

# Short-term clinical and radiographic outcomes of a novel, minimally invasive device for treatment of CMC arthritis

*Lorenzo L Pacelli, MD*  
*Roslyn M Kackman, BA*

*Scripps Clinic*  
*La Jolla, California*

# Disclosure

---

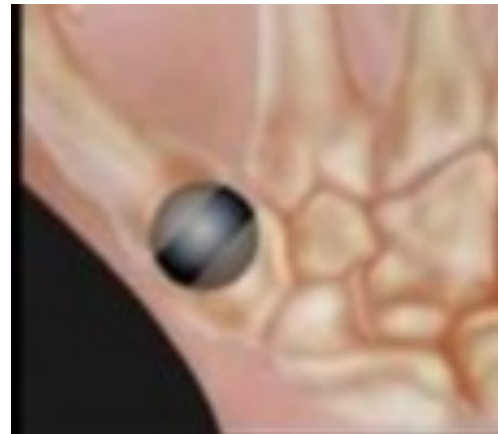
- Consultant Ensemble Orthopedics
- In2Bone - Royalties

# Introduction

- Trapeziectomy (+/- LRTI) remains the gold standard in the USA.
- Only 2% of US surgeons offer implant arthroplasty.\*
- French and Belgian hand surgeons perform implant arthroplasty 2 - 3.5 times more often than traditional Trapeziectomy arthroplasty.\*\*
- Many implant arthroplasties have been reported with varying success.

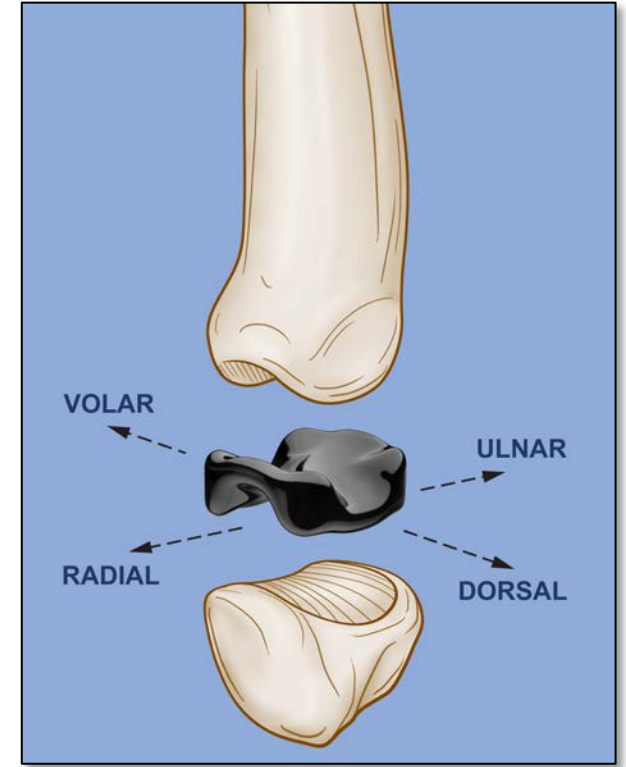
# Introduction

- 80% to 95% survival rate
- Technically demanding surgical procedure
- Limited by trapezium anatomy
- Risk of dislocation
- Challenging revision options



