

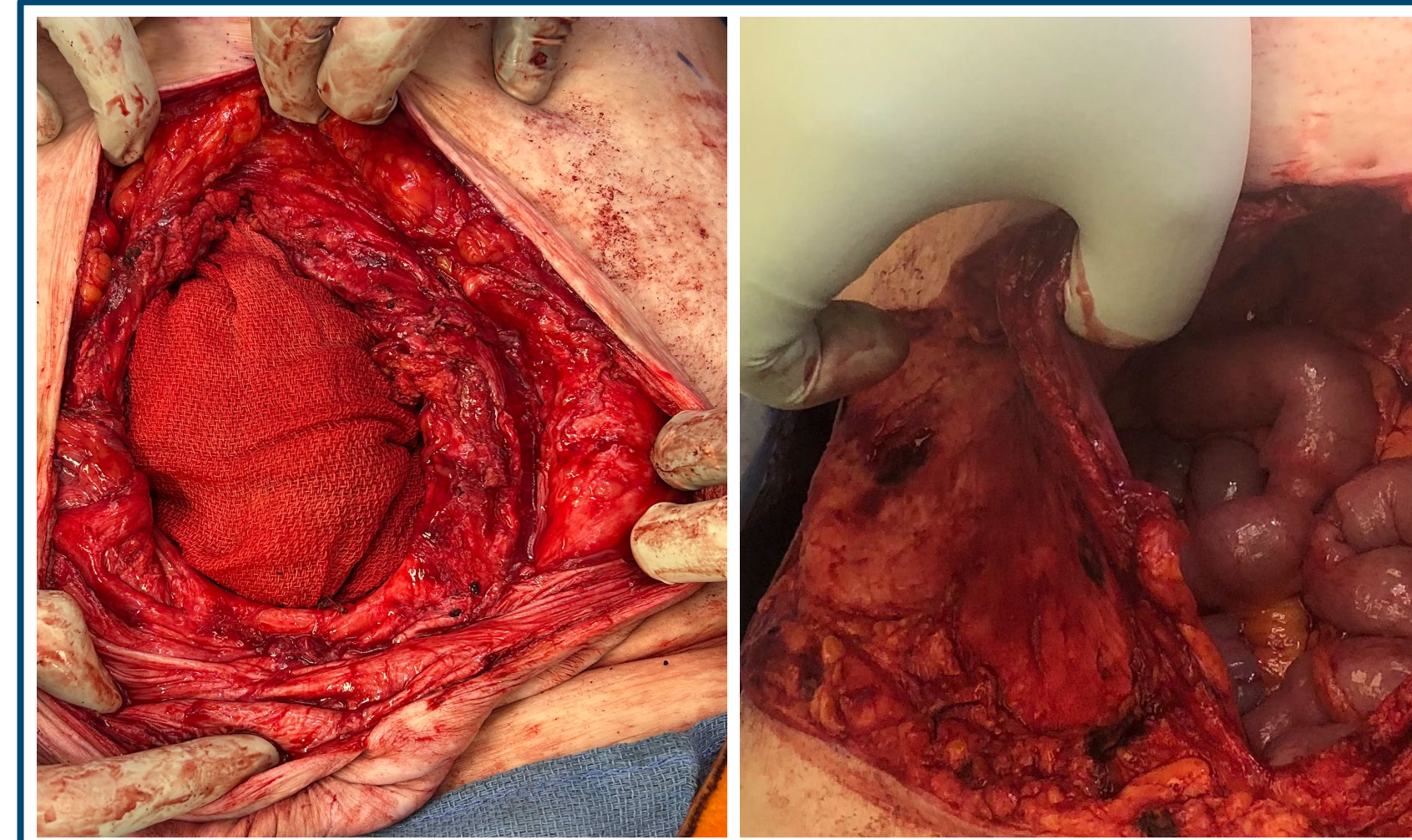
BACKGROUND

- Anterior abdominal wall reconstruction techniques: primary repair, anterior component separation, and posterior component separation with or without transversus abdominis release (TAR).
- TAR:
 - Myofascial advancement to assist with midline closure
 - Once utilized, limited future reconstructive options
- Our experience/practice:
 - Posterior sheath reconstitution: absorbable, biologic mesh
 - Retrorectus mesh repair: absorbable biosynthetic mesh
- Study goal:
 - Describe a novel approach to large, complex VHR for abdominal wall reconstruction & evaluate related outcomes

