

National Outcomes of Open Inguinal Hernia Repairs before and after 2020. Do we Need to Go Back to the Basics?



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Disclosures

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Introduction

- During the COVID-19 pandemic, operative volumes dropped significantly in the United States. Some have suggested this could impact patient outcomes, especially when pertaining to open procedures, which are now less frequently performed.
- We explored temporal trends in outcomes of open inguinal hernia repairs in the United States before and after 2020 using the Abdominal Core Health Quality Collaborative (ACHQC) database. We hypothesized outcomes have remained unchanged.

Objective

We aimed to compare postoperative outcomes in patients who underwent Open inguinal hernia repair:

2016 - 2019,

2020 - 2023,

Abdominal Core Health Quality Collaborative (ACHQC) Database.

Outcomes of interest

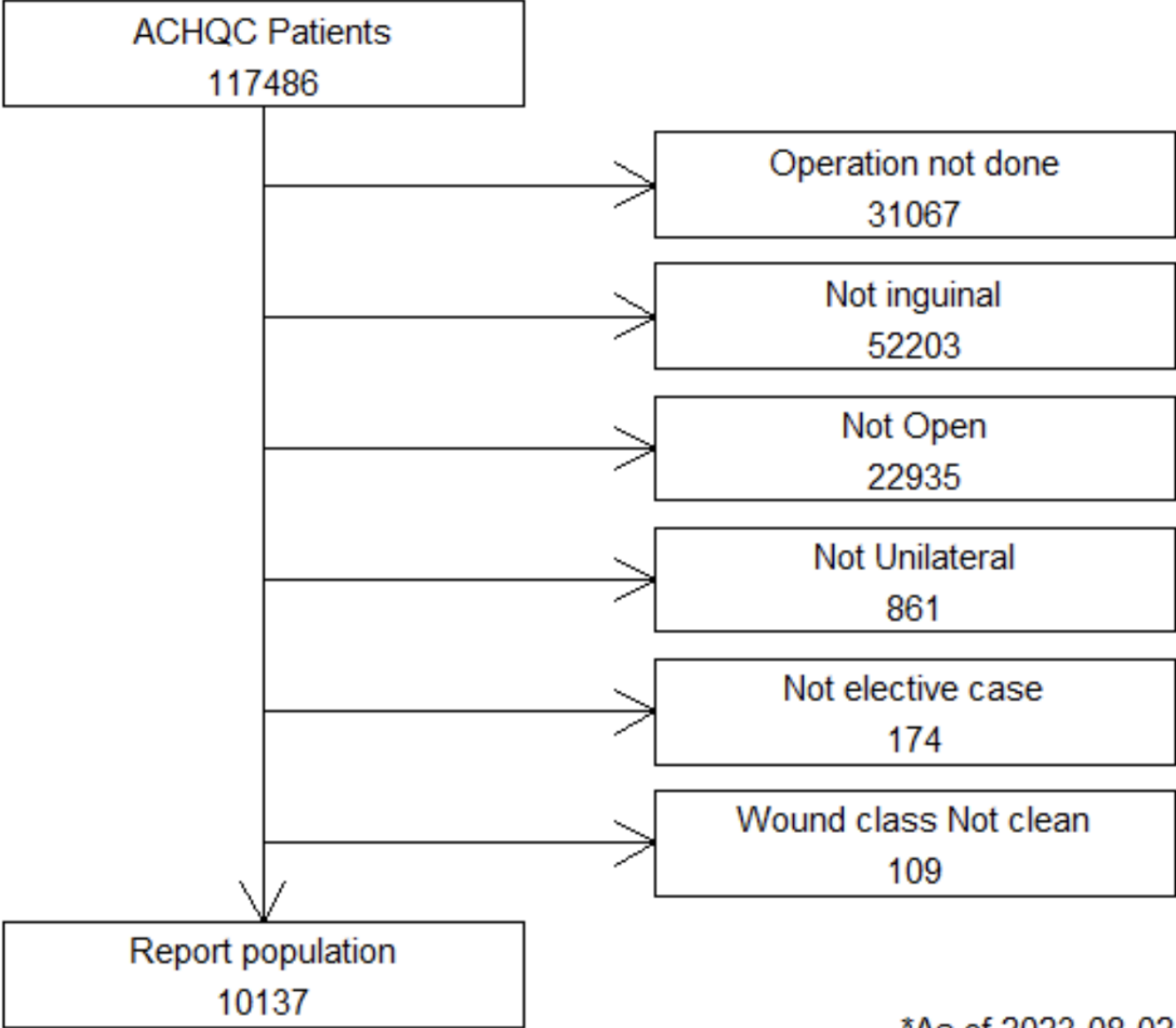
Primary outcomes: SSI and SSO at 30 days

