

# PQI IN ACTION



**ISATUXIMAB-IRFC (SARCLISA®)  
IN PATIENTS WITH RELAPSED/  
REFRACTORY MULTIPLE MYELOMA**



**NCODA'S POSITIVE QUALITY  
INTERVENTION IN ACTION**

# INTRODUCTION

The treatment and management of oncology patients is continually changing and evolving. The growing complexity creates a need for healthcare professionals to have a quick resource to turn to for drug therapy management information. The medically integrated team is in a unique position to ensure appropriate treatment, increase compliance, and maximize outcomes. Positive Quality Interventions (PQIs), an NCODA Quality Standard, are designed to operationalize and standardize those practices to achieve these positive clinical outcomes. This resource consists of peer-reviewed clinical guidance document for members of the oncology healthcare team. They provide quality standards, best practices, and foster better outcomes for oncology patients in a succinct, easy to digest format. This PQI in Action is a follow up to the the Isatuximab-irfc (SARCLISA®) PQI. We will dive in depth into how Massachusetts General Cancer Center and Yale New Haven Health - Smilow Cancer Hospital incorporate PQIs into their practice settings, and will discuss how utilizing the **Isatuximab-irfc (SARCLISA®) In Patients with Relapsed/Refractory Multiple Myeloma** PQI elevates patient care.

Massachusetts General Cancer Center is known for providing customized, innovative treatments and compassionate care to both adults and children. This Cancer Center comprises more than 37 treatment programs within 29 fully integrated, multidisciplinary disease centers and a vast array of support and educational services. Its network of affiliations extends throughout New England and the southeastern US. Its commitment to eradicating cancer is fueled by scientific investigation conducted as part of one of the largest hospital-based research programs in the nation. Through a powerful synergy between laboratory scientists and bedside physicians, the Massachusetts General Cancer Center fosters innovation in all phases of cancer research. Physician investigators conduct nearly 400 clinical trials annually.

Smilow Cancer Hospital provides the very best cancer care available. The hospital has an affiliation with Yale Cancer Center, the only National Cancer Institute (NCI)-designated comprehensive cancer center in Connecticut, and one of only 51 Centers in the nation. They offer 13 specialized cancer programs, each with multidisciplinary teams of clinicians with deep expertise in a specific type of cancer. Their approach places patients and their loved ones at the center of the care. They are committed to providing compassion and support for every individual's personal journey.

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## THE PARTICIPANTS

### Massachusetts General Cancer Center - North Shore Danvers, MA



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# MULTIPLE MYELOMA AND THE MEDICALLY INTEGRATED TEAM: BENEFICIAL FOR PATIENTS AND PRACTICES

**M**ultiple Myeloma (MM) is a cancer of the plasma cells and is a result of uncontrolled proliferation of monoclonal plasma cells. This is the most common type of plasma cell tumor, starting in the bones, but easily spreads throughout the body. The exact cause of Multiple Myeloma is not known, however there are several associated risk factors. These include age (median age at diagnosis 69 years old),<sup>1</sup> race (black), exposure to X-rays or ionizing radiation, and obesity.<sup>2</sup> It is estimated that in 2021 there were 34,920 new cases of myeloma diagnoses, with 12,410 people who will succumb to the disease according to the National Cancer Institute.<sup>1</sup> While MM was previously a hematological disease with few treatment options, the treatment landscape has improved greatly over the past few years. Sabrina Browning, MD of Yale New Haven Health - Smilow Cancer Hospital shares, “treatment of Multiple Myeloma has really evolved, and I am excited about where we are now.”