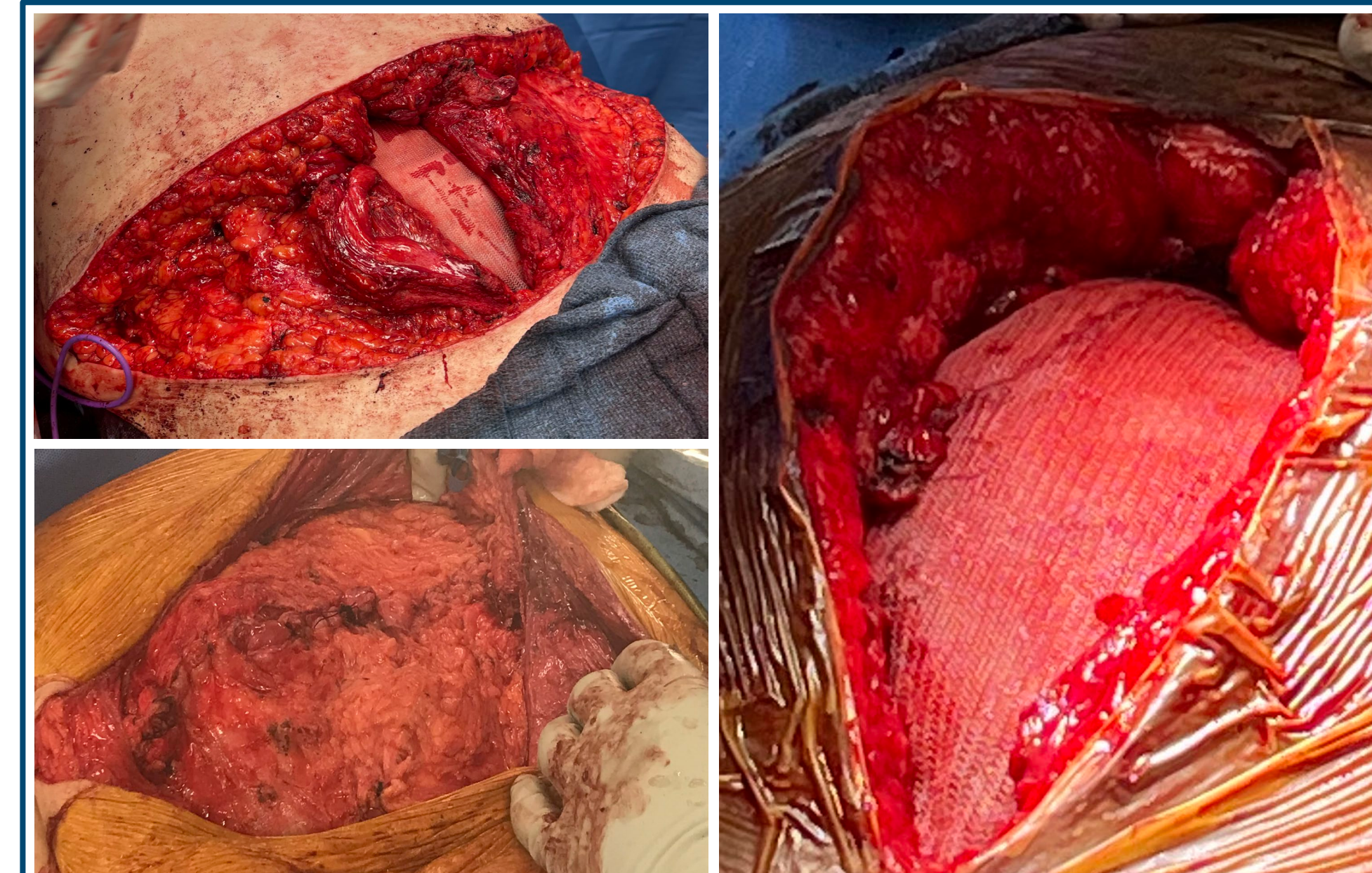
METHODS

- Retrospective Review
- Single Institution, Single Surgeon
- Study Population: Adult patients (>18 yo) from 9/2019-11/2024
- Surgical Technique:
 - Retrorectus repair utilizing fully absorbable, biosynthetic mesh with posterior sheath biologic mesh supplementation
- Metrics:
 - Patient demographics and comorbidities
 - Hernia and mesh characteristics
 - Surgical and patient outcomes including postoperative complications, recurrence, and follow-up
- Descriptive statistics and parametric testing were performed utilizing SPSS

