

# PQI IN ACTION



**TUCATINIB (TUKYSA®) AND  
TRASTUZUMAB IN HER2-POSITIVE  
METASTATIC COLORECTAL CANCER PQI**



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

# INTRODUCTION

In an effort to promote higher quality patient care, NCODA created the NCODA Positive Quality Intervention (PQI) as a peer-reviewed clinical guidance resource for healthcare providers. By providing Quality Standards and effective practices around a specific aspect of cancer care, PQIs equip the entire multidisciplinary care team with a sophisticated yet concise resource for managing patients receiving oral or IV oncolytics. This PQI in Action explores how the medically integrated teams at the Ruesch Center for the Cure of GI Cancers at Georgetown University and University Hospitals Seidman Cancer Center incorporate the information found in the PQIs as part of their daily workflow. This article will discuss how utilizing the **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** elevates patient care.

The Georgetown Lombardi Comprehensive Cancer Center is the only National Cancer Institute-Designated Comprehensive Cancer Center in Washington, D.C. and the region. In partnership with Lombardi Cancer Center, the Otto J. Ruesch Center for the Cure of GI Cancers provides cutting-edge clinical trials and can deliver breakthroughs in cancer care. The Ruesch Cancer Center is committed to advancing science through research, access to clinical trials, education, a culture of innovation and improving patient lives and outcomes. The center follows a multidisciplinary team approach to cancer treatment that includes clinical pharmacists, nurse navigators, specialist oncologists and students.

University Hospitals (UH) Seidman Cancer Center located in Cleveland, Ohio, is a National Cancer Institute Designated Case Comprehensive Cancer Center. Seidman Cancer Centers are associated with several community based cancer centers across Northeast Ohio. UH integrates center of excellence+ (COE+) programs to patients. The COE+ elevates the clinical experience by offering individualized care through a multidisciplinary team of cancer specialists including dedicated nurse navigators providing a highly personalized patient experience.

## THE PARTICIPANTS

### *Medstar Georgetown University Hospital Otto J. Ruesch Center for the Cure of GI Cancers Washington D.C.*



**John Marshall, MD**

Chief Hematologist Oncologist  
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**Bobbie Khan, RN**

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Medical Oncologist



**Veronica Mears, PharmD, BCOP**

Clinical Pharmacy Specialist



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**Laura Goerndt, RN**

Nurse Partner

### *University Hospitals Seidman Cancer Center Cleveland, Ohio*

# MID, THE PQI, AND TUCATINIB

**H**uman epidermal growth factor receptor 2 (HER2) is overexpressed in approximately 1–4% of metastatic colorectal cancer (mCRC) cases. Treatment targeting HER2 has shown benefit in this population. Tucatinib, an oral, selective small molecule inhibitor of HER2, is the first FDA-approved treatment in combination with trastuzumab for patients with HER2-positive mCRC previously treated with chemotherapy.<sup>1</sup>

Tucatinib is a tyrosine kinase that inhibits the growth of HER2 expressing tumors.<sup>3</sup> Based on the pivotal MOUNTAINEER trial which assessed the activity of tucatinib in combination with trastuzumab in patients with HER2 expressing, RAS wild type, mCRC refractory to chemotherapy (oxaliplatin, fluoropyrimidine, irinotecan)<sup>2</sup>, tucatinib is indicated:<sup>1–3</sup>

- **In combination with trastuzumab and capecitabine for treatment of adult patients with advanced unresectable or metastatic HER2-positive breast cancer, including patients with brain metastases, who have received one or more prior anti-HER2-based regimens in the metastatic setting**
- **In combination with trastuzumab in adult patients with RAS-wild type HER2-positive unresectable or mCRC that has progressed following treatment with fluoropyrimidine-, oxaliplatin-, and irinotecan-based chemotherapy.<sup>3</sup>**

*\*This indication is approved under accelerated approval based on tumor response rate and durability of response. Continued approval may be contingent upon verification and description of clinical benefit in confirmatory trials.<sup>3</sup>*

Tucatinib can be dispensed by the Medically Integrated Team, and thus offers patients more comprehensive care. NCODA defines Medically Integrated Dispensing (MID) as a dispensing pharmacy within an oncology center of excellence that promotes a patient-centered, multidisciplinary team approach. The MID is an outcome-based collaborative and comprehensive model that involves oncology healthcare professionals and other stakeholders who focus on the continuity of coordinated, quality care and therapies for cancer patients.<sup>4</sup>

