

Supplementary material

Surgery for acute cholecystitis in severely comorbid patients: A population-based study on acute cholecystitis

Supplementary Table 1: Concordance between EPR and Gallriks data for patients who had surgery

Variable	EPR (yes)	Gallriks (yes)	Concordance	p
Current smoker	57	25	0.49	<0.001
ASA classification (1/2/3/4-5)	195/375/152/2/1	216/357/94/1/0	0.39	<0.001
Cardiovascular disease	85	150	0.41	<0.001
Diabetes	85	76	0.88	<0.001
Pulmonary disease	68	51	0.62	<0.001
Date of surgery			0.95	<0.001
Postoperative complications	95	60	0.23	<0.001
Accidental rupture of gallbladder	161	266	0.31	<0.001

p-value for differences between EPR and registry

EPR: Electronic Patient Records

ASA: American Society of Anesthesiologists classification

Supplementary Table 2: ASA as reported in Gallriks and assessed from EPR

ASA from Gallriks	ASA from EPR				
	1	2	3	4	5
1	127	81	7	1	0
2	44	230	73	0	0
3	4	30	58	1	1
4	0	1	0	0	0

ASA: American Society of Anesthesiologists classification

Supplementary Table 3: Frequency of comorbidities by ASA in patients who had emergency surgery.

		Total	ASA1	ASA 2	ASA 3	ASA4-5	p
CVD	No	547 (75%)	190 (97%)	297 (79%)	58 (38%)	2 (67%)	< 0.001
	Yes	178 (25%)	5 (3%)	78 (21%)	94 (62%)	1 (33%)	
Diabetes	No	649 (90%)	195 (100%)	333 (89%)	118 (78%)	3 (100%)	< 0.001
	Yes	76 (10%)	0 (0%)	42 (11%)	34 (22%)	0 (0%)	
Pulmonary disease	No	643 (89%)	192 (98%)	336 (90%)	112 (74%)	3 (100%)	< 0.001
	Yes	82 (11%)	3 (2%)	39 (10%)	40 (26%)	0 (0%)	
Other	No	665 (92%)	195 (100%)	346 (92%)	123 (81%)	1 (33%)	< 0.001
	Yes	60 (8%)	0 (0%)	29 (8%)	29 (19%)	2 (67%)	
Bleeding risk	No	615 (85%)	173 (89%)	322 (86%)	117 (77%)	3 (100%)	< 0.001
	Yes	38 (5%)	0 (0%)	18 (5%)	20 (13%)	0 (0%)	
	NA	72 (10%)	22 (11%)	35 (9%)	15 (10%)	0 (0%)	

Comorbidities were recorded as cardiovascular disease (heart disease, peripheral vascular and cerebrovascular disease), diabetes, pulmonary disease (COPD, asthma, or other chronic pulmonary diseases), other diseases (grouped due to the small number of cases, dementia, kidney failure, liver failure, tumours) and increased bleeding risk (anticoagulant use or hereditary bleeding disorders). Bleeding risk was assessed from Gallriks data, hence the missing data is for patients missing from Gallriks.

ASA: American Society of Anesthesiologists classification

Supplementary Table 4: Sensitivity analysis using registry ASA and complications

	Registry ASA			Registry complications			Registry ASA and complications		
ASA	Total	C	%	Total	N	%	Total	C	%
1	216	26	12%	195	8	4%	216	12	6%
2	347	50	14%	375	28	7%	347	31	9%
3	94	24	26%	152	19	13%	94	12	13%

