Providence Cancer Institute
Guidelines for restoring non-emergent and elective surgical oncology services after the COVID-19 pandemic

Intent

To contribute to local surgical oncology procedure scheduling prioritization in the context of potential case back-log after stabilization / recovery of the COVID-19 pandemic. Ultimately, priority determination is at the discretion of the surgeon and the local OR leadership team based on community need and facility constraints. This only serves as a GUIDELINE.

Restoration of non-emergent surgical oncology procedures at a local hospital should be initiated in four phases outlined in this document, which are separate from the priority classifications, controlled by the local clinical / administrative leadership.

Recommendations

Four levels of diagnostic priority for surgical oncology procedures performed within hospital Medical Procedure Units/Operating Rooms during and after the COVID-19 outbreak

🟢 *Currently allowed procedures*	🟡 *Consider expanding – bring to review committees for determination locally*	🔴 *Wait until post-COVID/elective procedures allowed in your state*

Priority Classifications

🟢 Emergent / very urgent

Definition: cannot be delayed without significant risk to life

Recommendation: Continue allowing emergent / very urgent procedures

1. Life-threatening symptomatology (hemoptysis, obstruction, jaundice, GI bleeding, hematuria, perforation, erosion, tumor associated sepsis, ischemia, etc)
2. Required palliation (dyspnea from pleural effusion, airway / GI obstruction, bleeding, erosion, pathologic fracture, etc)
3. Management of surgical complications – unstable patient (active bleeding not amenable to nonsurgical management, dehiscence, anastomotic leak with sepsis, etc)

🟡 Urgent

Definition: cannot be delayed beyond 1-4 weeks without significant risk to life

Recommendation: Begin allowing urgent procedures after committee review to reduce backlog and avoid ED visits

1. Cancers deemed aggressive by the surgeon and MDT (multidisciplinary team)
    a. Appendix 1
2. Within narrow time window for surgery post systemic therapy / radiation therapy

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3. Locally advanced cancers
4. Time sensitive diagnosis, staging and treatment of suspected malignancy
5. Intractable symptoms requiring inpatient interventions (GI bleeding requiring recurrent transfusions, partial obstruction, compression, etc)
6. Metabolic derangement (medically uncontrollable hypercalcemia, medically uncontrollable Grave's disease, etc)

Semi-urgent

Definition: cannot be delayed beyond 4-8 weeks without significant risk to life

Recommendation: Begin allowing semi-urgent procedures after committee review to reduce backlog and avoid ED visits

1. Moderately aggressive cancers (large thymoma, oligometastases, malignant polyps, etc)
2. Salvage resection due to cancer progression while undergoing systemic and / or radiation therapy
3. Intractable symptoms requiring recurrent outpatient interventions (pain, GI bleeding requiring recurrent outpatient transfusions, partial obstruction, etc)
4. Re-excision for R1 margins (extremity / truncal sarcoma, melanoma, breast cancer, etc)
5. Severe conditions that cannot wait beyond 8 weeks

Elective

Definition: no harm from ≥ 8 week delay

Recommendation: During this Covid-19 pandemic, most states have regulations in force limiting the performance of elective procedures in our ministries. However, CMS recently relaxed its recommendation as to when to begin performing elective cases. It is anticipated that resumption of some elective surgical cases with minimal impact on hospital resources may soon begin [i.e. outpatient cases, cases with expected overnight or 1 or 2 days post-op inpatient stay and with no expected post-op ICU stay] but remain dependent on readiness of our respective regions and ministries.

1. Low grade malignancy with indolent biology (lung ground glass opacity with minimal solid component, typical carcinoid tumor, small thymoma, low grade sarcoma of known indolence (retroperitoneal well differentiated liposarcoma, low grade fibromyxoid tumor) breast high risk atypia, in situ melanoma, premalignant polyps, etc)
2. Chronic symptoms
3. Delayed or second stage reconstruction
4. Prophylactic surgery for hereditary / genetic conditions
5. Cancer surveillance / screening
    a. Resume previously delayed screening
    b. Resume routine surveillance / screening
6. Resume routine diagnostic testing

Considerations

Definition of "restoration of non-emergent surgical procedures at a local hospital"

- The resumption of non-emergent surgical oncology procedures at a local hospital will occur when the following conditions are met:
    - The state and federal authorities have granted such authorization, and

- The administrative leadership of the local hospital has assessed the medical center has met minimal staff and supply resources required levels and reserves to continue to address weaning pandemic issues, and to begin resumption of non-emergent cases

Phases of Surgical Status Restoration

Restoration of non-emergent surgical oncology procedures at a local hospital should be initiated in four Phases, controlled by the local clinical / administrative leadership.

Phase 1

Resumption status phase confirmed. The local leadership determines the resumption of non-emergent surgical oncology procedures at the local hospital should begin.