The MID model can optimize the management of patients on therapies like tucatinib in several ways including improving patient identification for therapy, monitoring adverse events, managing dosage changes, increasing patient satisfaction, ensuring financial assistance, and avoiding unnecessary costs.<sup>5</sup>

NCODA offers multiple tools to aid the MID practice in managing oncolytics. This toolbox contains a Patient Survey that is practice-customizable, a Cost Avoidance and Waste Tracker tool, a Financial Assistance Tool (database), Treatment Support Kits, Oral Chemotherapy Education sheets, and of course the Positive Quality Intervention clinical resource documents.

Georgetown Hospital and Seidman Cancer Centers both use a multidisciplinary team approach in the treatment of patients with cancer, providing an individualized care.

Georgetown Clinical Nurse Coordinator Bobbie Khan, RN notes that the multidisciplinary team approach is valuable to patients and enhances the quality of care. Patients have access to a team of specialists who can interact closely, order timely testing, evaluate treatment options and recommend individualized therapy. This approach speeds the time from diagnosis to treatment.

Georgetown Oncology Patient Services Manager Tiffany Simpson, CPhT believes that pharmacy services drive quality cancer care and improve patient outcomes. Simpson handles oncology specialty pharmacy for patients in the cancer center. “Pharmacy services are invaluable in general but especially during the implementation of new therapies such as tucatinib. Pharmacists provide the required scientific evidence to payers when they request prior approvals for new therapies. Pharmacists present the clinical criteria to justify the use of tucatinib in individual patients.”

**“PHARMACY SERVICES ARE INVALUABLE IN GENERAL BUT ESPECIALLY DURING IMPLEMENTATION OF NEW THERAPIES SUCH AS TUCATINIB. PHARMACISTS PROVIDE THE REQUIRED SCIENTIFIC EVIDENCE TO PAYERS REQUESTING PRIOR APPROVALS FOR NEW THERAPIES. THEY BRING FORWARD THE CLINICAL CASE TO JUSTIFY THE USE OF TUCATINIB IN INDIVIDUAL PATIENTS.”**

Tiffany Simpson, CPhT  
Georgetown University Hospital

# THE POSITIVE QUALITY INTERVENTION: A VALUABLE CLINICAL RESOURCE

**C**hief Oncologist and Hematologist and Director of the Ruesch Center for the Cure of GI Cancers at Georgetown University John Marshall, MD notes the value of the PQIs to the team. “There have been 80 new cancer drug approvals in the last two years alone”, he says, noting that it is virtually impossible to memorize all drug information. “The PQI is an invaluable resource for the team, it provides quick refreshers for the multidisciplinary team and can also be used to communicate information for patients. It is important to have a source of credible information for patients and professionals.” Georgetown is developing a library of educational videos as a resource for patients and hopes to prevent misinformation from untrusted sources.

**“THE PQI IS AN INVALUABLE RESOURCE FOR THE TEAM, IT PROVIDES QUICK SUMMARIES FOR THE MULTIDISCIPLINARY TEAM AND CAN ALSO BE USED TO COMMUNICATE INFORMATION FOR PATIENTS. IT IS IMPORTANT TO HAVE A SOURCE OF CREDIBLE INFORMATION FOR PATIENTS AND PROFESSIONALS.”**

John Marshall, MD  
Georgetown University Hospital

This article will explore the benefits of PQI utilization as a core standard of the MID and how adoption can benefit any practice. University Hospitals Seidman Cancer Centers position their Medically Integrated Teams in a way to ensure appropriate treatment, increase compliance, and maximize clinical outcomes. This section will explore the practice settings, how implementing the steps found in the PQIs benefit their staff and patients, and how they advance patient care on a daily basis.

Georgetown Manager of Patient Services Tiffany Simpson, CPhT shares that “The PQIs are helpful to practice, they are designed to provide concise, accurate information. The PQI covers the most important topics, background, dosing, toxicities, monitoring, and can be read quickly. It is a practical resource that is truly appreciated in a busy clinic.”



