



Postoperative outcomes for ASA 4 and ASA 3 patients in interventional radiology procedures at a freestanding surgery center: A matched cohort study

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Introduction and Methods

- More patients, more procedures, more complexity
- Retrospective case-controlled review at MSK Monmouth
- Primary outcome: post-anesthesia care unit length of stay (PACU LOS)
- Secondary outcomes: transfers, postoperative visits, mortality




8875 initial observations

Exclusion criteria applied

369 ASA 4 patients
5624 ASA 3 patients

Matching criteria applied

305 out of 369 ASA 4 matched with an ASA 3

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Table 1: Comparison of outcomes between ASA physical status 4 vs. 3 in post-matched cohort.

Characteristic	ASA 4, N = 305 ¹	ASA 3, N = 305 ¹	p-value ²
PACU LOS (minutes)	77 (83, 107)	72 (55, 96)	0.002
30-day mortality	48 (16%)	23 (7.5%)	<0.001
3-day mortality	1 (0.3%)	1 (0.3%)	
30-day emergency care visit ³	114 (37%)	65 (21%)	<0.001
UCC visit	25 (8.2%)	20 (6.6%)	
SCC visit	44 (14%)	32 (10%)	
ED visit	76 (25%)	35 (11%)	
30-day admission ⁴	68 (22%)	31 (10%)	<0.001
Transfer ⁵	3 (1.0%)	2 (0.7%)	

¹Median (IQR), n (%).

²Wilcoxon signed rank test with continuity correction; McNemar's Chi-squared test with continuity correction.

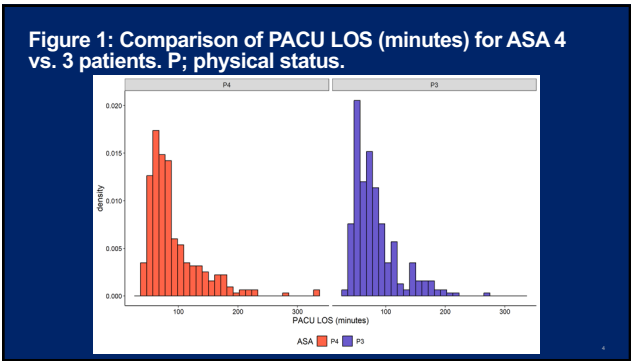
³Composite endpoint where a patient who visited any of, a combination of, or multiple times to UCC, SCC or ED would be counted once. The subcategories UCC, SCC and ED visits are not mutually exclusive and ignores whether patient visited the other emergency care departments. As a result, the sum of events for UCC, SCC and ED visit may not equal the composite endpoint for any emergency care visit.

⁴Admission must follow any emergency care visit.


⁵Transfer must follow admission.

ASA, American Society of Anesthesiologists; PACU, post-anesthesia care unit; LOS, length of stay; IQR, interquartile range; UCC, Urgent Care Centre; SCC, Symptom Care Clinic; ED, Emergency Department.

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Take home points and conclusion

- Outpatient oncologic IR procedures benefit patients,⁴ including better quality of life outcomes⁵
- ASA status alone **should not** exclude patients from ambulatory surgery centers
- Most post-discharge visits, especially later ones, are **unrelated** to anesthesia
- More research is needed to **identify stable ASA 4 patients** suitable for minor IR procedures with moderate sedation in these settings

Manish B, Purohit D. Procedures take less time at ambulatory surgery centers, keeping costs down and ability to meet demand. Health Aff (Millwood). 2014; 33(2): 254-260. doi:10.1177/0270219713505044

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