Article Number
50-04

HEAD CTA PHANTOM AVM

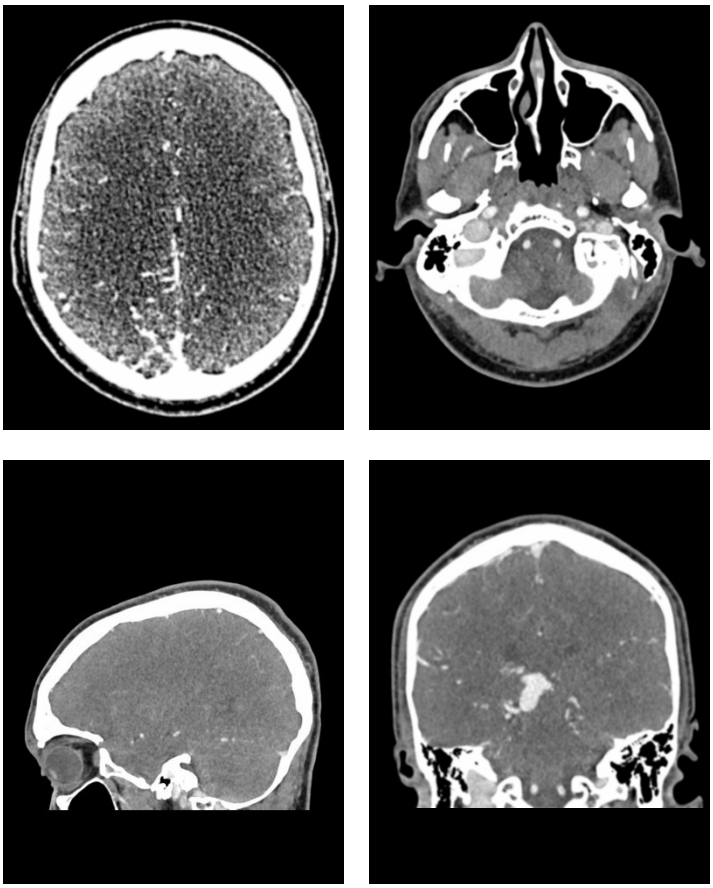
Age Category	Adult
Body Region	Head
Target Modality	CT
Diagnostic Features	Arteriovenous malformation (AVM)

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

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, including small details such as lymph nodes. Air voids are filled with a cellulose-polymer composite of approx. -160 HU.



PhantomX GmbH
Schwedenstr. 14, 13357 Berlin

www.phantomx.de

Mail: info@phantomx.de
Tel: +49 (0)30 6407 9970

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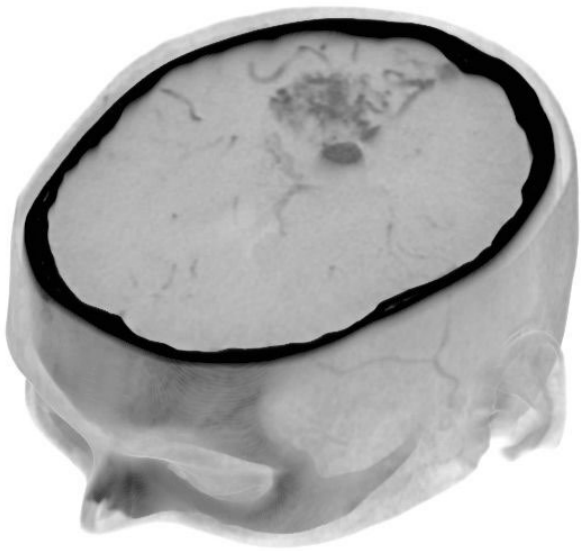

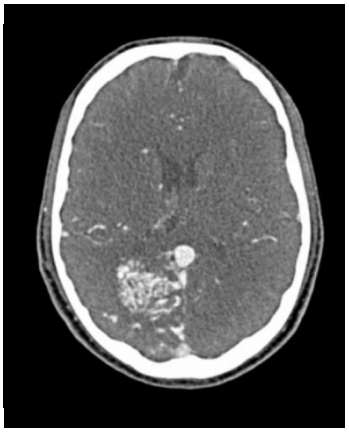

Specifications

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.

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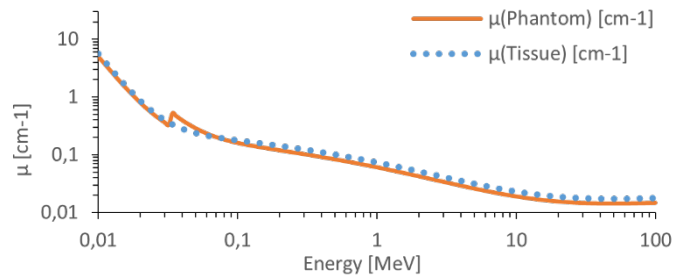
General indications

- 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.

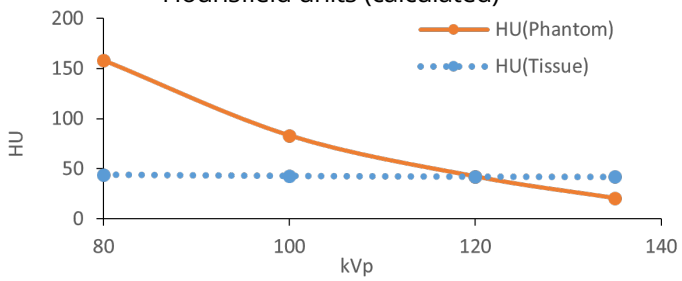
Attenuation properties

Soft Tissue

Linear attenuation coefficients [cm^{-1}] (calculated)

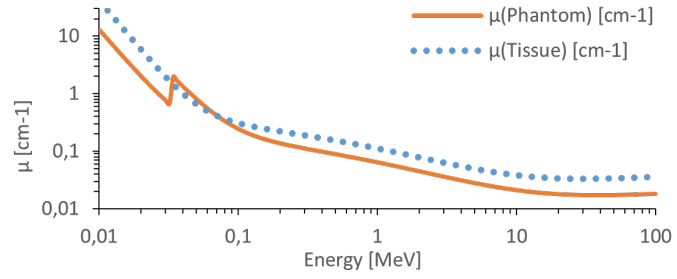


Hounsfield units (calculated)

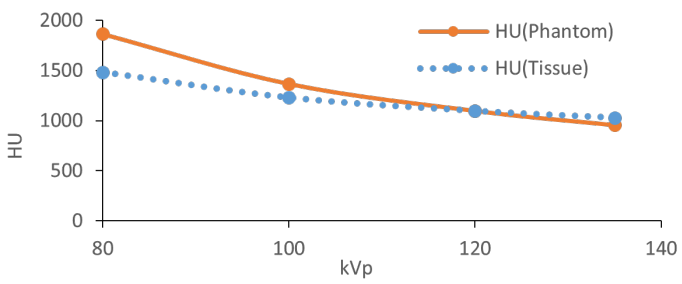


Bone Tissue

Linear attenuation coefficients [cm^{-1}] (calculated)



Hounsfield units (calculated)



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

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