

Arteritis...Can it Be Diagnosed with Duplex?

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Friday, April 27, 2018

Disclosures

- None relevant

Overview

- Types of arteritis
- Clinical Presentation
- Duplex presentation
- Physiologic presentation



Arteritis

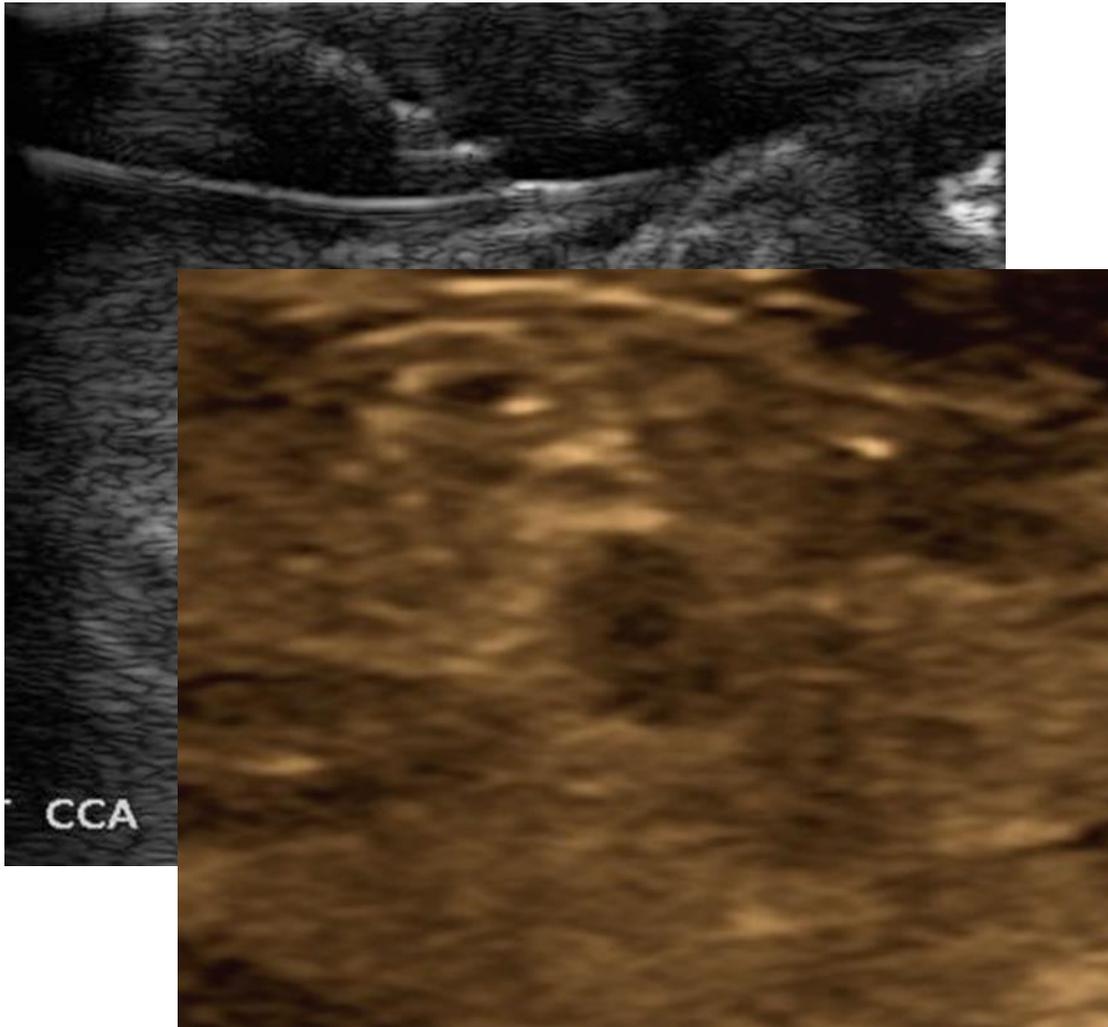
- Inflammation of the arteries
 - Thromboangitis obliterans (Buerger's disease)
 - Giant-cell arteritis (Takayasu's, Temporal Arteritis)
 - Polyarteritis Nodosa (Behcet's, Cogan's)
- Risk factors:
 - Age
 - Sex
 - Race and geographic descent
 - Family history
 - Other diseases (auto-immune, polymyalgia rheumatic, pancreatic disease)

