Optimizing the Implementation of New Therapies in Multiple Myeloma

A Mixed-Methods Approach to Identifying and Closing Knowledge and Practice Gaps Among Providers Caring for Patients with Multiple Myeloma

Introduction

The treatment landscape for patients with multiple myeloma has significantly expanded over the past decade with the introduction of several classes of agents and novel treatment regimens in the frontline, maintenance, and relapsed/refractory settings.[1-3] The emergence of proteasome inhibitors, immunomodulatory agents, and anti-CD38 antibodies have each improved outcomes and generated a learning curve for care team members in terms of administration and adverse event (AE) management. Nevertheless, multiple myeloma still frequently develops resistance to these agents, and recycling of previously used agents has occurred in patients with triple-class resistant disease, leading to suboptimal outcomes.[4]

The recent emergence of T-cell–based therapies, such as chimeric antigen receptor (CAR) T-cells and bispecific agents, is yet again expanding the therapeutic tools available for providers treating patients with multiple myeloma. Both CAR T-cells and bispecific agents targeting the B-cell maturation antigen (BCMA) have been approved, with additional agents in regulatory review.[5-8] Furthermore, agents targeting other novel antigens are also in development.[9] These new therapeutic classes have unique practical considerations and AE profiles.[10,11] For example, CAR T-cell therapy is a customized approach and currently requires time for manufacturing, and both CAR T-cells and bispecific agents are associated with cytokine release syndrome (CRS) and neurotoxicity.[10] This rapidly evolving therapeutic landscape is creating knowledge and practice gaps between evidence-based practice guidelines and the practice patterns of oncology health care professionals.

To identify the knowledge and practice gaps among community oncology providers relative to the evolving treatment landscape in multiple myeloma, the current study was initiated to assess practice patterns related to diagnosis and treatment of multiple myeloma, monitoring and management of treatment-related AEs, supportive care services, and barriers to treatment. By identifying knowledge and practice gaps related to patient care, this study aims to facilitate the development of quality improvement programs and other strategies to optimize health care delivery in those with multiple myeloma.

Survey Development

In 2023, the Association of Cancer Care Centers (ACCC), under the guidance of an expert planning committee, developed a survey with questions focused on assessing practice patterns related to diagnosis and treatment of patients with multiple myeloma, survivorship planning, barriers to treatment, and education for health care providers. The survey was semi-structured, with most questions having multiple choice answers or being Likert-type questions.

Study Sample and Data Collection

Provider survey invitations were distributed by e-mail in May of 2023 to oncology providers through ACCC member lists and a Sermo social media advertisement. The inclusion criteria specified advanced practice providers (nurse practitioners [NP], physician assistants [PA], and clinical nurse specialists [CNS]), hematologists oncologists, oncology nurses, oncology nurse navigators, and pharmacists that currently see patients with multiple myeloma.

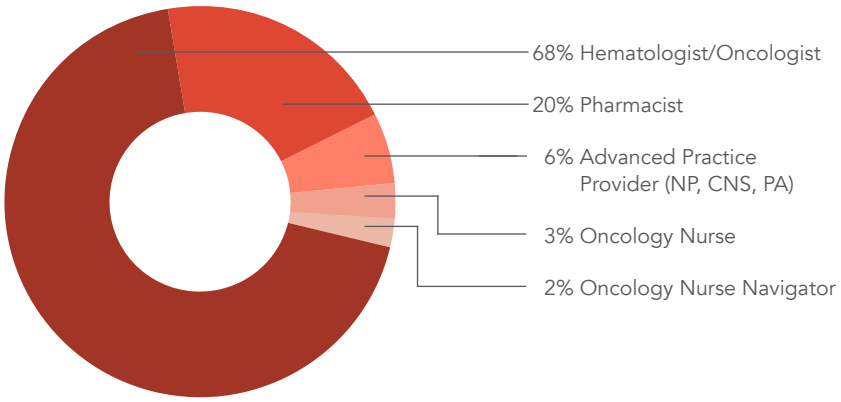
Post-Survey Focus Groups

Survey results were used to develop a focus group guide, which further probed into key themes identified in the survey. The focus group participants were drawn from the list of survey respondents. Two provider focus groups were conducted via Zoom and recorded; both focus groups included 3 to 4 participants, each with a representative from the physician, pharmacist, and nursing professions.

