product catalog

JAPAN BRAND

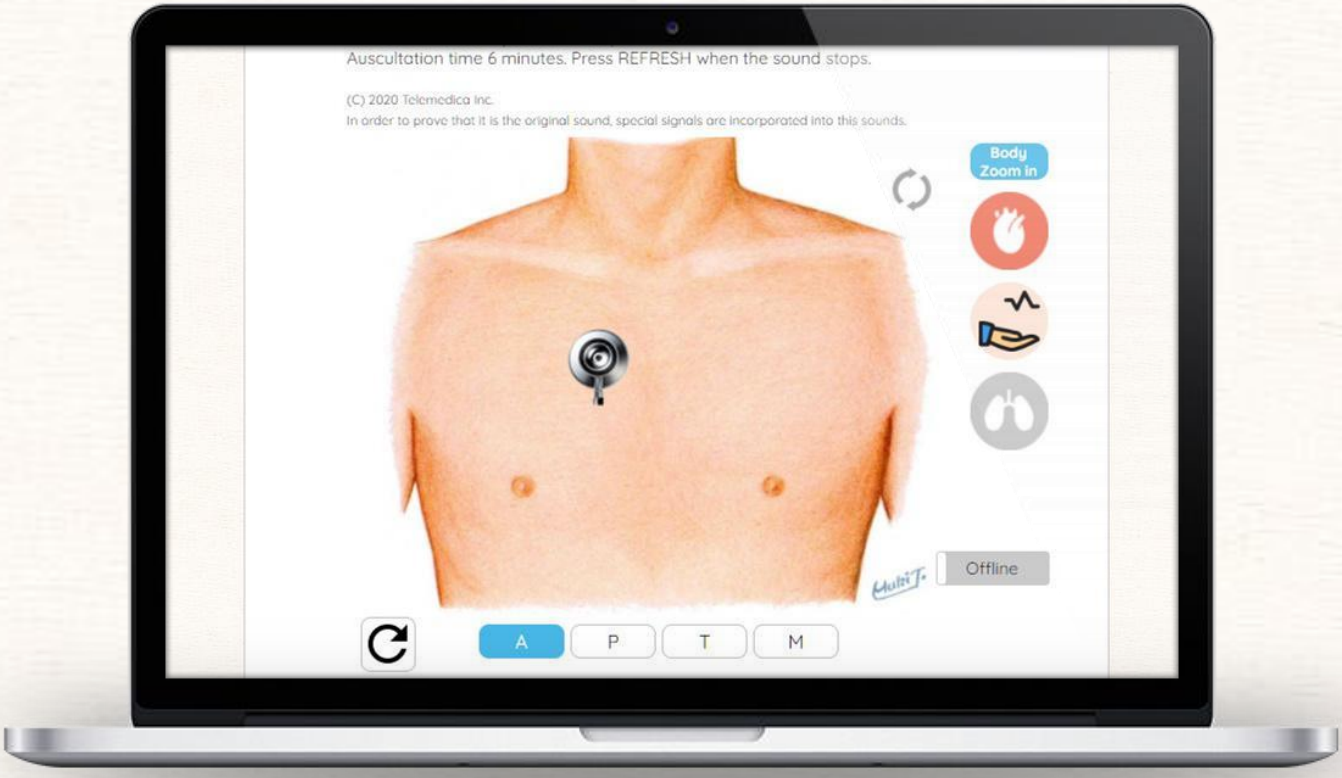
Japan e-Learning Awards 2018

Japan e-Learning Awards 2021

iPax

Virtual auscultation simulator

Inspection, **P**alpation, **A**uscultation, Examination



The iPax system is a cloud-based "Physical assessment education system" that was developed based on the ausculaide. We offer it on an annual contract.

The Kikuzo speaker and raptop computer in this photo are not included with the system.

JP Patent 6328223

US Patent 11,113,990

iPax
Virtual auscultation simulator

Supervisor

Inspection, **P**alpation, **A**uscultation, Examination

Dr. Tsunekazu Takashina,
MD.PhD
JECCS president,
FACC, FAHA

The more you use an iPax with Kikuzo speaker, the more acquire auscultation skills.

The cardiology patient simulator "K" was developed in 1993. In 1997, in this study its educational effectiveness were reported in CARDIOLOGY. Even today, most of the university medical schools and medical colleges in Japan as well as many foreign countries have been using this simulator for their educational activities.

The advancement in diagnostic instruments using high technology has been remarkable in the last few decades. However, there is a tendency for many clinicians to become too dependent on these highly sophisticated instruments and to forget the importance of bedside clinical skills.

I believe that we have an excellent inborn sensor to recognize "organ language" and are able to detect minor changes of physical findings, such as heart sounds or murmurs of heart diseases.
The iPax and Kikuzo speaker are used as an exciting teaching tool, whenever and wherever the self-learning of auscultation is needed. Please start with normal heart sounds and advance to each case at your own pace. So, you will be able to recognize various abnormal sounds and murmurs. The "Kikuzo" will be a great auscultation aide for you.

Dr. Takeshi Saraya,
MD, PhD
Kyorin University School of Medicine, Department of Respiratory Medicine

Auscultation is an important skill for clinical practice.

Auscultation is an important skill for clinical practice.
Physicians can use the stethoscope whenever they want, which is an indispensable for discovering the etiologies and/or information even after the timing of modern technologies were applied.
Furthermore, auscultation itself can give preferable emotional effects with the confidence for patients.
Physicians should image the lung sounds for individual respiratory disease just before auscultation.
Learning of auscultation skills for discriminating the respiratory diseases is pivotal issue in the view of imaging specific lung sounds in each anatomical location.
In this regard, the “Kikuzo speaker and iPax” will provide an important and useful lung sounds for physicians, which can clearly and reproducibly learn the representative and/or essential lung sounds in general practice.

iPax
Virtual auscultation simulator

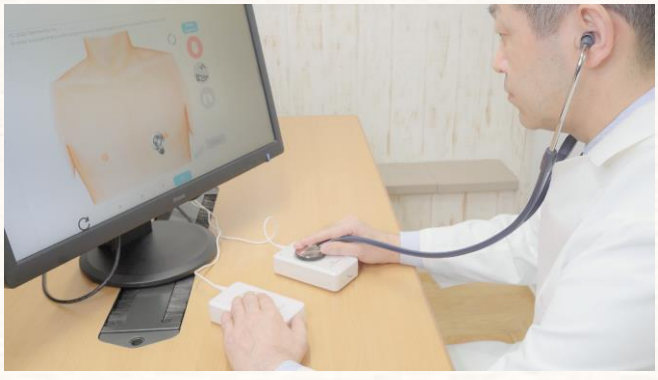
Supervisor

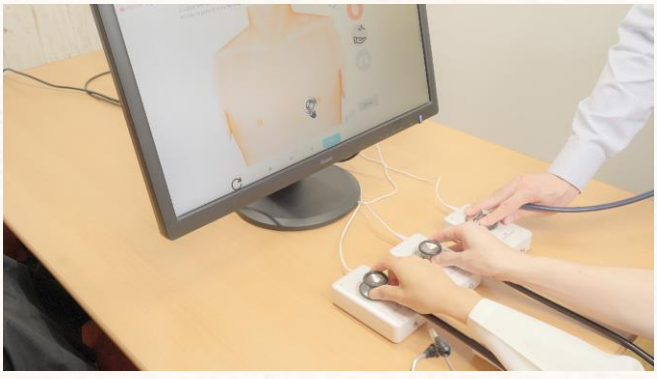
Inspection, **P**alpation, **A**uscultation, Examination

Dr. Chiaki Hidai,
MD, PhD
Nihon University School of Medicine, Department of Medical Education Center

Auscultation is not done with the ears, but between the ears.

I remember 35 years ago when I first realized, "I have finally grasped the art of auscultation!" As a new intern I was assigned to the cardiology ward where one of my tasks was to listen to the chest sounds of a patient with five different cardiac conditions: mitral valve stenosis, mitral valve regurgitation, aortic valve stenosis, aortic valve regurgitation, and tricuspid valve regurgitation. But all I heard was a whirring sound and had no idea what it was. From that day on, every morning when I went to the ward, I spent dozens of minutes auscultating her chest. One day, about 10 days later, I suddenly heard several distinct sounds. I was able to differentiate the sound of mitral stenosis from that of aortic regurgitation. Auscultation is not something that can be understood by attempting it once. Listening carefully over and over again is what turns a noise into meaningful sounds. It is said that auscultation is not done with the ears, but between the ears. I encourage everyone to train what lies between the ears by listening carefully again and again.