Phase 2

Restricted restoration phase.

- All pre-pandemic surgical block booking and booking protocols re-open
- Peri-op and OR services on stand-by to stay open on Saturday or weekend to accommodate additional case inflow
- RESTRICTED booking of surgical cases: urgent and semi-urgent only.

Phase 3

Unrestricted restoration phase.

- Same as Phase 2 with UNRESTRICTED booking of surgical cases.

Phase 4

Business restoration phase.

- Local peri-operative and operative functions at pre-pandemic level and now can be adjusted as per the local administrative leadership to accommodate the business restoration of our surgical service lines.

1. In the stabilization / recovery phase of the pandemic, consideration should continue for:
    - Resource limitations
        - Personnel
        - PPE
        - ICU capacity
        - Mechanical ventilators
        - Blood bank
        - Terminal cleaning supplies
    - Health care team risks from procedure extent / patient status
        - Procedure extent
            - OR time
            - Surgical team size
            - General vs regional / local anesthesia
            - Intubation probability
            - Surgery site / extent

- EBL
- Likelihood of prolonged ICU (>3d) / LOS requirement

- Patient status
  - Influenza-like symptoms
  - COVID-19 positive
  - PUIs
  - Require post-surgery SNF
  - ASA 4
  - ASA 3, > 65 yo, COPD, uncontrolled asthma, cardiovascular disease, immunosuppression

2. Limitation in resources and degree of risk will define capacity and will vary per local conditions, geography and pandemic phase (Appendix 2)
3. Continued functioning of multi-disciplinary surgical review / triage teams (typically directors of surgery, anesthesia, surgery nursing, ICU) required to determine scheduling priority in context of local capacity
4. Recommended pre-procedure COVID-19 testing:
   - Contingent upon institutional availability
   - Testing flow :
     1. Upon establishment of surgery / procedure date: patient instructed to self-isolate (Appendix 3) seven days, ideally 12-14 days, before procedure
     2. 3 - 4 days before procedure: phone contact patient and screen for COVID-19 symptoms
        a. If symptomatic, procedure postponed and patient instructed to self-isolate for 72 hours post-resolution of symptoms, or 7 days from onset of symptoms, whichever is longer.
           - Reschedule procedure.
        b. If asymptomatic, arrange drive-through testing
     3. 2 days before surgery: preop drive-through testing. Results typically available within 24 hours, rarely >36 hours
     4. Patient informed of results
        a. If COVID-19 positive, cancel case as default. Surgeon / proceduralist notified. Surgeon / proceduralist develops follow up plan with patient.
        b. If COVID-19 negative, proceed with surgery using universal COVID-19 precautions per current operating room / MPU protocols

- For cases with high procedural risk / higher likelihood of poor outcome / higher resource utilization, consider:
  - Alternate sites of service if available: tertiary centers, capable facilities in pandemic phase 1
  - Further diagnostic work-up and pre-op optimization if indicated
- For cases with moderate procedure risk / moderate likelihood of poor outcomes / moderate hospital resource utilization, consider:
  - Alternate site of service if available
  - Request extension to preop authorization
  - Continue or expand use of virtual visits to monitor progression of clinical stability / indications for intervention
- For cases with minimal procedure risk / low likelihood of poor outcome / lower hospital resource utilization, consider:

- Add extended blocks of procedure room time to accommodate higher daily case volume
- Alternate sites of service if appropriate: ambulatory centers

Potentially flexible processes / resources augmenting restoration:

- Extended work schedules (expanded hours, weekends, evenings)
- Alternate sites / locations
  - Ambulatory settings
- Ongoing or expansion of virtual patient encounters
- Updating or extending H&P timeline (currently not accepted beyond 30days)
- Expanded hours of diagnostic / imaging sites
- Recommend office request 120 days on authorizations for scheduling flexibility
- Expedite credentialing of sites / providers

Sources:

- Providence St Joseph Health system wide surgical experts
- https://www.facs.org/covid-19/clinical-guidance/elective-case
- Cancer Care Ontario Pandemic Planning Clinical Guideline
- https://www.surgonc.org
- Providence St. Joseph Health Cancer Institute Surgical Oncology Focus Group (April 1, 2020): Non-elective service guidelines supporting resource stewardship during Covid-19 pandemic. <link>
- COVID-19 Guidance for Triage of Operations for Thoracic Malignancies: A Consensus Statement from Thoracic Surgery Outcomes Research Network, the Society of Thoracic Surgeons and the American Association for Thoracic Surgery. In press Ann Thorac Surg and J Thorac Cardiovas Surg.
- SAGES/EAES "Closing the back door" recommendations in the fight against COVID-19: (preop screening) https://urldefense.proofpoint.com/v2/url?u=https-3A__www.sages.org_wp-2Dcontent_uploads_2020_04_Closing-2Dthe-2DBack-2DDoor-2DSOP.pdf&d=DwIFAg&c=KoC5GYBOIefzxGAm2j6cjFf-Gz7ANghQIP9aFG9DuBs&r=C39ipwAiwDwQ4ZeJGl4U1supHOCl48XCr8bb5cVuLqU&m=EHAdo3s3j3EaJKxtL9cAz4imMexX7egMuVQpxslnK6A&s=vz7hiZgmczX7FluTtuPPq9UwFwwLestzGO5638CHPuQ&e=

