



Provincial Health Services Authority

BRACHYTHERAPY FOR TREATMENT OF COVID-19+ PATIENT PROCEDURE

Summary of Changes

	NEW	Previous
BC Cancer		

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BRACHYTHERAPY FOR TREATMENT OF COVID-19+ PATIENT PROCEDURE

1. Introduction

1.1. Focus

In response to the COVID19 pandemic, BC Cancer [created Clinical Management Guidelines](#) to support best patient care outcomes. In patients that are COVID19 + all options must be considered prior to treatment including deferral of treatment unless deemed that deferral would significantly compromise survival ([page 37](#)).

The purpose of this procedure is to support decision making and planning for Brachytherapy treatment in the event of a COVID19+ patient and to support the health care team to coordinate and provide safe, timely Brachytherapy treatment to COVID19+ patients.

1.2. Health Organization Site Applicability

This procedure can be locally adapted to each center providing Brachytherapy procedures. BC Cancer Brachytherapy procedures involving COVID19+ patients will occur in designated appropriate BC Cancer Operating Room space.

1.3. Practice Level

I. Required Health Care Providers in Organization of Treatment

The Clinical Nurse Leader Radiation Therapy or designate is the designated point person for all communication and procedure considerations in collaboration with health care team.

- Radiation Oncologist
- Radiation Therapist(s)
- Anesthetist
- Registered Nurse
- Infection Control Practitioner
- Manager of Clinical Service Radiation Therapy
- Patient

II. Required Health Care providers for Brachytherapy Procedure

- Radiation Oncologist
- Anesthetist
- Registered Nurse- Operating Room (Circulating Role)
- Registered Nurse- Operating Room (Scrub Role)

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- Registered Nurse- Runner (remains in outside corridor for support as per Circulating and Scrub Nurse requirement)
- Radiation Therapist- Operating Room
- Radiation Therapist (2) - CT Sim when required.
- Radiation Therapist (2) – Treating Unit when required

1.4. Definitions

Brachytherapy: Internal radiation therapy in which radioactive "seeds" or "sources" are placed inside, or next to, a tumour. The sources give radiation directly to the tumour. This makes sure that surrounding healthy tissues gets as low a radiation dose as possible.

COVID19 +: Refers to a patient who has undergone either nasopharyngeal swabbing or saline gargle and results determine that the patient is positive for the SARS-CoV-2 virus.

Aerosol Generating Medical Procedures (AGMP): Includes medical procedures that generate small droplet nuclei in high concentration and present a risk for airborne transmission. In Brachytherapy this includes intubation and extubation procedures.

General Anesthetic (GA) versus Local Anesthetic (Spinal): If appropriate and patient care needs can be met, local anesthetic will be used instead of a GA. Consultation with Anesthetist to determine type of anesthetic to be used. Should a spinal be used wait time for room air exchange can be eliminated.

1.5. Equipment and Supplies

COVID19 + Patient:

1. COVID19 + patients will be required to wear a surgical mask at all times as well as practice hand hygiene through out and use of Antimicrobial Hand Rub.

Health Care Providers Operating Room

In addition to standard Operating Room requirements including head covering and scrubs. Airborne droplet precautions (See page 8 of [BCCDC Infection Prevention and Control \(IPC\) Protocol for Adult Surgical Procedures during the COVID-19 Pandemic](#))

1. N95 Respirator (All Health Care Providers require N95 fit testing every year or following significant weight loss)
2. Face shield or goggles
3. Sterile Gown
4. Two pairs of sterile gloves

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Health Care Providers outside of the Operating Room

Patient to be treated on Contact/Droplet precautions + N95 (See page 8 of [BCCDC Infection Prevention and Control \(IPC\) Protocol for Adult Surgical Procedures during the COVID-19 Pandemic](#) and [IPAC Point of Care Risk Assessment Advice for Health Care Workers: When to choose an N95 Respirators for Suspected/Confirmed COVID-19 Cases](#))

1. N95 Respirator (All Health Care Providers require N95 fit testing every year or following significant weight loss)
2. Eye protection
3. Surgical Mask
4. Isolation Gown
5. Gloves

2. Procedure

2.1. Steps and Rationale

I. Brachytherapy Clinical Nurse Leader

The Radiation Therapy Clinical Nurse Leader (CNL) or designate is the designated point person for communication and coordination of patient care.

1. CNL to determine patient's immune status with MRP. Once known discuss urgency of Brachytherapy case with MRP. Determine if treatment can be delayed. If treatment is deemed essential and impact to patient outcome is great move to planning phase of procedure.
2. Liaise with Brachytherapy team (Radiation Therapists, Nursing, Radiation Oncologist performing the procedure, Leadership and Anesthesia).
3. Schedule and facilitate huddles as needed to discuss patient care plans and review brachytherapy OR checklist ([Appendix A: Brachytherapy OR Checklist](#))
4. Communicate plans via email to involved HCPs and include a summary of the care plan ([Appendix B, template](#)).
5. Communicates plans with the patient
6. Advise RT scheduling clerk of any changes to operating room and post anesthetic recovery times to support patient care needs in collaboration with Brachy Resource Therapy. Instruct RT scheduling clerk to contact patient with new and or update times and advise of contact number to call upon arrival day of procedure.
7. Liaise with Brachy Resource therapist and Radiation Oncologist if rescheduling of non COVID19 + patients is required.