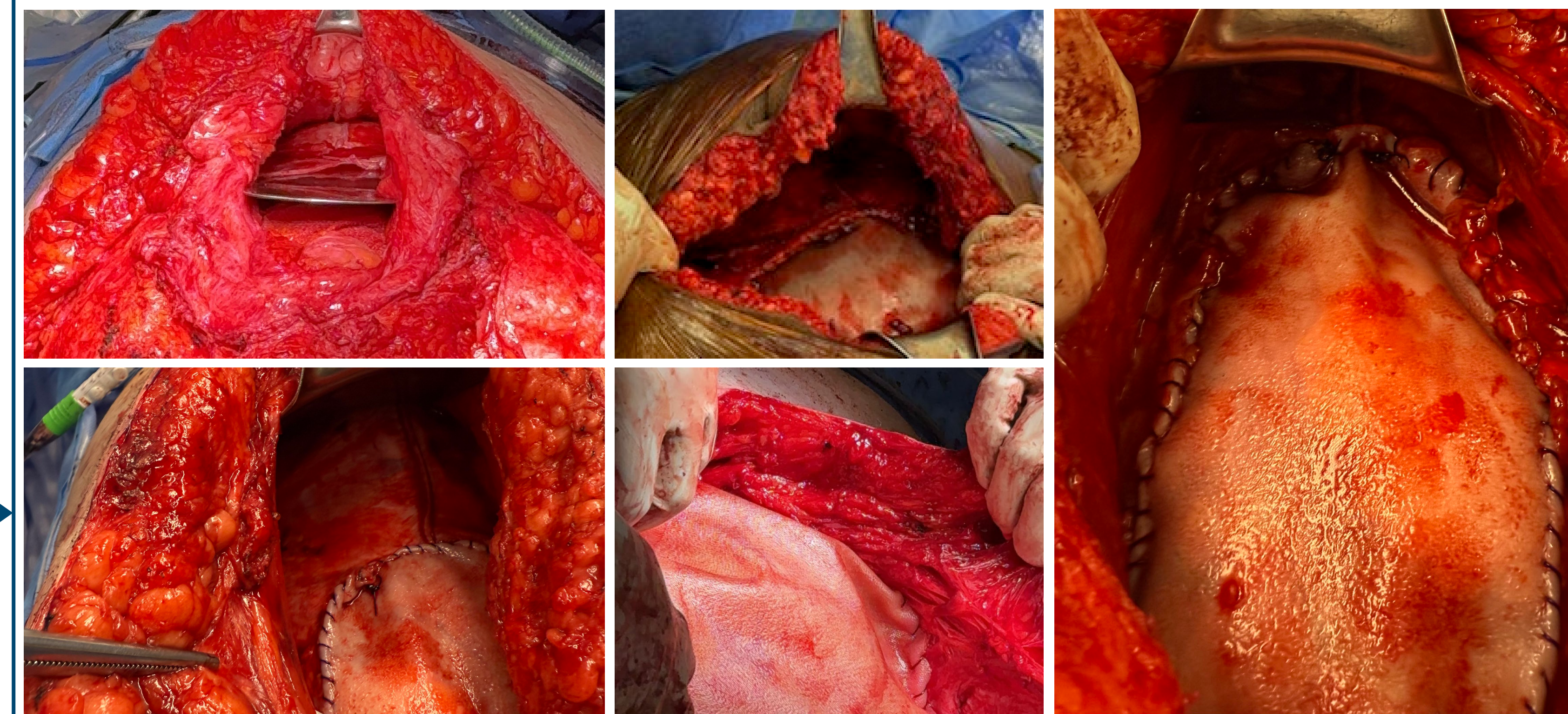
TECHNIQUE



- Midline or Pfannenstiel incision for laparotomy
- Adhesiolysis, hernia reduction, and bowel resection if required

