Recent reports have stressed the importance of early recognition of the high-risk foot in diabetes and the standardized provision of preventive measures to avoid diabetic foot lesions and reduce morbidity and costs resulting from those complications. Some interesting new ideas related to diabetic foot ulcer prevention have been published recently (use of home temperature monitoring, activity monitoring).

In the case of established ulceration, standard principles of diabetic foot treatment include surgical debridement, management of infection, application of off-loading principles, stage-adapted local wound-care and aggressive angioplasty or distal revascularization. Applying these principles in an interdisciplinary and intersectoral approach, amputation should be avoidable in the magnitude of cases. However, in the small number of patients who are not eligible for conventional principles of revascularization, therapeutic angiogenesis and collateralogenesis by means of gene therapy or autologous bone marrow transplantation might save legs in some patients with limb-threatening critical ischemia in future.

As intrinsic defects of ulcer healing in the diabetic patient (including fibroblast dysfunction, deficiency in growth-factors and abnormalities of the extra-cellular matrix) have been described, the use of advanced wound-healing products addressing these problems might be considered in cases reluctant to heal using standard techniques. In addition to new approaches and further development of existing procedures of local wound care new methods of debridement (ultrasound-based therapies and “hydrosurgery”) and the use of marrow-derived stem cells might be helpful to accelerate the healing process and reduce the risk of secondary infection and amputation that way.