# Self-Reported Financial Difficulties Among Patients with Multiple Myeloma and Chronic Lymphocytic Leukemia Treated at U.S. Community Oncology Clinics (Alliance A231602CD)

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# **Contributorship Statement:**

Gunn, McCue, Dockter analyzed and interpreted the data, drafted the initial manuscript, and reviewed and revised the manuscript for important intellectual content.

Conti, Dusetzina, Bennett, Weiss, Rapkin, Gracia, Jazowski conceptualized and designed the study, analyzed and interpreted the data, drafted the initial manuscript, reviewed and revised the manuscript for important intellectual content, and provided study supervision.

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All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

Abstract (word count: 299 max)

**Objectives:** To estimate the proportion and correlates of self-reported financial difficulty among patients with multiple myeloma (MM) or chronic lymphocytic leukemia (CLL).

**Setting:** 23 U.S. community and minority oncology practice sites affiliated with the National Cancer Institute Community Oncology Research Program (NCORP).

**Participants:** 521 patients ( $\geq$ 18 years) with MM or CLL were consented and 416 responded to a survey (completion rate=79.8%). Respondents had a MM diagnosis (74.0%), an associate degree or higher (53.4%), were White (89.2%), insured (100%) and treated with clinician-administered drugs (68.0%).

**Interventions:** Observational, prospective, protocol-based survey administered in 2019-2020.

**Primary and secondary outcome measures:** Financial difficulty was assessed using a single-item standard measure, the EORTC QLQC30: "Has your physical condition or medical treatment caused you financial difficulties in the past year?" and using an 'any-or-none' composite measure of 22 items assessing financial difficulty, worries and the use of cost-coping strategies. Multivariable logistic regression models assessed the association between financial difficulty, diagnosis, and socioeconomic and treatment characteristics.

**Results:** 16.8% reported experiencing financial difficulty using the single-item measure and 60.3% using the composite measure. Most frequently endorsed items in the composite measure were financial worry about having to pay large medical bills related to cancer and difficulty paying medical bills. Financial difficulty using the single-item measure was associated with having MM versus CLL (adjusted odds ratio [aOR], 0.34; 95% CI, 0.13-0.84; *P*=.02), having insurance other than Medicare (aOR, 2.53; 95% CI, 1.37-4.66; *P*=.003), being non-White (aOR, 2.21; 95% CI, 1.04-4.72; *P*=.04), and having a high school education or below (aOR, 0.36; 95% CI, 0.21-0.64; *P*=.001). Financial difficulty using the composite measure was associated with having a high school education or below (aOR, 0.62; 95% CI, 0.41-0.94; *P*=.03).

**Conclusions:** U.S. patients with blood cancer report financial difficulty, especially those with low socio-economic status. Evidence-based and targeted interventions are needed.

# **Study Strengths and Limitations**

#### Strengths

• NCORP, a program of the National Cancer Institute (NCI), is a national network for cancer clinical trials and care delivery studies that is comprised of 7 research bases and 46 community sites across the U.S., 14 of which are designated as Minority/Underserved community sites. The study had strong engagement and participation across diverse NCORP Sites across the country and their affiliates. Strong site engagement resulted in high patient recruitment and retention rates for this study (79.8%), despite coincident timing with the initial stages of the COVID-19 pandemic.

- The survey tool was composed of previously validated items that were modified for this population and new questions that were evaluated for comprehension, which facilitates comparison of our findings to others previously published. Patients targeted for recruitment were treated in the community and recruitment aimed to represent the socioeconomic characteristics of the prevalent patient population. The study relied on both self-report and medical chart abstraction to establish key dependent and independent variables.
- The primary outcome variable was a previously developed, and empirically tested measure, supporting study internal and external validity. We also used a secondary composite measure of financial difficulty to present a more holistic picture of how cancer diagnosis and treatment impact patients' daily lives and inform decisions to delay or forego care and use cost-coping strategies. By capturing specific worries, decisions and strategies, the composite measure indicates areas where there is a need for greater patient engagement and resource provision at the site of care.

## Limitations

- Among 105 participants who were not included in the final sample, the majority (n=66) were excluded from analysis because they could not be contacted within the 8-week period due to unexpectedly high recruitment volumes across sites.
- While NCORP sites from across the country participated in the study, 60% of patients recruited to the study were from the Midwest. Although this is the most representative study of financial difficulty in U.S. blood cancer patients to date, our findings may not be fully generalizable to the national CLL and MM communities due to these limitations.

# **Background**

The blood cancers multiple myeloma (MM) and chronic lymphocytic leukemia (CLL) represent a small percentage of all cancers in the United States (U.S.); however, their treatment costs are among the highest. While treatment advances, including several new high-cost prescription drugs, have resulted in greater survivorship and improved quality of life, out-of-pocket costs and financial difficulties encountered over the course of a cancer diagnosis and prolonged treatment are a growing concern among patients, their families, physicians and national multi-stakeholder groups. 5–12

Reports suggest that U.S. patients with cancer may be at risk of treatment-related financial difficulty. <sup>13–16</sup> Specifically, patients younger than 65, with lower household incomes and financial literacy scores, people of color, and those living in rural areas are more likely to experience financial difficulty. <sup>17–21</sup> Financial difficulty includes an inability to pay for basic necessities such as food and utilities, as well as the presence of medical debt and high out-of-pocket spending relative to income. <sup>22</sup> Financial difficulty is associated with various cost-coping strategies including skipping medication, taking less medication or not filling a prescription. <sup>6,23–26</sup>

Yabroff et al.<sup>27</sup> offered a model of financial difficulty founded on the assumption that patients with cancer face a decision to be treated based on an expectation of the benefits and costs of treatment. Self-reported financial difficulty each year can occur because a patient elects to be treated, but lacks sufficient resources to manage the expense of treatment.<sup>28–30</sup> Yabroff suggested that there are a range of factors, including policy, practice, provider and patient characteristics, which interact to shape patients' experiences of financial difficulty and their behaviors to cope with difficulty. Patients with MM or CLL cannot be cured and have a protracted course of treatment which is associated with decrements in quality of life.<sup>31,32</sup> Treatments are progressive and multimodal and often include diagnostic monitoring, frequent physician visits, use of expensive clinician or orally-administered drugs, hospitalizations to address adverse events associated with diagnosis and treatment, and, if necessary, stem cell transplantation, CAR-T therapy and associated care. The coordination and costs of these activities may deplete patients' and their families' financial resources, interfere with their ability to work, and make it difficult to afford other necessities.<sup>33,34</sup>

This Alliance/NCI protocol-based study sought to describe self-reported financial difficulty among U.S. patients with MM or CLL and identify factors associated with such difficulty. Our pre-specified hypotheses were that patient self-reported financial difficulty is associated with diagnosis, treatment and socioeconomic characteristics including patient sex, race and ethnicity, education and the presence and type insurance coverage.

#### **Methods**

### Study Design

A231602CD was a multi-centered observational, prospective study of patients diagnosed with MM or CLL and receiving treatment at a National Cancer Institute Community Oncology Research Program (NCORP) site (clinicaltrials.gov study identifier NCT03870633). NCORP, a program of the National Cancer Institute (NCI), is a national network for cancer clinical trials and care delivery studies that is comprised of 7 research bases and 46 community sites across the U.S., 14 of which are designated as Minority/Underserved community sites. NCORP sites are

consortia of researchers, hospitals, practices, medical centers, and other groups that provide healthcare services. The study was administered through the Alliance for Clinical Trials in Oncology research base, and the NCI Central Institutional Review Board (CIRB) served as the IRB of record. All NCORP community sites were invited to participate in the study. NCORP site staff recruited patients based on study eligibility criteria and a limited medical record review, and they obtained written, remote, verbal, or electronic consent. Participants were mailed a \$20 gift card upon completion of the 60-minute telephone survey administered by the study team. Between March 2019 and January 2021, 521 patients from 23 NCORP sites and their 66 affiliated locations were registered to the study. Participating sites and the number of patients they accrued are listed in **eTable 1** in the Supplement.

## **Participating Patients**

Study eligibility was restricted to adult patients (≥18 years of age) who (1) had been prescribed or recommended to receive drug-based anticancer therapy, whether administered orally or by infusion, within the prior 12 months; (2) were not currently enrolled in a clinical trial in which a drug was supplied; and (3) were able to read and comprehend English or Spanish. Patients with a psychiatric illness or other mental impairment that would preclude their ability to give informed consent or respond to the telephone survey were excluded from the study.

