**3 Group Comparison – BL, RL, RS**

\*P-values were calculated using Fisher’s Exact Test for binary and categorical variables and ANOVA or Kruskal-Wallis (as appropriate) for continuous variables.

|  | **BL** | **RL** | **RS** | **P-value (ANOVA)** | **P-value (Kruskal-Wallis)** | **testtype** | **P-value\*** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Age |  |  |  | 0.6603454 | 0.8806749 | NON-PARA | 0.881 |
| Mean ± SD (N) | 66.78±10.51 (68) | 67.78±8.69 (63) | 66.12±11.82 (68) | . | . |  | . |
| Median (Q1, Q3) | 69.00 (62.50,74.00) | 69.00 (61.00,75.00) | 68.50 (61.00,74.00) | . | . |  | . |
| Range | (31.00,83.00) | (33.00,79.00) | (21.00,83.00) | . | . |  | . |
| ASA PS |  |  |  | . | . |  | 1.000 |
| 1 | 0.00% (0/68) | 0.00% (0/63) | 0.00% (0/68) | . | . |  | . |
| 2 | 0.00% (0/68) | 0.00% (0/63) | 0.00% (0/68) | . | . |  | . |
| 3 | 1.47% (1/68) | 1.59% (1/63) | 2.94% (2/68) | . | . |  | . |
| 4 | 98.53% (67/68) | 98.41% (62/63) | 97.06% (66/68) | . | . |  | . |
| Gender |  |  |  | . | . |  | 0.876 |
| Female | 26.47% (18/68) | 22.22% (14/63) | 25.00% (17/68) | . | . |  | . |
| Male | 73.53% (50/68) | 77.78% (49/63) | 75.00% (51/68) | . | . |  | . |
| Height |  |  |  | 0.5046371 | 0.4338876 | NON-PARA | 0.434 |
| Mean ± SD (N) | 170.25±10.42 (68) | 171.22±9.95 (63) | 168.18±21.95 (68) | . | . |  | . |
| Median (Q1, Q3) | 170.00 (165.00,176.00) | 173.00 (168.00,178.00) | 175.00 (165.00,180.00) | . | . |  | . |
| Range | (142.00,193.00) | (142.00,191.00) | (67.00,185.00) | . | . |  | . |
| Weight |  |  |  | 0.1983934 | 0.3551183 | NON-PARA | 0.355 |
| Mean ± SD (N) | 85.28±18.51 (68) | 91.63±20.63 (63) | 89.24±21.93 (68) | . | . |  | . |
| Median (Q1, Q3) | 86.00 (71.00,98.00) | 86.00 (76.00,104.00) | 86.00 (72.50,103.00) | . | . |  | . |
| Range | (36.00,135.00) | (55.00,143.00) | (58.00,178.00) | . | . |  | . |
| BMI |  |  |  | 0.1294558 | 0.328833 | NON-PARA | 0.329 |
| Mean ± SD (N) | 29.60±5.46 (68) | 31.31±6.31 (63) | 29.51±5.20 (68) | . | . |  | . |
| Median (Q1, Q3) | 29.00 (25.00,33.00) | 31.00 (27.00,35.00) | 29.00 (27.00,33.00) | . | . |  | . |
| Range | (17.00,42.00) | (21.00,45.00) | (18.00,40.00) | . | . |  | . |
| Comorbidities |  |  |  | . | . |  | . |
| AF | 22.06% (15/68) | 7.94% (5/63) | 16.18% (11/68) | . | . |  | 0.074 |
| DM | 32.35% (22/68) | 39.68% (25/63) | 35.29% (24/68) | . | . |  | 0.686 |
| CKD | 22.06% (15/68) | 11.11% (7/63) | 17.65% (12/68) | . | . |  | 0.262 |
| HTN | 82.35% (56/68) | 93.65% (59/63) | 86.76% (59/68) | . | . |  | 0.151 |
| COPD | 13.24% (9/68) | 12.70% (8/63) | 11.76% (8/68) | . | . |  | 1.000 |
| Hyperlipidemia | 70.15% (47/67) | 68.25% (43/63) | 67.65% (46/68) | . | . |  | 0.962 |
| OSA | 27.94% (19/68) | 11.11% (7/63) | 27.94% (19/68) | . | . |  | 0.026 |