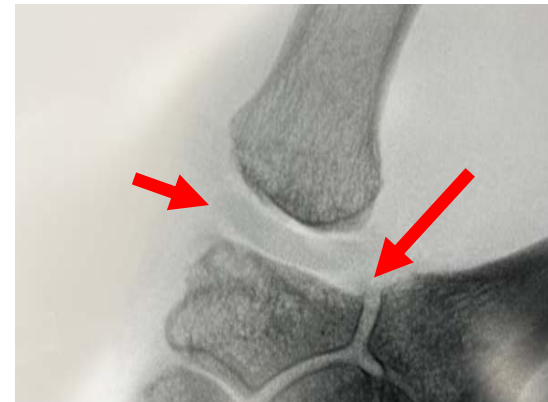
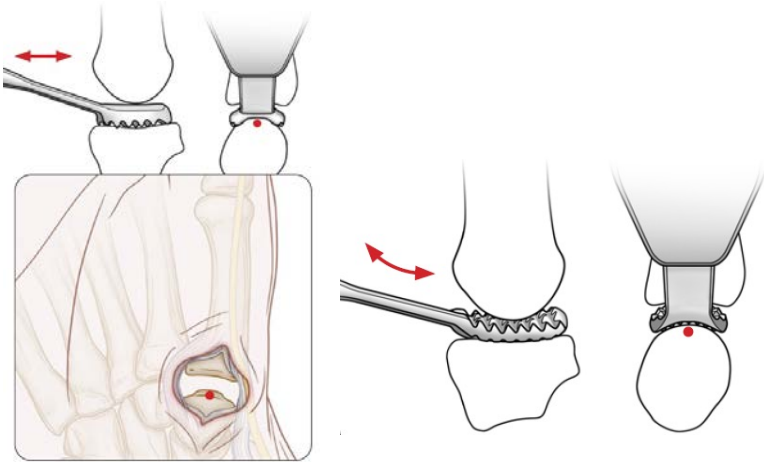
# Introduction

- Novel pyrocarbon saddle-shape implant for CMC arthritis (Ensemble CMC™)
- Minimally invasive technique
- Early to moderate stage basal thumb arthritis
- Younger and higher demand patients
- Preserved STT joint
- Early rehab and return to activity
- Not burning any bridges for later LRTI if needed



# Materials & Methods

- Technique
  - Wagner or Lateral Approach
  - Preserves all ligamental support
  - Reshape the arthritic trapezium & preserve subchondral bone
  - Expose and removal medial horn of the trapezium
  - Trails





# Results

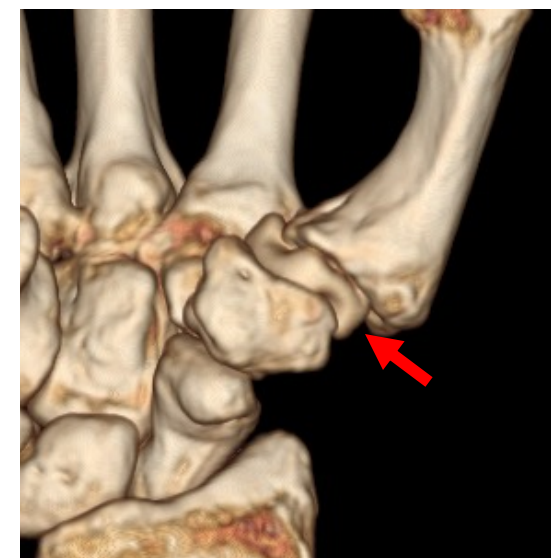
- Prospective outcomes on the first 36 consecutive patients (**39 implants**)
- Minimum 6-month F/u, Average F/u 20 months (**10 implants > 2 years**)
- Median age 63 y/o, 55% female
- VAS Pain scores improved at all time points (statistically significant)
- QuickDASH improved at 6 months, 1 & 2 years (statistically significant)
- Lat & 3-pt pinch strength trend improvement at 6 months, 1 & 2 years
- **No dislocation**, 2 revisions due to continued pain at 1 year (94.9% survival)

