



Ultrasound Phantoms PRODUCT CATALOG Vol. UP-1

For optimal application of ultrasound in medicine

Kyoto Kagaku started preparing for coming age of medical ultrasound as early as turning of the century. At the beginning, there was two streams to pursuit: development of material for ultrasound phantom that is not only close to human tissue under ultrasound but also stable and long-life, construction of three-dimensional anatomical representation that facilitate improving interpretation skills of trainees. With the passage of time, application of ultrasound in medicine has developed and also the phantoms. Now Kyoto Kagaku phantoms cover the field of QA, training in examination and ultrasound guided procedures, and serving the range of health care specialties.



Photos courtesy of Adventist University of Health Sciences

Our ultrasound phantoms are presented at exhibitions such as RSNA, ECR, AIUM, SDMS and IMSH.

For the latest information please visit:



Corporate Website www. Kyotokagaku.com/en www.facebook.com/KyotoKagaku/

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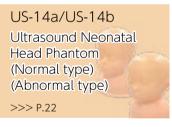




















Features of Ultrasound Phantom Materials

>>> P.26 >>> P.27-

Examples of custom made phantoms

>>> P.27-P.29

Lung Ultrasound Training Phantom ECHOLUNG



Simple, durable and effective tool to learn the basics of lung ultrasound.

Hirosaki University School of Medicine & Hospital Department of General Medicine Tadashi Kobayashi



- 1 | Four kinds of units: A-LINE, B-LINE(few), B-LINE (many), pneumonia and pleural effusion to learn the basics of lung ultrasound.
- 2 | Anatomy includes: lung, chest wall, ribs
- 3 | No special storage needed
- 4 | Suitable for training in large groups

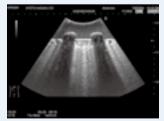
| Handling and manipulation of probe on lung ultrasound. Scanning the lungs to evaluate pneumonia findings.



A-LINE



B-LINE



B-LINE(many)



Pneumonia and pleural effusion

DESCRIPTIONS

SPECIFICATIONS

Size:Body:32×25×12.5cm/13×10×4.9 inch $Module: 14.8\times 11.8\times 11 \text{cm}/5.8\times 4.6\times 4.3 \text{ inch}$

Weight:Body:1.9kg

A-LINE/B-LINE/B-LINE (many): 0.9kg Pneumonia and pleural effusion: 1.4kg

- 1 Main Body
- Kinds of lung modules
- Instruction manual
- Talcum powder
- 1 Storage case









Ultrasound Guided Tube Feeding Phantom



Anatomically correct neck model for Ultrasound Guided Tube Feeding Training

Product Supervision Hirosaki University Hospital, General Medical Department. Dr. Kobayashi Tadashi



FEATURES

- 1 | Anatomically correct neck model
 - Thyroid Gland
 - Trachea
 - Esophagus
 - Sternum
 - Collarbone
 - Carotid Artery
 - Jugular Vein
- 2 | Realistic neck ultrasound images
- 3 | Usable with real ultrasound diagnostic devices
- 4 | Allows the confirmation of the proper Nasogastric Tube Placement with ultrasound
- 5 | Inner switch for tube insertion direction: trachea/esophagus for tube location image recognition tests (recognition by ultrasound of proper esophagus insertion or wrong tracheal insertion)

SKILLS

- | Proper handling and manipulation of probe on neck ultrasound
- | Feeding tube insertion
- | Confirmation of tube placement by ultrasound
- Neck scan to evaluate the tube position.



Ultrasound image

DESCRIPTIONS

SPECIFICATIONS

Size:W29×H17×D18cm W11.4×H6.7×D7.1inch Weight: 2.8kg

- 1 Main Body
- Ultrasound neck block
- Nasogastric Tube
- Syringe
- Talcum powder
- Storage case





FAST/Acute Abdomen Phantom "FAST/ER FAN"

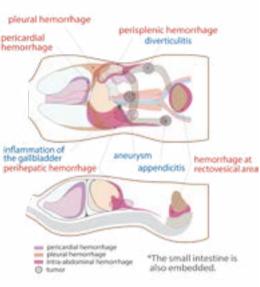
Conduct "FAST" assessment to save a trauma patient!

FAST/ER FAN provides simulated training in FAST (Focused Assessment with Sonography for Trauma); an ultrasound examination directed at detection of the presence of free fluid in trauma patients.

Product Supervision

Junii Machi, MD, PhD University of Hawaii at Manoa and Kuakini Medical





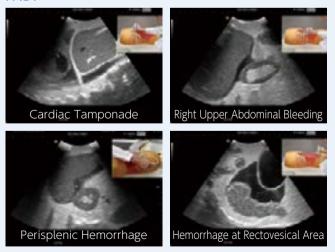
FEATURES

- 1 | An innovative phantom for repetitive training of FAST as an adjunct to the ATLS primary survey
- 2 | Pathologies include cholecystitis, an aortic aneurysm and a lesion on the colon.

SKILLS

- Internal hemorrhage at perihepatic, perisplenic, pelvis and pericardium area
- | Sonography for acute patients

FAST



Acute abdomen



DESCRIPTIONS -

SPECIFICATIONS

MATERIALS Polyurethane elastomer

Latex free

Size: W62 x D30 x H24 cm W24.4 x D11.8 x H9.4 inch

Weight: 30kg / 66lbs

ISET INCLUDES

- 1 ultrasound phantom with carrying base
- 1 tutorial manual (DVD)

*Ultrasound scanner is not included.













Ultrasound Examination Training Phantom "ABDFAN"

Abdominal ultrasound phantom with pathologies

Unique high-fidelity abdominal ultrasound phantom that facilitates effective training compatible with your own clinical devices.

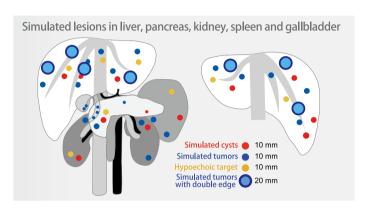
Product Supervision

Junji Machi, MD, PhD

University of Hawaii at Manoa and Kuakini Medical







Full set includes anatomical model ECHO-ZOU"

FEATURES

- 1 | Detailed hepatobiliary, pancreatic and other abdominal anatomy
- 2 | Eight Couinaud's hepatic segments can be localized.
- 3 | ABDFAN has various simulated lesions to provide wider training variety.

