

Chest Phantom N1

Instruction Manual

Chest Phantom N1

Chest Phantom N1 is designed for plain X-ray and also to allow CT scanning, by which chest images approximate to clinical ones can be obtained.

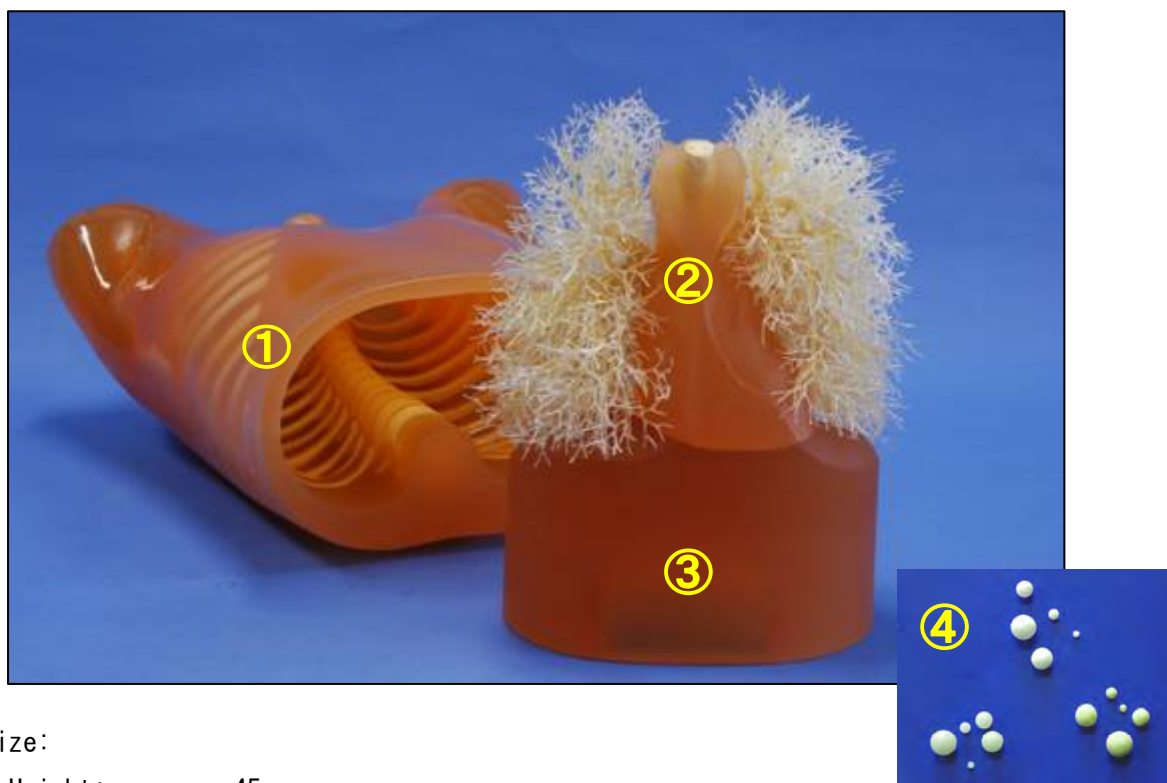
Please note: The images in this instruction manual is those of N1A (Advanced type), and appearance of the vessel part is different from N1B(Basic type).

Features

1. Arms abducted position of the phantom allows lateral and CT scanning.
2. Pulmonary vessels and bronchus up to the first bifurcation are three dimensionally disposed in the phantom lung field.
(N1A has capillary vessels.)
3. Mediastinum and pulmonary vessels are one piece structure.
4. Abdomen (diaphragm) block and mediastinum/vessels part can be taken out from the bottom opening of the phantom.
5. Simulated tumors can be attached to arbitrary position in the lung field by using double-sided tape or other adhesives.

Set includes

- (1) Main body (chest wall)
- (2) Mediastinum (heart and trachea included)
- (3) Abdomen (diaphragm) block
- (4) Simulated tumors: 15 variations
 - 3 varieties of Hounsfield numbers: -800, -630, +100
 - 5 sizes for each time: diameter 3, 5, 8, 10, 12 mm



Size:

Height: approx. 45cm

The measurement around the chest: approx. 94cm

Weight: approx. 18kg

Materials:

Soft tissue and vessels	Polyurethane (gravity1.06)
Synthetic bones	Epoxy resin and calcium carbonate