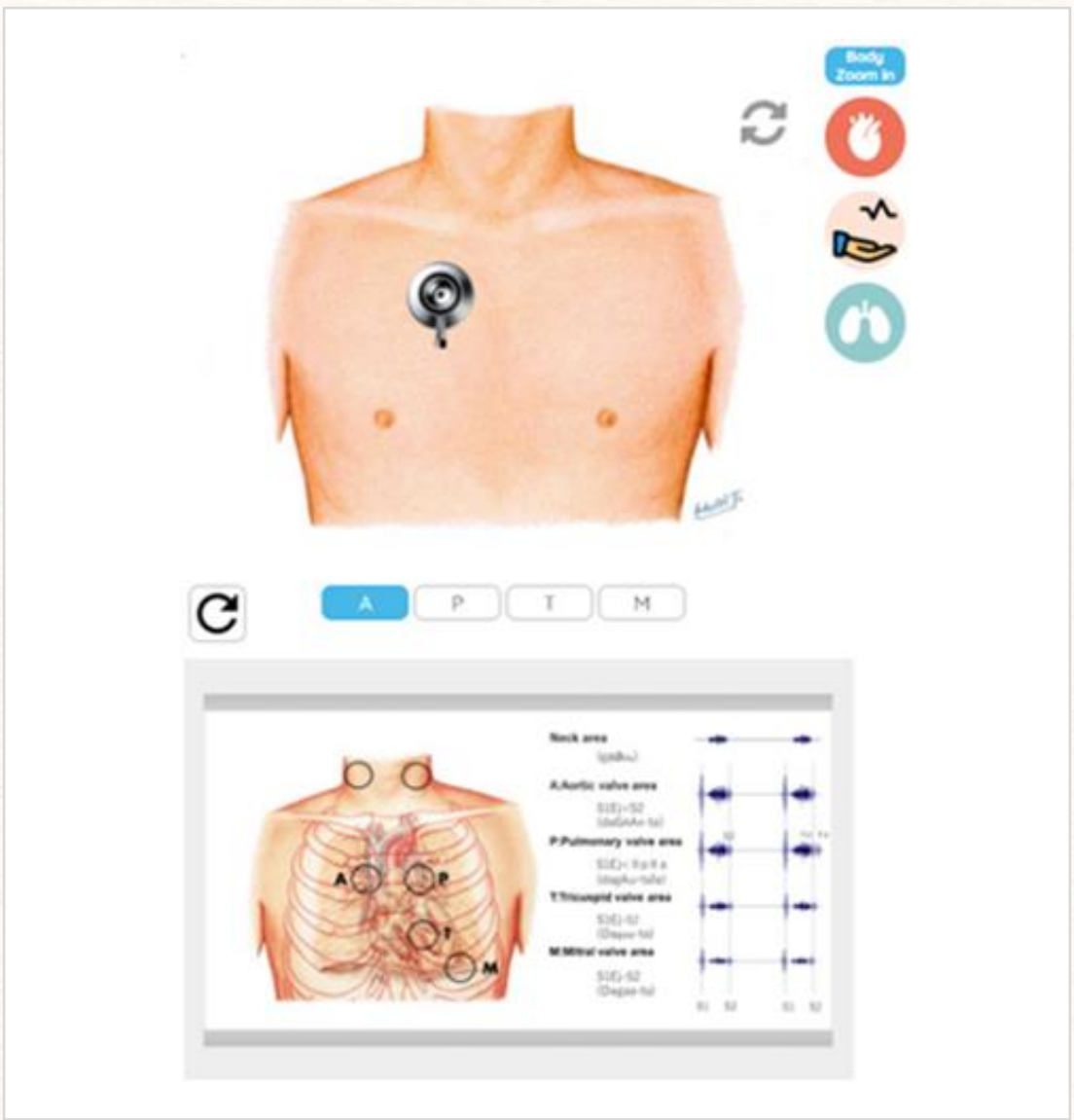


iPax
Virtual auscultation simulator

Heart sounds cases

Inspection, **P**alpation, **A**uscultation, Examination

The chest piece is moved to the "anterior and/or posterior illustration auscultation area" on the screen to listen. At the chest piece area, sounds are heard.
Below the chest illustration is the phonocardiogram.



After 6 minutes, the sound source stops.
To play the sound again, press "Refresh" at the bottom left of the screen.

The auscultation sounds of the iPax are optimized for the Kikuzo speaker. You can use earphones or another speaker output, but the sound quality may differ.

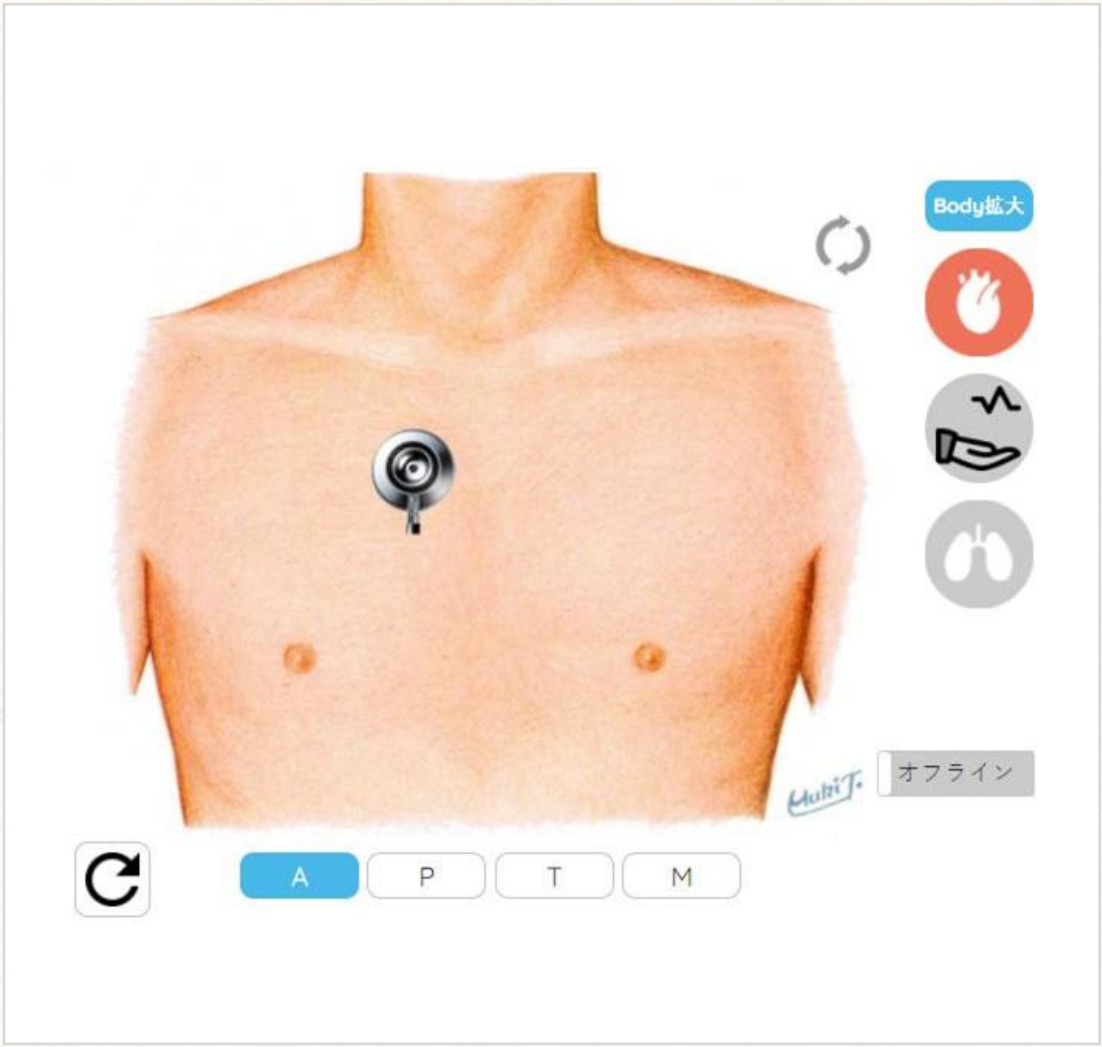
iPax
Virtual auscultation simulator

Heart sound cases

Lung sounds OFF

Inspection, **P**alpation, **A**uscultation, Examination

When lung sounds are turned off, only heart sounds are played.
Press the "A, P, T, M" buttons under the chest illustration to move the chest piece to each area (strongest point) and listen the sounds of that area. Other than the "strongest point", the heart sound/murmur is decreased. HR can also be adjusted.



After 6 minutes, the sound source stops.
To play the sound again, press "Refresh" at the bottom left of the screen.