SKILLS

Basics of abdominal sonography:

- Cross sections and sonographic anatomy
- Sonographic demonstration of each individual organ
- Localization of hepatic Couinaud's segments

Anatomy

(segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum)

(gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts) Pancreas (pancreatic duct)

Spleen / kidneys

Detailed vascular structures

(aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels, and more)

Pathologies

Hepatic lesions (cystic and solid)

Gallbladder and bile duct stones

Pancreatic tumors

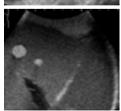
(one invading the portal vein)

Splenic lesions

Both kidney lesions

Left adrenal tumor





DESCRIPTIONS

SPECIFICATIONS

Size: 25x18x28cm / 9.8x7x11 inch Weight: 12kg / 26.5lbs

MATERIALS

Polyurethane elastomer

SET INCLUDES

- 1 ultrasound phantom "ABDFAN"
- positioning pillow
- 1 tutorial manual (DVD)
- storage case
- 1 instruction manual

US-1B (41900-100) "ABDFAN" full set

- ultrasound phantom "ABDFAN" anatomical model "ECHO-ZOU"
- positioning pillow
- tutorial manual (DVD)
- storage case instruction manual







Ultrasound Examination Training Phantom "ECHOZY

Abdominal ultrasound phantom without pathologies

Unique high-fidelity abdominal ultrasound phantom that facilitates effective training compatible with your own clinical devices.

Product Supervision

Dr. Hitoshi Asai, Director Osaka Kyoiku University, Health Administration Center Dr. Shigeru Nakamura

Nagayoshi General Hospital, Clinical Examination





Full set includes anatomical model "ECHO-ZOU"

FEATURES

- 1 | Detailed hepatobiliary, pancreatic and other abdominal anatomy
- 2 | Eight Couinaud's hepatic segments can be localized.

SKILLS

Basics of abdominal sonography:

- Cross sections and sonographic anatomy
- Sonographic demonstration of each individual organ
- Localization of hepatic Couinaud's segments

Anatomy

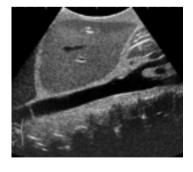
(segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum)

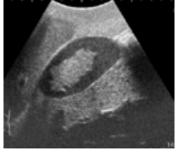
(gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts) Pancreas (pancreatic duct)

Spleen / kidneys

Detailed vascular structures

(aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels, and more)





DESCRIPTIONS

SPECIFICATIONS

Size: 25x18x28cm / 9.8x7x11 inch Weight: 12kg / 26.5lbs

MATERIALS

Polyurethane elastomer Latex free

- 1 ultrasound phantom "ECHOZY"
- set positioning pillow
- 1 storage case

- 1 ultrasound phantom "ECHOZY"
- anatomical model "ECHO-ZOU"
- set positioning pillow
- storage case









Abdominal Intraoperative & Laparoscopic Ultrasound Phantom "IOUSFAN"

Effective training tool for abdominal intraoperative ultrasound examination

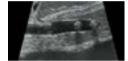
Phantom of abdominal organs to simulate ultrasound examinations during open and laparoscopic surgery

Product Supervision

Junii Machi, MD, PhD University of Hawaii at Manoa and Kuakini Medical









Bileduct stones

1 | Soft phantom materials allow realistic probe manipulation.

3 | Detachable stomach and duodenum for various scanning of

Gallstones



Intraoperative ultrasound



Laparoscopic ultrasound

ANATOMY and PATHOLOGIES

segmental anatomy

portal and hepatic venous system

ligamentum teres and ligamentum venosum

gall bladder

cystic duct

intrahepatic and extrahepatic bile ducts

Pancreas

pancreatic Duct

Spleen

Kidneys

Detailed vascular structures

aorta

vena cava

celiac artery and branches

portal vein and branches

superior mesenteric vessels

renal vessels

Biliary Stones and Cysts

Solid Tumors in liver, pancreas, spleen and kidneys

hypoechoic

hyperechoic

SKILLS

FEATURES

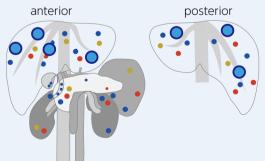
2 | Various simulated lesions.

the bile duct and pancreas.

| Abdominal intraoperative ultrasound examination

| Laparoscopic ultrasound examination





- Simulated cysts 1 cm / 0.4 in
- Hypoechoic 1 cm / 0.4 in
- Simulated tumors 1 cm / 0.4 in
- Simulated tumors with double edge 2 cm / 0 8 in

DESCRIPTIONS

SPECIFICATIONS

Size: W30 x D38 x H17.5 cm W11.8 x D15 x H6.9 inch

Weight: 5.8kg / 12.8lbs

MATERIALS

Polyurethane elastomer Latex free

- 1 upper abdomen ultrasound phantom
- stomach ultrasound phantom
- phantom container
- tutorial manual (DVD)







US-7α





Fetus Ultrasound Examination Phantom "SPACE FAN-ST

Staple phantom for hands-on practice in second trimester screening

Includes a 23-week fetus with detailed anatomy associated with assessment of gestational age in second trimester



Product Supervision

Kiyoko Kabeyama RN, RM, PhD

Professor Midwifery & Women's Health, School of Human Health Science, Graduate School of Medicine, Kyoto University

Haruto Egawa, PhD

National Hospital Organization Kyoto Medical Center Department of Obstetrics, Head Physician or Medical Director







FEATURES

- 1 | The oval shape phantom abdomen can be set info four different positions.
- 2 | The fetus includes full skeletal structures and key organs.
- 3 Includes an educational DVD and a fetus demonstration model for comprehensive learning.
- 4 | Includes a 23-weeks fetus.

