Advanced Practice Radiation Therapist (APRT) for Radiation Oncology – Medical Directive

Pharmacy and Therapeutics Committee Approved: 11JUN2024

☐ Harmonized

Authorizing Prescriber(s)

All Lakeridge Health (LH) Radiation Oncologists

Authorized to Whom

Advanced Practice Radiation Therapist (APRT) who:

- Is a certified APRT(T) through the Canadian Association of Medical Radiation and Imaging Technologists (CAMRT)
- Is currently employed within the DRCC Radiation Oncology program at LH
- Is a member-in-good-standing with both the College of Medical Radiation and Imaging Technologists of Ontario (CMRITO) and the CAMRT

Co-implementers:

- Laboratory Technologists/Assistants
- Medical Radiation Technologists, Radiography (MRT) (R)
- Medical Radiation Technologists, Radiation Therapy (MRT) (T)
- Nurses
- Respiratory Therapists (RT)

Patient Description/Population

Patients, 18 years of age and older, admitted to LH or registered as an outpatient at LH under the care of a LH radiation oncologist, who has referred the patient to the care of the APRT.

Order and/or Procedure

This medical directive includes delegation of the following controlled act:

- Communicating to an individual or their personal representative a diagnosis identifying a disease or disorder as the cause of symptoms of the individual in circumstances in which it is reasonably foreseeable that the individual or their personal representative will rely on the diagnosis.

The orders and/or procedures are not presented in sequential order; any one of or combination of the procedures below may be selected by the APRT.

- The APRT will obtain a comprehensive health history and perform a physical assessment to determine current medical status and to subsequently select specific investigations and/ or treatment for patients outlined in this medical directive. See Table 1: Diagnostic Tests/Interventions; Table 2: Consultations and Table 3: Radiation Treatment Planning & Delivery Orders & Approvals.

- The APRT will discuss results of diagnostic tests/imaging with a patient and their substitute decision maker (SDM).

- The APRT will discuss with the Authorizing Prescriber the patient's physical assessment and the result of any diagnostic investigations obtained by the APRT for further management.

- The APRT will formulate and discuss the proposed plan of care options with the Authorizing Prescriber.

- The APRT will discuss the patient's plan of care options with the patient, their family member/partner-in-care and their SDM to support informed decision-making.

- The APRT will obtain informed consent from the patient or their SDM to proceed with planning and delivery of radiation therapy.

- The APRT will enter an Intent-to-Treat order for each new radiation therapy course in the electronic health record (EHR).

- In the radiation therapy health record (RTHR), the APRT will enter and approve known cancer diagnosis, radiation treatment planning requisitions, and radiation prescriptions as outlined in Table 3.

Indications to the Implementation of the Directive

The APRT may implement this medical directive for a patient when the following have been met:

- The patient has been referred to the APRT by the Authorizing Prescriber, as documented in the EHR.
- The patient or their SDM has provided consent to the assessment and/or treatment.
- Specific indications as listed in Tables 1, 2 and 3.

Contraindications to the Implementation of the Directive

The medical directive must not be implemented in the following circumstances:

- Patient or their SDM has not provided consent for assessment, treatment and/or disclosure.
- The APRT does not have the necessary knowledge, skills and judgment to perform the delegated acts or orders/procedures.
- The patient has not been referred to the APRT by the Authorizing Prescriber.
- Specific contraindications as listed in Table 1.

Consent

The APRT must have the knowledge and ability to explain how and why the test/ procedure/ treatment will be obtained. The APRT will obtain informed consent from the patient or their SDM before implementing this medical directive for diagnostic imaging, laboratory testing, consultations and/or planning and delivery of radiation therapy.

The APRT implementing this medical directive must obtain informed consent prior to enacting it in accordance with the *Health Care Consent Act*, including a discussion with the patient and their SDM surrounding the clinical findings, the nature of the proposed treatment, the alternatives, the associated benefits and potential risks.

