

Framework for VWI Interpretation

Wall Enhancement

Positive

Negative

WThck + Enh

Vasculitis- Active (concentric)
Culprit Plaque (eccentric)
Reactive- post infarct
Scar/Fibrosis
Artifact
...among others [research!]

Only WThck

Remodeling, Atherosclerosis
HTN vasculopathy
Scar/Fibrosis
Normal aging
...among others [research!]



Only Enh

Vasa Vasorum (V4, ICA)
Vasculitis (concentric)
Atherosclerosis (eccentric)
Reactive- post infarct
Artifact
...among others [research!]

Other:

- (VWI post) Consider Spatial Distribution
- (VWI T2w) Juxtaluminal T2w signal
- (MRA) Stenosis
- (DWI) Infarct Topography
- (Post) Dural/Leptomeningeal/Perivascular Enhancement
- (SWI) Microhemorrhages, siderosis, RBC-thrombus
- Note: Normal VWI-MRI does not exclude small vessel vasculitis. Consider clinical history.

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Work-in-progress,
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References for further reading

(Recommend viewing images as examples)

General Review

[AJNR Expert Consensus Recommendations \(AJNR, 2017\)](#)

Intracranial Atherosclerosis

[Meta-analysis of VWI of Culprit Plaque \(Stroke, 2020\)](#)

Vasculitis

[Systematic Review of VWI of Inflamm & Infectious CNS Vasculitis \(Neuroradiology, 2022\)](#)

Image Examples

[Illustrative cases \(Seminars, 2021\)](#)

Wall Thickening

Positive

Negative