| PAD | 17.65% (12/68) | 12.70% (8/63) | 8.82% (6/68) | . | . |  | 0.302 |
| Crystalloid Use |  |  |  | 0.5363678 | 0.3457569 | NON-PARA | 0.346 |
| Mean ± SD (N) | 2172.06±746.90 (68) | 2228.57±726.94 (63) | 2084.56±758.60 (68) | . | . |  | . |
| Median (Q1, Q3) | 2000.00 (1550.00,2500.00) | 2000.00 (2000.00,2500.00) | 2000.00 (1500.00,2500.00) | . | . |  | . |
| Range | (500.00,4000.00) | (150.00,4000.00) | (700.00,4000.00) | . | . |  | . |
| PRBC (any) | 17.65% (12/68) | 11.11% (7/63) | 10.29% (7/68) | . | . |  | 0.408 |
| PRBC |  |  |  | 0.1597081 | 0.3317375 | NON-PARA | 0.332 |
| Mean ± SD (N) | 0.41±1.01 (68) | 0.14±0.47 (63) | 0.24±0.85 (68) | . | . |  | . |
| Median (Q1, Q3) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | . | . |  | . |
| Range | (0.00,4.00) | (0.00,3.00) | (0.00,5.00) | . | . |  | . |
| Autologous (any) | 8.82% (6/68) | 12.70% (8/63) | 8.82% (6/68) | . | . |  | 0.730 |
| Autologous |  |  |  | 0.5976949 | 0.7273697 | NON-PARA | 0.727 |
| Mean ± SD (N) | 35.29±119.72 (68) | 62.70±183.38 (63) | 61.03±210.16 (68) | . | . |  | . |
| Median (Q1, Q3) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | . | . |  | . |
| Range | (0.00,500.00) | (0.00,900.00) | (0.00,1000.00) | . | . |  | . |
| Colloid Products (any) | 7.35% (5/68) | 3.17% (2/63) | 16.18% (11/68) | . | . |  | 0.033 |
| Total # Colloid Products |  |  |  | 0.0573572 | 0.0285292 | NON-PARA | 0.029 |
| Mean ± SD (N) | 0.25±1.00 (68) | 0.05±0.28 (63) | 0.60±2.05 (68) | . | . |  | . |
| Median (Q1, Q3) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | . | . |  | . |
| Range | (0.00,6.00) | (0.00,2.00) | (0.00,14.00) | . | . |  | . |
| Total Colloiod prducts (mls) |  |  |  | 0.0685447 | 0.0290008 | NON-PARA | 0.029 |
| Mean ± SD (N) | 49.26±207.24 (68) | 9.52±53.77 (63) | 104.41±339.20 (68) | . | . |  | . |
| Median (Q1, Q3) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | 0.00 (0.00,0.00) | . | . |  | . |
| Range | (0.00,1350.00) | (0.00,350.00) | (0.00,2000.00) | . | . |  | . |
| Cell Saver volume retained (any) | 73.53% (50/68) | 63.49% (40/63) | 79.41% (54/68) | . | . |  | 0.132 |
| Cell Saver volume retained |  |  |  | 0.4605635 | 0.6084311 | NON-PARA | 0.608 |
| Mean ± SD (N) | 185.59±189.21 (68) | 157.38±140.77 (63) | 190.81±156.34 (68) | . | . |  | . |
| Median (Q1, Q3) | 150.00 (0.00,275.00) | 150.00 (0.00,250.00) | 150.00 (100.00,267.50) | . | . |  | . |
| Range | (0.00,1125.00) | (0.00,500.00) | (0.00,800.00) | . | . |  | . |
| Urine Output |  |  |  | 0.2878302 | 0.4169268 | NON-PARA | 0.417 |
| Mean ± SD (N) | 1123.16±620.43 (68) | 969.37±492.52 (63) | 1028.24±562.39 (68) | . | . |  | . |
| Median (Q1, Q3) | 1000.00 (675.00,1425.00) | 900.00 (650.00,1200.00) | 1000.00 (650.00,1250.00) | . | . |  | . |
| Range | (100.00,3000.00) | (100.00,3000.00) | (0.00,2600.00) | . | . |  | . |
