Digital Fillet Flaps: A Systematic Review
Valerie S. Schade, DPM, AACFAS: Chief Limb Preservation Service, Madigan Army Medical Center, 9040 Jackson Drive, MCHJ-CLS-V, Tacoma WA, 98431

INTRODUCTION
Digital fillet flaps were first reported for the use of coverage of plantar heel ulcerations. They were found to have a consistent vascular supply and provide durable soft tissue coverage. Despite the readily available nature of these flaps the literature on their use in the foot remains limited. This systematic review was undertaken to determine the defect size that could be covered, the potential post-operative complications, and the durability of a digital fillet flap for coverage of soft tissue defects of any etiology on the foot.

METHODS
11 electronic databases searched from inception to October 2013
Inclusion criteria
✓ English language
✓ Defects of any etiology
✓ Involved use of the entire digit for soft tissue coverage
✓ Reported complications
✓ Any duration of follow up time

RESULTS
9 studies (3 case reports; 6 small cases series)
34 patients
Combined mean age of 47.1 years
Combined follow up time of 9.3 months
Wound etiology
• Gangrene
• Infection
• Trauma
• Tumor resection
• Ulceration
Complications
• Continued infection (4/11.8%)
• Partial flap necrosis (2/5.9%)
• Total flap necrosis of the flap (2/5.9%)

CONCLUSION
Digital fillet flaps:
• Have a consistent vascular supply
• Have limited donor site morbidity
• Provides full coverage of exposed vital and osseous structures
• Can withstand weight bearing forces
• Are able to cover defects up to a mean size of 12.0 ± 16.1 cm²
• Negates the need for more complex reconstructive procedures
• Expedite healing time
• Are best for coverage of ulcerations restricted to the forefoot

REFERENCES AVAILABLE UPON REQUEST: valerie.l.schade.civ@mail.mil