# Survey Design

The study design was approved by the Alliance/NCI and conducted per protocol. The study used a comprehensive and theoretically grounded patient financial assessment survey comprising multiple domains, including financial difficulty, patient socioeconomic indicators, and health and well-being (eAppendix). Most questionnaire items were from validated national surveys, or from well-established patient-reported outcome instruments. Items developed or modified for this survey were pilot tested among patients with MM or CLL. All items had closed-ended responses, with recall periods of either "now" or "in the past 12 months." In some cases, the recall period of previously published items was modified to accommodate the study design; these changes were reviewed by a survey methodologist in accordance with guidelines published by Stull et al.<sup>36</sup>

Self-reported socioeconomic information included sex, race, education level, and insurance type. Additionally, NCORP site staff abstracted the following MM or CLL related information from the medical records of consented patients: date of diagnosis, treatment history and current treatments, including treatment initiation dates. Non-cancer related information included date or birth and current comorbidities. The medical abstraction applied to the past 12 months, with some exceptions, such as date of diagnosis, which may have been outside this window. Exposure to clinician-administered anticancer drugs was also measured (see eTable 2 in the Supplement for full list of anticancer drugs that were considered clinician-administered and their frequency of use).

#### **Outcome Measures**

Financial difficulty was assessed using a single-item from the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire – Core 30<sup>37–39</sup> (EORTC QLQ-

C30) with a modified recall period: "Has your physical condition or medical treatment caused you financial difficulties in the past year?" The EORTC-QLQ-C30 is a cancer specific instrument developed three decades ago by international researchers. <sup>1</sup> Due to the salience of financial difficulties and the typically long duration for chronically ill patients, a 12-month recall period was appropriate and based on theoretical work on recall periods. <sup>36</sup> Based on previously published scoring of the instrument and per Alliance/NCI approved study protocol in the analytical models, participant responses were dichotomized (i.e., "Not at all" or "A little" classified as No, "Quite a bit" and "Very much" classified as Yes).

Also in pre-planned analyses approved in the Alliance/NCI study protocol, a composite measure was created to capture additional aspects of financial difficulty. The composite measure included the following topics based on theoretical relevance (see **eAppendix** in the Supplement for full details): Difficulty Paying Medical Bills (Questions 1, 2, 21), Delaying or Foregoing Medical Care (Questions 4, 6, 6a-6f), Financial Worry (Questions 9, 10, 11, 12, 20), Cost-Coping Strategies (Questions 16a-c, 16f), and Treatment-Related Debt or Bankruptcy (Questions 17 and 18). Each question was designed to be answered by respondents as either yes/no. To determine the number of factors underlying these 22 items, an exploratory factor analysis and a scree test was performed;<sup>40</sup> the latter identifies the "elbow" of a scree plot and retains all factors above the elbow. The scree plot (**eFigure** in the Supplement) supported a unidimensional construct and the one-factor model had acceptable fit,  $\chi^2(209)=501.93$ , P<.001, RMSEA=0.059, CFI=0.96. If the patient endorsed any of the 22 items, then they were categorized in a binary variable as having financial difficulty per the composite measure. In order to facilitate ease of interpretation of the composition measure, an 'any-or-none' scoring was applied.

#### **Statistical Analysis**

Patient socioeconomic characteristics were examined descriptively overall, by cancer type, and according to report of financial difficulty, based on responses to the single-item measure and the composite measure. As all patients completed the survey in English, language was not included among the covariates examined.

Two multivariable logistic regression models were estimated separately for the two outcomes to assess the associations between patient characteristics and financial difficulty. The predictors for both models included sex (male/female), race (White/non-White), cancer type (MM/CLL), comorbidity (Charlson score=0/Charlson score≥1), treatment (not clinician-administered/clinician-administered), education (High School Diploma, GED, or below/above High School Diploma), and insurance presence (presence or absence) and insurance type (Medicare/Medicare + Other/Other). Adjusted and unadjusted odds ratios (aORs and ORs, respectively), confidence intervals (CIs), and *P* values were calculated for each predictor. We used listwise deletion to account for missing data.

The relationship between the single-item measure and composite measure of financial difficulty was examined by calculating the proportion and CI of patients endorsing each item in the composite measure for the total sample, split by patients who endorsed the single-item measure and those who did not, and split by MM and CLL diagnosis.

For all models and comparisons, 2-sided  $\alpha$ =.05 was used to determine statistical significance with no adjustment for multiplicity. All analyses were performed by the Alliance

Statistics and Data Center using SAS ® version 9.4 with data frozen on October 6, 2021. STROBE reporting guidelines were followed.

#### **Results**

Of the 521 patients consented to the study, 416 completed all or part of the Patient Survey, for a 79.8% completion rate (**Figure 1**). Patients were enrolled from 23 NCORP sites and their 66 affiliated locations.

Patients with MM represented 75% (n=308) of the full sample (n=416). Among MM and CLL patients, most respondents were male (56.5%; n=235), White (89.2%; n=371), had an associate degree or higher (54.3%; n=222/409), and were treated with a clinician-administered therapeutic (68.0%; n=283) (**Table 1**). All patients reported they were insured (**Table 1**). Characteristics were similar by cancer types except CLL patients were older (71.2 vs. 67.5; P<.001), less likely to currently be taking clinician-administered therapies (26.9% vs. 82.5%; P<.001), and more likely to have Medicare plus another form of insurance (76.9% vs. 63.3%; P=.03) compared to MM patients.

# Single-item Measure of Financial Difficulty

Across the 416 patients, 16.8% (95% CI, 13.4%-20.8%) endorsed financial difficulty by responding "Quite a bit" or "Very much" to the item "Has your physical condition or medical treatment caused you financial difficulties in the past year?" The socioeconomic characteristics of those who reported financial difficulty based on this single item are summarized in **eTable 3** in the Supplement.

After applying listwise deletion to the seven predictors and outcome variable used in the multivariable logistic regression model, the analytic sample consisted of 408 patients. The multivariable analyses are presented in **Table 2**. Patients with CLL had significantly lower odds of reporting financial difficulty than patients with MM (aOR, 0.34; 95% CI, 0.13-0.84; P=.02) as did patients who have above a high school education compared to patients with a high school education or below (aOR, 0.36; 95% CI, 0.21-0.64; P=.001). Additionally, patients who did not have Medicare had significantly greater odds of reporting financial difficulty than patients with Medicare plus one other type of insurance (aOR, 2.53; 95% CI, 1.37-4.66; P=.003) as did non-White patients compared to White patients (aOR, 2.21; 95% CI, 1.04-4.72; P=.04).

As a sensitivity analysis, we investigated other dichotomizations of the single measure. These results are summarized in **eTable 4**. Additionally, we provide the proportions of endorsement for each category of the primary endpoint for the overall sample and split by diagnosis in **eTable 5**.

## Composite Measure of Financial Difficulty

All respondents who completed the single-item measure also completed the composite measure of financial difficulty (i.e., 416 patients). More than half of respondents (n=251) affirmed at least one of the 22 items in the composite measure of financial difficulty (60.3%; 95% CI, 55.6%-64.9%). The most frequently endorsed item was, "In the past 12 months, have you ever worried about having to pay large medical bills related to your cancer? (Part 1, Question 20)." Other commonly endorsed items include difficulty paying medical bills in general and forgoing dental care. **Table 3** presents the proportion and CI of patients endorsing each of

the items in the composite measure of financial difficulty for those patients who endorsed the single-item measure of financial difficulty and for those patients who indicated financial difficulty according to the any-or-none composite.

The socioeconomic characteristics of those who endorsed the composite measure of financial difficulty are summarized in **eTable 3** in the Supplement. **eTable 6** in the Supplement presents the proportion of patients endorsing each of the items in the composite measure of financial difficulty split by cancer type. For most items, a greater proportion of MM patients endorsed the item compared to CLL patients.

The logistic regression with the composite measure of financial difficulty as the outcome is presented in **Table 2** for the 408 patients with complete data. Education was significantly associated with the composite measure of financial difficulty such that patients with above a high school education had lower odds of reporting financial difficulty compared to patients with a high school education or below (aOR, 0.62; 95% CI, 0.41-0.94; P=.03).