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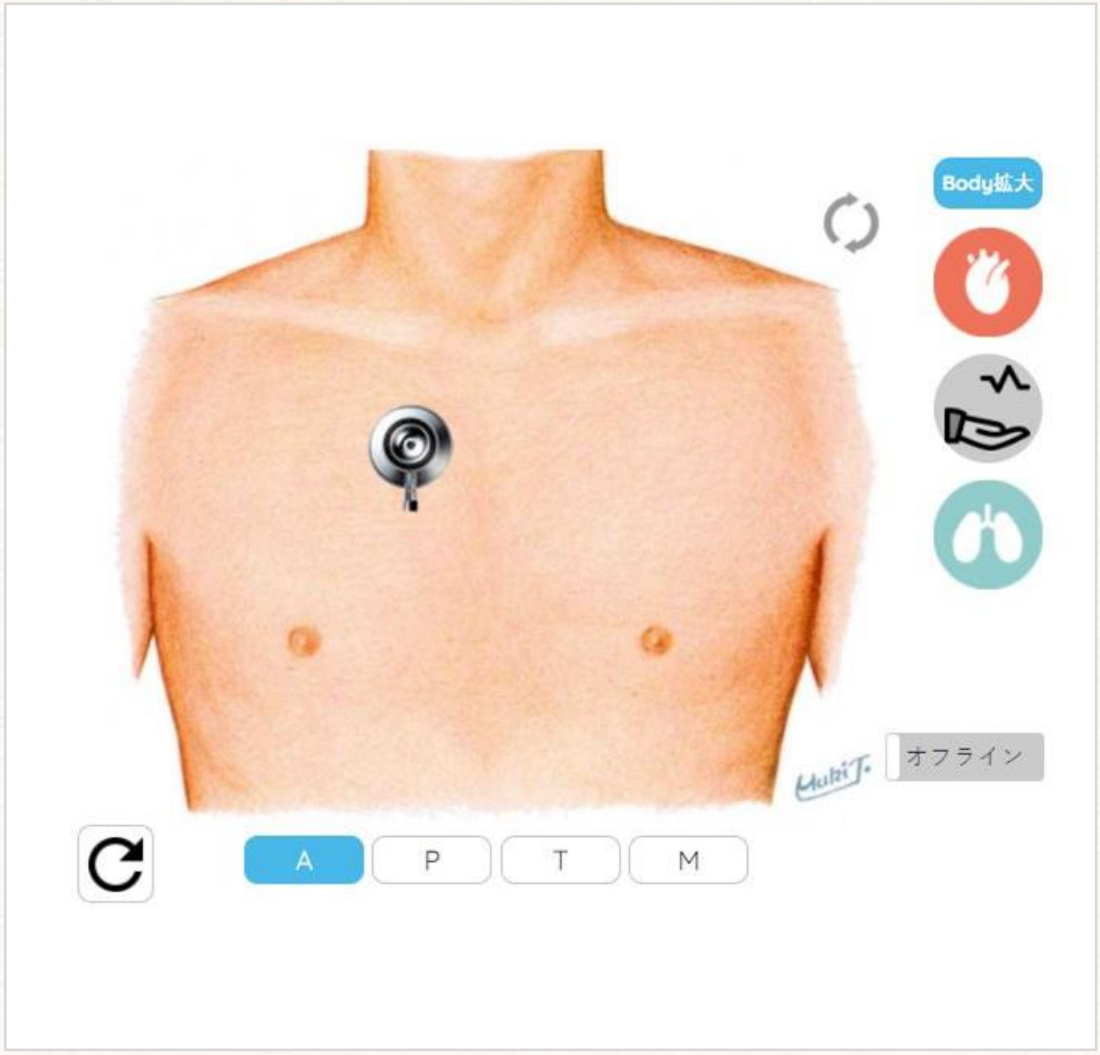
iPax
Virtual auscultation simulator

Heart sound cases

Lung sounds ON

Inspection, **P**alpation, **A**uscultation, Examination

If you turn on “lung sounds", you can listen to both heart and lung sounds at the same time. When you press the "A, P, T, M" buttons at the bottom of the screen, the chestpiece moves to each part (strongest point) and the sound of that part is played.Other than the "strongest point", the heart sound/murmur is decreased.



After 6 minutes, the sound source stops.
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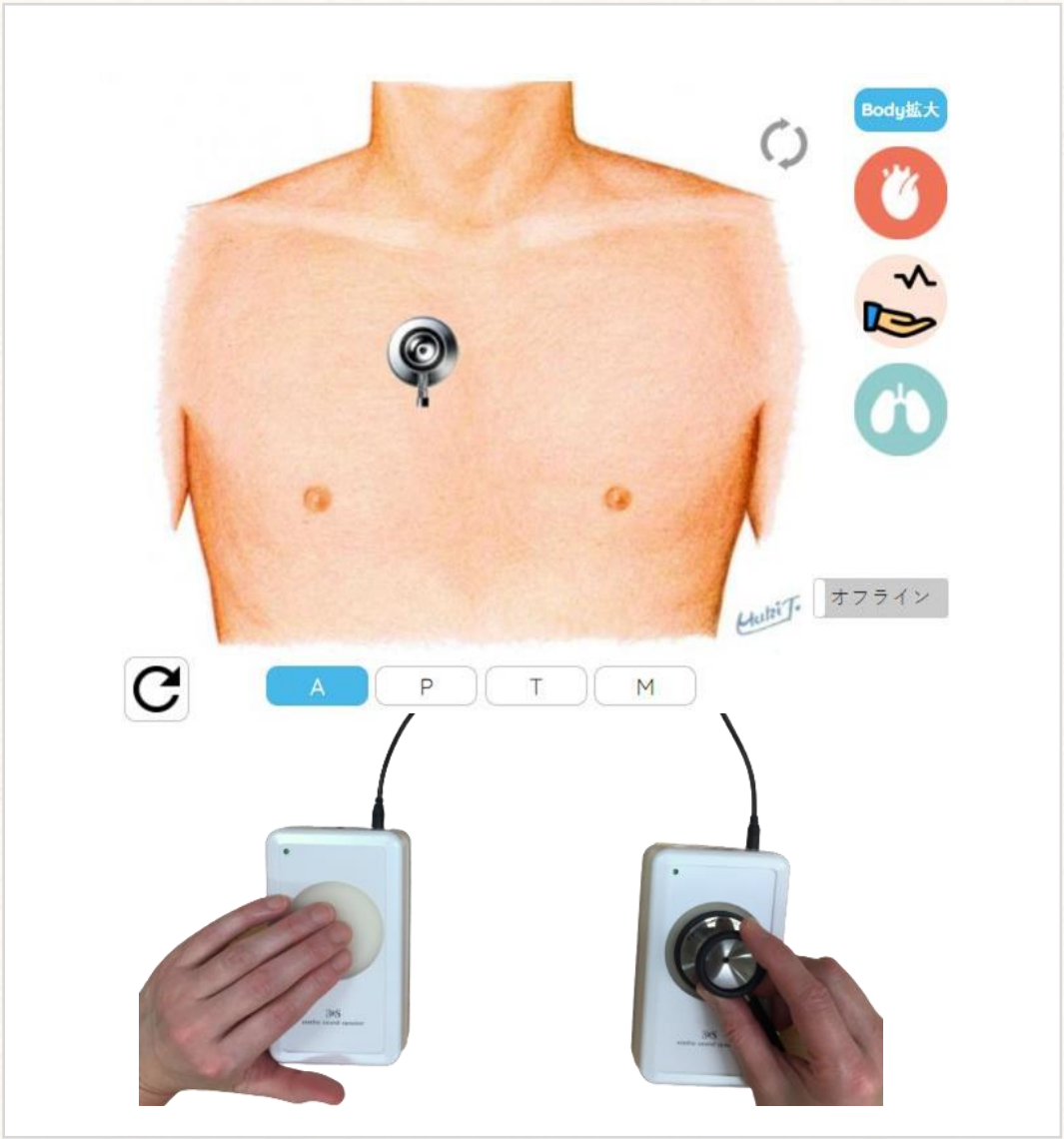
iPax
Virtual auscultation simulator

Heart sound cases

Pulse palpation ON

Inspection, **P**alpation, **A**uscultation, Examination

If you turn on the pulse function, you can listen to the heart sound while taking the pulse. In this case, you need two Kikuzo speakers as well as a stereo branch cable.
Turn up the volume of the Kikuzo speaker on the pulse side (L side) and gently palpate the silicon surface. The pulse is adjusted to the timing of the radial artery.



