

**GUIDELINES FOR
OPHTHALMOLOGISTS DURING
COVID-19
PANDEMIC IN MALAYSIA
(May 2020)**



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1. The College of Ophthalmologists, Academy of Medicine, Malaysia and the Malaysian Society of Ophthalmology has prepared the following guidelines for the management of patients during the pandemic and implementation of the Movement Control Order as well as post Movement Control Order (MCO) when resumption of elective surgeries may commence.

This guideline recommends that during the implementation of the MCO, all ophthalmologists should defer providing any treatment other than urgent/semi-urgent or emergency care. This should apply to both clinic-based as well as surgical/procedural services.

Guidance on decision-making of what are urgent/semi-urgent cases can be made as per recommendations by the American Academy of Ophthalmology (modified for local setting). This is listed as below in Appendix A of this guideline. However, final judgement in urgency of care will always need to be decided upon by each individual ophthalmologist and must always take into account an individual patient's medical and social circumstances

As Ophthalmologists are involved in procedures and surgeries around the head and neck region, the risk of transmission of COVID-19 is relatively higher compared to operations (both local and general anaesthesia) done in areas further away. Thus, extra precautions must be taken to decrease the risks to personnel.

All ophthalmologists will need to take note that for any Aerosol Generating Procedure (AGP) including General Anaesthesia, the workflow recommendations given by the Crisis Preparedness and Response Center (CPRC) guideline of the Ministry of Health should be followed. These recommendations are included in this document.

In ophthalmology, procedures involving the nasal and naso-lacrimal mucosa are considered high-risk for transmission due to viral aerosolization. This may put ophthalmologists operating or carrying out procedures in these areas at higher risk. There is significant evidence that the viral load is high in these locations compared to other parts of the body. Necessary precautions for AGP should be taken for lacrimal irrigation, invasive procedures including nasal endoscopic procedures, use of monopolar cautery, powered drills as well as the use of other irrigation and suction devices.

In other types of ophthalmic surgery, there may be mechanical instrumentation used, which could be classified as potentially "aerosol generating" (e.g. vitrectomy and phacoemulsification). There is however, as yet no evidence that these pose a risk for COVID-19 transmission during ophthalmic surgery. Surgeons may however opt to take extra precautions during these procedures.

For acute emergency, emergency, urgent or semi-urgent cases, the procedures should, if possible, to be done under Local anaesthesia rather than general anaesthesia to reduce the risk of AGP exposure.

While it is recommended that all elective cases are best deferred during the MCO of the COVID-19 pandemic, steps to lift the restrictions of the MCO will be taken in the coming weeks. As these restrictions are lifted, clinics, ambulatory care centres and hospitals will resume elective procedures and surgeries on a cautious note.

With this resumption of elective surgeries, the following recommendations are put forward:

- Ensure that a thorough assessment is made of all patients in order that they can be classified as "High Probability" or "Low Probability". (Refer to CPRC guidelines on classification)
- Ensure availability of COVID-19 diagnostic testing in or near to your practice. Real-time reverse transcription-polymerase chain reaction (rRT-PCR) is currently the gold standard for COVID-19 diagnosis.

- Only “High Probability” cases need to take a diagnostic test as per CPRC guidelines.
- Ramp up the number of surgeries very gradually to ensure social distancing can be implemented at all times
- Prioritize case selection according to resources, clinical needs and patient needs
- Ensure patient – staff have clear communication pathways about issues related to risk and safety during the pandemic
- Prioritize local anaesthesia for elective surgery
- Ensure compliance with national, state or local hospital orders and regulations with regard to COVID-19
- Ensure compliance with Infection Control regulations and measures in your place of practice.

Attached to these guidelines are flow charts which are self-explanatory and which Ophthalmologists may find useful for application in their practice.

2. The use of Personal Protection Equipment (PPE).

Ophthalmologists are advised to follow the detailed PPE recommendations in the guidelines. references from <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control> and MOH guideline's for PPE.

