**Use linear regression to explore RRT’s effect on GFR at discharge**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | -27.13 ( -164.57 , 110.3 ) | 0.6986 |
| rrt | 1.27 ( -3.68 , 6.21 ) | 0.6155 |
| age | -0.23 ( -0.32 , -0.14 ) | < 0.0001 |
| weight gain before dialysis perday | 0.63 ( 0.19 , 1.06 ) | 0.0047 |
| BBR | 2.74 ( -0.97 , 6.46 ) | 0.1472 |
| ACEI | 6.75 ( 4.39 , 9.11 ) | < 0.0001 |
| vasodilator | 2.97 ( 0.62 , 5.32 ) | 0.0133 |
| ischemic heart disease | -2.85 ( -5.28 , -0.42 ) | 0.0214 |
| renal failure | -6.49 ( -9.25 , -3.73 ) | < 0.0001 |
| infection | 2.79 ( 0.46 , 5.13 ) | 0.0191 |
| SBP at admission | -0.04 ( -0.09 , 0.01 ) | 0.1069 |
| SPO2 at admission | -0.23 ( -0.39 , -0.08 ) | 0.0034 |
| base excess at admission | -0.24 ( -0.48 , -0.01 ) | 0.0429 |
| BUN before dialysis | 0.08 ( 0.02 , 0.14 ) | 0.0063 |
| creatinine before dialysis | -4.72 ( -7.24 , -2.19 ) | 0.0003 |
| creatinine after DR | 3.68 ( 1.01 , 6.35 ) | 0.007 |
| sodium before dialysis | 0.25 ( 0.03 , 0.47 ) | 0.027 |
| potassium at admission | 1.56 ( 0.1 , 3.01 ) | 0.0366 |
| hemoglobin after DR | 0.52 ( -0.15 , 1.19 ) | 0.1271 |
| HCO3 before dialysis | 0.41 ( 0.16 , 0.67 ) | 0.0018 |
| GFR before dialysis | 0.34 ( 0.23 , 0.45 ) | < 0.0001 |
| GFR at admission | 0.13 ( 0.06 , 0.2 ) | 0.0006 |
| GFR after DR | 0.27 ( 0.14 , 0.39 ) | < 0.0001 |
| PH before dialysis | -16.98 ( -36.08 , 2.13 ) | 0.0815 |
| PH after DR | 19.74 ( 3.58 , 35.89 ) | 0.0167 |
| albumin at admission | 2.66 ( -0.19 , 5.51 ) | 0.0671 |
| albumin after DR | -2.12 ( -4.91 , 0.68 ) | 0.1378 |

**Use linear regression to explore RRT’s effect on fluid output**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | -15463.98 ( -152926.1 , 121998.13 ) | 0.8253 |
| age | -181.11 ( -271.3 , -90.92 ) | 0.0004 |
| add drug therapy | 9981.58 ( 7777.23 , 12185.94 ) | < 0.0001 |
| weight after DR | 104.07 ( 61.02 , 147.11 ) | < 0.0001 |
| weight gain before dialysis perday | -327.33 ( -747.18 , 92.52 ) | 0.1264 |
| inotropes vasopressor | 6464.73 ( 3908.49 , 9020.97 ) | < 0.0001 |
| valvular disease | 2468.88 ( -487.72 , 5425.47 ) | 0.1016 |
| atrial fibrilation | 2399.63 ( 164.46 , 4634.79 ) | 0.0354 |
| hypertension | 2067.69 ( -673.99 , 4809.37 ) | 0.1392 |
| diabetes | -3031.86 ( -5217.5 , -846.22 ) | 0.0066 |
| anemia | 2697.36 ( 490.65 , 4904.06 ) | 0.0166 |
| infection | 5383.96 ( 3111.66 , 7656.27 ) | < 0.0001 |
| Alcohol abuse | -5042.5 ( -10088.76 , 3.77 ) | 0.0502 |
| fluid overload before dialysis | 0.13 ( 0.03 , 0.23 ) | 0.009 |
