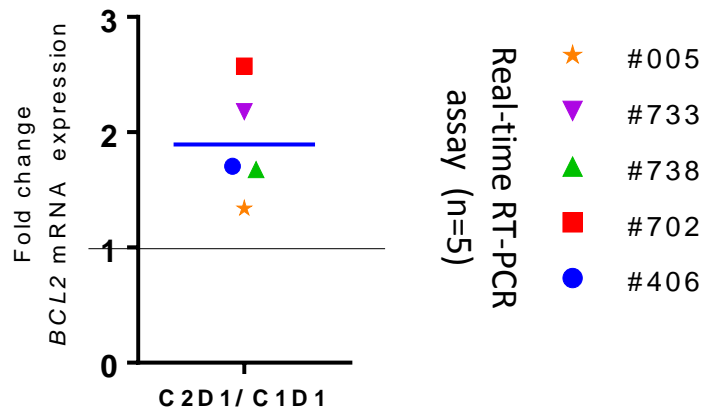
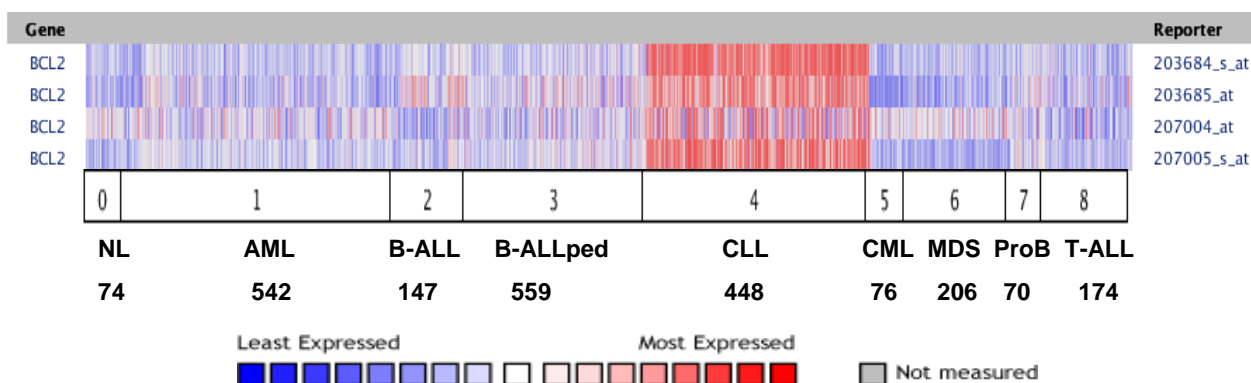


**Supplemental Figure 1.** Changes in absolute lymphocyte count (ALC) in the peripheral blood of patients during first four weeks of duvelisib therapy. Data on pretreatment and at 4-2weeks are shown in Figure 1A. Three patient samples (#228, 317, 733) showed decrease in ALC at week 4.



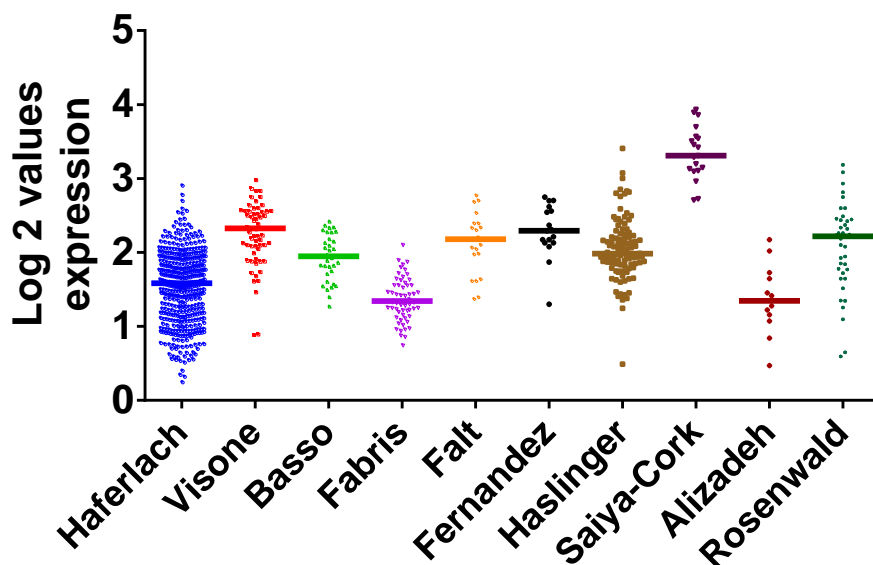
**Supplemental Figure 2.** Fold change in *BCL2* mRNA expression in CLL cells after one cycle (28 days) of duvelisib therapy. CLL cells were isolated from peripheral blood of patients before and after a cycle of duvelisib treatment and RNA was isolated and real-time RT-PCR assay was done to quantitate *BCL2* transcript. Each symbol represents a patient sample. C2D1, cycle 2 day 1; C1D1, cycle 1 day 1.