Documentation Requirements

In addition to the standard documentation practices, including the patient's history, present illness, physical assessment, consent and plan of care within the EHR and the RTHR, the APRT implementing this medical directive must:

- Select the appropriate order in the patient's EHR.
- Document this order in the patient's EHR.
- Select Order Mode of "*Per Medical Directive*"
- Indicate the name of the ordering provider (i.e., APRT implementing this medical directive)
- Indicate the name of the authorizing provider (i.e., Radiation Oncologist)
- State the name of this medical directive in the comment section of the order.
- Sign the order

Review/Evaluation Process

This medical directive will be reviewed every 2 years by the DRCC Radiation Oncology program.

References

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College of Physicians and Surgeons of Ontario. (2021, March). *Delegation of controlled acts.* http://www.cpso.on.ca/policies-publications/policy/delegation-of-controlled-acts

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Health Canada. (2013, November 14). *Gadolinium-containing contrast agents - Update on nephrogenic systemic fibrosis/nephrogenic fibrosing dermopathy (NSF/NFD) - Notice to hospitals*. Government of Canada. http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2013/36711a-eng.php

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Lakeridge Health. (2022). *Adult renal protection for intravascular contrast administration diagnostic imaging – Policy and procedure*.

Lakeridge Health. (2022). *Application of emergency oxygen – Policy and procedures*.

Public Hospitals Act, RSO 1990, c P.40.

Regulated Health Professionals Act, 1991, SO 1991, c 18.

The Canadian Association of Radiologists. (2024, May 14). *Referral guidelines*. http://www.car.ca/en/standards-guidelines/guidelines.aspx

This table must **not** be used independently apart from the Medical Directive

Table 1: Diagnostic Tests / Interventions

Order	Indication	Contraindication
Nuclear Medicine Bone Scan	• Evaluate bone pain in patient with suspected or known metastatic bone involvement • Follow up recommendation from findings on prior imaging	• Pregnancy • Breastfeeding
Computed Tomography (CT) Scan (with or without contrast) • All anatomical sites	• Evaluate pathology identified on X-ray, ultrasound or bone scan • Part of staging for new diagnosis of malignancy • Disease status/ treatment response • Evaluate clinically suspected metastatic deposits	• Pregnancy
Magnetic Resonance Imaging (MRI) (with contrast) • All anatomical sites	• Evaluation of suspected for known brain metastases • Evaluation of suspected or known spinal metastases / spinal cord compression • Further review of pathology identified on CT/US based on radiologists' recommendation	• Pregnancy • ICD
• Ultrasound ○ All anatomical sites • Venous Doppler Ultrasound	• Suspected venous occlusion/ thrombosis on clinical exam • Follow-up recommendation from findings on prior imaging	

Order	Indication	Contraindication
• X-ray ○ All anatomical sites • Skeletal Survey	• Evaluate pathology identified on bone scan or ultrasound • Part of staging for new diagnosis of malignancy • Disease status/ treatment response • Evaluate clinically supported metastatic deposits • Staging/ treatment evaluation for multiple myeloma patients • Orbital X-ray as required for MRI Screening • Respiratory symptoms including shortness of breath, chest pain, query pneumonia or aspiration • Trauma or fall • Query fracture of extremity	• Pregnancy
Routine Blood Work: • CBC, Creatinine/eGFR, Glucose (random), Liver Function Tests (ALP, AST, ALT, Total bilirubin, albumin), Calcium, PSA + Testosterone Urinalysis: • Urine Culture & sensitivity, Urine Routine & Microscopic	• Evaluate changes in patient condition (i.e. bleeding, suspected hypercalcemia, UTI, infection etc.)	
Oxygen therapy as required (initiate, titrate or discontinue) to achieve SpO_2 92-98% or 88-92% in patients with COPD.	• Treatment of hypoxia to maintain oxygen saturation as indicated	

Table 2: Consultations

Consultation Order	Indication
Home Care Referral	Assessment and management of medical/nursing and personal care needs for patients requiring care in home setting
Orthopedic Surgery	Assessment and management of orthopedic issues
Palliative Care Oncology	Assessment and management of palliative patients