SKILLS

- Fetal size assessment: BPD, AD, AC and FL
- Measurement of amniotic fluid volume
- Determination of fetus presentation (cephalic or breech)
- Assessment of each body part
- -Head: skull and brain
- -Spine and limbs
- -Cardiac chambers, blood vessels and lungs
- Assessment of umbilical cord and placenta position
- Determination of sex (This phantom represents a male fetus.)

ANATOMY

amniotic fluid

placenta umbilical cord

Fetus

- skeletal structure
- brain with septum lucidum
- I lateral ventricles and cerebellum
- heart with four chambers
- lungs
- spleen
- | bladder

stomach

liver

| kidneys

aorta

umbilical vein

| umbilical artery

| external genitalia







The oval shape phantom abdomen can be set in four different positions.

DESCRIPTIONS

SPECIFICATIONS

MATERIALS

Latex free

Size: W40 x D31 x H22 cm W15.7 x D12.2 x H8.7 inch

Soft resin, Polyurethane elastomer

Weight: 7.3kg / 13 lbs

- 1 mother body torso
- ultrasound pregnant uterus phantom
- fetus demonstration model
- storage case
- tutorial manual (DVD)
- talcum powder













^{*} Ultrasound scanner is not included.





Breast Ultrasound Examination Phantom "BREAST FAN"

Unique phantom for basic breast ultrasound examination

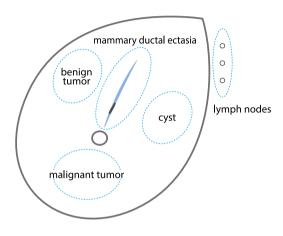
Simulated targets with different echogenicities are embedded in the phantom's mammary gland

Product Supervision

Tokiko Endo, MD, PhD Director of Department of Advanced Diagnosis, Clinical Research Center, National Hospital Organization Nagoya Medical Center

Director of Department of Radiology, National Hospital Organization Nagoya Medical Center





FEATURES

- 1 | State-of-the-art breast ultrasound phantom with anatomy
- 2 | Skills required for ultrasound breast screening can be greatly advanced with practice
- 3 | Excellent ultrasound image quality

SKILLS

- Systematic full breast scanning
- Visualization of key anatomical landmarks
- Tracking of galactophore
- Visualization and differentiation of typical pathologies
- Localization and measurement of cysts and tumor

MAGES Malignant tumor Benign tumor Cyst Mammary ductal ectasia

ANATOMY

- subcutaneous adipose mammary gland galactophore cooper's ligament retromammary adipose costae clavicle
- pectoralis major
- lymph nodes at axilla

DESCRIPTIONS

SPECIFICATIONS

Polyurethane elastomer

MATERIALS

Latex free

Size: W33 x D45 x H11 cm W13.0 x D17.7 x H4.3 inch Weight: 7kg / 15.4lbs

SET INCLUDES

- 1 breast phantom
- talcum powder
- 1 storage case
- tutorial manual (DVD)
- 1 instruction manual

* Ultrasound scanner is not included.

















Female Pelvic Ultrasound Phantom

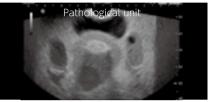
Practice both transvaginal and transabdominal ultrasound procedures in one

New unit released includes normal, pathological and ectopic pregnancies.



Charlotte Henningsen, MS, RT(R), RDMS, RVT, FSDMS, FAIUM Chair & Professor - Sonography Department Adventist University of Health Sciences







FEATURES

- 1 | Compatible with actual ultrasound probe
- 2 | Three types of interchangeable phantom inserts with different pathologies
- 3 | Realistic view of female external genital
- 4 | Excellent ultrasound image quality

SKILLS

- | Handling and manipulation of transvaginal and transabdominal transducers
- Interpretation of sonogram
- Visualization and localization of anatomies and pathologies



SPECIFICATIONS

Torso size: W34 x D33 x H24cm W13.5 x D13 x H9.5 inch

SET INCLUDES

US-10

Female Pelvic Ultrasound Phantom

- 1 lower torso manikin
- ultrasound pathology unit
- 1 ultrasound ectopic pregnancy unit
- talcum powder
- 1 Syringe
 - storage case
- 1 instruction manual

weight: 7.2kg / 15.9 lbs

Female Pelvic Ultrasound Phantom

- 1 lower torso manikin
- ultrasound pathology unit
- ultrasound first trimester pregnancy unit
- ultrasound ectopic pregnancy unit
- talcum powder Syringe
- 2 storage case
 - instruction manual

MATERIALS

Soft resin, Polyurethane elastomer Latex free

Obstetrics Pelvic Ultrasound Phantom

- 1 lower torso manikin
- ultrasound first trimester pregnancy unit 1 ultrasound ectopic pregnancy unit
- talcum powder
- Syringe storage case
- instruction manual

REPLACEMENT PARTS

41909-030 ultrasound pathology unit 41909-040 ultrasound ectopic pregnancy unit 41909-050 ultrasound first trimester pregnancy unit 41909-060 skin for US-10 / 10A / 10B

* Ultrasound scanner is not included.





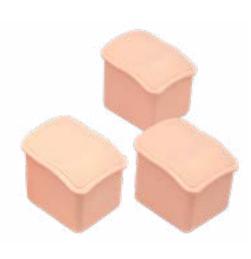


Intravesical Urine Volume Measurement Phantom



Pocket-sized ultrasound is gaining popularity and starting to be utilized more in daily care for examination. This method is preferred as catheterization may cause urinary infection.





FEATURES

1 | 4 variations of interchangeable inserts feature different patient scenarios.

SKILLS

- | Handling and manipulation of transducers on bladder
- | Scanning the bladder to measure urine volume and findings.

KEY FEATURES



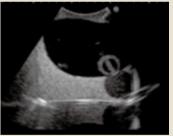
Urine volume 50mL



Urine volume 150mL

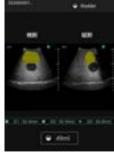


Urine volume 300mL



Urinary retention + balloon catheter





The data is measured by Fujifilm iViz air.