A



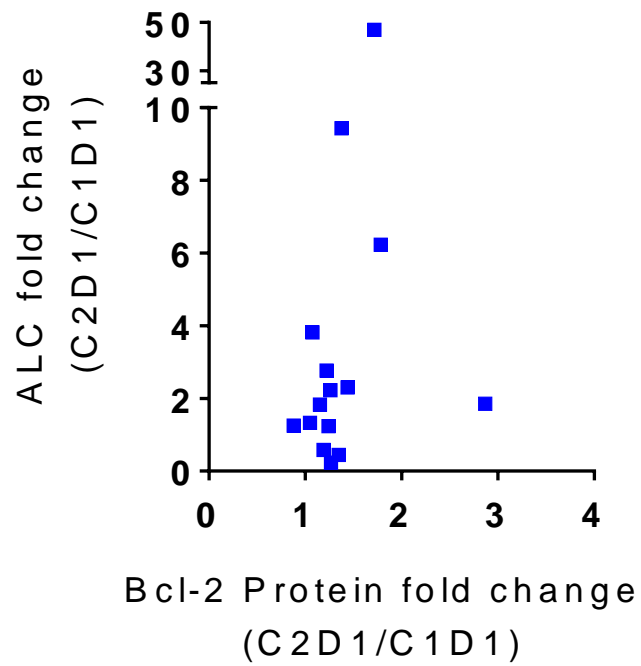
Note: Grouped by Cancer Type: log<sub>2</sub> median-centered intensity. Colors are z-score normalized to depict relative values within rows. They cannot be used to compare values between rows.

B

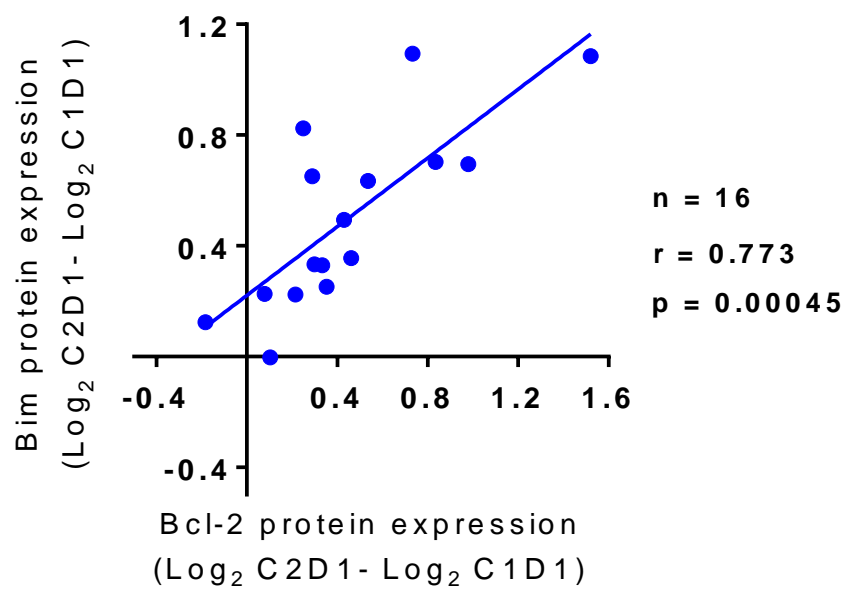


Different datasets cannot be used to compare differences in values of BCL-2 expression rather indicate expression level of BCL-2 gene in respective dataset.

**Supplemental Figure 3.** A) Comparison of *BCL2* mRNA expression in CLL cells compared to that in normal lymphocytes or other leukemia cells. NL, normal lymphocyte; AML, acute myelogenous leukemia; B-ALL, B-cell acute lymphoblastic leukemia; ped, pediatric; CLL, chronic lymphocytic leukemia; CML, chronic myelogenous leukemia; MDS, myelodysplastic syndrome; proB; pro-B-cell lymphocytic leukemia; T-ALL, T-cell acute lymphoblastic leukemia. Numbers under diagnosis represent total sample size per disease. B) Endogenous expression of *BCL2* mRNA in CLL cells (retrospective Oncomine data) in different datasets. X-axis indicates first author's name from the respective publication. References are provided in the Supplemental Methods. Oncomine Source: <https://www.oncomine.com/resource/main.html#d:149670397>.



**Supplemental Figure 4.** Comparison of fold change in absolute lymphocyte count (ALC) versus fold change in Bcl-2 protein expression measured through RPPA analysis after one cycle of duvelisib therapy. C1D1, cycle 1 day 1; C2D1, cycle 2 day 1



**Supplemental Figure 5.** Correlation of fold-change in Bcl-2 protein expression with that in Bim protein expression after one cycle of duvelisib treatment. Protein expressions of Bcl-2 and Bim from 16 CLL samples were measured using RPPA analysis as described in materials and methods. C1D1, cycle 1 day 1; C2D1, cycle 2 day 1.