**“TREATMENT OF MULTIPLE MYELOMA HAS REALLY EVOLVED AND I AM EXCITED ABOUT WHERE WE ARE NOW.”**

Sabrina Browning, MD

Isatuximab-irfc is an intravenous infused monoclonal antibody which selectively binds to the CD38 glycoprotein found on the surface of malignant plasma cells. Isatuximab-irfc has multiple mechanisms of action. These include CD 38 activity, boosting activation of natural killer cells, and down regulating immunosuppressors. SARCLISA® triggers cell death through antibody-dependent cell-mediated cytotoxicity, antibody-dependent cellular phagocytosis, complement dependent cytotoxicity, and directly kills myeloma cells through apoptosis without the need for crosslinking.<sup>3,4</sup> ICARIA-MM is a phase 3 trial which compared the regimen of isatuximab-irfc plus pomalidomide and low dose dexamethasone to pomalidomide plus low dose dexamethasone alone in patients who received two or more prior therapies including lenalidomide and a proteasome inhibitor.<sup>5</sup> The triplet therapy of isatuximab-irfc plus pomalidomide and low dose dexamethasone reduced the risk of disease

progression or death by 40% compared to pomalidomide plus dexamethasone alone.<sup>6</sup> This regimen has earned the National Comprehensive Cancer Networks (NCCN) Category 1 designation in early relapsed Multiple Myeloma patients.<sup>7</sup> In the IKEMA study, isatuximab-irfc plus carfilzomib and dexamethasone was compared to carfilzomib and dexamethasone alone. This combination reduced the risk of disease progression or death by 45% compared to carfilzomib and dexamethasone alone.<sup>8</sup> Additionally, this regimen received NCCN Category 1 in previously treated Multiple Myeloma patients.<sup>7</sup> Stephanie Sanford, NP-C from Massachusetts General Cancer Center shares, “not only does the pharmacy team make sure things are safe, but they also give fantastic clinical suggestions.” She goes on to share that the pharmacy team keeps providers up to date with NCCN updates, such as the SARCLISA® NCCN Category 1 designation in relapsed Multiple Myeloma patients.

The intricacies of not only a multi-drug regimen, but a regimen that includes both intravenous and oral medications takes the complexity of treatment to the next level. The Medically Integrated Team is the only way to ensure success of these complex treatments; not only for the practice, but also for the patient. Without the collaborative nature of the Medically Integrated Team, details could inevitably fall through the cracks leading to fragmented care and ultimately the failure of the regimen for the cancer patient. Conor McGladrigan, PharmD, JD, BCSCP of Massachusetts General Cancer Center shares that, “being part of the team is really helpful in a number of different ways. A lot of what we do in our clinical review is making sure that everything the patients are receiving is safe. The pharmacy team is looking through everything with a fine tooth comb and acts as a type of safety net.” Stephanie Sanford, NP-C echoes McGladrigan’s sentiments stating, “our pharmacy team is like the safety watchdogs of our practice, I cannot say enough good things about our pharmacy team.” McGladrigan goes on to explain the collaborative nature of the interactions between nursing, pharmacy, and providers at Massachusetts General Cancer Center. He shares that all team members work together to provide “excellent care.”

The teams at Massachusetts General Cancer Center and Yale New Haven Health - Smilow Cancer Hospital are examples of centers of excellence who excel in the integration of both oral and intravenous combination regimens; providing high level, medically integrated care for all cancer patients.



# THE POSITIVE QUALITY INTERVENTION (PQI)

All PQIs begin with a brief synopsis, the description section, of the document. This gives the reader a solid idea at a glance what the PQI will cover. This is followed by the background section, which delves into the details of clinical studies and relevant information regarding the medication or the disease state covered in the PQI. This particular PQI gives the oncology professional the historical data from the ICARIA-MM and IKEMA studies.<sup>6,8</sup> The background section is followed by the PQI Process. For an intravenously infused medication like SARCLISA<sup>®</sup>, this process gives a step-by-step guide of how to handle this product. Most importantly, pre-medications, dosing, and infusion rates. Infusion related reactions may occur (38-46%)<sup>5,9</sup> with the administration of isatuximab-irfc. These usually occur with the first infusion and in most cases, resolve on the same day. Infusion reactions may include difficulty breathing, cough, chills and nausea and the team should counsel the patient to report symptoms.<sup>6</sup> Keeping this in mind, the PQI Process encourages the use of dexamethasone, acetaminophen, an H2 antagonist, and diphenhydramine to prevent infusion related reactions. Some institutions may also use montelukast, but usage as a premedication is not required. Sonal Agarwal, PharmD, BCOP from Yale New Haven Health - Smilow Cancer Hospital shares, “the biggest struggle or challenge with SARCLISA<sup>®</sup> is the management of side effects. Particularly infusion related reactions, which generally are manageable with pre-medications.” Emphasizing that these pre-medications are very important in the process. Brenna Rowen, PharmD, BCOP from Massachusetts General Cancer Center also shares, “specifically with Isatuximab-irfc, this is not their first time getting chemotherapy. So, infusion related reactions are not necessarily a new risk to them, but it is definitely a highly likely side effect that could be very startling if the patient were not aware.”