# MEDICALLY INTEGRATED DISPENSING: ELEVATING CARE

**A**s cancer treatment continually grows in complexity with the use of IV, oral and combination regimens, MID and multidisciplinary teams represent a great option for patient care. The MID and multidisciplinary staff have access to patient information and can easily communicate with other members of the team. Similarly, pharmacists have direct access to patients and can

report back to the providers, which speeds time to treatment and enables delivery of optimal care to patients. This model greatly reduces fragmentation of care.

Seidman Cancer Centers utilize an integrated specialty pharmacy. Seidman clinical pharmacist Veronica Mears, PharmD, explains that pharmacy technicians would typically initiate



the approval process with the insurance company. Routing the medication to an external mail order pharmacy causes certain delays in treatment compared to using MID or the on site specialty pharmacy delivery. Most importantly, mail order or external specialty pharmacies do not provide patients with an in-person medication review by an in-house clinical pharmacist.

“Integration of the MID at Seidman Cancer Centers improved engagement of the staff with patients.” The most important added value of pharmacists within MID, notes Mears, is that “pharmacists are a direct source of information to the patients. A cancer diagnosis can be overwhelming to patients and cause a heavy burden. Pharmacists in cancer centers spend up to 30-40 minutes with each patient and their families, which enhances the patient experience.” Pharmacists play a central role within the multidisciplinary team at UH Seidman Cancer Center.

Laura Goerndt, RN, nurse partner at UH Seidman Cancer Center, assists patients in scheduling appointments, ordering baseline tests, monitoring results, and education. When MID is in place for both IV and oral therapies, nurses educate

patients on IV treatments and pharmacists deliver in-depth education about drug therapy. Pharmacists ensured that patients received the medications. “The MID structure allowed patients to get the best prices for their medications and enabled same day medication dispensing. Without MID, patients have to use an off-site specialty pharmacy and do not receive in-person education. In addition, using an external pharmacy will delay medication delivery.”

**“WITHOUT MID, PATIENTS HAVE TO USE AN OFF-SITE SPECIALTY PHARMACY AND WILL NOT RECEIVE IN-PERSON EDUCATION. IN ADDITION, USING AN EXTERNAL PHARMACY WILL DELAY MEDICATION DELIVERY.”**

Laura Goerndt, RN  
Seidman Cancer Center

## MID AND MULTIDISCIPLINARY TEAMS: PHARMACISTS ENHANCING THE PATIENT EXPERIENCE

Seidman Cancer Center Medical Oncologist Sakti Chakrabarti, MD stressed the central role of the pharmacist within the multidisciplinary team. Seidman Cancer Center has a robust multidisciplinary team composed of radiologists, pathologists, oncology subspecialists, and pharmacists. He comments “new drugs are being approved faster than any healthcare provider can ever keep up. Pharmacists provide a huge benefit for the staff and to the cancer patient population. Newer molecules are added to treatment options every week, and it is impossible to stay up to date with all that information. In this context, pharmacists are invaluable in educating the team about new drugs, their side effects, prevention and monitoring of adverse events, dose modifications, and drug-drug interactions. Pharmacist interventions have prevented numerous errors and can be life saving. Moreover, pharmacists possess expertise in managing the complex cancer patient population with numerous comorbidities.”

Veronica Mears, PharmD is a Clinical Pharmacy Specialist in ambulatory GI oncology at Seidman Cancer Center, and is part of a growing oncology pharmacy team. Her disease-based GI cancer team is composed of 7 GI oncologists and 4 nurse

**“NEWER MOLECULES ARE ADDED TO TREATMENT OPTIONS EVERY WEEK, AND IT IS IMPOSSIBLE TO STAY UP TO DATE WITH ALL THAT INFORMATION. IN THIS CONTEXT, PHARMACISTS ARE INVALUABLE IN EDUCATING THE TEAM ABOUT NEW DRUGS, THEIR SIDE EFFECTS, PREVENTION AND MONITORING OF ADVERSE EVENTS, DOSE MODIFICATIONS, AND DRUG-DRUG INTERACTIONS. PHARMACIST INTERVENTIONS HAVE PREVENTED NUMEROUS ERRORS AND CAN BE LIFE-SAVING. MOREOVER, PHARMACISTS POSSESS EXPERTISE IN MANAGING THE COMPLEX CANCER PATIENT POPULATION WITH NUMEROUS COMORBIDITIES.”**

Sakti Chakrabarti, MD  
Seidman Cancer Center

practitioners. She interacts with several other clinical oncology pharmacist specialists each assigned to various cancer teams including breast cancer, bone marrow transplant, and multiple myeloma teams. “Oncology pharmacists become experts in their respective diseases and serve as great resources for the

team.” Collaborative practice agreements with GI oncologists allow pharmacists to expand their scope of care including entering prescriptions, overseeing patient treatment plans, and managing supportive care.