Secondary outcomes: SSOPI, reoperation, recurrence and quality of life at 30 days and recurrence at 1 year

Inclusion criteria

- Adult patients
- Primary inguinal hernia
- Open inguinal hernia repair
- Unilateral
- Elective cases
- 30 day follow up completed
- Wound class: clean





*As of 2023-08-02

Demographics

	2016 - 2019, N = 4,400	2020 - 2023, N = 5,737	<u>P-value</u>
Median Age (IQR)	63 (52-73)	65 (54– 73)	<0.001
Median BMI (IQR)	26 (23.5 – 28.7)	25.6 (23.2 – 28.1)	<0.001
Sex			
Female	400 (9.1%)	495 (8.6%)	0.4
Male	4,000 (91%)	5,242 (91%)	
HTN	1,776 (40%)	2,183 (38%)	0.018
DM	342 (7.8%)	486 (8.5%)	0.2
COPD	189 (4.3%)	228 (4.0%)	0.4
Anti-platelets	897 (20%)	554 (9.7%)	<0.001
Anti-coagulants	334 (7.6%)	456 (7.9%)	0.5

Perioperative outcomes

	2016 - 2019, N = 4,400	2020 - 2023, N = 5,737	<u>P-value</u>
Operative Time (min)			<0.001
0-59	2,457 (56%)	3,785 (66%)	
60-119	1,718 (39%)	1,689 (29%)	
120-179	178 (4.0%)	209 (3.6%)	
180-239	39 (0.9%)	32 (0.6%)	
240+	8 (0.2%)	20 (0.3%)	

Perioperative outcomes – 30 days

	2016 - 2019, N = 4,400	2020 - 2023, N = 5,737	<u>P-value</u>
SSI	9 (0.2%)	8 (0.2%)	0.5
SSO	119 (3.3%)	190 (4.2%)	0.039
SSOPI	25 (0.7%)	27 (0.6%)	0.6
Reoperation 30 days	13 (0.4%)	26 (0.6%)	0.2

EuraHS Score

	2016 - 2019, N = 4,400	2020 - 2023, N = 5,737	<u>P-value</u>
Overall - Baseline	27.00 (14.00, 46.00)	26.00 (12.00, 44.33)	0.02
Overall - 30 days	14.00 (5.00, 32.00)	11.83 (4.00, 27.00)	<0.001
Pain - Baseline	7.00 (3.00, 14.00)	6.00 (2.00, 13.00)	0.004
Pain - 30 days	3.00 (0.00, 8.00)	3.00 (0.00, 6.00)	<0.001
Restriction – Baseline	12.00 (2.67, 24.00)	11.00 (2.00, 23.00)	0.11
Restriction – 30 days	4.00 (0.00, 18.00)	4.00 (0.00, 15.00)	0.007