Oncology technicians often comment that the most valuable part of the PQI, from a technician’s perspective, is the prepara-

tion information. Christine Cronin, CPhT of Massachusetts General Cancer Center agrees stating that, “the vial size, and preparation information, like gently swirling and not shaking is most important” and that it can often be difficult to find this information when searching in a package insert. Kristen Durand, CPhT also from Massachusetts General Cancer Center whole heartedly agrees, stating that, “the PQI is definitely a time-saver.” Adding that from a technician’s perspective, “the admixing instructions, would be the most pertinent to my role.” Emphasizing many of the same points that her teammate mentioned Cronin.

**“THE PQI IS DEFINITELY A TIME-SAVER.”**

Kristen Durand, CPhT

Oncology nurses on the other hand may find information on side effect management and information like the isatuximab-irfc rate of infusion table most helpful from a nurse’s perspective. At Massachusetts General Cancer Center, the utility of the PQI depends on the nurse’s role. For example, Anne Marie Haynes, RN, OCN, JD finds the patient education and side effect management more valuable for nurses in her role. While Kristina Lucia Worcester, RN finds the rate of infusion for isatuximab-irfc table from the **Isatuximab-irfc (SARCLISA<sup>®</sup>) In Patients with Relapsed/Refractory Multiple Myeloma PQI** the most valuable for nurses in her role. One of the big benefits of SARCLISA<sup>®</sup> over competitors is the significantly shorter infusion time of only 75 minutes by the third infusion, as long as no issues arise during the course of the first two infusions. Patients find that the shorter infusions times are extremely valuable allowing them to spend less time in the clinic. It is also valuable to the practice in increasing access to the chair and perhaps the opportunity to treat another patient.

Table 1: Rate of infusion for isatuximab-irfc<sup>9</sup> from Isatuximab-irfc (SARCLISA<sup>®</sup>) In Patients with Relapsed/Refractory Multiple Myeloma PQI

	Volume	Initial Rate	No Infusion Reaction	Rate Increment	Maximum Rate
<b>First infusion</b>	250 ml	25 ml/hr	For 60 minutes	25 ml/hr every 30 minutes	150 ml/hr
<b>Second Infusion</b>	250 ml	50 ml/hr	For 30 minutes	50 ml/hr for 30 minutes then increase by 100 ml/hr every 30 minutes	200 ml/hr
<b>Subsequent Infusions</b>	250 ml	200 ml/hr	-	-	200 ml/hr