The following is a brief summary of those recommendations:

- a. If you are working in **outpatients or an Accident and Emergency department**, you should use:
 - Disposable gloves - single use
 - Disposable plastic apron - single use
 - Face mask (3 ply) - sessional use
 - Eye/face protection – sessional use
 - Slit lamp breath guard

- b. If you are working in an **operating theatre where aerosol generating procedures (AGP) are being performed** you should use:
 - Disposable gloves - single use
 - Disposable fluid resistant gown - single (if you are doing the AGP) or sessional use
 - Filtering face piece respirator mask (N95/Kn95) - single (if you are doing the AGP) or sessional use
 - Eye/face protection - single (if you are doing the AGP) or sessional use

- c. If you are working in an **operating theatre where AGPs are not being performed** you should use:
 - Disposable gloves - single use
 - Disposable plastic apron (or fluid resistant gown if splashes are likely) - single use
 - Fluid resistant Type IIR surgical mask- 3 PLY - sessional use
 - Eye/face protection – sessional use

- d. If you are asked to **visit a ward or another hospital department** you should:
 - a. Consider whether telephone advice can be given

- b. Establish what PPE is required for the particular ward or department and where the necessary equipment can be obtained. As a minimum you should wear
- Disposable gloves
 - Disposable plastic apron
 - Fluid resistant Type IIR surgical mask -3 ply
 - Eye/face protection

The use of eye/face protection should be risk assessed, taking into account the requirement for protection from Covid infection versus the practical limitations of the device affecting the view or ability to perform an ophthalmic procedure.

Patients should be asked to wear masks at the discretion of the clinical ophthalmology team.

- *Single use = disposal or decontamination of device between each patient/procedure,
- *Dispose at end of session Sessional use = dispose at end of session eg at the end of morning clinic or when leaving the care setting

List of emergencies for Ophthalmology ** the list is non-exhaustive but the common possible situations are as below:

Paediatric Ophthalmology	<p>Essential are interventions for</p> <ul style="list-style-type: none"> • acute emergencies (e.g. penetrating injury, intraocular foreign body, lid lacerations, orbital abscess, retinal detachment) • cataract in children under 8 months of age or where there is a risk of causing irreversible, severe amblyopia • high IOP which cannot be managed medically • retinoblastoma and other tumour treatment • EUA's where it is critical to manage a potentially sight or life-threatening disease • surgery for imminently sight threatening disease e.g. orbital decompression • treatment for ROP • Pediatric patients with corneal blindness in both eyes in their amblyopic period • Probing of nasolacrimal duct: Dacryocystocele
Vitreoretinal surgery	<ul style="list-style-type: none"> • Scleral buckle • Vitrectomy: macula on retinal detachment, ocular trauma, intraocular infection, intraocular foreign body, misdirected aqueous, malignant glaucoma • Drainage of choroidal: Appositional choroidal effusion, suprachoroidal hemorrhage, or flat anterior chamber • Pneumatic retinopexy
Glaucoma surgery	<ul style="list-style-type: none"> • Filtration surgery (XEN, I-stent): Uncontrolled intraocular pressure that is sight- threatening who are poor candidates for trabeculectomy or aqueous tube shunts • Goniotomy ab externo or ab interno: Uncontrolled intraocular pressure that is sight- threatening • Insertion of drainage implant with or without graft: Catastrophic or rapidly progressive glaucoma • Repair of operative wound(s): Bleb leaks, wound leaks, over filtration, under filtration, bleb scarring, sight-threatening hypotony, or shallow anterior chamber
Oculoplastic surgery	<ul style="list-style-type: none"> • Biopsy of orbit: Suspected intraocular malignancy or immediate sight- threatening condition • Cantholysis: Sight-threatening conditions • Canthotomy: Sight-threatening conditions • Decompression of dacryocystocele: Neonate with obstructive respiratory compromise • Decompression of orbit: Orbital tumor with impending vision loss • Drainage of abscess: Orbital cellulitis • Enucleation: Ocular trauma, infection, intractable glaucoma, globe perforation, intractable pain, or intraocular malignancy • Evisceration: Sight-threatening infection, or intractable pain • Excision of tumors: Malignancy or sight-threatening tumor • Exenteration: Life-threatening infection • Exploration of orbit: Life-threatening or sight-threatening conditions • Fenestration of optic nerve sheath: Progressive vision loss