# Relation Between Single-item Measure and Composite Measure of Financial Difficulty

The single-item measure and the any-or-none composite measure of financial difficulty were dependent such that all 70 patients who endorsed the single-item measure endorsed one or more items of the composite measure. As a sensitivity analysis, we investigated differences between patients who indicated financial difficulty according to both the single-item measure and composite measure and those who did not. We created 3 non-overlapping groups: endorsed the single-item measure, endorsed the composite but not the single-item measure, and did not endorse either measure. We tested for statistical differences in patient sociodemographic and comorbidity information by this 3-group categorization and the results are presented in **Table 4** with the corresponding *P* value. If we assume endorsing the single-item measure indicates the most financial difficulty and not endorsing either measure indicates the least, then as financial difficulty increased, patients were more likely to be younger, be female, be non-White, be less educated, more likely to have MM rather than CLL, and more likely to have some form of insurance other than Medicare.

#### **Discussion**

In this large, multi-centered protocol-based study of MM and CLL patients conducted across 23 NCORP sites and their 66 affiliates, 16.8% specifically reported experiencing financial difficulty over the past 12 months using a single-item measure, while 60.3% endorsed financial difficulty items using a composite measure with questions about financial worry and difficulty paying medical bills eliciting the most affirmative responses. All survey respondents were insured, largely by Medicare. Some were insured by a primary and secondary payer, indicating less potential out of pocket costs associated with cancer treatment. Respondents endorsing both the single-item and composite measure of financial difficulty were significantly more likely to report having less education. For the single-item measure, reports of financial difficulty were also significantly associated with having MM, having insurance other than Medicare, and being non-White. Patients with MM tended to have higher endorsement on all items in the composite measure of financial difficulty.

This is the first multi-center study to assess the proportion of patients with financial difficulties and its correlates among MM and CLL patients treated at NCI NCORP sites and

reports significant financial difficulties among patients who have been prescribed treatment. The findings are important, because although general financial difficulties associated with cancer treatment are well-documented, <sup>13–15,27,43,44</sup> they are still considered to be underreported, and a comprehensive understanding of the range of financial difficulty types, worries and cost-coping strategies among this specific population has been, to date, limited. <sup>45</sup> The findings of this study are also concerning for patients with blood cancers, their families, treating physicians, and policymakers. As new treatments provide improvements in patient outcomes, including survival, there has been a corresponding rise in treatment costs. <sup>41</sup> Compared to CLL, MM treatments often involve multiple, expensive therapies with greater side effects that negatively impact a patient's ability to work and quality of life. <sup>42</sup> The results of this study also add to a growing body of evidence suggesting U.S. families are financially vulnerable. The relationships between general financial stress and specific financial burden related to cancer diagnosis and treatment are likely complex. The study endeavored to separate the latter from the former, but further study of these relationships is needed.

This study has several additional strengths. First, we used a survey tool composed of previously validated items that were modified for this population and new questions that were evaluated for comprehension, which facilitates comparison of our findings to others previously published. Findings from this survey are in line with research that demonstrate how experiences of financial difficulty impact the use of cost coping strategies (including treatment nonadherence), <sup>2</sup> feelings of distress, <sup>3 4</sup> and family members/caregivers. <sup>5</sup> Additionally, our questions on support seeking behaviors are supported by various studies that highlight the importance of engaging the care team <sup>6</sup> and financial navigators <sup>7</sup> in providing support and resources.

Second, our use of the composite measure of financial difficulty sought to present a more holistic picture of how cancer diagnosis and treatment impact patients' daily lives and inform decisions to delay or forego care and use cost-coping strategies. By capturing specific worries, decisions and strategies, the composite measure indicates areas where there is a need for greater patient engagement and resource provision at the site of care. For instance, patients expressed worry or concern about paying for household utilities, cancer and non-cancer related care and indicated delaying or foregoing treatment for cancer and non-cancer related care in response to cost concerns; they also reported using cost-coping strategies for cancer and non-cancer related care (**Table 3**). Patients may be implementing cost-coping strategies without recognizing the connection between these strategies and the financial difficulty they face.

Third, this study had strong engagement and participation across 23 diverse NCORP Sites across the country and their 66 affiliates. Strong site engagement resulted in high patient recruitment and retention rates for this study (79.8%). Between December 2019 and January 2021, most participants (n=490) were recruited to the study, despite coincident timing with the initial stages of the COVID-19 pandemic.

This study also has several additional limitations. First, among 105 participants who were not included in the final sample, the majority (n=66) were excluded from analysis because they could not be contacted within the 8-week period due to unexpectedly high recruitment volumes across sites. Second, the sample itself was not representative of the national MM and CLL patient populations. Black or African-American patients make up 20.5% of the MM population<sup>32</sup> and 5.8% of the CLL population,<sup>32</sup> respectively. However, in this study, they only accounted for 7.8% of the MM sample and 7.4% of the CLL sample. Although our research team had identified

Minority and Underserved NCORP Sites to participate in the study, seven were unable to recruit prior to the study closure due to site-related issues (e.g., electronic health record conversions, staff shortages) and/or COVID-19 related delays. Third, while NCORP sites from across the country participated in the study, 60% of patients recruited to the study were from the Midwest. Although this is the most representative study of financial difficulty in U.S. blood cancer patients to date, our findings may not be fully generalizable to the national CLL and MM communities due to these limitations, we did not adjust for multiplicity.

Finally, this study focused on patient-level financial difficulties associated with cancer treatments, as we believe cancer-treatment related financial difficulty is at core a patient experience. However, we are aware of and endorse the emphasis made by previous studies of patient-level financial difficulty on the broader context in which care is provided. Specifically, previous studies have emphasized that financial difficulties are also related to practice-level, payer-level and health system-wide characteristics. Our study captured additional practice-level characteristics of the sites enrolling patients into this study, and future planned analyses will focus on those outcomes.

More generally, the present aim of identifying components of patient-level financial difficulty and correlates of financial difficulty was intended to inform the future development of evidence-based and targeted interventions at both the patient and the practice levels. Previous studies have identified barriers to providing and accessing financial navigation services that disproportionately impact vulnerable patient populations, including rural, minority and younger patients. Planned follow-on studies have been designed to better understand patient experiences related to the composite measure topics (e.g., financial worry, use of cost coping strategies) and examine practice and provider engagement with identifying and ameliorating patient financial difficulty. Specific intervention goals may include developing more comprehensive screening practices and counseling to address financial concerns and mitigate the use of cost coping strategies, identifying communication tools to elicit financial concerns and specific preferences for types of assistance from patients, and advanced financial planning to reduce delays in the initiation or continuity of treatment. Advanced financial planning to

One important implication of our study's results is that patients who endorsed the single-item measure had a higher proportion of endorsement on items in the composite measure compared to patients who did not (**Table 3**). Moreover, we found that patients who reported financial difficulty using the composite measure did not always report financial difficulty on the single item measure. This suggests that future clinical interventions and research should consider using both the single item and the composite measure elements to screen patients for financial difficulty. Use of the composite measure in this context may also provide a way for physicians and sites to engage in specific discussions with patients and to identify resources that can help patients manage care and non-care related costs.

#### **Conclusion**

This is the first multicenter study to systematically assess the proportion of patients with financial difficulties and its correlates among MM and CLL patients treated at NCI NCORP sites. We found that U.S. patients with blood cancers experience financial difficulty, especially among those with low socioeconomic status. Evidence-based and targeted interventions to mitigate financial difficulty among U.S. blood cancer patients are needed.

