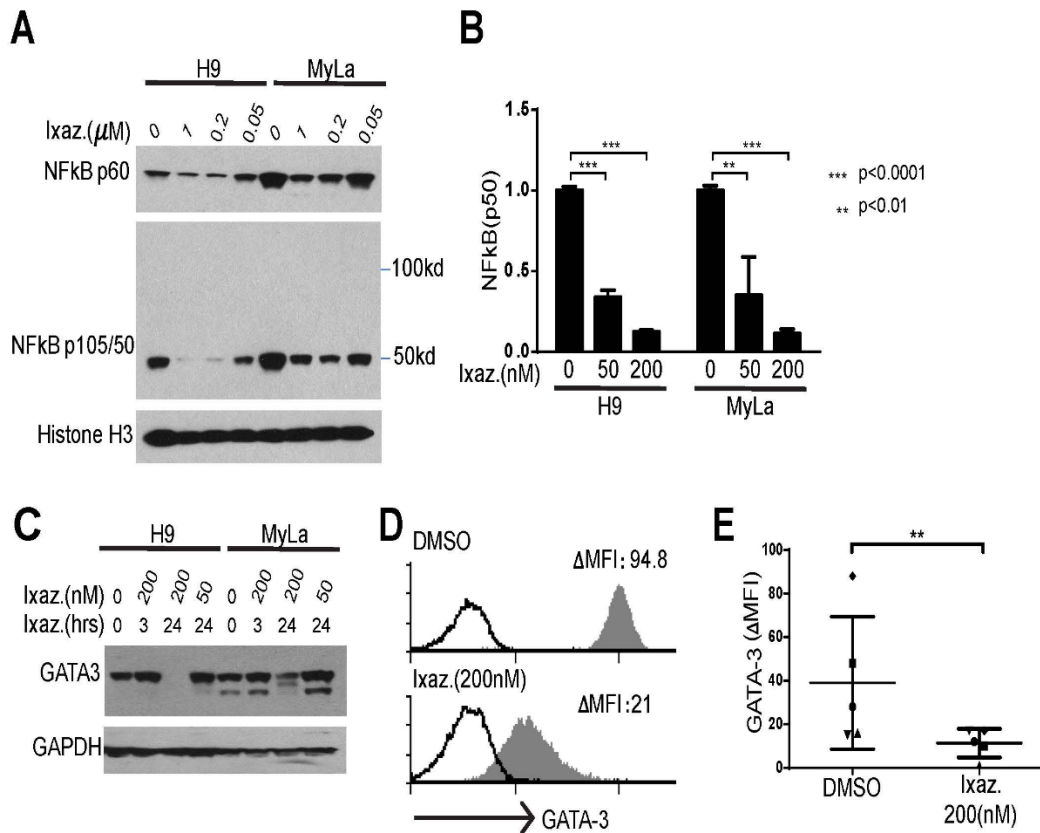


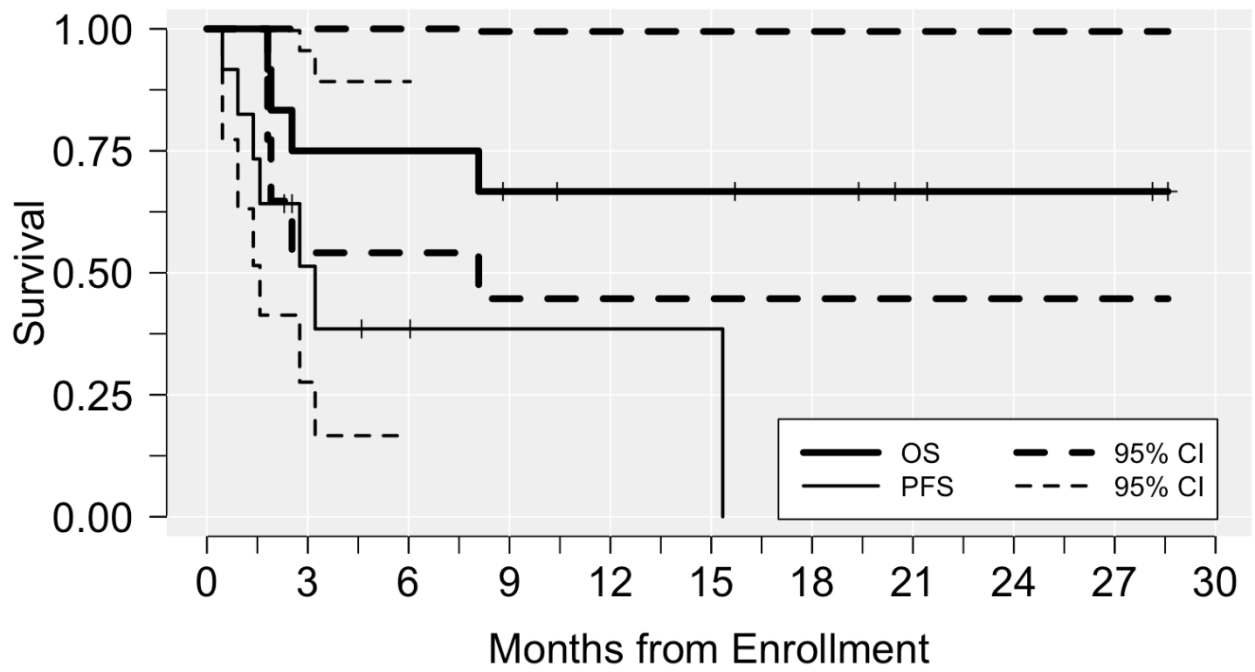
**Supplementary Table 1. Adverse Events Stratified by Severity and Attribution (presented as number of patients, n=12).**

<b>Event</b>	<b><u>All Events</u></b>		<b><u>Drug-Related Events</u></b>	
	<b><u>All Grades</u></b>	<b><u>Grade ≥3</u></b>	<b><u>All Grades</u></b>	<b><u>Grade ≥3</u></b>
	No. (%)	No. (%)	No. (%)	No. (%)
<b><u>Hematologic</u></b>				
Anemia	1(8)	1(8)	1(8)	1(8)
Thrombocytopenia	1(8)	1(8)	1(8)	1(8)
<b><u>Gastrointestinal</u></b>				
Abdominal pain	1(8%)	0	0	0
Anorexia	1(8)	0	1(8)	0
AST elevation	1(8)	0	1(8)	0
Constipation	2(17)	0	0	0
Diarrhea	3(25)	1(8)	2(17)	0
Dysgeusia	1(8)	0	1(8)	0