	<ul style="list-style-type: none"> • Repair of canalicular laceration: Injury or trauma to their canaliculus
Cornea surgery	<ul style="list-style-type: none"> • Corneal transplantation: corneal blindness in both eyes with/without local donor availability • Reconstruction of ocular surface or other tectonic procedures: Acute chemical injury, or acute Stevens Johnson Syndrome • Removal of aqueous drainage implant: Endophthalmitis, corneal touch, corneal decompensation, or exposed plate • Repair of anterior segment or cornea: Lacerations, blunt rupture, or deeply embedded corneal foreign body • Repair of dehiscence of corneal graft or other anterior segment wound: Wound dehiscence or other wounds, including dislocated LASIK flaps • Repair of extrusion or complication of keratoprosthesis: Complications with implanted devices in their cornea or anterior segment
Miscellaneous	<ul style="list-style-type: none"> • Brachytherapy: Intraocular malignancy • Cataract surgery: Congenital cataract in the amblyopic period, monocular patients with documented vision loss precluding driving, reading or self-care, lens-induced glaucoma, angle-closure glaucoma, acute lens complications, or severe anisometropia of fellow eye post recent lens extraction in first eye • Closure of cyclodialysis cleft: Sight-threatening hypotony due to trauma • Frontalis sling: Sight-threatening congenital ptosis • Laser photocoagulation: sight threatening proliferative retinopathy • Repair of eyelid/face: Lacerations of eyelid or face • Repair of facial fractures: Displaced facial bone fractures • Repair of open globe: Ocular trauma • Intravitreal injection of anti VEGF /Steroid /antibiotics

3. Preoperative Management: All patients are required to go through a thorough clinical assessment/Risk assessment questionnaires including:

History taking from patient or family members:

1. Close contact* with confirmed COVID19 case(s) or any cluster(s) **OR**
2. Travel overseas in the past 2 weeks (self or close family member(s)) **OR**
3. Travelled to or lives in Red Zone areas# **OR**
4. Had symptoms of fever, cough, sore throat, difficulty in breathing, red eye, loss of smell or others **OR**
5. Fever within the last 14 days

Physical Examination:

1. Vital Signs e.g.: Fever on admission **OR**
2. Lungs auscultation: for crepitations or added sounds on auscultation

Investigation: If indicated

1. Abnormal CXR (pneumonic changes) ^ **OR**
2. Lung USG – suggestive of pneumonic changes^ **OR**
3. FBC – leukopenia, lymphopenia for age

* if any of the above is present or in combination, proceed as **“High Probability”**.