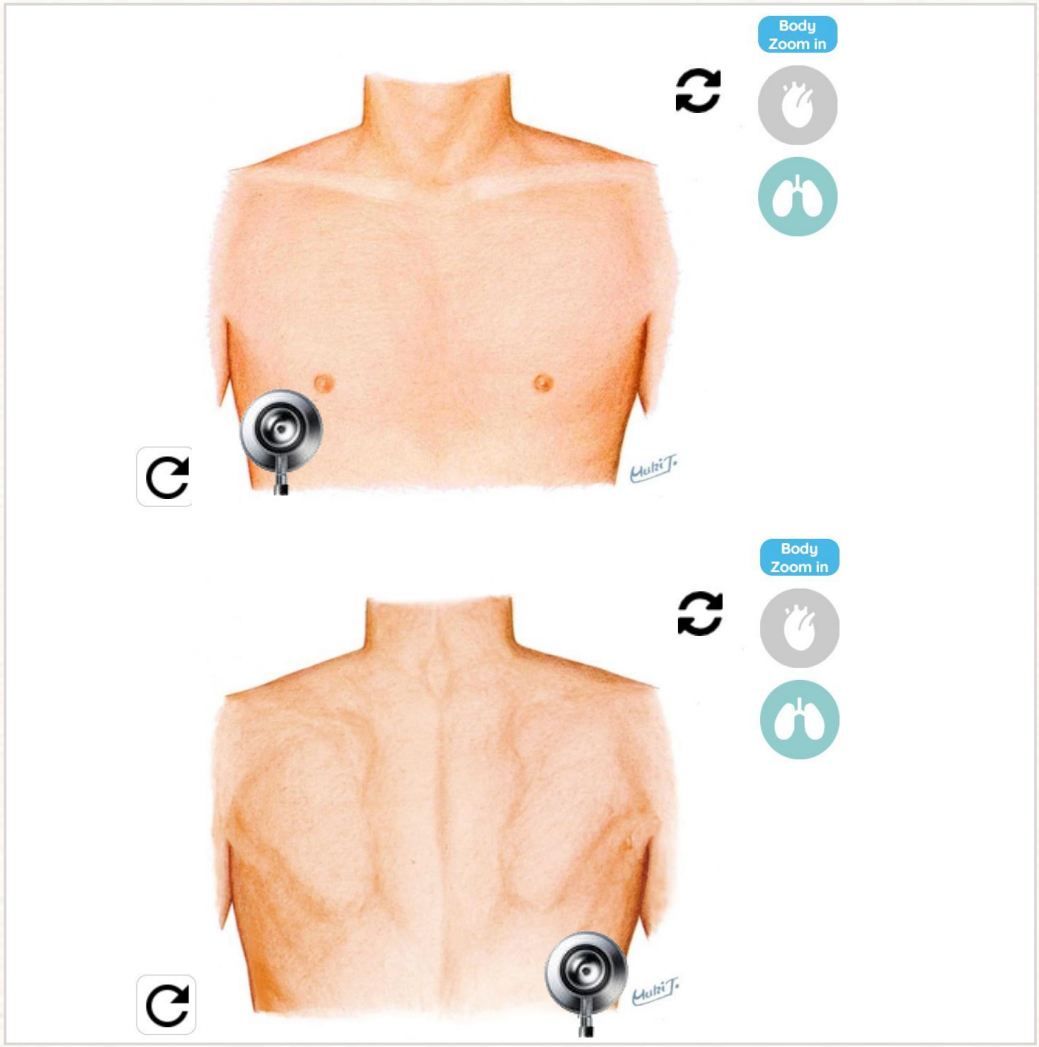
Kikuzo speakers and stereo branch cables are sold separately.

iPax
Virtual auscultation simulator

Lung sound cases
anterior/posterior

Inspection, **P**alpation, **A**uscultation, Examination

In cases of lung sound, auscultation is performed on the precordium and back. When you move the chest piece, you can listen the lung sounds on that area. Press END at the top right of the screen to switch to the anterior/ posterior illustration.



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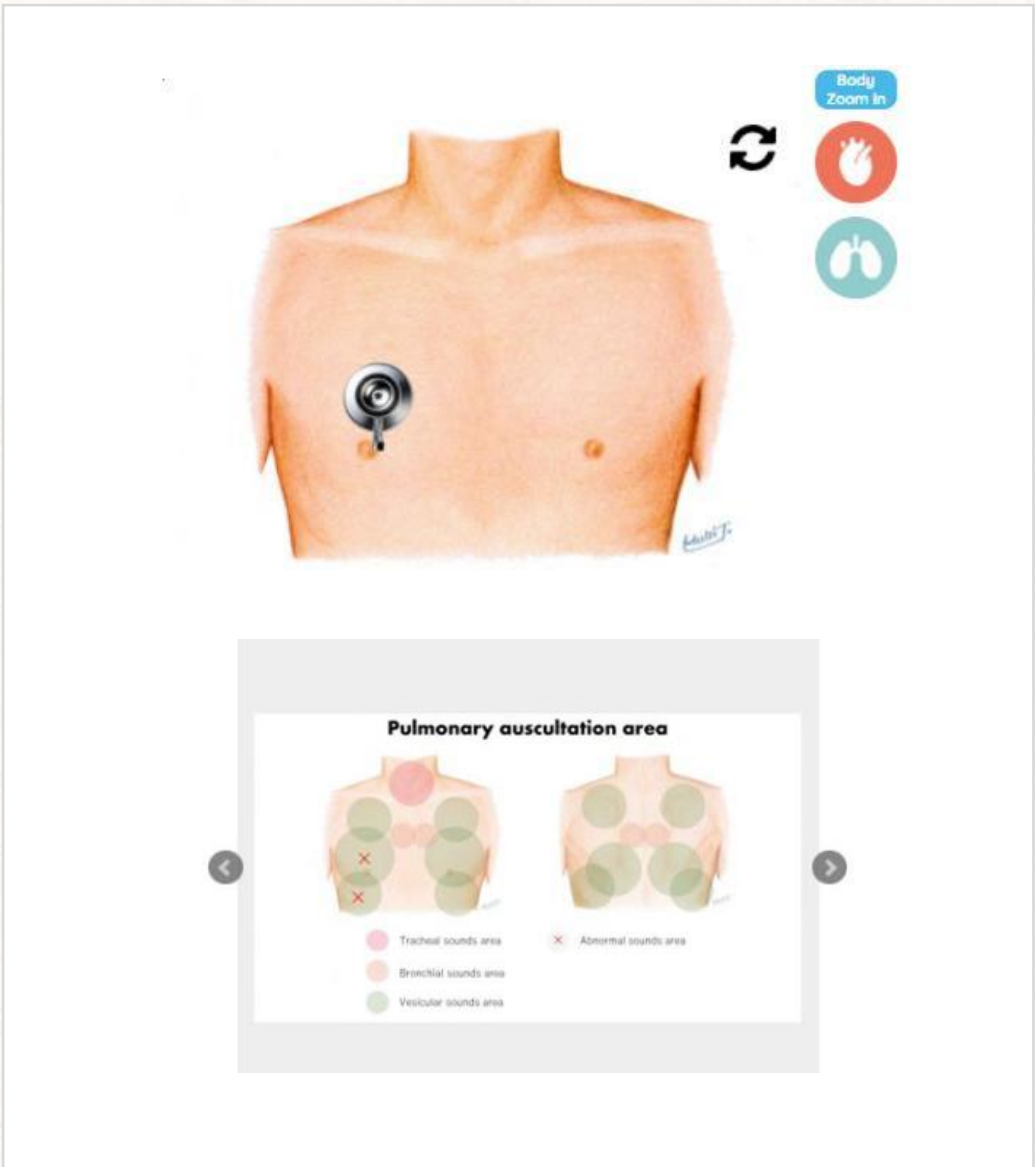
iPax
Virtual auscultation simulator

Lung sound cases
Auscultation area

Inspection, **P**alpation, **A**uscultation, Examination

Markers indicate the auscultatory and abnormal areas in the lower chest illustration.



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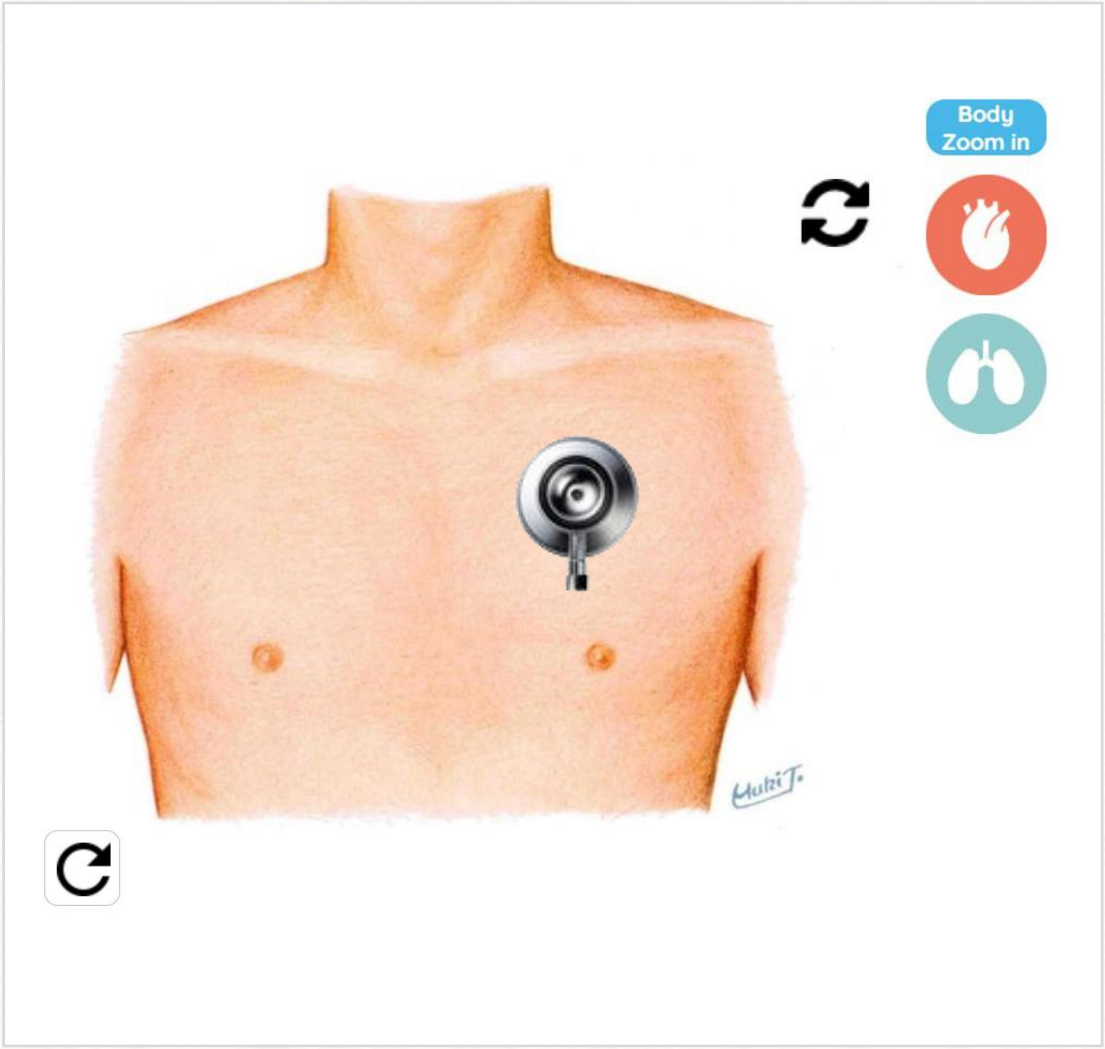
iPax
Virtual auscultation simulator

Lung sound cases

Heart sounds ON

Inspection, **P**alpation, **A**uscultation, Examination

Move the chest piece displayed on the screen and listen to lung sounds.
When you turn on the heart sound function, you can hear heart sounds along with lung sounds.



