Healthcare

CAE Blue Phantom User Guide

BPRB2011 Renal Biopsy Ultrasound Training Model

CAE

Contents

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Cautions and Warnings

Read this user guide, including all cautions and warnings, before you use your CAE Blue Phantom™ ultrasound training model. Use this product only as described in this guide. If you use the product incorrectly, it may be unsafe and will void your warranty. Keep this information for future reference.

General Precautions

- Make sure the training model is set up on a stable, sturdy work surface such as a bed, stretcher, or table that will not collapse and cause injury to users.

- Heavier training models should be placed on a patient bed or stretcher rated to support such weight.

- Place the model on smooth surfaces only. Rough or uneven surfaces can leave impressions on the skin and damage the model.

- Do only the procedures supported by each product as described in this guide.

- Use only needles for any procedures supported by this model.

- Do not use or store other sharp objects such as scissors, scalpels, or box-cutters with the training model.

- Do not pull on the training model skin. This can cause the skin to tear.

- Do not mark directly on the training model as this will permanently damage it.

- Do not insert any objects or tools into the model except for the equipment, accessories, or medical supplies intended for use with this model.

- Do not use chemical solvents on the models.

- Clean the training model with water and a light soap solution only. Do not immerse the model or use large amounts of liquid to wash it.

Latex-Free

- All CAE Blue Phantom training models, products, and accessories are manufactured only of materials that do not contain latex.

Needles and Catheters

- Use only new, sharp, unbent 18-21 gauge needles or 7F catheters. Smaller needles (higher than 22 gauge) can bend during use and damage the model.

- The self-healing feature of CAE Blue Phantom simulated tissue applies only to needle sticks from 18-21 gauge needles. Healing is not guaranteed if needles larger than 18 gauge, scalpels, or other sharp implements are used to cut into or pierce the model.

- Replace needles after ten uses. Dull needles can damage the model.

- Use extreme caution when using needles during training to avoid injury.

Service and Repair

- The CAE Blue Phantom training models are not user-serviceable. Only a trained technician may open or disassemble the product.

- Unauthorized use or handling of the model may void the warranty.

- If you have a problem with your product, contact CAE Customer Support.

Introduction

This user guide describes the features, use, and care of the following training models:

- CAE Blue Phantom Renal Biopsy Ultrasound Training Model (BPRB2011)
- CAE Blue Phantom Renal Biopsy Ultrasound Training Model, left kidney (BPRB2011-LEFT)

These models are intended as platforms for the practice of ultrasound-guided renal biopsy.
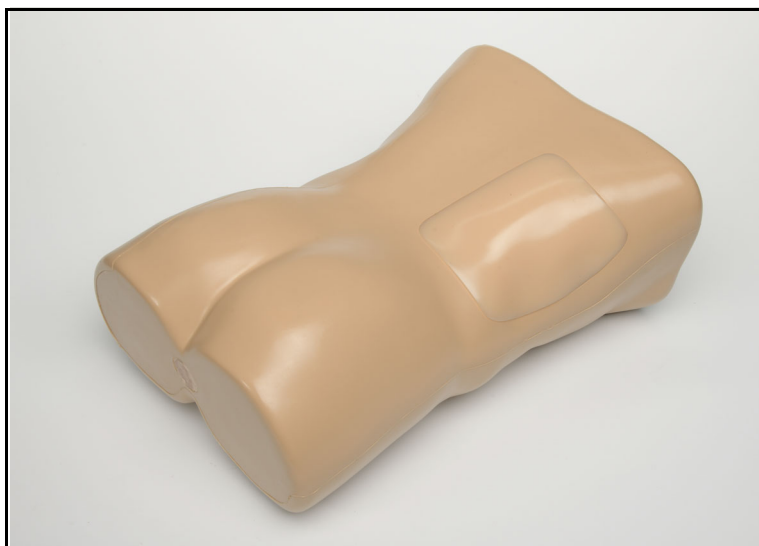
Renal Biopsy Ultrasound Training Model
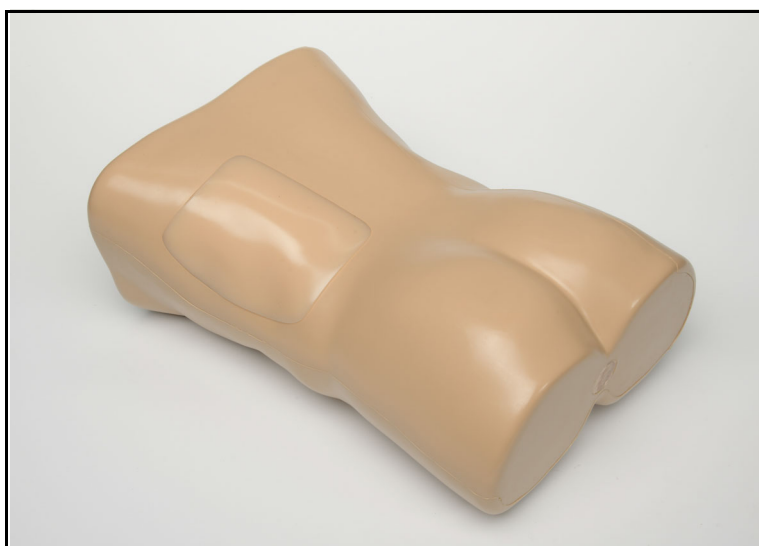
Renal Biopsy Ultrasound Training Model, left kidney

Anatomy

CAE Blue Phantom training models are constructed using our patented Simulex™ ultrasound tissue which has imaging characteristics that mimic human tissue. The models contain skeletal components so the user will encounter the same imaging landmarks as in a human patient.

