



TREATMENT

Clinical question: In which persons with diabetes, PAD and a foot ulcer or gangrene using clinical findings, perfusion test findings, and/or classification systems, should revascularisation be considered?

Recommendation 11: In a person with diabetes, peripheral artery disease and a foot ulcer or gangrene who is being considered for revascularisation, evaluate the entire lower extremity arterial circulation (from aorta to foot) with detailed visualization of the below-knee and pedal arteries. Best Practice Statement

Rationale: As per our recommendations 1-4 clinical examination and bedside testing should be the first line testing undertaken to diagnose the presence of PAD. When a revascularisation is being considered further anatomical information on the arteries of the lower limb should be obtained to assess the presence, severity, and distribution of arterial stenoses or occlusions. In this process, adequate imaging of the tibial and pedal vessels is of critical importance, particularly in planning intervention in people with diabetes and a foot ulcer (17). Modalities that can be used to obtain anatomical information include: arterial colour duplex ultrasound, computed tomographic angiography, magnetic resonance angiography, or intra-arterial digital subtraction angiography (including anteroposterior and lateral views of the foot). The Writing Committee considered that each of the imaging techniques have their advantages and disadvantages and their use will depend heavily on the availability of equipment and local expertise, preferences of the individual and associated costs. For these reasons a Best Practice statement was formulated. Regarding their use in people with diabetes, the utility of some these techniques, such as CDUS and CTA, can be affected by (severe) MAC, which is frequently present in the smaller arteries of the leg in people with DFU. MRA images are incapable of defining the extent of calcification which may be important when planning revascularisation (17). Finally, as stated in the Global Vascular Guidelines, catheter digital subtraction angiography (DSA), represents the gold standard imaging technique, especially for the below knee and foot arteries (17). In many centres DSA is typically used when MRA or CTA are not available, fail to adequately define the arterial anatomy, or when an endovascular intervention is planned. Arterial imaging should allow complete anatomical staging from aorta to foot using, for example, TASC for aorto-iliac disease and the Global Anatomic Staging System (GLASS), described in the Global Vascular Guidelines, for infrainguinal and pedal disease (17).

Recommendation 12: In a person with diabetes, peripheral artery disease, a foot ulcer and clinical findings of ischaemia, a revascularisation procedure should be considered. Findings of ischaemia include absent pulses, monophasic or absent pedal Doppler waveforms, ankle pressure < 100 mm Hg or toe pressure < 60 mm Hg. Consult a vascular specialist unless major amputation is considered medically urgent. Best Practice Statement

Rationale: The natural history of people with diabetes, PAD, and a DFU or gangrene remains poorly defined, but in two studies reporting the outcomes of participants with diabetes and limb ischaemia who were not revascularised, the limb salvage rate was around 50% at 1 year (66, 94). Our analysis of the evidence for revascularisation suggests that revascularisation in appropriately selected people with diabetes and hemodynamically significant PAD, can improve perfusion, expedite wound healing and reduce major limb amputations(73). After a revascularization procedure, most studies report limb salvage rates of 80% to 85% and ulcer healing in >60% at 12 months (95). On the other hand,