| Surgical Procedure |  |  |  | . | . |  | 0.753 |
| CABG | 61.76% (42/68) | 58.73% (37/63) | 58.82% (40/68) | . | . |  | . |
| Any Valves | 27.94% (19/68) | 23.81% (15/63) | 25.00% (17/68) | . | . |  | . |
| CABG + valves | 8.82% (6/68) | 12.70% (8/63) | 8.82% (6/68) | . | . |  | . |
| Other | 1.47% (1/68) | 4.76% (3/63) | 7.35% (5/68) | . | . |  | . |
| CPB duration (min) |  |  |  | 0.2743483 | 0.1997087 | NON-PARA | 0.200 |
| Mean ± SD (N) | 130.56±49.81 (68) | 120.10±50.88 (63) | 135.15±61.64 (68) | . | . |  | . |
| Median (Q1, Q3) | 117.50 (95.50,160.50) | 112.00 (84.00,136.00) | 122.50 (101.00,158.50) | . | . |  | . |
| Range | (49.00,252.00) | (53.00,301.00) | (52.00,452.00) | . | . |  | . |
| Aortic Clamp time (min) |  |  |  | 0.1194449 | 0.0754376 | NON-PARA | 0.075 |
| Mean ± SD (N) | 104.78±44.22 (68) | 90.51±46.35 (63) | 106.44±52.98 (68) | . | . |  | . |
| Median (Q1, Q3) | 94.50 (75.00,143.00) | 87.00 (56.00,111.00) | 98.00 (70.00,122.50) | . | . |  | . |
| Range | (0.00,214.00) | (0.00,244.00) | (19.00,371.00) | . | . |  | . |
| Ejection Fraction PRE (%) |  |  |  | 0.1916725 | 0.3082564 | NON-PARA | 0.308 |
| Mean ± SD (N) | 52.73±12.64 (67) | 56.29±9.73 (63) | 54.72±10.77 (68) | . | . |  | . |
| Median (Q1, Q3) | 55.00 (50.00,60.00) | 55.00 (55.00,60.00) | 55.00 (50.00,60.00) | . | . |  | . |
| Range | (15.00,75.00) | (15.00,80.00) | (20.00,70.00) | . | . |  | . |
| Ejection Fraction POST (%) |  |  |  | 0.0820995 | 0.2614515 | NON-PARA | 0.261 |
| Mean ± SD (N) | 56.09±10.80 (67) | 60.00±9.20 (63) | 57.29±10.21 (68) | . | . |  | . |
| Median (Q1, Q3) | 60.00 (50.00,65.00) | 60.00 (55.00,65.00) | 60.00 (55.00,65.00) | . | . |  | . |
| Range | (20.00,70.00) | (20.00,80.00) | (20.00,80.00) | . | . |  | . |
| Intraoperative Norepinephrine | 88.24% (60/68) | 87.30% (55/63) | 89.71% (61/68) | . | . |  | 0.961 |
| Intraoperatvie Nitroglycerin | 44.12% (30/68) | 46.03% (29/63) | 45.59% (31/68) | . | . |  | 0.984 |
| Intraoperative Vasopressin | 2.94% (2/68) | 4.76% (3/63) | 5.88% (4/68) | . | . |  | 0.769 |
| Intraoperative Milrinone | 5.88% (4/68) | 3.17% (2/63) | 2.94% (2/68) | . | . |  | 0.736 |
| Intraoperative Epinephrine | 25.00% (17/68) | 20.63% (13/63) | 20.59% (14/68) | . | . |  | 0.845 |
| Intraoperative Phenylephrine | 2.94% (2/68) | 11.11% (7/63) | 1.47% (1/68) | . | . |  | 0.045 |
| Post Bypass Norepinephrine | 51.47% (35/68) | 52.38% (33/63) | 60.29% (41/68) | . | . |  | 0.532 |
| Post Bypass Nitroglycerin | 51.47% (35/68) | 50.79% (32/63) | 45.59% (31/68) | . | . |  | 0.794 |
| Post Bypass Vasopressin | 8.82% (6/68) | 15.87% (10/63) | 22.06% (15/68) | . | . |  | 0.104 |
| Post Bypass Milrinone | 10.29% (7/68) | 6.35% (4/63) | 13.24% (9/68) | . | . |  | 0.463 |
| Post Bypass Epinephrine | 79.41% (54/68) | 63.49% (40/63) | 76.47% (52/68) | . | . |  | 0.099 |
