

GAMMEX

CT Perfusion Phantom

A Simple Tool for CT Perfusion Monitoring

DIAGNOSTIC RADIOLOGY



The Gammex CT Perfusion Phantom is designed to mimic a perfusion study where contrast material is monitored as it travels through the target tissue. The phantom is substituted for the patient and a CT perfusion study is performed. Software that is proprietary to your CT scanner is then used to determine blood flow and various parameters. This provides a reference baseline that can be used over time to check for any changes that may occur that are the result of changes within the system itself.

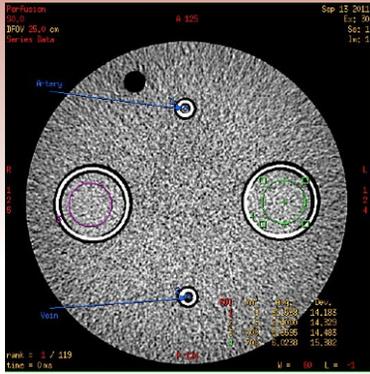
The phantom achieves this by moving 4 rods through the CT beam. The rods are designed to mimic nor-

mal blood flow in cerebral artery and vein and brain tissue. These rods are interchangeable with rods representing different anatomy available in the future.

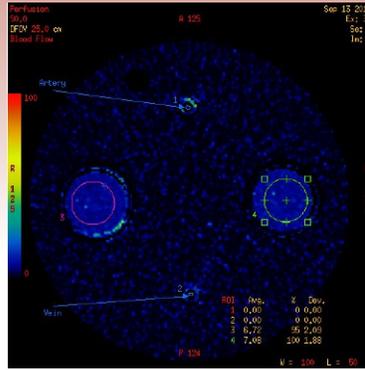
The battery operated phantom has a delay built into the circuitry allowing the user to set up the phantom and leave the scan room before x-rays are initiated.



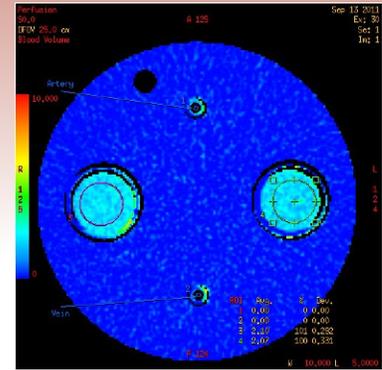
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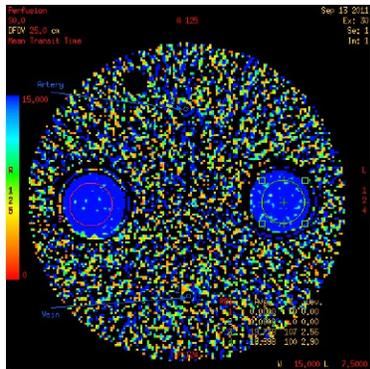
A Base Scan



B Blood Flow



C Blood Volume



D Mean Transfer Time

Image Analysis

Images A - D show the various calculated maps that CT vendors produce from CT Perfusion studies performed on the Gammex CT Perfusion Phantom.

Image "A" is the Base Scan; Image "B" is a Blood Flow map; Image "C" is a Blood Volume map and image "D" is a map of the Mean Transit Time.

Note: the placement of the artery and vein inserts can be seen in each image along with the hole that can be used to insert an ion chamber.

The Gammex CT Perfusion phantom is compact and easy to set up.

Phantom Dimensions and Specifics

Materials. Precision machined PVC
 Dimensions
 Height.12 in (30.5 cm)
 Width. 10 in (25.4 cm)
 Length.22 in (55.5 cm)
 Weight. 32 lbs (14.4 kg)

Key Benefits of the Phantom

- Permits evaluation of any scanner where perfusion studies done
- Interchangeable simulated tissue samples for cost effectiveness
- Battery operated for safety and efficiency
- Time delay removes timing related errors



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