Appendix I: Cancers deemed aggressive by the surgeon and MDT (multidisciplinary team)

- Breast
  - Excisional biopsy for diagnosis of a mass when needle biopsy cannot be done
  - Triple negative or HER2 positive patients if patient unable to undergo neoadjuvant chemotherapy or tumor is small and surgery information could inform chemotherapy management
  - Clinical Stage T2 or N1 ER+ / PR+ / HER2 negative tumors
  - Progressive disease on systemic therapy
  - Excision of malignant recurrence
  - Discordant biopsies likely to be malignant
  - Angiosarcoma
  - Malignant phyllodes tumor
- Colorectal
  - Asymptomatic colon cancers
  - Rectal cancers after neoadjuvant chemoradiation especially with no response to therapy
  - Cancers with concern about local perforation and sepsis
  - Early stage rectal cancers where neoadjuvant therapy not indicated
  - Biopsy for symptomatic anal masses for diagnosis
- Endocrine
  - Lesions with significant growth or short doubling times
  - If an endocrine disorder threatens a pregnant mother or her fetus

  Thyroid:
  - Thyroid cancer that is a current or impending threat to life, those that are threatening morbidity with local invasion (e.g., trachea, recurrent laryngeal nerve), aggressive biology (rapidly growing tumor or recurrence, rapidly progressive local-regional disease including lymph nodes)
  - Severely symptomatic Graves' disease that has failed medical therapy
  - Goiter that is highly symptomatic or is at risk for impending airway obstruction
  - Open biopsy with diagnostic intent for suspected anaplastic thyroid cancer or lymphoma

  Parathyroid:
  - Hyperparathyroidism with life-threatening hypercalcemia that cannot be controlled medically

  Adrenal:
  - Adrenocortical cancer or highly suspected adrenocortical cancer
  - Pheochromocytoma or paraganglioma that is unable to be controlled with medical management
  - Cushing's syndrome with significant symptoms that is unable to be controlled with medical management
  - Generally, functional adrenal tumors that are medically controlled and asymptomatic non-functional adrenal adenomas can be delayed

  Neuroendocrine Tumors (NETs):
  - Symptomatic small bowel NETs (e.g., obstruction, bleeding/hemorrhage, significant pain, concern for ischemia)
  - Symptomatic and/or functional pancreatic NETs that cannot be controlled medically

- Non-functional pancreatic NETs causing symptoms (jaundice, bleeding, obstruction) after failure of somatostatin analogues and medical therapy

- Genitourinary

Bladder:

- Cystectomy for muscle-invasive bladder cancer (T2+), regardless of receipt of neoadjuvant chemotherapy
- Cystectomy for CIS refractory to 3rd Line therapy
- TURBT for suspected cT1+ bladder tumors

Testicular:

- Orchiectomy for suspected testicular tumors
- Post-chemotherapy RPLND

Kidney:

- Nephrectomy for cT3+ tumors, including all patients with renal vein and/or IVC thrombi
- Planned partial or radical nephrectomy for cT2 should be considered for delay based upon patient specific considerations, such as age, morbidity, symptoms, and tumor growth rate

Prostate:

- Surgery for NCCN high risk if patient is ineligible for radiation

Upper tract urothelial cancer:

- Nephroureterectomy for high grade and/or cT1+ tumors

Urethral / Penile:

- Clinically invasive or obstructing cancers

- Gynecology

No delay:

- Malignant bowel obstruction
- Hemorrhage secondary to malignancy
- Malignant germ cell tumors
- Molar pregnancy
- Intractable pain with pelvic mass concerning for cancer
- Radiation cases: placement of smit sleeves/tandem and ovoids

<6 weeks:

- Poor histology endometrial cancers (carcinosarcoma, papillary serous, clear cell, or grade 3 endometrioid)
- Metastatic ovarian, fallopian tube, or primary peritoneal cancer (upfront debulking or interval debulking after neoadjuvant chemotherapy)
- Suspicious pelvic mass (imaging findings concerning for cancer and/or elevated tumor markers)
- Nonmetastatic vulvar cancer
- Suspected leiomyosarcoma
- Early stage cervical cancer

