Royal College of Surgeons in Ireland *Coláiste Ríoga na Máinleá in Éirinn*

NCPS

NATIONAL CLINICAL PROGRAMME IN SURGERY

Guide for Prioritisation Urgent Scheduled Surgical Conditions

Conditions that require surgical intervention within a two-month timeframe

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

NCPS GUIDE FOR PRIORITISATION OF URGENT SCHEDULE SURGICAL CONDITIONS

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1. Overview

Current events surrounding the COVID-19 outbreak are challenging and all public health bodies are placing the safety of patients, staff and communities first in all decisions.

The current outbreak of COVID-19 has already resulted in significant disruption in surgical practice in Irish hospitals. Based on international experience, this is anticipated to increase. If our public health efforts are successful, the duration of the outbreak will last several months at least. During this time many patients will still require emergency or urgent surgery. Other patients may be able to be safely deferred in the community if additional surgical and diagnostic support is available to GPs. This document has been developed by the RCSI National Clinical Programme in Surgery and sets out the prioritsation of urgent scheduled surgical conditions that will require surgical intervention within a 2 month timeframe. Within the document we also set out cases that can be deferred and alternative therapies that can be considered during the COVID-19 restrictions

2. Purpose

Restoration of essential non-emergency surgical activity will be guided by avoiding harm and mitigating risk of deferral of procedure or services in line with clinical guidelines, and appropriate use and supply of PPE.

The planned re-introduction of elective surgery should be conducted in a staged and controlled process. It should balance the need to maintain capacity to treat COVID19 patients with the need to increase the availability of elective surgery in a safe and equitable way, taking into account the well-being of patients and health care workers.

This guidance describes levels of surgical priority for urgent non-Emergency surgical cases during the current COVID-19 outbreak, covering all surgical specialties with the exception of plastic and reconstructive surgery and ophthalmic surgery. Prioritisation for these Specialty disciplines will follow

This guidance is not intended to replace clinical judgement but is formulated only to assist in prioritization of urgent surgery. Other conditions may also require urgent surgery at this time so the expert opinion of a consultant surgeon is required in all prioritisation decisions.

3. Authorship

This document is published by the RCSI National Clinical Programme in Surgery and has been developed by our National Specialty advisors with input from Specialty Associations and other recognised bodies.

4. Target audience

The target audience for this document is Hospitals Clinical Directors and surgeons so that they can carefully review and pritorise all urgent, non-emergency scheduled elective surgical procedures

5. Cardiothoracic Surgery

5.1. Operational issues:

- Cardiothoracic surgery is very demanding on ICU and HDU resources.
- A large portion of cases are hospital to hospital transfers.
- A large portion of the adult population are >70 and have multiple co-morbidities.
- The clock continues to tick in many cases.
- These are mortality / survival cases rather than quality of life. The EuroSCORE II system would work best to help prioritise cases (eg <5% prioritized).

5.2. Conditions/Surgery:

- Congenital – likely paediatric cardiothoracic surgery will continue at OLHSC.
- Adult congenital – most should be deferred.
- Adult acquired ischaemic heart disease.
- Adult acquired valvular disease
    - CABG: large volume, 40% inpatients awaiting surgery; some could be temporised with PCI; still need to do some.
    - Aortic aneurysm: ICU intensive, prolonged LOS; completely depend on ICU resource availability so may need to delay.
    - Adult Acquired Valve Disease: Aortic valve disease a significant factor in sudden death and should be prioritized. Mitral valve disease less acute, but delays reduce outcome quality.
- Adult heart failure / transplantation – transplant and mechanical support unlikely to continue.
- Adult thoracic oncology includes primary lung cancers, metastatic disease to chest and palliative support with malignant pleural effusions and airway stenosis. MDT can consider some alternatives (eg radiotherapy). It may be the case that radiotherapy can be delivered in a timely fashion, and although it has poorer outcomes, may be better than significantly delayed surgery. However some surgery must continue.
- Adult thoracic benign – some pneumothorax and empyema surgery will need to continue.
- Pulmonary failure/Lung transplantation- expected major challenge in getting COVID-negative donors, usually 30 cases a year, no medical alternatives.
- Trauma - majority are chest drain management cases, and operative surgery has a minor role.

6. Colorectal Surgery

It is important that surgeons assess the capacity of their hospital to deliver operative and post-operative care to patients undergoing colorectal surgery at this time. It should be noted that capacity may vary between hospitals due to local outbreaks or staffing shortages. The risks and consequences of post-operative complications; the risk of COVID acquisition in hospital; and the possible restorative and non-restorative surgical options should all be considered and discussed with patients as part of the consent process. The colorectal MDT should be involved in all pre- and post-operative decision-making, irrespective of the setting of the patient's care. This particularly applies if surgery in a non-cancer centre is proposed. These guidelines do not replace the clinical judgement of expert colorectal surgeons.

