

# Recommended Reading



## Outcomes of Hallux Amputation Versus Partial First Ray Resection in People with Non-Healing Diabetic Foot Ulcers: A Pragmatic Observational Cohort Study

Blanchette V, Houde L, Schmidt BM

**Abstract:** There are few data comparing outcomes after hallux amputation or partial first ray resection after diabetic foot ulcer (DFU). In a similar context, the choice to perform one of these two surgeries is attributable to clinician preference based on experience and characteristics of the patient and the DFU. Therefore, the purpose of this study was to determine the more definitive surgery between hallux amputation and partial first ray resection. We abstracted data from a cohort of 70 patients followed for a 1-year postoperative period to support clinical practice. We also attempted to identify patient characteristics leading to these outcomes. Our results suggested no statistical difference between the type of surgery and outcomes such as recurrence of DFU and amputation at 3, 6, and 12 months or death. However, there was a statistically significantly increased likelihood of re-ulceration for patients with CAD who underwent hallux amputation ( $p = 0.02$ ). There was also a significantly increased likelihood of re-ulceration for people with depression or a history when the partial ray resection was performed ( $p = 0.02$ ). Patients with prior amputation showed a higher probability of undergoing another re-amputation with partial ray resection ( $p = 0.01$ ). Although the trends that emerge from this project are limited to what is observed in this statistical context, where the number of patients included and the number of total observations per outcome were limited, it highlights interesting data for future research to inform clinical decisions to support best practices for the benefit of patients.

**Read at:** *The International Journal of Lower Extremity Wounds*. 2022; September 7; OnlineFirst. <https://doi.org/10.1177/15347346221122859>

## Knowledge and Practice of Diabetic Foot Care – A Scoping Review

Manickum P, Mashamba-Thompson T, Naidoo R, Ramklass S, Madiba T

**Background and aims:** This review aims to systematically map global evidence on foot care knowledge and practices in relation to diabetes mellitus (DM) and identify areas that need further research.

**Methods:** Database searches were undertaken using Google Scholar, Medline (PubMed), Academic Search Complete (EBSCOhost), and Medline (EBSCOhost). Studies were initially sought by title and focused on knowledge of diabetic foot ulcer burden. The framework by Arksey and O'Malley and the PRISMA-SCR guidelines were used to guide the methodology. The themes explored were principles of foot care knowledge and practice and these were reported using content analysis. The mixed-methods appraisal tool (MMAT) was employed to appraise the quality of the primary studies.

**Results:** Fifty-eight studies published between 2008 and 2018 met the inclusion criteria. Participants in various studies had varying degrees of foot care knowledge and practice, including foot inspection, foot hygiene, glycaemic control, and foot protection. Many people had knowledge of the various aspects of foot care but fewer practiced proper foot care. The MMAT showed the majority of the articles to be of high quality.

**Conclusions:** Levels of foot care knowledge and practice varied in the studies. A need for intervention on foot care was highlighted.

**Read at:** *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 2021;15(3): 783-793.  
<https://doi.org/10.1016/j.dsx.2021.03.030>

## Tackling Diabetic Foot: Limb Salvage During the COVID-19 Pandemic

Schmidt BM, Shin L

**Purpose:** Lower extremity amputation resulting

from diabetic foot ulcer, with neuropathic and/or ischemic etiologies, remains a devastating and costly complication of diabetes mellitus. This study evaluated changes in care delivery of diabetic foot ulcer patients during the COVID-19 pandemic. A longitudinal assessment evaluating the ratio of major lower extremity amputation to minor lower extremity amputations after implementation of novel strategies to combat access restrictions was compared to the pre-COVID-19 era.

**Methods:** The ratio of major to minor lower extremity amputation (i.e. the high-to-low ratio) was assessed at two academic institutions, the University of Michigan, and University of Southern California, in a population of patients with diabetes who had direct access to multidisciplinary foot care clinics in the 2 years prior to the pandemic and the first 2 years of the COVID-19 pandemic.

