

Outcomes and Satisfaction following Ultrasound-
Guided vs Mini-Open Carpal Tunnel Release: A
Retrospective Review

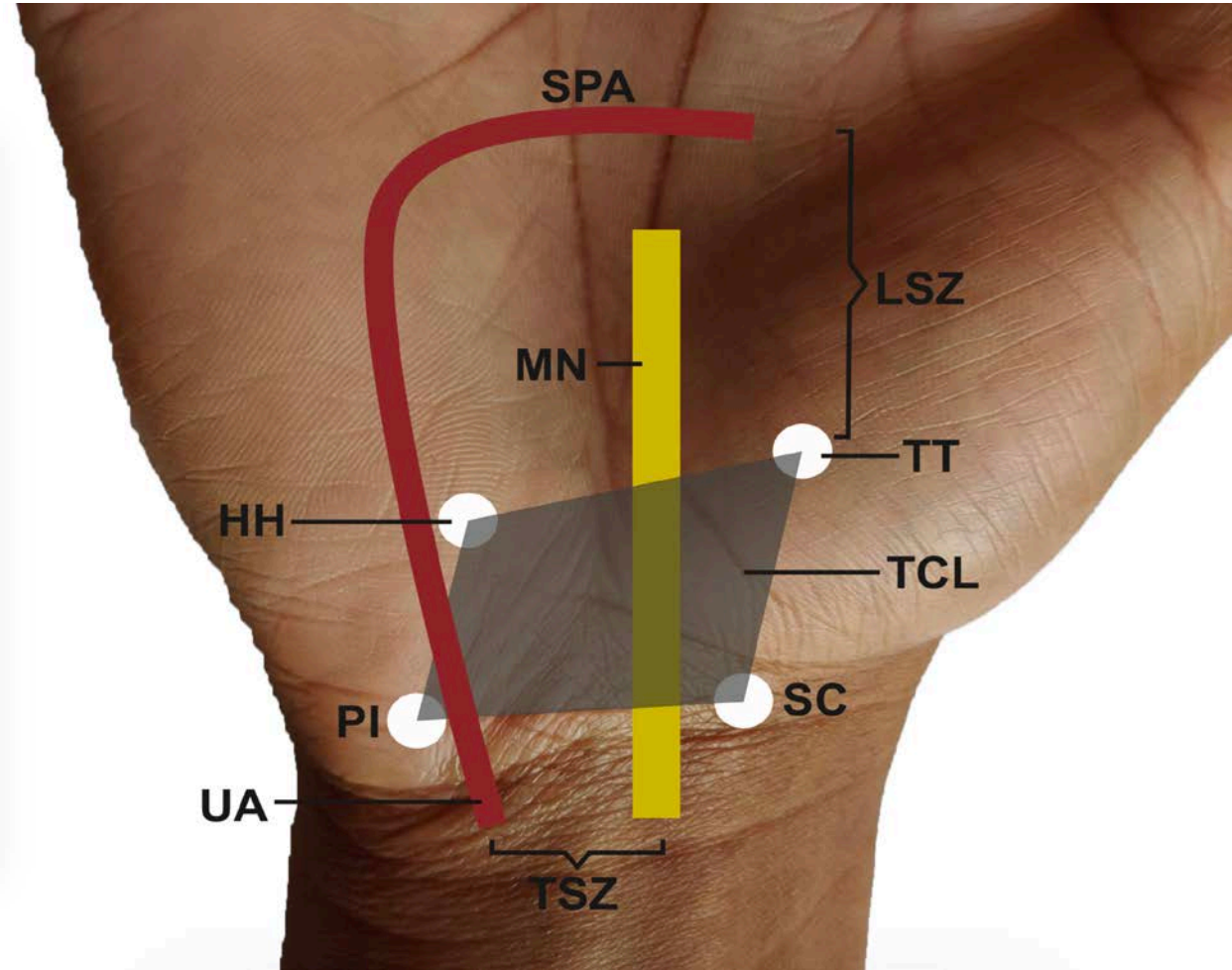
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BACKGROUND 1

- Carpal tunnel syndrome (CTS) is the most common entrapment mononeuropathy.
- There are >500,000 patients annually who decline surgical management due to the prolonged recovery time, intimidation by surgery, or inability to afford the operation.