| urine output before dialysis | 1.12 ( 0.98 , 1.25 ) | < 0.0001 |
| daily urine output before dialysis | 1.67 ( 0.77 , 2.58 ) | 0.0003 |
| SPO2 before dialysis | 143.65 ( 1.21 , 286.09 ) | 0.0481 |
| temperature before dialysis | 927.63 ( 390.4 , 1464.87 ) | 0.0007 |
| temperature at admission | -743.31 ( -1348.35 , -138.26 ) | 0.0161 |
| temperature after DR | 1635.41 ( 310.26 , 2960.56 ) | 0.0156 |
| BUN before dialysis | 189.88 ( 111.69 , 268.07 ) | < 0.0001 |
| BUN after DR | -97.8 ( -176.06 , -19.54 ) | 0.0144 |
| creatinine before dialysis | -1838.81 ( -3310.9 , -366.73 ) | 0.0144 |
| sodium after DR | -218.41 ( -440.12 , 3.31 ) | 0.0535 |
| potassium at admission | -1116.47 ( -2530.9 , 297.96 ) | 0.1217 |
| HCO3 before dialysis | 879.35 ( 551.25 , 1207.45 ) | < 0.0001 |
| HCO3 after DR | -828.61 ( -1169.05 , -488.18 ) | < 0.0001 |
| GFR at admission | 47.81 ( -8.78 , 104.41 ) | 0.0977 |
| PH before dialysis | 19418.77 ( 973.99 , 37863.55 ) | 0.0391 |
| PH after DR | -22544.67 ( -37968.4 , -7120.93 ) | 0.0042 |
| albumin before dialysis | -3449.49 ( -5187.36 , -1711.62 ) | 0.0001 |
| rrt | 11873.03 ( 7059.12 , 16686.93 ) | < 0.0001 |

**Use linear regression to explore RRT’s effect on fluid input**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | 5547.49 ( -66579.2 , 77674.17 ) | 0.8801 |
| age | -185.8 ( -344.32 , -27.28 ) | 0.0217 |
| gender = Male | 4531.43 ( -469.87 , 9532.73 ) | 0.0757 |
| add drug therapy | 13615.71 ( 9740.73 , 17490.69 ) | < 0.0001 |
| weight at admission | -654.99 ( -1106.86 , -203.12 ) | 0.0045 |
| weight before dialysis | 547.13 ( 135.69 , 958.57 ) | 0.0092 |
| BMI | 808.57 ( 185.9 , 1431.24 ) | 0.011 |
| weight gain before dialysis perday | -1801.5 ( -2890.19 , -712.81 ) | 0.0012 |
| inotropes vasopressor | 9832.52 ( 5130.42 , 14534.63 ) | < 0.0001 |
| ACEI | -4368.85 ( -8305.84 , -431.85 ) | 0.0297 |
| vasodilator | 2862.3 ( -1116.73 , 6841.34 ) | 0.1584 |
| anemia | 4280.32 ( 401.01 , 8159.62 ) | 0.0306 |
| infection | 8839.66 ( 4830.05 , 12849.26 ) | < 0.0001 |
| fluid overload before dialysis | 1.17 ( 1 , 1.35 ) | < 0.0001 |
| urine output before dialysis | 1.11 ( 0.88 , 1.34 ) | < 0.0001 |
| HR after DR | 108.25 ( -0.12 , 216.61 ) | 0.0503 |
| SBP at admission | 83.28 ( -12.26 , 178.81 ) | 0.0875 |
| SBP after DR | -104.57 ( -213.11 , 3.97 ) | 0.059 |
| SPO2 at admission | -214.38 ( -480.24 , 51.48 ) | 0.1139 |
| BUN at admission | 124.88 ( 15.14 , 234.62 ) | 0.0258 |
| creatinine at admission | -3401.29 ( -6905.74 , 103.16 ) | 0.0571 |