Required nursing staff for COVID+ Brachytherapy Patient:

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- (2) Operating Room nurses
- (2) PACU nurses
- Runner- Located outside of the operating room available to gather supplies

II. Radiation Chief/Brachytherapy Resource Therapist

*Organization of Radiation therapy staff to support patient care as needed (includes treating RTs, CT Sim and RT in the OR).

1. Review Brachytherapy patients scheduled on required treatment days with Brachytherapy Resource.
2. Make any necessary adjustments to accommodate the COVID+ patient (other patients may need to be delayed, CTSIM scheduled times adjusted to accommodate the COVID+ patient and additional time required, terminal cleans).
3. Contact MRI if required to make accommodations for patients requiring MRI.

*Required Radiation Therapy Staff for Brachytherapy procedure:

- (1+) RT in Operating Room (As required per procedure)
- (2) RT for CT Sim
- (2) RT for Treatment

III. Infection Control Practitioner

1. Collaborate with CNL or others as needed
2. Provide advisement on infection control requirements
3. Support staff education and mock run through of donning/doffing PPE if required based on BCCDC guidelines.
4. Support staff infection control questions/concerns as they arise

[Infection Prevention and Control \(COVID 19 tool kit, COVID-19 signage and posters, donning and doffing PPE\)](#)

IV. General Considerations

- When possible delay the OR procedure until the patient's isolation period has ended. If this is not possible delay treatment to allow extra time for patient's symptoms to subside but still within an acceptable treatment timeframe.
- The patient should have their own recovery room and away from other patients (e.g. PR room)
- If this is not possible, an urgent meeting with Dr. Al-Rawahi BC Cancer Medical Microbiologist should be arranged. These will be reviewed on a case-by-case basis.

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- Where possible anesthetist to perform a spinal anesthetic to avoid wait time for room air exchange. BC Cancer OR must meet CSA standards or 20 room air exchanges per hour requiring 21 minutes to remove 99.9% of the contaminants. (See page 7 of [BCCDC Options for Operating Room Configuration and Use When a Patient with Suspected or Confirmed COVID-19 Requires Emergent Surgery](#))
- Delaying other brachytherapy patients' treatment to accommodate the COVID+ patient could be considered and or adjust the OR schedule to extend day.
- Delay/move/cancel other CTSIM patient appointments if necessary to accommodate additional time needed for terminal clean.
- For prostate permanent seed implant patients do not complete CTSIM same day delay 1 month as per standard.
- For cervix patients consideration to reducing the number of insertions (from 4 to 3) should be considered if the patient has yet to start their insertion course

3. Related Documents

[BC Cancer Provincial Clinical Management Guidelines in a Pandemic](#)

[BCCDC Infection Prevention and Control \(IPC\) Protocol for Adult Surgical Procedures during the COVID-19 Pandemic](#)

[BCCDC Options for Operating Room Configuration and Use When a Patient with Suspected or Confirmed COVID-19 Requires Emergent Surgery](#)

[PHSA Aerosol Generating Medical Procedures for Patients with Suspect or Confirmed COVID-19](#)

[IPAC Point of Care Risk Assessment Advice for Health Care Workers: When to choose an N95 Respirators for Suspected/Confirmed COVID-19 Cases](#)

[Infection Prevention and Control \(COVID 19 tool kit, COVID-19 signage and posters, donning and doffing PPE\)](#)

4. Appendices

[Appendix A: Brachytherapy OR Checklist](#)

[Appendix B: Summary of COVID + patient receiving Brachytherapy Template](#)

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Appendix A: Brachytherapy OR Checklist

PRE-OPERATIVE	PATIENT TO OR THEATRE	INTUBATION
<p>Before the patient comes into the room</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Remove all unnecessary supplies from room, or cover with a white sheet <input type="checkbox"/> 2. Post Airborne Precaution and Droplet Precaution signs. <input type="checkbox"/> 3. Scrub nurse and 2nd Circulating nurse to enter OR and open supplies, set up table and count. All HOLD items are to be left outside the room otherwise will need to be discarded. <input type="checkbox"/> 4. Count sheet/Perioperative Record/Consent may remain in room. The rest of chart should stay outside of room in designated recovery area. <input type="checkbox"/> 5. Circulating nurse assisting anaesthesia and Anaesthesiologist DON <u>Airborne droplet PPE</u>. All other staff should be outside of OR. <input type="checkbox"/> 6. Do not use Forced Air Warming. Warm blankets only. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. Ensure patient has procedure mask on for transport and patient preforms hand hygiene. <input type="checkbox"/> 2. Periop record, count sheet and consent are only documents to be in the OR. <input type="checkbox"/> 3. Perform time out with other members of the team using <u>Airborne droplet PPE</u>. When exiting the OR doff gown and gloves inside the OR a safe distance from the patient. Once outside the OR doff eye protection and mask, maintaining distance while unmasked until hand hygiene can be preformed and new mask can be donned. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. PAUSE – Ensure everyone except anesthesiologist and 1st circulating nurse are out of room before intubation. <input type="checkbox"/> 2. Anaesthesiologist will intubate patient. 1st Circulating nurse will assume 2 meter distance and assist only if requested. <input type="checkbox"/> 3. 2nd circulator will be available outside of room in case of airway/patient need. DO NOT leave. ORNAC standard – two perioperative nurses should attend to each patient <input type="checkbox"/> 4. Once intubated wait 21 min for Air Clearance before doors are opened to allow airborne contaminants to be removed. Use wall clock to track time.