The Renal Biopsy Ultrasound Training Models have one replaceable kidney. Extra kidneys are available for purchase. For more information about kidney replacement, see the *Care and Maintenance* section of this guide.

Internal anatomy includes:

- Renal cortex
- Renal medulla
- Ribs
- Major and minor calyces

Equipment Overview

The following items are included with your shipment:

- Ultrasound training model

The following additional items are required for training but not included in your purchase:

- Ultrasound system with appropriate transducer
- Ultrasound gel
- Renal biopsy equipment per local protocol

CAE Blue Phantom training models are compatible with any diagnostic ultrasound system. General frequency ranges for diagnostic ultrasound imaging are 2–20MHz.

Optional accessories or consumables for your model are available to purchase on the CAE website:

- BPRB2012, BPRB2012–LEFT Renal biopsy replacement tissue inserts
- BPRB2013 Replacement kidney
- BPH602-B Soft storage case

Using the Training Model

This section has information and instructions about the setup and use of the training model and any specific training procedures.

Setup

Follow the guidelines below to unpack and set up your CAE Blue Phantom training model.

1. Open the shipping carton:

   º Use extreme caution with sharp tools, such as a box cutter, to avoid damage to the training model.

2. Unpack the equipment:

   º Remove the training model from its shipping container. For heavier models, use proper lifting techniques to prevent bodily injury.

   º Review the equipment, accessories, and supplies to make sure all necessary pieces are present. See the *Equipment Overview* section of this guide for a list of items included with this model.

3. Set up for training:

   º Put the model on a stable patient bed, stretcher, or table.

   º Prepare your ultrasound system and equipment.

   º Gather any procedural equipment and supplies.

Training

This section provides information about using your model for training and practice.

Ultrasound Scanning

Note: CAE Blue Phantom products do not teach ultrasound procedures or techniques. Refer to your institution or training program for more information.

To scan with your training model and conduct a simulated ultrasound-guided procedure:

1. Place the model in the appropriate position for scanning.

2. Place ultrasound gel on the transducer or on the training model in an adequate quantity so that the transducer slides effortlessly on the model. Add more gel as needed.

3. Adjust the ultrasound system controls per your training protocol and the manufacturer's instructions. Optimize the image with the ultrasound controls as needed.

Ultrasound-guided Procedures

Your CAE Blue Phantom training model is a realistic platform for complete renal core biopsy procedural training. Use your normal protocol and equipment, and follow your institution's policies and guidelines.

> ⚠ **CAUTION**
>
> Do not use antiseptics, such as iodine, on the training model. This can cause permanent damage to the model.

When a core renal tissue sample is taken from the model, it leaves an air-filled space in the kidney of the same size as the core sample. Once a tissue sample is removed from the kidney, it cannot be re-inserted, and damage to the surrounding tissue from biopsies cannot be repaired.

When a section of the kidney is destroyed, reposition the kidney to target a different section. Each kidney can withstand approximately 30 core biopsies until it is unusable.

Once the kidney is destroyed, you must install a replacement kidney. Extra kidneys can be purchased from CAE Healthcare. For information and instructions on replacing the kidney, see the *Care and Maintenance* section of this guide.

Care and Maintenance

With proper care, your training model will remain in optimal condition and ready for use.

Storage and Transport

Follow these guidelines to properly store or transport your model:

- Storage temperature degree range: 45 to 85 °F (7 to 29 °C)
- Store the model as is, or in a CAE Blue Phantom storage case (if available for your model).
- Do not store in contact with other models or hard objects as the pressure can damage the Simulex tissue. Do not stack multiple training models on top of each other.
- When models with inserts are stored standing up for long periods of time, gravity may cause the insert to deform slightly. Remove the insert and let it sit for a few days to regain its shape.
- Transport the model securely so it does not fall.
- Do not carry by the tubes or use them as handles as this will damage the model.

Cleaning

To maintain the product skin for the lifespan of the product, clean the exterior of the model after each use. Follow these steps:

1. Mix one cup of tap water with ¼ teaspoon of mild liquid soap (such as dish soap).
2. Gently clean the model's exterior with the soap mixture and a soft, non-abrasive sponge or cloth.
3. Rinse lightly with clean water.
4. Dab or pat with a clean, soft, lint-free cloth to dry the product after cleaning. Do not wipe or rub the skin, which can damage it.
5. After the model has dried completely, lightly coat the external surface of the model with baby powder and dust off any excess.

Replacing the Tissue Insert

To replace the insert, you will need:

- Replacement insert

Follow these steps:

1. Position your training model in the upright position.
2. Gently lift up and pull the insert out completely.

3. Place the new insert into the base.

4. Adjust the insert as needed so it aligns with the surface of the model.

Replacing the Kidney

To replace the kidney, you will need:

- Replacement kidney

Follow these steps:

1. Position the model on a clean workspace.

2. Gently lift up and pull the tissue insert out completely.

3. Remove the kidney from the tissue insert.

4. Place the new kidney into the tissue insert.

5. Replace the tissue insert with the new kidney and adjust as needed so it aligns with the surface of the model.

Help and Technical Assistance

For assistance, contact CAE Customer Support. Contact information for all regions is available on the back cover of this guide and on the CAE Healthcare website.

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For more information about CAE products, contact your regional sales manager or the CAE distributor in your country, or visit caehealthcare.com.

Tel +1 941-377-5562 or 866-233-6384

For customer support, please contact CAE.

Customer Support Headquarters – United States
Monday – Friday from 7:00 a.m. to 6:00 p.m. ET
Phone 1-866-462-7920
Email: srqcustomerservice@cae.com

Customer Support – Canada
Monday – Friday from 8:00 a.m. to 5:00 p.m. ET
Phone 1-877-223-6273
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