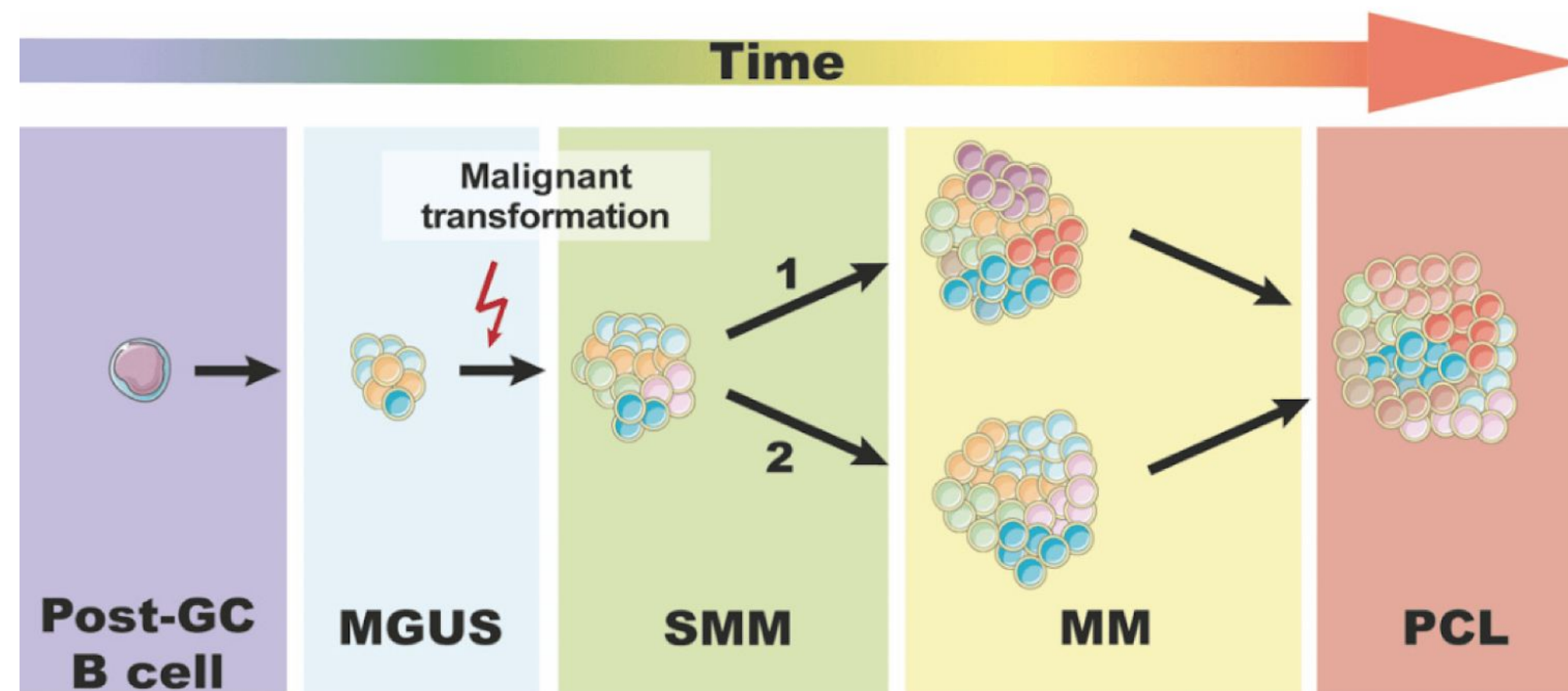


## INTRODUCTION

- Dietary supplement usage is prevalent among cancer patients in the United States, estimated at 70% (Du *et al.*, 2020).
- Patients with plasma cell disorders often make dietary changes including incorporating dietary supplements with unclear benefits with the hope of improving their health.
- While some supplements have shown potential benefits in preclinical studies and early clinical trials, there is currently no clear evidence that dietary supplements can treat myeloma or delay its progression.
- The aim of this study was to understand the perceptions, habits, and knowledge surrounding specific supplements — vitamin D, omega-3 fatty acids, turmeric/curcumin, and probiotics.



**Figure 1- Plasma cell disorder transformation stages**

Multiple myeloma, a clonal plasma cell disorder, progresses through stages including monoclonal gammopathy of undetermined significance (MGUS), smoldering multiple myeloma (SMM), active multiple myeloma (MM), and potentially plasma cell leukemia (PCL), driven by diverse genetic and epigenetic changes.

