

Stroke Syndromes

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APN

Lindsay Rademacher has disclosed that there is no actual or potential conflict of interest in regards to this presentation

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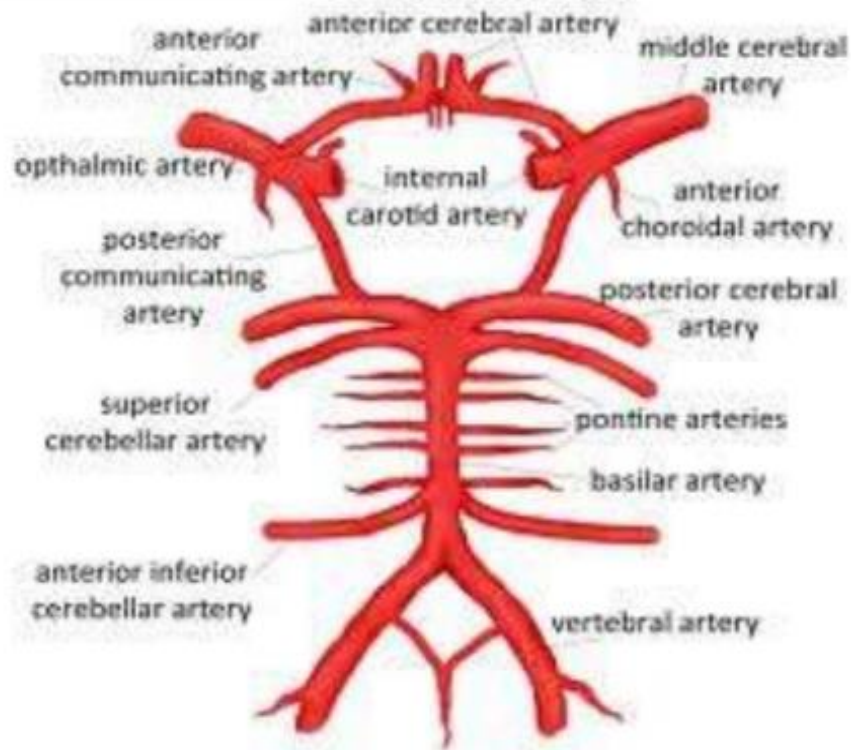
Objectives

After this lecture attendees should be able to:

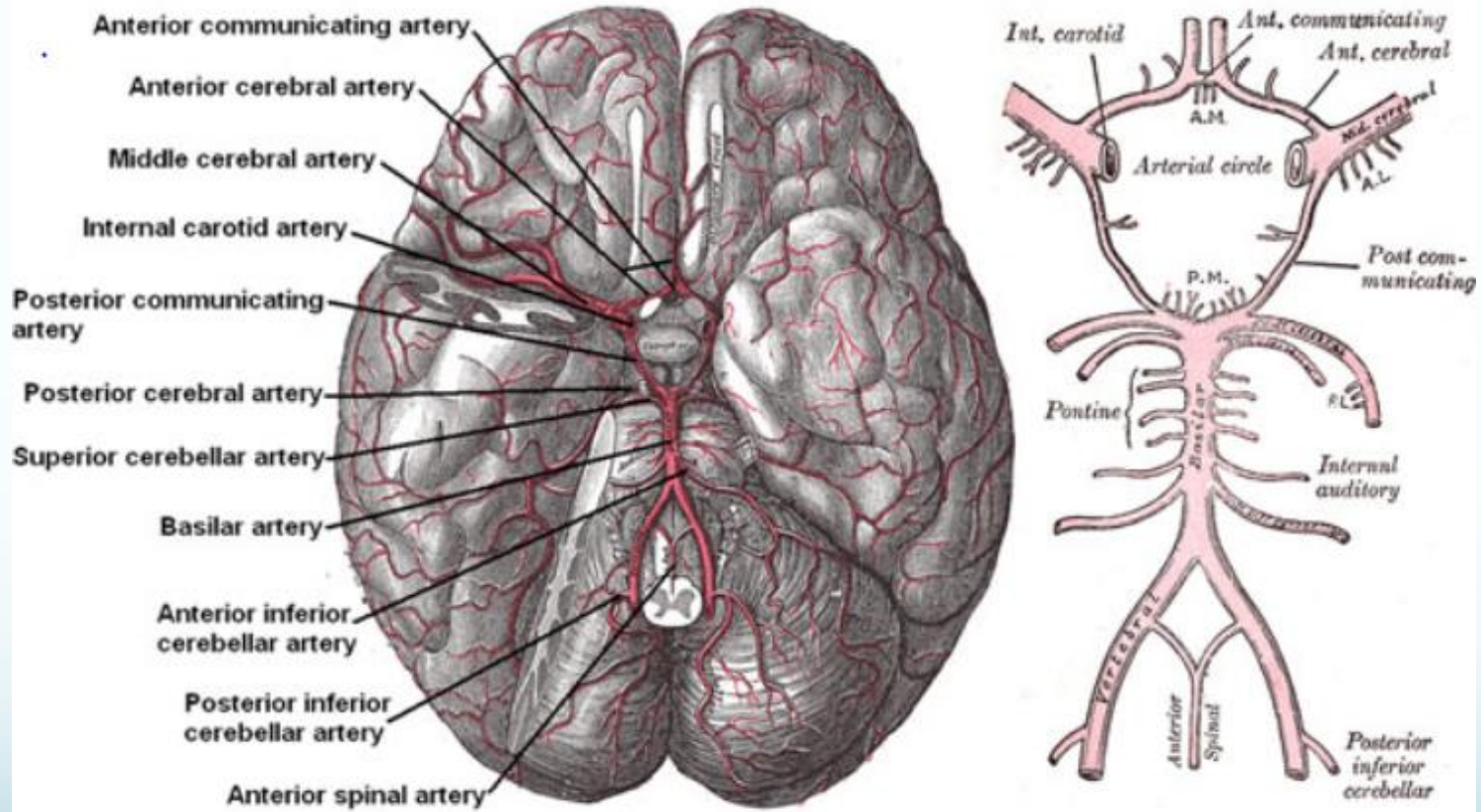
- 1. Identify the basic anatomic structures involved in a stroke.
- 2. Analyze stroke symptoms/syndromes based on the territory of the stroke
- 3. Evaluate small vessel vs large vessel strokes