**Table 3: Recommended dose modifications for adverse reactions**

Adverse Reaction	Severity	Management
<b>Diarrhea</b>	Grade 3 without antidiarrheals	Hold tucatinib and initiate antidiarrheals. Resume tucatinib at same dose level once improved to Grade $\leq 1$
	Grade 3 with antidiarrheals	Hold tucatinib. Intensify antidiarrheals, if appropriate. Resume tucatinib at next lower dose level once improved to Grade $\leq 1$
	Grade 4	Permanently discontinue tucatinib
<b>Hepatotoxicity</b>	Grade 2 bilirubin ( $>1.5$ to $3\times$ ULN)	Hold tucatinib until recovery to Grade $\leq 1$ , then resume at the same dose level
	Grade 3 AST or ALT ( $>5$ to $20\times$ ULN) or bilirubin ( $>3$ to $10\times$ ULN)	Hold tucatinib until recovery to Grade $\leq 1$ , then resume at the next lower dose level
	Grade 4 AST or ALT ( $> 20 \times$ ULN) OR bilirubin ( $> 10 \times$ ULN)	Permanently discontinue tucatinib
	AST or ALT $> 3\times$ ULN AND bilirubin $> 2\times$ ULN	Permanently discontinue tucatinib
<b>Other adverse reactions</b>	Grade 3	Hold tucatinib until recovery to Grade $\leq 1$ , then resume at the next lower dose level
	Grade 4	Permanently discontinue tucatinib

## PUTTING THE PQI INTO ACTION: IDENTIFYING ELIGIBLE PATIENTS FOR TUCATINIB

**T**he **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** Background Section identifies all approved indications and provides clinical trial information for the team including various safety and efficacy endpoints. It describes the dosage regimen, the patient population, and adverse events.<sup>1</sup>

The next section of the **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** is the PQI Process. This section lays out the intervention in step-by-step points, contains clinician-directed guidance and clinical criteria that can benefit the entire team. The first step of the **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** Process lists the criteria to identify patients eligible to receive tucatinib. This is critical for patient care but also vitally important to ensure the medication is covered by a patient’s insurance. The PQI process provides

information about the initiation of therapy, such as required baseline tests, monitoring and follow up, and concomitant drugs to avoid.<sup>1</sup>

The PQI is a peer-reviewed clinical guidance document that provides Quality Standards and effective practices around a specific aspect of cancer care. The Medically Integrated Pharmacy team is in a unique position to ensure appropriate treatment, increase compliance, and maximize clinical outcomes. Positive Quality Interventions (PQIs), an NCODA Quality Standard, are designed to operationalize and standardize those practices to achieve these positive clinical outcomes. The **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** provides guidance to providers involved in treating patients receiving tucatinib. The document is written in sections beginning with the Description and ending with Patient-Centered Activities and was developed to provide guidance for management of patients treated with tucatinib.<sup>1</sup>

Seidman Cancer Center medical oncologist Sakti Chakrabarti, MD describes the process to identify patients eligible to receive tucatinib. He explains that all patients receive genomic profiling using both tissue and liquid biopsy. Dr. Chakrabarti supports the liquid biosy option as a faster, less invasive method than tissue biopsy that can detect HER2 amplification. The typical patient on tucatinib has advanced colorectal cancer and is refractory to irinotecan, fluoropyrimidines, and oxaliplatin.

Georgetown University Hospital Chief Hematologist Oncologist Dr. Marshall explains that the typical patient eligible to receive tucatinib is a younger patient with left side colorectal cancer carrying a HER2 amplification. Patients are identified according to HER2 status in the metastatic setting beyond 1L treatment. He stresses that HER2 amplification is most likely identified in left-sided colon cancer although can be found anywhere in the colon. Tucatinib is indicated in the treatment of HER2 amplified but not in HER2-mutated colorectal cancers. Hence the importance of distinguishing between HER2 amplification and HER2 mutated colorectal cancers. Patients receive genetic testing through a strategic partner to the institution. Immunohistochemical (IHC) testing for HER2 amplification is a simple pathology test that can be done in house, while next-generation sequencing (BRAF, RAS-wild type) will be performed through strategic partners.