## METHODS

- A 23-question survey was developed by the authors to understand the perceptions, habits, and knowledge surrounding specific supplements and distributed to patients via HealthTree Cure Hub.
- From September 2023 to January 2024, 480 survey responses were collected, deidentified demographic and survey data were retrieved, and summary statistics were used to evaluate responses.

## RESULTS

Question	N (%)
<b>Habits and Knowledge</b>	
Source of Information on supplements*	Online Medical Media 216 (45%) Hematologist/oncologist 221 (46%) Primary care provider 161 (34%) Myeloma Education Website 136 (28%) Online Patient Forums 97 (20%) Advice from non-medical family and friends 72 (15%) Online Non-Medical Sources 70(15%) Online Videos (from experts) social media 44 (9%) Dietitian 11 (2%)
Motivation for Supplement Use*	Immune Support 337 (70%) Prevent nutritional deficiencies 258 (54%) Stop cancer progression 184 (38%)
<b>Financial Toxicity</b>	
Since being diagnosed, has your spending on supplements	Increased 282 (59%) Decreased 25 (5%) No change 160 (33%) Not applicable 13 (3%)
Received financial support to pay for supplements	Yes 24 (5%) No 442 (92%) Don't use supplements 14 (3%)
<b>Conversations with the hematologist/oncologist</b>	
Would you like your hematologist/oncologist to give you recommendations about supplement use and your diagnosis?	Yes 355 (74%) No 44 (9%) Not Sure 75 (16%) Blank 6 (1%)
Interested in more research on the risks and benefits of supplements for a plasma cell disorder diagnosis?	Yes 435 (91%) No 19 (4%) Not sure 26 (5%)

**Table 2- Habits & Knowledge of Supplement Use, Financial Toxicity & Patient-Physician Discussions surrounding supplement use**

Most patients (45%) obtained supplement information online and from physicians (46%), with immune support (70%) being the primary driver for supplement use. Expressing unmet needs, patients favored more physician recommendations (74%) for supplements and expressed a desire for increased research (91%) within this area.

