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### Re: Laurila *et al.*

The finding, by Laurila *et al.*,<sup>1</sup> of no impact on the patency of crural bypasses employing PTFE, an interposition vein cuff and an arterial-venous fistula, requires critical assessment. The authors acknowledge the potential of bias in this small patient sample but several other factors may be operative. I previously suggested that the lack of compliance in PTFE limits the blood volume provided to a compromised distal circulation when the least resistance is in the venous return component of the AVF. Ascer<sup>2</sup> banded the cephalad component of the venous interposition and used hemodynamic parameters to redirect the flow distally. Our experience with human umbilical vein graft under these circumstances showed increased volume flows in addition to velocity without need for banding. There is a critical difference when one uses different materials for the conduit in that a more compliant graft will enable increased flow resulting in improved distal perfusion.

Another concern is the technique employed for construction of the dAVF. We went through a number of phases and have reported the change in technique over time.<sup>3</sup> We currently emphasize the absolute need to avoid outflow constriction. This is best accomplished with interrupted sutures in each quadrant of the dAVF. Continuous suture technique can result in stenosis and does not permit adequate expansion of the ostium once flow is reestablished.

Finally, it is vital to use a tourniquet to decrease dissection time and obviate the need for clamps.<sup>4</sup> As a consequence, clamp damage and subsequent development of intimal hyperplasia is prevented. There is need for a randomized study that would require multiple experienced investigators skilled in crural revascularization as well as the construction of distal

fistulas. I urge the authors to continue their investigations but consider altering some of their methodologies in order to truly appreciate the value of the dAVF. We continue to feel that the dAVF does indeed alter hemodynamics favorably and, as a consequence, graft patency and limb salvage rates.

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### Response to Dr Herbert Dardik

We thank Dr Dardik for his comments on our hemodynamic results (Laurila *et al.* 2005). The pioneering work of Dr Dardik as a proponent for adjuvant av-fistula on the field of vascular surgery is well known. His impressive results have been the reason for us to employ the same method when no other alternatives are available. Our initial results of infrapopliteal redo bypass surgery suggested that an adjuvant distal arteriovenous fistula may improve PTFE graft patency.<sup>1</sup> Knowing the pitfalls of uncontrolled case series we wanted to embark on

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