Sample Demographics

There were 114 survey respondents. The majority (68%) were physicians, with pharmacists representing 20%, and the remainder consisting of advanced practice providers (6%) or nurses (5%) **[Figure 1]**. Respondents practicing in an academic institution represented 39% of the study cohort, with 27% affiliated with a community cancer program and 31% in private practice. Most respondents (61%) practiced in an urban setting, with 31% at a suburban institution and 7% located in a rural setting. The study population was a cohort with considerable experience in practice, with over half of the respondents having worked as a health care provider for at least 11 years, not including training years (more than 20 years, 27%; 11 to 20 years, 34%). Overall, 96% of the respondents indicated seeing more than 6 patients with multiple myeloma per year. Sixty-two percent (62%) of the respondents saw between 6 and 30 new patients, with 34% seeing more than 50 new patients per year.

Figure 1. Survey Respondents by Profession



Diagnosis and Risk Stratification of Multiple Myeloma

Most respondents (88%) reported using the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for risk stratification of patients with newly diagnosed multiple myeloma, while 11% used internal pathways. The Stratification for Myeloma and Risk-Adapted Therapy (mSMART) guidelines from the Mayo Clinic were used by 4% of the respondents.

In the focus groups, some participants reported using the International Staging System (ISS), while others consulted NCCN or mSMART guidelines. However, none of the focus group participants stated that risk stratification affects the choice of therapy.

Treatment Selection for Patients with Multiple Myeloma

Approximately half of the respondents were "familiar" or "very familiar" with updated clinical practice guidelines for treatment selection in patients with multiple myeloma. In terms of determining eligibility to undergo autologous hematopoietic stem cell transplant (HSCT), the majority (70%) incorporate multiple factors simultaneously, including comorbidities/performance status (PS), high-risk disease characteristics, access to a transplant center, patient preference, and age. Among these, comorbidities/PS was indicated as the most important single factor (19%), followed by high-risk disease characteristics (13%) **[Figure 2]**. Respondents reported that one-third of their patients in the first-line setting undergo autologous HSCT.

A trend toward increased use of quadruplet regimens in the first-line setting (eg, the GRIFFIN regimen) was noted in focus groups, particularly in patients with high-risk disease; one of the pharmacist participants stated that since daratumumab does not add significant toxicity, age would not be a barrier to using a quadruplet for them.

In patients with relapsed/refractory multiple myeloma, respondents most often consulted NCCN Guidelines (79%) when selecting treatment options. Physician preference and familiarity was the second most important influence, selected by 56%. Recommendations of key opinion leaders, clinical pathways, and access to bispecific agents or CAR T-cell therapy were each indicated by 40% of respondents as a consideration in treatment selection **[Figure 3]**. Focus group participants mentioned toxicity from the prior regimen(s) as being a key consideration when choosing the next line of therapy.