| Post Bypass Phenylephrine | 0.00% (0/68) | 1.59% (1/63) | 1.47% (1/68) | . | . |  | 0.765 |
| ***Immediately Pre-CPB*** |  |  |  | . | . |  | . |
| Central Aortic Cannula Pressures - Systolic |  |  |  | 0.2067745 | 0.2292629 | NON-PARA | 0.229 |
| Mean ± SD (N) | 96.22±11.53 (68) | 100.03±13.04 (63) | 99.13±13.96 (68) | . | . |  | . |
| Median (Q1, Q3) | 95.00 (90.00,100.00) | 100.00 (90.00,105.00) | 100.00 (90.00,105.00) | . | . |  | . |
| Range | (62.00,125.00) | (75.00,140.00) | (80.00,165.00) | . | . |  | . |
| Central Aortic Cannula Pressures - MAP |  |  |  | 0.7347548 | 0.4334319 | NON-PARA | 0.433 |
| Mean ± SD (N) | 70.04±11.33 (68) | 70.24±10.97 (63) | 68.87±10.39 (68) | . | . |  | . |
| Median (Q1, Q3) | 70.00 (62.00,77.00) | 70.00 (65.00,76.00) | 69.00 (62.00,72.50) | . | . |  | . |
| Range | (42.00,110.00) | (48.00,101.00) | (52.00,114.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Systolic |  |  |  | 0.3123895 | 0.2819492 | NON-PARA | 0.282 |
| Mean ± SD (N) | 94.72±13.71 (68) | 98.16±13.82 (63) | 97.94±15.99 (68) | . | . |  | . |
| Median (Q1, Q3) | 94.50 (88.00,100.00) | 98.00 (90.00,105.00) | 96.00 (88.00,104.50) | . | . |  | . |
| Range | (65.00,132.00) | (67.00,133.00) | (68.00,168.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Diastolic |  |  |  | 0.9135503 | 0.6869611 | NON-PARA | 0.687 |
| Mean ± SD (N) | 52.28±9.13 (67) | 52.59±9.78 (63) | 51.85±10.84 (68) | . | . |  | . |
| Median (Q1, Q3) | 52.00 (46.00,58.00) | 51.00 (47.00,58.00) | 50.00 (45.00,57.00) | . | . |  | . |
| Range | (33.00,78.00) | (29.00,83.00) | (27.00,90.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - MAP |  |  |  | 0.6916323 | 0.3379476 | NON-PARA | 0.338 |
| Mean ± SD (N) | 67.75±9.90 (68) | 67.40±10.55 (63) | 66.22±11.95 (68) | . | . |  | . |
| Median (Q1, Q3) | 68.00 (61.00,74.50) | 67.00 (61.00,75.00) | 66.00 (58.50,70.50) | . | . |  | . |
| Range | (47.00,94.00) | (43.00,94.00) | (44.00,118.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Waveform |  |  |  | . | . |  | 0.125 |
| Normal | 97.06% (66/68) | 88.89% (56/63) | 89.71% (61/68) | . | . |  | . |
| Overdamp | 2.94% (2/68) | 7.94% (5/63) | 10.29% (7/68) | . | . |  | . |
| Underdamp | 0.00% (0/68) | 3.17% (2/63) | 0.00% (0/68) | . | . |  | . |
| ***Post-CPB Separation (2 mins)*** |  |  |  | . | . |  | . |
| Central Aortic Cannula Pressures - Systolic |  |  |  | 0.2777258 | 0.5908364 | NON-PARA | 0.591 |
| Mean ± SD (N) | 112.13±13.43 (68) | 113.48±17.05 (63) | 116.62±19.13 (68) | . | . |  | . |
| Median (Q1, Q3) | 112.50 (100.00,120.00) | 115.00 (100.00,125.00) | 113.50 (100.00,127.50) | . | . |  | . |
| Range | (90.00,145.00) | (55.00,150.00) | (88.00,170.00) | . | . |  | . |
| Central Aortic Cannula Pressures - MAP |  |  |  | 0.400704 | 0.3225874 | PARA | 0.401 |