| creatinine after DR | 2903.09 ( -861.49 , 6667.66 ) | 0.1305 |
| sodium before dialysis | 525.94 ( 102.6 , 949.29 ) | 0.0149 |
| sodium at admission | -474.53 ( -919.53 , -29.52 ) | 0.0366 |
| potassium before dialysis | 2620.54 ( -789.82 , 6030.9 ) | 0.1319 |
| potassium at admission | -2153.76 ( -4733.94 , 426.42 ) | 0.1017 |
| HCO3 before dialysis | 927.46 ( 352.18 , 1502.73 ) | 0.0016 |
| HCO3 after DR | -915.08 ( -1503.09 , -327.07 ) | 0.0023 |
| GFR before dialysis | -227.1 ( -380.87 , -73.33 ) | 0.0038 |
| GFR after DR | 293.61 ( 114.76 , 472.45 ) | 0.0013 |
| albumin before dialysis | -9226 ( -13909.25 , -4542.74 ) | 0.0001 |
| albumin at admission | 3458.86 ( -1490 , 8407.72 ) | 0.1705 |
| rrt | 2872.87 ( -5059.38 , 10805.12 ) | 0.4774 |

**Use linear regression to explore RRT’s effect on fluid overload**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | 41184.78 ( -26971.19 , 109340.75 ) | 0.236 |
| gender = Male | 3760.69 ( -489.56 , 8010.95 ) | 0.0828 |
| add drug therapy | 4586.09 ( 1509.91 , 7662.27 ) | 0.0035 |
| change drug therapy | -4165.34 ( -8971.43 , 640.76 ) | 0.0893 |
| height | -225.3 ( -424.98 , -25.63 ) | 0.027 |
| weight at admission | -557.63 ( -886.95 , -228.32 ) | 0.0009 |
| weight before dialysis | 609.77 ( 277.74 , 941.8 ) | 0.0003 |
| weight gain before dialysis perday | -1590.84 ( -2468.37 , -713.3 ) | 0.0004 |
| inotropes vasopressor | 3582.37 ( 28.51 , 7136.24 ) | 0.0482 |
| ACEI | -3698.86 ( -6841.9 , -555.82 ) | 0.0211 |
| infection | 3876.46 ( 699.49 , 7053.43 ) | 0.0168 |
| fluid overload before dialysis | 1.03 ( 0.89 , 1.16 ) | < 0.0001 |
| HR before dialysis | 74.86 ( -13.88 , 163.6 ) | 0.0981 |
| SPO2 at admission | -254.55 ( -467.86 , -41.24 ) | 0.0194 |
| temperature before dialysis | -908.37 ( -1673.53 , -143.22 ) | 0.02 |
| temperature at admission | 1048.29 ( 204.69 , 1891.88 ) | 0.0149 |
| BUN before dialysis | -162.18 ( -257.31 , -67.06 ) | 0.0009 |
| BUN at admission | 188.84 ( 80.64 , 297.05 ) | 0.0006 |
| creatinine at admission | -4070.08 ( -6951.89 , -1188.27 ) | 0.0057 |
| creatinine after DR | 5012.52 ( 1983.67 , 8041.37 ) | 0.0012 |
| sodium before dialysis | 362.21 ( 23.14 , 701.29 ) | 0.0363 |
| sodium at admission | -385.21 ( -735.49 , -34.94 ) | 0.0312 |
| potassium before dialysis | 2136.23 ( -500.45 , 4772.91 ) | 0.1122 |
| GFR before dialysis | -269.01 ( -399.21 , -138.81 ) | 0.0001 |
| GFR after DR | 277.37 ( 135.12 , 419.61 ) | 0.0001 |
| albumin before dialysis | -2647.98 ( -5069.73 , -226.23 ) | 0.0321 |