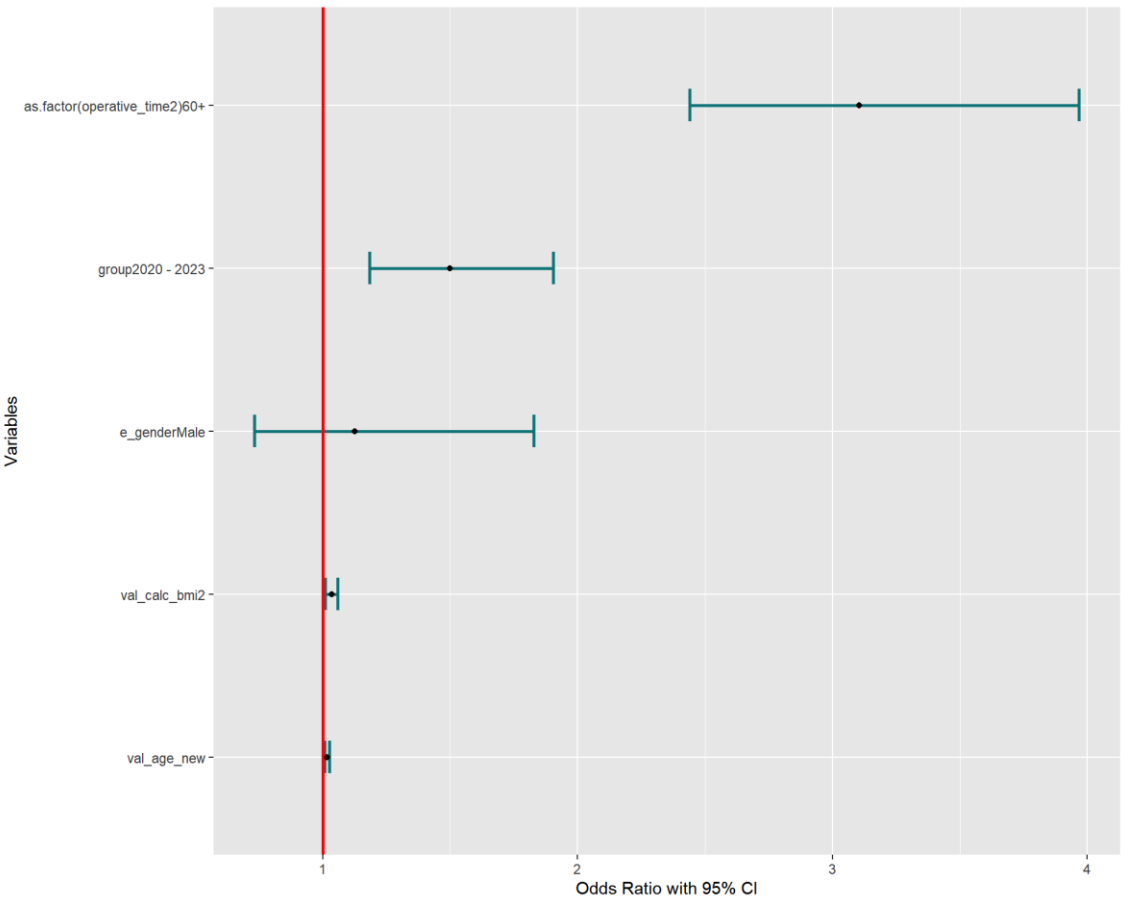
Perioperative outcomes – 1 year

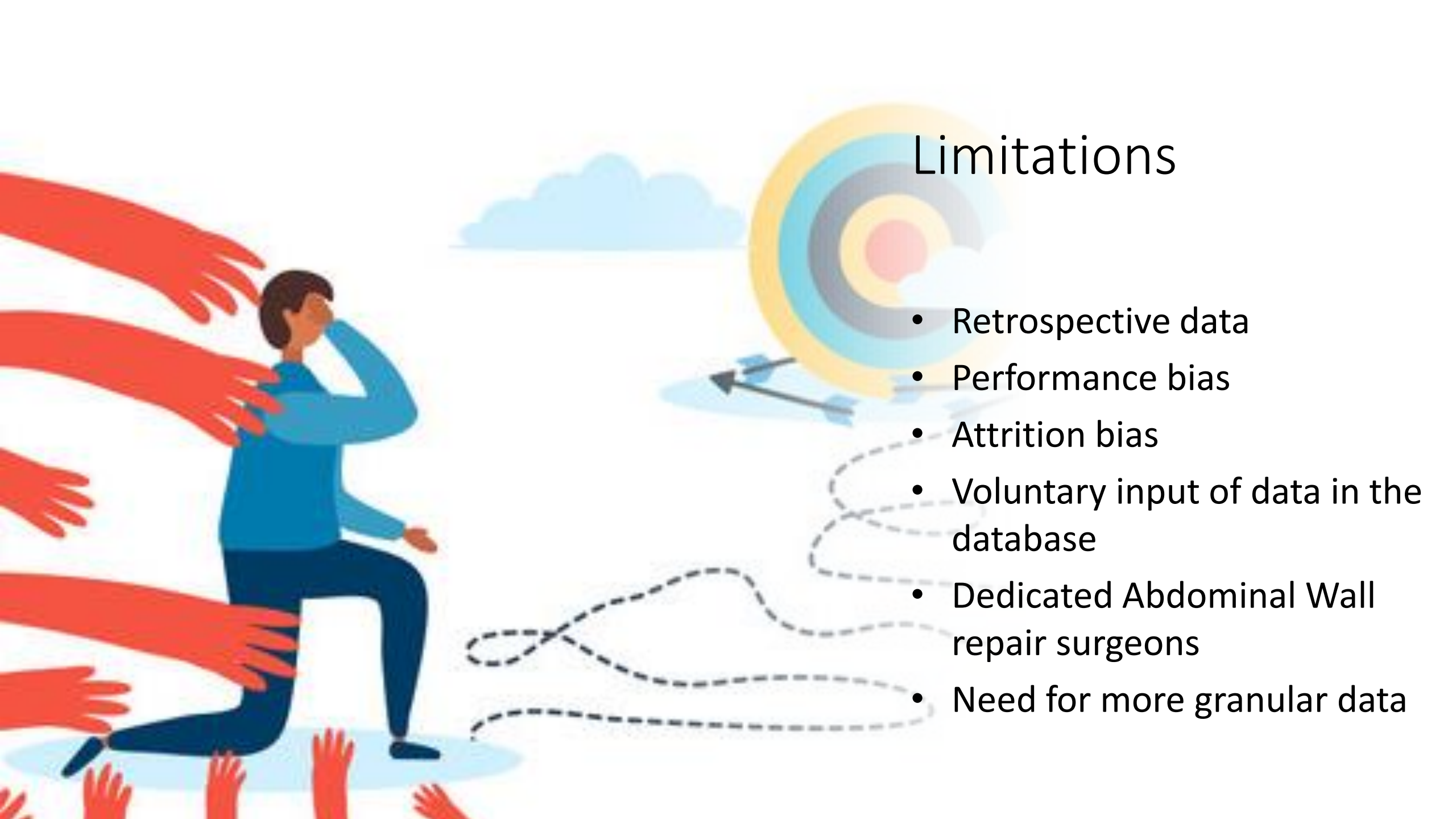
	2016 - 2019, N = 119	2020 - 2023, N = 149	<u>P-value</u>
Composite recurrence	23 (20%)	20 (14%)	P<0.001
SSI	0 (0%)	0 (0%)	>0.9
SSO	2 (1.7%)	0 (0%)	0.5
SSOPI	1 (0.8%)	0 (0%)	>0.9

Multivariable Logistic regression

SSO at 30 days	OR	95% CI	p-value
Group 2020-2023	1.49	1.18 – 1.9	0.001
Age	1.01	1.009 - 1.026	<0.001
Gender – Male	1.12	0.73 - 1.8	0.608
BMI	1.03	1.011 - 1.059	0.004
Operative Time > 60 min	3.1	2.4 - 3.9	<.001

Variables





Limitations

- Retrospective data
- Performance bias
- Attrition bias
- Voluntary input of data in the database
- Dedicated Abdominal Wall repair surgeons
- Need for more granular data

Conclusions

- This study suggests that the outcomes of open inguinal hernia repair in the United States after 2020 worsened in terms of surgical site occurrences at 30-days.
- Although this finding merit further investigation, other postoperative outcomes did not seem to be similarly affected.



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Thank you!



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