Seidman Clinical Oncology Pharmacist Veronica Mears, PharmD, shares that some patients are already receiving tucatinib and others may be eligible when they progress. Typically,

**“THERE IS CLEAR DATA THAT SHOWS THAT PATIENTS WITH HER2 AMPLIFICATION AND EGFR MUTATIONS, AND RASWT, WILL NOT BENEFIT FROM CETUXIMAB AND PANUTUMUMAB, SO IT IS IMPORTANT TO TEST THE HER2 STATUS, AND IDENTIFY THESE PATIENTS EARLY BEFORE INITIATING A SUBOPTIMAL THERAPY.”**

John Marshall, MD  
Georgetown University Hospital

commented Mears; “Lab tests are ordered once patients meet with the GI oncology specialist. By the time the patient meets with their physician, the workup is completed to determine extent of disease, testing is performed for molecular signatures

(MSI, MMR, TMB) and HER2 status in metastatic disease. Genomic tests can be done individually or part of next generation sequencing panels. Even in patients started on traditional chemotherapy regimens such as FOLFOX, the team is well-versed about next-line treatment options once the results of genomic profiling are known (BRAF, RASwt, HER2). We keep targeted therapy options such as tucatinib in the background until progression, we evaluate therapies and potential drug-drug interactions, risks vs benefits. I reach out to patients to discuss side effects.”

**“WE KEEP TARGETED THERAPY OPTIONS SUCH AS TUCATINIB IN THE BACKGROUND UNTIL PROGRESSION, WE EVALUATE THERAPIES AND POTENTIAL DRUG-DRUG INTERACTIONS, RISKS VS BENEFITS. I REACH OUT TO PATIENTS TO DISCUSS SIDE EFFECTS.”**

Veronica Mears, PharmD  
Seidman Cancer Center

Seidman Cancer Center pharmacist Mears says that “In addition to molecular testing, patients undergo baseline labs such as complete blood counts and comprehensive metabolic panel. Follow-up testing is done routinely. We monitor for cardiomyopathy risk, shortness of breath or chest pain. Other commonly reported side effects include diarrhea, fatigue, hand foot syndrome, mucositis, etc”.

Nurse partner Goerndt says that patients undergo genomic testing to determine the optimal treatment and potential eligibility for tucatinib. Patients undergo baseline laboratory tests, echocardiography and cardiac tests, and a follow up test at 3 weeks (CBC, CMP). Nurses educate patients early on in the treatment journey and give printouts with easy-to-digest information. Common side effects include diarrhea, fatigue, nausea, and abdominal pain. “I instruct patients to take tucatinib at the same time each day,” says Goerndt, “not to double the dose when they miss a dose, and to take anti-diarrheal medications. I explain the required monitoring tests for cardiac and liver function, the importance to communicate any change in activities of daily living, and how to reach the cancer center when issues arise.”

Goerndt praised the value of the PQI as a comprehensive resource with all the information in a summarized format. She says the most helpful parts are the patient centered activities presented as a brief actionable summary for patients about tucatinib.

# PATIENT-CENTERED ACTIVITIES: ENHANCING THE PATIENT EXPERIENCE

**T**he Patient-Centered Activities section follows the PQI Process and gives patient-centered guidance for the team.

In 2019 the Patient-Centered Standards for Medically Integrated Dispensing: ASCO/NCODA Standards were published to provide standards for medically integrated dispensing of oral anticancer drugs and supportive care medications.<sup>6</sup> Standard 1.2 of the ASCO/NCODA Standards reads:

*Prior to initiation of an oral anticancer drug, a formalized patient education session should occur with an experienced clinical educator such as a nurse, physician, pharmacist, nurse practitioner, or physician assistant. The discussion should include drug name (generic and brand), drug dose, schedule, potential adverse effects and how to properly manage them, fertility (where applicable), treatment goal, duration of therapy, and financial and affordability considerations.<sup>6</sup>*

The last section in the PQI concerns patient-centered activities such as counseling patients on the appropriate use of tucatinib, management of side effects, and education about the tucatinib treatment journey.