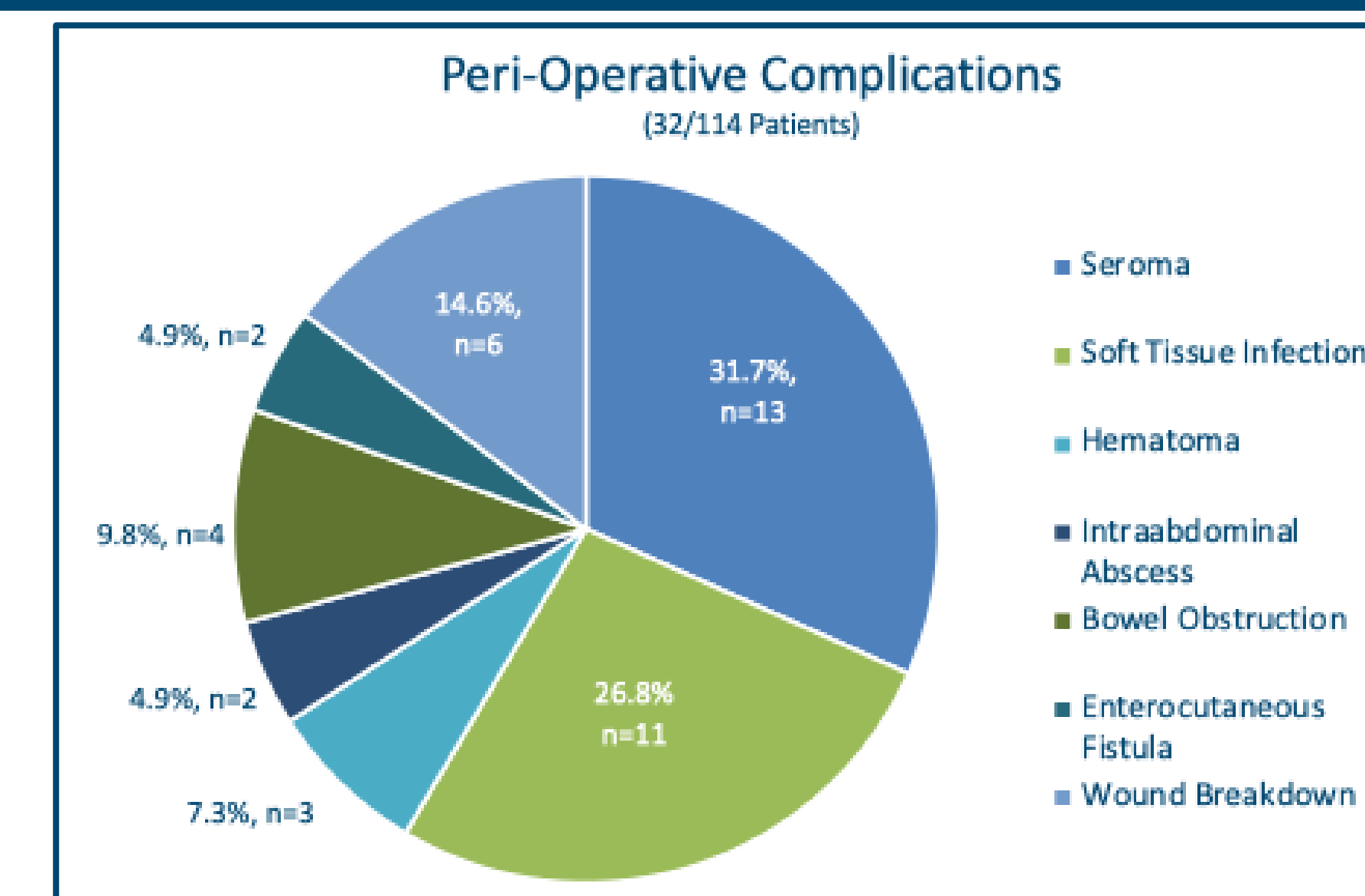
