MULTIPLE MYELOMA Research Foundation

MMRF Scientific/Clinical – IO

Discussion Guide

I. Introduction

Thank you for agreeing to take part in this interview to support **the Multiple Myeloma Research Foundation (MMRF)'s efforts to define the foundation's strategy to continue to lead in finding a cure and optimizing care.** As part of this effort, we are reaching out to influential stakeholders such as to brainstorm and discover solutions together. Your perspective on current immune-oncology medical and translational research will be especially valuable.

Today's discussion will focus on immune therapies in development and approved for myeloma and for other indications, including checkpoint inhibitors, adaptive cellular therapies, immunomodulatory agents and vaccines as well as predictive biomarkers and tests.

1. To begin, we would like to discuss your current studies and research in IO and multiple myeloma
2. Broadly, what research initiatives, drug programs and translational research projects are you involved in? In multiple myeloma? More broadly?

II. Current challenges, opportunities and direction in IO?

1. From your perspective, what are the challenges in each stage of the drug development pathway in IO?
    a. Probe: target identification and qualification, choice of combinations, clinical development-signal finding or approval, predicting patient response, short term or long term safety?
    b. Productivity and overlap across the many CPI's?
    c. What challenges are specific for multiple myeloma?
2. What are the most immediate IO opportunities in myeloma? Long term opportunities?
    a. Probe; CPI's, CAR-T, vaccines, diagnostics, other?
3. What are highest priority translational research questions and goals?
    a. Understanding of disease biology and target identification?
    b. Identifying when IO drugs should be used in disease progression and patient treatment?
    c. Identification of most appropriate endpoints in IO trials?
    d. Predictive biomarkers?
    e. Patient data (genomic, proteomic, EHR, other)?

   f. Standardized assays?
   g. Shared data?
   h. Effective tests?
4. What are the challenges and opportunities for patients and oncologists to improve use of IO therapies
   a. Optimized care pathways/guidelines?
   b. Information on research/trial results?
   c. Confidence on reimbursement and logistics?

III. Future Developments in IO

1. What near-term developments do you expect in IO in multiple myeloma?
   a. Continued development of knowledge of mechanisms of action, response and safety? For monotherapies and combinations?
   b. Development and approval of PD-1 inhibitors? CAR-T cell therapies? Vaccines?
   c. Improved use of current immunomodulatory drugs?
   d. When should IO drugs be used in MGUS, smoldering and multiple myeloma?
2. In IO in general, beyond myeloma?
3. What risks do you foresee in IO development in myeloma in the near future?
   a. Poorly understood endpoints?
   b. Lack of efficacy?
   c. Short-term safety? Long-term safety?
   d. Failure to gain adoption or confusion in use?
   e. In IO in general, beyond IO?

IV. Driving Change in IO Research

1. How would you rate the current state of IO research in multiple myeloma?
   a. In basic research and IO models?
   b. Translational research?
   c. Clinical trials?
   d. Clinical therapeutic use?
   e. Patient burden?
2. In IO research in general?

3. What do you believe are the most effective mechanisms to improve IO research in these areas?
    a. In basic research and IO models?
    b. Translational research?
    c. Clinical trials?
    d. Clinical therapeutic use?
    e. Patient burden?
4. How should the MMRF advance use of these mechanisms?
5. What role do you believe real world patient data and data analytics should play in IO research?
6. How can the research community improve collaboration, sharing of data and results and standardization of methods and assays?
7. Are there particular areas that the research community should focus on such as super-responders or resistance mechanisms?
8. How should the MMRF enable or support improvements in these areas?
9. Are there areas, suggestions or comments outside of what we've already discussed, that you would like to share with our team and the MMRF?
10. Thank you for your participation.