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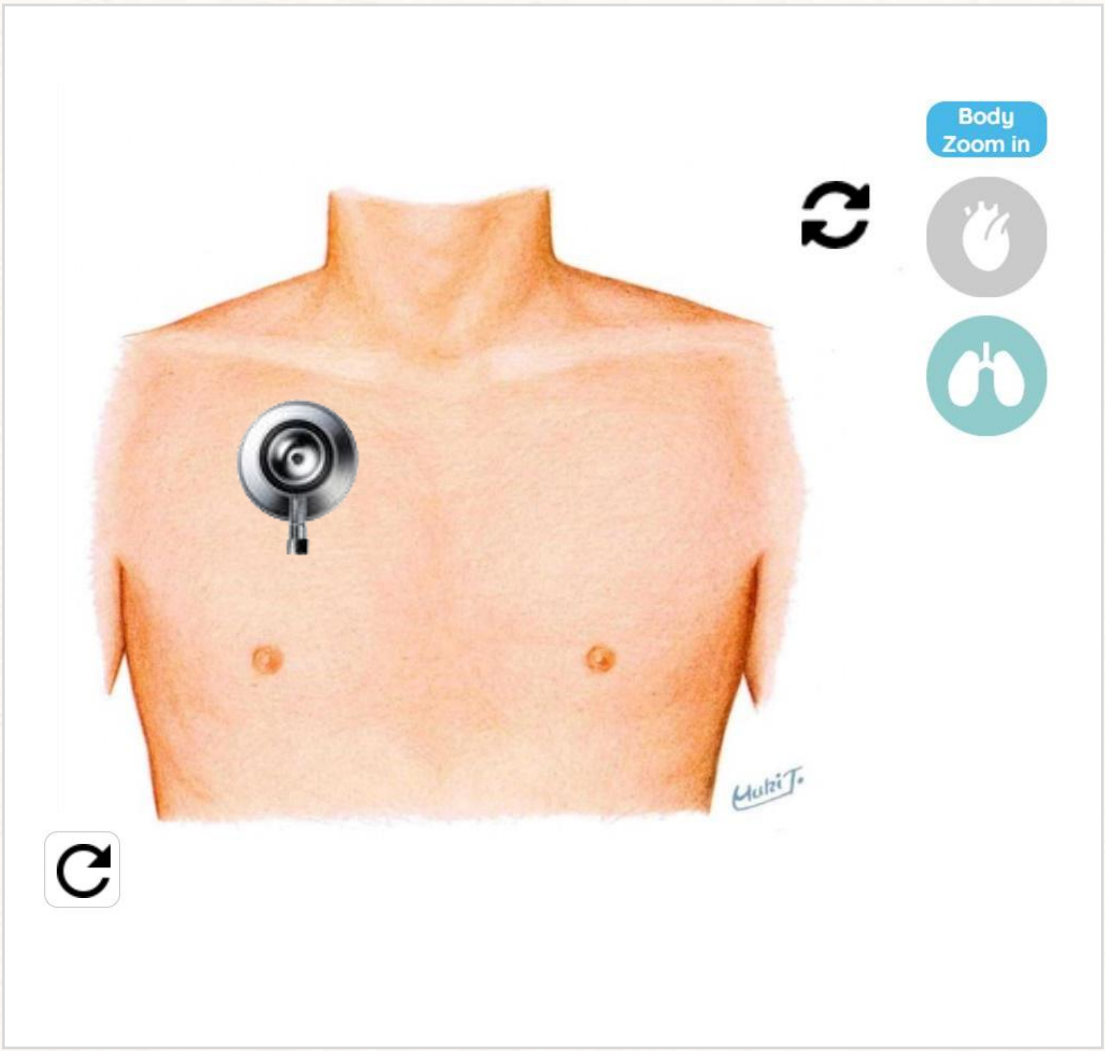
iPax
Virtual auscultation simulator

Lung sound cases

Heart sounds OFF

Inspection, **P**alpation, **A**uscultation, Examination

Move the chest piece displayed on the screen to listen to lung sounds. The heart sound can be switched ON/OFF, and it cannot be listened when it is OFF.



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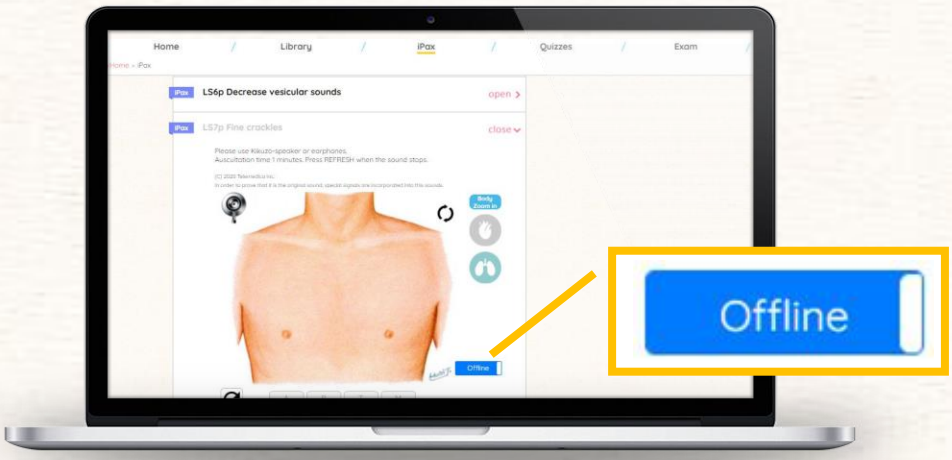
iPax
Virtual auscultation simulator

Full-screen display and offline use

Inspection, Palpation, Auscultation, Examination

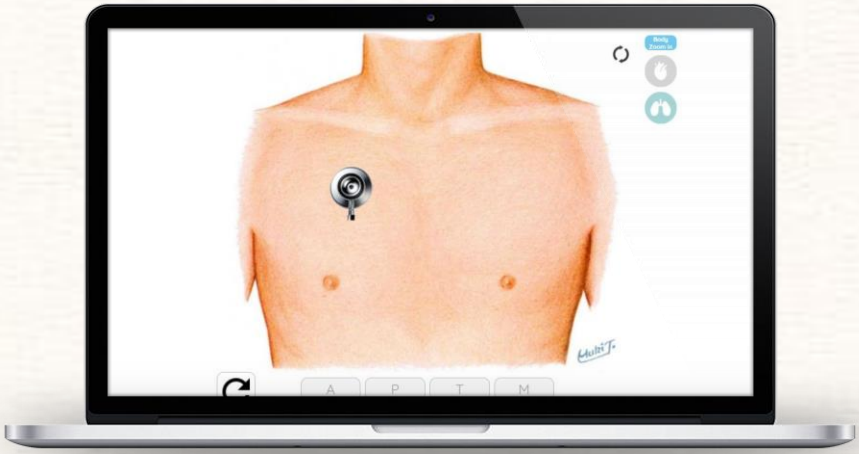
The chest illustration can be enlarged to full-screen. The screen is magnified with the heart, lung and pulse palpation settings and HR maintained just before magnification. In this full-screen mode, you can use it without an Internet connection. Also, the magnified screen does not display any information such as heart and lung icons or descriptive text.