Clinical Presentation

- Fever
- Headache
- Fatigue
- Weight-loss
- Neuralgia
- General aches and pains
- Rash
- Pulselessness



Duplex Presentation



- Almost always looks the same ultrasonically
 - “Halo”
 - Concentric homogeneous layers
 - Narrow flow channel
 - Loss of intima-media definition

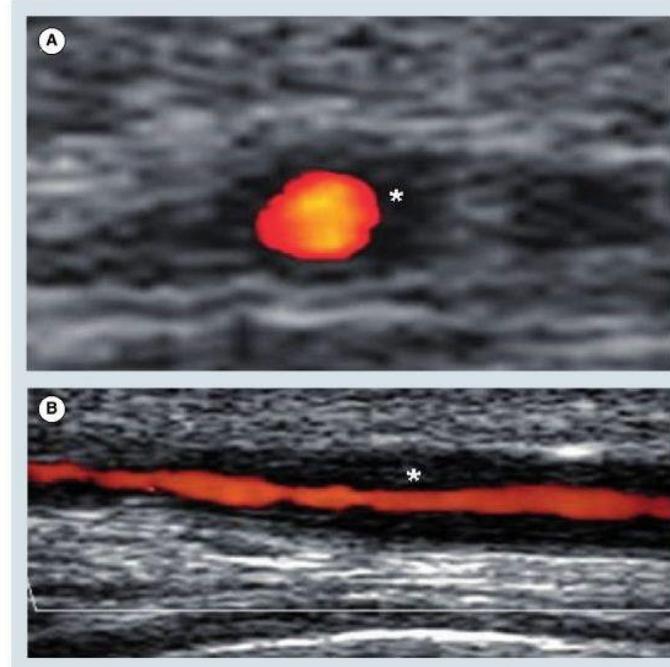
Giant Cell Arteritis

- Temporal Arteritis
 - Can lead to permanent loss of vision
 - Tenderness along temple and scalp
 - Pain and stiffness in neck, shoulders, and/or hips
 - Approximately 50% have polymyalgia rheumatica



