The Interventional Oncology Clinic: Introduction to the IO Clinical Care Model

Assessing interventional oncology patients in an outpatient clinic setting is essential for providing longitudinal and optimal care.

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Positive clinical patient outcomes and growth in interventional oncology (IO) procedures throughout the country have led many interventional radiology (IR) programs to establish a comprehensive IO service line. Although there are a variety of successful practice models, each unique to the individual practice setting, we believe that our endeavor can be a successful precedent for other IO practices. This article provides some guidelines and recommendations gleaned from our decade-long experiences, with a focus on the essentials of IO practice development and the clinical necessities and operational teamwork imperatives, with the hope that our experiences can assist in the development of other IO clinics.

PRACTICE DEVELOPMENT

Prior to establishing an IO practice, numerous foundational elements must be implemented. First is the development of a network of referring physicians. As IO is an evolving specialization, building relationships and successfully educating referring physicians on the benefits and procedural opportunities that IO can bring to a patient's treatment plan reinforces the importance of IO. In order to continually foster these relationships and develop a comfort level within the referring community, a certain amount of translucency is important. Frequent communication with referring physicians before, during, and after a patient's treatment demonstrates a clear commitment to patient care. Although communication must be fluid, correspondence through secure emails and texts, electronic medical records, letters, or phone calls is essential, as many IO patients will have complex disease processes, necessitating the free sharing of all pertinent health information. Therefore, their clinical management, when done in a collaborative multidisciplinary approach with other health care providers, ensures superior patient care and promotes positive patient outcomes. Timely responses to physicians and patients, as well as taking a proactive approach in the management of any potential medical concerns, demonstrates to referring physicians that interventional radiologists are an essential part of the comprehensive oncologic clinical team.

It is also important for interventional radiologists to manage patients in a clinic environment to establish patient relationships and formulate effective treatment plans; this will position the interventional radiologist to have a greater role in current and subsequent care of patients.[1]

VISIBILITY: ESTABLISHING A PRESENCE

Practice-building fundamentals for IO is not generally a focus for the majority of IR fellowship programs, but this must become a critical strength of all physicians and staff members alike. Although the rigors and pressures of a busy clinical schedule make this an encumbrance to some daily activities, practice building needs to become a daily priority for the entire IO team.

It is paramount for interventional radiologists to become regular participants at multidisciplinary conferences and be open and available to discuss cases with oncologists, surgeons, hepatologists, and other referring

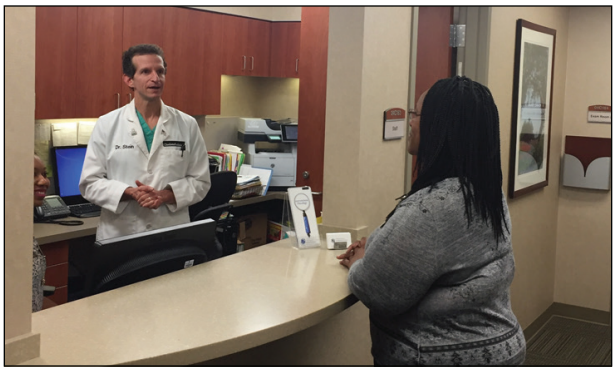

Figure 1. Clinical support team office and lobby area adjacent to exam rooms.

Figure 2. Dedicated IR clinical exam room for patient and family consultations and review of medical imaging.

physicians. One of the best opportunities to become involved in the treatment algorithm for oncology patients is to establish a consistent presence at hospital oncology conferences and be vocal about the available IO treatment options and outcomes. Additionally, hosting educational lunch meetings or evening dinner presentations with referring physicians have proved to be positive opportunities to market an IO practice. By cultivating an open dialogue with a wide range of medical specialists, innumerable patient referrals can be attained, thus increasing the reach of a growing IO practice.

It would be ideal for all interventional radiologists performing IO procedures to continue personal development through educational opportunities. The IO language base can be difficult, but there should be an understanding of cancer staging and oncology drug regimens used in different lines of treatment.[2] Physicians must be able to discuss the National Comprehensive Cancer Network guidelines and have an understanding of where IO procedures fit within them. An interventional radiologist who is fluent in oncology can more effectively engage potential referring physicians in conference or curbside discussions.

