Cancer Surgeries in the Time of COVID-19: A Message from the SSO President and President-Elect

March 23, 2020

Dear SSO Members,
In these unprecedented times, we are forced to consider triage and rationing of cancer surgery cases. Here are a few of the reasons:

- the potential shortage of supplies, such as masks, gowns, gloves
- the potential shortage of hospital personnel due to sickness, quarantine and duties at home
- the potential shortage of hospital beds, ICU beds and ventilators
- the desire to maximize social distancing amongst our patients, colleagues and staff.

We have asked each of the SSO Disease Site Work Group Chairs and Vice Chairs to provide their recommendations for managing care in their specialties, assuming a 3- to 6-month delay in care. We have summarized their recommendations below.

Numerous organizations are publishing in-depth guidelines, such as the NCCN, ACS, and ASCO, and we will provide links to those documents on the SSO Website. We have also instituted a COVID-19 community discussion page in My SSO Community for members to share what is happening in their institutions. In the next few days, SSO will produce a series of podcasts featuring discussions with experts, regarding their opinions and institutional practices. These podcasts will be available on SSO's Website, iTunes, Sticher and other podcast platforms. Please watch your email and SSO's Twitter and Facebook pages for details. The *Annals of Surgical Oncology* will be publishing an editorial on this topic soon.

As each institution across the world is experiencing this pandemic at different levels, the timing of rationing care will vary and must be decided locally. **The recommendations below represent generalized opinions from experts in their fields, but decisions must be made on a case-by-case basis** based upon your knowledge and understanding of the biology of each cancer, alternative treatment options, and how restrictive your institution is at the time the patient will be scheduled for surgery.

As conditions evolve, the SSO will provide updated information. It is encouraging to see how SSO leadership, committees, members and staff have eagerly reached out to help in response to this pandemic. The SSO office is being run remotely at this time, as Chicago is under a state-wide stay-at-home order. Our dedicated staff, however, are available to address questions or issues that arise at info@surgonc.org.

We wish you the best in these challenging times.

David L. Bartlett, MD
SSO President

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Breast Cancer

Defer surgery for at least 3 months for atypia, prophylactic/risk reducing surgery, reconstruction and benign breast disease.

DCIS

- Defer for 3-5 months
- Treat ER+ DCIS with endocrine therapy
- Monitor monthly for progression
- Untreated DCIS high priority for surgery when safe/ORs available

ER+ invasive breast cancer (Stage I-III)

- Treat with endocrine or chemotherapy in a neoadjuvant fashion as deemed appropriate by multidisciplinary tumor board recommendations

Triple negative/HER2+ invasive breast cancer

- Treat with neoadjuvant chemotherapy for T2+ and/or N1+ disease
- Consider primary surgery as urgent if patient unable to undergo chemotherapy or tumor is small and surgical information could inform chemotherapy decisions.

Post-neoadjuvant chemotherapy

- Delay post-chemotherapy surgery for as long as possible (4-8 week window) in those patients for whom adjuvant systemic therapy is unclear/not indicated.

Unusual Cases/surgical emergencies/special considerations

- Patients with progressive disease on systemic therapy, angiosarcoma and malignant phyllodes tumors should be considered for urgent surgery and should not be delayed.

Colorectal Cancer

- Defer surgery for all cancers in polyps, or otherwise early stage disease.
- Operate if obstructed (divert only if rectal) or acutely transfusion dependent.
- Proceed with curative intent surgery for colon cancer.
- Consider all options for neoadjuvant therapy including utilization of TNT for rectal cancer and to consider neoadjuvant chemotherapy for locally advanced colon cancer
- Delay post-TNT rectal surgery for 12 to 16 weeks.
- Utilize 5x5 Gy pelvic radiotherapy and defer further surgery for locally advanced rectal cancer patients.

Endocrine/Head and Neck Cancer

Most uncomplicated endocrine operations can be delayed.
Diseases and presentations that might qualify for more urgent surgery (i.e., within approximately 4-8 weeks during the current pandemic), include:

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

- Symptomatic small bowel NETs (e.g., obstruction, bleeding/hemorrhage, significant pain, concern for ischemia)
- Symptomatic and/or functional pancreatic NET that cannot be controlled medically
- Lesions with significant growth or short doubling times
- Cytoreductive operations and metastasectomy should generally be delayed but should be considered on an individual basis

Upper Gastrointestinal Cancer

Most gastrointestinal cancer surgery is not elective.

Gastric and esophageal cancer

- cT1a lesions amenable to endoscopic resection should preferentially undergo endoscopic management.
- cT1b cancers should be resected.
- cT2 or higher and node positive tumors should be treated with neoadjuvant systemic therapy.
- Patients finishing neoadjuvant chemotherapy can stay on chemotherapy if responding and tolerating treatment.

Defer surgery for less biologically aggressive cancers, such as GIST unless symptomatic or bleeding.

Hepato-pancreato-biliary Cancer

Operate on all patients with aggressive HPB malignancies as indicated.

- Pancreas adenocarcinoma, gastric cancer, cholangiocarcinoma, duodenal cancer, ampullary cancer, metastatic colorectal to liver
- 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.

Consider ablation or embolization over surgical resection for HCC.

Defer surgery for asymptomatic PNET, duodenal and ampullary adenomas, GIST, and high risk IPMN's, unless delay will affect resectability.

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) should be placed on hold unless the patient is critical/symptomatic or unresponsive to systemic therapies (assuming surgical resources are available).

Peritoneal Surface Malignancy

- Operate on patients with malignant bowel obstruction if a palliative procedure is feasible.
- As CRS/HIPEC can take unique levels of resources, special consideration should be made for proceeding with these cases.
- Defer CRS/HIPEC for low grade appendiceal mucinous neoplasms except in extreme circumstances
- Consider systemic chemotherapy for peritoneal metastases from high grade appendix cancer, gastric cancer, colorectal cancer, high grade mesothelioma, ovarian cancer and desmoplastic small round cell tumors.

If patients are completing neoadjuvant chemotherapy and are ready for surgery, consider continuing chemotherapy if responding and tolerating therapy. For those who cannot continue neoadjuvant chemotherapy then consider delaying surgery for:

- 4-6 weeks in patients with high grade appendiceal, colorectal, mesothelioma, or ovarian cancer.
- 2 to 4 weeks in patients with gastric cancer or desmoplastic small round cell tumors.

Defer surgery for peritoneal metastases from rare low-grade malignancies such as neuroendocrine tumors and gastrointestinal stromal tumors.

Sarcoma

A primary soft tissue sarcoma without metastatic disease on staging that needs surgery will be prioritized for the OR.

- Deferring the surgical treatment of newly diagnosed truncal/extremity well-differentiated liposarcoma/ALT and desmoids for at least 3 months or more. 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 to do it preoperatively (already do that anyways). This can be administered in a lower risk outpatient setting and will push out the timing of surgery for about 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 can be considered for patients with recurrent disease. Surgery for recurrent disease can be offered to patients who:

- are likely to have relatively high chances 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 (e.,g., due to bleeding, obstruction), and
- who do not have indolent histologies (e.g., well-differentiated liposarcoma in the retroperitoneum) that can be managed with active observation.