In the November 2016 issue of Vascular Disease Management, Drs. Richards and Schneider discuss the discrepancy between lower patency and higher limb salvage rates in patients presenting with critical limb ischemia (CLI). This discrepancy surfaces frequently as the subject of debates at major vascular conferences around the world. Some pundits argue that long-term patency is not mandatory, while others, particularly those advocating surgical bypass as first-line therapy, argue that long-term patency is paramount. Experienced interventionalists often argue that the improved primary patency reported with drug-eluting stents in the proximal infrapopliteal vessels is not worth the increased procedural cost, especially with lack of improvement in limb salvage rates.

Richards and Schneider have carefully assessed multiple factors in an effort to better understand the basis of this discrepancy. These authors are quick to point out that all forms of CLI are not created equal and may have different prognoses. Factors including Wound, Ischemia, foot Infection (WIfI) classification at presentation, presence of tissue loss vs ischemic rest pain at presentation, postprocedural wound care, nutritional status, renal and metabolic status, and unloading therapy are discussed. In addition, the effects of secondary intervention are taken into account as potentially being additive to the reported primary patency. The authors have concluded that by taking these factors into account, the discrepancy between limb salvage and patency is much less apparent.

The authors state that there seems to be selection bias with cases of more severe wounds at presentation having open surgical revascularization. Although this has certainly been the case historically, I believe that the discrepancy has become less apparent with contemporary intervention, in which techniques such as pedal loop reconstruction and digital access are being utilized. These patients with no distal outflow needed for surgical bypass are now being treated successfully with intervention. Better follow-up care, improved patency in above-the-knee disease (CLI is often the product of multilevel disease where continued patency of the superficial femoral and popliteal arteries may prevent recurrent CLI even with recurrent occlusion of the
infrapopliteal vessels). In addition, repeat interventions performed in a timely manner are resulting in a dramatic improvement in rates of limb salvage with intervention, particularly when coupled with coordinated postvascularization wound care and unloading. There is an undeniable trend toward an interventional-first approach in patients presenting with CLI.

This article evaluates the results of reported series assessing potential explanations of the discrepancy between patency rates and limb salvage in patients presenting with CLI. Objective measures noted in this article have the potential to change clinicians’ approach to the treatment of CLI. One must question whether multilevel disease vs pure infrapopliteal disease at presentation should be evaluated differently. Should more than one infrapopliteal arterial occlusion be revascularized during limb salvage intervention to improve likelihood of long-term patency? Is the trend toward an interventional-first approach appropriate? Should long-term dual antiplatelet therapy be maintained indefinitely in patients presenting with CLI? Clearly more studies are needed, but this review article does help to defend the importance of long-term patency, particularly in the most severe presentations of CLI with significant tissue loss and associated infection.