Table 3: Radiation Treatment Planning & Delivery Orders & Approvals

Order	Indication	Notes (Optional)
Intent to Treat (ITT)	For every new radiation therapy course, the ITT will be ordered in the EHR	In the health record, the APRT will: • Enter an “Intent to Treat” order for radiation therapy
Diagnosis	The APRT will enter and affirm a known cancer diagnosis into the radiation therapy health record (RTHR).	
Care Plan	Once the decision-to-treat has been made, the APRT will add a new care plan in the RTHR.	In the RTHR, The APRT will: • identify the course of radiation therapy • identify the intent and urgency of radiation therapy • choose the most appropriate care plan and indicate the CT simulation requisition details, as outlined below. • approve the care plan

Order	Indication	Notes (Optional)
CT Simulation Requisition	The APRT will indicate the CT simulation details for MRT(T)s based on the intended treatment site(s) in the RTHR.	In the CT Simulation requisition, the APRT will indicate: • the site / laterality • the anticipated dose and fractionation. • if the RO/ APRT is required at time of CT simulation • relevant details for treatment coordination/ scheduling • specific instructions to MRT(T)s that are outside care plan guidelines • area(s) to be imaged • approximate isocentre location • if bolus is required • if diagnostic imaging fusion is required • if previous treatment is to be imported and fused • approve the requisition
Re-simulation Requisition	If a change in patient condition or treatment volumes occurs, necessitating re-planning of radiation treatment, the APRT will complete the required documentation in the RTHR to start the re-simulation, outlining the changes required.	The APRT will: • choose the most appropriate care plan for the change in the radiation treatment. • indicate the CT simulation requisition details, as outlined below. • identify whether the current plan is on hold including timelines, or to continue • document the rationale for the rescan • approve the care plan

Order	Indication	Notes (Optional)
Planning (Dosimetry) Requisition	After the radiation therapy target volume has been created, the APRT will indicate in the planning requisition the treatment site, dose and fractionation and technique for the MRT(T)s to use to plan the treatment, in the RTHR.	In the planning requisition, the APRT will indicate: • the planning pathway (standard or non-standard) • the prescription site name • the dose and fractionation • the proposed planning technique • any additional planning details • approve the requisition
Radiation Re-planning Requisition	If a change in patient condition or treatment volumes occurs, necessitating re-planning of radiation treatment, the APRT will complete the required documentation for re-planning, outlining the changes required in the RTHR.	In the Replan requisition, the APRT will indicate: • the site / laterality • the replan dose and fractionation • the treatment timeline • details regarding the replan changes (technique/contours/fields/expansion volumes) and other pertinent details. • Approve the requisition
Radiation therapy treatment plan approval	The APRT will review the radiation treatment plan is acceptable in the radiation planning system based on target coverage and dose to normal structures.	• If the RO has reviewed the target volume and/or fields, the APRT may approve the plan in the radiation treatment planning system. • The APRT will complete the Plan Approval requisition, indicating any additional details regarding non-standard planning or retreatment/overlap.
Radiation therapy weekly review	Patients will be seen weekly during the course of their radiation treatment, to assess their condition and potential side effects.	• The APRT will assess patients in weekly review, and document the review assessment in the EHR.

Order	Indication	Notes (Optional)
Radiation prescription approval	The APRT will review the accuracy and completion of the radiation prescription, and approve it in the RTHR.	• Requires verbal agreement with the RO prior to initiating and will be documented in the EHR.
Radiation treatment hold, discontinue or resumption	If a change in patient condition or treatment volumes occurs, indicating radiation therapy should not continue as planned, the APRT will indicate a radiation treatment hold or discontinue by documenting in the RTHR. If a patient's previously held treatment can continue based on an improvement, the APRT will indicate to continue/re-start treatment.	The APRT will indicate a radiation treatment hold, or discontinue if: • patient withdraws consent for treatment • patient is not clinically stable • patient can no longer remain still for the duration of treatment • change in patient condition or treatment volumes occurs, necessitating re-planning of radiation treatment • significant change occurs in performance status of patient such that patient will no longer be able to benefit from the proposed treatment The APRT will indicate a radiation treatment resumption if: • reason for hold/discontinuation resolves