Figure 2. Criteria Used to Determine Transplant-Eligibilty

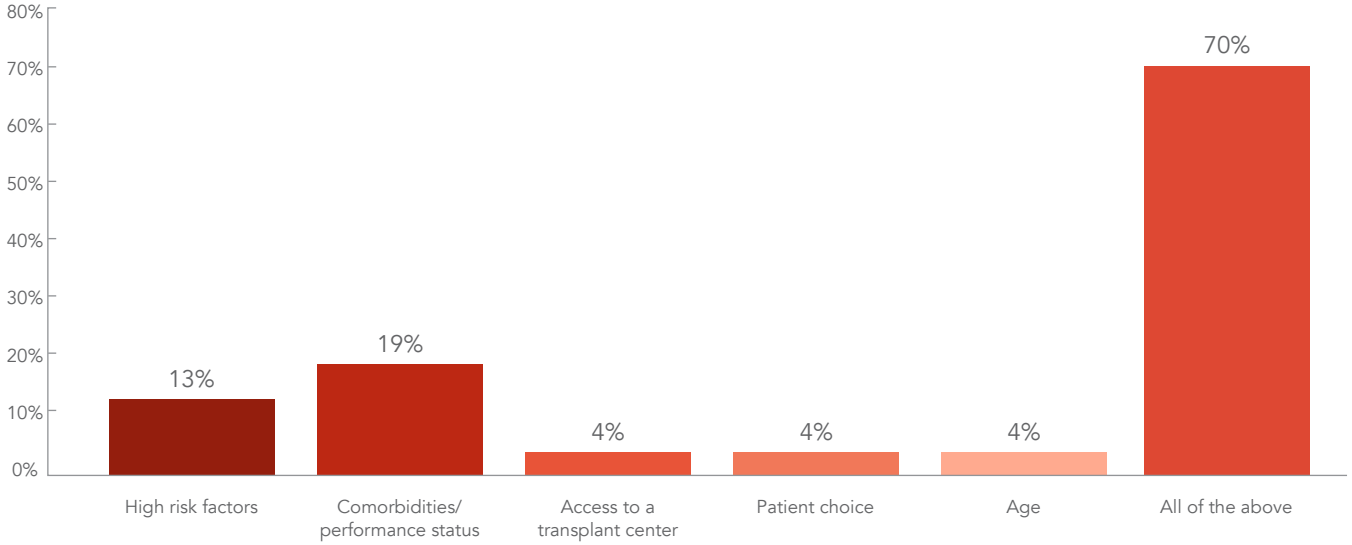
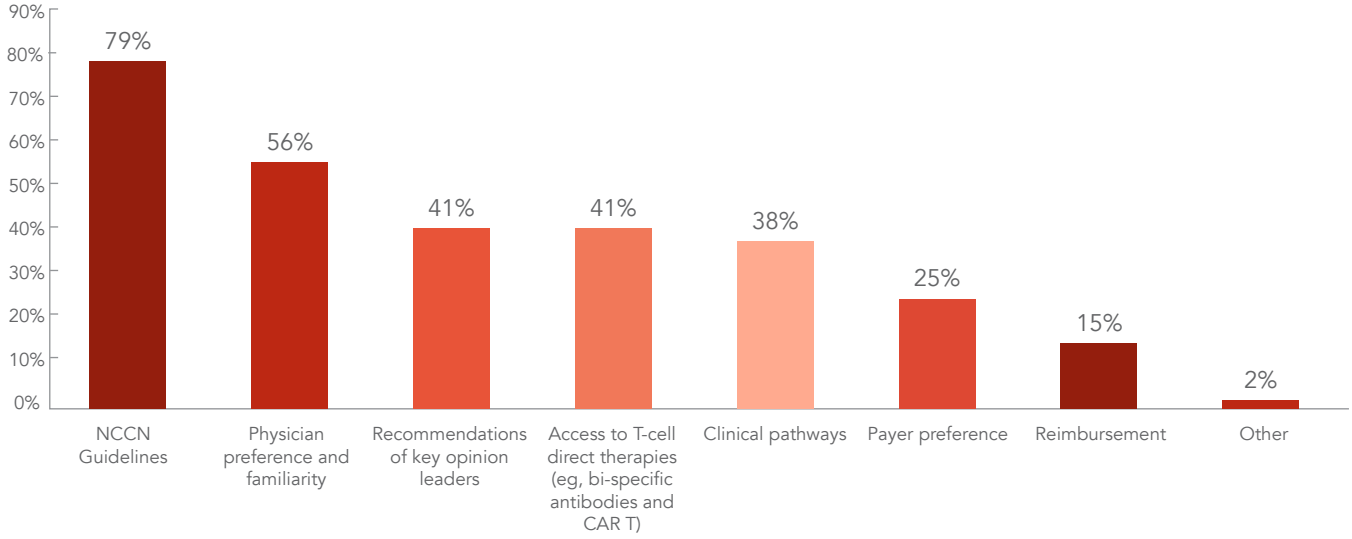