**Results:** Patient characteristics and volumes including patients with diabetes and those with a diabetic foot ulcer were similar between eras. In addition, inpatient diabetic foot-related admissions were similar, but were suppressed by government shelter in placed mandates and subsequent COVID-19 variants surges (e.g. delta, omicron). In the control group, the Hi-Lo ratio increased every 6 months by an average of 11.8%. Meanwhile, following STRIDE implementation during the pandemic, the Hi-Lo ratio reduced by (-)11% ( $p < 0.001$ ) and doubled limb salvage efforts as compared to the baseline era. The reduction of the Hi-Lo ratio was not influenced significant by patient volumes or inpatient admissions for foot infections.

**Conclusion:** These findings signify the importance of podiatric care in the at-risk diabetic foot population. Through strategic planning and rapid implementation of at-risk diabetic foot ulcer triage, multidisciplinary teams were able to maintain accessible care during the pandemic which resulted in a reduction of amputations. Furthermore, this manuscript highlights the value of the Hi-Lo ratio as an indicator of institutional limb salvage efforts.

**Read at:** *Ther Adv Endocrinol Metab*. 2023;14:1-7.  
<https://doi.org/10.1177/20420188231157203>

## Frailty in People with Chronic Limb Threatening Ischemia and Diabetes-Related Foot Ulcers: A Systematic Review

Fernando ME, Blanchette V, Mishra R, Zulbaran-Rojas A, Rowe V, Mills JL, et al

**Background:** Frailty represents a state of multi-system impairment that may adversely impact people presenting with chronic limb-threatening ischemia (CLTI) and diabetes-related foot ulcers (DFUs). The aim of this systematic review was to explore the association between frailty and outcomes from CLTI and DFUs.

**Methods:** We performed a systematic literature search of electronic databases to find studies using a validated measure of frailty in individuals with CLTI and/or DFUs. The primary outcomes were the impact of frailty on the severity of initial clinical presentation and unfavourable follow-up outcomes including readmissions, major limb amputation, cardiovascular events, revascularization and wound healing.

**Results:** Ten cohort studies were included. Two studies had a low risk of bias, 1 was unable to be assessed, 5 had moderate risk of bias, and 2 high risk of bias. The prevalence of frailty in people presenting with CLTI ranged from 27% to 88% and was 71% in people with DFUs. The presence of frailty in both people with CLTI and DFUs was associated with substantially increased severity at presentation (severity of ischemia and tissue loss) and poorer outcomes at follow-up (risk of readmission, limb amputation, and all-cause mortality).

**Conclusions:** The presence of frailty in both people with CLTI and DFUs is likely associated with substantially higher complexity at presentation followed by a greater risk for readmission, amputation, and death during follow-up. Heterogeneity in the tools used to screen for frailty, poor definition of frailty, and unclear evaluation of exposure and outcomes limit further interpretation of findings.

**Read at:** *Annals of Vascular Surgery*. 2023;89: 322-337.

<https://doi.org/10.1016/j.avsg.2022.09.057>

## An Unusual Case of May-Thurner Syndrome in a Middle-Aged IV Drug Abuser

Danish A, Mohammed A S, Kanagala S, et al

**Abstract:** May-Thurner syndrome (MTS) is an extrinsic venous compression of the ilio caval venous territory by the arterial system. MTS is common in middle-aged women. Despite its importance, it is uncommonly considered in the differential diagnosis of deep vein thrombosis (DVT), especially in males with other risk factors. Due to the perianal abscess, a 35-year-old male health-care worker was abusing IV opioids through his left leg veins. His symptoms included signs and symptoms of cellulitis around the catheter site, followed by recurrent DVTs due to poor response to anticoagulation therapy alone. A comprehensive workup revealed the diagnosis of MTS. The patient eventually required endovenous treatment with stent placement, after which his condition improved dramatically.

**Read at:** *Cureus*. 2022;14(9): e29360.

<https://doi.org/10.7759/cureus.29360>

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