Anatomy Review

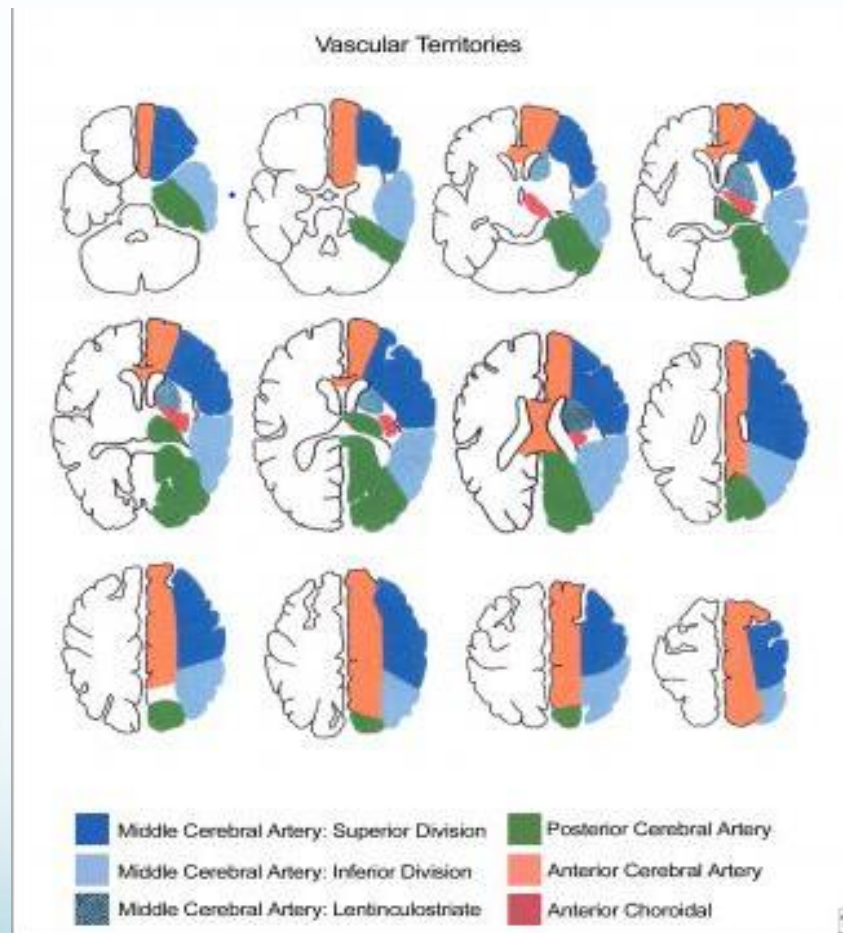
Circle of Willis :



