What Are The Current Duplex Velocities For Performing CEA In Asymptomatic Carotid Stenosis Patients: Why Other Imaging Should Be Obtained Preoperatively

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Selecting Asymptomatic Patients for CEA
• Usually based on severity of ICA stenosis
  – Randomized trials support > 60% ICA stenosis
• Stenosis usually identified by duplex scanning
• Should additional imaging be performed?
  – Confirm duplex, evaluate plaque characteristics
• Current real world practice in VQI:
• Analyzed 15,517 CEAs done in 233 VQI centers for asymptomatic patients during 2012-2015

Percentage of CEAs where Additional Imaging Was Done Based on Duplex PSV

Duplex Criteria for ICA Stenosis Vary Widely

Published Criteria VSGNE* 2014

Society of Radiologists in Ultrasound Consensus Conference 2003 Recommended: 230 cm/sec

*Arsus et al, Circ Cardiovasc Qual Outcomes 2014
Center Variation in Duplex PSV Criteria in Asymptomatic Patients Selected for CEA (15,517 Procedures in 233 VQI Centers)

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Asymptomatic Patients Undergoing CEA in VQI: Variation in PSV (cm/sec) in Regional Groups

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Severity of ICA Stenosis Treated in VQI

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Comparison of Duplex vs Other Imaging

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Conclusion

- Additional imaging is obtained in 54% of asymptomatic patients who have duplex scanning and then undergo CEA in VQI
  - More often done in patients with lower PSV
  - More often demonstrated more severe stenosis in those patients selected for surgery
- Unclear from these data when additional imaging should be performed, but it is done very frequently and requires further study

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