

## Biomechanics of Ventral Hernia Repair: Tailoring surgical parameters for better outcomes

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### Introduction

Recurrence rate of Ventral Hernia Repair, despite use of textile meshes

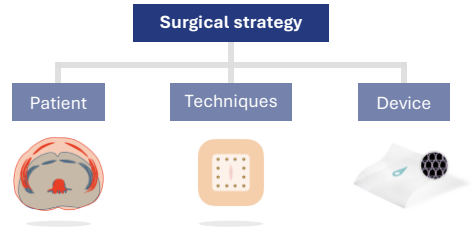


**25%-plateau recurrence rate**  
at 3 years postoperatively

*Bhardwaj et al. 2024*

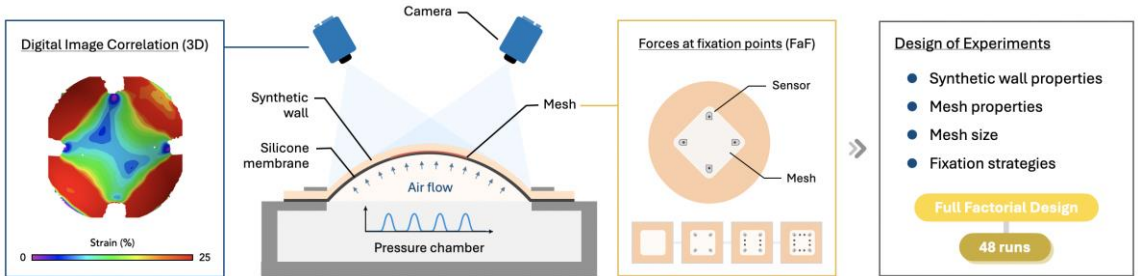
Post-operative complications may be linked to the lack of customization in the surgical technique.

How do key surgical parameters influence the biomechanical behavior of the repaired abdominal wall?



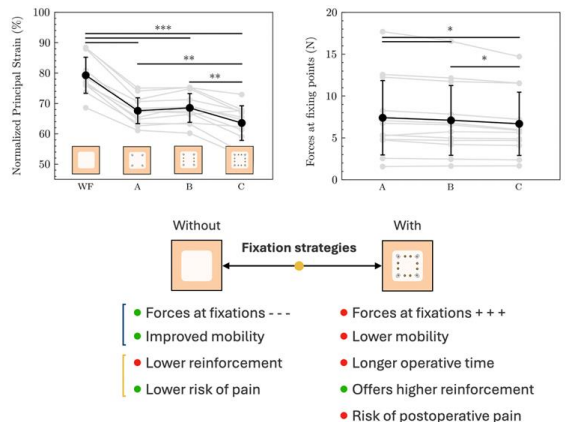
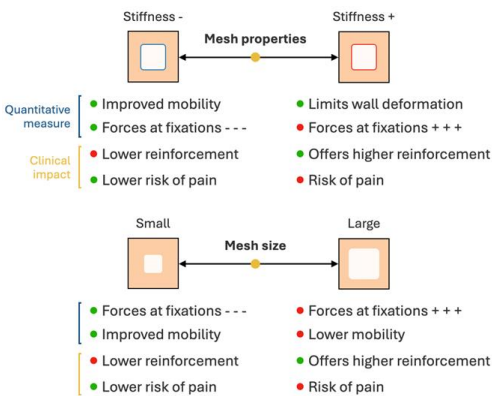
*Jourdan et al. 2020*

### Materials & Method



### Results & Discussion

- All factors affected biomechanical responses, dominated by wall compliance



### Conclusion

- Surgical parameters significantly impact abdominal wall biomechanics
- Future objective: identify the **optimal trade-off** based on **patient profile** and **lifestyle**