



# Lateral Ankle Fusion

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## Clinical History

63-year-old, controlled diabetic male with severe ankle arthritis and significant ankle varus (FIGs 1&2). The patient did have recurrent ankle sprains with pain and crepitus on a daily basis. The patient did fail bracing, NSAID's, custom orthotics, custom shoes, activity modifications and corticosteroid injections.



## Technology Platform

XCELLERATE™ is opaque and thicker than other grafts. The Lyophilized graft is flexible and easy to handle. What you can't see is the benefit of our proprietary Lyophilization processing focused on preserving the quality of the matrix. The growth factor-rich matrix with an outer basement membrane immediately serves as a natural barrier and supports re-epithelialization.

OSTEOXCELL™'s advanced performance provides surgeons with a better option for bone repair. An allograft closer to autograft performance and handling through processing designed to optimally protect the tissue environment with less disruption. Science that brings bone grafting closer to meeting the surgeon's and patient's needs.

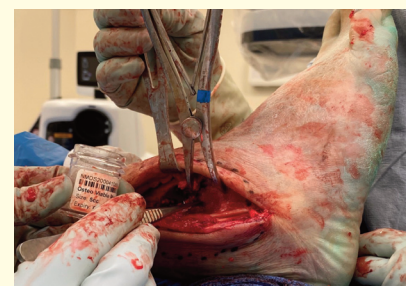
## Procedure

- A lateral incision is placed over the lateral malleolus about 10cm from the distal tip of the fibula. The incision is deepened through skin and subcutaneous tissue down to the lateral malleolus. The lateral malleolus is then adequately exposed.
- Next, a sagittal saw is utilized to perform an osteotomy in the lateral malleolus to allow access to the ankle joint and for placement of the lateral ankle fusion plate.
- Next, the fibula is excised, and the ankle joint is then accessed with a pin based distractor.
- Next, the remaining cartilage within the ankle is removed with curettes and osteotomes.
- Next, a solid drill bit along with an osteotome and mallet is used to penetrate the subchondral plate to facilitate good bleeding to bone to allow a fusion.
- Next, 5cc's of OSTEOXCELL bone graft is then packed into the ankle joint to help facilitate healing of the fusion (FIG 3).



**Figures 1&2**

AP and Lateral ankle x-rays demonstrating severe ankle arthritis and significant ankle varus.



**Figure 3**

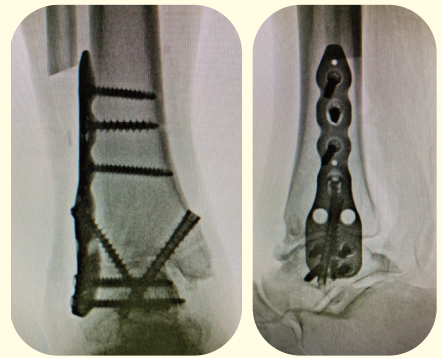
OSTEOXCELL bone graft was then placed into the fusion site.



- Next, the ankle varus is then reduced to neutral and a compression screw is then placed over a guide wire accessed from the medial malleolus into the talus under fluoroscopy.
- Next, a lateral anatomic locking plate is then placed laterally over the ankle joint under fluoroscopy and screws are placed (FIGs 4&5).
- Next, XCELLERATE is placed over the fusion site under the skin to assist in healing given that the patient is a diabetic (FIG 6).
- The incision is then closed in layers.

## Outcome

- The patient is placed into a well padded non weight bearing posterior splint for 2 weeks.
- Sutures are removed at 2 weeks and the patient was placed into a cast for 6 more weeks with cast changes every 2 weeks.
- The patient was then transitioned to weight bearing in a cam boot for one month.
- At 12 weeks x-rays did confirm adequate healing of the fusion and correction of the ankle varus (FIGs 8&9). The then patient was then transitioned to weight bearing in custom diabetic shoes and insoles with an ankle brace.
- The patient has resumed all his activities with well healed incision and ankle fusion (FIGs 10&11). He is very pleased with the final outcome.



**Figures 4&5**

Correction of the ankle varus with fusion of the ankle joint in a neutral position and placement of the lateral ankle fusion plate and compression screw.



**Figures 6&7**

Place of 4x5 XCELLERATE amniotic membrane to help healing of the incision in this high risk diabetic patient.



**Figures 8&9**

AP x-rays pre op and 12 weeks post op lateral ankle fusion with a progressive healing noted.



**Figures 10&11**

Well healed lateral ankle incision in this diabetic male at 12 weeks post op.

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