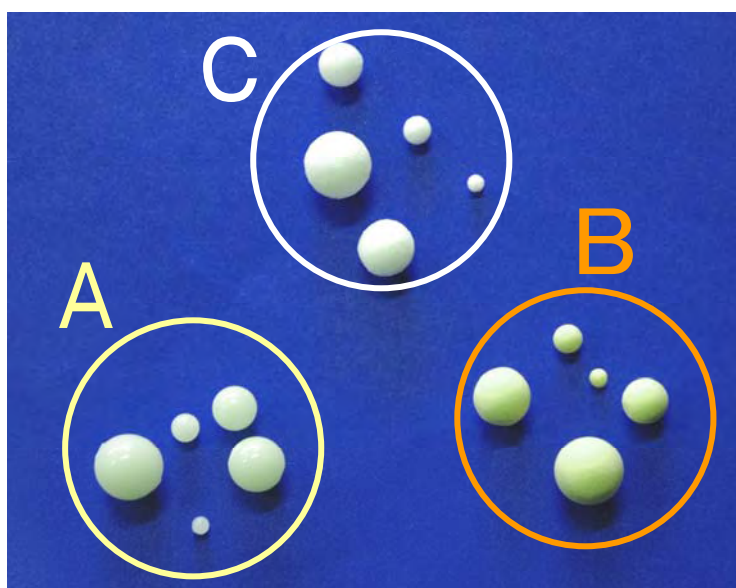
Simulated tumors

Size: diameter 3, 5, 8, 10, 12mm

Shape: sphere

	Color	Hounsfield number	Material
A	Cream	Approx. HU+100	Polyurethane, SZ50 and hydroxyapatite
B	White	Approx. HU-800	Urethane foam
C	Pale orange	Approx. HU-630	Urethane foam

Total 15 piece



<Detach the internal phantom structure>

A-1) Lay the phantom body in supine position.

A-2) Pull out the abdomen by holding the indentation at the bottom section of the phantom.



A-3) Hold the lower part of the heart and pull out the mediastinum unit carefully.

Caution: Do not grab or pull the vessels. It may cause breakage in the phantom.

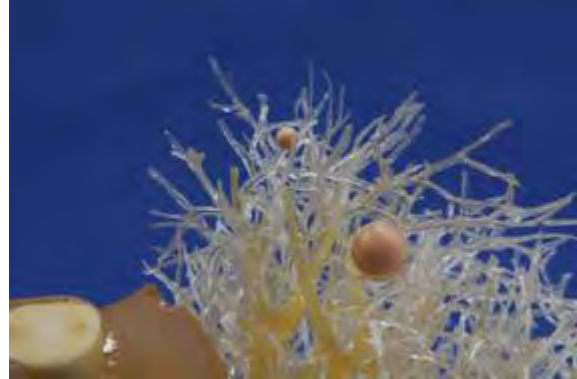
A-4) Keep the mediastinum unit upright and put it on the abdomen (diaphragm) block at any time when it is detached from the phantom body.

Caution: Do not put the mediastinum unit horizontally with the vessel part contacted with the ground or table top. The weight of the unit may cause breakage in the vessels.



<Attach the simulated tumors>

B-1) Put simulated tumors to the pulmonary vessels by double sided-taped tape.
A pair of tweezers will help to put them closer to the heart.

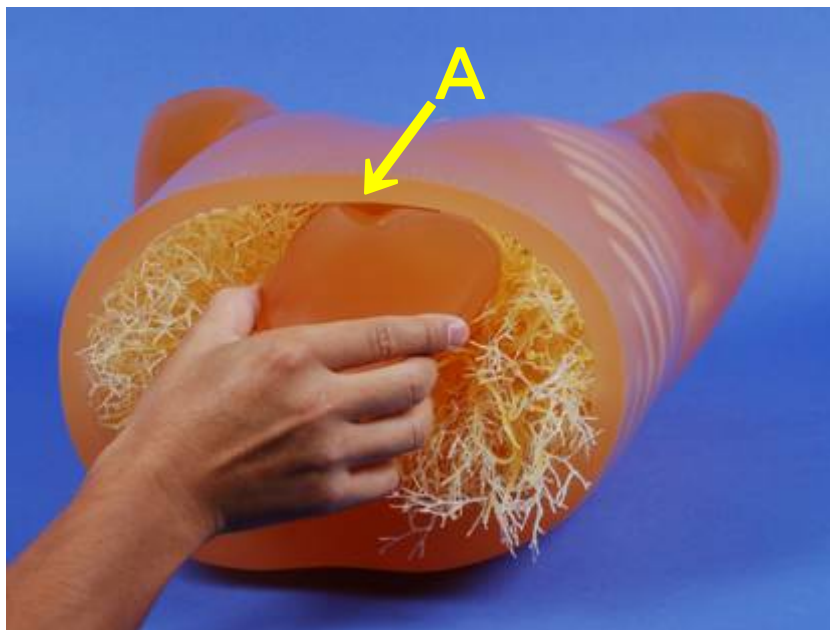


<Attach the internal phantom structure>

C-1) Insert the mediastinum unit carefully into the phantom body by holding the lower part of the heart.

Take note to the direction so that the indentation on the front surface of the heart fit to the projection on the inner surface of the chest wall (A).

C-2) Insert the abdomen (diaphragm) block, taking note to the direction.



<Take out the phantom from the case>

Lay the case horizontally when you take out the phantom from the case.

Do not lift the phantom while the phantom with the inner structures is put upright.

In case you do, hold the bottom section firmly, so that the inner structures will not slip out.



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NOTICE

Handle the bodycovers carefully since they are fragile.

Hold the plate with your both hands carefully at all times.



Put it as shown in the picture on the right.



For storage, put the plate on the foam in the carton case and keep it in room temperature.



Don't grip either side edges or thin area of the plate.

Don't hit them against hard objects.



Don't put them horizontally.

Don't push them or put heavy material on the plate.

