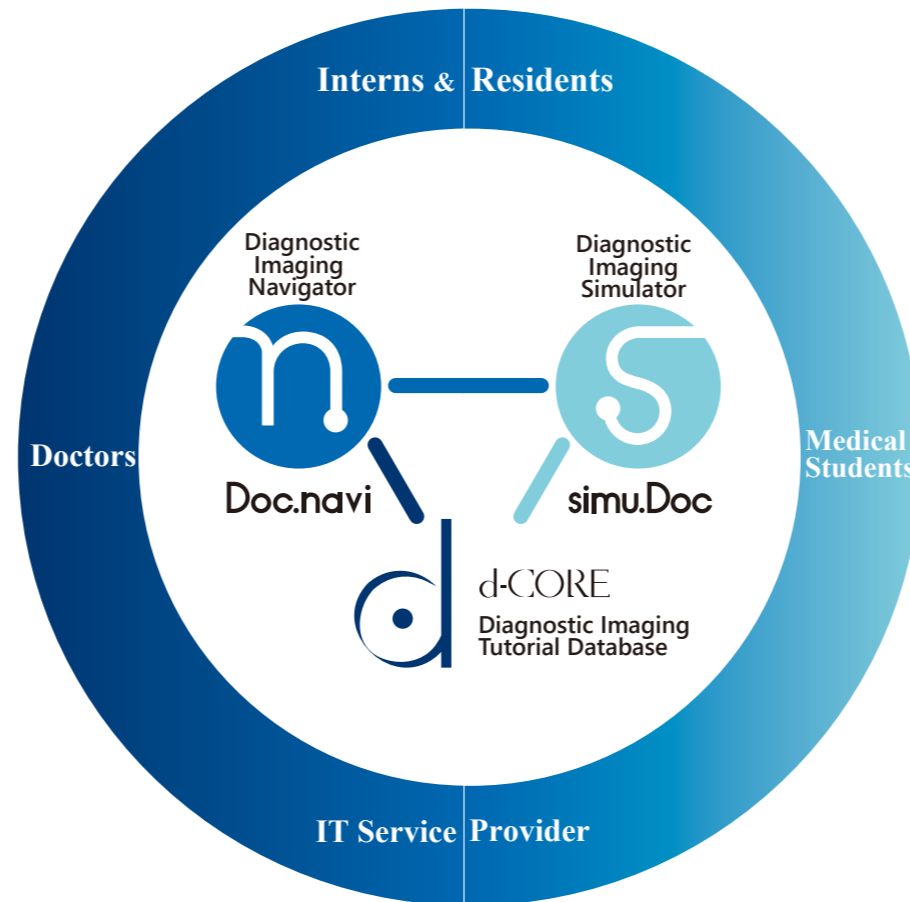


Diagnostic Imaging Navigator **Doc.navi**

Our d-CORE supports users in procedures, such as identifying diseases, creating medical records and explaining diseases to patients. You'll learn both efficient clinical management and win patient confidence while supported by the latest medical technology based on the knowledge and experience of specialists.

- Supports medical diagnostic imaging
- Supports needs in community medicine and telemedicine

for supporting



Diagnostic Imaging Simulator **simu.Doc**

We also provide a training application to acquire the interpretative process using case images that give maximum learning performance. This tool called simu.Doc helps everyone from interns and residents to medical specialists learn or relearn accurate diagnosis of medical imaging that requires both specific knowledge and experience.

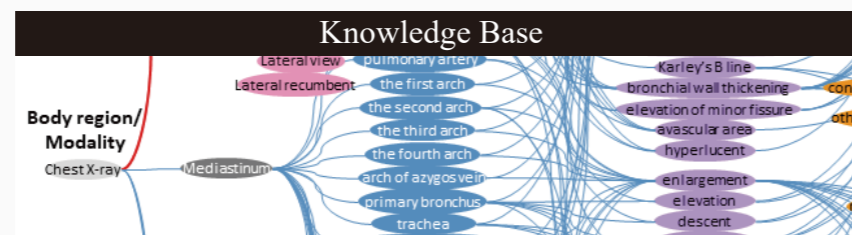
- Learning materials for medical students
- Teaching materials for medical instructors or physicians who train interns and residents for skill improvement

for improving skills



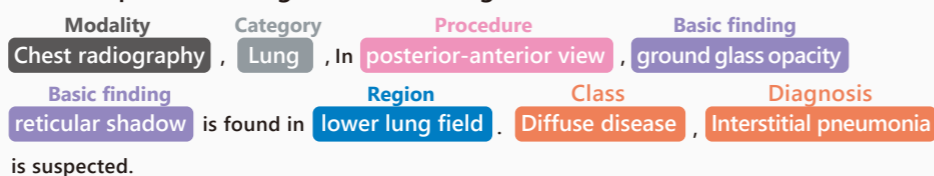
Diagnostic Imaging Tutorial Database **d-CORE**

Information coming in from the diagnosis flow process is provided by linking knowledge bases with imaging case databases.



