S14 Table. Sensitivity Analyses in the Explicit Cohort

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| --- | --- | --- | --- | --- | --- | --- |
|  | **3-hour SOFA assessment window** | **12-hour SOFA assessment window** | **24-hour SOFA assessment window** | **1-day exposure windowa** | **5-day exposure windowb** | **Compare to any dose of corticosteroids** |
| **Before IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.57(n=6596) | 0.57(n=6596) | 0.57(n=6596) | 0.54(n=8090) | 0.59(n=4964) | 0.54(n=439) |
| In-hospital 50-Day Survival among Treated | 0.56(n=562) | 0.56(n=562) | 0.56(n=562) | 0.47(n=419) | 0.58(n=539) | 0.56(n=562) |
| In-hospital 50-Day Survival Difference with 95%CI | -0.01(-0.16, 0.10) | -0.01(-0.16, 0.10) | -0.01(-0.16, 0.10) | -0.07(-0.27, 0.08) | -0.01(-0.14, 0.11) | 0.02(-0.15, 0.19) |
| **After IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.57(n=6596) | 0.57(n=6596) | 0.57(n=6596) | 0.54(n=8090) | 0.59(n=4964) | 0.52(n=439) |
| In-hospital 50-Day Survival among Treated | 0.60(n=562) | 0.61(n=562) | 0.61(n=562) | 0.53(n=419) | 0.65(n=539) | 0.57(n=562) |
| In-hospital 50-Day Survival Difference with 95%CI | 0.03(-0.14, 0.16) | 0.04(-0.13, 0.17) | 0.04(-0.12, 0.16) | -0.01(-0.22, 0.15) | 0.06(-0.07, 0.18) | 0.05(-0.13, 0.21) |
|  | **Corticosteroid daily dose 200 to 400mg** | **Without any corticosteroids as controls** | **Excluded patients with asthma or COPD** | **Only hospitals ever prescribed corticosteroids** | **g-formula** | **Excluded patients >1 hospitalization** |
| **Before IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.57(n=6839) | 0.58(n=6157) | 0.58(n=5240) | 0.59(n=3957) | 0.57(n=6596) | 0.56(n=5694) |
| In-hospital 50-Day Survival among Treated | 0.53(n=319) | 0.56(n=562) | 0.54(n=428) | 0.56(n=562) | 0.56(n=562) | 0.53(n=475) |
| In-hospital 50-Day Survival Difference with 95%CI | -0.04(-0.19, 0.09) | -0.02(-0.16, 0.11) | -0.04(-0.21, 0.11) | -0.03(-0.17, 0.11) | -0.01(-0.16, 0.10) | -0.03(-0.19, 0.11) |
| **After IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.57(n=6839) | 0.58(n=6157) | 0.57(n=5240) | 0.58(n=3957) | 0.58(n=6596) | 0.55(n=5694) |
| In-hospital 50-Day Survival among Treated | 0.59(n=319) | 0.62(n=562) | 0.60(n=428) | 0.58(n-562) | 0.60(n=562) | 0.59(n=475) |
| In-hospital 50-Day Survival Difference with 95%CI | 0.02\*(-0.14, 0.16) | 0.04(-0.13, 0.17) | 0.03(-0.18, 0.20) | 0.00(-0.16, 0.14) | 0.02(-0.12, 0.13) | 0.04(-0.19, 0.18) |

Abbreviations: IPTW, inverse probability treatment weight;

a with 2-day immortal time bias adjustment;

b with 6-day immortal time bias adjustment;

\* Stepwise model selection was used;

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **In-hospital survival up to 90 days**  | **Excluding patients without ventilation support** | **Excluding patients admitted for surgery** | **Patients received hydrocortisone as treated** | **All untested laboratory data assumed abnormal** | **Excluding laboratory values with high percentage of untested patients from the analysis** |
| **Before IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.57(n=6596) | 0.53(n=1741) | 0.57(n=6412) | 0.57(n=6336) | 0.57(n=6596) | 0.57(n=6596) |
| In-hospital 50-Day Survival among Treated | 0.55(n=562) | 0.57(n=265) | 0.55(n=553) | 0.55(n=340) | 0.56(n=562) | 0.56(n=562) |
| In-hospital 50-Day Survival Difference with 95%CI | -0.02(-0.22, 0.11) | 0.03\*(-0.12, 0.17) | -0.02(-0.15, 0.11) | -0.02(-0.19, 0.11) | -0.01(-0.16, 0.10) | -0.01(-0.16, 0.10) |
| **After IPTW adjustment** |  |
| In-hospital 50-Day Survival among Controls | 0.49(n=6596) | 0.53(n=1741) | 0.56(n=6412) | 0.57(n=6336) | 0.57(n=6596) | 0.57(n=6596) |
| In-hospital 50-Day Survival among Treated | 0.53(n=562) | 0.67(n=265) | 0.61(n=553) | 0.66(n=340) | 0.62(n=562) | 0.60(n=562) |
| In-hospital 50-Day Survival Difference with 95%CI | 0.04(-0.27, 0.23) | 0.14\*(-0.01, 0.26) | 0.05(-0.12, 0.17) | 0.09\*(-0.07, 0.22) | 0.05(-0.11, 0.17) | 0.03(-0.13, 0.17) |

Abbreviations: IPTW, inverse probability treatment weight;

a with 2-day immortal time bias adjustment;

b with 6-day immortal time bias adjustment;

\* Stepwise model selection was used;