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**Figure 1: Consort Diagram** 

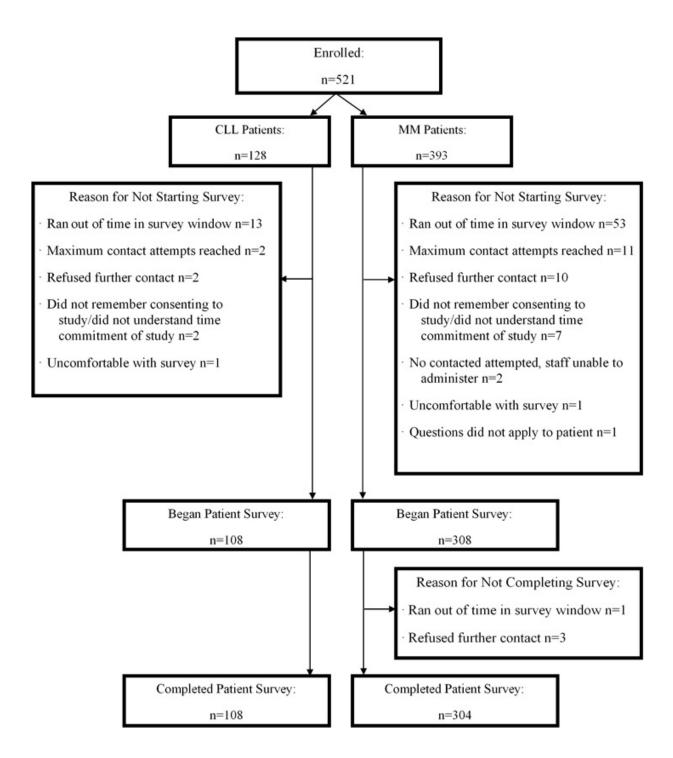


Table 1. Socioeconomics and Treatment Characteristics of the 416 Patients Who Responded to All or Part of the Patient Survey

	MM	CLL	Total	
Characteristics	No. (%)	No. (%)	No. (%)	P value <sup>a</sup>
No. of patients	308	108	416	NA
Age in years, Mean (SD)	67.5 (9.79)	71.2 (8.01)	68.5 (9.49)	<.001 <sup>b</sup>
Sex				.04
Female	143 (46.4)	38 (35.2)	181 (43.5)	
Male	165 (53.6)	70 (64.8)	235 (56.5)	
Race				.33
White	272 (88.3)	99 (91.7)	371 (89.2)	
Non-White <sup>c</sup>	36 (11.7)	9 (8.3)	45 (10.8)	
Geographic Region <sup>d</sup>				.34
Northeast	20 (6.5)	9 (8.3)	29 (7.0)	
Midwest	195 (63.3)	59 (54.6)	254 (61.1)	
South	78 (25.3)	31 (28.7)	109 (26.2)	
West	15 (4.9)	9 (8.3)	24 (5.8)	
Education	, ,	,		.21
High School Diploma/GED or below	132 (43.9)	55 (50.9)	187 (45.7)	
Above High School	169 (56.1)	53 (49.1)	222 (54.3)	
Missing	7	0	7	
Home Ownership Status				.31
Homeowner	255 (83.6)	96 (89.7)	351 (85.2)	
Non-Homeowner	50 (16.4)	11 (10.3)	61 (14.8)	
Missing	3	1	4	
Reported Household Income				.87
Less than \$20,000	40 (14.4)	10 (10)	50 (13.3)	
\$20,000 to \$39,999	52 (18.8)	19 (19)	71 (18.9)	
\$40,000 to \$59,999	49 (17.7)	22 (22)	71 (18.9)	
\$60,000 to \$79,999	42 (15.2)	15 (15)	57 (15.2)	
\$80,000 to \$99,999	30 (10.8)	10 (10)	40 (10.6)	
\$100,000 or more	64 (23.1)	23 (23)	87 (23.1)	
Missing	31	9	40	
Insurance Type	-			.03
Medicare only	18 (5.8)	5 (4.6)	23 (5.5)	
Medicare + other insurance	195 (63.3)	83 (76.9)	278 (66.8)	
Other <sup>e</sup>	95 (30.8)	20 (18.5)	115 (27.6)	
Charlson Comorbidity Index score	()	- ( /	- (,	.94
1 or more	110 (35.7)	39 (36.1)	149 (35.8)	
	· · · · · /	, · · · · /	( / - /	

	MM	CLL	Total	
Characteristics	No. (%)	No. (%)	No. (%)	P value <sup>a</sup>
0	198 (64.3)	69 (63.9)	267 (64.2)	
Treatment Received				<.001
Clinician-Administered Therapeutic	254 (82.5)	29 (26.9)	283 (68.0)	
Not a Clinician-Administered Therapeutic	54 (17.5)	79 (73.1)	133 (32.0)	
Single-item Measure of Financial Difficulty				.002
Yes	62 (20.1)	8 (7.4)	70 (16.8)	
No	246 (79.9)	100 (92.6)	346 (83.2)	
Composite Measure of Financial Difficulty				.62
Yes	188 (61.0)	63 (58.3)	251 (60.3)	
No	120 (39.0)	45 (41.7)	165 (39.7)	

Abbreviations: NA: Not Applicable, MM: Multiple Myeloma, CLL: Chronic Lymphocytic Leukemia.

<sup>&</sup>lt;sup>a</sup> All P values come from a Chi-Square test unless otherwise noted.

<sup>&</sup>lt;sup>b</sup> Kruskal-Wallis *P* value.

<sup>&</sup>lt;sup>c</sup> Non-White race captures patients who selected American Indian or Alaska Native, Asian, Black, or African American, Native Hawaiian, or other Pacific Islander, Unknown, Not Reported

<sup>&</sup>lt;sup>d</sup> Geographic Regions were divided according to the United States census divisions and regions: **Northeast:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; **Midwest:** Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; **South:** Delaware, Maryland, Virginia, West Virginia, Kentucky, North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma, Washington DC; **West:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, California, Oregon, Washington, Alaska, and Hawaii.

<sup>&</sup>lt;sup>e</sup> Other includes: Private Insurance, Medicaid, Military Sponsored (including CHAMPUS & TRICARE), Veterans Sponsored, Not Otherwise Specified (NOS), and any combination of those listed here.

Table 2. Multivariable Logistic Regression Results of Survey Respondent Self-Report of Financial Difficulty

Model	<b>Unadjusted Odds Ratios</b> (95% CI)	P value	Adjusted Odds Ratios (95% CI) <sup>a</sup>	P value
Single-item Measure of Financial Difficulty				·
Female	1.32 (0.78, 2.21)	.30	1.09 (0.62, 1.91)	.77
Non-White	2.97 (1.49, 5.90)	.002	2.21 (1.04, 4.72)	.04
Comorbidity	1.39 (0.82, 2.36)	.27	1.53 (0.86, 2.75)	.15
CLL	0.31 (0.15, 0.68)	.003	0.34 (0.13, 0.84)	.02
Clinician-Administered Treatment	1.72 (0.94, 3.15)	.08	1.02 (0.49, 2.12)	.96
Above HS Education	0.42 (0.24, 0.71)	.001	0.36 (0.21, 0.64)	.001
Medicare + Other <sup>b</sup>	NA [Reference]	NA	NA [Reference]	NA
Medicare	3.17 (1.21, 8.27)	.02	2.17 (0.77, 6.07)	.14
Other <sup>c</sup>	2.50 (1.43, 4.37)	.001	2.53 (1.37, 4.66)	.003
Composite Measure of Financial Difficulty				
Female	1.35 (0.90, 2.01)	.15	1.28 (0.84, 1.94)	.25
Non-White	1.84 (0.92, 3.69)	.09	1.56 (0.75, 3.23)	.24
Comorbidity	1.28 (0.84, 1.94)	.29	1.27 (0.81, 1.97)	.30
CLL	0.88 (0.56, 1.37)	.57	1.21 (0.71, 2.09)	.48
Clinician-Administered Treatment	1.52 (0.998, 2.32)	.05	1.61 (0.97, 2.68)	.07
Above HS Education	0.62 (0.41, 0.92)	.02	0.62 (0.41, 0.94)	.03
Medicare + Other <sup>b</sup>	NA [Reference]	NA	NA [Reference]	NA
Medicare	3.64 (1.21, 10.98)	.02	3.00 (0.98, 9.21)	.06
Other <sup>c</sup>	1.47 (0.94, 2.32)	.10	1.57 (0.97, 2.54)	.07

Abbreviations: CLL: Chronic Lymphocytic Leukemia, HS: High School, NA: Not Applicable.

<sup>&</sup>lt;sup>a</sup> The adjusted models include all predictors listed in the table.

<sup>&</sup>lt;sup>b</sup> The insurance variable was defined by two dummy variables with patients who have Medicare and another insurance (i.e., Medicare + Other) as the reference group.

<sup>&</sup>lt;sup>c</sup> Other insurance includes: Private Insurance, Medicaid, Military Sponsored (including CHAMPUS & TRICARE), Veterans Sponsored, Not Otherwise Specified (NOS), and any combination.