# KEEPING THE FOCUS ON PATIENTS: PATIENT-CENTERED ACTIVITIES

Since one of NCODA's guiding values is "patient-centered" it comes as no surprise that every PQI has a Patient-Centered Activities section. Anne Marie Haynes, RN, OCN, JD shares that in regards to Patient-Centered Activities, "the Sarclisa PQI gives a reminder of things that I need to talk to the patients about. It reminds me of all the little niche things that are different with the medication." Patient education around infusion related reactions, side effect management, and coordination with pharmacy are all touched on. It is important to educate the patient on infusion related reactions. Making sure that they are aware, but not frightened by this possibility. That they are educated and aware of the signs so that they can alert their nurse as soon as possible. A frequent side effect with SARCLISA® is diarrhea. The PQI recommends use of the **Oncolytic Induced Diarrhea PQI** as well as the Oral Chemotherapy Education (OCE) Supplemental Sheet on managing diarrhea to assist practitioners in the specifics of diarrhea management. Kristina Gigante, RN from Yale New Haven Health - Smilow Cancer Hospital shares that after ruling out any possible infectious causes of diarrhea, "we talk to the patient about use of loperamide, the importance of staying well hydrated, following the BRAT diet/bland foods, and to call us if it seems to be worsening or not improving." She goes on to stress that patients should feel comfortable to report any side effect and never hesitate to call. When asked what portion of the PQI she felt was most important from a pharmacist perspective, Sonal Agarwal, PharmD, BCOP shares, "I think the most important aspect of the PQI is patient counseling; going over what the side effects are, what things to monitor or watch out for is very important. From a patient perspective, they are going through a lot, and they are getting multiple agents. I feel like it is my job to make them feel much more comfortable with the treatment."

[CLICK HERE TO VIEW THIS PQI](#)

[CLICK HERE TO VIEW THIS OCE SUPPLEMENTAL SHEET](#)

Another part of the patient centered activities sections is a link to the NCODA Financial Assistance Tool. The Financial Assistance Tool is an NCODA initiative that provides up to date and comprehensive financial resource information about dozens



of chemotherapies and cancer care treatment options. This resource is available in the NCODA Member Portal in a convenient online format or as a downloadable excel spreadsheet. The Financial Assistance Tool is a ready resource for oncology caregivers to assist their patients struggling to pay for cancer treatment. Many types and levels of assistance are available from major pharmaceutical companies to not-for-profit organizations. Kristen Durand, CPhT shares that financial assistance is another area of focus at Massachusetts General Cancer Center. She shares "we also have a finance team. If there, for any reason, a medication is not covered or the patient needs help paying for it, it will be reviewed by our finance team and sent to one of our medication access coordinators who can assist the patient, if needed, with paying for their IV or oral medication."

**"FROM A PATIENT PERSPECTIVE, THEY ARE GOING THROUGH A LOT, AND THEY ARE GETTING MULTIPLE AGENTS. I FEEL LIKE IT IS MY JOB TO MAKE THEM FEEL MUCH MORE COMFORTABLE WITH THE TREATMENT."**

Sonal Agarwal, PharmD, BCOP

# THE PQI – A VALUABLE RESOURCE FOR ALL MEMBERS OF THE ONCOLOGY TEAM

**W**hen being developed, the authors of the PQI are asked to keep in mind all members of the oncology care team. From pharmacists, to nurses; from providers, to technicians.

Sabrina Browning, MD says, “the important thing is that the PQI is patient centered and seems to incorporate information for the full multidisciplinary team”. When asked which part of the PQI she found to be the most important from a pharmacist perspective, Brenna Rowen, PharmD, BCOP shares, “for me, the PQI is really the full package, I really cannot pinpoint one particular item, but I think it provides all of the important details for all members of the care team.” Christine Cronin,

CPhT agrees and shares, “our pharmacists provide a lot of information when a new medication comes out, but there is lot of good information in the PQI.” Kristina Lucia Worcester, RN says, “it is definitely valuable having this clear, concise document.” The PQI is a valuable resource for all.

**"THE PQI IS REALLY THE FULL PACKAGE – IT PROVIDES ALL OF THE IMPORTANT DETAILS FOR ALL MEMBERS OF THE CARE TEAM."**

Brenna Rowen, PharmD, BCOP

## A COMPREHENSIVE APPROACH ADDRESSING THE COMPLEXITY OF MULTI-DRUG COMBINATION REGIMENS THROUGH THE MEDICALLY INTEGRATED TEAM

Historically, Multiple Myeloma was treated with single medications. As advancements in therapies have emerged over the years, treatment paradigms have shifted to doublet and triplet-based regimens. These led to longer remission times, however, these doublet/triplet regimens greatly increase the complexity of treatment not only for the patient, but also for the Medically Integrated Team. Sabrina Browning, MD shares, “we are seeing great responses with these triplet or quadruplet therapies and overall are seeing good tolerance, but the complexity makes them challenging.” In a traditional model, oral medications are siloed from intravenous medication. So much so that it is not only different insurances, route of administration, but even a different organization all together. The change of model to a Medically Integrated Team and focusing on medically integrated dispensing helps to decrease fragmented care and really focuses on the patient. It has been shown in multiple studies that fragmented care can lead to increased spending and worse clinical outcomes for the patient.<sup>10</sup> Which should lead every person in healthcare to work towards an integrated model; even a Medically Integrated Team.

