Table 3. Treatment-emergent adverse events during the on-rescue observation period

Number (%) of patients	MBV rescue arm (n=22)
Any TEAE	22 (100)
Any treatment-related TEAE	13 (59.1)
Any TESAE	11 (50.0)
Any treatment-related TESAE	1 (4.5)
Any TEAE that led to treatment discontinuation	1 (4.5)
Any treatment-related TEAE that led to treatment discontinuation	1 (4.5)
Any TESAE that led to treatment discontinuation	0
Any TEAE that led to study discontinuation	0
Any TESAE with outcome of death	1 (4.5)
Any treatment-related TESAE with outcome of death	0

The on-rescue treatment observation period started at the time of MBV rescue treatment initiation through 7 days after the last dose of rescue treatment, or until the non-study CMV treatment initiation, whichever was earlier. TEAEs were defined as any adverse event occurring during the on-rescue treatment observation period.
CMV, cytomegalovirus; MBV, maribavir; TEAE, treatment-emergent adverse event; TESAE, treatment-emergent serious adverse event.

Conclusion. Rescue arm data show MBV was efficacious for R/R CMV infection in HCT/SOT recipients inadequately responding to IAT with/without intolerance and had a similar safety profile to that reported for pts in the randomized MBV group.

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22. International Multicenter Study Comparing Cancer to Non-Cancer Patients with COVID-19: Impact of Risk Factors and Treatment Modalities on Outcome

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Session: O-05. Clinical Quandries in Viral Infections in ICH

Background. Given the limited collaborative international studies that evaluated COVID-19 in patients with cancer in comparison to patients without cancer, we aimed to determine the independent risk factors associated with increased 30-day mortality and the impact of novel treatment modalities in a large group of cancer and non-cancer patients with COVID-19 from multiple countries.

Methods. We retrospectively collected de-identified data on cancer and non-cancer patients diagnosed with COVID-19 between January and November 2020, at 16 centers in Asia, Australia, Europe, North America, and South America. A logistic 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 pancytopenic , had pulmonary disorders, hypertension, diabetes mellitus. 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 4.55; 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 0.39-0.88; p=0.009). Among patients on low-flow oxygen at admission, patients who received remdesivir had a lower 30-day mortality rate than those who were on high flow oxygen (5.9% vs 17.6%; p=0.03). 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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Session: O-05. Clinical Quandries in Viral Infections in ICH

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 and 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 old, 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 Rigshospitalet, 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 hemoglobin 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 of 1611 SOT recipients between 2008-2018 from University Hospital of Zürich, 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.