6-12 weeks:

- Grade 1 or 2 endometrial cancer
- Complex atypical endometrial hyperplasia
- Pelvic mass with normal tumor markers

- Head and Neck
  - Surgical or needle biopsy of suspicious neck masses
  - Excision or biopsy of any oral cavity, oropharyngeal, laryngeal, or nasopharyngeal masses that are clinically symptomatic or easily seen on imaging (PET / CT / MRI)

  Reversible cause of airway obstruction:
  - Intubation vs tracheostomy preferable, using difficult airway protocols
  - Most skilled airway manager (anesthesiologist) present should manage airway to maximize first pass success
  - Most skilled airway manager (experienced surgeon) for tracheostomy if required
  - Avoid changing tracheostomy tube until COVID-19 has passed, after review with infectious diseases
- Hepato-pancreato-biliary
  - Operate on all patients with HPB malignancies behaving aggressively
    - Pancreas adenocarcinoma, gastric cancer, cholangiocarcinoma, duodenal cancer, ampullary cancer, metastatic colorectal to liver
- Peritoneal surface malignancy
  - There is significant utilization of resources for patients undergoing cytoreductive surgery with or without HIPEC. Such surgeries may only be considered if the system is well resourced to perform "rescue" for such patients without exposing them to unnecessary risk
  - Application of HIPEC after cytoreductive surgery must be an individualized decision, and considerations to avoid HIPEC during/after cytoreductive surgery must include the risk of development of neutropenia in the patient, increased risk of peri-operative complications, longer ICU / hospital stay, increased operative time / personnel required
  - Operative management of malignant bowel obstruction if emergent or failure to progress
- Sarcoma
  - Primary soft tissue sarcoma without metastatic disease
  - Surgery for recurrent disease for patients who:
    - high chance of obtaining long-term disease control in the context of complete gross resection (e.g., long disease-free interval, solitary site of recurrence)
    - require immediate palliation (bleeding, obstruction)
    - who do not have indolent histologies (e.g., retroperitoneal well-differentiated liposarcoma) that can be managed with active observation
- Thoracic
  - Highly PET avid tumor
  - Central where further growth entails a larger anatomic resection
  - Solid or predominantly solid (>50%) lung cancer or presumed lung cancer > 3 cm, clinical node negative
  - Node positive lung cancer
  - Post neoadjuvant chemo and / or radiation cancer therapy
  - Esophageal cancer T1b or greater
  - Chest wall tumors of high malignant potential not manageable by alternative therapy
  - Staging to start treatment (mediastinoscopy, diagnostic thoracoscopy for pleural dissemination)
  - Symptomatic mediastinal tumors – diagnosis not amenable to needle biopsy
  - Patients enrolled in therapeutic clinical trial

Appendix II: Pandemic Hospital Capacity Levels (locally determined):

Phase I: Semi-Urgent Setting (Preparation Phase)

- Few COVID-19 patients, hospital resources not exhausted, institution still has ICU and ventilator capacity
- COVID-19 trajectory not in rapid escalation phase
- Status of each hospital likely to evolve over *next week or two*

Phase II: Urgent Setting

- Many COVID-19 patients, ICU and ventilator capacity limited, OR supplies limited
- Status of hospital likely to progress over *next few days*

Phase III:

- Hospital resources are all routed to COVID 19 patients, OR supplies exhausted, no ventilator or ICU capacity
- Surgical interventions / resources preserved for patients in whom death is likely within hours if deferred
- Status of hospital likely to progress *in hours*

Appendix III: Self-isolation in preparation for surgery during COVID-19 pandemic

(Adapted from CDC guidelines: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html)

Limiting face to face contact with others is the best way to reduce spread of COVID-19. Prior to upcoming surgery, it is recommended to **self-isolate for at least 7 days, ideally 12-14 days**, to minimize the chance of COVID-19 infection of yourself or your health care team.

Isolation starts by practicing social / physical distancing. Since people can spread the virus before they know they are sick, it is important to stay away from others as much as possible.

- Stay at least 6 feet from other people
- Do not gather in groups
- Stay out of crowded places and avoid mass gatherings
- Work from home when possible
- When possible, avoid public transportation, taxis, ride hailing (Uber, Lyft)

In addition to the above physical distancing practices, to further reduce the chance of contracting COVID-19 prior to surgery, **we highly recommend also following these additional self-isolation recommendations**:

- Avoid grocery stores and pharmacies
- Use mail order for medications
- Consider a grocery delivery service
- Cover your mouth and nose with a cloth face cover when around others, including when you have to go out in public
- Ask friends or family members who follow social distancing practices to shop for you
- In your home, if anyone else is sick, they should separate themselves from you by staying in a specific “sick” bedroom or space and use a different bathroom (if possible)