| Mean ± SD (N) | 82.12±13.29 (68) | 84.90±13.82 (63) | 85.03±15.07 (68) | . | . |  | . |
| Median (Q1, Q3) | 82.00 (75.50,90.00) | 84.00 (75.00,97.00) | 84.00 (77.00,94.50) | . | . |  | . |
| Range | (52.00,120.00) | (45.00,105.00) | (51.00,126.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Systolic |  |  |  | 0.6706071 | 0.3373969 | PARA | 0.671 |
| Mean ± SD (N) | 109.25±14.32 (68) | 110.19±22.68 (63) | 107.10±23.01 (68) | . | . |  | . |
| Median (Q1, Q3) | 107.50 (98.00,119.00) | 113.00 (99.00,125.00) | 106.00 (92.50,123.00) | . | . |  | . |
| Range | (84.00,149.00) | (29.00,147.00) | (48.00,157.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - MAP |  |  |  | 0.7178343 | 0.6451658 | PARA | 0.718 |
| Mean ± SD (N) | 75.09±10.44 (68) | 74.22±15.10 (63) | 73.25±13.66 (68) | . | . |  | . |
| Median (Q1, Q3) | 74.50 (70.00,82.50) | 75.00 (66.00,84.00) | 74.50 (63.50,82.00) | . | . |  | . |
| Range | (49.00,102.00) | (25.00,105.00) | (41.00,100.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Waveform |  |  |  | . | . |  | 0.004 |
| Normal | 89.71% (61/68) | 82.54% (52/63) | 69.12% (47/68) | . | . |  | . |
| Overdamp | 10.29% (7/68) | 14.29% (9/63) | 30.88% (21/68) | . | . |  | . |
| Underdamp | 0.00% (0/68) | 3.17% (2/63) | 0.00% (0/68) | . | . |  | . |
| ***Post-CPB Separation (10 mins)*** |  |  |  | . | . |  | . |
| Central Aortic Cannula Pressures - Systolic |  |  |  | 0.3637889 | 0.3034864 | NON-PARA | 0.303 |
| Mean ± SD (N) | 112.46±12.79 (68) | 109.17±13.12 (63) | 111.06±13.64 (68) | . | . |  | . |
| Median (Q1, Q3) | 110.00 (105.00,120.00) | 110.00 (100.00,120.00) | 110.00 (100.00,120.00) | . | . |  | . |
| Range | (79.00,140.00) | (83.00,140.00) | (82.00,140.00) | . | . |  | . |
| Central Aortic Cannula Pressures - MAP |  |  |  | 0.9443945 | 0.9274433 | PARA | 0.944 |
| Mean ± SD (N) | 76.16±11.76 (68) | 76.83±11.09 (63) | 76.62±11.72 (68) | . | . |  | . |
| Median (Q1, Q3) | 75.00 (70.00,84.50) | 78.00 (69.00,83.00) | 76.50 (69.00,85.00) | . | . |  | . |
| Range | (49.00,114.00) | (54.00,105.00) | (50.00,105.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Systolic |  |  |  | 0.2837824 | 0.2406762 | PARA | 0.284 |
| Mean ± SD (N) | 107.72±15.58 (68) | 103.60±21.00 (62) | 103.19±18.04 (68) | . | . |  | . |
| Median (Q1, Q3) | 108.00 (97.00,119.00) | 104.00 (94.00,115.00) | 103.00 (93.50,113.50) | . | . |  | . |
| Range | (70.00,150.00) | (20.00,157.00) | (53.00,161.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - MAP |  |  |  | 0.0291129 | 0.0131313 | PARA | 0.029 |
| Mean ± SD (N) | 73.09±11.31 (68) | 68.23±12.69 (62) | 68.31±12.02 (68) | . | . |  | . |
| Median (Q1, Q3) | 74.00 (65.00,81.50) | 69.00 (60.00,75.00) | 67.50 (59.00,76.50) | . | . |  | . |