Standard screen



Full-screen display

Offline use



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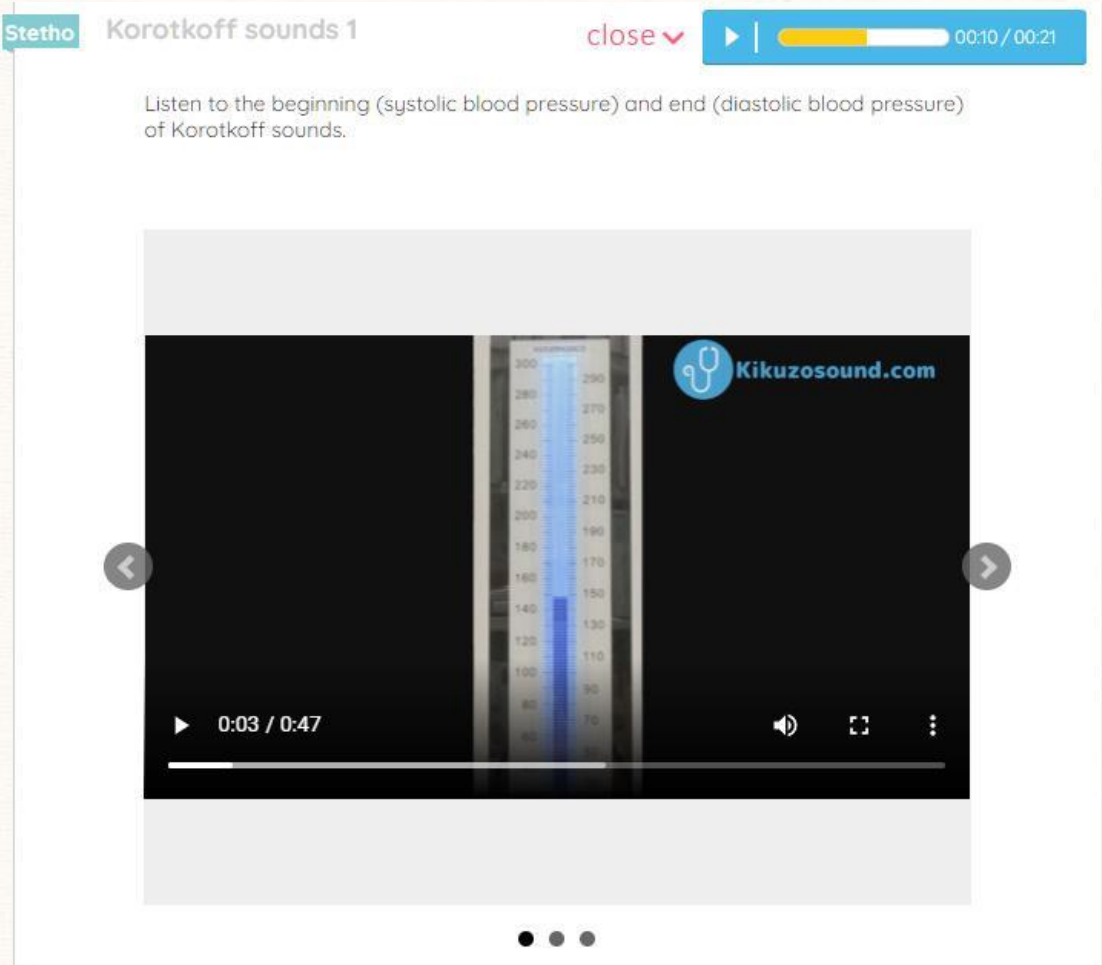
iPax
Virtual auscultation simulator

Korotkoff sounds contents

Inspection, **P**alpation, **A**uscultation, Examination

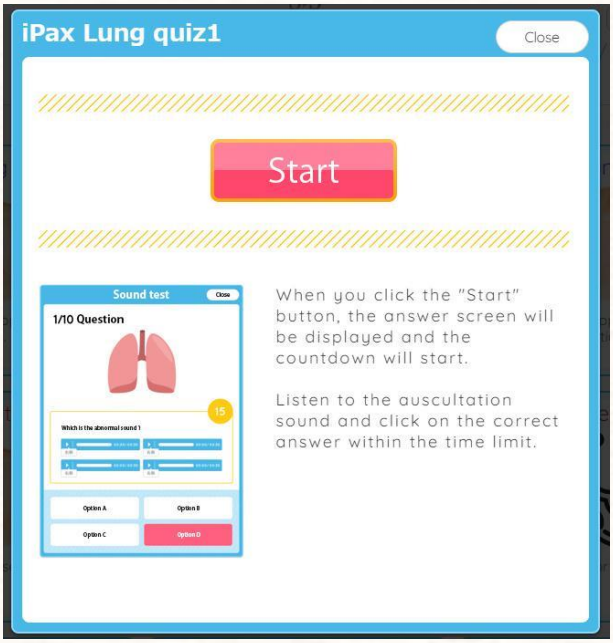
When you press the play button, a video will appear on the screen, and you can hear Korotkoff sounds.



iPax
Virtual auscultation simulator

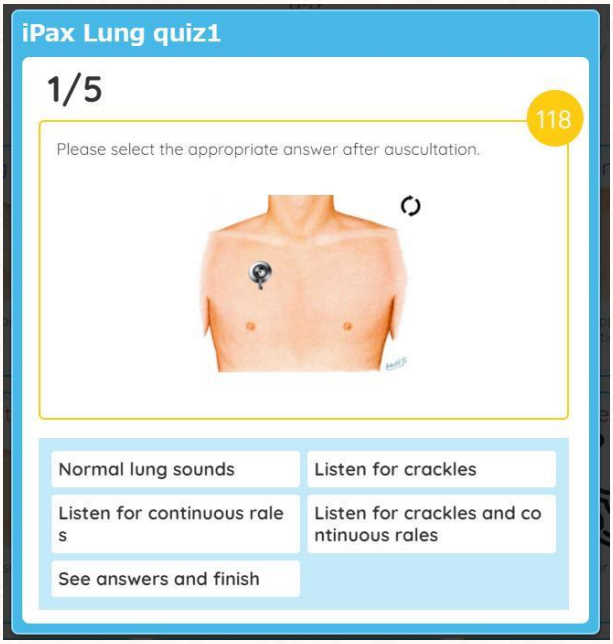
Quizzes/ Exam

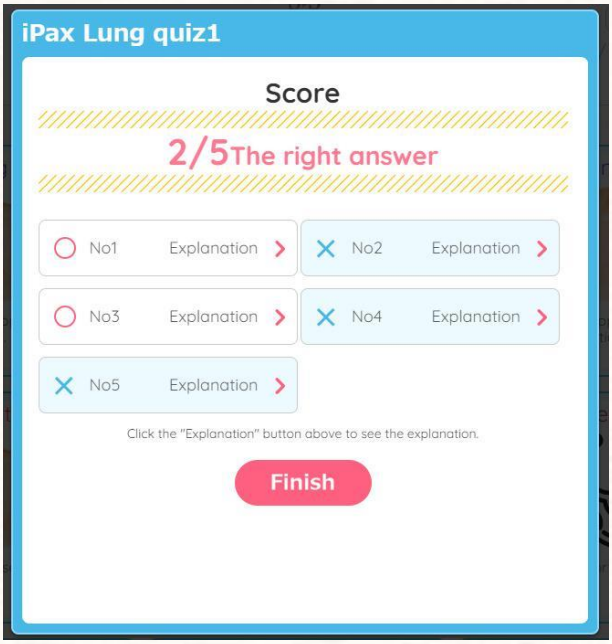
Inspection, **P**alpation, **A**uscultation, Examination



It contains more than 100 quiz questions. After users answer, they can review their answer. The results are recorded on the server and the administrator can review the user data in the group on the administration screen. The administrator can also create original quizzes and/or Exams on the administration screen.

Exam does not display the score after the user answer, and the data is logged to the server. Administrators can view the results in the administration page.





iPax
Virtual auscultation simulator

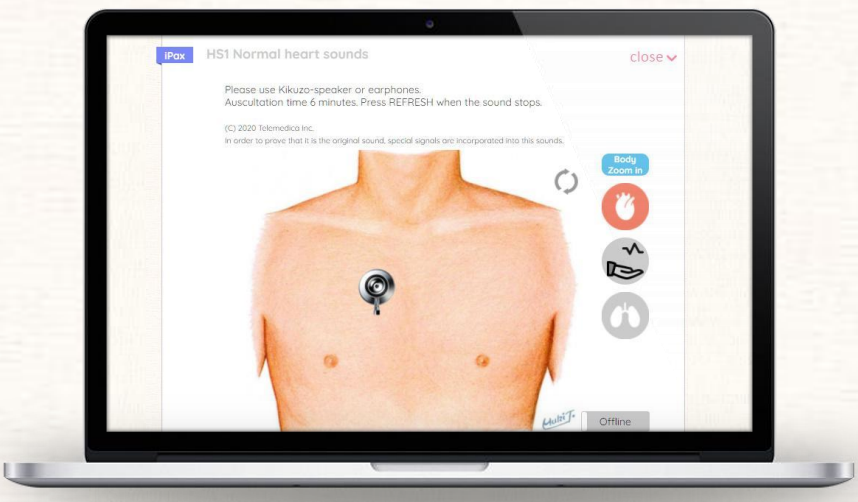
University License
Student license

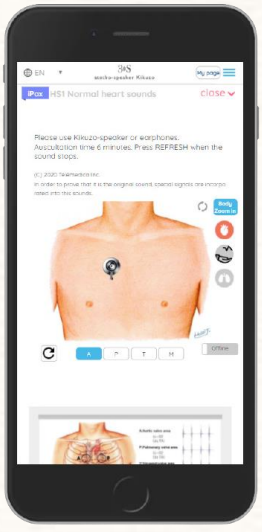
Inspection, **P**alpation, **A**uscultation, Examination

There are two types of iPax licenses:
University license: Teachers are requested to apply for a university license for use in classes or labs. In addition to the function of the pulse, you can choose the sound source playback duration for auscultation of iPax cases from 1 minute, 3 minutes, and 6 minutes. If you have applied for student licenses, you can use the Log Management page. The use of the university license is limited to computers.
Student License: A student can use it with a tablet or smartphone. In iPax cases, the sound is played for 1 minute, and the pulse function is not available. Based on each student's usage history, iPax (AI) recommend the case that the student needs on his My Page.

