

HEAD CTA PHANTOM AVM / LESION

Age
Category

Adult

Body
Region

Head

Target
Modality

CT

Diagnostic
Features

AVM,
Low-contrast lesions

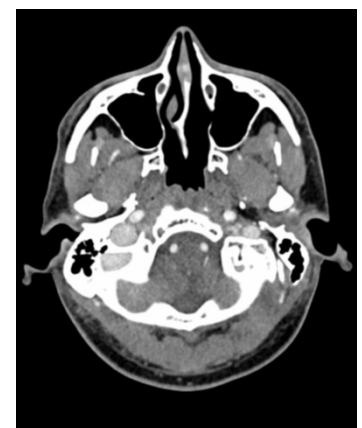
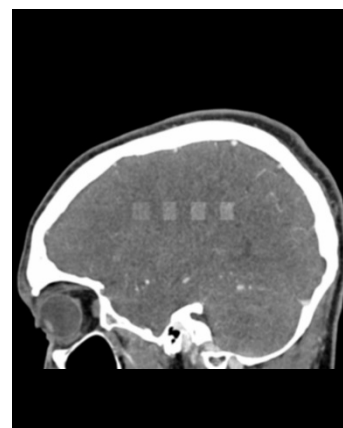


This phantom simulates a contrast medium enhanced head in arterial phase (CT angiography). It covers the vertex to the foramen magnum.

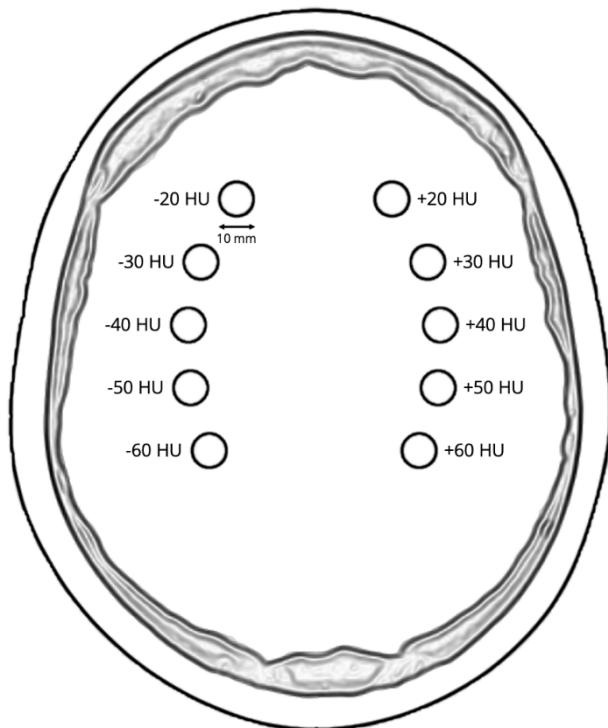
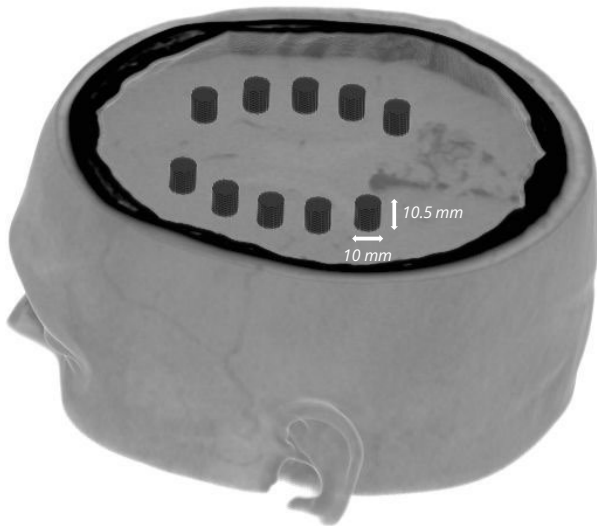
The phantom has 10 low-contrast lesions in the centrum semiovale and the right hemisphere has an arteriovenous malformation.

The phantom can be used in CT (including CBCT) to evaluate and optimize imaging performance and AI-enabled diagnosis. It is also suited for training purposes.

The phantom provides a detailed and realistic simulation of vascular structures, soft and bone tissue. Air voids are filled with a cellulose-polymer composite of approx. -160 HU.