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Medscape



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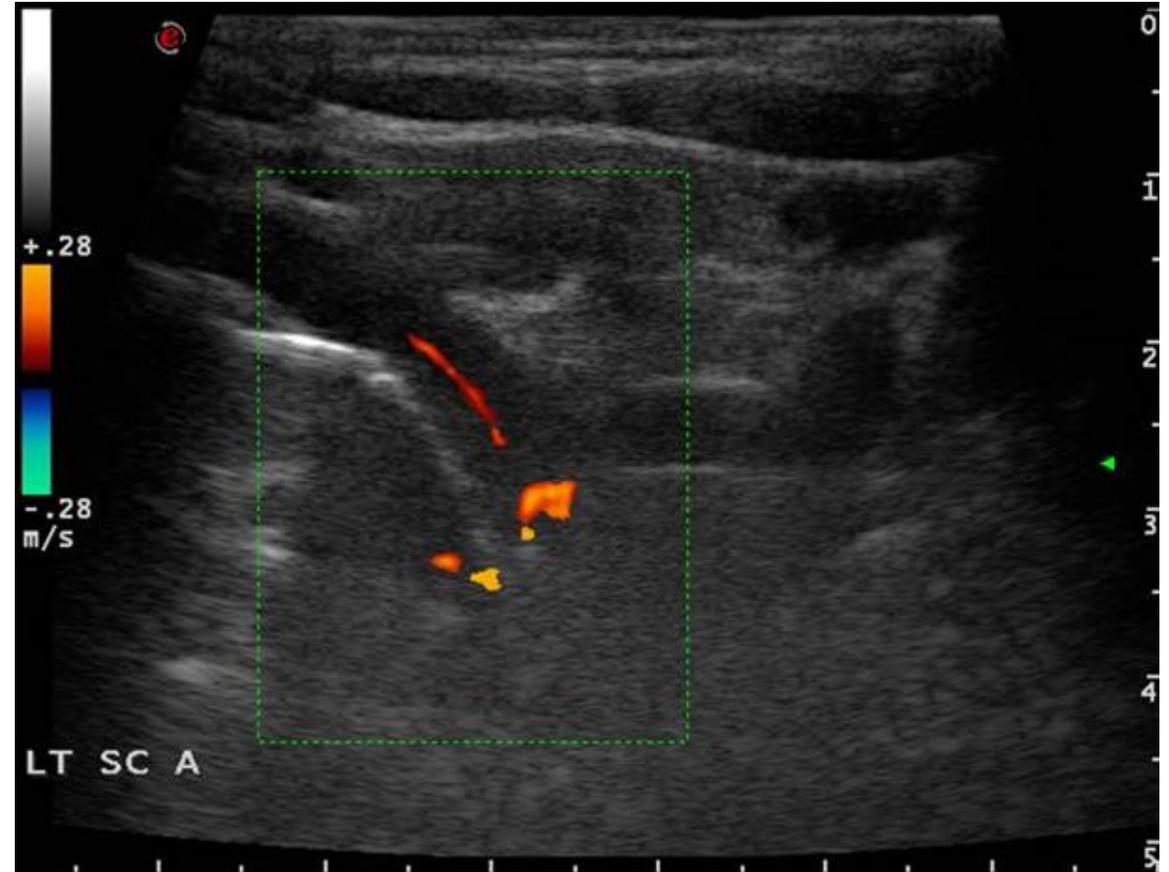
Buerger's Disease



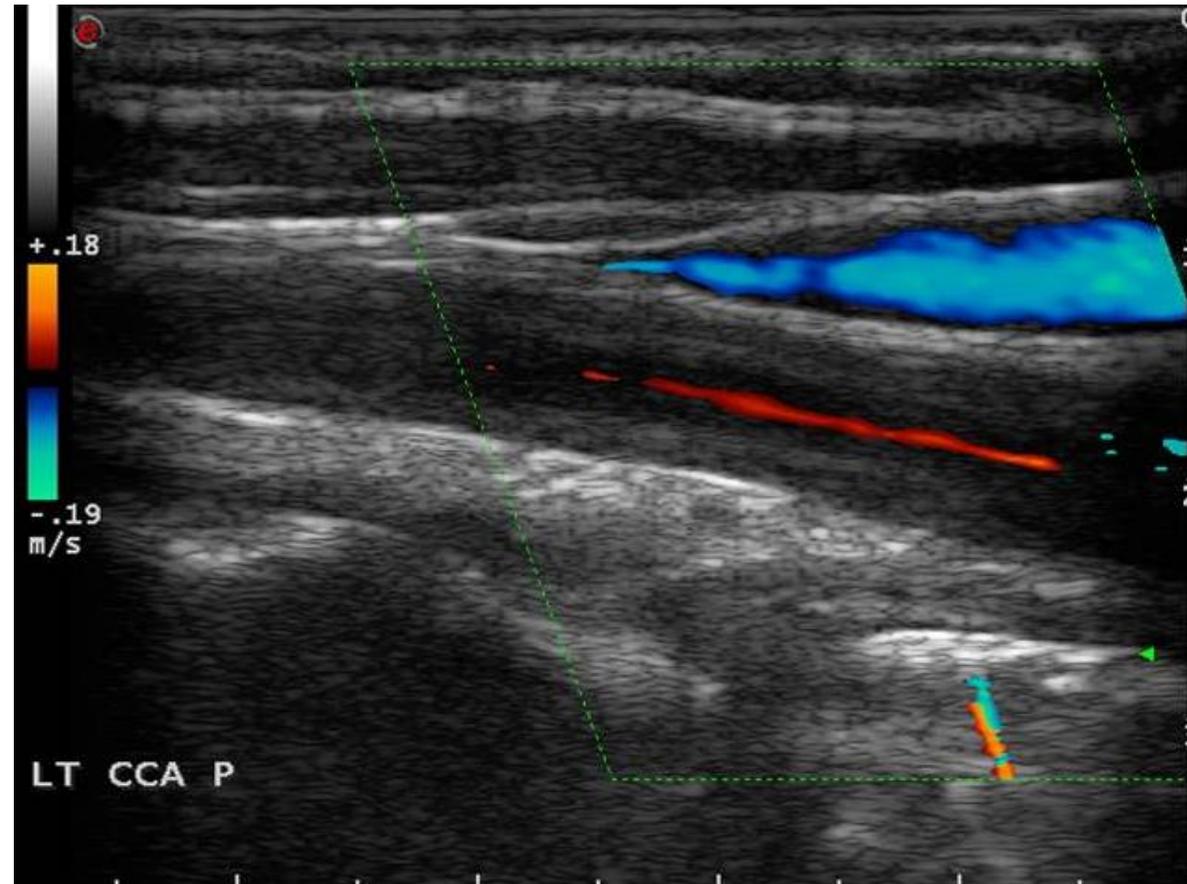
- Young (<45 y.o.) male smokers are most affected
- Intermittent pain in legs/feet or arms/hands
- Raynaud's "phenomenon"
- Ulceration/cyanosis of digits
- Affects both arteries and veins
- Quit tobacco use is only way to stop, otherwise amputation