Table 3. Number of Patients Who Endorsed the Items in Composite Measure of Financial Difficulty by Endorsement of Financial Difficulty of Single-item Measure of Financial Difficulty and Composite Measure

	Proportion 95% exact CI) 49	Proportion (95% exact CI)
	49	
,		
In the past 12 months, did you have problems paying or were unable to pay any medical bills?		88
Include bills for doctors, hospitals, therapists, medication, equipment, nursing home or home.	0.700	0.351
	(0.579, 0.804)	(0.292, 0.413)
Do you or anyone in your family currently have medical bills that you are unable to pay at all?	30	47
(Part 1, Question 2)	0.429	0.187
	(0.311, 0.553)	(0.141, 0.241)
During the past 12 months, have you or someone in your family delayed medical care because	29	56
you were worried about the cost (do not include dental care)? (Part 1, Question 4)	0.414	0.223
	(0.298, 0.538)	(0.173, 0.279)
During the past 12 months, was there a time when you or someone in your family needed	17	29
medical care but didn't get it because you couldn't afford it? (Part 1, Question 5)	0.243	0.116
	(0.148, 0.360)	(0.079, 0.162)
During the past 12 months, was there a time when you needed one of the following, but did not	18	41
get it because you couldn't afford it? <b>Prescription medicine</b> (Part 1, Question 6a)	0.257	0.163
	(0.160, 0.376)	(0.119, 0.215)
During the past 12 months, was there a time when you needed one of the following, but did not	6	12
get it because you couldn't afford it? <b>Mental health care or counseling</b> (Part 1, Question 6b)	0.086	0.048
	(0.032, 0.177)	(0.025, 0.082)
During the past 12 months, was there a time when you needed one of the following, but did not	33	79
get it because you couldn't afford it? <b>Dental care</b> (Part 1, Question 6c)	0.471	0.315
	(0.351, 0.595)	(0.258, 0.376)
During the past 12 months, was there a time when you needed one of the following, but did not	22	46
get it because you couldn't afford it? <b>Eyeglasses</b> (Part 1, Question 6d)	0.314	0.183
	(0.209, 0.436)	(0.137, 0.237)
During the past 12 months, was there a time when you needed one of the following, but did not	13	21
get it because you couldn't afford it? <b>Cancer-related medical care</b> (Part 1, Question 6e)	0.186	0.084
	(0.103, 0.297)	(0.053, 0.125)
During the past 12 months, was there a time when you needed one of the following, but did not	19	31
get it because you couldn't afford it? <b>Non-cancer related medical care</b> (Part 1, Question 6f)	0.271	0.124
	(0.172, 0.391)	(0.086, 0.171)
If you get sicker or have an accident, how worried are you that you will not be able to pay your	40	66
medical bills? (Part 1, Question 9)	0.571	0.263

Survey Question	Endorsed Single-item Measure (n=70) No.	Endorsed One or More Composite Items (n=251)
	Proportion (95% exact CI)	Proportion (95% exact CI)
	(0.448, 0.689)	(0.209, 0.322)
How often in the last 12 months would you say you were worried or stressed about having	42	82
enough money to pay your rent or mortgage? (Part 1, Question 10)	0.600	0.327
	(0.476, 0.715)	(0.269, 0.389)
How often in the last 12 months would you say you were worried or stressed about having	37	66
enough money to buy nutritious meals? (Part 1, Question 11)	0.529	0.263
	(0.406, 0.649)	(0.209, 0.322)
How often in the last 12 months would you say you were worried or stressed about having	41/69	74/250
enough money to pay household utilities such as water, gas, and electricity? (Part 1, Question	0.594	0.296
12)	(0.469, 0.711)	(0.240, 0.357)
During the past 12 months, were any of the following true for you: <b>You skipped medication</b>	17	26
doses to save money (Part 1, Question 16a)	0.243	0.104
	(0.148, 0.360)	(0.069, 0.148)
During the past 12 months, were any of the following true for you: <b>You took less medicine to</b>	16	29
save money (Part 1, Question 16b)	0.229	0.116
	(0.137, 0.345)	(0.079, 0.162)
During the past 12 months, were any of the following true for you: You delayed filling a	28	46
prescription to save money (Part 1, Question 16c)	0.400	0.183
	(0.285, 0.524)	(0.137, 0.237)
During the past 12 months, were any of the following true for you: You used alternative	4	18
therapies to save money (Part 1, Question 16f)	0.057	0.072
	(0.016, 0.139)	(0.043, 0.111)
In the past 12 months, have you or has anyone in your family had to borrow money or go into	31	47
debt because of your cancer, its treatment, or the lasting effects of that treatment? (Part 1,	0.443	0.187
Question 17)	(0.324, 0.567)	(0.141, 0.241)
In the past 12 months, did you or your family file for bankruptcy because of your cancer, its	2	3/250
treatment, or the lasting effects of that treatment? (Part 1, Question 18)	0.029	0.012
	(0.004, 0.099)	(0.003, 0.035)
In the past 12 months, have you ever worried about having to pay large medical bills related to	60	173
your cancer? (Part 1, Question 20)	0.857	0.689
	(0.753, 0.929)	(0.628, 0.746)
Please think about medical care visits for cancer, its treatment, or the lasting effects of that	26	40
treatment in the past 12 months. Have you ever been unable to cover your share of those visits?	0.371	0.159
(Part 1, Question 21)	(0.259, 0.495)	(0.116, 0.211)

Note: Each cell presents the following information: number of patients who answered yes or always/usually/sometimes, the proportion, and the 95% Wilson score confidence interval. If there was missing data, the total number of patients who answered the question was also provided.

Table 4. Patient Demographics and Treatment Characteristics by Self Report of Financial Difficulty by Measure

	No. of Patients (%)					
Variable	Endorsed	Endorsed	Endorsed	P value <sup>a</sup>		
M. CDellente	Single-item Measure	Composite Only	Neither			
No. of Patients	70	181	165	001h		
Age in years, Mean (SD)	64.3 (11.09)	68.0 (9.05)	70.8 (8.58)	<.001 <sup>b</sup>		
Sex	24 (42)	24 (47)		.43		
Female	34 (49)	81 (45)	66 (40)			
Male	36 (51)	100 (55)	99 (60)			
Race				.007		
White	55 (79)	164 (91)	152 (92)			
Non-White <sup>c</sup>	15 (21)	17 (9)	13 (8)			
Geographic Region <sup>d</sup>				.69		
Northeast	5 (7)	11 (6)	13 (8)			
Midwest	42 (60)	111 (61)	101 (61)			
South	19 (27)	52 (29)	38 (23)			
West	4 (6)	7 (4)	13 (8)			
Education				.002		
High School Diploma/GED or below	44 (64)	81 (45)	62 (39)			
Above High School	25 (36)	98 (55)	99 (61)			
Missing	ì	2	4			
Home Ownership Status				.04		
Homeowner	52 (75)	155 (86)	144 (89)			
Non-Homeowner	17 (25)	26 (14)	18 (11)			
Missing	1	0	3			
Reported Household Income				<.001		
Less than \$20,000	19 (29)	24 (15)	7 (5)			
\$20,000 to \$39,999	18 (28)	37 (22)	16 (11)			
\$40,000 to \$59,999	16 (25)	35 (21)	20 (14)			
\$60,000 to \$79,999	6 (9)	20 (12)	31 (21)			
\$80,000 to \$99,999	4 (6)	14 (8)	22 (15)			
\$100,000 or more	2 (3)	36 (23)	49 (34)			
Missing	5	15	20			
Insurance Type		10	20	.003		
Medicare only	7 (10)	12 (7)	4 (3)	.003		
Medicare + other insurance	34 (49)	123 (68)	121 (73)			
Other <sup>e</sup>	29 (41)	46 (25)	40 (24)			
Charlson Comorbidity Index score	29 (41)	TO (23)	TU (24)	.36		

	No. of Patients (%)					
Variable	Endorsed	Endorsed	Endorsed	P value <sup>a</sup>		
	Single-item Measure	Composite Only	Neither			
1 or more	29 (41)	67 (37)	53 (32)			
0	41 (59)	114 (63)	112 (68)			
Treatment Received				.10		
Clinician-Administered Therapeutic	54 (77)	125 (69)	104 (63)			
Not a Clinician-Administered Therapeutic	16 (23)	56 (31)	61 (37)			
Diagnosis				.008		
Multiple Myeloma	62 (89)	126 (70)	120 (73)			
Chronic Lymphocytic Leukemia	8 (11)	55 (30)	45 (27)			

<sup>&</sup>lt;sup>a</sup> All *P* values come from a Chi-Square test unless otherwise noted.

