

# Dynamic Heart and Lung Phantom

The motion of diaphragm and tumor, and the realistic heart motions provide various solutions for clinical research.

Dynamic Heart and Lung Phantom is an anthropomorphic chest phantom with motion that represents movement of the heart and lung. The phantom can be used for ECG gating cardiac CT as well as for the study of motion artifact in MDCT. The simulated tumor with 3 dimensional movement facilitate evaluation on tumor tracking application in radio therapy.

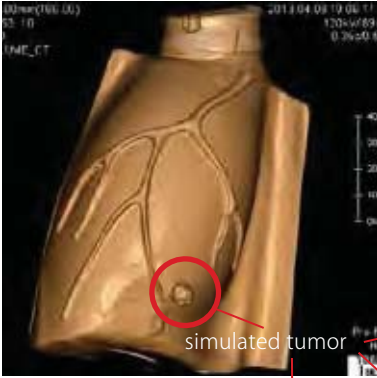


## Features

1. The phantom represents movement of the human heart, lungs and pulmonary nodule.
2. The pulmonary nodule and diaphragm moves independently from the respiratory cycle.
  - Three dimensional movement of the pulmonary nodule (linearly and rotationally)
  - Life-size male chest torso phantom with human tissue substitute
3. The elastic heart represents systolic and diastolic motion. The coronary vessels including stenotic examples are shown.
  - The phantom can be connected to ECG for ECG gating.
  - Motion disc represents movement of abdomen for respiration.
  - Simple operation with wireless tablet



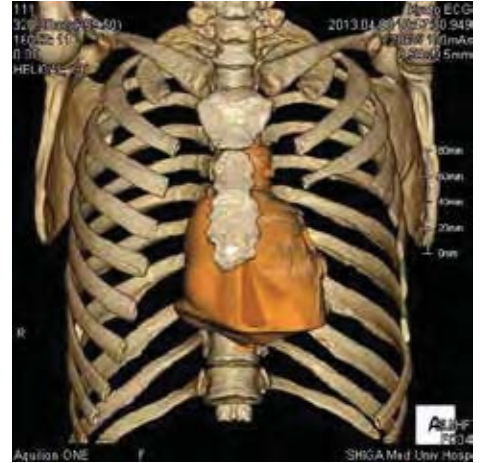
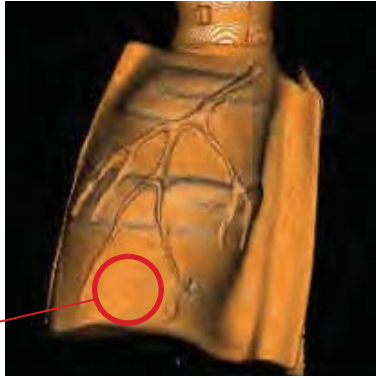
ECG gated



simulated tumor



Non ECG gated



simulated tumor

### Anatomies

Synthetic bones of the chest  
Heart, diaphragm

### Pathologies

pulmonary nodule, stenosis of coronal artery

### Applications

Respiratory gating chest CT  
Tumor tracking in radiotherapy  
ECG gating cardiac CT

### Controllable Parameters

Heart rate: 30-120 times/min  
Cardiac output: 60,70,80,90, 100mm  
EF rate: 30%, 35%, 40%, 45%, 50%, 55%, 60%  
Respiratory rate: 6-24 cycles/min  
Linear movement of nodule unit: 8-64mm / 0-1.5 inch  
Rotation range of nodule unit: 50-70 degrees

### Specifications

Set Includes:  
1 drive unit  
1 nodule rotation unit  
1 diaphragm block  
1 chest phantom  
3 types of heart unit  
1 set of simulated tumors  
(15 types)  
1 tablet PC

