

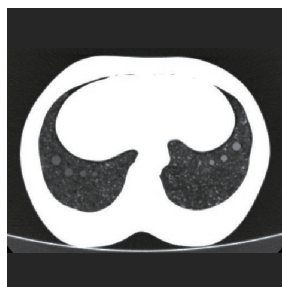
PH-8 | 41507-000

Lung Cancer Screening CT Phantom LSCT001

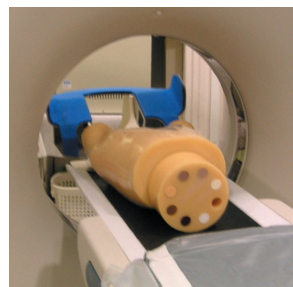
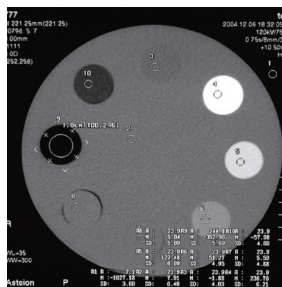
Dosimetry 

CHEST PHANTOMS

Chest phantom for standardization studies in low dose lung cancer CT screening
Anthropomorphic structure provides life-like images allowing operators visual evaluation



SHOW MORE! 

FEATURES

- | Simulated GGO type tumors with different sizes and HU numbers are prepared in the vicinity of three main sections of bilateral lungs
- | Dosimeter holder on the central axis of the phantom allows housing a pencil type ion chamber. 8-step cylindrical linearity phantom to control density curve as a scale can be attached to the chest phantom base

APPLICATIONS

- | CT image quality evaluation
- | Dosimetry
- | Evaluation of density curve

ANATOMY

- | Bones
- | Lungs
- | Mediastinum
- | Simulated tumors at three lung areas
 - Apical portion of the lungs
 - Bifurcation of the trachea
 - Base of lungs

Simulated tumors

	HU contrast with the lung back ground	size	materials
tumors in the right lung	Δ HU=100	4,6,8,10,12 mm dia. 0.16, 0.24, 0.32, 0.39, 0.47 in dia.	urethane resin
tumors in the left lung	Δ HU=270	2, 4, 6, 8, 10 mm dia. 0.08, 0.16, 0.24, 0.32, 0.39 in dia.	urethane resin

Linearity phantom targets

	HU contrast with the lung back ground	materials
A	-1000	air
B	-850	polyurethane
C	-600	polyurethane
D	-400	polyurethane
E	-200	polyurethane
F	100	polyurethane
G	250	bakelite
H	350	polyacetal resin



DESCRIPTIONS

SET INCLUDES

1 chest phantom	1 adjustment base
1 8 step linearity phantom	1 set of sample images manual
1 urethane cylinder	

MATERIALS

Chest wall: human tissue substitute
 Bones: synthetic bones
 Alveoli: styrene foam and urethane foam

SPECIFICATIONS

Phantom size:
 W44 x H69.4 cm
 W17.3 x H27.3 in

PUBLICATION REFERENCES

Muramatsu, Y., Tsuda, Y., Nakamura, Y., Kubo, M., Takayama, T., & Hanai, K. (2003). The Development and Use of a Chest Phantom for Optimizing Scanning Techniques on a Variety of Low-Dose Helical Computed Tomography Devices. *Journal of Computer Assisted Tomography*, 27(3), 364-374. doi:10.1097/00004728-200305000-00012