6.1. Phase I. Semi-Urgent Setting (Preparation Phase)

Few COVID-19 patients, hospital resources not exhausted, institution still has ICU ventilator capacity and COVID-19 trajectory not in rapid escalation phase.

6.1.1. Cases that need to be done as soon as feasible (recognising that the status of each hospital likely to evolve over next week or two):

- Nearly obstructing colon
- Nearly obstructing rectal cancer
- Cancers requiring frequent transfusions
- Asymptomatic colon cancers
- Rectal cancers after neoadjuvant chemoradiation with no response to therapy
- Cancers with concern about local perforation and sepsis
- Early stage rectal cancers where adjuvant therapy not appropriate

6.1.2. Diagnoses that could be deferred 3 months:

- Malignant polyps, either with or without prior endoscopic resection
- Prophylactic indications for hereditary conditions
- Large, benign appearing asymptomatic polyps
- Small, asymptomatic colon carcinoids
- Small, asymptomatic rectal carcinoids

6.1.3. Alternative treatment approaches to delay surgery that can be considered by the MDT:

- 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
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6.2. Phase II. Urgent setting

Many COVID-19 patients, ICU and ventilator capacity limited, theatre supplies limited

6.2.1. Cases that need to be done as soon as feasible (recognising status of hospital likely to progress over next few days):

- Nearly obstructing colon cancer where stenting is not an option
- Nearly obstructing rectal cancer (should be diverted)
- Cancers with high (inpatient) transfusion requirements
- Cancers with pending evidence of local perforation and sepsis

6.2.2. Cases that should be deferred:

- All colorectal procedures typically scheduled as routine

6.2.3. Alternative treatment approaches:

- Transfer patients to hospital with capacity
- Consider neoadjuvant therapy for colon and rectal cancer
- Consider more local endoluminal therapies for early colon and rectal cancers when safe

6.3. Phase III. Surge Setting

Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred.

6.3.1. Cases that need to be done as soon as feasible (status of hospital likely to progress in hours)

- Perforated, obstructed, or actively bleeding (inpatient transfusion dependent) cancers
- Cases with sepsis

6.3.2. All other cases deferred

- Alternate treatment recommended
  - Transfer patients to hospital with capacity
  - Diverting stomas
  - Chemotherapy
  - Radiation

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7. General Surgery

7.1. Diagnostic procedures:

- Endoscopy where cancer suspected
- Endoscopy where cancer requires staging
- Endoscopy for drainage of biliary tree
- CT scanning for neoplasia or (acute) IBD staging
- Pigmented lesion diagnostic excisions

7.2. Treatment procedures:

- Breast: Diagnostic biopsies, neoplasm resections, nodal staging
- Upper GI: Neoplasm resections, neoplastic staging, neoplastic bypass,
- HPB: biliary sepsis not amenable to endoscopic drainage, hepatic/ pancreas/ duodenal neoplasm resections, organ transplant for urgent indications
- Endocrine: Adrenal carcinoma resection, high risk thyroid neoplasm resection
- Colorectal: Colorectal resections for neoplasm or uncontrolled IBD/ sepsis
- Skin/ soft tissue: sarcoma, melanoma, high risk non-melanomatous skin cancer resections

HDU may be required for complex resections in 2 and 3 and some of 5 (complex rectal) and 6 (torso sarcomata)

8. Neurosurgery

8.1. Neuro-oncology

- Aim to do procedures that allow discharge as soon as possible (i.e. same day or next day)

8.2. Malignant Gliomas

- < 70 yrs old (this is a guide and other factors e.g. comorbidities should be considered)
- For the majority of cases - biopsy only and early discharge and refer for radiotherapy
- Young patient + large tumour + significant mass effect + easily accessible tumour – consider craniotomy and debulking
- >70 yrs old with clear diagnosis of High Grade Glioma on MRI Radiotherapy without histological diagnosis

8.3. Metastases

- Known cancer with single brain metastasis < 3 cm – SRS
- Known cancer with single brain metastasis >3 cm with significant mass effect – Consider resection
- New presentation with unknown primary – consider biopsy to get histology OR resection if superficial

8.4. Meningiomas

- Consider surgery only in those with major mass effect and neurology (e.g hemiparesis) or which are life threatening.

8.5. Posterior fossa and CP angle tumours (Malignant or benign)

- Consider surgery only in those with symptomatic major brainstem compression.
- In those with hydrocephalus but without symptomatic brainstem compression, treat the hydrocephalus and defer treatment of the tumour itself.