CLINIC SUPPORT STAFF

Establishing key relationships with referring providers will help direct patients to the practice. An IO patient's complex diagnosis generally requires a team of many physicians who participate in their ongoing treatments. Another important key to a successful IO practice is to employ a dedicated staff to coordinate patient visits and procedures. Not only are the IR clinic team members vital to the success of any IO practice, but they are also beneficial to the relationships that interventional radiologists foster with patients and referring providers. Although the interventional radiologists perform the interventional procedures and are the public faces of the practice, the ancillary team members set the overall tone for the medical practice, interfacing directly with the patients and facilitating patient satisfaction with the physician-patient relationship.[3]

The clinical coordinator team members are responsible for numerous duties including but not limited to telephone triage; clinic, imaging, and procedure scheduling; insurance authorizations; and processing incoming and outgoing referrals.

Without the dedicated staff to follow patients throughout their IO treatments to confirm appropriate imaging, procedures, and follow-up visits, patients might become lost to follow-up, which can be detrimental to their medical care and treatment plan and have a negative impact on the radiology department's downstream revenue. The department as a whole would have lost revenue from the radiology imaging and subsequent IO procedures that could have been performed. Similarly, ensuring that patients have clinic follow-up for months or years after the IO procedures shows the referring provider network your commitment and dedication as a trusted physician in the patient care team.

Although IR coordinators can come from various professional backgrounds, from clinical to clerical, the ideal candidate is someone who can multitask, work efficiently, has a good understanding of the disease process and procedures, and has an excellent rapport with the patients and providers. As previously mentioned, these team members set the tone of a successful medical practice. Not only do the physicians and advanced medical practitioners rely heavily on these team members, so do the patients. It is also worth noting that clinical coordinators are the patients' first line of contact to the IR clinic, and they can also serve in this capacity to many referring physicians. Coordinators are the key liaisons for the practice, ensuring that critical information is accurately distributed to the appropriate individuals.

DEDICATED CLINIC SPACE

A dedicated clinic space is a necessity for any IO practice, as this provides a safe, private area for the treating team to meet with patients and their family to review imaging studies and treatment plans (Figures 1 and 2). Patient encounters behind a curtain in a radiology holding area are

not ideal. Not only does this come with concerns related to the Health Insurance Portability and Accountability Act, but also the preference is for patients to view your medical organization as professional and respectable. Patients have a certain level of expectation based on their previous physician experiences and will expect a designated clinic space, where confidential and sensitive discussions can be had.[3] A dedicated, well-equipped space where physical examinations and counseling can be performed is desired and gives the best impression.

Clinical space within the hospital setting is generally difficult real estate to secure. The clinical space can be located anywhere, within the hospital in close proximity to IR suites, in an adjacent hospital wing, or in a medical building off campus. Our experience suggests that securing clinical space within the hospital setting allows for favorable IR accessibility, along with convenience and ease of flow for patients. Locating the clinic within the hospital also allows interventional radiologists more visibility and access to referring physicians than if the clinic is removed from the hospital campus. If considering locations adjacent to or separate from the hospital, it is important to ensure adequate patient parking and ease of entry and exit, especially because some patients can be debilitated from the disease process.[3]

Some IO practice models include imaging immediately prior to consultation. If one is fortunate to have secured real estate within the hospital setting, placing the IR clinic within the radiology department allows for ease of scheduled imaging and IO clinic appointments. This coordination of patient imaging and consultation appointments is ideal and generally appreciated by the patients, as it minimizes their trips to the hospital or medical facility. When imaging is completed before the consultation appointment, the interventional radiologist has access to pertinent information used to formulate the next treatment steps while the patient is in the clinical office setting. Patients and family members also find it useful if the interventional radiologist can provide immediate interpretation and review of the radiology images during a consultation appointment, as this helps to empower them to make educated decisions about the proposed IO treatment plan.

ALLEVIATING RVU AND FINANCIAL PRESSURES

IO is a substantial revenue-generating service line within an IR department, with higher relative value units (RVUs) generated than most arterial disease interventions. For many interventional radiologists, IO has been or will continue to be a key driver for economic growth within their IR department.[2]

Although it may be ideal to have the clinic staffed with an interventional radiologist who is not scheduled to do any procedures during that time,[1] the clinic appointments for our IO practice are scheduled throughout a busy IR workday, interwoven between interventional procedures. The IR clinic is composed of IO patients as well as patients with numerous other medical conditions such as but not limited to peripheral artery disease, arteriovenous malformations, pelvic congestion syndrome, chronic venous thrombotic disease, and uterine fibroids. Although not every interventional procedural patient must be seen pre- or postprocedure in the clinic, some exams are directly related to the care of patients seen in the clinic, and all of them must be rendered in conjunction with providing necessary clinic time. Our IR/IO clinic operates 5 full days a week, with appointments staggered throughout the day, interspersed with new patients and follow-up appointments. Availability of a few clinic slots for add-on appointments is also relevant, so that patients have a chance to explore interventional treatment options immediately if their referring physician requests a same-day consultation.