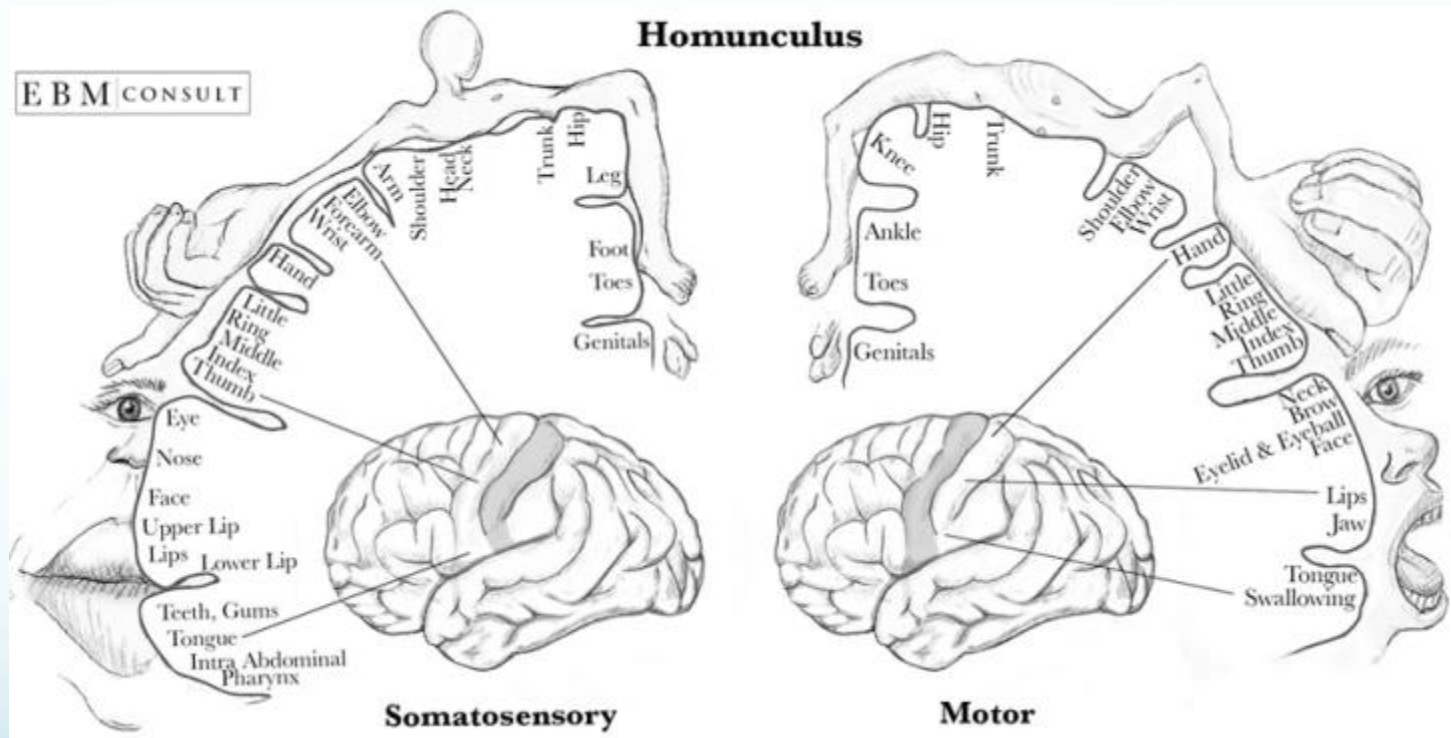
Anatomy Review



Vascular Territories

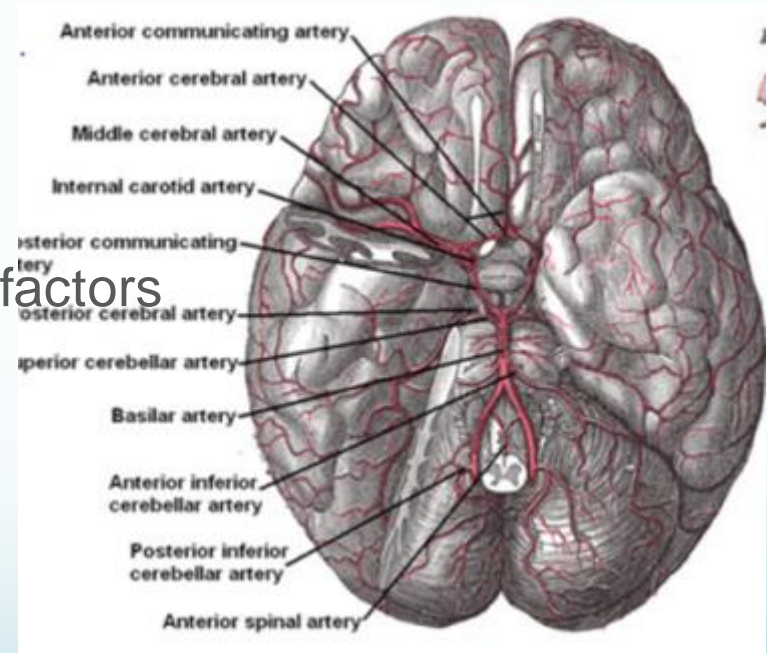


Sensory & Motor Homunculus



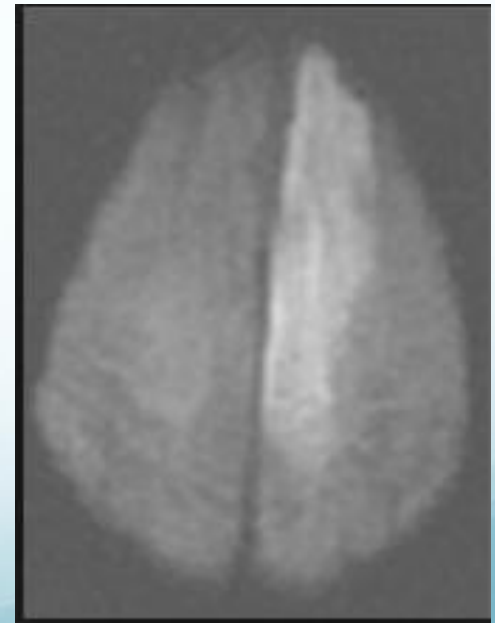
Large artery vs Small artery

- Large vessels are blocked by atherosclerosis vs embolus
 - Symptoms more devastating
 - Small vessel disease
 - Small perforating arteries