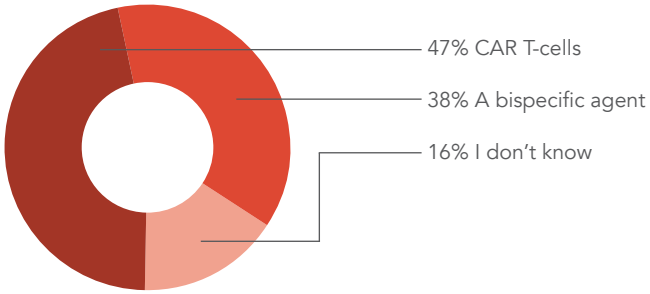
Figure 3. Variables When Selecting Treatment Options for Relapsed/Refractory Multiple Myeloma



Emerging Therapies in the Relapsed/ Refractory Setting for Multiple Myeloma

Providers were asked about the use of CAR T-cells and bispecific agents in their practice. At the time of this survey, both CAR T-cells and bispecific agents were available for patients with relapsed/refractory multiple myeloma treated with at least 4 prior lines of therapy. In this patient population, most respondents (47%) would use CAR T-cell therapy first, with 38% recommending a bispecific agent first. Sixteen percent were undecided **[Figure 4]**.

Figure 4. CAR T vs Bispecific Agents as First Approach for Relapsed/Refractory Patients



Respondents were asked about their confidence regarding the management of adverse events (AEs) associated with CAR T-cells and bispecific agents, such as cytokine release syndrome, neurotoxicity, and infection. A 5-point Likert scale was used, where 1 equals not at all confident and 5 equals very confident. On average, respondents were less than confident, with a lower average confidence score among community providers for CAR-T–associated AEs (academic, 3.60 average score; community, 3.07 average score), as well as AEs associated with bispecific agents (academic, 3.60 average score; community, 3.19 average score).

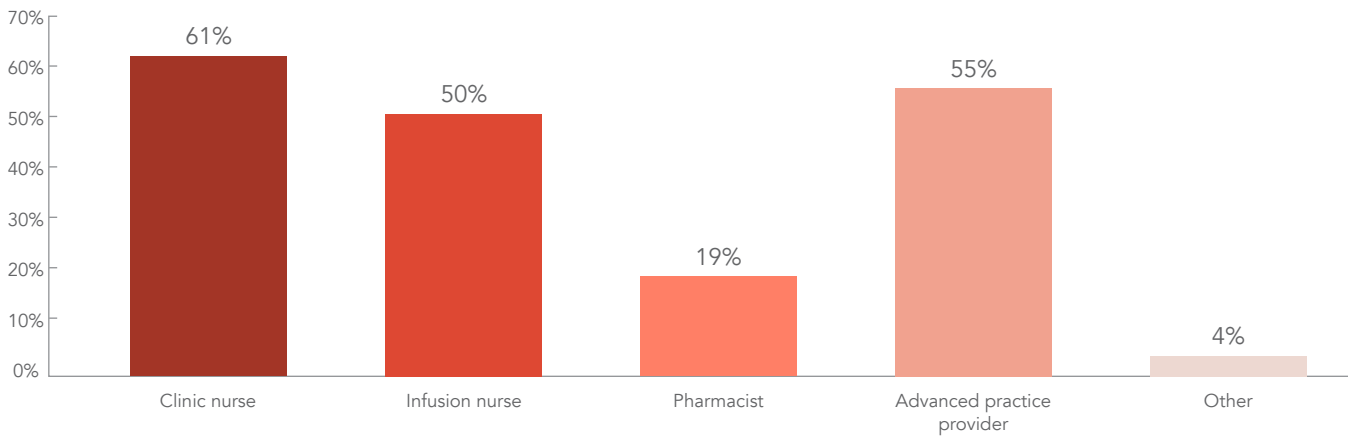
In focus groups, a need to strengthen connections between community and academic practices was mentioned to facilitate patient access to newer therapies, including CAR T-cells and bispecific agents in the relapsed/refractory settings. Focus group participants had varying views of CAR T-cells versus bispecific agents; in some practices, CAR T-cells are preferred initially for fit patients; however, other participants viewed the administration of bispecific agents as less complicated, particularly if their institution lacks inpatient capacity. One of the providers in a focus group mentioned a decline in frequency of HSCT would be seen as bispecific agents and CAR T-cells become more widely used.