<sup>&</sup>lt;sup>b</sup> Kruskal-Wallis *P* value.

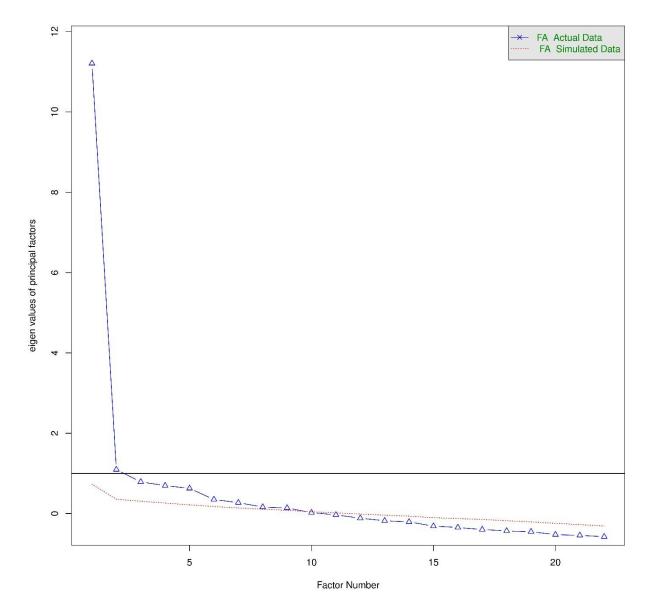
<sup>&</sup>lt;sup>c</sup> White race captures patients who did not select American Indian or Alaska Native, Asian, Black, or African American, Native Hawaiian, or other Pacific Islander, Unknown, Not Reported.

<sup>&</sup>lt;sup>d</sup> Geographic Regions were divided according to the United States census divisions and regions: **Northeast:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; **Midwest:** Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; **South:** Delaware, Maryland, Virginia, West Virginia, Kentucky, North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma, Washington DC; **West:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, California, Oregon, Washington, Alaska, and Hawaii.

<sup>&</sup>lt;sup>e</sup> Other includes: Private Insurance, Medicaid, Military Sponsored (including CHAMPUS & TRICARE), Veterans Sponsored, Not Otherwise Specified (NOS), and any combination of those listed here.

eAppendix: Study Protocol with Patient Survey

eFigure. Scree Plot of Composite Measure



eTable 1. Patient Enrollment by Site and by Diagnosis

Site	CTEPID	Main NCORP Site	MM	CLL	Total
Munson Medical Center	MI059	Cancer Research Consortium of West Michigan NCORP	4	1	5
Spectrum Health at Butterworth Campus	MI132	Cancer Research Consortium of West Michigan NCORP	3	1	4
West Michigan Cancer Center	MI080	Cancer Research Consortium of West Michigan NCORP	3	0	3
Carle Cancer Center	IL168	Carle Cancer Center NCORP	7	1	8
Carle on Vermilion	IL405	Carle Cancer Center NCORP	1	1	2
Licking Memorial Hospital	OH122	Columbus NCORP	5	2	7
OhioHealth Mansfield Hospital	ОН067	Columbus NCORP	3	0	3
The Mark H Zangmeister Center	OH124	Columbus NCORP	2	1	3
Southern Ohio Medical Center	OH245	Columbus NCORP	1	0	1
Saint Vincent Hospital Cancer Center Green Bay	WI027	CROWN Consortium NCORP	24	10	34
Aspirus Regional Cancer Center	WI028	CROWN Consortium NCORP	7	1	8
Armes Family Cancer Center	ОН470	Dayton NCORP	10	0	10
Beebe Health Campus	DE040	Delaware Christiana Care NCORP	19	8	27
Medical Oncology Hematology Consultants PA	DE038	Delaware Christiana Care NCORP	8	3	11
Delaware Clinical and Laboratory Physicians PA	DE019	Delaware Christiana Care NCORP	3	4	7
Geisinger Medical Center	PA052	Geisinger Cancer Institute NCORP	7	5	12
Geisinger Wyoming Valley/Henry Cancer Center	PA138	Geisinger Cancer Institute NCORP	3	4	7
Geisinger Medical Group	PA281	Geisinger Cancer Institute NCORP	5	0	5

Geisinger Medical Center- Cancer Center Hazleton	PA209	Geisinger Cancer Institute NCORP	3	0	3
Community Medical Center	PA136	Geisinger Cancer Institute NCORP	1	0	1
Augusta University Medical Center	GA020	Georgia Cares Minority Underserved NCORP	3	0	3
Louisiana Hematology Oncology Associates LLC	LA101	Gulf South Minority Underserved NCORP	2	1	3
Terrebonne General Medical Center	LA135	Gulf South Minority Underserved NCORP	1	1	2
Northshore Oncology Associates-Covington	LA086	Gulf South Minority Underserved NCORP	1	0	1
Ochsner Medical Center Jefferson	LA007	Gulf South Minority Underserved NCORP	1	0	1
Illinois CancerCare-Peoria	IL101	Heartland NCORP	11	9	20
Crossroads Cancer Center	IL208	Heartland NCORP	13	3	16
Cancer Care Specialists of Illinois - Decatur	IL185	Heartland NCORP	8	1	9
Missouri Baptist Medical Center	MO046	Heartland NCORP	7	2	9
Cancer Care Center of O'Fallon	IL413	Heartland NCORP	3	0	3
Medical Oncology and Hematology Associates- Des Moines	IA072	Iowa-Wide Oncology Research Coalition NCORP	16	6	22
Physicians' Clinic of Iowa PC	IA066	Iowa-Wide Oncology Research Coalition NCORP	5	0	5
Kaiser Permanente Northwest	OR035	Kaiser Permanente NCORP	2	3	5
Hennepin County Medical Center	MN013	Metro Minnesota NCORP	7	1	8
Regions Hospital	MN001	Metro Minnesota NCORP	4	0	4
Saint John's Hospital - Healtheast	MN041	Metro Minnesota NCORP	3	1	4
Lakeview Hospital	MN119	Metro Minnesota NCORP	2	1	3

Park Nicollet Clinic - Saint Louis Park	MN014	Metro Minnesota NCORP	2	0	2
Ascension Saint Mary's Hospital	MI142	Michigan Cancer Research Consortium NCORP	1	1	2
Saint Joseph Mercy Hospital	MI013	Michigan Cancer Research Consortium NCORP	2	0	2
Benefis Sletten Cancer Institute	MT020	Montana Cancer Consortium NCORP	3	2	5
Saint Alphonsus Cancer Care Center-Boise	ID011	Montana Cancer Consortium NCORP	1	1	2
MedStar Washington Hospital Center	DC007	National Capital Area Minority Underserved NCORP	0	1	1
Prisma Health Cancer Institute - Eastside	SC036	NCORP of the Carolinas Greenville Health System	4	3	7
Katmai Oncology Group	AK015	Pacific Research Cancer Consortium NCORP	7	2	9
Regional Cancer Center at Indian Path Community Hospital	TN131	Southeast Clinical Oncology Research Consortium NCORP	7	2	9
Waverly Hematology Oncology	NC099	Southeast Clinical Oncology Research Consortium NCORP	6	2	8
Mission Hospital	NC031	Southeast Clinical Oncology Research Consortium NCORP	6	0	6
Margaret R Pardee Memorial Hospital	NC090	Southeast Clinical Oncology Research Consortium NCORP	3	0	3
Cone Health Cancer Center at Alamance Regional	NC003	Southeast Clinical Oncology Research Consortium NCORP	2	0	2
Wellmont Medical Associates-Bristol	VA208	Southeast Clinical Oncology Research Consortium NCORP	1	1	2
Olathe Health Cancer Center	KS020	University of Kansas Cancer Center- MCA Rural MU NCORP	4	0	4
Spartanburg Medical Center	SC024	Upstate Carolina NCORP	5	4	9
Gibbs Cancer Center- Pelham	SC101	Upstate Carolina NCORP	7	1	8
Rocky Mountain Cancer Centers-Boulder	CO072	Western States Cancer Research NCORP	1	1	2
Rocky Mountain Cancer Centers-Aurora	CO044	Western States Cancer Research NCORP	1	0	1