BACKGROUND 2

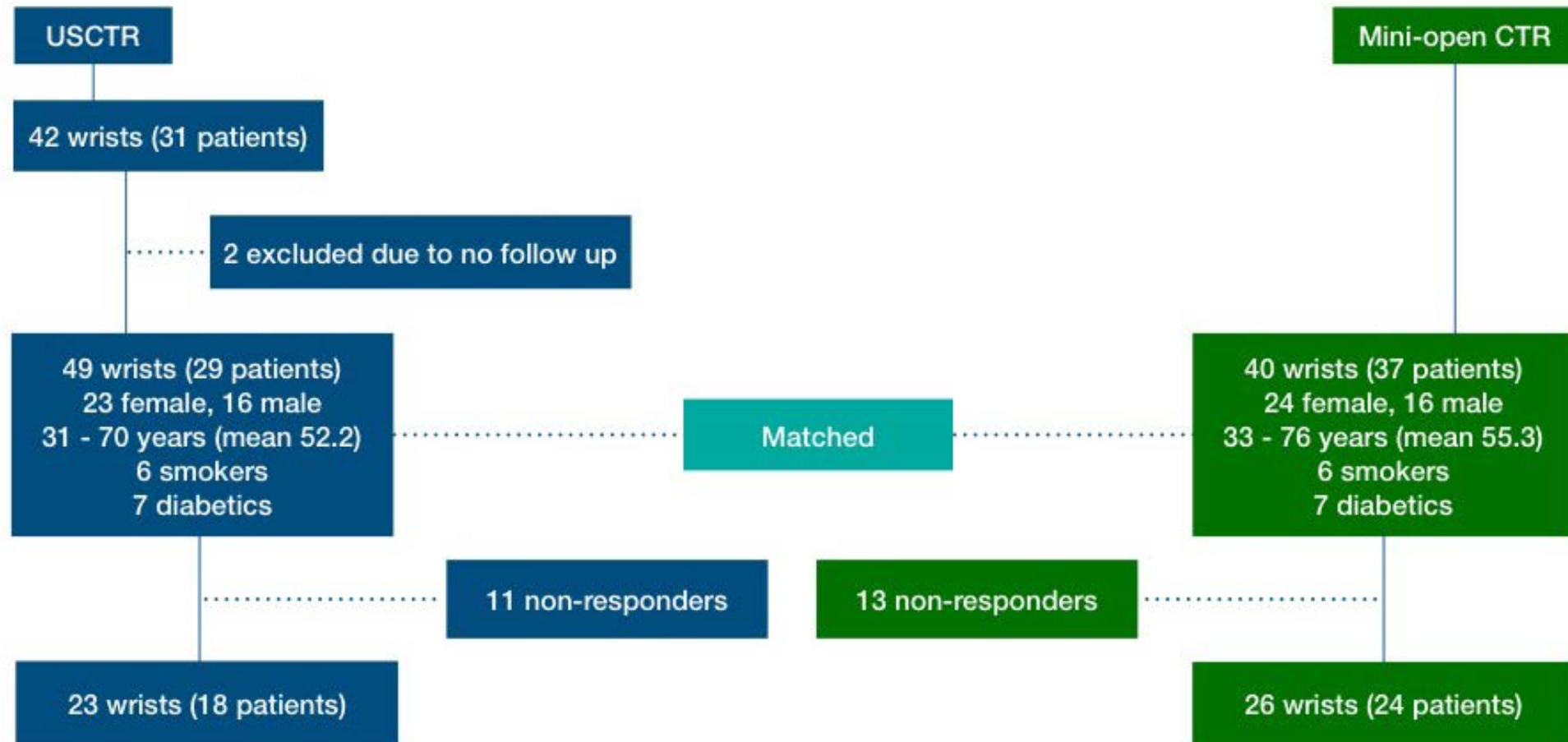




OBJECTIVES

- The primary purpose of this study is to retrospectively evaluate the outcomes, return-to-work/activities time (RTW), and patient satisfaction of USCTR performed using the SX-One MicroKnife compared to mCTR.
- Hypothesis: There will be no significant difference in outcomes, however there will be shorter RTW among the USCTR group