The knowledge base is constructed based on a huge case data by extracting and grouping elements such as the "region", "basic findings", and "diagnosis" necessary for diagnostic imaging and then linking the respective elements. Thus, an evolution from data to knowledge has been achieved by Semantic Web technology that gives meanings to information.

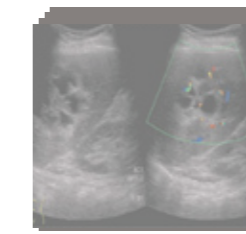
An example of the diagnostic flow using d-CORE



Imaging Case Database



About 500 cases for Chest Radiography

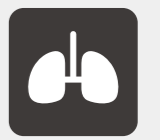


About 250 cases for Abdominal Ultrasonography

The imaging case database is constructed by extracting highly useful cases and adding information such as patient's gender, age, definitive diagnosis and reports given through correlation with the knowledge base to anonymized case images. This greatly expands usage for a wide range of applications.

Number of cases as of October 2024.

A wide range of knowledge and experience essential for diagnostic imaging are available.



Chest Radiography



Abdominal Ultrasonography (Under Development)

Doc.navi supports users who need to improve their skills for diagnosing highly specialized modern medical imaging. You will also discover both more efficient clinical management and win patient satisfaction through our Doc.navi support.



1 Procedure ▶ 2 Region ▶ 3 Basic finding ▶ 4 Diagnosis

Procedure	Region	Basic findings	Explanation	Diagnosis
posterior-anterior view	whole lung field	no remarkable findings		Infectious disease
lateral view	apex field	abnormal shadow		old tuberculosis ¹⁾
lateral decubitus view	left upper lung field	ground glass opacity		tuberculous lesion
	middle lung field	reticular shadow		tuberculoma ¹⁾
	lower lung field	linear shadow		pneumonia ¹⁾
	hilum	trabecular shadow		aspiration pneumonia ¹⁾
		consolidation		Airway disease
		nodular shadow		atelectasis ¹⁾
		granular shadow		partial lung atelectasis
		tumor shadow		Neoplastic disease
		cystic change		metastatic lung cancer ¹⁾
		volume loss		lung cancer ¹⁾

Very likely disease shown in dark blue

Function 1

Diagnostic imaging navigation

Doc.navi guides users to select a very likely or high-probability diagnosis step by step from "procedure", "region", and "basic finding".

- More accurate diagnosis by listing possible diseases
- Easy to take follow-up actions by presenting the possible diseases
- More efficient diagnosis by retrieving and showing suspected cases instantly

Function 2

Imaging cases search

Selected and useful case images have information on "patient attribute", "definitive diagnosis", "medical record" and "specialist's explanation." A search of imaging cases can be instantly made from "basic finding", "diagnosis", etc. to compare with your patient's image. This helps you make a smooth and efficient diagnose.

Case explanation

Each case imaging contains specific explanations with comments by specialists about how they figured it out.

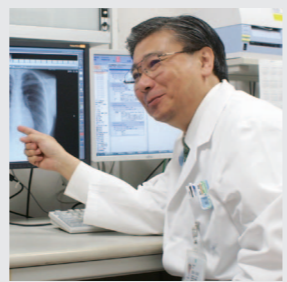
Other functions

- Support for creating medical records**: Medical records are automatically and immediately prepared by selecting "region", "basic finding" and "diagnosis". This function shortens the time and trouble needed in creating your diagnosis and medical records.
- Commentary on findings**: Makes diagnosis easy by reviewing medical imaging for definite signs that identify a disease or problem.
- Disease explanation**: Simple explanations for "diagnostic results", "explanation about disease", "treatment plan", "precautions", etc. are displayed that can be printed out for patients.

Recommender's VOICE

Eirou Sakai, M.D.,Ph.D.
 Chief of Radiation Department and Director (Palliative Medicine)
 Vice Director, Hyogo Prefectural Kakogawa Medical Center

Medical imaging with poor image detail and wrong interpretations in medical image reading can prove harmful to patients. The quality of diagnoses given by interns and residents and supportive reading by radiological technologists depends on the individual. I do believe that Doc.navi will support users by improving their overall capacity to read and interpret medical imaging.



Testers' VOICE

Doctors, interns and residents in hospitals or clinics, etc.

- This is a real professional tool for accurate diagnosis that supports making prompt decisions for patients
- When interpreting a medical image is difficult, the sample cases displayed here guide us in making a correct diagnosis
- Easy and supportive when explaining diagnostic results to patients since it shows them case images
- Make preparing the medical records simple and quick
- Makes it easy to understand the concepts and procedures of diagnostic imaging
- A great help in post-graduate training for recalling clinical findings learned while an intern or resident

Diagnostic Imaging Simulator



Build up your skill in pinpointing abnormalities and interpreting symptoms from medical imaging by simulating the diagnostic know-how of medical specialists and supervisors.