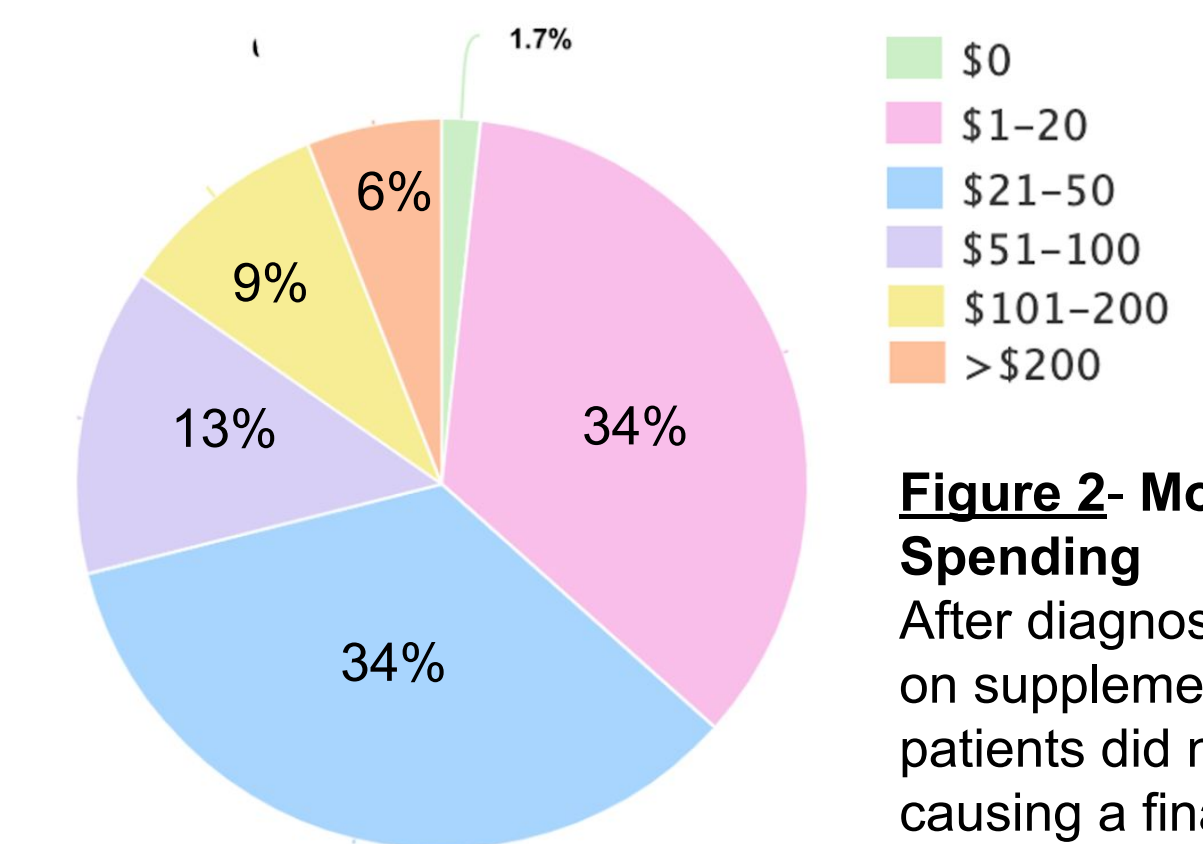
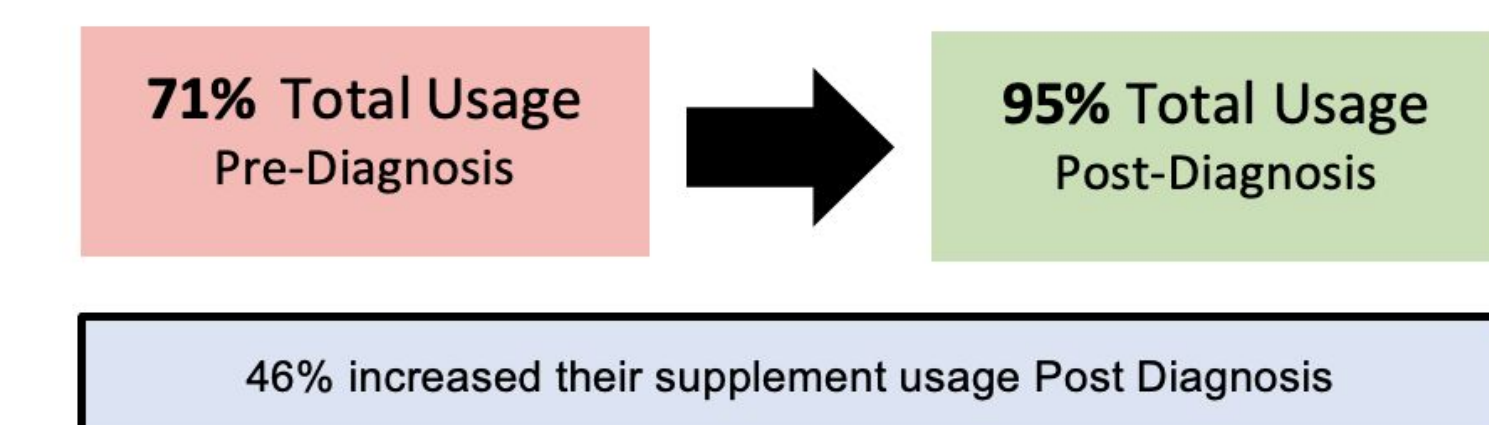
Of our cohort, 63% of patients discussed their supplement use with their physician, with 74% preferring their oncologist's recommendations. Overall, 91% of patients expressed interest in further research on the risks and benefits of supplement use.

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Demographics	N (%)
<b>Sex</b>	
Female	280 (42%)
Male	200 (58%)
<b>Race</b>	
White	376 (78%)
Black/Other/Hispanic	104 (22%)
<b>Age</b>	
<50	27 (6%)
51-64	293 (61%)
>65	160 (33%)
<b>Education level</b>	
College degree and above	323 (67%)
High School graduate	10 (2%)
Some college/some high school/vocational	74 (15%)
Did not answer	73 (15%)

**Table 1- Demographics & Baseline Characteristics of Study Participants**

Study participants were predominantly female (58%), white (78%), aged ≥65 (61%), with a college degree or above (67%).



**Figure 2- Monthly Supplemental Spending**

After diagnosis, although spending on supplements increased, patients did not perceive it as causing a financial burden.

## CONCLUSION

This survey underscores the unmet need for research on supplements. Despite limited evidence, most survey participants reported an increase in supplement use after being diagnosed with a PCD, primarily interested in their oncologist's recommendations.

## ACKNOWLEDGEMENTS

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