ThedaCare Regional Cancer Center	WI212	Wisconsin NCORP	12	4	16
Marshfield Medical Center - Weston	WI144	Wisconsin NCORP	7	4	11
Marshfield Clinic Stevens Point Center	WI210	Wisconsin NCORP	7	3	10
Marshfield Medical Center- EC Cancer Center	WI208	Wisconsin NCORP	6	4	10
Marshfield Medical Center - Minocqua	WI009	Wisconsin NCORP	4	1	5
Marshfield Medical Center- Marshfield	WI031	Wisconsin NCORP	1	0	1

Abbreviations: CTEP ID: Cancer Therapy Evaluation Program site ID, NCORP: NCI Community Oncology Research Program, MM: Multiple Myeloma, CLL: Chronic Lymphocytic Leukemia.

eTable 2. Frequency of Clinician-Administered Treatments

Clinician-Administered Treatment	Frequency
Dexamethasone	192
Bortezomib	115
Zoledronic Acid	108
Daratumumab	106
Carfilzomib	41
Denosumab	24
Intravenous Immunoglobulin	22
Elotuzumab	19
Rituximab	17
Cyclophosphamide	16
Obinutuzumab	16
Acetaminophen	7
Palonosetron	6
Diphenhydramine	5
Pamidronate Disodium	5
Bendamustine	4
Diphenhydramine	2
Fludarabine Phosphate	2
Ondansetron	2
Aciclovir	2
Allopurinol	1
Aspirin	1
Trimethoprim/sulfamethoxazole	1
Cisplatin	1
Cyanocobalamin	1
Doxorubicin	1
Epoetin Alfa-Epbx	1
Etoposide	1
Melphalan Hydrochloride	1
Methylpredisolone Acetate	1

Note: Patients can be administered more than 1 treatment, so the sum of the frequencies will not equal the total sample size.

eTable 3. Socioeconomics and Treatment Characteristics by Patient Report of Financial Difficulty by Measure and by Diagnosis

		rted Financial Diffi ingle-item Measuro			Reported Financial Difficulty (Composite Measure)		
	MM	CLL	Total	MM	CLL	Total	
Characteristics	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
No. of Patients	62	8	70	188	63	251	
Age in years, Mean (SD)	63.6 (10.84)	69.8 (12.21)	64.3 (11.09)	65.8 (10.03)	70.6 (8.06)	67.0 (9.78)	
Sex							
Female	34 (55)	0 (0)	34 (49)	95 (51)	20 (32)	115 (46)	
Male	28 (45)	8 (100)	36 (51)	93 (49)	43 (68)	136 (54)	
Race							
White	49 (79)	6 (75)	55 (79)	161 (86)	58 (92)	219 (87)	
Non-White <sup>a</sup>	13 (21)	2 (25)	15 (21)	27 (14)	5 (8)	32 (13)	
Geographic Region <sup>b</sup>	, ,		, ,		` '	, ,	
Northeast	4 (7)	1 (13)	5 (7)	13 (7)	3 (5)	16 (6)	
Midwest	37 (60)	5 (63)	42 (60)	116 (62)	37 (59)	153 (61)	
South	18 (29)	1 (13)	19 (27)	52 (28)	19 (30)	71 (28)	
West	3 (5)	1 (13)	4 (6)	7 (4)	4 (6)	11 (4)	
Education	. ,		,		,	( )	
High School Diploma/GED or below	40 (66)	4 (50)	44 (64)	89 (48)	36 (57)	125 (50)	
Above High School Diploma	21 (34)	4 (50)	25 (36)	96 (52)	27 (43)	123 (50)	
Missing	1	0	1	3	0	3	
Home Ownership Status							
Homeowner	46 (75)	6 (75)	52 (75)	151 (81)	56 (89)	207 (83)	
Non-Homeowner	15 (25)	2 (25)	17 (25)	36 (19)	7 (11)	43 (17)	
Missing	1	0	1	1	0	1	
Reported Household Income							
Less than \$20,000	18 (32)	1 (13)	19 (29)	37 (21)	6 (10)	43 (19)	
\$20,000 to \$39,999	14 (25)	4 (50)	18 (28)	39 (23)	16 (28)	55 (24)	
\$40,000 to \$59,999	13 (23)	3 (38)	16 (25)	35 (20)	16 (28)	51 (22)	
\$60,000 to \$79,999	6 (11)	0 (0)	6 (9)	20 (12)	6 (10)	26 (11)	
\$80,000 to \$99,999	4 (7)	0 (0)	4 (6)	16 (9)	2 (3)	18 (8)	
\$100,000 or more	2 (4)	0 (0)	2 (3)	26 (15)	12 (21)	38 (17)	
Missing	5	0	5	15	5	20	
Insurance Type							
Medicare only	5 (8)	2 (25)	7 (10)	15 (8)	4 (6)	19 (8)	
Medicare + other insurance	31 (50)	3 (38)	34 (49)	110 (59)	47 (75)	157 (63)	

	Reported Financial Difficulty (Single-item Measure)			orted Financial Difficulty Composite Measure)		
	MM	CLL	Total	MM	CLL	Total
Characteristics	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Other <sup>c</sup>	26 (42)	3 (38)	29 (41)	63 (34)	12 (19)	75 (30)
Charlson Comorbidity Index score						
1 or more	25 (40)	4 (50)	29 (41)	71 (38)	25 (40)	96 (38)
0	37 (60)	4 (50)	41 (59)	117 (62)	38 (60)	155 (62)
Treatment Received						
Clinician-Administered Therapeutic	52 (84)	2 (25)	54 (77)	158 (84)	21 (33)	179 (71)
Not a Clinician-Administered	10 (16)	6 (75)	16 (23)	30 (16)	42 (67)	72 (29)
Therapeutic						

Abbreviations: MM: Multiple Myeloma, CLL: Chronic Lymphocytic Leukemia.

<sup>&</sup>lt;sup>a</sup> Non-White race captures patients who selected American Indian or Alaska Native, Asian, Black, or African American, Native Hawaiian, or other Pacific Islander, Unknown, Not Reported

b Geographic Regions were divided according to the United States census divisions and regions: **Northeast:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; **Midwest:** Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; **South:** Delaware, Maryland, Virginia, West Virginia, Kentucky, North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma, Washington DC; **West:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, California, Oregon, Washington, Alaska, and Hawaii.

<sup>&</sup>lt;sup>c</sup> Other includes: Private Insurance, Medicaid, Military Sponsored (including CHAMPUS & TRICARE), Veterans Sponsored, Not Otherwise Specified (NOS), and any combination of those listed here.

eTable 4. Sensitivity Analysis Single Measure of Financial Difficulty Using Different Dichotomizations

Model	Unadjusted Odds Ratios (95% CI)	P value	Adjusted Odds Ratios (95% CI) <sup>a</sup>	P value
Single-item Measure of Financial Difficu	lty – Not at all/A little/Quite a bit vs. Very muc	ch .		
Female	2.47 (0.90, 6.81)	.07	2.00 (0.70, 5.68)	.20
Non-White	1.11 (0.25, 5.03)	.89	0.82 (0.17, 3.96)	.81
Comorbidity	0.74 (0.26, 2.15)	.58	0.78 (0.26, 2.38)	.67
CLL	OR unable to be calculated – zero cell	X	OR unable to be calculated – zero cell	X
Clinician-Administered Treatment	2.29 (0.65, 8.11)	.19	0.79 (0.21, 2.96)	.72
Above HS Education	0.34 (0.12, 0.97)	.04	0.31 (0.11, 0.93)	.04
Medicare + Other <sup>b</sup>	NA [Reference]	NA	NA [Reference]	NA
Medicare	1.19 (0.15, 9.74)	.99	0.97 (0.11, 8.52)	.88
Other <sup>c</sup>	1.46 (0.52, 4.10)	.67	1.32 (0.44, 3.93)	.69
Single-item Measure of Financial Difficu	lty – Not at all/A little vs. Quite a bit/Very muc	h		
Female	1.32 (0.78, 2.21)	.30	1.09 (0.62, 1.91)	.77
Non-White	2.97 (1.49, 5.90)	.002	2.21 (1.04, 4.72)	.04
Comorbidity	1.39 (0.82, 2.36)	.27	1.53 (0.86, 2.75)	.15
CLL	0.31 (0.15, 0.68)	.003	0.34 (0.13, 0.84)	.02
Clinician-Administered Treatment	1.72 (0.94, 3.15)	.08	1.02 (0.49, 2.12)	.96
Above HS Education	0.42 (0.24, 0.71)	.001	0.36 (0.21, 0.64)	.001
Medicare + Other <sup>b</sup>	NA [Reference]	NA	NA [Reference]	NA
Medicare	3.17 (1.21, 8.27)	.02	2.17 (0.77, 6.07)	.14
Other <sup>c</sup>	2.50 (1.43, 4.37)	.001	2.53 (1.37, 4.66)	.003
Single-item Measure of Financial Difficu	lty – Not at all vs. A little/Quite a bit/Very muc	ch .		
Female	0.82 (0.56, 1.21)	.32	0.87 (0.58, 1.32)	.51
Non-White	0.63 (0.33, 1.19)	.15	0.85 (0.43, 1.67)	.63
Comorbidity	0.82 (0.55, 1.23)	.34	0.74 (0.48, 1.14)	.17
CLL	2.15 (1.36, 3.39)	.001	1.83 (1.06, 3.17)	.03
Clinician-Administered Treatment	0.62 (0.41, 0.95)	.03	0.86 (0.52, 1.44)	.58
Above HS Education	1.40 (0.95, 2.07)	.09	1.52 (1.01, 1.13)	.05
Medicare + Other <sup>b</sup>	NA [Reference]	NA	NA [Reference]	NA
Medicare	0.38 (0.16, 0.92)	.24	0.45 (0.18, 1.13)	.45
Other <sup>c</sup>	0.42 (0.26, 0.65)	.19	0.41 (0.25, 0.65)	.11