SARCLISA® is indicated in combination with pomalidomide and dexamethasone or carfilzomib and dexamethasone. As previously discussed, these multi-drug and even multi-route regimens add to the complexity of the regimens. Medically





Integrated Teams have to be in tune with each other and with different branches of their organizations to ensure smooth and seamless care. Also adding to the intricacy is the REMS program associated with pomalidomide (if this regimen is used). Kristina Gigante, RN shares that a lot of her time is spent in the management and coordination of this REMS program. Her work is crucial in ensuring continuous and uninterrupted care with the oral and intravenous combination regimen. Stephanie Sanford, NP-C shared her thoughts on Massachusetts General Cancer Centers best practices for these intricate regimens. Sanford says, “that initial touch point with a nurse is so important. We have also found that bringing the patient back and redoing the whole education is very helpful.” She goes on to share that written education and calendars are particularly helpful. So much so,

that “after one or two cycles it almost becomes second nature.” Anne Marie Haynes, RN, OCN, JD shares that she provides, “color coded calendars to show the patient what each cycle of treatment looks like. It is a good amount of work, but it is so helpful for patients.” Yale New Haven Health - Smilow Cancer Hospital shares a similar approach. Sabrina Browning says, “it starts really from the beginning in terms of education, and then continues with the multidisciplinary approach from our team in terms of continued education and monitoring for side effects.” Dr. Browning goes on to share that “close communication and work with our pharmacists, our infusion nurses, and of course the patient” is the key to success with these complex treatment regimens



## Education is the key to success in complex multi-drug regimens

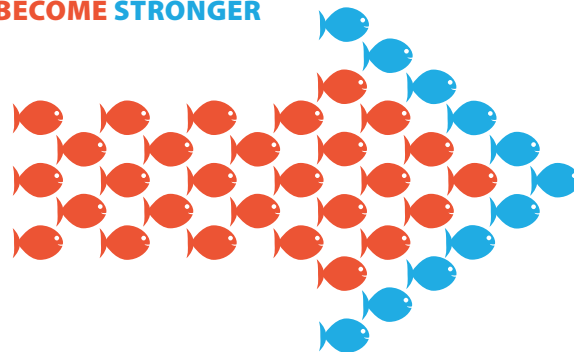
# ALWAYS COLLABORATIVE: NCODA, MEDICALLY INTEGRATED TEAMS, AND THE PQI

**N**CODA's Guiding Values have always been and always will be 1) Patient-Centered and 2) Always Collaborative, just like Massachusetts General Cancer Center and Yale New Haven Health - Smilow Cancer Hospital. All members of the Medically Integrated Team agree that medically integrated collaboration and the PQI Clinical Resource are a valuable asset to patient care and management of these complex regimens. The PQI helps to set the stage for appropriate patient identification and management through a peer reviewed, succinct, clinically based document.

Pairing Medically Integrated Teams at Massachusetts General and Yale New Haven Health Smilow Cancer Hospital with the **Isatuximab-irfc (SARCLISA®) In Patients with Relapsed/Refractory Multiple Myeloma PQI** benefits patients and practices. Every day the Medically Integrated Team has the opportunity to make a difference in the life of patients. Every day the team can learn something new, can optimize care, can touch a patient's life. Brenna Rowen, PharmD, BCOP says, “these are patients are in the commu-

nities that we live in. They're like family. I think that shines through to how we work together as a Medically Integrated Team.” Conor McGladrigan, PharmD, JD, BCSCP sums it all up greatly, “it takes a team of people to make everything go smoothly, efficiently, and safely. I am really thankful to be part of this team here, because there are a lot of good people. Not just in the pharmacy, but the nurses, and providers. It really takes all of us coming together, working together in a positive way to really provide excellent care.”