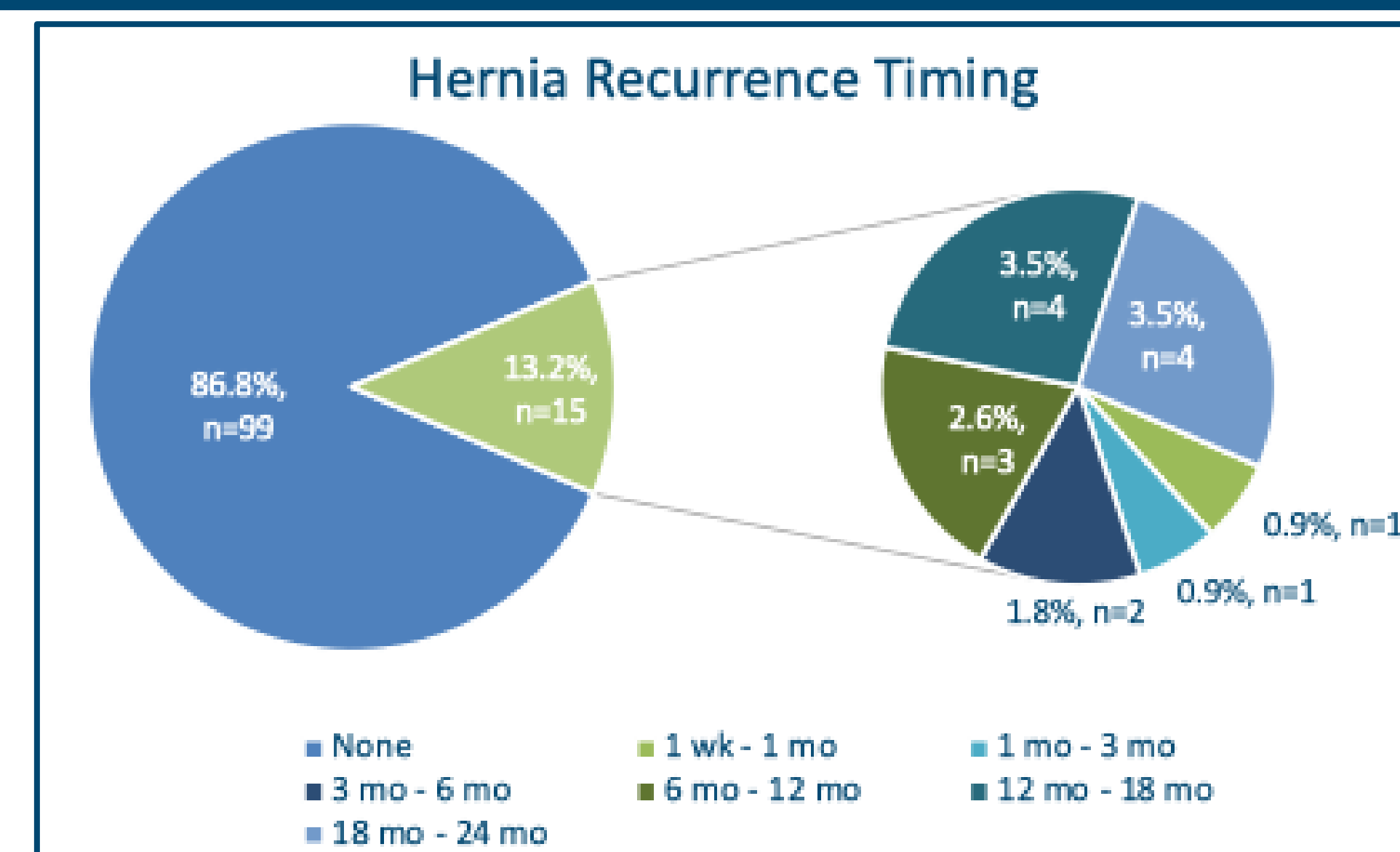


