Table 1. Data on 39 respiratory syncytial virus (RSV)–infected pediatric patients with cancer.

Characteristic	Value
Malignancy	
Leukemia	25 (64)
Acute lymphoblastic leukemia	17 (44)
Acute myeloid leukemia	8 (21)
Non-Hodgkin lymphoma	5 (13)
Solid tumor (except CNS tumor)	2 (5)
CNS tumor	2 (5)
Other malignancy	2 (5)
Receipt of solid-organ transplant	3 (8)
Leukocyte count at diagnosis,[a] 10^9 leukocytes/L	
Median (range)	3.8 (300–62,500)
IQR	1.9–5.5
Neutropenia[b] at diagnosis[a]	6 (15)
Body temperature	
>38.5°C	21 (54)
>39°C	14 (36)
Tachypnea at diagnosis[a]	25 (64)
Hypoxemia[c] at diagnosis[a]	5 (13)
Underwent radiologic examination of the chest	30 (77)
Pneumonia confirmed by radiologic examination of the chest	10 (26)
Received antibiotic treatment	26 (67)
Received supplemental oxygen	17 (44)
Admitted to pediatric intensive care unit	5 (13)
Received mechanical ventilation	1 (3)
Hospitalization attributed to RSV infection, inpatient days	
Median (range)	7 (2–35)
IQR	5–11
Mortality, %	
All cause	5
Related to RSV infection	0

NOTE. Data are no. (%) of patients, unless otherwise indicated. There were 17 male patients and 22 female patients. The median age at diagnosis of RSV infection was 33 months (interquartile range [IQR], 20–72 months; range, 4–217 months).

[a] Diagnosis of RSV infection.

[b] Leukocyte count $< 1.0 \times 10^9$ leukocytes/L and no differential blood cell count available or neutrophil count $< 0.5 \times 10^9$ neutrophils/L.

[c] Transcutaneously measured hemoglobin saturation ($tcSO_2$) level <94%.

monoclonal antibody [11]—should be debated for cases of RSV infection.

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Respiratory Syncytial Virus Infection in Immunocompromised Patients Revisited

To the Editor—We read with great interest the letter from Simon et al. [1] reporting respiratory syncytial virus (RSV) infection in 39 immunocompromised pe-

diatric patients (median age, 33 months), including patients with cancer and recipients of solid-organ transplants. Although none underwent hematopoietic stem cell transplantation, 30 patients appeared to have underlying hematological disease comparable to that in our 32 adult patients [2]. The authors report that none of the children died of RSV-related causes, although only 3 received treatment with oral ribavirin (2 patients) or intravenous palivizumab (1 patient).

The reason for the striking difference between the study by Simon et al. [1] and our study [2] is unclear and might reflect the recovery competence of children [3]. It seems to us that a key difference could reside in the delaying of chemotherapy for 25 of the pediatric patients. In addition, 80% of our case patients were hematopoietic stem cell transplant recipients [2]. In fact, RSV-attributed mortality was significantly associated with pre-engraftment and with ≥ 2 criteria of severe immunodeficiency, such as receipt of hematopoietic stem cell transplant within the previous 6 months, T cell or B cell depletion within the previous 3 months, graft-versus-host disease of grade ≥ 2, leukopenia (leukocyte count, $\leq 2.0 \times 10^9$ cells/L), lymphopenia (lymphocyte count, $\leq 0.1 \times 10^9$ cells/L), or hypogammaglobulinemia (Ig level, ≤ 6.5 g/L). Conversely, patients with moderate immunodeficiency had a favorable course. We noted that 3 of our patients with severe immunodeficiency survived RSV infection without any intervention [2]. These 3 patients all had a lack of T cell depletion, the absence of lymphopenia or leukopenia, and the presence of graft-versus-host disease of grade ≥ 2. Although the role of severe immunodeficiency in risk stratification and treatment requires validation in prospective clinical studies, it would be important to know the potential use of these criteria for immunocompromised children [1, 3]. Simon et al. [1] indicated that 10 patients had radiological evidence of pneumonia, 5 patients were admitted to the intensive care unit, and only 1 required mechanical ventilation. This is in contrast to our study, in which lower respiratory tract infection was significantly associated with RSV-attributable mortality in patients with severe immunodeficiency [2].

The retrospective report by de Fontbrune et al. [4] concluded that administration of palivizumab was costly but was not associated with any discernable benefit. Among 18 patients with upper respiratory tract infection, one-half of whom received treatment with palivizumab, progression to lower respiratory tract infection was observed in 56% in both groups. RSV-associated death occurred in 3 (33%) of the 9 patients in the palivizumab-treated group and in 1 (11%) of the 9 patients in the untreated group. However, palivizumab was preferentially administered to recipients at a presumably higher risk, such as cord blood transplant recipients (6 [67%] of 9 in the treated group vs. 0 [0%] of 9 in the untreated group) and patients who had RSV infection within 30 days after hematopoietic stem cell transplantation (8 [89%] of 9 in the treated group vs. 3 [33%] of 9 in the untreated group).

Regarding the use of ribavirin, Simon et al. [1] point out that oral (systemic) administration is simpler than aerosolization, particularly for pediatric patients. We found that oral ribavirin at a maximum daily dose of 1800 mg was generally well tolerated, but reversible hemolysis was observed in ~20% of patients [2]. Therefore, we agree with Simon and colleagues that prospective, multicenter studies are needed to identify effective antiviral treatments for RSV infection among immunocompromised patient groups, for which the new high-affinity monoclonal motavizumab, as well as systemic ribavirin, could be an option.

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Transmission of Adenovirus Serotype 14 in the Health Care Setting

To the Editor—In the 1 February 2008 issue of *Clinical Infectious Diseases*, Louie et al. [1] described a cluster of severe respiratory illnesses caused by adenovirus serotype 14 (Ad14). Two children, both requiring high-frequency oscillatory ventilation (HFOV), were admitted to adjacent beds in the intensive care unit; Ad14 infection was diagnosed during the course of hospitalization for both patients. Louie et al. [1] speculated that 1 of these cases may have been acquired nosocomially. We describe a cluster of health care workers (HCWs) infected with adenovirus in association with caring for a critically ill patient with Ad14 infection, to highlight the