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INTRA-OPERATIVE

- ☐ 1. **ALL STAFF** should be wearing Airborne Droplet Precautions PPE, which includes a N95 mask.
- ☐ 2. Case to proceed, as normal.
- ☐ 3. Communicate with runner for any items needed. Runner will place items on clean table outside door. Then circulating nurse can open door and retrieve supplies
- ☐ 4. At end of case, surgeon, scrub nurse and circulating nurse to doff PPE 2 meters away from patient, leave dirty gown and gloves in room and leave room.
- ☐ 5. Once outside the OR doff eye protection and mask, maintaining distance while unmasked until hand hygiene can be preformed and new mask can be donned.
- ☐ 6. Runner keeps PPE on and is available outside of room in case of airway emergency. DO NOT leave.

POST-OPERATIVE

- ☐ 1. **PAUSE** – Ensure everyone except anesthesiologist and circulating nurse are out of room before extubation.
- ☐ 2. Anaesthesia and circulating nurse will stay in room and extubate patient wearing Airborne droplet Precaution PPE. Circulating nurse will assume 2 meter distance and assist only if requested. .
- ☐ 3. After extubation is completed - wait 21 min for Air clearance before OR doors are opened. This practice allows airborne contaminants to be removed. Use wall clock to track time.
- ☐ 4. After 21 minutes, Runner in Airborne droplet Precaution PPE will bring clean bed into room. Close door behind you.
- ☐ 5. Anaesthesiologist and circulating nurse to doff gown and gloves inside the OR. Once outside the OR preform hand hygiene and don new gloves and gown.
- ☐ 6. Transfer to designated recover space.
- ☐ 7. Circulator who was assisting anaesthesia and anesthetist doffs PPE at this time.
- ☐ 8. Once patient has left room, staff may enter room with droplet precautions PPE to remove case cart. Place dirty suction canisters in yellow bags. Remove white sheets from anaesthetic machine and other equipment.
- ☐ 9. Ensure droplet precaution sign remains posted to alert Housekeeping and Aides to precautions. Remove airborne precaution sign.
- ☐ 10. Housekeeping and Aides must use Droplet precautions PPE for all cases – terminal isolation clean.

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Appendix B: Summary of Covid + patient receiving Brachytherapy Template

Patient will arrive at BC Cancer Centre at XXXX-date and XXX-time per self. Once patient arrives, patient will call XXX-person on escort's portable phone XXX-XXX-XXXX

- Once escort receives the call he/she will go to level 1 Rear elevator and escort the patient to level 0 exam room XXX. ***Ensure Contact/Droplet Signage is posted on exam room door***
 - Infection control consideration: Ensure patient is wearing a surgical mask and performs hand hygiene. Ensure when patient is in the elevator it is just the escort and the patient.
- Patient will remain in Exam room 2 until OR is ready.
- When OR space is ready for patient to arrive PACU nurse will transport patient down the hallway from exam room 2 directly to OR.
 - Infection control consideration: Ensure patient is wearing a surgical mask and performs hand hygiene.
- Patient will arrive in OR for Brachytherapy Procedure. Following brachytherapy procedure patient will be transferred from OR back to exam room 2 where the patient will be recovered by 2 PACU nurses.
- (Once recovered prostate patients should be given future CT scan date and instructions and escorted out of building. For cervical patients continue below).
- Once patient has sufficiently recovered 1 PACU nurse will remain stationed outside room2 to monitor patient.
- PACU nurse will notify CT sim that patient is in exam room xxx and remind of requirement for contact/droplet precautions.
- RT/Nursing will transport patient from exam room xxx to CT Sim
 - Infection control consideration: Ensure patient is wearing a surgical mask and performs hand hygiene. Staff to don Contact/Droplet PPE
- Following CT Sim patient will be transferred back to exam room xxx by RT/Nursing
 - Ensure terminal clean is completed in CT Sim following treatment
- Patient will remain in exam room xxx until treatment
- When patient is ready to treat, patient will be transferred to the HDR suite by RT/Nursing
 - Infection control consideration: Ensure patient is wearing a surgical mask and performs hand hygiene. Staff to don Contact/Droplet PPE
 - Ensure terminal clean is completed in Treatment unit following treatment
- Following treatment patient will be transferred back to exam room xxx for apparatus removal and will remain in exam room xxx until escort arrives to take patient home.
- Upon arrival of escort the patient will be escorted out by nursing.

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