Table 1. Clinical Outcomes

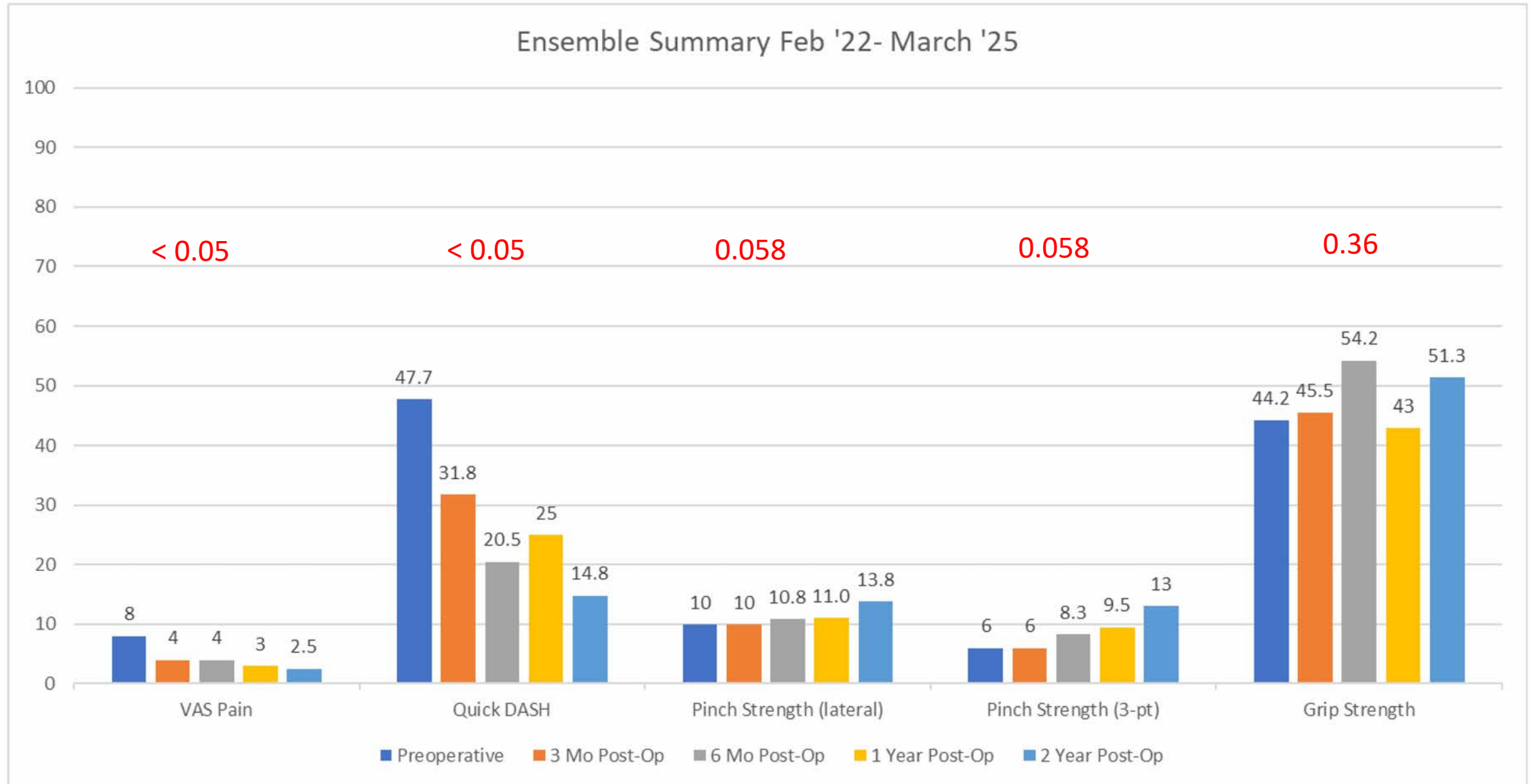
|                               | VAS Pain         | Quick DASH       | Pinch Strength (lateral) | Pinch Strength (3-pt) | Grip Strength    |
|-------------------------------|------------------|------------------|--------------------------|-----------------------|------------------|
| <b>Preoperative</b>           | 8.0 (4-10)       | 47.7 (2.3-81.8)  | 10.0 (2-24)              | 6.0 (2.5-21)          | 44.2 (4.7-106.3) |
| <b>3 Months Postoperative</b> | 4.0 (0-7)        | 31.8 (9.1-84.1)  | 10.0 (4-13)              | 6.0 (3-14)            | 45.5 (25.7-91.2) |
| <i>p-value</i>                | <b>&lt;0.001</b> | 0.121            | <b>0.023</b>             | <b>0.023</b>          | 0.659            |
| <b>6 Months Postoperative</b> | 4.0 (0-10)       | 20.5 (0-65.9)    | 10.8 (2-19)              | 8.3 (3-22)            | 54.2 (26.3-99.3) |
| <i>p-value</i>                | <b>&lt;0.001</b> | <b>&lt;0.001</b> | 0.529                    | <b>0.010</b>          | 0.206            |
| <b>1 Year Postoperative</b>   | 3.0 (0-8)        | 25.0 (2.3-72.7)  | 11.0 (4-16)              | 9.5 (4-19)            | 43.0 (15-91.7)   |
| <i>p-value</i>                | <b>&lt;0.001</b> | <b>&lt;0.001</b> | 0.522                    | 0.635                 | 0.067            |
| <b>2 Year Postoperative</b>   | 2.5 (0-8)        | 14.8 (0-29.5)    | 13.8 (8.5-17.5)          | 13.0 (9-18)           | 51.3 (30-71)     |
| <i>p-value</i>                | <b>0.027</b>     | <b>0.018</b>     | 0.058                    | 0.058                 | 0.362            |

