


ePoster #126
**Trends in the Use of Superior Capsular
Reconstruction in the
United States using the AAOS Shoulder
and Elbow Registry**

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Shoulder & Elbow Registry

Disclosures



I (and/or my co-authors) have something to disclose.

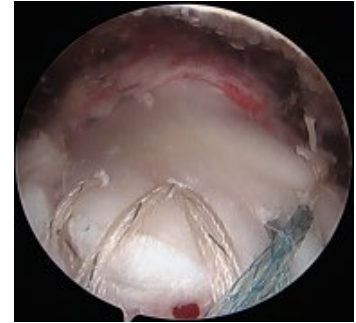
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The course syllabus, or

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Background

- Superior capsular reconstruction (SCR) has been described as a management option for irreparable rotator cuff tears
- Over the past seven years, SCR has been adopted by many surgeons into their clinical practice.
- Intermediate term outcomes have been reported in Japan, with only small clinical series and early follow-up published within the United States (US).



Purpose

The purpose of this study is to report the frequency and demographic patterns for use of SCR in the US using the AAOS Shoulder and Elbow Registry (AAOS-SER).

Methods

- All patients treated with a rotator cuff surgery as reported to the rotator cuff module of the AAOS-SER from January 2015 through March 2022 were analyzed.
- Cases were stratified into **superior capsular reconstruction (SCR)** versus **non-SCR (RCR)** procedures.
- Bivariate analyses were performed to compare demographic characteristics between the two cohorts
- Procedural volumes were compared to determine the overall frequency of SCR within the entire cohort of rotator cuff procedures.

Results

	Rotator Cuff			P Value
	Superior Capsule Reconstruction (N = 547)	Other (N = 6,493)	Total (N = 7,040)	
Age Mean (SD)	29.32 (14.05)	55.04 (14.07)	53.04 (15.66)	<0.001
Year				
2015	61 (11.15%)	649 (10.00%)	710 (10.09%)	<0.001
2016	71 (12.98%)	520 (8.01%)	591 (8.39%)	
2017	10 (1.83%)	124 (1.91%)	134 (1.90%)	
2018	75 (13.71%)	969 (14.92%)	1,044 (14.83%)	
2019	95 (17.37%)	1,235 (19.02%)	1,330 (18.89%)	
2020	155 (28.34%)	1,910 (29.42%)	2,065 (29.33%)	
2021	79 (14.44%)	1,048 (16.14%)	1,127 (16.01%)	
2022	1 (0.18%)	38 (0.59%)	39 (0.55%)	
Age Group				
<20	177 (32.36%)	156 (2.40%)	333 (4.73%)	0.007
20-29	172 (31.44%)	279 (4.30%)	451 (6.41%)	
30-39	78 (14.26%)	398 (6.13%)	476 (6.76%)	
40-49	56 (10.24%)	1,040 (16.02%)	1,096 (15.57%)	
50-59	42 (7.68%)	1,910 (29.42%)	1,952 (27.73%)	
>=60	22 (4.02%)	2,710 (41.74%)	2,732 (38.81%)	

- Of the total cohort of patients reported to the AAOS-SER who underwent rotator cuff surgery (7,040), **7.8%** (547) were treated with an SCR procedure.
- The annual percentage of the overall SCR cohort did not significantly change over time
- There is a statistically significant difference in the average age of the SCR cohort at **29** years compared to **55** years in the RCR group
- **90% of the SCR patients were under the age of 50** and **64% of the SCR cohort was under the age of 30**

Results

- SCR was performed significantly more common in males and in patients within normal BMI range.
- No statistical differences noted in the frequency of SCR when comparing hospital size
- Majority were performed in the hospital setting (96%) versus ASC

	Rotator Cuff		Total (N = 7,040)	P Value
	Superior Capsule Reconstruction (N = 547)	Other (N = 6,493)		
Gender				
Female	132 (24.13%)	2,442 (37.61%)	2,574 (36.56%)	<0.001
Male	400 (73.13%)	3,966 (61.08%)	4,366 (62.02%)	
NR	15 (2.74%)	85 (1.31%)	100 (1.42%)	
BMI Group				
Underweight	8 (1.50%)	44 (0.70%)	52 (0.74%)	<0.001
Normal	210 (39.33%)	1,131 (17.95%)	1,341 (19.05%)	
Pre-Obesity	174 (32.58%)	2,165 (34.35%)	2,339 (33.22%)	
Obesity Class I	70 (13.11%)	1,541 (24.45%)	1,611 (22.88%)	
Obesity Class II	49 (9.18%)	821 (13.03%)	870 (12.36%)	
Obesity Class III	23 (4.31%)	600 (9.52%)	623 (8.85%)	
Missing	13 (2.38%)	191 (2.94%)	204 (2.90%)	
Teaching Status				
Major	151 (29.32%)	1,389 (23.33%)	1,512 (22.07%)	0.006
Minor	313 (60.78%)	4,005 (67.27%)	591 (8.63%)	
Non-Teaching	51 (9.90%)	560 (9.41%)	4,198 (61.27%)	
Missing	1,540 (21.88%)	1,540 (21.88%)	1,540 (21.88%)	
Bed Size				
Small (<100 beds)	77 (14.95%)	985 (16.54%)	1,062 (15.09%)	0.40
Medium (100-399 Beds)	54 (10.49%)	696 (11.69%)	750 (10.65%)	
Large (>= 400 Beds)	384 (74.56%)	77 (14.95%)	4,657 (66.15%)	
Missing	32 (5.85%)	54 (10.49%)	571 (8.11%)	
Institution Type				
Ambulatory Surgical Center	3 (0.55%)	215 (3.31%)	218 (3.10%)	<0.001
Hospital	544 (99.45%)	6,254 (96.32%)	6,798 (96.56%)	
Private Practice	0 (0.00%)	24 (0.37%)	24 (0.34%)	
Region				
North-East	159 (30.58%)	1,757 (27.77%)	1,916 (27.22%)	0.13
Midwest	101 (19.42%)	1,279 (20.21%)	1,380 (19.60%)	
South	236 (45.38%)	2,846 (44.98%)	3,082 (43.78%)	
West	24 (4.62%)	445 (7.03%)	469 (6.66%)	
Missing	27 (4.94%)	166 (2.56%)	193 (2.74%)	

Discussion

- SCR has gained popularity in the US since 2015, accounting for approximately 8% of all AAOS-SER rotator cuff procedures, though this trend may have slowed in 2021.
- The most notable finding noted in the registry data is the significant utilization of SCR in a very young patient population (65% below the age of 30 years)
- Future registry data will be essential to follow comparative patient reported outcomes for this procedure and to monitor complications and revision rates of SCR, specifically in this very young patient cohort, as available evidence is limited.

References

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