Georgetown GI Cancer Center Director John Marshall, MD notes that patients receive tucatinib from the specialty pharmacy and connect with their physician before they get started on therapy. Dr. Marshall educates patients about the side effects of tucatinib, particularly diarrhea. Grade 3 diarrhea is common with tucatinib and the risk is higher early in therapy. Patients are prescribed antidiarrheals and counseled on symptoms to expect, and instructed to call the cancer center when symptoms worsen. Nurses monitor patients in the early phase of therapy and follow up closely. It is common to hold and/or modify the tucatinib doses when diarrhea occurs.

With the advent of effective oral therapies, says Dr. Chakrabarti, treatment regimens include combinations of IV and oral agents. Order sets now include both oral and IV treatments. The IV agents are administered by nurses and oral targeted therapies are monitored by clinical pharmacists. Physicians get alerts during patient follow up and monitoring and they are notified when side effects occur. “The PQIs are highly valuable tools to pharmacists but also to the entire team. It is important to have a quick reference that

outlines all the required clinical information in a tight and actionable fashion”, says Dr. Chakrabarti.

Seidman Cancer Center physician Dr. Chakrabarti shares that pharmacists are instrumental in patient education and initiation of treatment and follow up. Pharmacists sit with patients, review side effects, precautions, and side effect management. Patients are given handouts to support the information they receive. One of the major side effects of tucatinib is diarrhea. It is important to discuss nutrition, since different foods may exacerbate diarrhea. Counseling patients to avoid spicy or greasy food is important in patients receiving tucatinib, he adds. “We discuss the risks of dehydration with diarrhea, the importance of staying hydrated, and best practices to prevent complications such as kidney failure and consequent hospitalizations. Providing patient education ensures that patients are compliant to therapy and get full benefit of treatment.”

Seidman Clinical Pharmacist Mears discusses the appropriate use of tucatinib. She notes that tucatinib is used in combination with trastuzumab according to the MOUNTAINEER trial. Tucatinib is orally administered twice daily. Pharmacists review all drug interactions, check other herbal or over the counter medications that the patients might be taking and provide comprehensive patient education about tucatinib. Mears comments that “with any oral chemotherapy, it is important to educate on how to take the medications and how to manage side effects. We educate the patient about monitoring requirements including blood work and echocardiogram every 3 weeks, routine imaging, potential drug-drug interactions, etc. Tucatinib is taken every 12 hours at the same time each day and can be taken with or without food; if a dose is missed or if vomiting occurs, the missed dose should be skipped and the next dose resumed at the next dose timing. Tablets must be stored in the original bottle. If the bottle has been opened and unused, the tablets must be discarded after 3 months.” Mears stresses that diarrhea is a major side effect with tucatinib. Patients are instructed about how to manage symptoms of diarrhea, and when to use loperamide if appropriate. It is important to prevent emergency room visits.”

Georgetown Clinical Nurse Coordinator Khan gets in touch with the patient when the medication is delivered and reviews the use of tucatinib. She discusses side effects, hand



foot syndrome, diarrhea, and plans an office visit for the patient within two weeks of the start of tucatinib. Nurses perform wellness checks after one week of the tucatinib start and encourage the patients to call between visits. Khan describes hand-foot syndrome, a very common side effect with tucatinib that may cause hands and feet to swell. She instructs patients to reduce pressure to hands and feet (avoid running, gardening, hard activities, avoid extreme temperatures, hot or cold water, washing the dishes) and use lotion.

Khan educates patients about the correct dose of tucatinib, instructs them to take it at the same time everyday; not to double a dose if they skip a dose because it will increase the risk of side effects and to call the center if they have symptoms (if not feeling well and taking less of the dose). Nurses follow up on a regular basis and set up labs with doctors.

Diarrhea is a concern with tucatinib, says Khan. If a patient reports diarrhea, nurses should respond to patient calls within two hours. The first step is assessment of symptoms, checking frequency and inputs and outputs. "If dehydration is a concern", notes Khan, "we prescribe loperamide (maximum of 8 capsules/day) and call the patient the next day. If infectious diarrhea is suspected, I might order a stool culture, check for fever to determine the reasons for diarrhea". She follows up with patients and uses the teach back method, where she asks the patients to verbalize the message they received. "Patients see different providers and might be overwhelmed with information. With IV treatments, pa-

tients are seen by the nursing team and monitored in the infusion center as they receive treatments. With oral targeted therapies such as tucatinib, patients are taking the medicines at home. When an issue arises, we have to respond within a fast turnaround. We want to make sure patients understand how to take their medicines and be available to them when side effects happen."

