On the Frontlines: From a Large U.S. Radiation Oncology Practice During the COVID-19 Pandemic

The following is a brief practical guide prepared for radiation oncologists during the first weeks during which the state of Maryland saw cases of COVID-19 and before our large urban hospital had seen or admitted a patient with the virus. Our hospital, like many others, had developed initial guidelines in which the primary focus was on inpatient and primary/urgent care settings. Our radiation oncology department, with services in the main hospital and at 3 community sites, including a proton treatment center, developed the following practical guidelines during the week of March 9. They were distributed, with additional instruction, to all patient care personnel. We continue to amend policies and procedures as the numbers of patients rise, as challenges with medical supply/vendor access evolve, and as institutional, state, and federal regulations are issued. They present a snapshot in time of efforts to address the immediate effects on radiation treatment scheduling and delivery.

Patient Appointments

Consults: Patients with new cancer diagnoses will be consulted, simulated, and treated without delay. Patients presenting for palliative reasons, such as bone metastasis or pain, should be considered for a clinically acceptable alternative, such as initiation or increase in pain medication. As of the time of this writing, no patients are being delayed for consultation.

Follow-ups: Patients in radiation oncology often have 3 categories of follow-up visits: (1) visits within a short time-frame after treatment to assess for acute toxicity resolution; (2) visits to assess disease response to definitive treatments; and (3) routine follow-ups. Routine follow-up visits should be rescheduled to a future date. We are rescheduling patients depending on the last visit to their medical or surgical oncologists. If, for example, a breast patient has recently seen her medical oncologist, we are rescheduling our follow-up to the next normal time we would see them (e.g., 6 months). If the patient has not recently been seen by an oncologist, we will contact him or her by phone to screen for disease-specific symptoms. If needed, orders will be placed. This follow-up call is documented in the electronic medical record. Sites with telehealth capabilities can use this technology for these visits. If a patient has any disease-site specific complaints for which a physical exam is indicated or an in-person visit is needed to determine next steps, then the patient is brought in for an in-person visit. We believe that visits in Category 1 (above) can be completed by phone ± photograph and/or telehealth capabilities. All of these visits have been and are being rescheduled. Category 2 visits have not been canceled; however, we are being mindful of either combining visits with other appropriate providers (e.g., for a cervix cancer patient receiving 12-week PET/CT, Rad Onc and Gyn Onc can see the patient when she comes in for imaging) or having only one provider to see the patient. As patient appointments are moved/delayed, it will be challenging for many clinics to re-incorporate these patients into already booked time slots. Any follow-up patient who is deemed a PUI or is COVID-19 positive should be delayed for 2 weeks after symptom resolution.

On-treatment Visits (OTVs): OTVs will continue to occur on a weekly basis per billing and compliance guidelines. Care should be taken to have one provider, if possible, see the patient and not multiple providers.

Daily RT treatments: Patients will continue to come in daily for treatments. Each day, patients and their visitor are screened in accordance with hospital policy for symptoms of COVID-19, recent travel, and exposure history. As the virus becomes more prevalent across the United States, screening questions should be adjusted to include any potential exposures to other sick contacts. If the patient screens positive based on these questions, the hospital-based algorithm is enacted and a patient is deemed and treated as a PUI. These patients will wear masks and be treated as PUIs until testing returns negative. In areas where testing cannot be performed or the patient does not meet the appropriate criteria, then our recommendation is to continue to treat the patient as a PUI for the remainder of his or her course of treatment or until symptoms have resolved plus 14 days, whichever is longer. PUIs will be moved to the last treatment of the day and will be asked to arrive at their appointment time rather than earlier. Visitors will not be allowed into the department with a PUI. If the patient needs assistance, this will be provided by the appropriate staff member wearing the appropriate precautions. PUIs will immediately be placed in an open exam room, where they will change and wait for treatment (if the machine is not ready). Following treatment, they will use the exam room to change and then exit. Any exam room used by a PUI will be shut down for the rest of the day and then cleaned by Environmental Services (EVS). All staff working with a PUI will wear precautionary gear. Following completion of treatment, the machine will be wiped down.

If a patient tests positive for COVID-19, an algorithm similar to that for PUIs will be utilized. If, in the coming months, we have multiple positive patients, we will utilize only one machine to treat these individuals, and we will use only 1–2 exam rooms ensuring that no healthy patients enter these. If we have a PUI and a positive patient, we will treat the PUI first, followed by the positive patient. Patients are required to comply with these regulations/treatment times. Because of the current shortage of testing in our state, repeat testing will not be performed for COVID-19–positive patients to confirm a negative result. Because COVID-19 positive patients will ultimately develop immunity to further infection, these patients would continue treatment at the end of the day until 14 days after all symptoms resolve. At that point, moving their treatment appointments into the 'general times' could be considered.

If a COVID-19–positive patient has severe or critical symptoms (ICU level care), care should be deferred until the patient is deemed stable to leave the floor.

Staffing

All staff without direct patient care will work from home via teleworking capabilities, if able to do so. We have maintained full nursing, physician, radiation therapy, and front desk staff complements on site. This will be subject to change should we face reduced staffing capabilities. All dosimetrists except one are teleworking. The on-site dosimetrist at the main campus is needed for the high volume of procedures and emergency cases. One on-site

physicist is present at each site, except for the main campus where 2 are on-site to address the high volume of special procedures.

If we are faced with reduced therapy staffing, our first step would be to close a machine/room down early, which would result in extended hours. In the eventuality that we do not have enough therapists to treat at a site (despite moving staffing resources), then we would plan to move patients to another center (all centers are beam matched).

Caring for Staff

Our department has implemented weekly COVID-19 Virtual Drop-In Sessions at which any staff member on-site or working from home can log in and ask questions about our COVID-19 response and SOPs. Our clinical director and senior director of operations answer most questions, and any question that cannot be answered is taken to the hospital system incident command center. We have received an overwhelmingly positive response to these sessions, in particular from the therapy, dosimetry, and physics groups, who often have no hospital representation outside of the department level.

Conclusion

We are in unprecedented times. What remains imperative is that we deliver safe, high-quality care that will not result in compromised cancer outcomes or increased infectious risk to staff and patients.