

LITERATURE REVIEW

## Scaphoid Nonunion with Segmental Defect

**CLINICAL ISSUE:**

5% to 12% of scaphoid fractures result in nonunions; this incidence may be as high as 55% when fracture displacement is greater than 1 mm.<sup>1</sup>

**MEDARTIS SOLUTION:**

The Medartis APTUS Hand System includes the anatomically contoured Scaphoid Plate designed to address nonunions and multifragmentary fractures of the scaphoid. With its grid structure, up to 3 TriLock screws can be placed on each side of the nonunion.



Scaphoid Plate 1.2/1.5

**LITERATURE REVIEW:**

A study by Putnam, J., et al.<sup>1</sup> reviewed the clinical performance of the Scaphoid Plate for scaphoid nonunions with segmental defects. In their study, Outcomes of Unstable Scaphoid Nonunion With Segmental Defect Treated With Plate Fixation and Autogenous Cancellous Graft<sup>1</sup>, they highlight the following key points:

1. All 34 nonunions healed within 18 weeks (82% healed within 12 weeks)<sup>1</sup>
2. The mean DASH, MAYO wrist, and VAS scores improved postoperatively<sup>1</sup>
3. Grip strength increased from 77.5% to 90.5% after surgery<sup>1</sup>
4. All employed patients returned to work, 3 at a reduced capacity<sup>1</sup>
5. Polyaxially locking screws aided in capturing small fragments<sup>1</sup>

**KEY TAKEAWAY:**

They concluded their study by saying, “The combination of scaphoid plate fixation and pure cancellous bone grafting for scaphoid nonunion with segmental defects yields reliable union rates and good patient outcomes.”<sup>1</sup>

Scan the QR Code to read this study and learn more about the specific methods and results from this study or visit [https://www.jhandsurg.org/article/S0363-5023\(17\)30962-0/fulltext](https://www.jhandsurg.org/article/S0363-5023(17)30962-0/fulltext)



**REFERENCES:**

1. Putnam, J., et al. (2019). Outcomes of Unstable Scaphoid Nonunion With Segmental Defect Treated With Plate Fixation and Autogenous Cancellous Graft. The Journal of hand surgery. 44(2): 160.e1-160.e7. doi:10.1016/j.jhssa.2018.05.023