8.6. Transnasal / Transsphenoidal Pituitary & suprasellar tumours

- Some evidence from China, Italy and Iran is suggesting that transnasal procedures may be among the highest risk cases for spread of COVID-19 infection. Therefore:
    - Surgery should be performed only if absolutely necessary (e.g. patient experiencing rapid loss of vision)
    - If tumour debulking / optic chiasm compression has to be performed, consider craniotomy rather than transnasal approach.
    - Cystic craniopharyngiomas with optic chiasm compression and visual loss – consider Ommay reservoir and radiotherapy
    - If urgent transnasal surgery has to be performed, perform TWO preop COVID19 tests (at 48 hrs and 24 hrs preop)
    - If Covid positive or emeregency transnasal surgery – appropriate PPE (powered air purifying respirators - PAPR if available) for all operating theatre staff until further data is available

8.7. Low grade gliomas

- Monitor with MRI after 3 months. It is envisaged that urgent surgery would be rarely necessary in this group of patients.

8.8. Rare brain tumours (e.g. lateral/third ventricle/pineal)

- Consider temporising measures such as ETV or VP shunt and delaying definitive surgery

8.9. Aneurysmal SAH

- WFNS grades I-III - Transfer for treatment according to usual protocols.
- WFNS grades IV-V (ventilated patients) - Selected poor grade patients will continue to benefit from neurosurgical treatment following local policy. However, during the COVID 19 pandemic, some with poor prognostic factors (e.g. elderly patients or those with significant comorbidities) are more likely to be managed conservatively in their local hospital.
- Space occupying haematoma: this will remain at the treating surgeon's discretion. It is likely that a higher threshold for treatment will need to be applied than usual.

8.10. CTA negative SAH

- Perimesencephalis SAH – If high quality CTA in local hospital is negative, consider avoiding DSA (review by neuroradiologist recommended).
- Non-permiesencephalis SAH – If high quality CTA in local hospital is negative, consider repeat CTA after 7 days and avoid DSA (review of CTA by neuroradiologist recommended)

8.11. Unruptured aneurysms

- Only treat if expanding aneurysm causing new 3 rd nerve palsy

8.12. Ruptured AVMs

- Space occupying haematoma or hydrocephalus – Consider transfer and treatment
- No space occupying haematoma or hydrocephalus - Consider transfer for embolisation or surgery if obvious bleeding point from associated aneurysm. Otherwise manage in local hospital and defer investigation till later date

8.13. Unruptured AVMs

- Defer treatment

8.14. Cranial Dural AVFs

- Ruptured or neurological deficit from cortical venous drainage – Consider treatment
- Asymptomatic – Defer treatment

8.15. Spinal Dural AVFs

- Treat cases with rapid neurological deterioration. Defer others.

8.16. Spontaneous intracerebral haemorrhage

- Majority should be managed conservatively. Operate if lobar haematoma with significant mass effect + young age + deteriorating GCS.

8.17. Traumatic Brain Injury (TBI)

- Refer to flow chart on Page 4 of full document adapted from SBNS/NHS guidelines

8.18. Spinal Tumours and degenerative disease

- Consider surgery in cases of:
  - Spinal cord compression
  - Cauda equina compression
  - Neural compression with progressive neurological deficit
  - Intrinsic cord tumours with progressive neurological deficit

8.19. Spinal Trauma A

- Refer to flow chart on Page 5 of full document adapted from SBNS/NHS guidelines

Access the full document here

9. Oral and maxillofacial surgery

It is essential that the team involved in procedures generating aerosols and at risk of contamination from bodily fluids is equipped with full barrier precautions. The covid-19 virus is transmitted in nasal, lacrimal and salivary secretions as well as blood.
Consideration should be given to treatment under LA if possible to reduce the risk of AGP in GA.

9.1. Soft and hard tissue trauma

- Soft tissue wounds:
  - Exploration of wound / arrest of haemorrhage
  - Exploration and repair of nerve
- Facial bone fractures: Craniofacial, midface, zygoma, mandibles
  - Consider: Bridle wire, arch bars, Leonard buttons/ eyelet wiring/bonded brackets or IMF Screws as an alternative to ORIF with plates and screws (AGPs)
  - Consider self-drilling screws if plating fractures and minimal irrigation if no alternative.
  - Extra-oral plates/External fixator may need to be considered
- Zygomatic complex fractures: Closed reduction (e.g. elevation zygoma) where possible
- Orbital floor fractures: Exploration and repair with orbital implant as indicated clinically

9.2. Spreading fascial space infections

- Surgical management of oral cavity infection not responding to antibiotics.
- I&D & extractions as indicated
- There is evidence that 0.04% chlorhexidine mouth-rinse reduces viral load in saliva.