**WORKING TOGETHER,  
WE BECOME STRONGER**

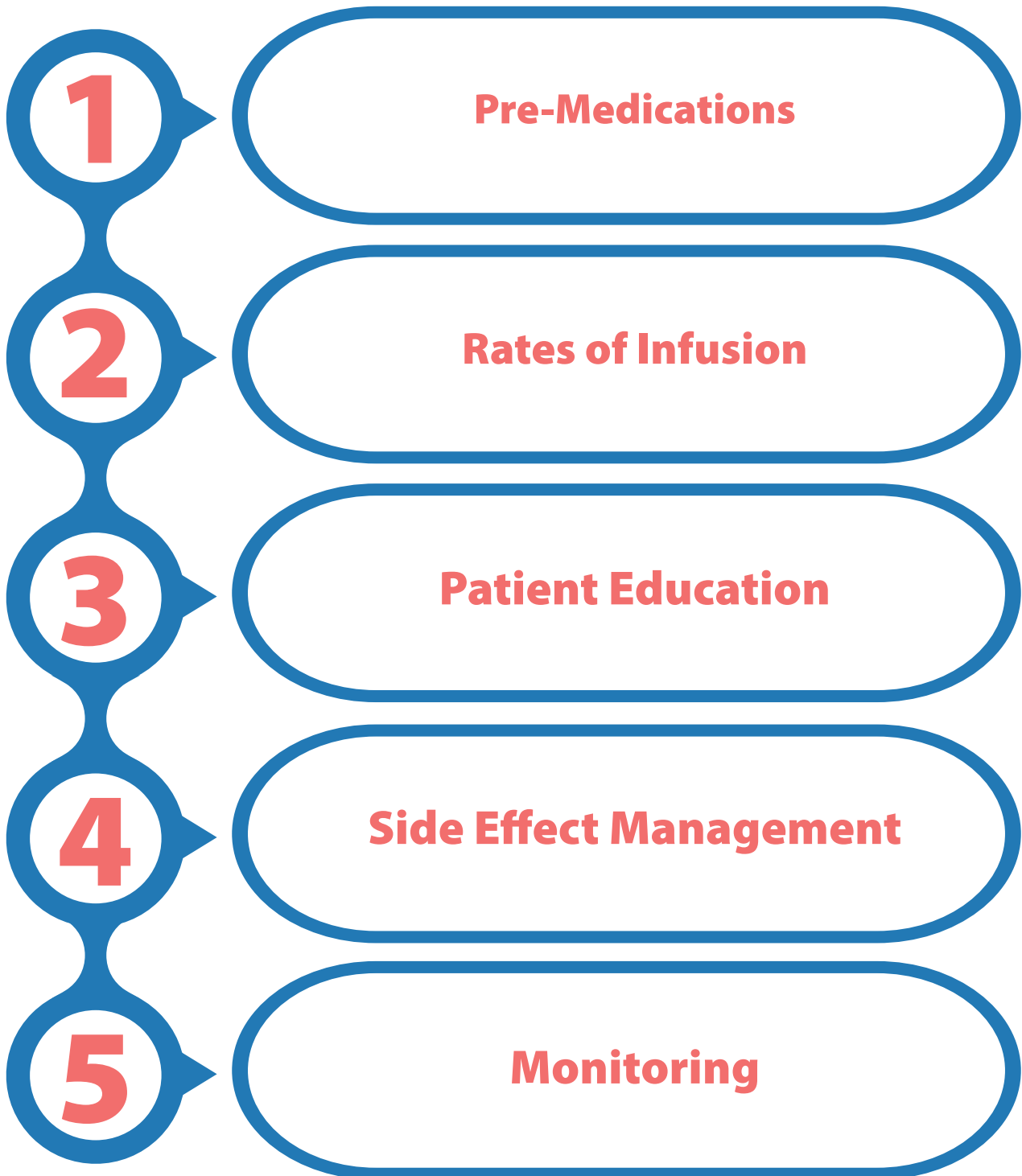


# REFERENCES

1. National Cancer Institute. (n.d.). Myeloma - Cancer Stat Facts. Surveillance, Epidemiology, and End Results (SEER) Program. <https://seer.cancer.gov/statfacts/html/mulmy.html>.
2. Centers for Disease Control and Prevention. (2021, April 1). Multiple Myeloma. Centers for Disease Control and Prevention. <https://www.cdc.gov/cancer/myeloma/index.htm>.
3. Trudel, Suzanne. "Incorporating Isatuximab in the Treatment of Multiple Myeloma." *The Lancet*, vol. 394, 7 Dec. 2019, pp. 2045–2046.
4. Moreno, Laura, et al. "The Mechanism of Action of the Anti-CD38 Monoclonal Antibody Isatuximab in Multiple Myeloma." *Clinical Cancer Research*, vol. 25, no. 10, 15 May 2019.
5. Martin, Thomas, et al. "Therapeutic Opportunities with Pharmacological Inhibition of CD38 with Isatuximab." *Cells*, vol. 8, no. 1522, 26 Nov. 2019.
6. Attal, Prof. Michael, et al. "Isatuximab plus Pomalidomide and Low-Dose Dexamethasone versus Pomalidomide and Low-Dose Dexamethasone in Patients with Relapsed and Refractory Multiple Myeloma (ICARIA-MM): a Randomised, Multicentre, Open-Label, Phase 3 Study." *The Lancet*, vol. 394, no. 10214, 7 Dec. 2019, pp. 2096–2107.
7. Multiple Myeloma . NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) - Multiple Myeloma . (2021, Dec 12). [https://www.nccn.org/professionals/physician\\_gls/pdf/myeloma.pdf](https://www.nccn.org/professionals/physician_gls/pdf/myeloma.pdf).
8. Moreau P (2020) Isatuximab plus carfilzomib and dexamethasone vs carfilzomib and dexamethasone in relapsed/refractory multiple myeloma (IKEMA): Interim analysis of a phase 3, randomized, open label study. (#LB2603) EHA25 Virtual, June 14th 2020.
9. Sarclisa®(isatuximab-irfc) Package Insert.
10. Skolarus TA, Zhang Y, Hollenback BK. Understanding Fragmentation of Prostate Cancer Survivorship Care Implications for Cost and Quality. *Cancer*. 2012; 118(11) 2837-2845.



