The world is passing through a critical phase of uncertainty in public health which is of a magnitude which we have never faced before. This pandemic of the deadly Coronavirus was unprecedented, catching even the most developed countries in a state of total unpreparedness. Our Medical and paramedical fraternities stand today on the frontline of the battlefield and we must be aptly prepared to deal with our patients most effectively. Needless to say, we are in a huge shortfall of resources and manpower.

Cancer is also a life-threatening condition that should be dealt with very early and treated holistically with all the armamentarium of different Oncological disciplines based on certain evidence-based guidelines for the best possible outcomes. The problem in the present days is we have to weigh the benefits of cancer treatment against the risks of getting infected with corona virus, which can be more lethal. There are no clear guidelines and different Oncological societies (like SSO, NHS, NCCN) in the developed worlds that have tried to create some which are mostly based on their resources and their profile of patients. Not all of these can be applied in a country like India where Healthcare infrastructure, the Manpower and the patient profiles are all very heterogeneous.

We hope the crisis will be over in the coming weeks, especially with some bold steps taken by the Government of India and the State Governments. IASO has taken inputs from many Senior Members of the fraternity and had tried to formulate some guidelines applicable for the first 3 wks of lockdown subject to revisions in the future as per the new situation. It will be the final prerogative of the clinician, based on his scientific understanding to make decisions in the best interest of the patient and the whole nation in general. The decisions must be made on a case-by-case basis based upon the knowledge and understanding of the biology of each cancer, with the help of a multidisciplinary team, and institutional policies. Any suggestions from our side may be overruled by any Orders or diktats which may come from the local or national government authorities from time to time.

### Broad Guidelines

#### General

All the surgical procedures should be chosen with the intent of better survival and optimal minimal therapy possible as per the stage of the disease and clinical condition.

All emergency must be attended even in the present circumstances like tracheostomy, obstruction, bleeding, perforation, sepsis, mechanical respiratory emergencies like Pneumothorax/ pleural effusion etc.

All terminal care treatment must be optimized.

Semi-elective cancer Surgeries, if planned, must be simple and short and with low morbidity with minimal blood loss.

Prioritize Surgeries with high chances of cure when given early treatment.

Avoid surgery with doubtful benefits and for poor prognostic diseases.

Avoid the surgical time and manpower associated with extensive surgery like microvascular reconstruction, laparoscopic lengthy procedures, breast reconstruction, major Liver & Esophageal Resections.

Choose surgeries associated with morbid conditions and requiring prolonged ICU care with due diligence.

Anytime, the need for ventilators for COVID-19 patients may arise. In those times of crisis, the ventilators shouldn’t be blocked by Surgical Oncology patients.

We need to be very judicious and must have a clear mechanism to rationalize the use of PPE including Masks, Manpower, Hospital beds, Ventilators, Blood products among others.
Some Suggested Guidelines

Biopsies being the 1st step in confirming the diagnosis, and being a minor procedure, should be considered early. Management decisions can be based on these reports.

Breast Cancer

ER, PR positive patients can be delayed with Neoadjuvant hormonal therapy.

- Locally advanced cases may be offered neoadjuvant chemotherapy if they are Hormone Receptor negative.
- Treatment for very early cancers can be delayed until the crisis subsides.
- Surgery may be justified in poor responders to Neoadjuvant treatment or where Chemotherapy and Hormone therapy are not an option (eg elderly ER negative patient), or Malignant Phylloides, sarcomas.

Head and Neck

Emergencies like Stridor, bleed, dysphagia need to be treated appropriately. Procedures like Tracheostomy, Carotid Artery ligation, Endoscopic NG tube insertion, stenting need to be considered in such cases.

- Advanced and palliative patients should be counseled to remain at home with minimal therapy ensuring adequate symptomatic medical treatment.
- Surgeries, when done should be simple involving minimal manpower and material. Cosmetic reconstruction can be delayed.
- T1, T2 lesions can be operated with minimal hospitalization.
- Cases that have equivalent results with radiation should be given Radiation.
- Anyone who is a candidate for neoadjuvant therapy must be dealt with accordingly.
- Treatment for slow cancers like Thyroid, Parotid, Basal cell Carcinoma can be delayed.
- However, Thyroid cancers which are locally aggressive and have a local invasion or airway compression should be taken up for early surgery.
- Uncontrolled Hyperparathyroidism may also be a candidate for early surgery.

Thoracic Malignancies

It is prudent to avoid surgery which is likely to require ventilators for long periods and can have high risks of chest complications.

- Esophagus cancers are preferably given Neo-adjuvant radiotherapy and or chemotherapy and those who have already completed Neo-adjuvant treatment, surgery can be delayed for another 3 weeks.
- Lung cancers are mostly inoperable and get Non-surgical treatments like Chemotherapy, Radiotherapy, Targeted therapy. A multidisciplinary decision should be taken after full work up to rationalize surgery versus Non-surgical Neo-adjuvant treatment in Stage I-III Cancers.
- Thymomas are mostly slow-growing and surgery can be delayed.
- Metastatic resections are preferably deferred.

