

# Evaluation of a Novel Mesh Suture for Crural Closure in Laparoscopic Hiatal Hernia Repair

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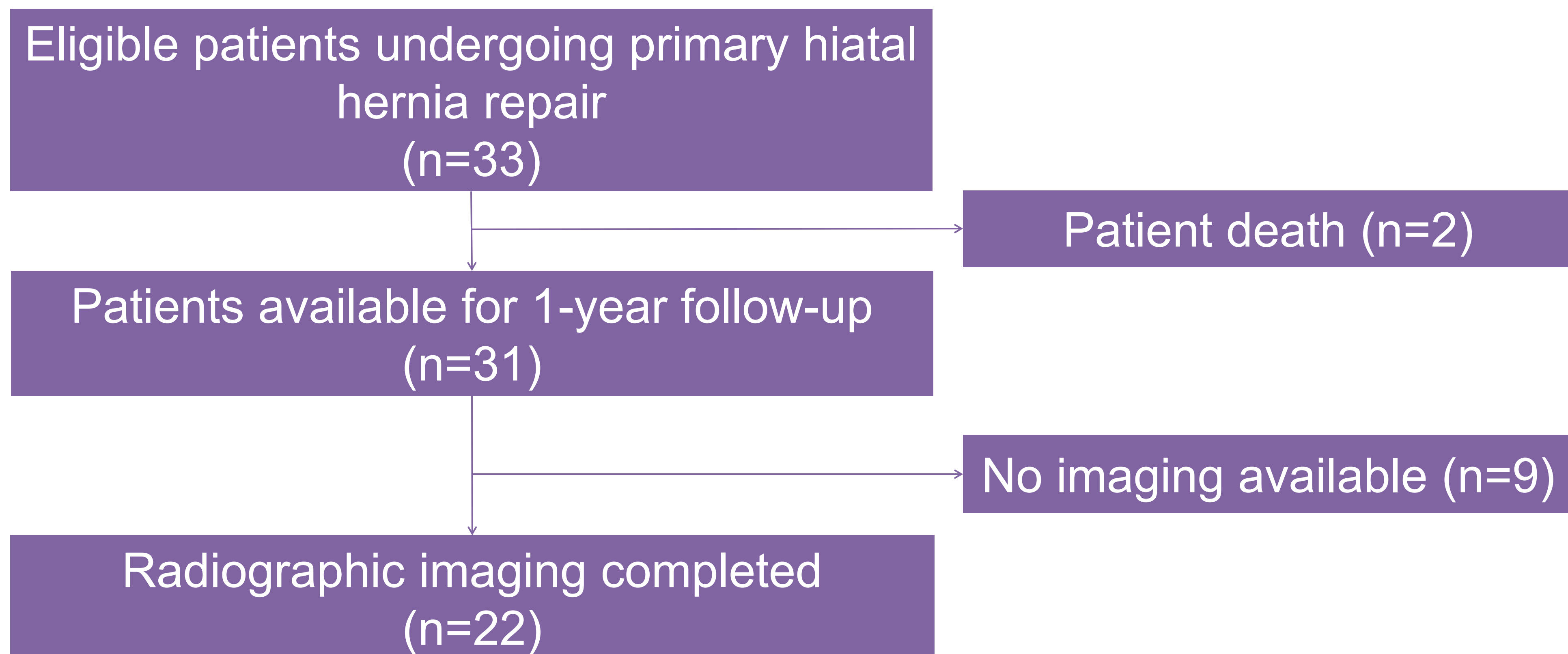
## Background

- Hiatal hernia recurrence following laparoscopic repair remains a persistent challenge<sup>1,2</sup>
- Mesh suture (Duramesh) has been introduced as a reinforced suture material designed to distribute tension across the crura without permanent mesh implantation.<sup>3</sup>
- Data regarding early radiographic durability of mesh-suture crural closure remain limited.