Mucositis oral	1(8)	1(8)	1(8)	1(8)
Nausea	2(17)	0	2(17)	0
Vomiting	3(25)	0	3(25)	0
Acute kidney injury	1(8)	1(8)	1(8)	1(8)
<b><u>Infectious</u></b>				
Sepsis	1(8)	1(8)	1(8)	1(8)
Skin infection	1(8)	0	0	0
URI	2(17)	0	2(17)	0
<b><u>Neuropathy</u></b>				
Peripheral sensory neuropathy	4(33)	0	3(25)	0
<b><u>Other</u></b>				
Arthralgia	1(8)	0	0	0
Atrial fibrillation	1(8)	1(8)	0	0
Back pain	2(17)	0	0	0
Chills	1(8)	0	1(8)	0
Dysarthria	1(8)	0	1(8)	0
Dyspnea	2(17)	1(8)	0	1(8)
Edema limbs	2(17)	0	1(8)	0
Fatigue	3(25)	0	2(17)	0
Hypercalcemia	1(8)	1(8)	0	0
Hyponatremia	1(8)	1(8)	0	0
Hypotension	1(8)	1(8)	1(8)	1(8)
Hypothyroidism	1(8)	0	0	0
Lymph node pain	1(8)	1(8)	0	0
Lymphedema	1(8)	0	0	0

