Supplemental Zimmer Total Ankle Replacement (TAR) Cutting Guide

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1. NEED
➢ Misalignment of TAR implants cause 44% of revisions within 10 yrs.
➢ Longer surgery increases infection risk

Objective: Help surgeons usher the Cutting Guide into the correct position in less time

2. DESIGN INPUTS
➢ Compatible with Zimmer System and ankle sizes
➢ Decrease procedure time
➢ Groove mimics patient joint line

3. SOLUTION
1. NEED
➢ Misalignment of TAR implants cause 44% of revisions within 10 yrs.
➢ Longer surgery increases infection risk

Objective: Help surgeons usher the Cutting Guide into the correct position in less time

4. TESTING
Tibiotalar joint line data captured from pre-op imaging

Using joint line dimension data, model product in CAD

3D print guide for surgery

Insert product into joint line of ankle/sawbones model for testing

5. IMPACT
➢ Improve alignment, decrease need for revision surgeries
➢ Decrease surgery time, decrease risk of infection and cost

FUTURE
➢ Increase repeatability of current MATLAB code
➢ Incorporate new MATLAB code to improve patient specificity and stability