- Placement of biosynthetic mesh within Retrorectus space (2-0 PDS horizontal mattress sutures in cardinal directions)
- Closure of midline anterior sheath
- Complex wound closure with soft tissue debridement if required



- Posterior rectus sheath release to linea semilunaris
- Cranial and caudal midline conjunction with 1-2 GIA blue staple fires (60 mm)
- Reconstitution of posterior sheath with inlay biologic mesh (2-0 PDS)

RESULTS



RESULTS

Descriptive Characteristics	Patients (n=114)
Age (years)	61.4 ± 12.0 (24.9-90.4)
Gender	
Male	59 (51.8%)
Female	55 (48.2%)
Race	
White	89 (78.1%)
Black	24 (21.1%)
Other	1 (0.9%)
BMI	31.6 ± 4.8 (19.2-42.3)
Hemoglobin A1c	5.7 ± 0.7 (4.3-8.6)
ASA Class	2.6 ± 0.5 (2.0-3.0)
Albumin	3.8 ± 0.5 (2.3-5.2)
Tobacco Use	
Never	61 (53.5%)
Former	49 (43.0%)
Current	4 (3.5%)
Hypertension History	73 (64%)
Prior Enterocutaneous Fistula	4 (3.5%)
Anticoagulation Use	9 (7.9%)
Immunosuppression Use	11 (9.6%)
Number Prior Surgeries	3.1 ± 2.5 (0.0-13.0)
Prior Ventral Hernia Repair	47 (41.2%)
Number Prior Ventral Hernia Repairs	0.8 ± 1.6 (0.0-12.0)
Hernia Reducibility	
Reducible	56 (49.1%)
Incarcerated	58 (50.9%)
Hernia Size Characteristics	
Length (cm)	16.1 ± 5.9 (4.7-30.0)
Width (cm)	10.6 ± 3.9 (3.6-25.0)
Area (cm²)	187.6 ± 123.7 (16.9-625.0)
Posterior Sheath Mesh Characteristics	
Length (cm)	18.5 ± 5.6 (5.0-40.0)
Width (cm)	12.6 ± 5.0 (4.0-30.0)
Area (cm²)	252.9 ± 176.1 (25.0-1200.0)
Retrorectus Mesh Characteristics	
Length (cm)	28.3 ± 5.5 (10.2-45.0)
Width (cm)	23.0 ± 5.4 (10.0-40.0)
Area (cm²)	676.6 ± 273.5 (120.0-1800.0)
Length of Follow-Up (years)	2.0 ± 1.2 (0.4-5.5)
Hernia Recurrence	15 (13.0%)
Post-Operative Day of Recurrence	390.7 ± 169.3 (18.0-644.0)
Underwent Recurrent Hernia Repair	10 (8.7%)
Recurrent Hernia Repair Characteristics	
Robotic Approach	4 (40.0%)
Open Approach	6 (60.0%)

CONCLUSIONS

- Technique: Posterior sheath reconstitution utilizing a biologic mesh while performing a retrorectus biosynthetic mesh repair
- Effective approach to midline VHR with overall low recurrence, complication, and reoperative rates