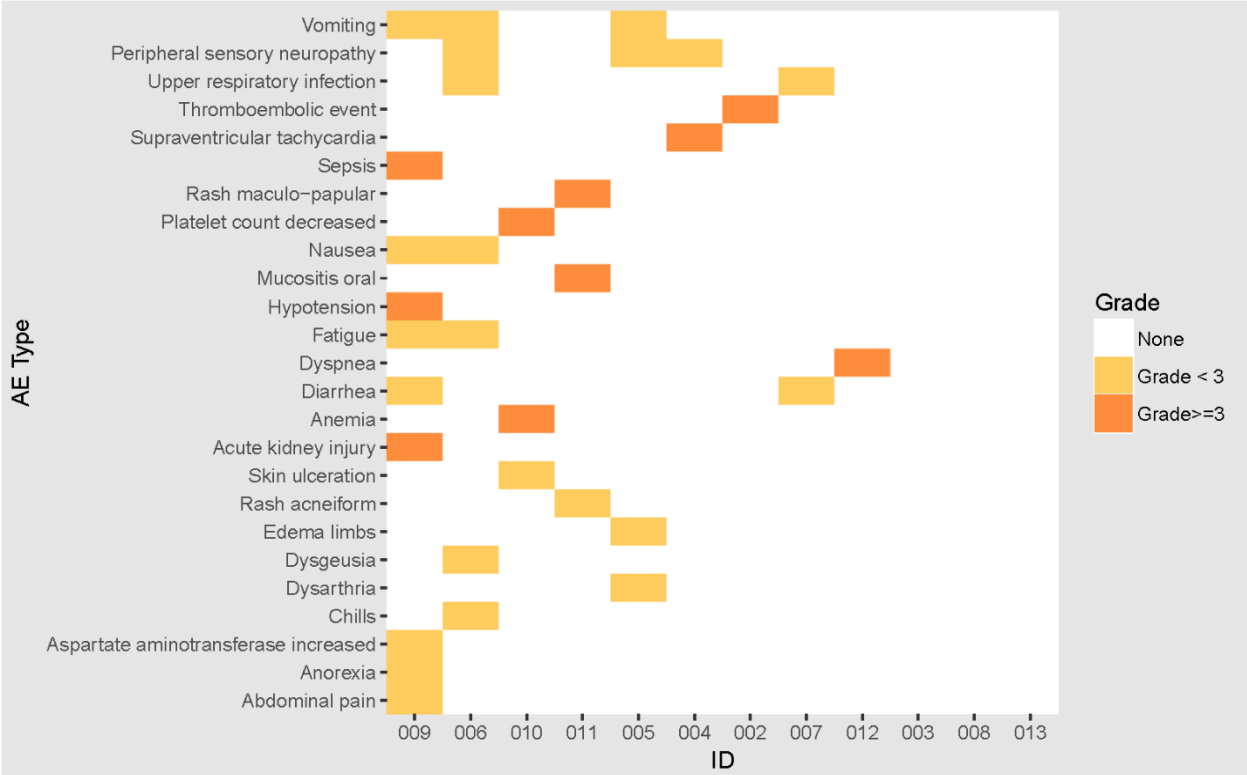
Pain in extremity	1(8)	0	0	0
Pruritus	2(17)	0	0	0
Rash acneiform	2(17)	0	1(8)	0
Rash maculopapular	2(17)	1(8)	1(8)	1(8)
Dehydration	1(8)	0	0	0
Respiratory failure	1(8)	1(8)	0	0
Skin ulceration	1(8)	0	1(8)	0
Supraventricular tachycardia	1(8)	1(8)	1(8)	1(8)
Thromboembolic event	1(8)	1(8)	1(8)	1(8)



**Supplementary Figure 1.** Ixazomib inhibits NF- $\kappa$ B activation and GATA-3 expression. (A) NF- $\kappa$ B (p65 and p105/50) nuclear localization was determined in nuclear extracts obtained from H9 and MyLa cells treated overnight with ixazomib or vehicle control at the concentrations shown. A representative western blot is shown. (B) Nuclear NF- $\kappa$ B (p50) DNA binding was similarly determined by ELISA. (C) GATA-3 expression was determined in H9 and MyLa whole cell lysates after ixazomib treatment, as indicated. A representative western blot is shown. (D, E) GATA-3 expression was determined by intracellular flow cytometry (GATA-3, dark gray histogram; isotype control, open histogram) in purified primary T-cell lymphoma cells cultured with ixazomib (200 nM) or vehicle control for 24 hours. Representative histograms are shown in (D) and data independent patients (n=5) summarized in (E).



**Supplementary Figure 2.** Progression-free and overall survival.



**Supplementary Figure 3.** Patient-specific adverse events stratified by severity.