| rrt | -7153.55 ( -13488.24 , -818.86 ) | 0.0269 |

**Use linear regression to explore RRT’s effect on urine output**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | -39540.3 ( -159018.15 , 79937.56 ) | 0.5162 |
| age | -160.69 ( -233.26 , -88.13 ) | < 0.0001 |
| add drug therapy | 8757.86 ( 6866.13 , 10649.59 ) | < 0.0001 |
| weight after DR | 76.4 ( 39.48 , 113.32 ) | 0.0001 |
| weight gain before dialysis perday | -376.6 ( -738.41 , -14.78 ) | 0.0414 |
| inotropes vasopressor | 5912.19 ( 3720.54 , 8103.83 ) | < 0.0001 |
| diabetes | -2457.38 ( -4326.06 , -588.71 ) | 0.01 |
| anemia | 1404.25 ( -572.37 , 3380.88 ) | 0.1636 |
| infection | 4753 ( 2781 , 6725 ) | < 0.0001 |
| alcohol abuse | -3299.93 ( -7649.52 , 1049.67 ) | 0.1369 |
| daily fluid overload before dialysis | 0.58 ( 0.23 , 0.93 ) | 0.0011 |
| urine output before dialysis | 1.02 ( 0.9 , 1.14 ) | < 0.0001 |
| daily urine output before dialysis | 1.93 ( 1.15 , 2.71 ) | < 0.0001 |
| SPO2 before dialysis | 129.88 ( 8.29 , 251.47 ) | 0.0363 |
| temperature before dialysis | 742.81 ( 280.63 , 1204.98 ) | 0.0017 |
| temperature at admission | -646.64 ( -1166.88 , -126.39 ) | 0.0149 |
| temperature after DR | 1029.11 ( -117.95 , 2176.18 ) | 0.0786 |
| bun before dialysis | 129.12 ( 60.49 , 197.75 ) | 0.0002 |
| BUN after DR | -85.84 ( -160.33 , -11.35 ) | 0.024 |
| sodium before dialysis | 237.61 ( -38.87 , 514.09 ) | 0.092 |
| sodium after DR | -388.93 ( -683.51 , -94.36 ) | 0.0097 |
| potassium at admission | -1225.45 ( -2430.49 , -20.41 ) | 0.0463 |
| hemoglobin before dialysis | -712.04 ( -1578.67 , 154.6 ) | 0.1072 |
| hemoglobin after DR | 671.93 ( -156.47 , 1500.34 ) | 0.1118 |
| HCO3 before dialysis | 932.44 ( 646.46 , 1218.42 ) | < 0.0001 |
| HCO3 after DR | -792.06 ( -1091.89 , -492.23 ) | < 0.0001 |
| GFR before dialysis | 107.87 ( 22.88 , 192.87 ) | 0.0129 |
| GFR after DR | -80.23 ( -165.89 , 5.43 ) | 0.0664 |
| PH before dialysis | 18362.99 ( 2444.76 , 34281.21 ) | 0.0238 |
| PH after DR | -16255.41 ( -29616.75 , -2894.08 ) | 0.0172 |
| albumin after DR | -2180.84 ( -3772.03 , -589.66 ) | 0.0073 |
| rrt | -6368.12 ( -10233.3 , -2502.95 ) | 0.0013 |

**Use linear regression to explore RRT’s effect on LOS hospital**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | -27.99 ( -105.03 , 49.05 ) | 0.476 |
| age | -0.13 ( -0.19 , -0.07 ) | < 0.0001 |
| add\_drug\_therapy | 4.51 ( 3.14 , 5.89 ) | < 0.0001 |
| BMI | 0.11 ( 0.01 , 0.21 ) | 0.0246 |
| weight gain before dialysis | 0.15 ( 0 , 0.29 ) | 0.0453 |
