

Providence St Joseph Health Surgical Oncology Focus Group: Non-elective service guidelines supporting resource stewardship during Covid-19 pandemic

Intent: To contribute to local surgery procedure triage in the context of limited resources and personnel acute contagion risk. These are guidelines. Ultimately, determination of non-elective service is the discretion of the surgeon and the local OR leadership team based on community / facility constraints.

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*

Recommendations: Recognizing the status of the hospital (capacity definitions above), the following cases should be done as soon as feasible:

1. Cancers deemed highly 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

○ 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

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- 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

2. In the narrow time window for surgery post systemic therapy / radiation therapy
3. Life-threatening symptomatology (hemoptysis, obstruction, jaundice, GI bleeding, hematuria, perforation, erosion, post obstruction infection, etc)
4. Required palliation (dyspnea from pleural effusion, airway / GI obstruction, bleeding, erosion, etc)

Possible alternatives to surgery as guided by disease-specific MDT

- Breast
 - ER+ DCIS: endocrine therapy
 - ER+ invasive (stage 1-3): neoadjuvant endocrine or chemotherapy
 - Clinical Stage T1N0 estrogen receptor positive/progesterone receptor positive/Her2 negative tumors can receive hormonal therapy
 - Triple negative and HER2 positive tumors can undergo neoadjuvant therapy prior to surgery
 - Some Clinical Stage T2 or N1 ERpos/PRpos/HER2 negative tumors can receive hormonal therapy
 - Inflammatory and locally advanced breast cancers should receive neoadjuvant therapy prior to any surgery
- Colorectal
 - Locally advanced resectable colon cancer
 - Neoadjuvant chemotherapy for 2-3 months followed by surgery
 - Rectal cancer cases with clear and early evidence of downstaging from neoadjuvant chemoradiation
 - Where additional wait time is safe
 - Where additional chemotherapy can be administered
 - Locally advanced rectal cancers or recurrent rectal cancers requiring exenterative surgery
 - Where additional chemotherapy can be administered
 - Oligometastatic disease where effective systemic therapy is available
- Genitourinary
 - Bladder:
 - Chemoradiotherapy for T2+ disease in select patients
 - Testicular:
 - Favor chemotherapy or radiation rather than RPLND when clinically appropriate
 - Kidney:

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- Planned partial or radical nephrectomy for cT1 masses should be delayed or other forms of ablative approaches should be considered in selected patients
- 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:

- Most prostatectomies should be delayed; Selected high risk patients as well as those with intermediate or low risk cancer should be delayed.
- Shared decision making to consider radiation therapy for NCCN High risk disease.
- Option for androgen deprivation therapy to delay definitive primary treatment in local disease

- Gynecology

- Hepato-pancreato-biliary

- If responding to and tolerating neoadjuvant chemotherapy, then continue and delay surgery
- Use ablation or stereotactic radiosurgery instead of resection for liver metastases where possible
- Regional treatment strategies (Y90, chemoembolization) should be used whenever reasonable.
- Defer surgery for asymptomatic PNET, duodenal and ampullary adenomas, GIST, and high risk IPMN's, unless delay will affect resectability

Pancreatic Masses - concerning for primary cancers

- Some will need ERCP/stenting for biliary obstruction, as indicated
- Some will require EUS for diagnosis to begin therapy
- Hypervascular lesions thought to be pNET/renal mets may be treated with chemotherapy as appropriate

Pancreatic Cancers

- Utilize neoadjuvant strategy chemotherapy for all resectable, borderline, or locally advanced tumors (Metastatic lesions get palliative care per Medical Oncology)
- Biliary obstruction will require stenting, PTC v ERCP

Biliary Cancers

- Utilize neoadjuvant strategy chemotherapy
- Metastatic disease will get palliative care per Medical Oncology
- Biliary obstruction will require stenting, PTC v ERCP

Primary Liver Cancers

- Utilize non-surgical options when possible
 - Y90 or chemoembolization
 - Systemic chemotherapy
- Resection by guidelines as appropriate

Metastatic Liver Cancers

Colorectal liver metastases

- Neoadjuvant chemotherapy may be appropriate
- Ablative technologies when possible may reduce resource utilization
- Resection should be utilized as needed

NET

- Treat with systemic or regional therapies

Non-CR and non-NET

- Address on an individual basis in similar fashion

- Melanoma
 - Delay wide local excision of in-situ disease for 3 months and, as resources become scarce, all lesions with negative margins on initial biopsy. Efforts should be made to perform procedures in an outpatient setting to limit use of OR resources.
 - Surgical management of T3/T4 melanomas (>2 mm thickness) should take priority over T1/T2 melanomas (≤2 mm thickness). The exception is any melanoma that is partially/incompletely biopsied in which large clinical residual lesion is evident. Gross complete resection is recommended in this case.
 - Sentinel Lymph Node biopsy is reserved for patients with lesions > 1mm and, as resources become scarce, set aside for 3 months.
 - Manage clinical Stage III disease with neoadjuvant systemic therapy. If resources permit and patient is not suitable for systemic therapy, consider resection of clinical disease in an outpatient setting.
 - Metastatic resections (stages III and IV) only if the patient is critical/symptomatic or unresponsive
- Sarcoma
 - Defer newly diagnosed truncal / extremity well differentiated liposarcoma / ALT and desmoids for at least 3 months and reassess at that time
 - Resection of other low-grade lesions with known indolent behavior (e.g., retroperitoneal well-differentiated liposarcoma) and low metastatic risk (e.g., myxoid liposarcoma, low grade-fibromyxoid tumor) can be deferred for short intervals depending on available resources
 - Consider short interval deferral of re-excision for R1 margins in extremity /truncal lesions if OR resources are limited.
 - If there is an indication for radiation therapy, plan it as preoperatively, in a lower risk outpatient (extends the timing of surgery for 3-4 months)
 - Use of neoadjuvant therapy for high grade sarcomas or recurrent disease can be considered if it can be safely delivered in an outpatient setting as a means of deferring surgical intervention.
 - Active observation protocols or low-toxicity systemic options considered for patients with recurrent disease.
- Thoracic
 - Early stage lung: SBRT
 - Early stage esophageal cancer (stage T1a/b superficial) managed endoscopically
 - If eligible for adjuvant therapy, then give neoadjuvant therapy (e.g. chemotherapy for 5cm lung cancer)
 - Ablation (e.g. cryotherapy, radiofrequency ablation)
 - Stent for obstructing cancers then treat with chemoradiation
 - Debulking (endobronchial tumor) only in circumstance where alternative therapy is not an option due to increased risk of aerosolization (e.g. stridor post obstructive pneumonia not responsive to antibiotics)
 - Nonsurgical staging (EBUS, imaging, interventional radiology biopsy)
 - Follow patients after their neoadjuvant for “local only failure” (i.e. salvage surgery)
 - Extending chemotherapy (additional cycles) for patients completing a planned neoadjuvant course

Cancer Screening:

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Cancer Institute: Surgical Oncology Clinical Focus Group

- Routine screenings
 - Defer, especially in asymptomatic patient
- More frequently recommended screening
 - Delay to longest recommended frequency

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>
- ❖ <https://www.nccn.org/covid-19/default.aspx>
- ❖ K Stensland, et al. Consideration in the triage of urologic surgeries during the COVID-19 pandemic. Euro Uro. Manuscript # EURUROL-D-20-00380. March 15, 2020.
- ❖ GYNONC