- DESCRIPTIONS -

SPECIFICATIONS

Size: 30 x 26 x 18 cm 12 x 10 x 7 inch

Phantom: 1.5kg / 3.3lbs Body: 3.2kg / 7.1lbs

MATERIALS Latex free

- 1 lower torso manikin
- 4 ultrasound blocks
- 1 storage case
- 1 instruction manual





Scrotal Ultrasound Phantom



Master techniques for a safe and painless examination

Hands-on training to accurately diagnose scrotum abnormalities

Product Supervision

Charlotte Henningsen, MS, RT(R), RDMS, RVT, FSDMS, FAIUM Chair & Professor - Sonography Department

Adventist University of Health Sciences

FEATURES

- 1 | Two types of interchangeable scrotums: normal and pathology
- 2 | Excellent ultrasound image quality



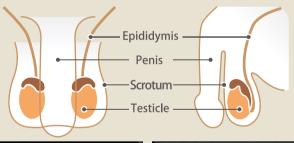
SKILLS

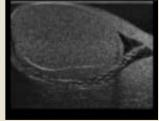
- Patient positioning and preparation for examination
- Scrotal ultrasound screening
- Visualization of testicular cancer

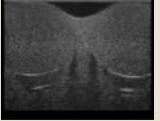


Normal phantom

- scrotum, testicle, epididymis and penis

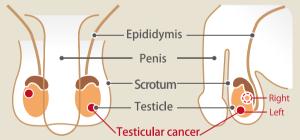




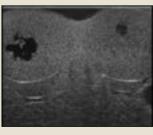


Pathological phantom

- -scrotum, testicle, epididymis and penis
- -testicular cancer (each one in left and right testis, 10mm dia.)







DESCRIPTIONS -

SPECIFICATIONS

Size: 34x33x24cm / 13.4x13x9.4 inch Weight: 3.6kg / 7.9lbs

SET INCLUDES

- 1 pelvic body
- normal scrotum
- 1 pathological scrotum
- storage case
- 1 instruction manual

REPLACEMENT PARTS

41911-010 1 normal scrotum unit 41911-020 1 pathological scrotum unit

* Ultrasound scanner is not included.











CVC Insertion Simulator II

Conduct a variety of CVC insertion and management simulations with the assistance of 3 interchangeable pads

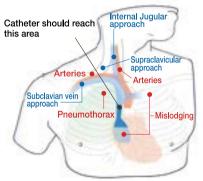


Masahiro Tanabe, M.D., Ph.D., Professor Director General Medical Education Center Chiba University School of Medicine

Kinya Sando, M.D., Ph.D., Professor Director Department of Human Dietetics Graduate School of Human Science Osaka Shoin Women's University

Masanori Hoki, M.D., Ph.D., Professor Department of Human Dietetics Graduate School of Human Science Osaka Shoin Women's University

Joho Tokumine, M.D.Ph.D., Department of Anesthesia, Kawatetsu Chiba Hospital



FEATURES

- 1 | Realistic ultrasound-guided CVC
- 2 | Landmark puncture pad with anatomically correct vein bifurcations simulates mechanical complications including pneumothorax, mislodging and artery puncture
- 3 | Transparent anatomical block for anatomical understanding and guide wire manipulation
- 4 | Introductory ultrasound training block to acquire basics of ultrasound guided venous access
- 5 | Both internal jugular and subclavian (axillary) veins are accessible

SKILLS

- | Ultrasound-guided CVC
- Landmark guided CVC
- Ultrasound-guided venous access
- Prevention of mechanical complications

F KEY FEATURES



Transparent anatomical block



Ultrasound training block



Ultrasound puncture pad

SPECIFICATIONS

SET INCLUDES

Size: W40 x D20 x H 34 cm W15.8 x D7.9 x H 13.4inch

1 male upper torso manikin

landmark puncture pad

transparent anatomical block

1 ultrasound puncture pad

Weight: 2.3kg/5lbs

1 red coloring powder

blue coloring powder air bulb

plastic jars

1 introductory ultrasound training block 1 irrigation bottle

DESCRIPTIONS

MATERIALS Soft resin

Latex free 1 syringe

sample syringe

1 sample needle

RECOMMENDED DEVICES

Ultrasound scanner and needles are not included.

REPLACEMENT PARTS

11347-119 2 landmark puncture pads 11347-170 2 ultrasound puncture pads 11347-210 2 introductory ultrasound training blocks

11347-240 11347-250 2 CVC placement pads

pulsation unit for CVC placement pad 1 pulsation unit (for M93UB) 11347-260 11347-320 irrigation bottle



CVC Insertion Simulator III



CVC III facilitates a sequence of uninterrupted simulation experience for specialist training

From aseptic field preparation to final catheter placement









- 1 | Insertion practice is repeatable to obtain the best technique for patient safety.
- 2 | Both landmark guided insertion and ultrasound guided techniques can be practiced.
- 3 | The frictionless tissue-like simulation pad to facilitate the realistic sensation of CVC placement.

Take complete steps to a successful CVC insertion

- Perform hand hygiene practices and prepare aseptic field Decide on insertion site via ultrasound guidance or observation
- Insertion under ultrasound guidance or via landmark technique Confirm flashback
- Advance guidewire and sheath

and palpation of landmarks

Insert catheter



Pad material simulates features of human tissue

DESCRIPTIONS



Anatomically accurate features including 3 insertion sites and rib cage

SPECIFICATIONS

Size: W40 x D20 x H 34 cm W15.7 x D8 x H13.5 inch

Ultrasound compatible

SET INCLUDES

- 1 male upper torso manikin
- CVC placement pad
- 1 skin for cannulation training
- transparent anatomical block
- 2 artery tube (transparent): 2 type
- 2 vein tube (blue): 2 type
- vein pipe
- pulsation unit (for landmark technique)
- irrigation bottle (for UG technique)

MATERIALS

Soft resin, hydrogel, hard resin Latex free

- 1 coloring powder (red/blue)
- sample needle
- syringe (2.5ml, 50ml each)
- introductory ultrasound training block REAL VESSELS

RECOMMENDED DEVICES

Ultrasound machine and needles are not included.