**"WITH ORAL TARGETED THERAPIES SUCH AS TUCATINIB, PATIENTS ARE TAKING THE MEDICINES AT HOME. WHEN AN ISSUE ARISES, WE HAVE TO RESPOND WITHIN A FAST TURNAROUND. WE WANT TO MAKE SURE PATIENTS UNDERSTAND HOW TO TAKE THEIR MEDICINES AND BE AVAILABLE TO THEM WHEN SIDE EFFECTS HAPPEN."**

Bobbie Khan, RN  
Georgetown University Hospital

## CONCLUSION: NCODA, THE MID AND PQI: OPTIMIZING PATIENT OUTCOMES

All the interviewed team members agree that the MID model and the PQI Clinical Resource are valuable to the team and enhance the quality of care. Every day the MID team can make a difference in the life of patients. Every member within the multidisciplinary team, says Dr. Marshall, is central to providing cancer care. "We cannot do it alone. We rely on colleagues in pharmacy, nursing, and others to tackle the complexities of cancer treatment. It is a team sport."

Dr. Chakrabarti at Seidman Cancer notes that the MID and multidisciplinary model benefit practice because "pharmacists are key to the multidisciplinary team and provide life-saving interventions in the complex cancer patient population."

**"WE CANNOT DO IT ALONE. WE RELY ON OUR PHARMACY FRIENDS, NURSING COLLEAGUES, TO MANAGE ALL THE AREAS OF COMPLEXITIES IN CANCER TREATMENT. IT IS A TEAM SPORT."**

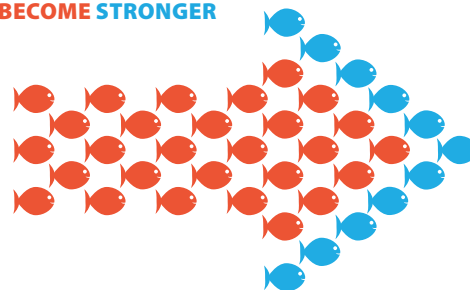
John Marshall, MD  
Georgetown University Hospital

The PQI resource fosters continuous education about new therapies in a scientific, evidence-based yet brief, easy to digest information for the staff and that can also be leveraged for patient education. Hands on information about tucatinib inform the identification of eligible patients for tucatinib, the selection, monitoring of treatment, and management of adverse events. Effective education about tucatinib will facilitate implementation of tucatinib and appropriate use for the patient and their Medically Integrated Teams.

Bobbie Khan, RN, clinical nurse coordinator at Georgetown stresses that “the PQI provides drug information, particularly information on when to hold the drug when toxicities occur or when patients have scheduled surgery or dental work.” She says she also uses the PQI to check the frequency of monitoring for specific lab tests, radiation, and follow up essentials. Khan uses the PQI to find information on when to hold and resume tucatinib around dental procedures or a surgery that might be scheduled. “Having a quick reference for the staff that summarized all the needed information is a great resource”.

The PQIs provide the MID program with an easy to use, compact clinical resource guide when discovering the right patient and dispensing TUKYSA®. The PQIs help the team ensure they are providing patients with the tools and education to improve clinical outcomes. Pairing Medically Integrated Dispensing with the **Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer PQI** meets NCODA’s Guiding Values of being Patient-Centered and Always Collaborative.