| weight gain before dialysis perday | -0.51 ( -0.89 , -0.12 ) | 0.0099 |
| BBR | 2.43 ( 0.2 , 4.65 ) | 0.0324 |
| inotropes vasopressor | 2.24 ( 0.62 , 3.86 ) | 0.0069 |
| MRA | 1.73 ( -0.09 , 3.54 ) | 0.0626 |
| vasodilator | 1.91 ( 0.49 , 3.32 ) | 0.0085 |
| ischemic heart disease | -1.42 ( -2.91 , 0.07 ) | 0.0614 |
| diabetes | -1.22 ( -2.61 , 0.16 ) | 0.0829 |
| sleep disordered breathing | -2.51 ( -5.24 , 0.22 ) | 0.071 |
| anemia | 1.16 ( -0.26 , 2.59 ) | 0.1101 |
| infection | 3.97 ( 2.53 , 5.4 ) | < 0.0001 |
| fluid overload before dialysis | 0 ( 0 , 0 ) | 0.0004 |
| daily fluid overload before dialysis | 0 ( 0 , 0 ) | 0.0001 |
| urine output before dialysis | 0 ( 0 , 0 ) | < 0.0001 |
| daily urine output before dialysis | 0 ( 0 , 0 ) | < 0.0001 |
| HR at admission | 0.03 ( -0.01 , 0.06 ) | 0.1056 |
| SPO2 before dialysis | 0.09 ( 0 , 0.18 ) | 0.0467 |
| BUN before dialysis | 0.06 ( 0.02 , 0.09 ) | 0.0006 |
| creatinine after DR | -0.89 ( -1.97 , 0.19 ) | 0.1067 |
| sodium after DR | -0.17 ( -0.3 , -0.03 ) | 0.0203 |
| potassium after DR | -1.22 ( -2.26 , -0.18 ) | 0.0214 |
| hemoglobin after DR | -0.7 ( -1.12 , -0.28 ) | 0.0012 |
| HCO3 before dialysis | 0.38 ( 0.17 , 0.58 ) | 0.0003 |
| HCO3 after DR | -0.35 ( -0.56 , -0.14 ) | 0.001 |
| GFR at admission | 0.09 ( 0.05 , 0.13 ) | 0.0001 |
| GFR after DR | -0.07 ( -0.12 , -0.01 ) | 0.0119 |
| PH before dialysis | 9.53 ( -0.55 , 19.6 ) | 0.0638 |
| albumin after DR | -2.1 ( -3.26 , -0.94 ) | 0.0004 |
| rrt | 7.24 ( 4.42 , 10.07 ) | < 0.0001 |

**Use linear regression to explore RRT’s effect on LOS ICU**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | -15.07 ( -79.01 , 48.87 ) | 0.6438 |
| age | -0.03 ( -0.07 , 0.01 ) | 0.1341 |
| add drug therapy | 4.6 ( 3.61 , 5.59 ) | < 0.0001 |
| height | 0.12 ( -0.03 , 0.28 ) | 0.1124 |
| weight at admission | -0.18 ( -0.36 , -0.01 ) | 0.0424 |
| weight before dialysis | 0.08 ( -0.03 , 0.18 ) | 0.1593 |
| BMI | 0.38 ( -0.03 , 0.79 ) | 0.0686 |
| weight gain before dialysis perday | -0.37 ( -0.65 , -0.09 ) | 0.0095 |
| inotropes vasopressor | 3.17 ( 2.01 , 4.32 ) | < 0.0001 |
| hypertension | 1.8 ( -0.11 , 3.72 ) | 0.0653 |
| diabetes | -0.96 ( -1.95 , 0.03 ) | 0.0564 |
| renal failure | -1.81 ( -3.68 , 0.06 ) | 0.0573 |
| anemia | 0.95 ( -0.05 , 1.95 ) | 0.0613 |
| infection | 2.76 ( 1.75 , 3.78 ) | < 0.0001 |
| fluid overload before dialysis | 0 ( 0 , 0 ) | < 0.0001 |
| daily fluid overload before dialysis | 0 ( 0 , 0 ) | 0.0472 |
| urine output before dialysis | 0 ( 0 , 0 ) | < 0.0001 |
