I. General considerations
A. Carotid artery arteriosclerosis accounts for around 20% of all strokes
B. Cerebrovascular insufficiency is often accompanied by ocular signs and symptoms
C. Depending on the clinical setting, there is a spectrum of stroke risk (Table 16-1)
D. Patients with stroke are at high risk for subsequent vascular events, including recurrent stroke (highest risk), myocardial infarction, and death from vascular causes

II. Anatomy of the carotid system
A. The first major branch of the aortic arch is the innominate artery, which gives rise to the right common carotid artery
B. The left common carotid is the second major branch of the aortic arch
C. Each common carotid artery divides into internal and external branches at the C4 level, about 3 cm below the angle of the mandible
D. The internal carotid artery enters the skull through the carotid canal of the temporal bone, ascends along the side of the sella turcica, forms the carotid siphon as it passes through the cavernous sinus, then emerges intracranially
E. The ophthalmic artery is its first major branch, and the internal carotid ultimately divides into the anterior and middle cerebral arteries
F. Numerous connections between the external and internal carotid systems involve the ophthalmic artery (Figure 16-1)
G. Third-order neuron (postganglionic) sympathetic fibers to the eye, orbit, and face travel in the posterior carotid sheath
H. Cervical portion of carotid artery is surgically accessible

III. Ocular manifestations of carotid disease
A. Transient monocular visual loss (TMVL)
   1. Alternate terms: amaurosis fugax (“fleeting blindness”), transient monocular blindness
   2. Duration: 2 to 30 minutes
   3. Typically, a “shade” temporarily covers part or all of the visual field. Other descriptions include a “dark cloud,” “a film,” or generalized darkening
   4. Visual loss may include the entire visual field or only one-half or a quadrant of the field
   5. Positive visual phenomena may be described by one-third of patients