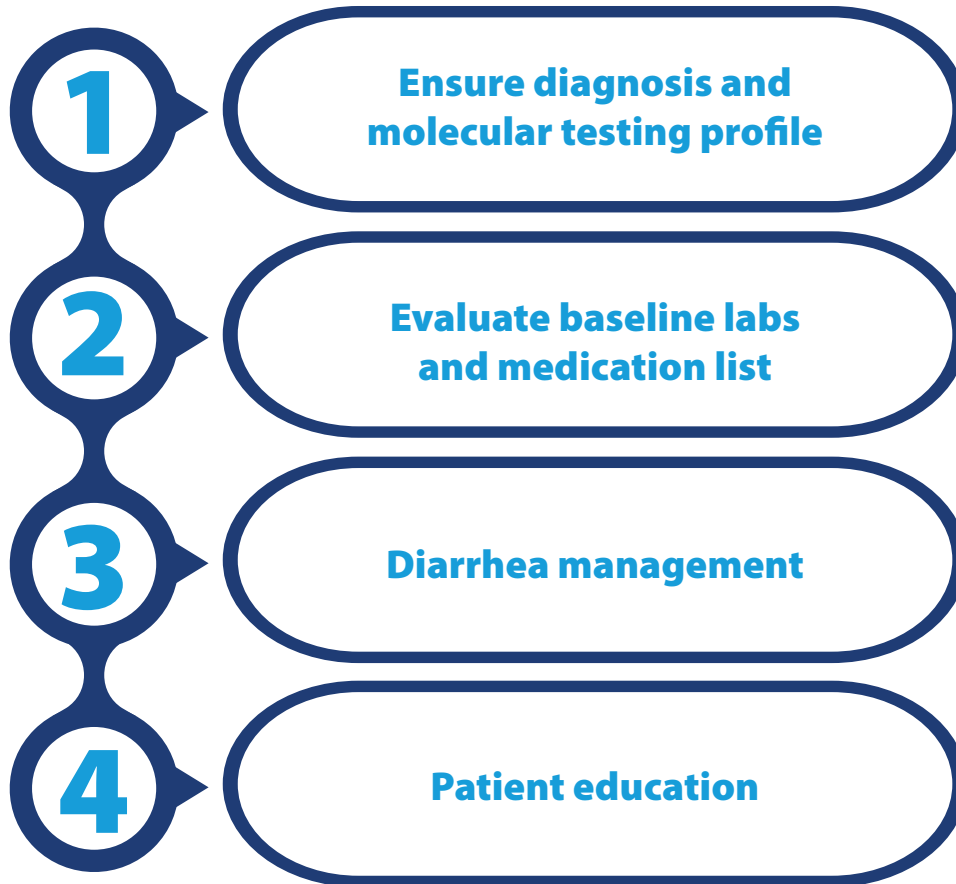
**WORKING TOGETHER,  
WE BECOME STRONGER**



## REFERENCES

1. Arango,M. Positive Quality Intervention: Tucatinib (TUKYSA®) and trastuzumab in HER2-positive Metastatic Colorectal Cancer. Available at [https://www.ncoda.org/wp-content/uploads/pqis/Tucatinib-TUKYSA-and-trastuzumab-in-HER2-positive-mCRC\\_PQI\\_NCODA.pdf](https://www.ncoda.org/wp-content/uploads/pqis/Tucatinib-TUKYSA-and-trastuzumab-in-HER2-positive-mCRC_PQI_NCODA.pdf). Accessed October 2023.
2. Strickler JH, Cercek A, Siena S, et al. Tucatinib plus trastuzumab for chemotherapy-refractory, HER2-positive, RAS wil-type unresectable or metastatic colorectal cancer (MOUNTAINEER): a multicentre, open-label, phase 2 study. *Lancet Oncol*. 2023;24 (5):496-508.
3. Tukysa (tucatinib) [prescription information]. Bothwell, MA: Seagen, Inc; 2023.
4. NCODA. NCODA announces the defining of the Medically Integrated Dispensing Pharmacy. <https://www.ncoda.org/medically-integrated-dispensing-pharmacy/>. Accessed April 2022.
5. Wimbiscus, B. “Medically Integrated Dispensing: An Alternative to How Oral Drugs Get Dispensed.” *Am J Manag Care*. March 14, 2019. <https://www.ajmc.com/view/medically-integrated-dispensing-an-alternative-to-how-oral-drugs-get-dispensed>. Accessed April 2022.
6. Dillmon MS, Kennedy EB, Anderson MK, et al. “Patient-Centered Standards for Medically Integrated Dispensing: ASCO/NCODA Standards.” *J Clin Onco*. 2019;38(6):633-644.

# PQI PRINCIPLES:



## ON THE COVER:

- John Marshall, MD and Bobbie Khan, RN provide collaborative, patient-centered care.

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

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.



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

December 2023