- Blocked due to uncontrolled risk factors



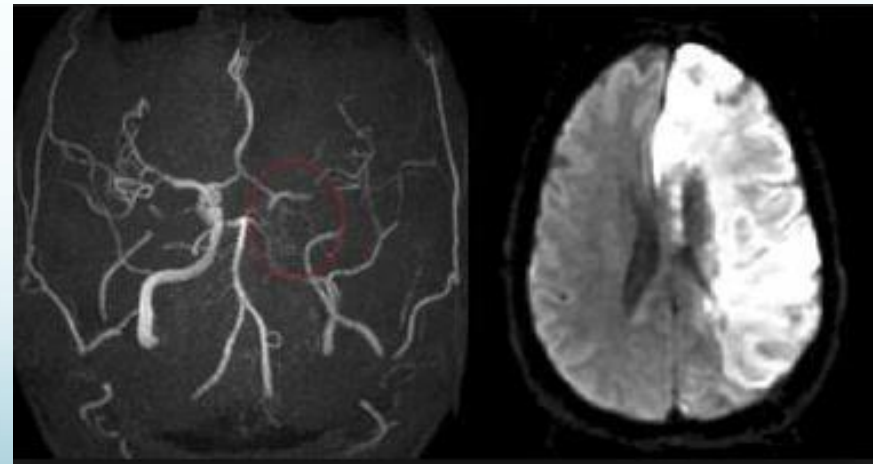
Anterior Circulation Stroke

- **Anterior Cerebral Artery**
- Can be caused by large artery (internal carotid) vs embolic
- Contralateral leg weakness
- Contralateral sensory loss
- Variable degree of frontal lobe symptoms
 - Flat affect, apraxia, abulia, Incontinence, impaired judgment