University license

- Case sound duration time 1min., 3min., 6min.
- Pulse function
- Recommend PC is more than 16MB memory
- The Log Management page is available





Student license

- Case sound duration time 1min
- No pulse function
- Smart device available
- iPax (AI) recommend the case

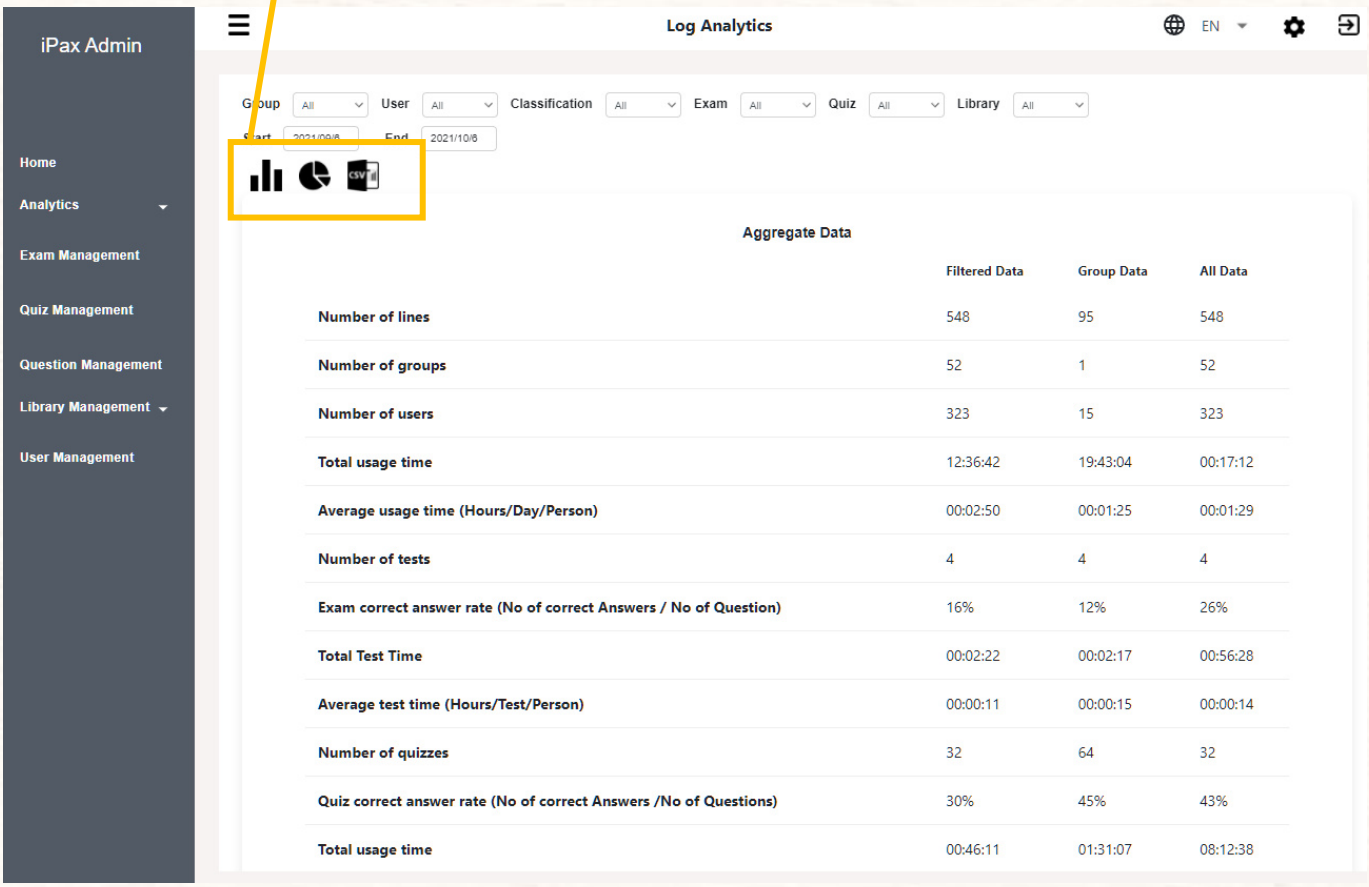
*Log Management page
You can manage students' usage history, quizzes and test scores. Data can be downloaded in CSV.
You can also make original contents with ECG, UCG etc.

iPax
Virtual auscultation simulator

Log management

Inspection, **P**alpation, **A**uscultation, Examination

The log server records student content usage history and quiz/Exam results.
Administrators can download all the data of students who belong to their group.

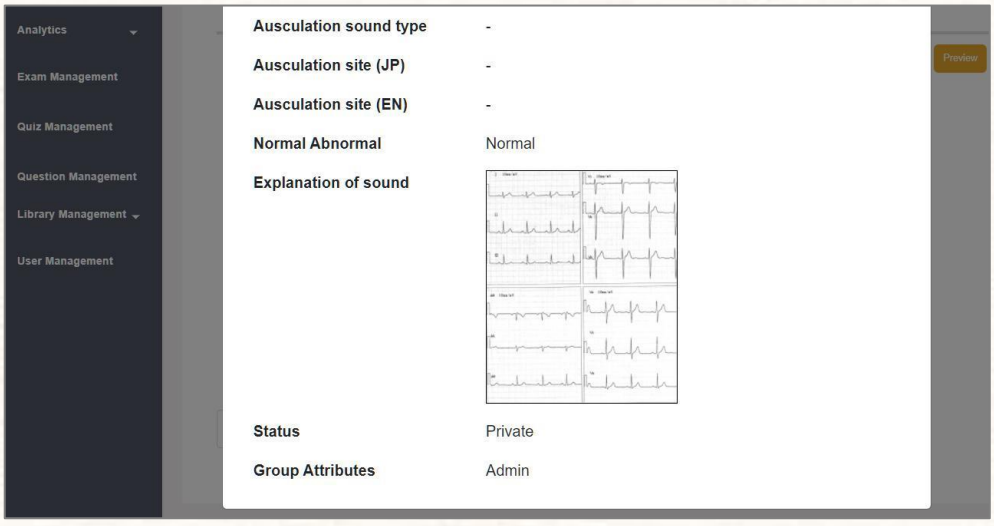


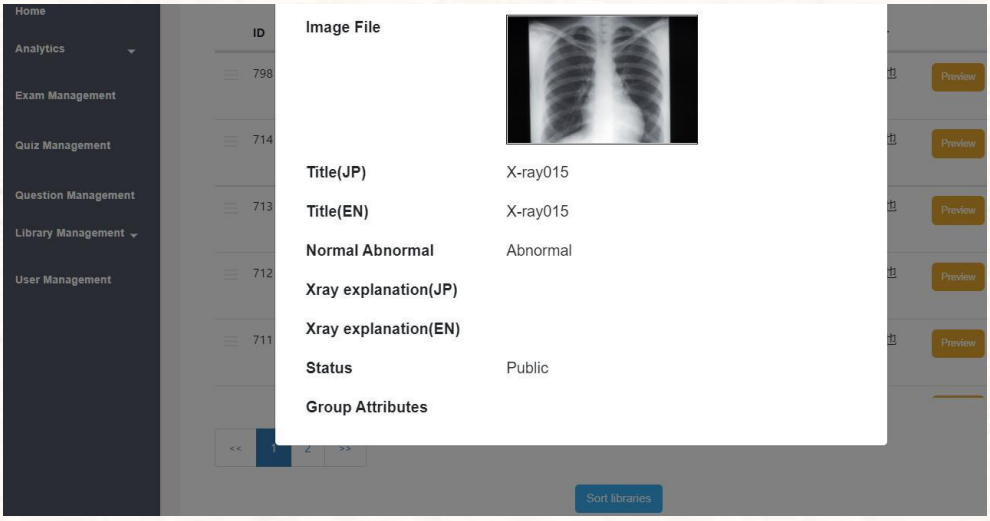
iPax
Virtual auscultation simulator

ECG,X-ray, UCG etc

Inspection, **P**alpation, **A**uscultation, Examination

You can register contents such as ECG from the management site.
The registered contents are only available to students within the group.
Registered contents can also be used for quizzes and/or Exams to your group.





iPax
Virtual auscultation simulator

Auscultation cases list

Inspection, Palpation, Auscultation, Examination

In the case of auscultation for university administrators, the auscultation duration time are set at 1 minute 3 minutes 6 minutes. And the pulse palpation function is available. Use with a computer with 16 MB memory or more.
In the case for students, auscultation duration time is 1 minute and pulse palpation is not available. However, they can use it with a smartphone or tablet. When the sound stops, press the refresh button to listen repeatedly.

