Vascular Model Repository Specifications Document
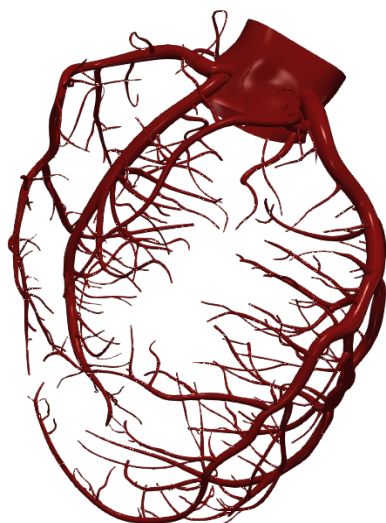

0106_A_CORO_H

Legacy Name: 190529_P6

Model added: 10 Jun 2022

Species	Mouse
Anatomy	Coronary
Disease	Healthy
Procedure	None

Clinical Significance and Background

Coronary

Just like every tissue in the body, the heart itself also requires oxygenated blood to function. The coronary arteries supply blood to the heart and stem from the root of the ascending aorta. The two main coronary arteries are the left main and right coronary arteries, and they wrap around the outside of the heart.

The left main coronary artery (LCMA) supplies blood to the left side of the heart muscle and divides into two branches: the left anterior descending (LAD) artery and the left circumflex (LCX) artery which supply blood to the front left and outer backside of the heart respectively.

The right coronary artery (RCA) supplies blood to the right ventricle, the right atrium, and the SA (sinoatrial) and AV (atrioventricular) nodes, which regulate the heart rhythm. Together with the left anterior descending artery, the right coronary artery also helps supply blood to the middle or septum of the heart.

Clinical Data

General Patient Data

Age (yrs)	0.016438356
Sex	-

Specific Patient Data

Condition	wild-type, non-injured

Notes

Represents untreated coarctation of aorta using permanent sutures. \nSee paper for more details. See below for information on the image data.

Image Modality: Ultramicroscope II light sheet microscopy

Image Type: VTI

Image Source: Stanford

Publications

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

Anbazhakan, S., Coronado, P. E. R., Sy-Quia, A. N. L., Seow, A., Hands, A. M., Zhao, M., ... & Red-Horse, K. (2021). Blood flow modeling reveals improved collateral artery performance during mammalian heart regeneration. bioRxiv. http://www.doi.org/10.1016/j.vascn.2011.10.003

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