Anterior Circulation Stroke

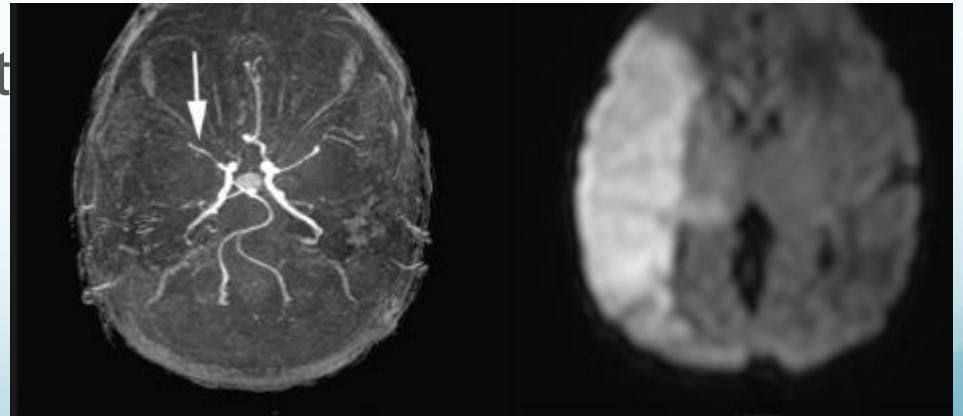
- **Left MCA Syndrome**
- Hemiparesis or hemiplegia of lower half of contralateral face
- Hemiparesis or hemiplegia of contralateral upper and lower extremity
- Sensory loss of contralateral face, arm and leg
- Global Aphasia (dominant)
- Right homonymous hemianopia
- Left gaze preference



Anterior Circulation Stroke

- Right MCA Syndrome

- Hemiparesis or hemiplegia of lower half of contralateral face
- Hemiparesis or hemiplegia of contralateral upper and lower extremity
- Sensory loss of contralateral upper and lower extremity
- Left hemineglect
- Right gaze preference

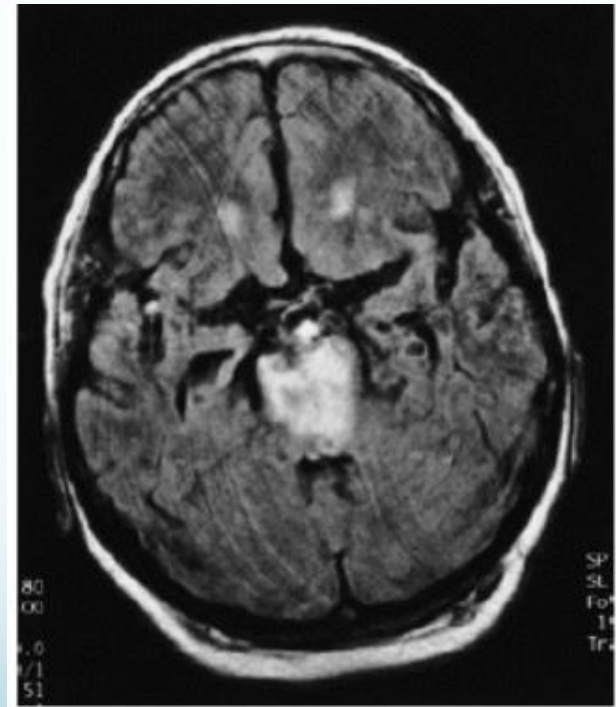


Posterior Circulation Strokes

- Can be difficult to recognize due to varying degree of symptoms
- “D Symptoms”
 - Diplopia, Dizziness, dysphagia, dysarthria, drop attack
- Contralateral homonymous hemianopia
- If involves the thalamus
 - Contralateral hemiparesis or hemisensory loss
- Ataxia

Posterior Circulation Strokes

- Locked in Syndrome
 - Complete paralysis of all voluntary movements except for eyes (vertically)
 - Cognition and consciousness is spared
- Occlusion of basilar artery
- Damage to the Pons



Lacunar syndromes

- Small vessel occlusion from risk factors such as hypertension, hyperlipidemia, diabetes
- Pure motor-contralateral face/arm/leg- (internal capsule, pons)
- Pure sensory-contralateral face/arm/leg-(thalamus)
- Ataxia hemiparesis-ipsilateral pure motor (leg) with ataxia arm and leg (pons, basal ganglia)
- Clumsy hand dysarthria - facial weakness, severe dysarthria, and dysphagia, with mild ipsilateral hand weakness and clumsiness (Internal Capsule)

Questions?

Thank you!