This model performs well for multiple reasons. First, it relieves financial pressures by not allocating a physician for a half or full day for only consultations. By allowing for appointments throughout the week, this more closely aligns with many referring physician office hours and the complexity of patient schedules. Seeing patients throughout the day in a staggered approach means less clinic rooms are concurrently in use, reducing space requirements. Finally, the ability to see consultations in between IR procedures helps to contribute to RVU production and maximize efficiency.

Diagnostic radiology colleagues and partners often have difficulty being supportive of the high overhead costs of IR physician time that is associated with clinic consultations; they prefer that the interventional radiologists are performing higher-revenue–generating cases or reading imaging exams. Some may view this as a short-sighted perspective due to the number of procedures and downstream imaging tests needed by clinic patients.[4] Our practice continues to work diligently to support continuation of a model to maximize economic potential for both the radiology department and the hospital. By ensuring that each member of the IO team is operating at their highest skill level, time and efficiency are maximized to the benefit of the organization and the patient. This operational philosophy is consistent with the IR transition from a referral-based only subspecialty to a clinic-based subspecialty.[5]

IMPORTANCE OF THE ADVANCED CLINICAL PRACTITIONER

Due to the complexities of the oncology disease process and the comorbidities and unique patient-to-provider

relationships, care for these patients can be very time consuming. Considering that physician time is the most expensive clinic resource, it is imperative to optimize physician time where it will have the most positive impact, and to leverage other staff, specifically advanced clinical practitioners, such as physician assistants (PAs), to provide the high level of care required for IO patients.[6]

Advanced clinical practitioners such as PAs are essential providers during IO clinic visits; they begin the initial or follow-up history and physical assessment and conclude each visit for patients to optimize both the clinic workflow and the overall patient experience. By including PAs as a critical part of the patient experience, the interventional radiologist's time in the clinic can be focused on review of pertinent radiology imaging, procedure-specific discussions, and addressing questions from patients and family members. In the scenario employing the system outlined above, the PA usually spends 1 hour on a new oncology patient consultation. In that same amount of time, an IR can complete an IO case such as a chemoembolization or a microwave ablation (1:1 ratio). The revenues generated by the radiologist during this time, along with procedures performed by a PA, can be completed in between consultations to help offset PA and IR clinic expenses.

A strong knowledge base in oncology is a requirement for any medical provider in the IO clinic setting. They must be conversant the disease process and IO postprocedural care, as well as the standard drugs and treatments offered by medical, surgical, and radiation oncologists.[2] Considering the rate of advancement in cancer treatment options, IO radiologists and their advanced clinical practitioners should maintain diligence in staying up to date with care options and research trial information to be considered relevant and valued members of the comprehensive treatment team for oncology. Top providers will be more comfortable continuing to send referrals if they have confidence that the IR team has an adequate mastery of the latest oncology data and clinical practice algorithms.

As the IR team works together to attend to patient care needs and collaborative relationships with referring providers are developed, the clinic will be essential in establishing longitudinal medical care of patients who are sometimes exposed to IO as a late-stage option.

SUMMARY

IO is an excellent foundation for most IR practices, but there are challenges associated with trying to establish a successful IR clinic and IO clinical care model. Development of a comprehensive approach for optimal patient care in IO incorporates an outpatient clinic setting to enhance longitudinal care and education for patients with a complex disease process. Furthermore, establishing a successful IO practice and clinic may be a lengthy process given the dedication of time, space, and resources inclusive of coordinators and advanced clinical practitioners.

The workflow of each hospital and radiology practice throughout the country can be quite different. Nevertheless, if there is a commitment of the IR to key aspects of building an IO practice, continued educational development, and outpatient clinic support, the referral base will no doubt value interventional radiologists in their important role as part of the multidisciplinary oncology team. The IO clinical program regardless of location will then be well positioned to thrive. With the ability to provide a full spectrum of clinical care, the rewards for both the IO providers and their patients go far beyond anything that can be evaluated on paper. ■

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