

Table 2. General and preoperative patient characteristics, including breakdown of composite comorbidity variables and preoperative laboratory chemistries.

Variable	Overall (n=77902)	No NRT (n=77561)	NRT (n=341)	P-value
General variables, mean ±SD				
Age, years	58.6 ±13.4	58.6 ±13.4	57.4 ±13.1	0.105
Body Mass Index, kg/m ²	28.5 ±7.1	28.5 ±7.1	28.5 ±6.7	0.978
WRVU ^a	13.4 ±4.0	13.4 ±4.0	15.1 ±3.7	<0.001
	125.7			
Operation time, min	±102.6	125.6 ±102.5	145.1 ±122.9	0.002
Intraoperative transfusion ^b	0.0 ±0.2	0.0 ±0.2	0.1 ±0.4	<0.001
Other Variables, n (%)				
Chemotherapy in previous 30 days	3,696 (4.7%)	3,593 (4.6%)	103 (30.2%)	<0.001
Breast reconstruction technique				0.023
	11,552			
Tissue expanders	(68.5%)	11,510 (68.6%)	42 (56.0%)	
	2,335			
Implants	(13.8%)	2,324 (13.84%)	11 (14.7%)	
	2,976			
Autologous	(17.6%)	2,954 (17.6%)	22 (29.3%)	
Year of Operation, n (%)				0.066
	1,900	1,890	10	
2005	(2.4%)	(2.4%)	(2.9%)	
	6,600	6,579	21	
2006	(8.5%)	(8.5%)	(6.2%)	
	11,809	11,747	62	
2007	(15.2%)	(15.2%)	(18.2%)	
	13,684	13,621	63	
2008	(17.6%)	(17.6%)	(18.5%)	
	16,965	16,908	57	
2009	(21.8%)	(21.8%)	(16.7%)	
	17,209	17,135	74	
2010	(22.1%)	(22.1%)	(21.7%)	
	9,735	9,681	54	
2011	(12.5%)	(12.5%)	(15.8%)	
Race				0.907
	55,724			
White	(78.8%)	55,498 (78.8%)	226 (77.4%)	
	8,111			
African American	(11.5%)	8,073 (11.5%)	38 (13.0%)	
	3,609			
Latino	(5.1%)	3,594 (5.1%)	15 (5.1%)	

Asian	2,771 (3.9%)	2,759 (3.9%)	12 (4.1%)	0.446 <0.001
American Indian	489 (0.7%)	488 (0.7%)	1 (0.3%)	
General anesthesia ASA class ^c	71,404 (91.7%)	71,080 (91.7%)	324 (95.0%)	
I	6,174 (7.9%)	6,161 (7.9%)	13 (3.8%)	
II	48,571 (62.4%)	48,393 (62.4%)	178 (52.2%)	
III	22,092 (28.4%)	21,947 (28.3%)	145 (42.5%)	<0.001
IV	915 (1.2%)	910 (1.2%)	5 (1.5%)	
V	1 (0.0%)	1 (0.0%)	0 (0.0%)	
Surgical wound class				
Clean	75,910 (97.4%)	75,591 (97.4%)	319 (93.5%)	0.121
Clean-Contaminated	1,555 (2.0%)	1,542 (1.9%)	13 (3.8%)	
Contaminated	260 (0.3%)	254 (0.3%)	6 (1.7%)	
Dirty-Infected	177 (0.2%)	174 (0.2%)	3 (0.9%)	
Functional status				
Independent	50,153 (98.5%)	49,948 (98.6%)	205 (97.2%)	0.998 0.0089
Partially dependent	651 (1.3%)	646 (1.3%)	5 (2.4%)	
Totally dependent	91 (0.2%)	90 (0.2%)	1 (0.5%)	
Smoking Inpatient status	10,734 (13.8%)	10,687 (13.8%)	47 (13.8%)	0.516
Inpatient	35,374 (45.4%)	35,195 (45.4%)	179 (52.5%)	
Outpatient	42,528 (54.6%)	42,366 (54.6%)	162 (47.5%)	
Diabetic				
On insulin	2,406 (3.1%)	2,392 (3.1%)	14 (4.1%)	
On oral drugs	5,723 (7.3%)	5,700 (7.4%)	23 (6.7%)	0.003
Alcohol intake in previous 2 weeks ^d	1,058 (1.4%)	1,047 (1.3%)	11 (3.2%)	

