

Vascular Model Repository

Specifications Document



0066_0001

Species	Rabbit
Anatomy	Aorta
Disease	Healthy
Procedure	-

Clinical Significance and Background

Aorta

The aorta is the main and largest artery in the human body, originating from the left ventricle of the heart and extending down to the abdomen, where it splits into two smaller arteries (the common iliac arteries). The aorta distributes oxygenated blood to all parts of the body through the systemic circulation.

The aortic arch loops over the left pulmonary artery and the bifurcation of the pulmonary trunk. In addition to these blood vessels, the aortic arch crosses the left main bronchus. The aortic arch has three major branches: from proximal to distal, they are the brachiocephalic trunk, the left common carotid artery, and the left subclavian artery. The brachiocephalic trunk supplies the right side of the head and neck as well as the right arm and chest wall, while the latter two together supply the left side of the same regions.

Clinical Data

General Patient Data

Age (yrs)	0.615385
Sex	Male

Notes

See below for information on the image data and boundary conditions associated with the model.

Image Modality: MR

Image Type: DICOM

Image Source: MARQ

Image Manufacturer: GE MEDICAL SYSTEMS

Boundary Conditions: Refer to boundary conditions in the SimVascular file.

Publications

See the following publications which include the featured model for more details:

Menon, A., Wendell, D. C., Wang, H., Eddinger, T. J., Toth, J. M., Dholakia, R. J., ... & LaDisa Jr, J. F. (2012). A coupled experimental and computational approach to quantify deleterious hemodynamics, vascular alterations, and mechanisms of long-term morbidity in response to aortic coarctation. *Journal of pharmacological and toxicological methods*, 65(1), 18-28.

<http://www.doi.org/10.1016/j.vascn.2011.10.003>

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AND/OR

N.M. Wilson, A.K. Ortiz, and A.B. Johnson, "The Vascular Model Repository: A Public Resource of Medical Imaging Data and Blood Flow Simulation Results," J. Med. Devices 7(4), 040923 (Dec 05, 2013) doi:10.1115/1.4025983.

AND/OR

Reference the official website for this data: www.vascularmodel.com

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