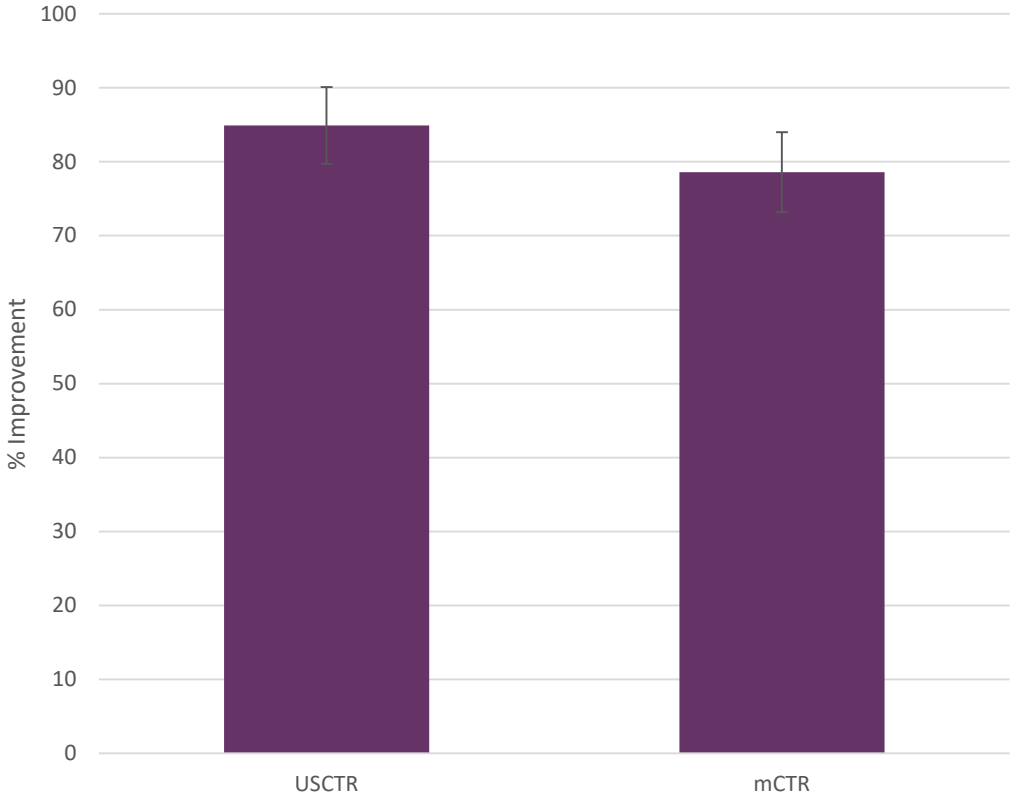
METHODOLOGY



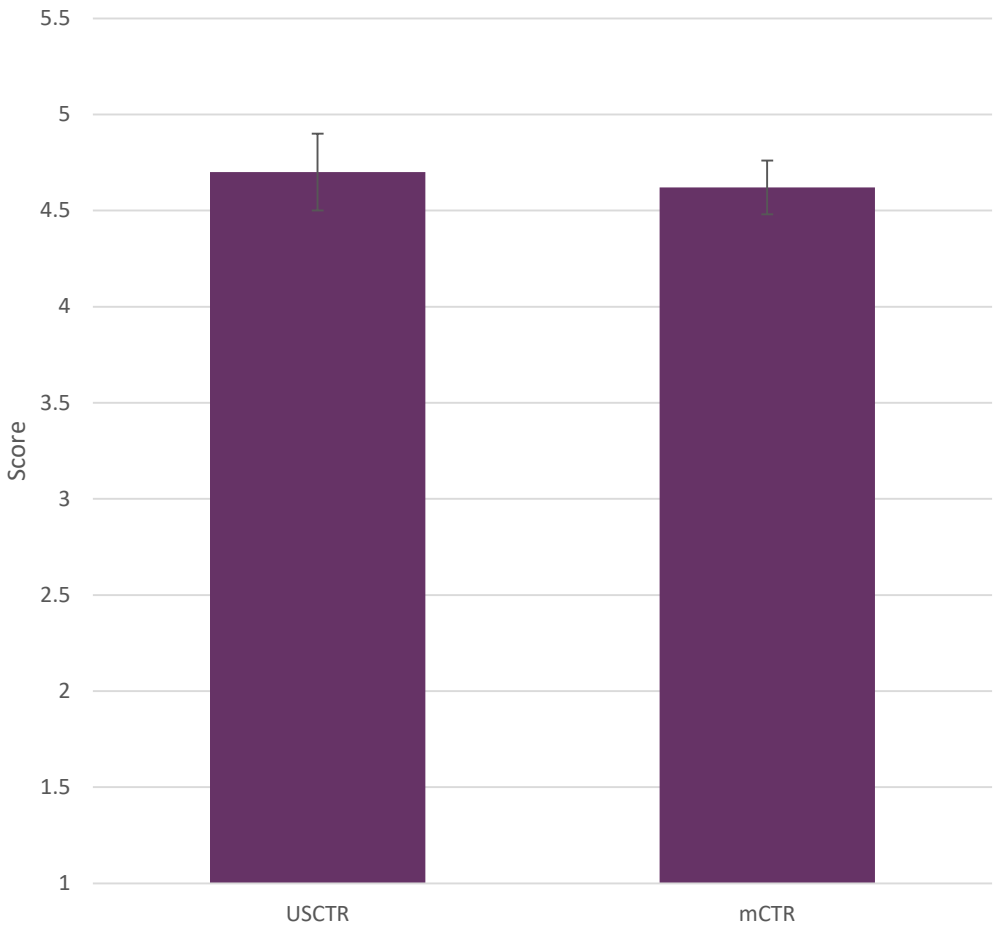


RESULTS 1

Symptom Improvement



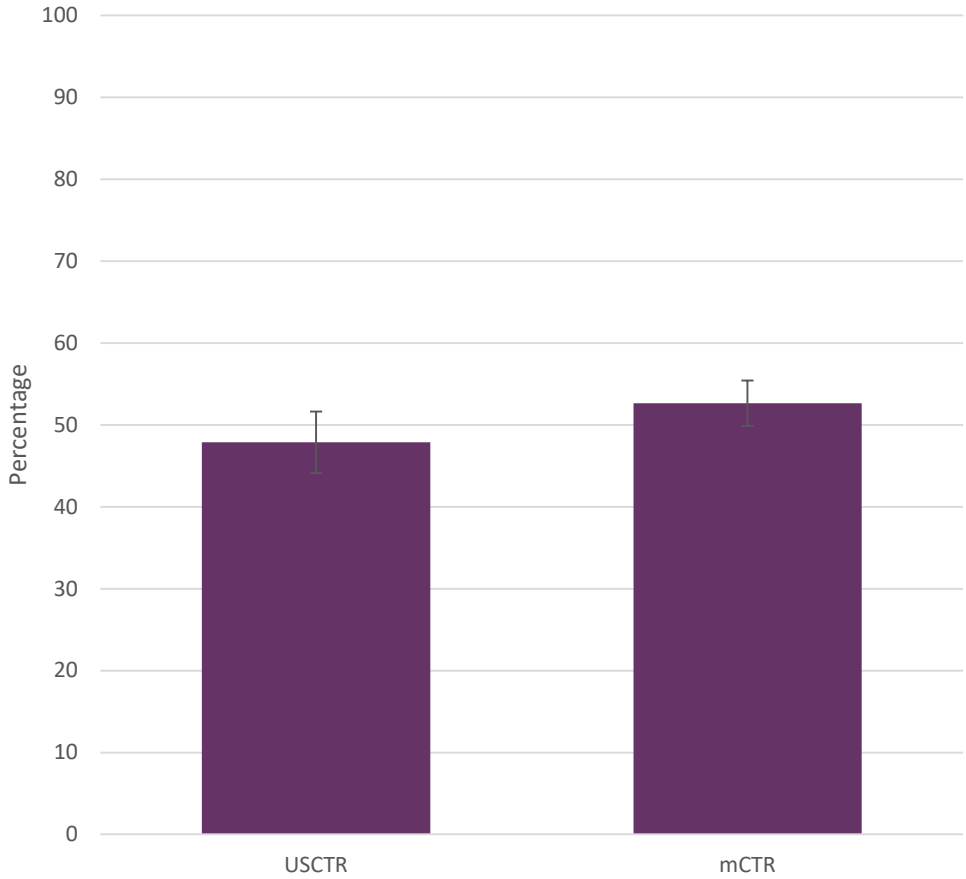
Patient Satisfaction



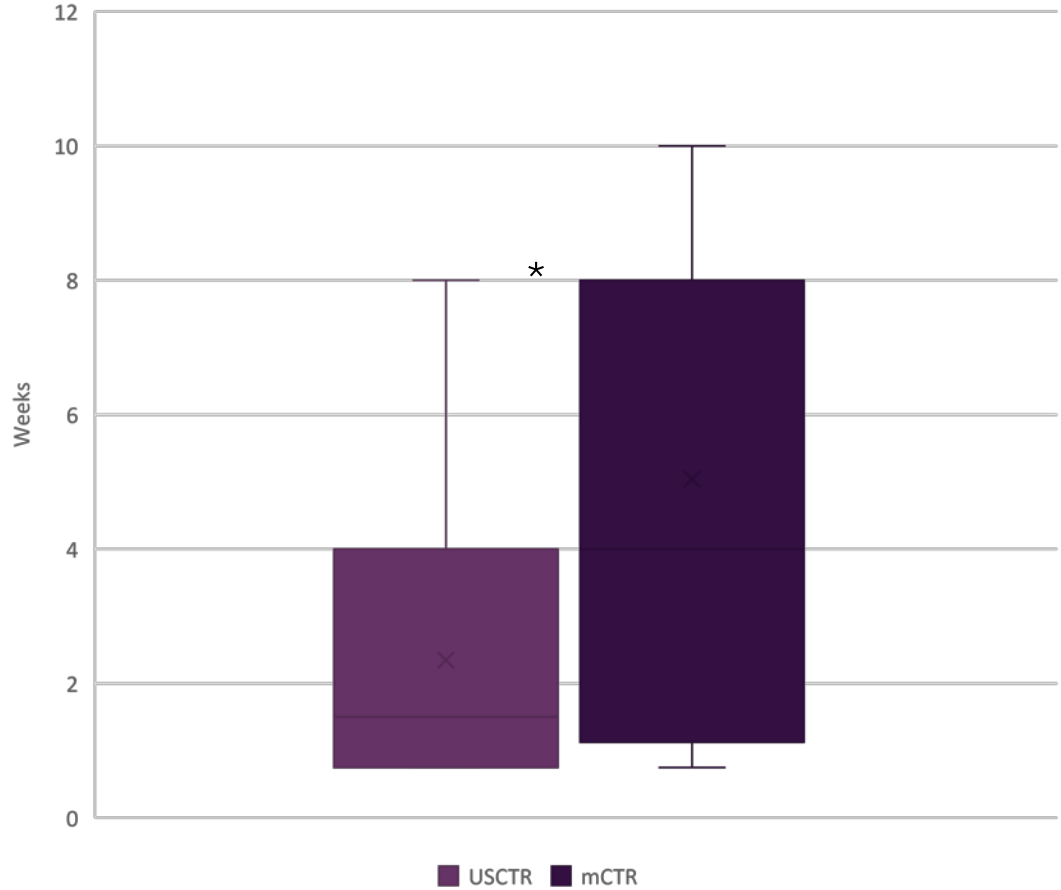


RESULTS 2

Pain Reduction



Return-to-Work Time



*statistically significant



CONCLUSION

- When performed by an experienced sports medicine physician, USCTR produces similar satisfaction and pain outcomes as mCTR.
- USCTR may have an additional benefit of a reduced RTW time (difference of 2.8 ± 0.9 weeks, $p < 0.05$) when compared to mCTR.
- With USCTR, there is a risk of incomplete sectioning of the TCL due to the inability to visualize the incision.
- This study's power was limited by a small sample size and its retrospective design.
- Susceptible to significant sampling bias.
- Further research is warranted to elucidate any additional advantages it may offer.

REFERENCES

- Fajardo M, et al. Incidence of carpal tunnel release: trends and implications within the United States ambulatory care setting. J Hand Surg Am 2012;37:1599-1605.
- Henning, P. T., Yang, L., Awan, T., Lueders, D. and Pourcho, A. M. Minimally Invasive Ultrasound-Guided Carpal Tunnel Release: Preliminary Clinical Results. J Ultrasound Med 2018;37: 2699-2706.
- Nakamichi, K., S. Tachibana, et al. Percutaneous carpal tunnel release compared with mini-open release using ultrasonographic guidance for both techniques. J Hand Surgery 2010;35A(3): 437-445.
- Smith, J. SX-One MicroKnife Ultrasound Guided Carpal Tunnel Release: Initial Clinical Experience 2018
- Wright, A., Atkinson, R. Carpal Tunnel Syndrome: An Update for the Primary Care Physician. Hawaii J Health Soc Welf 2019;78 (11 Suppl 2): 6-10

THANK YOU!

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