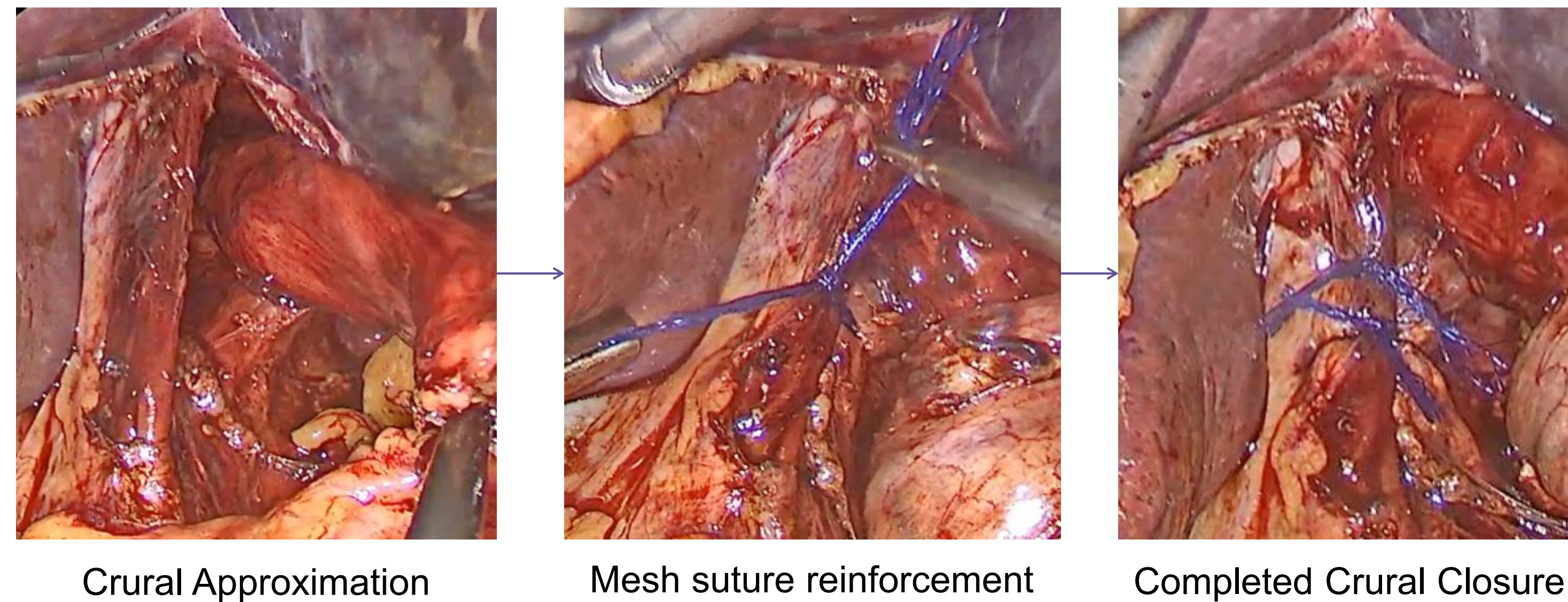
## Research Objectives

Describe 1-year radiographic recurrence and reoperation rates following laparoscopic hiatal hernia repair reinforced with mesh-suture (Duramesh) in a single-surgeon series.

## Methods



## Mesh-Suture Crural Closure



## Results

| Cohort Characteristics                |                  |
|---------------------------------------|------------------|
| Patient Demographics                  |                  |
| Age (years)                           | 70 [55–75]       |
| Female                                | 28 (82%)         |
| Body Mass Index                       | 29.2 [24.1–31.4] |
| ASA Class                             | 3 [2-3]          |
| Diabetes Mellitus                     | 5 (15%)          |
| Active Smoker                         | 3 (9%)           |
| Operative Characteristics             |                  |
| Time of complete crural closure (min) | 18.9 [12.8–22.5] |
| Posterior sutures placed              | 2 [2–3]          |
| Anterior sutures placed               | 1 [1–2]          |
| Left sutures placed                   | 0 [0–0]          |
| Right sutures placed                  | 0 [0–0]          |
| Length of stay (days)                 | 1 [1–1]          |

## Results (Continued)

| Follow-up and Outcomes     |                   |
|----------------------------|-------------------|
| Readmission Within 30 Days | 0 [0–0]           |
| Reoperation Within 30 Days | 1 (3%)            |
| Reoperation Within 1 Year  | 1 (3%)            |
| Had Available Imaging      | 23 (72%)          |
| Imaging Modality           |                   |
| UGI                        | 18 (56%)          |
| CTAP                       | 6 (19%)           |
| 1-Year Clinical Outcomes   |                   |
| <b>Recurrence</b>          | <b>5/23 (22%)</b> |
| 2-5 cm                     | 4/23              |
| >5 cm                      | 1/23              |

- Reoperation occurred on POD#3 for tight fundoplication
- No reoperations for late radiographic recurrence

## Conclusions

- Radiographic recurrence following mesh suture crural reinforcement was observed in **22%** of evaluable patients at 1 year.
- Reoperation within 1 year occurred in only one patient
- Early radiographic recurrence may not translate into symptom recurrence or clinically significant failure.

## References

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