REPLACEMENT PARTS

11347-210 2 introductory ultrasound training block REAL VESSELS

11347-240 2 CVC placement pads

11347-260 1 pulsation unit (for M93UB) 11347-320 irrigation bottle













Ultrasound-Guided PICC Training Simulator

New, innovative, human-like material for perfect visualization

A non-complicated design with replaceable puncture site and anatomically accurate features including the rib cage, sternum, bifurcation, plus visible tip placement in the superior vena cava.



Joho Tokumine, M.D., Ph.D., Department of Anesthesiology, Kyorin University School of Medicine







- 1 | Excellent image quality and visualization of the needle tip for ultrasound guided venous access
- 2 | Movable shoulder to demonstrate positioning
- 3 | Realistic flashback in needle provides confirmation for successful venous access
- 4 | Ribs and right clavicle provide anatomical understanding of correct PICC placement
- 5 | Anatomically correct bifurcation of the vein
- 6 | Simulation of cannula malposition

- Ensure patient comfort and position Hand hygiene and prepare sterile field
- | Identify puncture site
- Ultrasound-guided insertion
- Insertion of dilator and guide wire
- Insertion of sheath
- Insertion of catheter

KEY FEATURES











Ultrasound guided puncture

Movable shoulder

Malpositioning

SPECIFICATIONS

Size: W79 x D38 x H18 cm W31 x D15 x H7.1 inch

SET INCLUDES

- 1 male upper torso with the right arm
- PICC puncture pads simulated blood (swab type)
- jar

Weight: 4.5kg/10lbs

- 1 instruction manual
- storage case

DESCRIPTIONS

MATERIALS Soft resin, hard resin

REPLACEMENT PARTS

11398-010 2 PICC puncture pads

RECOMMENDED DEVICES

PICC Catheter 4Fr. 50-60cm

Ultrasound scanner and PICC instruments are not included







MW4



Ultrasound-Guided Thoracentesis Simulator

MW4A

Ultrasound-Guided Thoracentesis Simulator - Strap-on set -**MW15**

Ultrasound-Guided Pericardiocentesis Simulator

ΛΛ\Λ/17

Ultrasound-Guided Thoracentesis/ Pericardiocentesis Simulator









Takahiro Amano, M.D. Vice President Senior Vice-Dean, Postgraduate School Professor and Director, Center of Postgraduate Medical Education International University of Health and Welfare Honorary Director, Sanno Medical Center



Thoracentesis

- Patient positioning
- Recognition of anatomical landmarks by ultrasound
- Assessment of level and volume of pleural effusion
- Determination of insertion site
- Needle insertion and collection of fluid

Pericardiocentesis

- Patient positioning
- Visualization of pericardial fluid under ultrasound scanning
- | Landmark palpation
- Needle insertion to the pericardial space
- | Aspiration of pericardial effusion

DESCRIPTIONS

S	SET INCLUDES	M	W4	MW4A	MW15	MW17
1	adult chest model		/		/	✓
1	mid-axially line unit		/	1		✓
1	mid-scapular line unit		/	/		/
1	pericardiocentesis unit				/	1
1	pillow for positioning		/		/	1
1	explanation model for thoracentesis		/			1
1	instruction manual		/	/	/	1

Ac	cessories	MW4		MW15	MW17
1	irrigator	✓			✓
1	funnel	✓	/		/
1	syringes (50ml)	✓	/	✓	√ x2
1	joint hose			✓	/
1	tube with three-way stopcock	✓	/		/
1	plastic jar	/	/		/

Thoracentesis

Simulate thoracentesis on both a torso and SP

Ultrasound-Guided Thoracentesis Simulator features two types of puncture units: mid-scapular line access and mid-axillary line access. Strap-on (wearable) puncture units facilitates hybrid training sessions with simulated patients.

- Palpable ribs
- Realistic needle-tip insertion and resistance
- Strap-on units to practice patient positioning and communication
- |Two sites for access: right mid-scapular line and left mid-axillary line
- 5 | Volume of pleural effusion can be controlled to set different levels of difficulty.
- 6 | Body torso for independent training. (Only for MW4)

















Pericardiocentesis

Practice patient safety during pericardiocentesis with ultrasound guidance

This simulator allows trainees to insert the needle under ultrasound guidance, pierce the "pericardial sac" and aspirate pericardial fluid.

- Durable and replaceable puncture pad
- 2 | Practice both the subxiphoid approach and parasternal approach through palpable and ultrasonic landmarks.
- 3 | Realistic needle tip sensation during puncture of the "pericardial sac"



junction) for needle insertion.





Identification of "Larrey's point" (left xiphisternal Inserting needle to the pericardial space with ultrasound guidance Ventricles, ribs, pericardium, liver and main artery can be visualized.

DESCRIPTIONS

ISPECIFICATIONS

Torso size: W40 x D25 x H50 cm / W15.7 x D9.9 x H19.7 inch Pad size: W16 x D7 x H21 cm / 6.3 x 2.76 x 8.3 inch Thora centesis unit Pad size: W16 x D14 x H21 cm / 6.3 x 5.6 x 8.3 inch Pericardio centesis unit

MATERIALS

Soft resin, Latex free

RECOMMENDED DEVICES

Thoracentesis: 22 G/ 23 G needle Pericardiocentesis: 18 G needle

REPLACEMENT PARTS

11394-010 pad for MW15

11383-010 mid axially line unit puncture pad 11383-020 mid-scapular line unit puncture pads for MW4, MW17, MW4A 11383-030 replacement lung





Ultrasound Compatible Lumbar Puncture/ Epidural Simulator



Lumbar puncture training with ultrasound guidance

Anatomically correct puncture block offers excellent ultrasound images



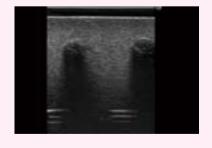


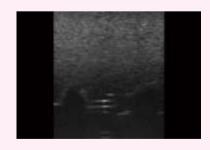


- 1 | Durable and replaceable parts for repetitive practice
- 2 | Adjustable to an upright or lateral position.
- 3 | Translucent block makes the needle trace visible.
- 4 | Interchangeable parts for other landmark and fluoroscopic procedure training

- | Ultrasound-guided lumbar puncture
- Ultrasound-guided epidural anesthesia
- | CSF collection and CSF pressure measurement