| Range | (40.00,94.00) | (20.00,110.00) | (43.00,103.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Waveform |  |  |  | . | . |  | 0.036 |
| Normal | 91.18% (62/68) | 80.65% (50/62) | 76.47% (52/68) | . | . |  | . |
| Overdamp | 8.82% (6/68) | 16.13% (10/62) | 23.53% (16/68) | . | . |  | . |
| Underdamp | 0.00% (0/68) | 3.23% (2/62) | 0.00% (0/68) | . | . |  | . |
| ***CICU*** |  |  |  | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Systolic |  |  |  | 0.372186 | 0.3127162 | NON-PARA | 0.313 |
| Mean ± SD (N) | 116.16±17.48 (67) | 114.16±15.43 (61) | 111.96±18.79 (68) | . | . |  | . |
| Median (Q1, Q3) | 119.00 (103.00,126.00) | 114.00 (107.00,124.00) | 113.00 (100.00,121.50) | . | . |  | . |
| Range | (63.00,156.00) | (52.00,152.00) | (28.00,162.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Diastolic |  |  |  | 0.5431661 | 0.428481 | PARA | 0.543 |
| Mean ± SD (N) | 62.64±12.46 (67) | 60.77±12.61 (61) | 60.47±11.77 (68) | . | . |  | . |
| Median (Q1, Q3) | 64.00 (54.00,70.00) | 59.00 (51.00,69.00) | 60.00 (53.00,67.00) | . | . |  | . |
| Range | (37.00,94.00) | (40.00,95.00) | (23.00,89.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - MAP |  |  |  | 0.0411051 | 0.0298272 | PARA | 0.041 |
| Mean ± SD (N) | 81.81±13.22 (67) | 76.75±11.16 (61) | 77.10±13.48 (68) | . | . |  | . |
| Median (Q1, Q3) | 85.00 (72.00,89.00) | 75.00 (70.00,82.00) | 76.00 (68.00,84.50) | . | . |  | . |
| Range | (41.00,109.00) | (48.00,105.00) | (26.00,110.00) | . | . |  | . |
| Peripheral Arterial Catheter Pressures - Waveform |  |  |  | . | . |  | 0.010 |
| Normal | 94.03% (63/67) | 91.80% (56/61) | 80.88% (55/68) | . | . |  | . |
| Overdamp | 5.97% (4/67) | 4.92% (3/61) | 19.12% (13/68) | . | . |  | . |
| Underdamp | 0.00% (0/67) | 3.28% (2/61) | 0.00% (0/68) | . | . |  | . |

**DAMPENING - BL vs RL vs RS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Peripheral Arterial Catheter Pressures - Waveform** | **BL** | **RL** | **RS** | **P-value** |
| ***Immediately Pre-CPB*** |  |  |  | 0.125 |
| Normal | 97.06% (66/68) | 88.89% (56/63) | 89.71% (61/68) |  |
| Overdamp | 2.94% (2/68) | 7.94% (5/63) | 10.29% (7/68) |  |
| Underdamp | 0.00% (0/68) | 3.17% (2/63) | 0.00% (0/68) |  |
| ***Post-CPB Separation (2 mins)*** |  |  |  | 0.004 |
| Normal | 89.71% (61/68) | 82.54% (52/63) | 69.12% (47/68) |  |
| Overdamp | 10.29% (7/68) | 14.29% (9/63) | 30.88% (21/68) |  |
| Underdamp | 0.00% (0/68) | 3.17% (2/63) | 0.00% (0/68) |  |
| ***Post-CPB Separation (10 mins)*** |  |  |  | 0.036 |
| Normal | 91.18% (62/68) | 80.65% (50/62) | 76.47% (52/68) |  |
| Overdamp | 8.82% (6/68) | 16.13% (10/62) | 23.53% (16/68) |  |
| Underdamp | 0.00% (0/68) | 3.23% (2/62) | 0.00% (0/68) |  |
| ***CICU*** |  |  |  | 0.010 |
| Normal | 94.03% (63/67) | 91.80% (56/61) | 80.88% (55/68) |  |