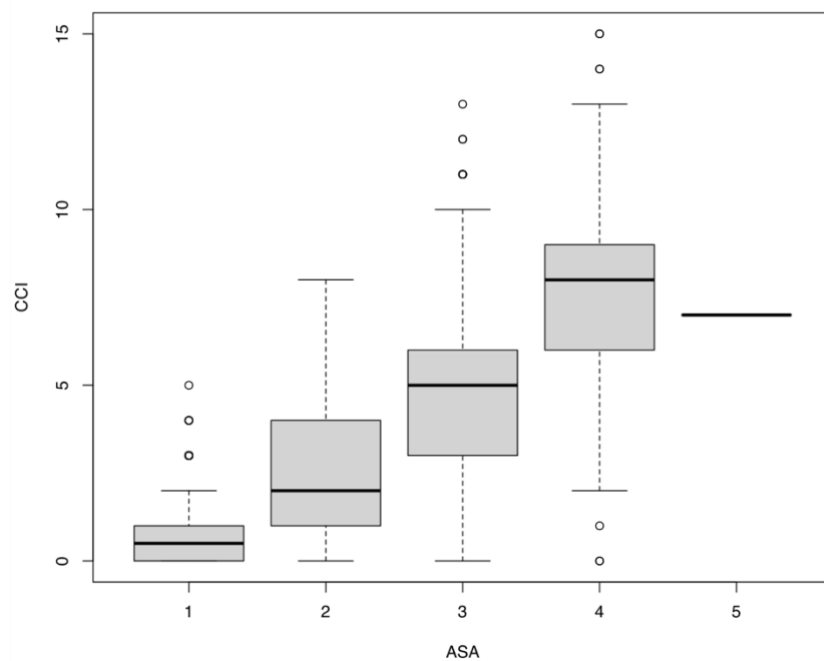
ASA: American Society of Anesthesiologists

C: Peri/postoperative complications

Supplementary Table 5: ASA classification, Age and complications***Complications, CLavien-Dindo Grade***

		Total	No	1-3a	3b+	p
ASA1	≤65	174	159 (91%)	14 (8%)	1 (1%)	0.128
	>65	22	18 (82%)	3 (14%)	1 (5%)	
ASA2	≤65	232	207 (89%)	21 (9%)	4 (2%)	0.349
	>65	151	128 (85%)	17 (11%)	6 (4%)	
ASA3	≤65	68	55 (81%)	9 (13%)	4 (6%)	0.176
	>65	88	63 (72%)	13 (15%)	12 (14%)	

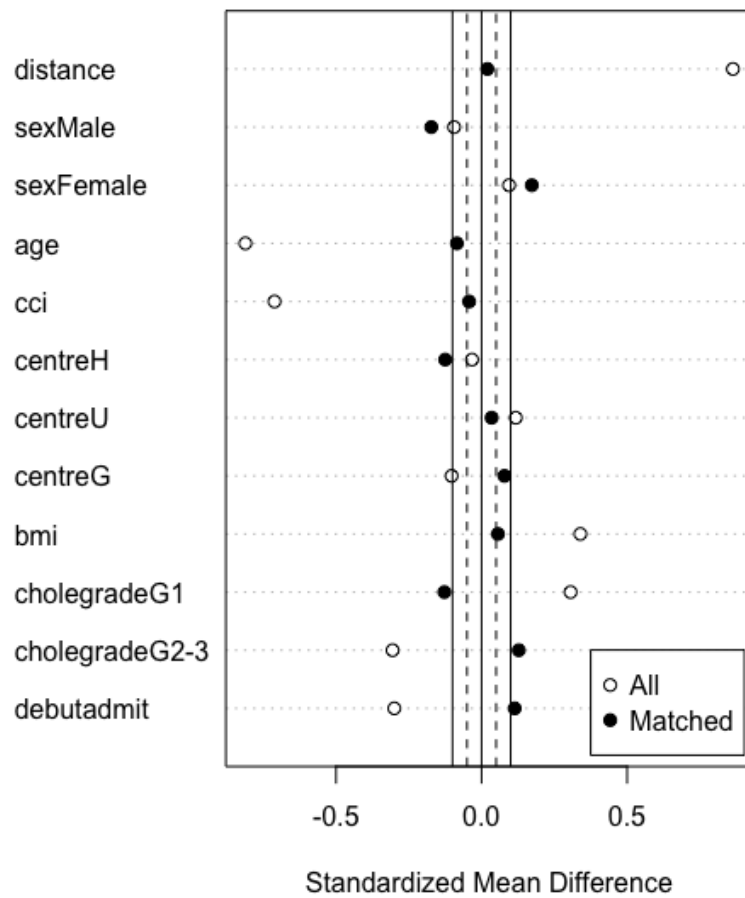
ASA: American Society of Anesthesiologists



Supplementary Figure 1: Boxplot of CCI score by ASA-classification. Only one patient was ASA5 and had a CCI score of 7

ASA: American Society of Anesthesiologists

CCI: Charlson Comorbidity Index



Supplementary Figure 2: Distance between unmatched and matched ASA3 patients.