regression model was used to identify independent predictors of all-cause mortality within 30 days after COVID-19 diagnosis.

Results. Of the total 4015 COVID-19 confirmed patients entered, we analyzed 3966 patients, 1115 cancer and 2851 non-cancer patients. Cancer patients were older than non-cancer patients (median age, 61 vs 50 years; p < 0.0001); more likely to be previously healthy; had pulmonary or diabetes, hypertension, or other chronic diseases. In addition, they were more likely to present with higher inflammatory biomarkers (D-dimer, ferritin, and procalcitonin), but were less likely to present with clinical symptoms. By multivariable logistic regression analysis, cancer was an independent risk factor for 30-day mortality (OR 1.46; 95% CI 1.03 to 2.07; p=0.035). Older age (≥65 years) was the strongest predictor of 30-day mortality in all patients (OR 4.45; 95% CI 3.34 to 6.20; p<0.0001). Remdesivir was the only therapeutic agent independently associated with decreased 30-day mortality (OR 0.58; CI 0.39-0.86; p=0.009). Among patients on low-flow oxygen at admission, patients who received remdesivir had a lower 30-day mortality (OR 1.46; 95% CI 1.03 to 2.07; p=0.035). Patients transfused with convalescent plasma within 1 day of diagnosis had a lower 30-day mortality rate than those transfused later (1% vs 7%; p=0.04).

Conclusion. Cancer is an independent risk factor for increased 30-day all-cause mortality from COVID-19. Remdesivir, particularly in patients receiving low-flow oxygen, can reduce 30-day all-cause mortality, as well as convalescent plasma given early after COVID-19 diagnosis.

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23. Development and Validation of a Risk Score for Post-transplant Lymphoproliferative Disorders among Solid Organ Transplant Recipients

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Background. Post-transplant lymphoproliferative disease (PTLD) is a well-recognized complication after transplant. This study aimed to develop and independently validate a risk score to predict PTLD among solid organ transplant (SOT) recipients (kidney, liver, lung, heart).

Methods. Poisson regression identified predictors of PTLD with the best fitting model selected for the risk score, where each predictor contributed with a risk coefficient to the risk score, dividing patients in high vs low risk of having a PTLD.

Results. For both cohorts, most of the patients were male, aged more than 16 years. The kidney recipients and with a low-risk pre-transplant Epstein-Barr Virus (EBV) IgG donor recipient serostatus. The derivation cohort consisted of 2546 SOT transplanted at Righospital, Copenhagen between 2004-2019; 57 developed PTLD. Predictors of PTLD were high-risk pre-transplant Epstein-Barr Virus (EBV) IgG donor/recipient serostatus, and current plasma EBV DNA positive, abnormal hematoglobin and C-reactive protein levels. A positive EBV DNA was the strongest parameter for the PTLD risk score (figure 1), although the model was able to predict the risk of PTLD cases in both EBV positive and EBV negative individuals. Individuals in the high-risk group had almost 7 times higher incidence of PTLD compared to the low-risk group (table 1). In the validation cohort, 1228 SOT recipient patients between 2008-2018 from University Hospital of Zurich, 24 developed PTLD. A similar seven times higher risk of PTLD was observed in the high-risk group compared to the low-risk group (table 1). The discriminatory ability was also similar in derivation (Harrell’s C statistic of 0.82 95%CI (0.76-0.88) and validation (0.82, 95% CI 0.72-0.92) cohorts.

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