



Society for Vascular Surgery Launches Mobile Apps for Staging of Chronic Limb-Threatening Ischemia

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ROSEMONT, ILL, Nov. 18, 2020 – The Society for Vascular Surgery introduces three new mobile apps to guide surgeons in the treatment and management of Chronic Limb-Threatening Ischemia (CLTI).

They are available at the App Store (Apple products).

The apps help facilitate translating the Global Vascular Guidelines^{1,2} on managing CLTI. These guidelines were published in 2019 as a joint effort between the Society for Vascular Surgery, the European Society for Vascular Surgery and the World Federation of Vascular Societies.

These guidelines highlight the importance of individualized clinical decision-making based on the assessment of Patient risk, Limb severity, and Anatomic pattern of disease (PLAN). PLAN provides an organized framework for provider-patient discussions as well as outcomes assessment and evidence-based practice.

The three new apps, available on its interactive practice guideline (iPG) mobile platform, allow for real-time estimation of patient risk (VQI CLTI Mortality Prediction Model), severity of limb threat (SVS Threatened Limb Classification [WIFI] staging system), and anatomic complexity of disease (Global Limb Anatomic Staging System [GLASS]). The calculators are simple to use and meant for everyday practice settings.

The **VQI CLTI Mortality Prediction Model** was developed from a cohort of 38,470 unique patients who underwent infra-inguinal revascularization (open or endovascular) for CLTI and had data available in the Vascular Quality Initiative registry.³ Using baseline patient demographics, comorbidity, ambulatory status and medication use this model estimates both 30-day (peri-procedural) and two-year patient survival. Risk groups are summarized as low (>97% 30-day and >70% 2- year survival), medium (95-97% 30-day, 50-70% 2-year survival), or high (<95% 30-day or <50% 2-year survival).

The **SVS Threatened Limb Classification [Wifl]** calculator uses the consensus scheme for estimating risk of major amputation that has since been validated across multiple institutional studies and registries.⁴ The target population for Wifl staging is any patient referred for possible CLTI, excluding those with purely venous or traumatic wounds, acute limb ischemia, embolic or non-atherosclerotic disease. Wound, ischemia and infection are each graded on a 0-3 scale. The combination of grades is then grouped into four clinical stages based on estimated one-year risk for major amputation. Wifl staging is recommended for all patients at initial presentation, and over time to monitor response to interventions or disease progression.

The **Global Limb Anatomic Staging System [GLASS]** calculator allows the treating vascular specialist to estimate the complexity of infra-inguinal arterial disease from an angiogram. A high-quality study including the ankle and foot is required. The treating physician first decides on the preferred Target Artery Path (TAP), which is the primary infrapopliteal artery selected for establishing in-line flow for the case at hand. Grades are then defined for the femoro-popliteal and infra-popliteal segments based on lesion location, length and severity. These grades are then combined into three overall GLASS Stages for the limb that correspond to low-, intermediate- and high-complexity disease. These disease patterns are expected to correlate with both immediate technical success and one-year limb-based patency for an endovascular approach.

“The SVS is excited to offer these new tools for all practicing vascular specialists who care for patients with CLTI,” said Dr. Michael Conte, SVS editor for the Global Vascular Guidelines. “Broad dissemination and use of these calculators will increase the quality of patient and provider discussions about prognosis and treatment, provide opportunity for validation and future refinement of the tools, and promote evidence-based care for patients with this challenging disease.”

References:

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