Human rhinovirus detection in the lower respiratory tract of hematopoietic cell transplant recipients: association with mortality

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### Supplemental Table 1. Risk factors for mortality from all causes or respiratory failure by day 90 after HRV LRI (N=128)

|                          | Univariable analysis |                  |                      | Multivariable analysis |                  |                      |
|--------------------------|----------------------|------------------|----------------------|------------------------|------------------|----------------------|
|                          | HR       | 95% CI | P Value | HR       | 95% CI | P Value |
| Overall mortality        |          |        |         |          |        |         |
| Lymphocyte count at diagnosis |          |        |         |          |        |         |
| > 300 cells/μL           | 1.00     |        |         | 1.00     |        |         |
| ≤ 300 cells/μL           | 2.70     | 1.49-4.7 | 0.001 | 1.96     | 1.05-3.6 | 0.036 |
| Monocyte count at diagnosis |          |        |         |          |        |         |
| > 300 cells/μL           | 1.00     |        |         | 1.00     |        |         |
| ≤ 300 cells/μL           | 2.44     | 1.33-4.5 | 0.004 | 1.49     | 0.75-3.0 | 0.26  |
| LRI symptoms at diagnosis |          |        |         |          |        |         |
| No                      | 1.00     |        |         | 1.00     |        |         |
| Yes                     | 3.03     | 1.37-6.7 | 0.006 | 1.42     | 0.50-4.0 | 0.51  |
| Oxygen use at diagnosis  |          |        |         |          |        |         |
| No                      | 1.00     |        |         | 1.00     |        |         |
| Yes                     | 2.94     | 1.54-5.6 | 0.001 | 2.87     | 1.25-6.6 | 0.013 |
| Mechanical ventilation  | 10.3     | 4.82-22.0 | <0.001 |          |        |         |
| Steroid dose before diagnosis* |          |        |         |          |        |         |
| No                      | 1.00     |        |         | 1.00     |        |         |
| < 1 mg/kg               | 0.82     | 0.41-1.6 | 0.58  | 1.00     |        |         |
| ≥ 1 mg/kg               | 3.69     | 1.93-7.0 | <0.001 | 1.96     | 1.04-3.6 | 0.038 |
| Steroid dose after diagnosis# |          |        |         |          |        |         |
| No                      | 1.00     |        |         | 1.00     |        |         |
| < 1 mg/kg               | 1.39     | 0.64-3.0 | 0.40  |          |        |         |
|                          |   | 1     | 2.39-10. |   | 1.39-4.6 | 0.003 |
|--------------------------|---|-------|----------|---|---------|-------|
| ≥ 1 mg/kg                | 4.92  | <0.001 | 2.55     |   | 9       |       |
| Ct value at diagnosis †  | 0.99  | 0.95-1.0 | 0.70     |   |         |       |

**Mortality from respiratory failure**

**Lymphocyte count at diagnosis**

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| > 300 cells/μL           | 1.00  | 1.00  | 1.00   |   |         |       |
| ≤ 300 cells/μL           | 2.50  | 1.30-4.7 | 0.006 |   | 1.87    | 0.08  |

**Monocyte count at diagnosis**

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| > 300 cells/μL           | 1.00  | 1.00  | 1.00   |   |         |       |
| ≤ 300 cells/μL           | 2.44  | 1.22-4.7 | 0.012 |   | 1.12    | 0.75  |

**LRI symptoms at diagnosis**

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| No                       | 1.00  | 1.00  | 1.00   |   |         |       |
| Yes                      | 4.28  | 1.52-12. | 0.006 |   | 2.40    | 0.16  |

**Oxygen use at diagnosis**

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| No                       | 1.00  | 1.00  | 1.00   |   |         |       |
| Yes                      | 2.72  | 1.31-5.6 | 0.007 |   | 2.09    | 0.09  |
| Mechanical ventilation   | 10.3 | 4.47-23. | <0.001 |   |         |       |

**Steroid dose before diagnosis***

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| No                       | 1.00  | 1.00  | 1.00   |   |         |       |
| < 1 mg/kg                | 1.22  | 0.55-2.6 | 0.63  |   |         |       |
| ≥ 1 mg/kg                | 4.65  | 2.18-9.9 | <0.001 |   | 2.25    | 0.025 |

**Steroid dose after diagnosis***

|                          |   | 1     | 1.00   |   | 1.00    |       |
|--------------------------|---|-------|--------|---|---------|-------|
| No                       | 1.00  | 1.00  | 1.00   |   |         |       |
| < 1 mg/kg                | 1.68  | 0.66-4.3 | 0.28  |   |         |       |
|                | 0   | 2.90-16.4 | <0.001 | 2.77 | 1.39-5.5 | 0.004 |
|----------------|-----|-----------|--------|------|----------|-------|
| $\geq 1$ mg/kg | 6.90|           |        |      |          |       |
| Ct value at diagnosis $^\dagger$ | 0.99| 0.94-1.0  | 0.68   |      |          |       |

* Peak steroid dose was recorded from the period within two weeks prior to LRI.

$^\#$ Peak steroid dose after LRI diagnosis was recorded from within two weeks after the diagnosis. These variables are analyzed as time-dependent.

$^\dagger$ This analysis was performed as a continuous variable.

All variables in Table 1 were used for the univariable analysis. Only variables with $p < 0.05$ are shown in this table. Ct value was shown regardless of $p$ values.

Abbreviations; HRV: human rhinovirus, LRI: lower respiratory tract infection, Ct: cycle threshold