Takayasu's Arteritis – Case Study

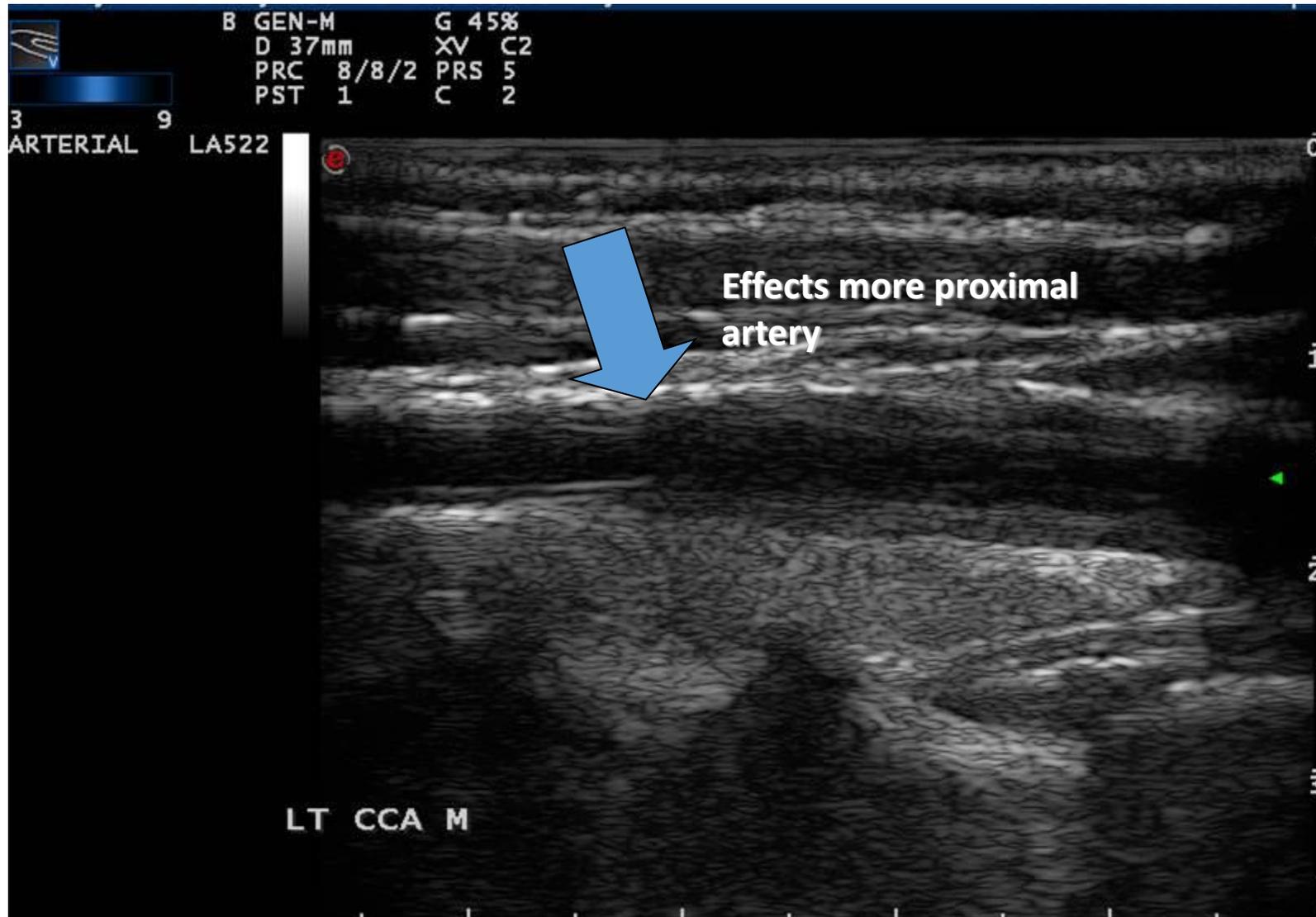
- 22 y.o. Hispanic female
- Admitted with CHF and cardiomegaly
- While in hospital, developed right sided weakness
- Physical exam: absent left radial pulse
 - Technologist did NOT take BP



