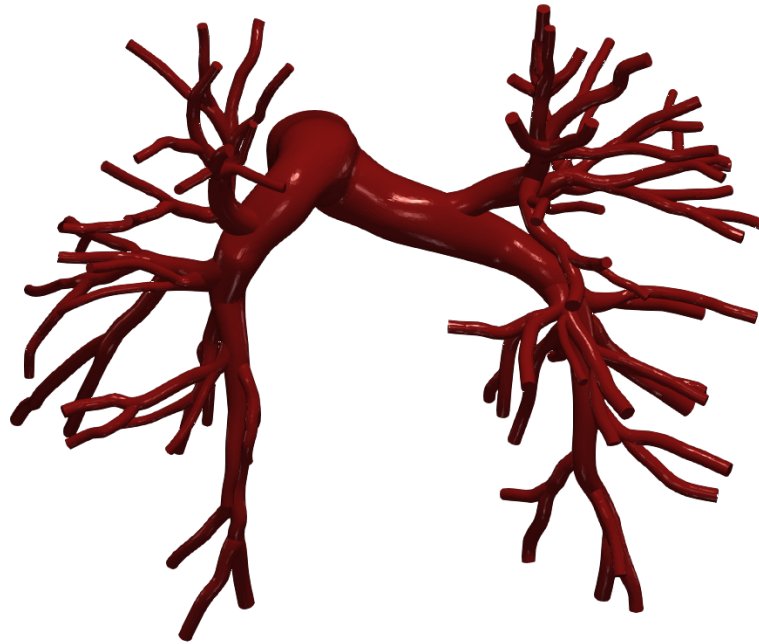


Vascular Model Repository

Specifications Document



0086_0001

| | |
|------------------|-----------|
| Species | Human |
| Anatomy | Pulmonary |
| Disease | Healthy |
| Procedure | - |

Clinical Significance and Background

Pulmonary

The pulmonary arteries are blood vessels that carry systemic venous blood returning to the right side of the heart through to the microcirculation of the lungs. Unlike in other organs where arteries supply oxygenated blood, the blood carried by the pulmonary arteries is deoxygenated, as it is venous blood returning to the heart. The main pulmonary arteries emerge from the right side of the heart, and then split into smaller arteries that progressively divide and become arterioles, eventually narrowing into the capillary microcirculation of the lungs where gas exchange occurs.

Clinical Data

General Patient Data

| | |
|-----------|------|
| Age (yrs) | 21 |
| Sex | Male |

Specific Patient Data

| | |
|-----------------------|------|
| BSA (m ²) | 1.76 |
|-----------------------|------|

Notes

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

Image Modality: MR

Image Type: DICOM

Image Source: TLAB

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:

Tang, B. T., Fonte, T. A., Chan, F. P., Tsao, P. S., Feinstein, J. A., & Taylor, C. A. (2011). Three-dimensional hemodynamics in the human pulmonary arteries under resting and exercise conditions. *Annals of biomedical engineering*, 39(1), 347-358. <https://www.doi.org/10.1007/s10439-010-0124-1>

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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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