SPECIFICATIONS

Size: W33 x D21 x H30 cm W13 x D8.3 x H11.8 inch

Weight: 3.15kg / 1.43lbs

SET INCLUDES

- 1 lumbar region model
- ultrasound lumbar puncture/epidural block
- 1 ultrasound lumbar region skin cover lumbar region support bases
- (sitting position / lateral position)
- irrigation bottle
- syringe
- stand for irrigation bag
- instruction manual
- irrigation bag
- storage case

MATERIALS

DESCRIPTIONS

Soft resin, polyurethane elastomer

REPLACEMENT PARTS

11348-190 ultrasound lumbar puncture /epidural block

11348-230 ultrasound lumbar region skin cover for M43E

RECOMMENDED DEVICES Epidural needle:18G/Spinal needle:21G





US-9



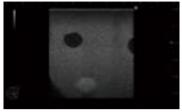


Ultrasound-Guided Breast Biopsy Phantom

Enhance confidence in performing safe and accurate breast biopsies

Combine two types of breast phantoms for step-by-step development of skills in needle biopsy





KEY FEATURES **Basic (Transparent)** Hand-eye coordination

Advanced (Opaque)

Acquisition of skills in safe and reliable needle biopsy



- 1 | Fine Needle Aspiration Biopsy (FNAB), Core Needle Biopsy (CNB) and Mammotome biopsy can be performed under ultrasound guidance.
- 2 | Realistic breast tissues that simulate the softness and resistance of the mammary gland.
- 3 | Targets are colored to confirm successful sampling.
- 4 | Targets are embedded in three levels for training in needle access in different angles and depth.
- 5 | Transparent and opaque phantoms provide level variations.
- 6 | Inexpensive and disposable for multiple attempts.

SKILLS

- | Hand-eye coordination in ultrasound biopsy
- | Localization of targets under ultrasound guidance
- Sampling of target

DESCRIPTIONS

SPECIFICATIONS

Size: 16 dia. x H8 cm / 6.3 dia. x H3.1 inch

Weight: 0.75kg / 1.7 lbs

MATERIALS

Hydrogel Latex free

ISET VARIATIONS

Duo set: 11387-000 transparent + opaque type Transparent set: 11387-100 1 pair of transparent type Opaque set: 11387-200 1 pair of opaque type

* Ultrasound scanner is not included.

Hyperechoic target

11347-210

Introductory Ultrasound Training Block "REAL VESSEL"

- 1 | 2 simulated vessel lines: straight and curve.
- 2 | Lines have slope to represent vessels with different depth.
- 3 | Vessel wall yields under pressure of a needle tip.

SKILLS

- Visualization and localization of the vessels
- Transducer manipulation
- | Basics for ultrasound-guided vascular access











Pediatric FAST/Acute Abdomen Phantom

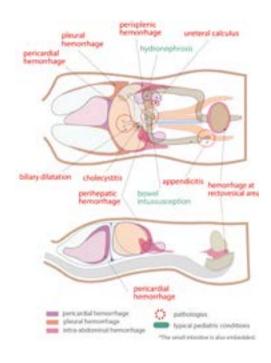
Ultrasound training for pediatric FAST procedures

This world's first pediatric ultrasound torso phantom provides opportunities of hands-on training in ultrasound examination of two year-old patient

Product Supervision

Shunsuke Nosaka, MD, PhD Director of Radiology National Medical Center for Children and Mothers





FEATURES

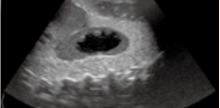
- 1 | Thoracoabdominal organs, bone structure and free-fluid for practicing FAST examination procedures
- 2 | Commonly seen pathologies in pediatrics
- 3 | Acquire fundamental pediatric abdominal ultrasound skills, as well as FAST/Acute sonography skills

- | FAST procedures: Internal hemorrhage at perihepatic, perisplenic, pelvis, and pericardium area
- | Sonography for acute pediatric patient: Bowel intussusception, appendicitis and biliary dilatation

IMAGES



Pleural hemorrhage



Hydronephrosis



Appendicitis

DESCRIPTIONS

SPECIFICATIONS

Size: W41 x D17 x H15 cm W16.1 x D6.7 x H5.9 inch Weight: 7kg / 15.4lbs

MATERIALS

Polyurethane elastomer Latex free

SET INCLUDES

- 1 ultrasound phantom
- talcum powder
- 1 storage case
- 1 tutorial manual (DVD)

* Ultrasound scanner is not included.







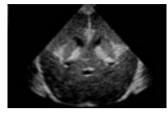




Ultrasound Neonatal Head Phantom (Normal Type)

World's first ultrasound neonatal head phantom with key anatomies







Weight: 1.5kg / 3.3lbs

FEATURES

Charlotte Henningsen, MS, RT(R), RDMS, RVT, FSDMS, FAIUM Chair & Professor - Sonography Department Adventist University of Health Sciences

Cranial or head ultrasound is one of the most difficult scanning skills, and trainees have few opportunities for training. This head model features an accurate depiction of a newborn's cerebral anatomy, and facilitates a realistic user experience with its life-like soft touch.

SKILLS

| Scanning of brain anatomy in sagittal (angled parasagittal), coronal and transverse planes via any fontanel

Palpation of anterior, posterior and mastoid fontanels

ANATOMY

skull anterior fontanel posterior fontanel mastoid fontanels

cerebrum cerebellum brain-stem lateral ventricle

third ventricle fourth ventricle septum lucidum

DESCRIPTIONS

SET INCLUDES

- 1 ultrasound phantom
- pillow
- storage case
- instruction manual

* Ultrasound scanner is not included.

MATERIALS

Polyurethane elastomer Latex free

ISPECIFICATIONS Size: W13 x D13 x H17 cm

W5.1 x D5.1 x H6.7 inch

US-14b

Ultrasound Neonatal Head Phantom (Abnormal Type)



Product Supervision

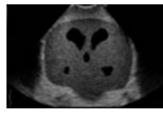
MS, RT(R), RDMS, RVT, FSDMS, FAIUM Chair & Professor - Sonography Department Adventist University of Health Sciences

Charlotte Henningsen,



World's first ultrasound neonatal head phantom with hydrocephalus







FEATURES

This head phantom is designed to demonstrate Hydrocephalus. The shape of the skull is altered due to intracranial pressure.

