

# Image-Guided Abdominal Biopsy Phantom

Model 071B



## CT/ ULTRASOUND/ MRI IMAGE FUSION • LIVE SCANNING• BIOPSY TRAINING

The Model 071B, Image-Guided Abdominal Biopsy Phantom is a simplified abdominal phantom suitable for training and demonstrating image-guided needle biopsy navigation tools or procedures that require a constant visual reference for needle placement. Because it is constructed of a self-healing formulation of Zerdine®, the phantom allows multiple biopsy insertions with minimal needle tracking.

The phantom contains 12 lesions, 5-12 mm in diameter, positioned in groups of three in consistent locations within the phantom. It also includes simulated spine and ribs, and an "H" marker within the spine to assist in determining the head side within a CT image. The lesions and spine are visible under ultrasound, CT and MRI. The solid polymer gel background is anechoic and will not leak with punctured.\*

The phantom includes a foam lined hard carry case. For users interested in image fusion studies, the phantom can Image-Guided Abdominal Biopsy Phantom be purchased

as a kit to include a serial-number specific CT DICOM Data set for reference. CIRS can also offer value-added options and services such as phantom specific CMM, attachment of customer specific registration devices and inclusion of special point markers

### Benefits

- Improve performance of freehand abdominal biopsies
- Minimal needle tracking-- Z-skin™ fat layer and softer gel provide better self-healing properties
- Validate automated biopsy systems
- Suitable for CT, MRI and Ultrasound

<sup>(1)</sup>US Patent #5196343

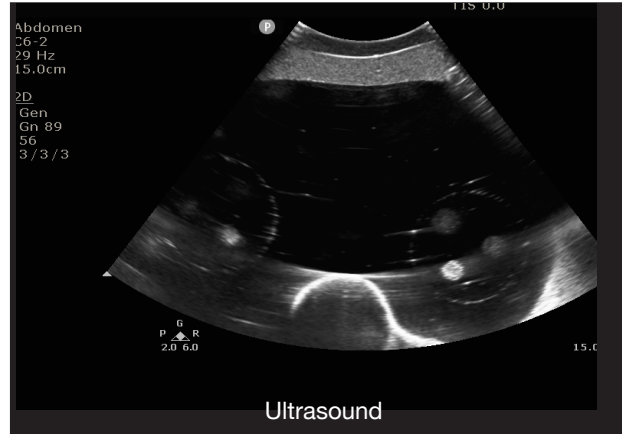
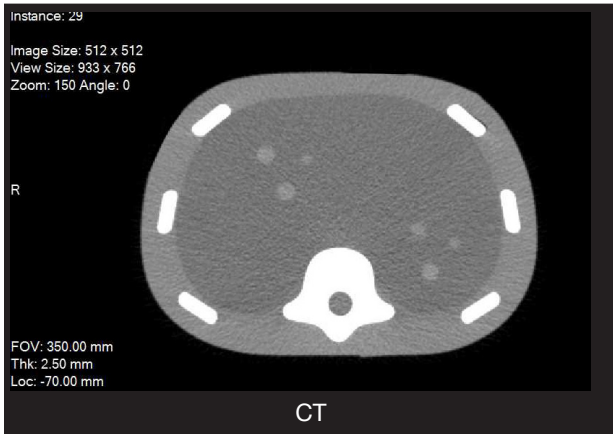
\*NOTE: Some permanent tracking may be evident if debris and air bubbles are entrained in the gel during the biopsy procedure. To extend the lifetime of the phantom, the use of higher gauge needles that have been wetted and de-aired prior to insertion is recommended.

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**CIRS**

Tissue Simulation & Phantom Technology



**SPECIFICATIONS**

|                       |  |
|-----------------------|--|
| <b>DIMENSIONS</b>     | 28 cm x 20 cm x 12.5 cm (11" x 7.9" x 4.9")  |
| <b>PHANTOM WEIGHT</b> | 5.5 kg (12.1 lb)   |
| <b>MATERIALS</b>      | Background: Optically clear Zerdine <sup>®(1)</sup> gel, 1540 m/s (nominal)<br>Ribs & Vertebrae: Radio-opaque epoxy<br>Scan Surface: Z-skin <sup>™</sup> elastomer<br>Masses: Zerdine, soft tissue<br>Muscle Layer: Hyperechoic Zerdine <sup>®</sup> gel (ensures phantom retains shape over time) |
| <b>MASSES</b>         | 5-12 mm Diameter<br>Qty:12   |
| <b>OTHER</b>          | CT visible "H" marker to indicate head/foot orientation (made from lead- MRI compatible)   |

**MODEL 071B INCLUDES**

| QTY | COMPONENT DESCRIPTION                 |
|-----|---------------------------------------|
| 1   | Image-Guided Abdominal Biopsy Phantom |
| 1   | User Guide                            |
| -   | 12-Month Warranty*                    |

**MODEL 071B-035 KIT INCLUDES**

| QTY | COMPONENT DESCRIPTION   |
|-----|---|
| 1   | Image-Guided Abdominal Biopsy Phantom   |
| 1   | CT DICOM Data Set <sup>(2)</sup> (Serial number specific, 1.5 mm slice thickness @ 120 kvp) |
| 1   | User Guide  |
| -   | 12-Month Warranty*  |

\*Please note: once any device has been inserted into the phantom (such as biopsy needles, localization wires, etc.) the 12 month warranty will not cover claims related to material desiccation or needle tracking.

(1) US Patent # 5196343

(2) DICOM Images are provided with a free DICOM reader (Onis 2.6). If using alternate software to read the images, please notify CIRS of any special requirements for making the data compatible with your software. For instance, some programs include special checks of the DICOM header file or the DICOM directory when loading the image data set.

