

## **SAMPLE ABSTRACT (SCIENTIFIC)**

**Title:** A radiographic evaluation of implant migration across time and between two generations of an implant

**Authors:** John Smith, DPM, Jane Doe DPM, Herbert Hoover, DPM.

**Corresponding Author Name/Email:** John Smith, DPM (JJSmithdpm@cyberspace.com)

**Format:** Scientific

**Level of Evidence:** III

**Length of Follow-up:** 24 months

**Classification:** Rearfoot & Ankle Reconstruction

**Purpose:** Aseptic loosening and talar subsidence have been identified as the primary causes of premature implant failure. The purpose of the present report was to compare the extent of implant migration across time and between two generations of the same implant. The authors hypothesized that implant migration would increase over and time and that this increase would be greater in the first generation implant.

**Methodology:** A retrospective review was performed to assess implant migration. Via anteroposterior radiographs, the distance from the apex of the tibial component was measured to the most distal aspect at the center of the talar stem or the mid-saddle of the non-stemmed component. Measurements were recorded from postoperative radiographs: the immediate postoperative, the 12 month, and the 24 month. Implant migration was defined as the change from the immediate postoperative radiograph.

**Procedures:** The TARs were implanted with an anterior ankle approach.

**Results:** Thirty-four consecutive patients were included (aged  $58.59 \pm 12.01$  years, 22 men). Twenty (58.82%) patients were treated with the first generation of the implant and 14 (41.18%) with the second generation. Implant migration significantly increased across time ( $p = 0.008$ ). However, there was no implant by time interaction ( $p = 0.069$ ), indicating that implant migration was similar for the two implant groups across time.

**Discussion:** Although the present study demonstrated similar component migration between the two implants, significant findings may have been masked due to the small sample size. Additional investigations are needed to identify implant designs that prone to migration.