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Specifications

Size	Approx. 186 x 214 x 159 mm
Weight	Approx. 3170 g
Base material	Cellulose-polymer composite
Optimal tube voltage	120 kVp (cf page 3) - adaptable upon request -

Diagnostic features

- Realistic simulation of head vessels, bone and soft tissues.
- Arteriovenous malformation of the right hemisphere.
- 5 rod-shaped lesions on each side in the centrum semiovale at the periventricular and supraventricular level.

Lesion diameter:	10 mm
Lesion height:	10.5 mm
Lesion contrast:	Approx. -60 to -20 and 20 to 60 HU at 120 kVp

For more information visit
www.phantomx.de

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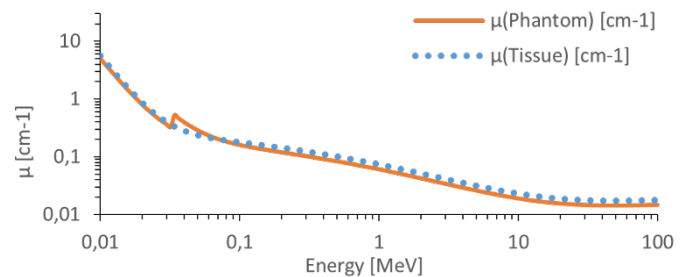
General indications

- The phantom is made of a cellulose-polymer composite material with properties similar to hardwood. If handled carefully, it will last a long time.
- The phantom is coated with a protective layer. If the protective layer is undamaged, the phantom can be cleaned using a damp cloth (water or mild detergent).
- Protect from direct sunlight.
- Maintain a storage temperature of 10 °C to 30 °C. If the phantom is exposed to temperatures below -10 °C or above 45 °C, it can be severely damaged.
- The phantom is not equipped for dose measurements with dosimeters and it is not suited for material characterization with dual energy CT.
- The phantom is not certified as medical device.
- Air voids are filled with cellulose-polymer composite of approx. -160 HU.

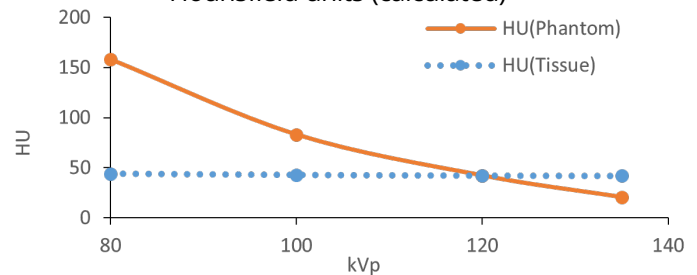
Attenuation properties

Soft Tissue

Linear attenuation coefficients [cm⁻¹] (calculated)

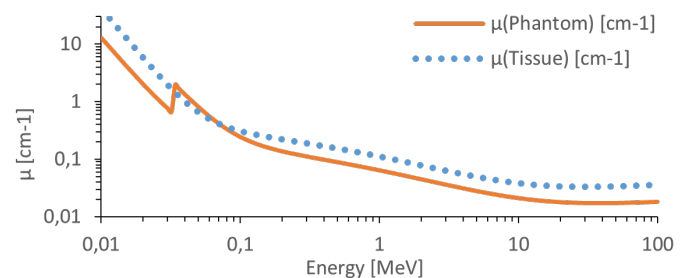


Hounsfield units (calculated)

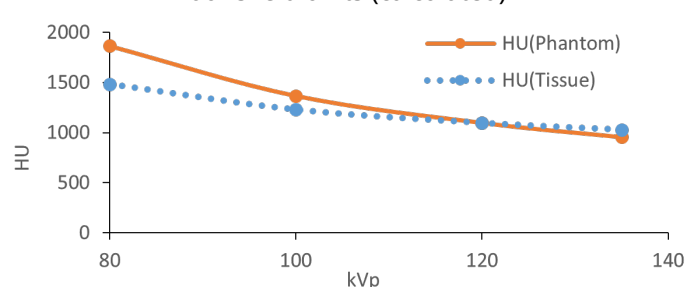


Bone Tissue

Linear attenuation coefficients [cm⁻¹] (calculated)



Hounsfield units (calculated)



Tissue Reference: Woodard HQ, White DR. The composition of body tissues. Br J Radiol. 1986.