Steroid use for chronic condition	1,076 (1.4%)	1,056 (1.4%)	20 (5.9%)	<0.001
Pregnancy	92 (0.1%)	92 (0.1%)	0 (0.0%)	>0.999
Operation within previous 30 days	3,421 (4.7%)	3,408 (4.7%)	13 (4.1%)	0.623
Cardiovascular Variables, n (%)				
Dyspnea				0.050
At rest	240 (0.3%)	237 (0.3%)	3 (0.9%)	
With moderate exertion	5,245 (6.7%)	5,215 (6.7%)	30 (8.8%)	
Congestive heart failure in previous 30 days	145 (0.2%)	144 (0.2%)	1 (0.3%)	0.471
Angina in previous 30 days	174 (0.2%)	174 (0.2%)	0 (0.0%)	>0.999
Myocardial infarction in previous 6 months	80 (0.1%)	80 (0.1%)	0 (0.0%)	>0.999
Previous percutaneous coronary intervention	1,636 (2.1%)	1,629 (2.1%)	7 (2.5%)	>0.999
Previous cardiac surgery	1,306 (1.7%)	1,301 (1.7%)	5 (1.5%)	>0.999
Hypertension requiring medication	32,054 (41.2%)	31,925 (41.2%)	129 (37.8%)	0.212
History of peripheral vascular disease	332 (0.4%)	329 (0.4%)	3 (0.9%)	0.179
Rest pain or gangrene	31 (0.0%)	31 (0.0%)	0 (0.0%)	>0.999
Composite cardiovascular morbidity not including HTN requiring medication	3,353 (4.3%)	3,336 (4.3%)	17 (5.0%)	0.534
Respiratory Variables, n (%)				
Current pneumonia	17 (0.0%)	17 (0.0%)	0 (0.0%)	>0.999
History of severe COPD	1,967 (2.5%)	1,952 (2.5%)	15 (4.4%)	0.027
Ventilator dependent in previous 48h	8 (0.0%)	8 (0.0%)	0 (0.0%)	>0.999
Composite respiratory morbidity	2,048 (2.6%)	2,031 (2.6%)	17 (5.0%)	0.006
Hepatobiliary variables, n (%)				
Ascites in 30 previous days	34 (0.0%)	34 (0.0%)	0 (0.0%)	>0.999
Esophageal varices in previous 6 months	28 (0.0%)	28 (0.0%)	0 (0.0%)	>0.999
Composite hepatobiliary morbidity	53 (0.1%)	53 (0.1%)	0 (0.0%)	>0.999

Renal variables, n (%)				
Renal failure	26 (0.0%)	26 (0.0%)	0 (0.0%)	>0.999
	200			
Presently on dialysis	(0.3%)	199 (0.3%)	1 (0.3%)	0.585
	216			
Composite renal morbidity	(0.3%)	215 (0.3%)	1 (0.3%)	0.613
Neurological variables, n (%)				
Impaired sensorium in previous 48h	31 (0.0%)	31 (0.0%)	0 (0.0%)	>0.999
	306			
Hemiplegia	(0.4%)	305 (0.4%)	1 (0.3%)	>0.999
	113			
Paraplegia	(0.2%)	113 (0.2%)	0 (0.0%)	>0.999
Quadraplegia	29 (0.0%)	29 (0.0%)	0 (0.0%)	>0.999
Coma lasting >24h	1 (0.0%)	1 (0.0%)	0 (0.0%)	>0.999
History of transient ischemic attacks	1339			
	(1.7%)	1,334 (1.7%)	5 (1.5%)	>0.999
History of CVA ^e with neurological deficit	865			
	(1.1%)	862 (1.1%)	3 (0.9%)	>0.999
History of CVA without neurological deficit	916			
	(1.2%)	912 (1.2%)	4 (1.2%)	>0.999
Tumor involving CNS	44 (0.1%)	40 (0.1%)	4 (1.2%)	<0.001
Composite neurological morbidity	3,104			
	(4.0%)	3,091 (4.0%)	13 (3.8%)	>0.999
Hematology-oncology variables, n (%)				
	1,309			
Bleeding disorder	(1.7%)	1,294 (1.7%)	15 (4.4%)	<0.001
Weight loss >10% in previous 6 months	364			
	(0.5%)	356 (0.5%)	8 (2.4%)	<0.001
	1,043			
Disseminated cancer	(1.3%)	992 (1.3%)	51 (15.0%)	<0.0001
Composite hematology-oncology variable	2,625			
	(3.4%)	2,555 (3.3%)	70 (20.5%)	<0.001
Preoperative laboratory studies, n (%)				
	3,131			
Serum sodium ≤135 mmol/L	(5.4%)	3,108 (5.4%)	23 (8.2%)	0.041
	622			
Serum sodium >145 mmol/L	(1.1%)	620 (1.1%)	2 (0.7%)	0.774
Blood urea nitrogen >143 mmol/L	29,016			
	(49.7%)	28,888 (49.8%)	128 (45.2%)	0.1363
Serum creatinine >16·1 μmol/L	2,207			
	(3.7%)	2,201 (3.7%)	6 (2.1%)	0.158

	3,112			
Total bilirubin >1.9 mg/dL	(7.2%)	3,102 (7.2%)	10 (4.7%)	0.155
Aspartate aminotransferase >4 U/L	2,547 (5.7%)	2,525 (5.7%)	22 (10.0%)	0.012
Alkaline phosphatase >125 U/L	2,441 (5.4%)	2,413 (5.4%)	28 (13.0%)	<0.0001
White-blood-cell count >11, cells per μ l	2,854 (4.5%)	2,845 (4.5%)	9 (3.0%)	0.215
	1,874			
Platelet count \leq 15, cells per μ l	(3.0%)	1,855 (3.0%)	19 (6.4%)	<0.001
International normalized ratio >1.4	564 (3.2%)	562 (3.2%)	2 (2.0%)	0.773

^aWork relative value unit is a scale (0–95) to quantify the amount of work involved in a specific surgery on the basis of pre-procedural, intra-procedural, and post-procedural time, technical skill, physical effort, mental effort and judgment, and stress due to potential risk; the scale is the work portion of the Resource-based Relative Value System adopted by US Medicare to quantify the amount of work involved in every medical procedure (score of 0=least complex and 95=most complex). ^bTransfusion of any number of units intraoperatively for all years. ^cASA= American Society of Anesthesiologists. ASA scores: I is a healthy patient; II is mild systemic disease but no functional limitations; III is severe systemic disease with definite functional limitations; IV is severe systemic disease that is a constant threat to life; and V is a moribund patient unlikely to survive 24 h with or without an operation. ^d>2 drinks per day. ^eCVA = cerebrovascular accident.