\*P-value assessing change from preoperative to each postoperative assessment using the Wilcoxon signed rank test

\*data reported as median (range)

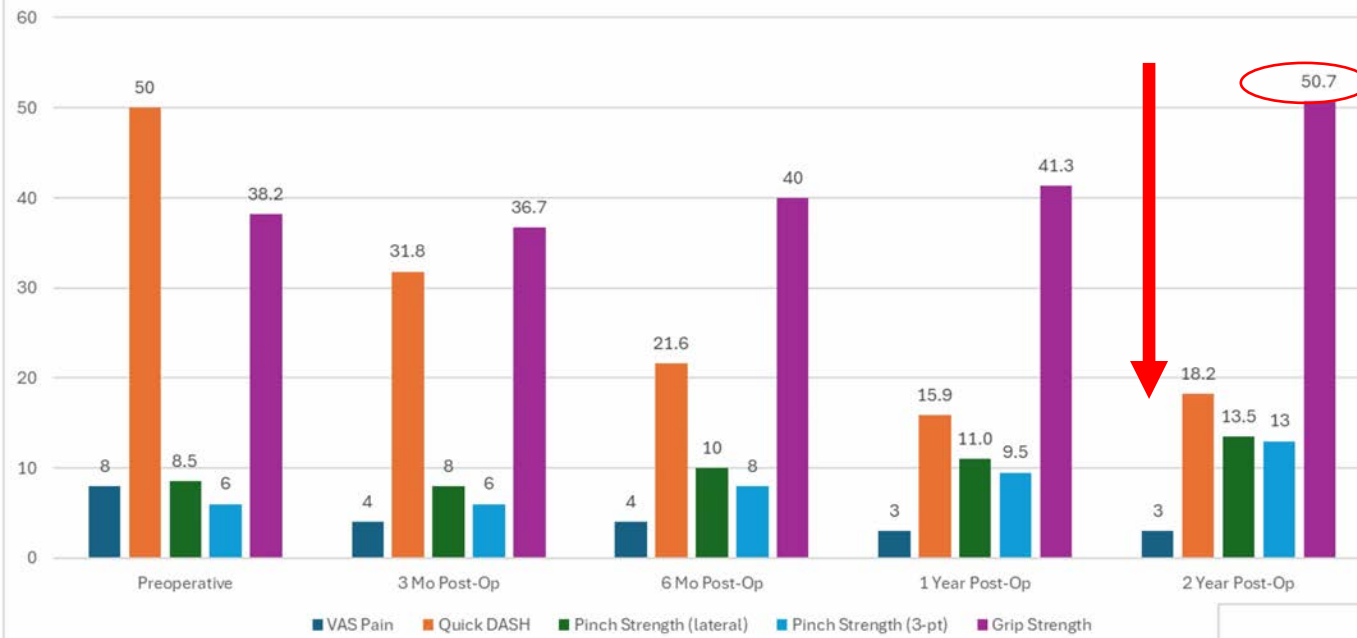


# Results

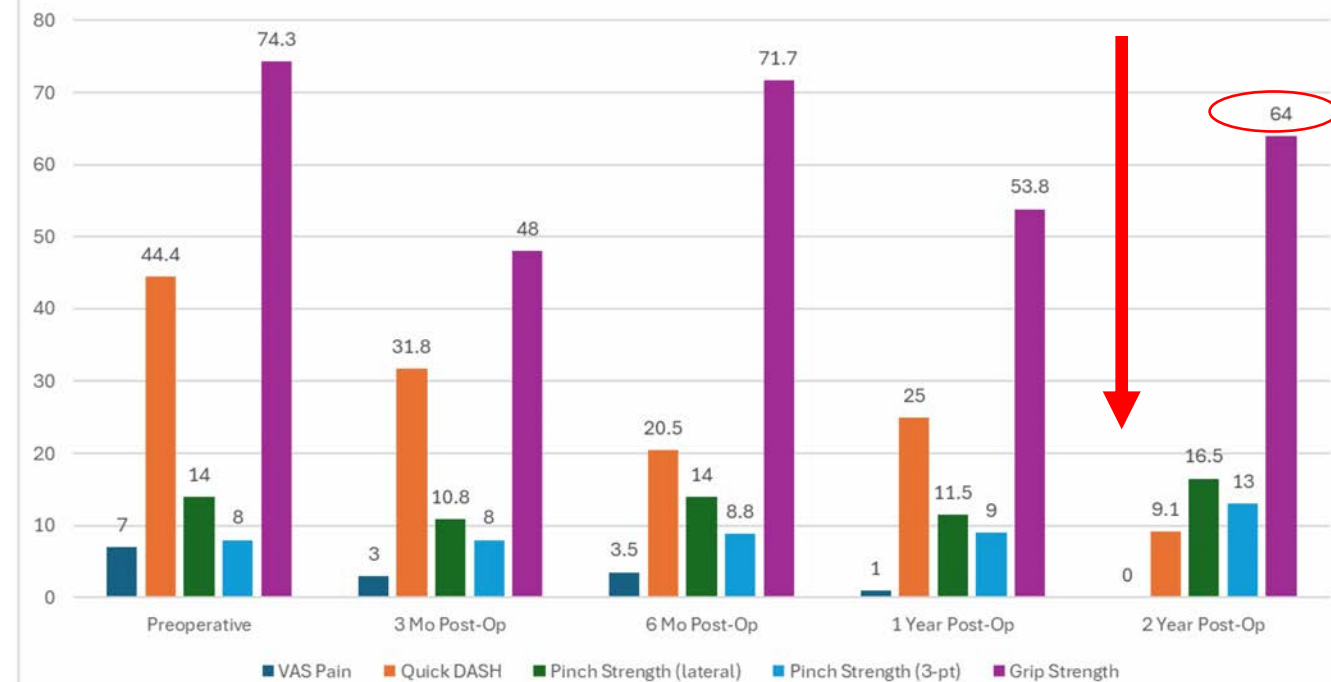




Female Outcomes Feb '22 - March '25



Male Outcomes Feb '22 - March '25



# Limitations

---

- Short term follow-up
- Small sample size at +2 years
- Statistical power will improve when more patients have longer follow-up

# Conclusion

---

Ensemble CMC™ implant arthroplasty provides a viable minimally invasive surgical option for early to moderate degree basal thumb arthritis in this short-term series

# Thank You