SKILLS

| Scanning of brain anatomy in sagittal (angled parasagittal), coronal and transverse planes via any fontanel

Palpation of fontanels

ANATOMY

- anterior fontanel
- posterior fontanel
- hypertrophied lateral ventricle

DESCRIPTIONS

SPECIFICATIONS

Size: W13 x D14 x H20 cm W5.1 x D5.5 x H7.9 inch

MATERIALS

Polyurethane elastomer Latex free

SET INCLUDES

- 1 ultrasound phantom
- 1 pillow
- 1 storage case
- 1 instruction manual

* Ultrasound scanner is not included.





Weight: 1.5kg / 3.3lbs





Infant Hip Sonography Training Phantom

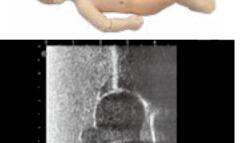
World's first infant hip sonography phantom Best tool to teach Graf's method

This phantom expands training opportunities for pediatricians, radiologists and orthopedists. Before working on real infants, trainees can repetitively practice on this phantom to become familiar with the examination procedures and key points. Using real ultrasound devices, trainees can learn key ultrasound landmarks to identify standard plane for Graf's classification. This is a foundation to acquire skills in handling and positioning of the baby as well as correct positioning of the transducer.



Product Supervision

Univ. Prof., h.c., Reinhard Graf, M.D.

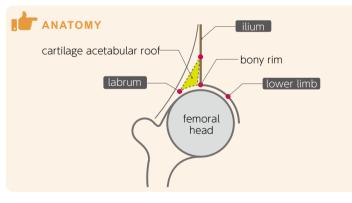


FEATURES

- 1 | The market's only training phantom for hip sonography on a full body manikin of 6-week-old infant.
- 2 | Bilateral hips for examination.
- 3 | Facilitate anatomical understanding.
- 4 | Movable arms to practice supporting and repositioning of the infant.

SKILLS

- Setting and preparation for hip sonography
- Changing the position of the infant
- Communication and interaction with infant's guardian
- Correct use and positioning of the transducer
- Recognition of landmarks for hip sonography
- Visualization of standard, anterior and posterior planes
- Interpretation and morphological classification of the sonogram



- chondro-osseous junction
- I femoral head
- synovial membrane
- joint capsule
- acetabular labrum
- cartilaginous portion of the acetabular roof
- bony promontory of the superior bony acetabular rim
- lower margin of the ilium
- standard plane

DESCRIPTIONS

SPECIFICATIONS

Size: W55 x D25 x H13 cm W21.6 x D9.8 x H5.1 inch Weight: 3kg / 6.6lbs

MATERIALS

Polyurethane elastomer Latex free

- 1 ultrasound infant phantom
- talcum powder
- 1 storage case
- instruction manual

^{*} Ultrasound scanner is not included.









^{*}Supporting cushion is not included.

Fundamental Ultrasound Phantom



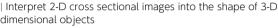


This oval phantom which helps sonographers with basic trainings

FEATURES

- 1 | Phantom for basic manipulation of ultrasound transducer
- 2 | Recognition of shape, echogenicity, distance, and practice of horizontal transducer works, which are all you are able to learn through this oval phantom

SKILLS



- 10 objects are embedded
- Adjusting Time-Gain Compensation to obtain suitable density
- Measuring dimensions and distance
- | Transducer handling to obtain accurate 2-D cross-section image | Flat and spheroidal surfaces provide a variety of difficulty

DESCRIPTIONS

SPECIFICATIONS Size: W24 x D16 x H11 cm/ W9.5 x D6.3 x H4.3 inch

Weight: 2.3kg/5lbs

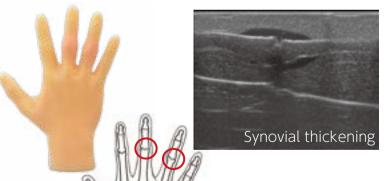
MATERIALS Polyurethane elastomer Latex free

*Ultrasound scanner is not included

US-17

Rheumatoid Hand Phantom





Ultrasound examination is a key skill for early diagnosis on rheumatoid arthritis.

FEATURES

- 1 | For skills training in ultrasound examination on rheumatoid arthritis
- 2 | Synovial thickening and increased synovial fluid are simulated on middle and ring finger.

SKILLS

| Ultrasound examination on rheumatoid arthritis

SPECIFICATIONS Size: 17 x 5 x 21 cm 6 x 2 x 8 inch

MATERIALS Polyurethane elastomer Latex free

Weight: 0.6kg/ 1.32lbs

SET INCLUDES

- 1 hand manikin
 - instruction manual
- 1 storage case

*Ultrasound scanner is not included.





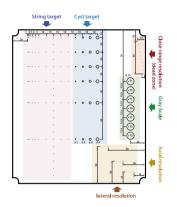
DESCRIPTIONS -

US-2

Ultrasound QA Phantom (Multi Purpose Phantom N-365)







Durable and stable

Useful both for daily assessment and further research. Gray scale for evaluation, cyst targets with non-resonance cylinders, line targets for geometrical evaluation including close range (dead zone) resolution, axial and lateral resolution are prepared for scanning. The phantom is designed to allow scanning from all four side walls.





Gray Scale

String target

SPECIFICATIONS

Size: 19 x 22 x 7 cm 7.6 x 8.8 x 2.8 in. SET INCLUDES

1 phantom

carrying case

DESCRIPTIONS

Sonic velocity: 1432m/ sec at 25 degrees C Attenuation coefficient: 0.57 dB/ cm MHz at 25 degree C Acoustic impedance: 1.38 rayl at 25 degree C

MATERIALS

Urethane elastomer, acryl, nylon

US-4

Breast Ultrasound QA Phantom

Weight: 3.6kg/ 7.9lbs



Ensure highly detailed images for reliable breast cancer examinations

Ultrasound QA phantom for high precision imaging in the high frequency sonography around 10 MHz that is required in breast examination. For monthly basic quality check of ultrasound images, as well as longer term quality assurance to maintain consistency of the performance of scanners and transducers.