# PQI PRINCIPLES:





## Helpful Online Resources

- [Isatuximab-Irfc \(Sarclisa®\) In Patients With Relapsed Refractory Multiple Myeloma PQI](#)
- [NCODA Website](#)
- [Positive Quality Interventions](#)
- [Oral Chemotherapy Education Supplemental Sheet](#)

### ON THE COVER:

- Darren Luon, PharmD, BCOP and Evanica Rosselli, MSN, RN-BSN, OCN collaboratively reviewing a patient case.







Practice panelist's comments reflect their experiences and opinions and should not be used as a substitute for medical judgement.

Important notice: NCODA has developed this Positive Quality Intervention in Action platform. This platform represents a brief summary of medication uses and therapy options derived from information provided by the drug manufacturer and other resources. This platform is intended as an educational aid and does not provide individual medical advice and does not substitute for the advice of a qualified healthcare professional. This platform does not cover all existing information related to the possible uses, directions, doses, precautions, warning, interactions, adverse effects, or risks associated with the medication discussed in the platform and is not intended as a substitute for the advice of a qualified healthcare professional. The materials contained in this platform are for informational purposes only and do not constitute or imply endorsement, recommendation, or favoring of this medication by NCODA, which assumes no liability for and does not ensure the accuracy of the information presented. NCODA does not make any representations with respect to the medications whatsoever, and any and all decisions, with respect to such medications, are at the sole risk of the individual consuming the medication. All decisions related to taking this medication should be made with the guidance and under the direction of a qualified healthcare professional.



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