Upper GI, Hepatopancreatico Biliary Cancers

All obstruction, bleeding, and perforations need to be operated on without delay.

- Neo-adjuvant chemotherapy should be considered in Gastric malignancies.
- Stenting can be done in patients with Esophageal stricture or gastric outlet obstruction in advanced cases for palliation.
- Complex Cases like Whipples and Segmental Liver resections should preferably be done only at high volume Centres in otherwise uncomplicated cases.
- Surgeries for Gallbladder cancer should be done sooner rather than later for its aggressive nature.
- RFA may be considered to treat small HCCs and Colorectal Liver metastases (up to 3 cms). For larger lesions, systemic therapy should be considered.
- TACE / TARE may be also be considered for treating HCC.
- GIST can be treated with neo-adjuvant TKIs unless they are bleeding actively which will necessitate surgery.
- Treatment for PNET, IPMN, etc. can be delayed.

Colorectal Cancers

Cancer of the rectum can be staged and planned preferably with neoadjuvant RT and CT followed by definitive surgical procedures (8 to 12 weeks after completion of RT).

- In cases of obstructive lesions a diversion procedure (stoma can be considered before starting the treatment).
- Colonic obstructions, bleeding and impending perforation should be relieved early with a resection/ stoma. Definitive surgery may be delayed by Endoluminal stenting for obstructing lesions.
- Neo-adjuvant chemotherapy may be considered for locally advanced colonic cancers.
- Colectomies should be done early as delays may significantly affect the outcome.

Sarcomas and Bone Cancers

Low -grade sarcomas (eg Low-grade Retroperitoneal Liposarcoma) can have deferred Surgery.
Those cases which need Radiation and Chemotherapy, are preferably given in the Neo-adjuvant setting especially in the extremities.
Aggressive malignant sarcomas are to be operated upon without much delay.

**Peritoneal Surface Malignancy**

Consider Chemotherapy for all fresh cases.
Those who are responding to chemotherapy may be further delayed with additional chemotherapy.
Those due for surgery or those not responding to chemotherapy must be delayed by a minimum of 2 weeks. Those with surgical complications like obstructions need to be operated immediately.
Avoid HIPEC procedures during COVID-19 pandemic.
Avoid primary and secondary cytoreductive surgery during COVID 19 pandemic.

**Cancer Cervix/Vulva**

Select young patients who can undergo surgery with minimal morbidity. Prefer early discharge with.
Telephonic support and utilize telemedicine consultation.

**Renal Cancers**

Renal cancers are relatively slow-growing and surgery can be delayed for 2–3 weeks, unless associated with any complications or bleeding.

**Adrenal Tumors**

Surgery may be deferred unless the patient is having uncontrolled symptoms in Pheochromocytomas/ Paragangliomas/ Cushings.

**Testicular Cancers/Ca Penis**

Simple procedures to be done on day care basis. RPLND to be delayed or avoided in favor of chemotherapy. Elective groin dissections to be delayed.

**Melanoma**

Early surgery should be considered in Stage I & II.
Neo-adjuvant therapy should be considered in Stage III.

**Premalignant Cases**

Avoid therapy for now.

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**Statutory Guidelines Must for Surgeons and Anesthetists**

The experience of China strongly suggests high morbidity (40%) and mortality (20%) of patients after Elective surgery for florid COVID infection post-operatively. Also, there is a high risk of Corona infection among the Surgeons and Anesthetists when operating on a confirmed/suspected COVID 19 case.

All patients who are selected for surgery should have COVID testing done. Please bear in mind that there can be false negative reports during the Incubation period. Recommendations from Institutes in China and some European countries are to put the patients on quarantine for 14 days and if they remain symptom-free, to take them up for surgery on the 15th day. This may not be a practical solution in India.

Full protection with PPEs is strongly recommended for all OT staff. Special care should be taken during Intubation by the Anesthetists or Head & Neck surgeons and Endoscopists. Laparoscopic surgeries should be avoided as much as possible. Electrocautery should be used in a minimal setting and should be accompanied by suction. Avoid needle stick and stab injuries.

After the surgery is over the OT should be cleaned with PerOxyacetic acid. High-efficiency filter should be changed and OT should be closed for at least 2 h thereafter.
Also, it is advisable to keep the OT personnel to minimum and club the operations on specific dates.
Work with teams that don’t mix with other teams.
Healthcare workers should be educated and informed to take adequate preventive measures, not to carry infection to the outside world including their home.

**Follow up**

Follow up visits can be delayed and any problems to the patient can contact through online services. If an emergency visits the hospital.
All patients and their families should be educated on COVID-19 infection and the responsibilities of the caretakers. Keep patients aware of COVID-19 and their responsibilities.
These are recommended guidelines from the associations and final decisions have to be taken after consultation with the individual institution and their policies. The patient is the priority and every treatment to be planned considering the risk and benefits of cancer treatments during COVID-19 pandemic.
While utilizing these guidelines do not forget to keep in mind governmental statutory guidelines. This may not have any validity in the Court of Law.

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Compliance with Ethical Standards

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