Monitoring and Managing Treatment-Related Adverse Events

Regarding follow-up and triage of patients for treatment-related AEs, 50% of the respondents indicated that patients in their practice are monitored weekly. Monthly follow-up was indicated by 43% of the providers. The health care team members most often involved were the clinic nurse (61%), an advanced practice provider (55%), or an infusion nurse (50%). In 19% of the practices, the pharmacist was responsible for patient monitoring **[Figure 5]**.

Most of the participants in focus groups stated that their program has a 24-hour hotline for patients to report adverse events. In terms of proactive monitoring, a wide variety of practices were described in the focus groups, including close follow-up every 2 to 4 weeks, a full toxicity check every visit, or checking on patients as much as possible.

Figure 5. Healthcare Team Member Responsible for Monitoring and Managing Treatment-Related Adverse Events



Survivorship Planning

Most respondents (62%) indicated that a discussion regarding survivorship is initiated upon diagnosis. Thirty-seven percent (37%) indicated that survivorship planning at their practice occurs only when requested by the patient. Additionally, 21% of respondents indicated this discussion is reserved for transplant-eligible patients prior to treatment.

The medical oncologist/hematologist was the health care team member most often indicated by respondents (75%) as taking responsibility for the survivorship discussion. In other practices, the team member responsible for this discussion included an APP (37%), a social worker (21%), or a pharmacist (7%). Eight percent (8%) of respondents indicated that their practice has a dedicated survivorship clinic.

Focus group participants reported a variety of approaches to the survivorship discussion, with some starting the discussion on day 1, others around the time of HSCT, and others with no predefined approach. Most of the participants mentioned that an APP was the health care provider in charge of this discussion. At one of the practices, the survivorship discussion is managed by a general supportive care program.

Geographic/Cultural/System Barriers

Respondents were asked about barriers to considering therapy in patients with multiple myeloma. A 5-point Likert scale was used, where 1 equals not at all important and 5 equals extremely important. Concerns about comorbidities and patient fitness were among the top barriers. Specifically, a poor PS was the top barrier for newly diagnosed patients (3.51/5), and multiple comorbidities was the top barrier in subsequent lines of therapy (3.58/5) **[Figure 6]**.

Other important barriers were related to care and insurance premiums (3.47/5 for first line; 3.52/5 for subsequent lines) and supply issues, such as limited slots for CAR T-cell manufacturing (3.48/5 for subsequent lines). Focus group participants mentioned financial barriers such as underinsured patients, and lack of foundation funds as potential reasons for delays in receiving medication.

The survey also included polling regarding desired provider educational materials. In terms of resources not currently available to respondents, 45% stated that they would like educational materials specific to multiple myeloma. Guidance and information were also desired regarding clinical trial availability (44%), recommendations on sequencing therapies (41%), and managing AEs (32%).

