Expert Recommendations and Global Practice Patterns From 2012-2015: Results From an Annually Updated Online Decision Aid for Multiple Myeloma (MM)

Timothy A. Quill, PhD\(^1\); Shaji Kumar, MD\(^2\); Suzanne Lentzsch, MD, PhD\(^3\); Sagar Lonial, MD\(^4\); G. David Rodman, MD, PhD\(^5\); Erik D. Brady, PhD, CHCP\(^6\); Jim Mortimer\(^7\); Kevin L. Obholz, PhD\(^8\); Kenneth C. Anderson, MD\(^9\)

1. Clinical Care Options, LLC; 2. Mayo Clinic; 3. Columbia University Medical Center; 4. The Winship Cancer Institute; 5. Indiana School of Medicine 6. Dana-Farber Cancer Institute

Background
Clinical practice guidelines for MM list many therapeutic choices, with similar levels of evidence but frequently lack specific recommendations for individual patient cases. We sought to determine whether expert recommendations on MM treatment, based on specific disease and patient characteristics and delivered via an interactive, online decision aid, would affect the planned treatment decisions of community practitioners. Here we report data from the third version (2015) of this tool that captures changes in expert recommendations and treatment trends for MM since 2013.

Study Components
- **Online decision support tool:**
  - Faculty (2013): Adam D. Cohen, MD; Sagar Lonial, MD; Amitabha Mazumder, MD; Robert Z. Orlowski, MD, PhD; and G. David Rodman, MD, PhD
  - Faculty (2014): Kenneth Anderson, MD; Adam D. Cohen, MD; Sagar Lonial, MD; Amitabha Mazumder, MD; and G. David Rodman, MD, PhD
  - Faculty (2015): Kenneth Anderson, MD; Shaji Kumar, MD; Suzanne Lentzsch, MD, PhD; Sagar Lonial, MD; and G. David Rodman, MD, PhD
- For the 2015 tool, each expert provided treatment recommendations in March 2015 for patient scenarios in 3 settings: induction, maintenance, and relapsed/refractory disease.
- The tool included a total of 352 patient cases based on variations of the following criteria: eligibility for autologous stem cell transplantation; results of chromosome analysis; ECOG performance status, risk of renal insufficiency or peripheral neuropathy; cardiopulmonary dysfunction, as well as previous therapy and depth of response to previous therapy.
- Tool users were prompted to select patient information and then indicated their intended clinical approach.
- Recommendations from the 5 experts were displayed.
- Users were asked to indicate whether the experts’ recommendation confirmed or changed their intended clinical approach.
- 2015 online tool at clinicaloptions.com/MM2015Guidance

Results

2015 Tool Use
- We analyzed 306 different patient cases entered by 193 practicing clinicians

Use of the Tool and Impact on Treatment Plan
- Of the total patient cases analyzed from the tool:
  - 62% were induction
  - 17% were maintenance
  - 21% were relapsed/refractory
- Intended use and tool impact questions were optional and available after users received the experts' recommendation
  - Answered for 113 of 306 cases (37%)

Intended Use of 2015 Tool, %

![Graph showing distribution of intended use of 2015 tool]

Self-Identified Clinical Impact, % Cases

![Graph showing self-identified clinical impact]

Viewing the expert insights led to a planned treatment change in 70% of cases where this optional question was answered

Maintenance Therapy
- Postinduction therapy was recommended by the experts in every case

Therapy for Relapsed/Refractory Disease
- 2015 participant data (n = 64 cases)
  - 79% of users selected regimens that differed from expert selections
  - 17% selected pomalidomide and 20% selected carfilzomib
  - Among users who selected panobinostat (n = 16), 19% did so in combination with bortezomib/dex

Conclusions
- The recommended use of combination therapy with carfilzomib and pomalidomide increased among experts from 2013 to 2015
- In 2015, large numbers of users chose treatment options for induction and R/R settings not selected by experts
  - Experts generally preferred triplet regimens
  - Users but not experts continued to select melphalan tx and thalidomide tx
- This tool either confirmed or changed the user’s intended clinical approach in 68% of cases where this optional question was answered
  - Viewing the expert insights led to a planned treatment change in 22% of cases