

# Vascular Model Repository

## Specifications Document



### 0200\_H\_CERE\_CA

Legacy Name: ANR101\_Stable

Model added: 21 Jul 2023

<b>Species</b>	Human
<b>Anatomy</b>	Cerebral
<b>Disease</b>	Cerebral Aneurysm
<b>Procedure</b>	None

# Clinical Significance and Background

## Cerebral

The cerebral arteries are involved in providing blood to the brain and the spine. They provide about 20% of the blood to the brain while the carotid arteries provide the other 80%. The two vertebral arteries start at the subclavian arteries near the collarbone and run up the left and right sides of the spinal column in the neck. At the base of the skull, the two vertebral arteries then merge into one artery called the basilar artery which is the main supply of blood to the brain stem and also supplies blood to the brain itself through the Circle of Willis.

## Cerebral Aneurysm

A cerebral aneurysm, also known as a brain aneurysm, is a weakened or thin spot on an artery in the brain that bulges and fills with blood. If left untreated, it can rupture, leading to a hemorrhage, potentially causing serious health issues such as hemorrhagic stroke, brain damage, coma, or even death. While some small aneurysms may not cause immediate problems, they have the potential to rupture and cause bleeding within the brain or surrounding areas. Symptoms of an unruptured aneurysm may include pain behind the eye, numbness, weakness, vision changes, and more. When an aneurysm ruptures, it presents with a sudden and severe headache, double vision, nausea, stiff neck, and other alarming symptoms. Immediate medical attention is crucial if any of these symptoms occur.

Cerebral aneurysms can be classified into three types: saccular, fusiform, and mycotic. The saccular aneurysm is the most common form and is typically found on arteries at the base of the brain. They can be categorized by size as small (less than 11 mm), large (11-25 mm), or giant (greater than 25 mm).

# Clinical Data

## General Patient Data

Age (yrs)	69
Sex	M

## Specific Patient Data

Aneurysm Location	Anterior Communicating Artery
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Diabetes Mellitus	No
Hypertension	Yes
Hyperlipidemia	Yes
Smoking	Yes
Family History of Cerebral Aneurysm	No

## Notes

Categorized as a stable aneurysm (no increase in size by at least 1mm in two or more dimensions between checkups). Aneurysm located in the anterior communicating artery. Paired with growing aneurysm 0199\_H\_CERE\_CA. See below for information on the image data.

**Image Type:** VTI

**Image Source:** Stanford Health database

## Publications

There are no publications associated with the featured model.

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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](http://www.vascularmodel.com)

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