Figure 6. Barriers to Care in Subsequent Lines of Therapy: Average Perceived Significance

Multiple comorbidities complicating clinical decision-making	3.58
Concern about patient fitness (eg, patients with ECOG PS score ≥ 2)	3.54
Cost of care/insurance premiums and limitations on coverage	3.52
Supply issues (eg, limited slots/long waiting list for CAR T-cell manufacturing)	3.48
Concern about managing treatment-related adverse events	3.27
Lack of access to treatment (distance to receive treatment, restrictive institutional pathways)	3.23
Difficulty comprehending diagnosis	3.13
Inadequate support system	3.09
Limited access to providers specializing in treatment/care of multiple myeloma patients	3.06
Lack of transportation	2.98
Difficulties taking time away from work	2.96
Poor health literacy	2.94
Childcare/family care considerations	2.84
Difficulty communicating with health care team	2.70

Figure 7. Preferred Method of Consuming Educational Content

Educational websites (Up-To-Date, etc.)	40%
Online access to journals	32%
Live conferences (regional, national, international)	27%
Webcasts, podcasts, online CME activities	25%
Locally-driven education programs (eg, visiting professor, small group learning, academic detailing)	18%
E-mail	18%
Meeting with industry to discuss latest updates	12%

Educational websites, such as UpToDate, were the most preferred method of consuming educational content (40%). Other preferred methods included online access to journals (32%), live conferences (27%), and online Continuing Medical Education (CME) activities (25%). In focus groups, the participants expressed a preference for live conferences, however, due to the appeal of didactic presentations and the large volume of emails that may cause email-based education/updates to be lost in their inbox. Society-sponsored meetings, such as American Society of Hematology (ASH) and American Society of Clinical Oncology (ASCO) were favored **[Figure 7]**.

Another resource that respondents would like at their institutions is an increased availability of social workers and mental health providers (40%).

In focus groups, participants stated that patient education is important due to the overwhelming amount of information that newly diagnosed patients face. Contributing to this is the multiple routes of therapeutic drugs (eg, oral and intravenous) involved in triplet and quadruple regimens, as well as additional supportive care agents. Additionally, while solid tumors are usually visualized by radiographic means, multiple myeloma can be abstract to patients, who have to learn disease concepts such as light chains and M-protein, which are usually expressed as numbers. Patients can also be confused, when moving to the next line of therapy, about why some drugs are carried over from the previous line after their disease progressed. Finally, transportation was mentioned in focus groups as a major logistical hurdle, due to long distances needing to be traveled or rush-hour traffic in urban areas.

Concluding Thoughts

This survey reveals knowledge gaps among providers regarding the changing therapeutic landscape of multiple myeloma. In terms of patient treatment, about half of the respondents were less than familiar with updated clinical practice guidelines in multiple myeloma. Currently, one-third of patients underwent autologous HSCT in the first-line setting, although the view was that more patients would forego HSCT moving forward with the establishment of bispecific agents and CAR T-cell therapies.

Both CAR T-cells and bispecific agents were used in patients with relapsed/refractory multiple myeloma, with a preference for initial use of CAR T-cells (47%) than bispecific agents (38%); 16% did not express a preference. It was thought that these treatment modalities are currently underutilized, due to lack of communication between community-based and academic practices. There also appears to be a confidence gap in terms of managing AEs with CAR T-cells and bispecific agents.

Key barriers to treatment not related to patient fitness included access issues, such as limited slots for CAR T-cell manufacturing, and financial burden. Participants expressed a desire for multiple myeloma-specific educational materials and activities related to clinical trial availability, guidance on treatment sequencing therapies, and AE management.

This study has limitations, as these survey results represent only a subset of ACCC member providers, and the number of focus groups was limited to 2 sessions of 3 to 4 participants each.

In summary, this study shows potential areas to improve the care of patients with multiple myeloma. First, provider education continues to be important to operationalize novel therapeutic classes, and patient education can be optimized for the unique disease and treatment features of multiple myeloma compared with other cancers. Support for programs that facilitate communication between academic and community practices may help more patients access new therapies such as CAR T-cells and bispecific agents. Finally, continued support for financial assistance programs will also ensure that more patients will have access to new classes of active therapies.

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The **Association of Cancer Care Centers (ACCC)** is the leading education and advocacy organization for the cancer care community. For more information, visit **accc-cancer.org**.

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