

**Table 2. Types of Educational Gaps and Learning Objectives Identified\***

Educational Needs	Reasons for Gaps	Desired Outcomes
<p>Applies to all other needs:<sup>†</sup></p> <ul style="list-style-type: none"> <li>Translating presented or published data from clinical trials into practice</li> </ul>	<p>Knowledge gap</p> <ul style="list-style-type: none"> <li>Volume of new data is enormous; data are complex</li> </ul> <p>Performance gap</p> <ul style="list-style-type: none"> <li>High-level synthesis is required to incorporate new information into clinical practice</li> </ul>	<ul style="list-style-type: none"> <li>Continually update knowledge</li> <li>Effectively integrate emerging data into patients' treatment plans</li> </ul>
<ul style="list-style-type: none"> <li>Appropriate use of methods (eg, cytogenetics, FISH testing) for diagnosis, classification, risk stratification of MM, and appropriate application of results to treatment decisions</li> </ul>	<p>Knowledge/attitude gap</p> <ul style="list-style-type: none"> <li>Insufficient data are currently available to indicate utility of cytogenetic/FISH results for guiding treatment (some physicians and patients think cytogenetic data should have clinical utility, but they need to understand that it is not yet possible to use these data to guide treatment)</li> </ul> <p>Performance gap</p> <ul style="list-style-type: none"> <li>Tests are not always ordered, and results are not always collected and documented for future use</li> </ul>	<ul style="list-style-type: none"> <li>Explain the potential biologic rationale for cytogenetic and FISH testing</li> <li>Cite the implications of the current lack of data on utility of cytogenetic test results for treatment decisions and need for data accumulation</li> <li>Order appropriate tests, collect data, and document results</li> <li>Effectively integrate emerging data on cytogenetic testing into patients' treatment plans</li> </ul>
<ul style="list-style-type: none"> <li>Early recognition of toxicities and appropriate dosage adjustment to manage them</li> </ul>	<p>Knowledge gaps</p> <ul style="list-style-type: none"> <li>Possible toxic effects of novel agents are not well known</li> <li>Ways to mitigate toxicities, including acceptable dosage adjustment or alternative methods, are not widely discussed</li> </ul> <p>Performance gaps</p> <ul style="list-style-type: none"> <li>Physicians and allied health professionals ("providers") need to effectively discuss possible treatment toxicities with patients and question them about symptoms and signs of toxicities</li> <li>Providers should reassure patients that toxicities can be managed without disrupting their cancer treatment</li> </ul>	<ul style="list-style-type: none"> <li>Identify potential toxicities of novel therapies</li> <li>Describe methods to mitigate anticipated toxicities</li> <li>Discuss treatment toxicities with patients and facilitate patients' early identification of adverse events</li> <li>Recognize early signs of toxicities characteristic of novel therapies</li> <li>Manage toxicities effectively</li> <li>Effectively integrate emerging data on toxicity management into patients' treatment plans</li> </ul>
<ul style="list-style-type: none"> <li>Comparing implications of achieving CR versus VGPR for treatment decisions</li> </ul>	<p>Knowledge gap</p> <ul style="list-style-type: none"> <li>Weigh available treatment-response criteria and their implications for overall survival and patient quality of life</li> </ul> <p>Performance gap</p> <ul style="list-style-type: none"> <li>Elicit and discuss preferences of patients and families/caregivers for quality of life and overall survival</li> </ul> <p>Attitude gap</p> <ul style="list-style-type: none"> <li>Clinicians often do not respect patient preferences</li> </ul>	<ul style="list-style-type: none"> <li>Catalog type, depth, and duration of response attainable with different treatments</li> <li>Effectively discuss options with patients and outline trade-offs between responses and treatment side effects</li> <li>Effectively integrate emerging data on response criteria into patients' treatment plans</li> <li>Demonstrate empathy and respect</li> </ul>

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Table 2 (CONT.)

Educational Needs	Reasons for Gaps	Desired Outcomes
<ul style="list-style-type: none"> <li>Safe and effective use of SCT (who, when, and how many times?)</li> </ul>	<p>Knowledge gap</p> <ul style="list-style-type: none"> <li>Few data are available comparing outcomes of different SCT policies in the era of novel therapies; existing published research was done with older therapies</li> </ul> <p>Performance gap</p> <ul style="list-style-type: none"> <li>Providers should inform patients that with novel therapies, SCT may not be first-choice treatment for all patients</li> </ul>	<ul style="list-style-type: none"> <li>Continually update knowledge on appropriate use of SCT</li> <li>Effectively integrate emerging data on SCT into patients' treatment plans</li> <li>Effectively communicate with patients about SCT</li> </ul>
<ul style="list-style-type: none"> <li>Safe and effective use of maintenance therapy after initial response to cytotoxic therapy or SCT (who, when, what treatment, and for how long?)</li> </ul>	<p>Knowledge gap</p> <ul style="list-style-type: none"> <li>Insufficient data are available to indicate pros and cons of various maintenance (or consolidation) therapy options after treatment with novel agents; current data pertain only to older therapies</li> </ul> <p>Performance gap</p> <ul style="list-style-type: none"> <li>Patients should be helped to enroll in clinical trials whenever possible to help generate data on effective consolidation therapy</li> </ul>	<ul style="list-style-type: none"> <li>Continually update knowledge on maintenance therapy with novel agents</li> <li>Inform patients about available clinical trials and support their participation</li> <li>Effectively integrate emerging data on maintenance therapy into patients' treatment plans</li> </ul>
<p>*FISH indicates fluorescence in situ hybridization; MM, multiple myeloma; CR, complete response; VGPR, very good partial response; SCT, stem cell transplantation.  †This row applies to all other needs.</p>		

management [6] point out the need to weigh the potential benefits of aggressive treatment of MM against the adverse effects of such treatment and the quality-of-life impairments they may cause. Some patients would prefer to undergo treatments that promise a greater depth and duration of remission at the potential expense of increased toxicities. In contrast, other patients are unwilling to jeopardize their quality of life to achieve a deeper and more durable remission. The need for good communication among patients, their families, and the full spectrum of healthcare providers involved in their care is especially acute in this area.

### Importance of Targeting Depth of Response in Treatment Decisions

Healthcare providers who attended educational activities developed by several of the education partners on the panel requested additional information on the

depth of response that should be targeted. Oncologists participating in the expert panel meeting noted that the advantages of targeting a very good partial response (90% improvement in myeloma paraprotein) are becoming more widely recognized, but many questions remain to be answered about the desirable depth of response—for example, a complete response (CR) or a stringent CR—at various stages of treatment. This question highlights a knowledge gap, in that some community oncologists may not be aware of the advantages of targeting a very good partial response [6].

MM is not considered curable today: Minimal residual disease remains in all patients following therapy (excluding the small group of patients selected to undergo allogeneic [donor] transplantation), and patients eventually die from disease relapse. Ultimately, because long-term survival is now the norm, most patients will eventually

be exposed to all agents over the course of their treatment. Therefore, controlling disease to prevent relapse is the most relevant goal of therapy. The time to disease progression is the parameter most closely correlated with overall survival; prolonging overall survival is considered the ultimate goal of therapy by both academic and community physicians.

### Current Place of Autologous Stem Cell Transplantation in MM Therapy

The availability of new induction-chemotherapy regimens for MM patients has begun to alter physicians' opinions about the use of autologous stem cell transplantation (SCT) as a definitive part of first-line management. If induction chemotherapy leads to CR or a near CR, many physicians treating MM patients now consider the use of SCT for intensification or consolidation of the response. In an independent market