| HR before dialysis | 0.03 ( 0 , 0.06 ) | 0.0738 |
| DBP before dialysis | -0.03 ( -0.07 , 0.01 ) | 0.0955 |
| SPO2 before dialysis | 0.09 ( 0.03 , 0.16 ) | 0.0046 |
| BUN before dialysis | 0.04 ( 0.02 , 0.06 ) | 0.0002 |
| creatinine at admission | -0.83 ( -1.43 , -0.23 ) | 0.0065 |
| sodium before dialysis | 0.14 ( 0 , 0.29 ) | 0.0472 |
| sodium after DR | -0.19 ( -0.34 , -0.03 ) | 0.0166 |
| potassium after DR | -0.83 ( -1.59 , -0.08 ) | 0.0312 |
| hco3 before dialysis | 0.32 ( 0.18 , 0.47 ) | < 0.0001 |
| hco3 after DR | -0.3 ( -0.45 , -0.14 ) | 0.0002 |
| ph before dialysis | 6.76 ( -1.58 , 15.09 ) | 0.1119 |
| ph after DR | -6.76 ( -13.79 , 0.27 ) | 0.0593 |
| albumin after DR | -1.8 ( -2.63 , -0.96 ) | < 0.0001 |
| rrt | 6.33 ( 4.33 , 8.32 ) | < 0.0001 |

**Use logistic regression to explore RRT’s effect on hospital expire status**

|  |  |  |
| --- | --- | --- |
|  | coef(95%CI) | p value |
| (Intercept) | 708309177.63 ( 3.73 , 125669825004832144 ) | 0.0354 |
| rrt | 1.34 ( 0.66 , 2.72 ) | 0.4216 |
| age | 1.02 ( 1.01 , 1.04 ) | 0.0013 |
| gender = Male | 1.55 ( 0.91 , 2.63 ) | 0.1084 |
| add drug therapy | 1.65 ( 1.11 , 2.45 ) | 0.0127 |
| change drug therapy | 0.36 ( 0.16 , 0.77 ) | 0.0118 |
| height | 0.98 ( 0.95 , 1 ) | 0.0552 |
| weight at admission | 0 ( 0 , 0 ) | 0.3674 |
| weight after DR | 1.25 ( 0.71 , NA ) | 0.977 |
| weight before dialysis | 2680.97 ( 0.2 , 27970664.88 ) | 0.0983 |
| weight gain before dialysis | 0 ( 0 , 4.82 ) | 0.0977 |
| BBR | 0.18 ( 0.1 , 0.32 ) | < 0.0001 |
| inotropes vasopressor | 3.14 ( 1.89 , 5.39 ) | < 0.0001 |
| ACEI | 0.28 ( 0.17 , 0.44 ) | < 0.0001 |
| MRA | 0.63 ( 0.32 , 1.15 ) | 0.1458 |
| vasodilator | 0.53 ( 0.35 , 0.79 ) | 0.0021 |
| alcohol abuse | 1.99 ( 0.82 , 4.57 ) | 0.1128 |
| daily urine output before dialysis | 1 ( 1 , 1 ) | 0.0053 |
| HR before dialysis | 1.01 ( 1 , 1.02 ) | 0.0921 |
| HR at admission | 1.01 ( 1 , 1.02 ) | 0.0273 |
| SPO2 at admission | 1.05 ( 1.02 , 1.08 ) | 0.0027 |
| temperature before dialysis | 0.94 ( 0.87 , 1.01 ) | 0.0909 |
| BUN before dialysis | 1.02 ( 1.01 , 1.03 ) | 0.0008 |
| BUN at admission | 0.99 ( 0.98 , 1 ) | 0.0431 |
| creatinine before dialysis | 0.67 ( 0.52 , 0.84 ) | 0.0008 |
| sodium before dialysis | 1.04 ( 1 , 1.08 ) | 0.0722 |
| sodium at admission | 0.96 ( 0.92 , 1 ) | 0.0394 |
| potassium before dialysis | 1.3 ( 0.94 , 1.79 ) | 0.109 |
| HCO3 before dialysis | 0.91 ( 0.87 , 0.95 ) | < 0.0001 |
| PH after DR | 0.07 ( 0.01 , 0.8 ) | 0.031 |
| albumin after DR | 0.69 ( 0.5 , 0.95 ) | 0.0252 |