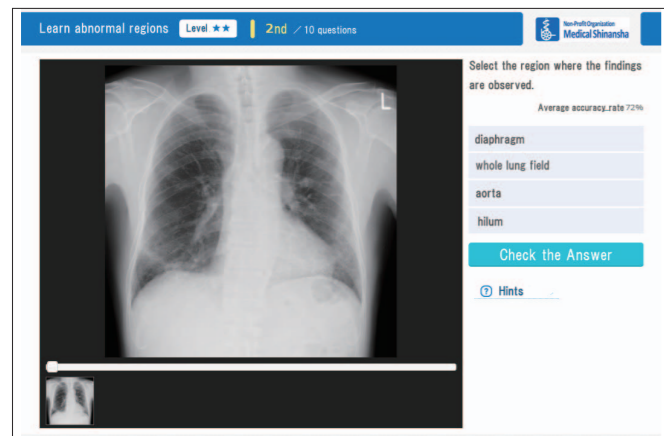
Educate yourself online -anytime and anywhere!

The most effective cases selected from leading university hospitals in Japan

Build up your skill in pointing out abnormalities and interpreting symptoms from medical imaging

Basic

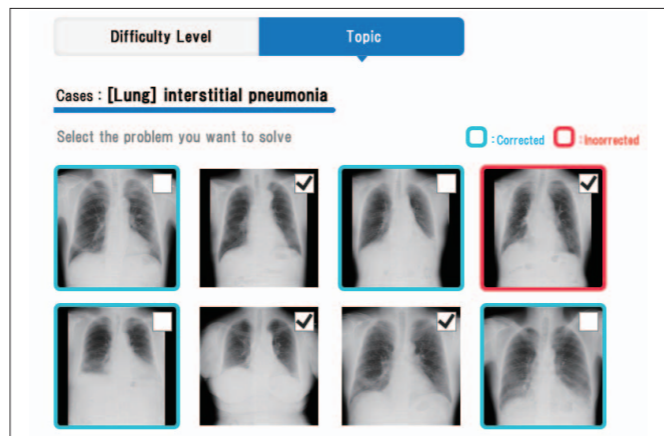
You can repeatedly drill yourself on the basics through practice questions. A self-assessment function gives your performance levels.



Typical exercises by the difficulty level

- 1 Select any difficulty level of the contents to learn.
- 2 Select an answer from 4 or 5 choices. Hints may help you.
- 3 Check answers and explanations with "Check the Answer."
- 4 Check your record and rank after answering all questions.
- 5 You can try the exercise again by just clicking "Again."

Advice for "Basic": Check your performance and the correct answers right after finishing all questions. | Check your level and achievement from your own record list. | You can repeatedly learn on specific cases.



Specific exercises by the topics

- 1 Select "Findings" and "Cases" to learn.
- 2 Select an answer from 4 or 5 choices. Hints may help you.
- 3 Check answers and explanations with "Check the Answer."
- 4 Answer all questions then check your record and performance.

Practice Clinical diagnostic imaging is shown on the screen. Simulating diagnostic experiences improves your image interpretative skill.

Exercise flow

- 1 Set the scope of questions, difficulty level, and other items on the initial screen.
- 2 Check case images and select terms from the Diagnostic Imaging Navigation.
- 3 Compare your answers with correct answers and explanations.
- 4 Answer all questions and then check "Record" to review your performance.

Advice for "Practical": Set a degree of difficulty that matches your own level | By narrowing down answers using Diagnostic Imaging Navigation you can acquire the necessary thinking for diagnostic process | After checking your answer, deepen your understanding by viewing the case commentary



Naoki Mihara, M.D., Ph.D.
Diagnostic Radiologist & Director
Former Director of Medical Information Department,
Hiroshima University Hospital

Master the knack of picking out abnormal signs in medical imaging on sight!

The role of medical imaging is becoming increasingly important in modern medicine. It is essential to acquire image interpretation skills to change them into meaningful information. Medical imaging contains much information, so I would like all medical professionals to learn how to interpret images by applying systematic learning methods.

To achieve this, by looking at many cases, you can understand what normal images look like and then check for abnormal images. We hope that "simu.Doc" will be a valuable tool for acquiring skills in accurate image interpretation.

Terms of service and license agreement

Diagnostic Imaging Navigator & Diagnostic Imaging Simulator

Both Doc.navi and simu.Doc. online services are available on an annual or semiannual contract basis. We assume that typical users will include medical doctors, interns and residents working in hospitals and clinics to become medical specialists as well as students in medical schools or technical colleges. You can access our website "<https://www.medicalshinansha.or.jp/en/inquiry/>".

Diagnostic Imaging Tutorial Database "d-CORE"

Non-exclusive user license for d-CORE is available to interested groups and/or businesses, especially for those producing and developing content and applications for medical services in the IT area involving the health and medical sectors. If you want our license agreement, please contact us via our website "<https://www.medicalshinansha.or.jp/en/inquiry/>".

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● Chest Radiography



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Former Director of Medical Information
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Japan Radiological Society, Supervisor

● Abdominal Ultrasonography We will develop this in partnership with you. We appreciate your cooperation.



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Disclaimer: This "Diagnostic Imaging Tutor" is not meant to replace one's clinical expertise but rather it serves as an adjunct to enhance the knowledge and skills of medical students or professionals for better quality of diagnosis.



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