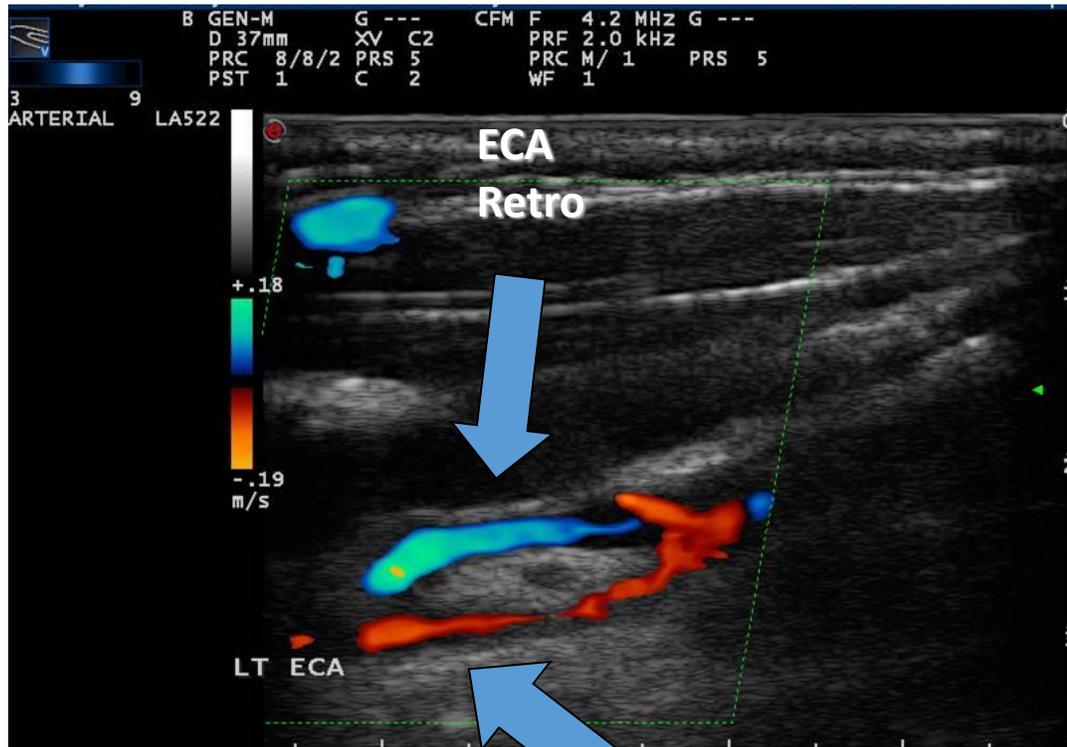
Left Common Carotid Artery



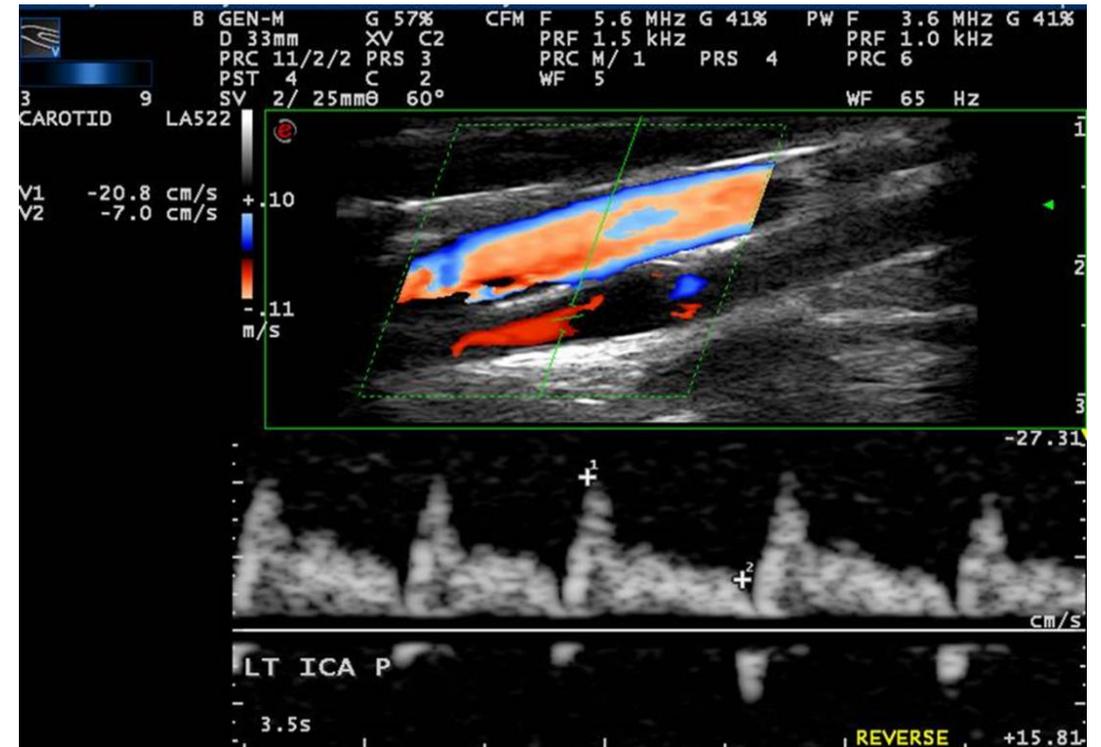
Left CCA Mid



Physiologic Changes



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Takayasu's Arteritis

- Inflammation of the aorta and primary branches
- May affect the pulmonary and coronary arteries
- Reported worldwide although most prevalent in Asian and Hispanic females
- Typical age of onset is between 15-30 years
- Typical treatment with steroid therapy

Summary

- Yes, duplex can assist in the diagnosis of some arteritides
- Vague symptoms but coupled with duplex findings, the diagnosis can be made
- Arteritis has a distinct b-mode presentation
- Early diagnosis can prevent stroke, amputation, and death

HISTORY AND PHYSICAL EXAM IN VASCULAR LAB IS PARAMOUNT

Thank you!

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- "Arteritis." Britannica Academic, Encyclopædia Britannica, 6 Feb. 2018.
- Jennette J.C. Overview of the 2012 revised International Chapel Hill Consensus Conference nomenclature of vasculitides. Clin Exp Nephrol (2013) 17:603-606 DOI: 10.1007/s10157-0869-6