9.3. Head and neck cancer

- Head and neck surgery for oral cancers where surgery is the primary treatment should remain a priority.
- Tracheostomies are required frequently and appropriate PPE must be worn

9.4. Skin cancers of the head and neck region

- Remain a high priority. Use of resorbable sutures for closure should be considered

10. Surgical Oncology

10.1. Underlying principles

- Emergency surgery will at all times be prioritised.
- All decisions to provide or defer surgery will be based on clinical judgement and an individual risk assessment.
- Up-to-date infection prevention and control guidance will be followed at all times, with the support of local IPC teams.
- Consider the current infrastructure of the Theatres, ICU/HDU and surgical bed capacity.
- Many complex cancer surgeries will require ICU/HDU support routinely. There is a small risk of postoperative complications requiring return/admission to ICU/HDU in (usually) the first week.
- Separation of the location of emergency from elective operations within the same hospital group will allow cancer surgery work to continue at the cancer centre.
- It is critical to maintain the MDT process for clincial decision making and consideration of all options during this crisis.

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11. Otolaryngology / Head and Neck Surgery

- Head and neck cancer where surgery deemed primary modality of treatment by MDT (e.g. T1 /T2 tumors of the oral cavity, T3/T4 tumors of the larynx / pharynx, metastatic cervical nodal disease requiring neck dissection)
- Lateral and Anterior skull base pathology with potential for intracranial extension (e.g. osteomyelitis of temporal bone, olfactory neuroblastoma)
- Patients with acute / chronic sinus and middle ear disease with potential for intracranial complications, (e.g. fungal sinusitis, cholesteatoma in middle ear/ mastoid)
- Paediatric (e.g. infants with congenial airway disease , life threatening sleep apnoea, laryngeal papillomatosis)
- Apart from paediatric group very few require admission to ICU.
- Tracheostomy care is an important area.
- Cochlear implantation in sclerosing circumstances including meningitis in adults and children.
- Cochlear implantation for preverbal bilaterally profoundly deaf children.

12. Paediatric Surgery

12.1. Cleft surgery

- Cleft surgery can be considered an AGP. Process measures need to be in place to risk stratify for active COVID-19 infection in all patients. Testing for COVID-19 within 48hrs of the procedure would be ideal
- Cleft operations require loupes, headlights and an operating microscope, none of which are compatible with PAPRs
- Operations will likely therefore be carried out using FFP2/3 respirators. Surgeons and theatre staff will need to receive adequate training in the use of this equipment. A plan for simulation training is underway in RCSI. As with all specialties, theatre scheduling will need to allow adequate time and space for safe induction of anesthesia, patient transfers, donning and doffing of PPE, cleaning of theatre etc.

13. Plastic Surgery – TBC

14. Urology

14.1. Patients with high grade urothelial cancer of upper tracts (kidney and ureter), bladder, urethra

- Urgent TURBT
- Nephroureterectomy
- Cystectomy and urinary diversion
  - May need high dependency/ICU management

14.2. Testis cancer

- Radical orchidectomy
- Post chemotherapy retroperitoneal lymph node dissection for residual cancer
  - May need high dependency/ICU management

14.3. Renal cancer

- Radical Nephrectomy for Stage T2 and above disease

14.4. Prostate cancer (See NCCP guidelines)

- Radical prostatectomy for high risk or unfavorable intermediate risk prostate cancer
- Active surveillance (Non-surgical management) for low and favorable intermediate risk prostate cancer

14.5. Penile cancer

- Invasive penile cancer (not intraepithelial neoplasia)
- Regional lymph node dissection for lymph node metastases

Access the full document here

15. Vascular Surgery

Overview: the majority of vascular inpatients are Urgent.

15.1. Emergency Conditions:

- Emergency and Acute AAA; 1 - 2 per week nationally. ICU requirement. 1 bed needed.
- Acute Limb Ischaemia; 3 open ops per week nationally. ICU requirement 0 beds.
- Diabetic Foot interventions; data not precise, 5 - 10 procedures per week. Occasional ICU/HDU bed requirement.

15.2. Elective Surgery:

- Carotid surgery for TIA; As soon as possible because delay = Stroke; ergo cannot delay. Number of procedures is 6 - 10 per week nationally. Should not need ICU or ventilation but 12 - 24 hour HDU monitoring usual.
- Critical Limb Ischaemia (Rest Pain); No accurate data, with open and endo options, case by case decision, say 10 ops per week nationally. On +ve side min ICU or Ventilation requirement.
- AAA; Difficult: some can be postponed but at present could not defer 6.5+ cm AAA in male or 6+ cm in female for 2 months. Again all case by case when the inevitable happens. Survival elective 95+% and for emergency 30%. Estimate 5-7 per week and as 70% EVAR 0.5 ICU beds nationally.