

# Grading Carotid Artery Stenosis

Grade of Stenosis (% , NASCET method)	Normal	10-40	50	60	70	80	90	Occlusion
<b>Major criteria</b>								
B-mode image, diameter	No Plaque	Plaque						Imaging of occluded artery
Flow imaging	Flow							
Systolic Flow velocity threshold (cm/s)			>125		>230		NA	No Flow 0
Systolic Flow velocity average (cm/s)		≤160	210	240	330	370	Variable	0
Post-stenotic Systolic Flow velocity (cm/s)				<50	≥50	<50	<30	0
Collateral pathways (ophthalmic, communicating arteries)		No			Possible		Present	
<b>Additional Criteria</b>								
Common carotid artery diastolic flow	Normal			±	↘	↘	↘	↘
Downstream flow disturbance	No	+	++		++	++	Variable	NA
End-diastolic flow velocity (within stenosis)			<100		>100		Variable	NA
Systolic velocity ratio (ICA stenosis/CCA)	<2		≥2		>4		Variable	NA

Adapted from: von Reutern GM et al. Grading Carotid Stenosis Using Ultrasonic Methods. Stroke 2012;43:916-921