| Overdamp | 5.97% (4/67) | 4.92% (3/61) | 19.12% (13/68) |  |
| Underdamp | 0.00% (0/67) | 3.28% (2/61) | 0.00% (0/68) |  |
|  |  |  |  |  |
| **Normal vs ANY Dampening by Time** |  |  |  |  |
| Waveform - Pre CPB |  |  |  | 0.148 |
| Normal | 97.06% (66/68) | 88.89% (56/63) | 89.71% (61/68) |  |
| Dampened (over or under) | 2.94% (2/68) | 11.11% (7/63) | 10.29% (7/68) |  |
| Waveform - Post CPB (2m) |  |  |  | 0.010 |
| Normal | 89.71% (61/68) | 82.54% (52/63) | 69.12% (47/68) |  |
| Dampened (over or under) | 10.29% (7/68) | 17.46% (11/63) | 30.88% (21/68) |  |
| Waveform - Post CPB (10m) |  |  |  | 0.059 |
| Normal | 91.18% (62/68) | 80.65% (50/62) | 76.47% (52/68) |  |
| Dampened (over or under) | 8.82% (6/68) | 19.35% (12/62) | 23.53% (16/68) |  |
| Waveform - CICU |  |  |  | 0.048 |
| Normal | 94.03% (63/67) | 91.80% (56/61) | 80.88% (55/68) |  |
| Dampened (over or under) | 5.97% (4/67) | 8.20% (5/61) | 19.12% (13/68) |  |

*OVERALL comparison - This is for dampening at ANY time – If a patient had dampening at any of the timepoints [Pre CPB, Post CPB (2m), Post CPB (10m) Or CICU] then they are counted as having dampening.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OVERALL** | **BL** | **RL** | **RS** | **P-value** |
| Waveform (all times - Pre,Post, CICU) |  |  |  | <.001 |
| No Dampening | 89.71% (61/68) | 79.37% (50/63) | 60.29% (41/68) |  |
| Any Dampening (over or under) | 10.29% (7/68) | 20.63% (13/63) | 39.71% (27/68) |  |

Significant p-value above that there is a difference in rates of dampening between the 3 groups. Pairwise comparisons will indicate which groups are different.

**BL vs RL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Normal vs ANY Dampening by Time** | **BL** | **RL** | **Difference (95% CI)** | **P-value** |
| Waveform - Pre CPB |  |  |  | 0.087 |
| Normal | 97.06% (66/68) | 88.89% (56/63) | 8.17%[-0.57%,16.91%] |  |
| Dampened (over or under) | 2.94% (2/68) | 11.11% (7/63) | -8.17%[-16.91%,0.57%] |  |
| Waveform - Post CPB (2m) |  |  |  | 0.311 |
| Normal | 89.71% (61/68) | 82.54% (52/63) | 7.17%[-4.67%,19.00%] |  |
| Dampened (over or under) | 10.29% (7/68) | 17.46% (11/63) | -7.17%[-19.00%,4.67%] |  |
| Waveform - Post CPB (10m) |  |  |  | 0.126 |
| Normal | 91.18% (62/68) | 80.65% (50/62) | 10.53%[-1.39%,22.45%] |  |
| Dampened (over or under) | 8.82% (6/68) | 19.35% (12/62) | -10.53%[-22.45%,1.39%] |  |
| Waveform - CICU |  |  |  | 0.736 |
| Normal | 94.03% (63/67) | 91.80% (56/61) | 2.23%[-6.69%,11.15%] |  |
| Dampened (over or under) | 5.97% (4/67) | 8.20% (5/61) | -2.23%[-11.15%,6.69%] |  |

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| --- | --- | --- | --- | --- |
| **OVERALL** | **BL** | **RL** | **Difference (95% CI)** | **P-value** |
| Waveform (all times - Pre,Post, CICU) |  |  |  | 0.144 |
