**Introduction**

- Atherosclerosis and neuropathy contribute to an increased risk of peripheral vascular disease (PVD) and adverse outcomes, e.g., ulcers, infections, limb amputation, hospitalizations and mortality in people with diabetes mellitus (DM).
- The same risk applies to patients on hemodialysis (HD), caused by uremic neuropathy, arteria media sclerosis and microvascular problems related to secondary hyperparathyroidism (shHTP) and vascular calcifications. Pain and other symptoms are often reduced due to neuropathy resulting in late diagnosis. HD has been described as an independent risk factor for foot ulcers.
- Both the ACC/AHA and K/DOQI guidelines recommend screening of individuals at risk.

**Objective**

- This study analyzed the frequency of foot complications following implementation of a standardized foot examination in 345 prevalent hemodialysis patients with DM in 12 DaVita centers in Poland (n=8, 177 pts) and Portugal (n=4, 168 pts).
- Hospitalizations and cause-specific mortality were documented during 44 months follow up.

**Methods**

- The protocol included: history of the patient (ulcers, amputation), inspection of feet (skin, nails) and examination of the pedal pulses (a dorsalis pedis and a tibialis posterior measurement (normal vs weak or missing).
- Foot complications were classified according to Wagner (grade 0-5) (Fig 1) and PVD was classified by clinical pulse measurement (normal vs weak or missing).
- We analyzed risks associated with hospitalization and mortality using Cox proportional hazard models.

**Results**

- The mean age of patients (58% men) was 70.4 ± 11.9 years.
- The Wagner classification score was 0 or 1 in 88% of patients, 2 or 3 in 6 % of patients, and 4-5 in 5 % (Fig 2).
- Among the examined complications, foot ulcers at grade 4 or 5 in 5 % (Fig 2).
- Gangrene of toes or forefoot (4) and exposed bone and/or abscess/osteomyelitis (5) (Fig 3).
- Death (HD) has been described as an independent risk factor for foot ulcers.

**Conclusion**

- Implementation of a standardized foot examination protocol in HD patients with DM showed a high prevalence of clinically significant complications that warrant close attention.
- This clinical tool is suitable to identify patients at high risk of future complications and could be the basis of a program to improve overall health outcomes.

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Correspondence: Szymon.Brzosko@davita.com

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**Fig 1. Wagner Classification of Foot Complications**

**Fig 2. Wagner Classification Score**

**Fig 3. Mortality and Hospitalization (44 months)**

**References**