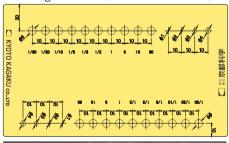


Mass targets block

Sonic velocity: 1434 m/sec at 25 degrees C Attenuation coefficient: 0.59 dB/ cm MHz at 25 degrees C Acoustic impedance: 1.37 rayl at 25 degree C Integrated target: gray scale targets/ cyst targets

Dot targets block

Sonic velocity: 1442 m/sec at 25 degrees C Attenuation coefficient: 0.73 dB/cm MHz at 24 degrees C Acoustic impedance: 1.39rayl at 25 degree C Integrated target: dot targets/ 45 degrees line target Mass targets block (contrast resolution)





Mass targets block (contrast resolution)

SPECIFICATIONS

Size: mass targets block phantom size: 18 x 7.5 x 11 cm / 7.2 x 3 x 4.4 inch dot targets block phantom size: 13.5 x 7.5 x 11 cm / 5.4 x 3 x 4.4 inch

SET INCLUDES

- 1 mass targets blocks
- dot targets blocks
- 1 thermometer storage case

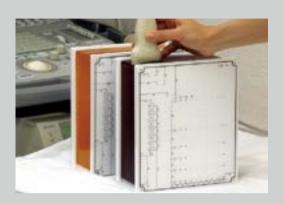
MATERIALS

Urethane elastomer, acryl, nylon Latex free

DESCRIPTIONS -

Weight: Mass 1.3kg / 2.7lbs Dot 1.0kg / 2.2lbs

Features of Ultrasound Phantom Materials



Comparison of 2004 phantom and 2012 phantom.

Natori H, Igarashi T, Arakawa M. Durable fine resolution test phantom for diagnostic ultrasound system ECR 2013 Poster C-1765

"Durable fine resolution test phantom for diagnostic ultrasound system", H.Natori 2013

Materials for Ultrasound Phantoms

Japanese patent No. 3650096

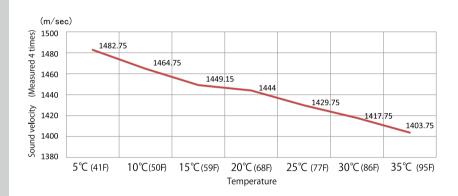
Durable, stable with homogeneous granular background reflection with excellent and controllable echogenicities

Sonic velocity: 1434m/sec at 25 degrees C

Density: 0.954g/cm³

Attenuation rate: 0.57dB/cmMHz at 25 degrees C Acoustic impedance: 1.37 rayl at 25 degrees C

	15 degrees C	35 degrees C			
Speed of sound	1449.5 m/sec	1434.1 m/sec	1403.9 m/sec		
Attenuation rate	0.58 dB/cmMHz	0.57 dB/cmMHz	0.55 dB/cmMHz		



Examples of custom made phantoms

We accept custom order items tailored for your needs, such as:

Study tool for innovation, Meet training requirements to promote standardized or new method of examination, Demonstration and user-training tool for device suppliers

*The following phantoms are examples of custom made phantoms. Not for general sales.

Biliary model







A demonstration/user training phantom for percutaneous transhepatic biliary drainage (PTBD).

- Ultrasound and/or X-ray guided procedures.
- Common bile duct (CBD) is removable to place and remove a simulated mass lesion or stone, etc.,. Urinary tract mode



Urinary tract model

A demonstration/user training phantom for percutaneous nephrostomy/nephroureterectomy procedures.

- Ultrasound guided procedures.
- The bladder is transparent to demonstrate the cath eter placement under direct vision.
- The kidney tissue allows repeated access with wide diameter catheters without showing marks of punc ture site.



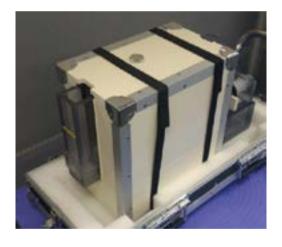




Abscess drainage model

A demonstration/user training phantom for percutaneous nephrostomy/nephroureterectomy procedures.

- Ultrasound , X-ray and or CT guided procedures.
- Three abscess with different diameters and depth.
- · Abscess are refillable for repeated use.
- The tissue allows repeated access with wide diameter catheters without showing marks of puncture site.



Endoscopic Ultrasound (EUS) Phantom for promotion of EUS system

Stomach and duodenum are accessible with EUS probes, allowing to visualize pancreas, gall bladder and liver.



Multi Modality Biopsy Phantom

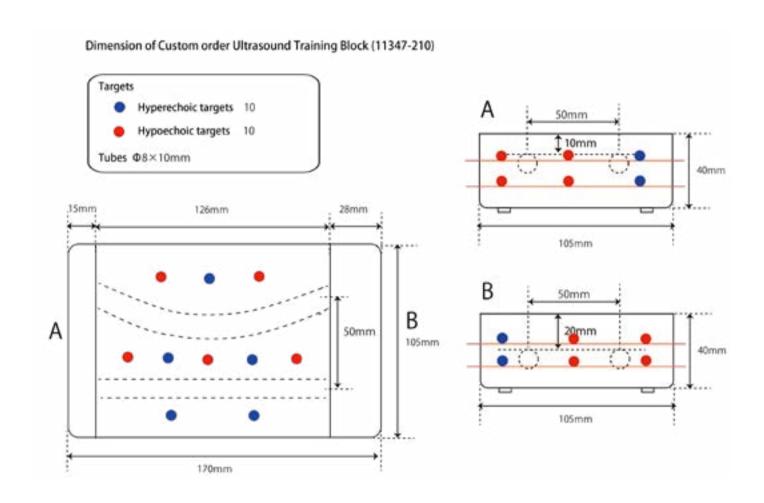
Compatible with ultrasound and CT. Can also be used for Mammography.





Ultrasound training block

Vascular access differentiation of hyperechoic targets, hypoechoic targets and biopsy can be trained.





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