| No Dampening | 89.71% (61/68) | 79.37% (50/63) | 10.34%[-1.99%,22.67%] |  |
| Any Dampening (over or under) | 10.29% (7/68) | 20.63% (13/63) | -10.34%[-22.67%,1.99%] |  |

**BL vs RS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Normal vs ANY Dampening by Time** | **BL** | **RS** | **Difference (95% CI)** | **P-value** |
| Waveform - Pre CPB |  |  |  | 0.165 |
| Normal | 97.06% (66/68) | 89.71% (61/68) | 7.35%[-0.91%,15.62%] |  |
| Dampened (over or under) | 2.94% (2/68) | 10.29% (7/68) | -7.35%[-15.62%,0.91%] |  |
| Waveform - Post CPB (2m) |  |  |  | 0.005 |
| Normal | 89.71% (61/68) | 69.12% (47/68) | 20.59%[7.44%,33.73%] |  |
| Dampened (over or under) | 10.29% (7/68) | 30.88% (21/68) | -20.59%[-33.73%,-7.44%] |  |
| Waveform - Post CPB (10m) |  |  |  | 0.034 |
| Normal | 91.18% (62/68) | 76.47% (52/68) | 14.71%[2.58%,26.83%] |  |
| Dampened (over or under) | 8.82% (6/68) | 23.53% (16/68) | -14.71%[-26.83%,-2.58%] |  |
| Waveform - CICU |  |  |  | 0.036 |
| Normal | 94.03% (63/67) | 80.88% (55/68) | 13.15%[2.21%,24.08%] |  |
| Dampened (over or under) | 5.97% (4/67) | 19.12% (13/68) | -13.15%[-24.08%,-2.21%] |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OVERALL** | **BL** | **RS** | **Difference (95% CI)** | **P-value** |
| Waveform (all times - Pre,Post, CICU) |  |  |  | <.001 |
| No Dampening | 89.71% (61/68) | 60.29% (41/68) | 29.41%[15.72%,43.10%] |  |
| Any Dampening (over or under) | 10.29% (7/68) | 39.71% (27/68) | -29.41%[-43.10%,-15.72%] |  |

**RL vs RS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Normal vs ANY Dampening by Time** | **RL** | **RS** | **Difference (95% CI)** | **P-value** |
| Waveform - Pre CPB |  |  |  | 1.000 |
| Normal | 88.89% (56/63) | 89.71% (61/68) | -0.82%[-11.42%,9.78%] |  |
| Dampened (over or under) | 11.11% (7/63) | 10.29% (7/68) | 0.82%[-9.78%,11.42%] |  |
| Waveform - Post CPB (2m) |  |  |  | 0.103 |
| Normal | 82.54% (52/63) | 69.12% (47/68) | 13.42%[-1.02%,27.86%] |  |
| Dampened (over or under) | 17.46% (11/63) | 30.88% (21/68) | -13.42%[-27.86%,1.02%] |  |
| Waveform - Post CPB (10m) |  |  |  | 0.670 |
| Normal | 80.65% (50/62) | 76.47% (52/68) | 4.17%[-9.91%,18.26%] |  |
| Dampened (over or under) | 19.35% (12/62) | 23.53% (16/68) | -4.17%[-18.26%,9.91%] |  |
| Waveform - CICU |  |  |  | 0.082 |
| Normal | 91.80% (56/61) | 80.88% (55/68) | 10.92%[-0.69%,22.53%] |  |
| Dampened (over or under) | 8.20% (5/61) | 19.12% (13/68) | -10.92%[-22.53%,0.69%] |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OVERALL** | **RL** | **RS** | **Difference (95% CI)** | **P-value** |
| Waveform (all times - Pre,Post, CICU) |  |  |  | 0.023 |
| No Dampening | 79.37% (50/63) | 60.29% (41/68) | 19.07%[3.74%,34.40%] |  |
| Any Dampening (over or under) | 20.63% (13/63) | 39.71% (27/68) | -19.07%[-34.40%,-3.74%] |  |