

## Supplementary Tables

Supplementary Table 1. Underlying malignancy for which patients underwent stem cell transplant

Indication for transplant, n	Patients (N = 42)
Acute lymphoblastic leukemia	9
Acute myelogenous leukemia	9
Chronic lymphocytic leukemia	7
Chronic myelogenous leukemia	3
Myelofibrosis	3
Myelodysplastic syndrome	3
Hodgkin lymphoma	3
Aplastic anemia	2
T-cell prolymphocytic leukemia	1
T-cell-type acute leukemia	1
Diffuse large B-cell lymphoma	1

**Supplementary Table 2. Additional immunosuppressive therapies\* in use at baseline**

	<b>Patients (N = 42) n (%)</b>
Patients with any immunosuppressants other than corticosteroids	21 (50)
Calcineurin inhibitors	17 (41)
Tacrolimus	14 (33)
Cyclosporine A	3 (7)
Selective immunosuppressants	7 (17)
Mycophenolate mofetil	4 (10)
Sirolimus	3 (7)

\*Does not include 1 patient who was treated with extracorporeal photopheresis (ECP) every 2 weeks, but did not receive ECP therapy on the day that ibrutinib was initiated.

**Supplementary Table 3. Disposition of patients who discontinued study treatment**

	<b>Patients (N = 42)</b>
Median time on study (range) — months	13.9 (0.5–24.9)
Median time on treatment (range) — months	4.4 (0.2–24.9)
Patients still on treatment — no. (%)	12 (29)
Reasons for treatment discontinuation, n (%)	
Adverse events (including death)*	14 (33)
Patient decision†	6 (14)
Progression of cGVHD	5 (12)
Recurrence or progression of original malignancy	2 (5)
Investigator decision†	2 (5)
Noncompliance with study drug	1 (2)

\*AEs leading to discontinuation in > 1 patient included fatigue (n=3) and pneumonia (n=2).

†1 patient in each group (total of 2 patients) discontinued after resolution of cGVHD symptoms.

**Supplementary Table 4. Serious AEs**

<b>Serious AEs (N = 42)</b>	<b>All Grades n (%)</b>	<b>Grades 3-4 n (%)</b>	<b>Grade 5 n (%)</b>
Pneumonia	6 (14)	5 (12)	1 (2)
Pyrexia	2 (5)	2 (5)	0
Septic shock	2 (5)	2 (5)	0
Headache	2 (5)	1 (2)	0
Cellulitis	2 (5)	0	0
Bronchopulmonary aspergillosis	1 (2)	0	1 (2)
Anemia	1 (2)	1 (2)	0
Atrial fibrillation	1 (2)	1 (2)	0
Bacteremia	1 (2)	1 (2)	0
Brain abscess	1 (2)	1 (2)	0
<i>Clostridium difficile</i> infection	1 (2)	1 (2)	0
Rhinovirus infection	1 (2)	1 (2)	0
Staphylococcal bacteremia	1 (2)	1 (2)	0
Femoral fracture	1 (2)	1 (2)	0
QT prolongation	1 (2)	1 (2)	0
Arthralgia	1 (2)	1 (2)	0
Myalgia	1 (2)	1 (2)	0
Acute lymphocytic leukemia*	1 (2)	1 (2)	0
Prolymphocytic leukemia*	1 (2)	1 (2)	0
Syncope	1 (2)	1 (2)	0
Respiratory failure	1 (2)	1 (2)	0
Skin pain	1 (2)	1 (2)	0
Skin mass	1 (2)	1 (2)	0
Deep vein thrombosis	1 (2)	1 (2)	0
Viral pneumonia	1 (2)	0	0
Compression fracture	1 (2)	0	0
Muscular weakness	1 (2)	0	0
Dyspnea	1 (2)	0	0
Pneumothorax	1 (2)	0	0
Hypertension	1 (2)	0	0

\*Relapse of underlying disease that was the indication for transplant.