

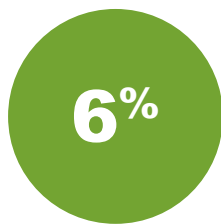
**Application of Acellular Amniotic Scaffold Following Total Ankle Replacement:
A Retrospective Comparison.** *Brigido SA^a, Riniker ML^a, Protzman NM^b, and Constant DD^a*

The purpose of this study was to compare the incidence of surgical wound dehiscence in patients who underwent total ankle replacement surgery with placement of BIOVANCE[®] Human Amniotic Membrane Allograft (treatment group), vs. patients who did not receive an acellular dehydrated human amniotic membrane (control group).

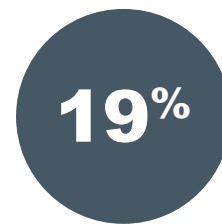
Complications following total ankle replacement surgery (TAR) are common and can be devastating. The breakdown of an operative incision, resulting in a wound, **affects 39% of TAR patients**. Wound dehiscence is a concern regardless of implant type. Amniotic membrane allografts may help prevent dehiscence following total ankle replacement.

**STUDY FOUND A STATISTICALLY SIGNIFICANT DECREASE IN CASES
OF INCISIONAL DEHISCENCE WITH THE USE OF BIOVANCE**

Primary Endpoint – Complications of Wound Dehiscence (%)



BIOVANCE Treatment Group
(3 out of 47)



Control Group
(9 out of 47)

The BIOVANCE Treatment Group began physical therapy
10 days earlier than the control group.

**ACHIEVING EARLY RANGE OF MOTION IS IMPORTANT TO A SUCCESSFUL
OUTCOME AND REDUCTION OF STIFFNESS FOLLOWING TAR.**

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STUDY DESIGN

All procedures were performed by one surgeon

Inclusion Criteria:

- Patients > 18 years of age at time of surgery
- Exhausted all forms of conservative treatment
- Elected to undergo TAR

Exclusion Criteria:

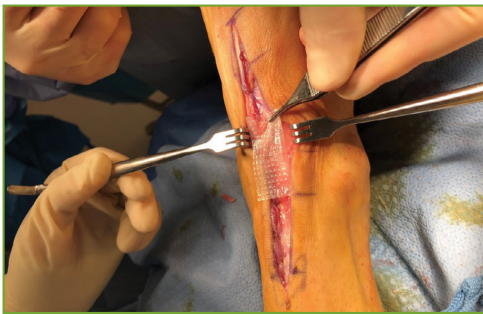
- Postoperative acute traumatic injury that could interfere with wound healing

STUDY METHODOLOGY

A retrospective chart review was performed to identify consecutive patients that underwent TAR with (treatment group) and without (control group) application of a decellularized, dehydrated, human amniotic membrane.

SURGICAL TECHNIQUE

- A traditional anterior approach was utilized for all but two* total ankle replacements:
- A 4 cm by 4 cm BIOVANCE amniotic scaffold was placed at the flexion point of the ankle joint
- The extensor retinaculum was closed with 2-0 monocryl and the skin was re-approximated with 3-0 nylon in a horizontal mattress suturing technique



BIOVANCE application



Post application of BIOVANCE prior to closure of the ankle joint

*Two total ankle replacements were approached laterally and the BIOVANCE was placed subcuticular prior to skin closure.

DECREASED
19.1% to 6.4%

This Study demonstrates a dehiscence rate decrease from 19.1% to 6.4% with the use of an amniotic scaffold.

CITATION: Brigido SA, Riniker ML, Protzman NM, Constant DD (2018) Application of Acellular Amniotic Scaffold Following Total Ankle Replacement: A Retrospective Comparison. *Clin Res Foot Ankle* 6: 275. DOI: 10.4172/2329-910X.1000275

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