eTable 5. Endorsement of Categories for Single Measure of Financial Difficulty by Diagnosis

Category	MM (n=308)	CLL (n=108)	Total (n=416)	
	No., percentage	No., percentage	No., percentage	
Very Much	17 (5.5%)	0 (0.0%)	17 (4.1%)	
Quite a Bit	45 (14.6%)	8 (7.4%)	53 (12.7%)	
A Little	102 (33.1%)	30 (27.8%)	132 (31.7%)	
Not at All	143 (46.4%)	70 (64.8%)	213 (51.2%)	
Patient prefers not to answer	1 (0.3%)	0 (0.0%)	1 (0.2%)	

eTable 6. Endorsement of Items in Composite Measure of Financial Difficulty by Diagnosis

Survey Question	MM (n=308)	CLL (n=108)	P value
	No., proportion	No., proportion	
	(95% Wilson CI)	(95% Wilson CI)	
(EORTC QLQ-C30) item #28: "Has your physical condition or medical	62	8	.002
treatment caused you financial difficulties in the past year? (Part 1,	0.201	0.074	
Question 8)	(0.160, 0.250)	(0.038, 0.140)	
In the past 12 months, did you have problems paying or were unable to	72	16	.06
pay any medical bills? Include bills for doctors, hospitals, therapists,	0.234	0.148	
medication, equipment, nursing home or home. (Part 1, Question 1)	(0.190, 0.284)	(0.093, 0.227)	
Do you or anyone in your family currently have medical bills that you are	40	7	.07
unable to pay at all? (Part 1, Question 2)	0.130	0.065	
	(0.097, 0.172)	(0.032, 0.128)	
During the past 12 months, have you or someone in your family delayed	48	8	.03
medical care because you were worried about the cost (do not include	0.156	0.074	
dental care)? (Part1, Question 4)	(0.120, 0.201)	(0.038, 0.139)	
During the past 12 months, was there a time when you or someone in your	27	2	.02
family needed medical care but didn't get it because you couldn't afford	0.088	0.019	
it? (Part 1, Question 5)	(0.061, 0.125)	(0.005, 0.065)	
During the past 12 months, was there a time when you needed one of the	30	11	.89
following, but did not get it because you couldn't afford it? <b>Prescription</b>	0.097	0.102	
medicine (Part 1, Question 6a)	(0.069, 0.136)	(0.058, 0.173)	
During the past 12 months, was there a time when you needed one of the	9	3	.94
following, but did not get it because you couldn't afford it? <b>Mental health</b>	0.029	0.028	
care or counseling (Part 1, Question 6b)	(0.015, 0.055)	(0.010, 0.079)	
During the past 12 months, was there a time when you needed one of the	62	17	.32
following, but did not get it because you couldn't afford it? <b>Dental care</b>	0.201	0.157	
(Part 1, Question 6c)	(0.160, 0.250)	(0.101, 0.238)	
During the past 12 months, was there a time when you needed one of the	37	9	.29
following, but did not get it because you couldn't afford it? Eyeglasses	0.120	0.083	
(Part 1, Question 6d)	(0.088, 0.161)	(0.045, 0.151)	
During the past 12 months, was there a time when you needed one of the	17	4	.46
following, but did not get it because you couldn't afford it? Cancer-	0.055	0.037	
related medical care (Part 1, Question 6e)	(0.035, 0.087)	(0.015, 0.091)	
During the past 12 months, was there a time when you needed one of the	26	5	.19
following, but did not get it because you couldn't afford it? <b>Non-cancer</b>	0.084	0.046	
related medical care (Part 1, Question 6f)	(0.058, 0.121)	(0.020, 0.104)	
If you get sicker or have an accident, how worried are you that you will	60	6	<.001
not be able to pay your medical bills? (Part 1, Question 9)	0.195	0.056	

Survey Question	MM (n=308)	CLL (n=108)	P value
	No., proportion	No., proportion	
	(95% Wilson CI)	(95% Wilson CI)	
	(0.154, 0.243)	(0.026, 0.116)	
How often in the last 12 months would you say you were worried or	68	14	.04
stressed about having enough money to pay your rent or mortgage? (Part	0.221	0.130	
1, Question 10)	(0.178, 0.270)	(0.079, 0.206)	
How often in the last 12 months would you say you were worried or	57	9	.01
stressed about having enough money to buy nutritious meals? (Part 1,	0.185	0.083	
Question 11)	(0.146, 0.232)	(0.045, 0.151)	
How often in the last 12 months would you say you were worried or	60	14/107	.14
stressed about having enough money to pay household utilities such as	0.195	0.131	
water, gas, and electricity? (Part 1, Question 12)	(0.154, 0.243)	(0.080, 0.208)	
During the past 12 months, were any of the following true for you: <b>You</b>	22	4	.20
skipped medication doses to save money (Part 1, Question 16a)	0.071	0.037	
	(0.048, 0.106)	(0.015, 0.091)	
During the past 12 months, were any of the following true for you: <b>You</b>	25	4/107	.13
took less medicine to save money (Part 1, Question 16b)	0.081	0.037	
	(0.056, 0.117)	(0.015, 0.092)	
During the past 12 months, were any of the following true for you: <b>You</b>	32	14/107	.44
delayed filling a prescription to save money (Part 1, Question 16c)	0.104	0.131	
	(0.075, 0.143)	(0.080, 0.208)	
During the past 12 months, were any of the following true for you: You	14	4/107	.72
used alternative therapies to save money (Part 1, Question 16f)	0.046	0.037	
	(0.027, 0.075)	(0.015, 0.092)	
In the past 12 months, have you or has anyone in your family had to	39	8	.14
borrow money or go into debt because of your cancer, its treatment, or the	0.127	0.074	
lasting effects of that treatment? (Part 1, Question 17)	(0.094, 0.168)	(0.038, 0.139)	
In the past 12 months, did you or your family file for bankruptcy because	3	0/107	.31
of your cancer, its treatment, or the lasting effects of that treatment? (Part	0.010	0.000	
1, Question 18)	(0.003, 0.028)		
In the past 12 months, have you ever worried about having to pay large	134/307	39	.17
medical bills related to your cancer? (Part 1, Question 20)	0.437	0.361	
•	(0.381, 0.492)	(0.277, 0.455)	
Please think about medical care visits for cancer, its treatment, or the	31/307	9	.59
lasting effects of that treatment in the past 12 months. Have you ever been	0.101	0.083	
unable to cover your share of those visits? (Part 1, Question 21)	(0.072, 0.140)	(0.045, 0.151)	

Note: The proportion of patients who answered yes or always/usually/sometimes to the question in the table above are presented descriptively by disease status. Each cell presents the following information: (number of patients who answered yes or always/usually/sometimes)/(total number of patients who answered the question), the proportion, and the 95% Wilson score confidence interval.