	Heart sounds cases		
1	HS1 Normal heart sounds	Auscultation on anterior	Heart + Pulse + Lung, 6min
2	HS2 S2 split	Auscultation on anterior	Heart + Pulse + Lung, 6min
3	HS3 Abnormal S2 split	Auscultation on anterior	Heart + Pulse + Lung, 6min
4	HS3' Abnormal S2 split	Auscultation on anterior	Heart + Pulse + Lung, 6min
5	HS4 S3 gallop	Auscultation on anterior	Heart + Pulse + Lung, 6min
6	HS5 S4 gallop	Auscultation on anterior	Heart + Pulse + Lung, 6min
7	HS6 S4+S3 gallop	Auscultation on anterior	Heart + Pulse + Lung, 6min
8	HS6' S4+ S3 gallop	Auscultation on anterior	Heart + Pulse + Lung, 6min
9	HS7 S4 S3 summation gallop	Auscultation on anterior	Heart + Pulse + Lung, 6min
10	HS8 S4 S3 summation gallop 2	Auscultation on anterior	Heart + Pulse + Lung, 6min
11	HS9 Pulmonary ejection sounds	Auscultation on anterior	Heart + Pulse + Lung, 6min
12	HS10 Innocent or functional murmur	Auscultation on anterior	Heart + Pulse + Lung, 6min
13	HS11 Atrial septal defect ASD with pulmonary hypertension	Auscultation on anterior	Heart + Pulse + Lung, 6min
14	HS11' Atrial septal defect ASD with pulmonary hypertension	Auscultation on anterior	Heart + Pulse + Lung, 6min
15	HS12 Atrial septal defect ASD without pulmonary hypertension	Auscultation on anterior	Heart + Pulse + Lung, 6min
16	HS12' Atrial septal defect ASD without pulmonary hypertension	Auscultation on anterior	Heart + Pulse + Lung, 6min
17	HS13 Aortic stenosis AS	Auscultation on anterior	Heart + Pulse + Lung, 6min
18	HS14 Aortic stenosis : AS (localized)	Auscultation on anterior	Heart + Pulse + Lung, 6min
19	HS15 Aortic regurgitation AR	Auscultation on anterior	Heart + Pulse + Lung, 6min
20	HS15' Aortic regurgitation AR	Auscultation on anterior	Heart + Pulse + Lung, 6min
21	HS16 Aortic regurgitation AR	Auscultation on anterior	Heart + Pulse + Lung, 6min
22	HS16' Aortic regurgitation (Severe) AR	Auscultation on anterior	Heart + Pulse + Lung, 6min
23	HS17 Mitral regurgitation MR	Auscultation on anterior	Heart + Pulse + Lung, 6min
24	HS17' Mitral regurgitation (Severe) MR	Auscultation on anterior	Heart + Pulse + Lung, 6min
25	HS18 Mitral stenosis MS	Auscultation on anterior	Heart + Pulse + Lung, 6min
26	HS19 Hypertrophic cardiomyopathy HCM	Auscultation on anterior	Heart + Pulse + Lung, 6min
27	HS20 Tricuspid regurgitation TR	Auscultation on anterior	Heart + Pulse + Lung, 6min
28	HS21 Pulmonic valvular stenosis PS	Auscultation on anterior	Heart + Pulse + Lung, 6min
29	HS22 Ventricular septal defect VSD	Auscultation on anterior	Heart + Pulse + Lung, 6min
30	HS23 Patent ductus arteriosus PDA	Auscultation on anterior	Heart + Pulse + Lung, 6min
31	HS24 Mitral valvular prolapse MVP	Auscultation on anterior	Heart + Pulse + Lung, 6min
32	HS25 Dilated cardiomyopathy DCM	Auscultation on anterior	Heart + Pulse + Lung, 6min
33	HS25' Dilated cardiomyopathy (Severe) DCM	Auscultation on anterior	Heart + Pulse + Lung, 6min
34	HS26 S3 + Coarse crackles	Auscultation on anterior	Heart + Pulse + Lung, 6min

iPax
Virtual auscultation simulator

Auscultation cases list

Inspection, **P**alpation, **A**uscultation, Examination

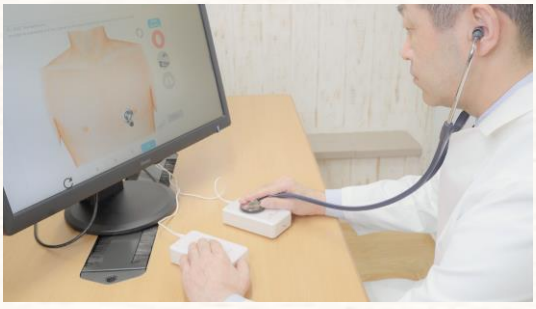
	Lung sounds cases		
1	LS1 Normal Lung sounds	Auscultation on anterior and posterior	Lung + Heart, 6min
2	LS2 Decrease bronchial sounds	Auscultation on anterior and posterior	Lung + Heart, 6min
3	LS3 Decrease bronchial sounds and wheezes	Auscultation on anterior and posterior	Lung + Heart, 6min
4	LS4 Decrease bronchial sounds and wheezes2	Auscultation on anterior and posterior	Lung + Heart, 6min
5	LS5 Amphoric respiration	Auscultation on anterior and posterior	Lung + Heart, 6min
6	LS6 Decrease vesicular sounds	Auscultation on anterior and posterior	Lung + Heart, 6min
7	LS7 Fine crackles	Auscultation on anterior and posterior	Lung + Heart, 6min
8	LS8 Fine crackles	Auscultation on anterior and posterior	Lung + Heart, 6min
9	LS8' Fine crackles	Auscultation on anterior and posterior	Lung + Heart, 6min
10	LS9 Coarse crackles	Auscultation on anterior and posterior	Lung + Heart, 6min
11	LS10 Coarse crackles2	Auscultation on anterior and posterior	Lung + Heart, 6min
12	LS11 Coarse crackles3	Auscultation on anterior and posterior	Lung + Heart, 6min
13	LS12 Coarse crackles, rhonchi	Auscultation on anterior and posterior	Lung + Heart, 6min
14	LS13 Coarse crackles,rhonchi2	Auscultation on anterior and posterior	Lung + Heart, 6min
15	LS14 Coarse crackles, squawk, rhonchi	Auscultation on anterior and posterior	Lung + Heart, 6min
16	LS15 Coarse crackles, squawk, rhonchi2	Auscultation on anterior and posterior	Lung + Heart, 6min
17	LS16 Wheezes	Auscultation on anterior and posterior	Lung + Heart, 6min
18	LS17 Wheezes2	Auscultation on anterior and posterior	Lung + Heart, 6min
19	LS18 Wheezes3	Auscultation on anterior and posterior	Lung + Heart, 6min
20	LS19 Wheezes, Coarse crackles	Auscultation on anterior and posterior	Lung + Heart, 6min
21	LS20 Pleural friction rub	Auscultation on anterior and posterior	Lung + Heart, 6min
22	LS21 COVID-19	Auscultation on anterior and posterior	Lung + Heart, 6min
	Bowel sounds		
1	Bowel sounds-1	Gulu sounds	MP3
2	Bowel sounds-2	Gulu sounds	MP3
3	Bowel sounds-3	Gulu sounds	MP3
4	Bowel sounds-4	Metallic sounds	MP3
	Other sounds		
1	Korotkoff sounds and swan point	-	MP4
2	Korotkoff sounds 1	118/80mmHg	MP4
3	Korotkoff sounds 2	116/74mmHg	MP4
4	Korotkoff sounds 3	136/82mmHg	MP4
5	Korotkoff sounds 4	142/88mmHg	MP4
6	Korotkoff sounds 5	146/88mmHg	MP4
7	Korotkoff sounds 6, Aneroid	136/82mmHg	MP4
8	Korotkoff sounds 7, Aneroid	125/64mmHg	MP4
9	Blood pressure gap	-	MP4

iPax
Virtual auscultation simulator

Examples of using iPax

Inspection, **P**alpation, **A**uscultation, Examination

Connect 2 Kikuzo to PC



Move the chest piece on the PC screen and listen to the heart sounds with pulse palpation.

The pulse is output from the left side and the heart sound is output from the right side.

Practical training on mannequin simulator

This combination reduces the waiting time for technique training.

Online classes

The "remote control function" allows the student to operate the chest piece on the screen.

Class room lecture

You can view your iPax on the screen or use the online conferencing system to deliver the contents.

OSCE

We have almost all of the auscultation sounds necessary for medical university education.

Other uses of Kikuzo

Inspection, **P**alpation, **A**uscultation, Examination

Using a neck strap or Bluetooth receiver, you can practice auscultation with the SP (simulated patient). Please purchase a neck strap and Bluetooth receiver.

(Reference) The black part connected to the Kikuzo is a bluetooth receiver.

UGREEN Bluetooth receiver 3.5mm
You can purchase it on the internet such as Amazon.

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