** if none of the above is present, patient should be classified as **“Low Probability”**.

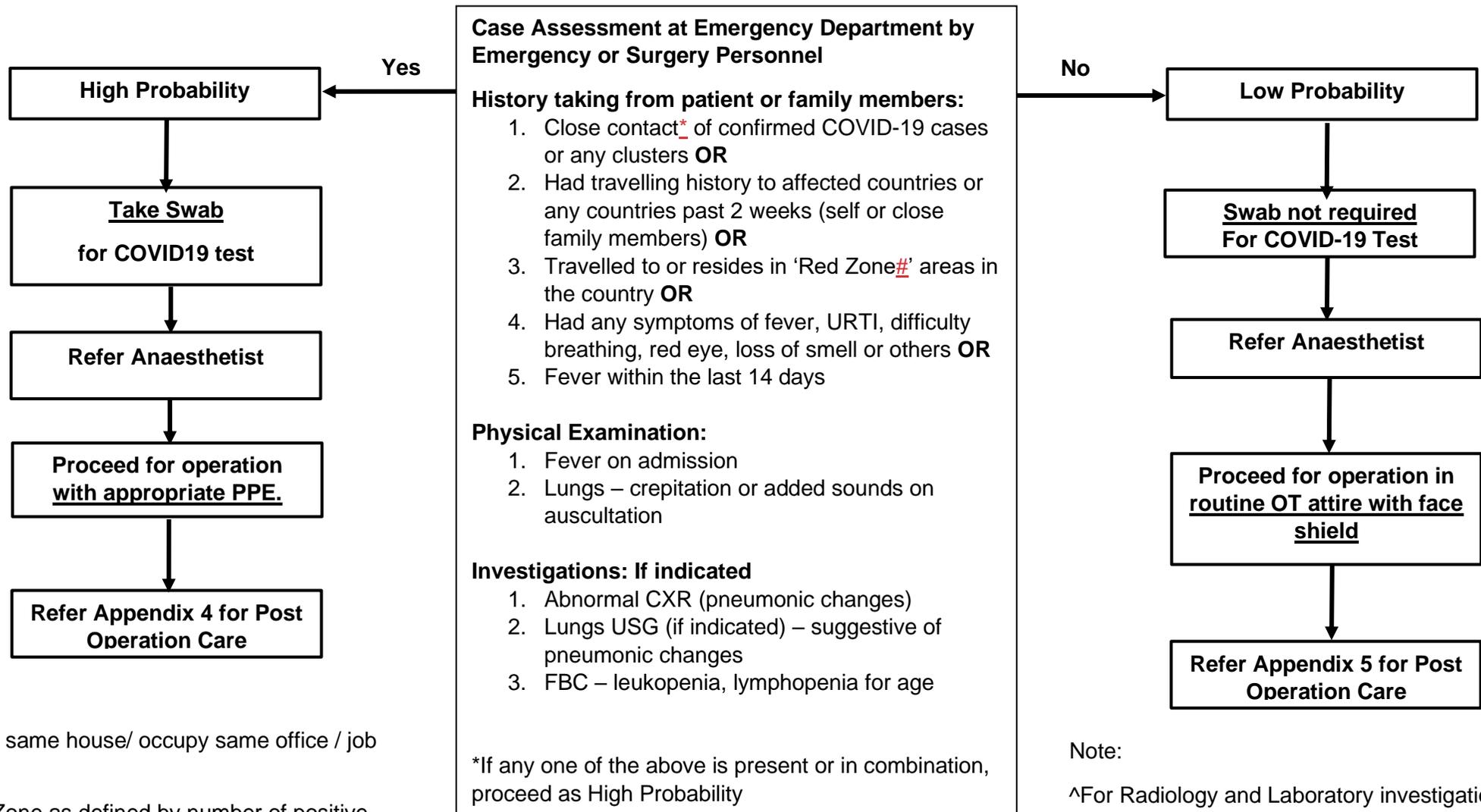
4. Terminology for urgency of cases:

EMERGENCY SURGERY					
Acute Emergency	Patient condition, which requires immediate operation, i.e. life-threatening situation, failing which life/limb will be lost. Surgery may proceed without baseline investigation/patient being fasted.				
Emergency	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">Patient condition which haemodynamically stable that requires operative procedure to be carried out, otherwise life is threatened or morbidity is increased.</td> <td style="width: 50%; vertical-align: top;"> A. Trauma (< 6 hours) - Non-life threatening condition but if the operation is carried out after 6 hours, it will increase patient morbidity and mortality risk. </td> </tr> <tr> <td></td> <td style="vertical-align: top;"> B. Non-trauma (< 8 hours) - Non-life threatening condition but if the operation is carried out after 8 hours, it will increase patient morbidity and mortality risk. </td> </tr> </table>	Patient condition which haemodynamically stable that requires operative procedure to be carried out, otherwise life is threatened or morbidity is increased.	A. Trauma (< 6 hours) - Non-life threatening condition but if the operation is carried out after 6 hours, it will increase patient morbidity and mortality risk.		B. Non-trauma (< 8 hours) - Non-life threatening condition but if the operation is carried out after 8 hours, it will increase patient morbidity and mortality risk.
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	B. Non-trauma (< 8 hours) - Non-life threatening condition but if the operation is carried out after 8 hours, it will increase patient morbidity and mortality risk.				
Urgent	Patient condition, which requires operative procedure within 24-hours otherwise there is increased in morbidity.				
Semi-urgent	Patient condition, which requires operative procedure within one week otherwise there is increased in morbidity.				

ACUTE EMERGENCY AND EMERGENCY OPERATION

GENERAL ANAESTHESIA

APPENDIX 1



Note:

*Live in same house/ occupy same office / job space

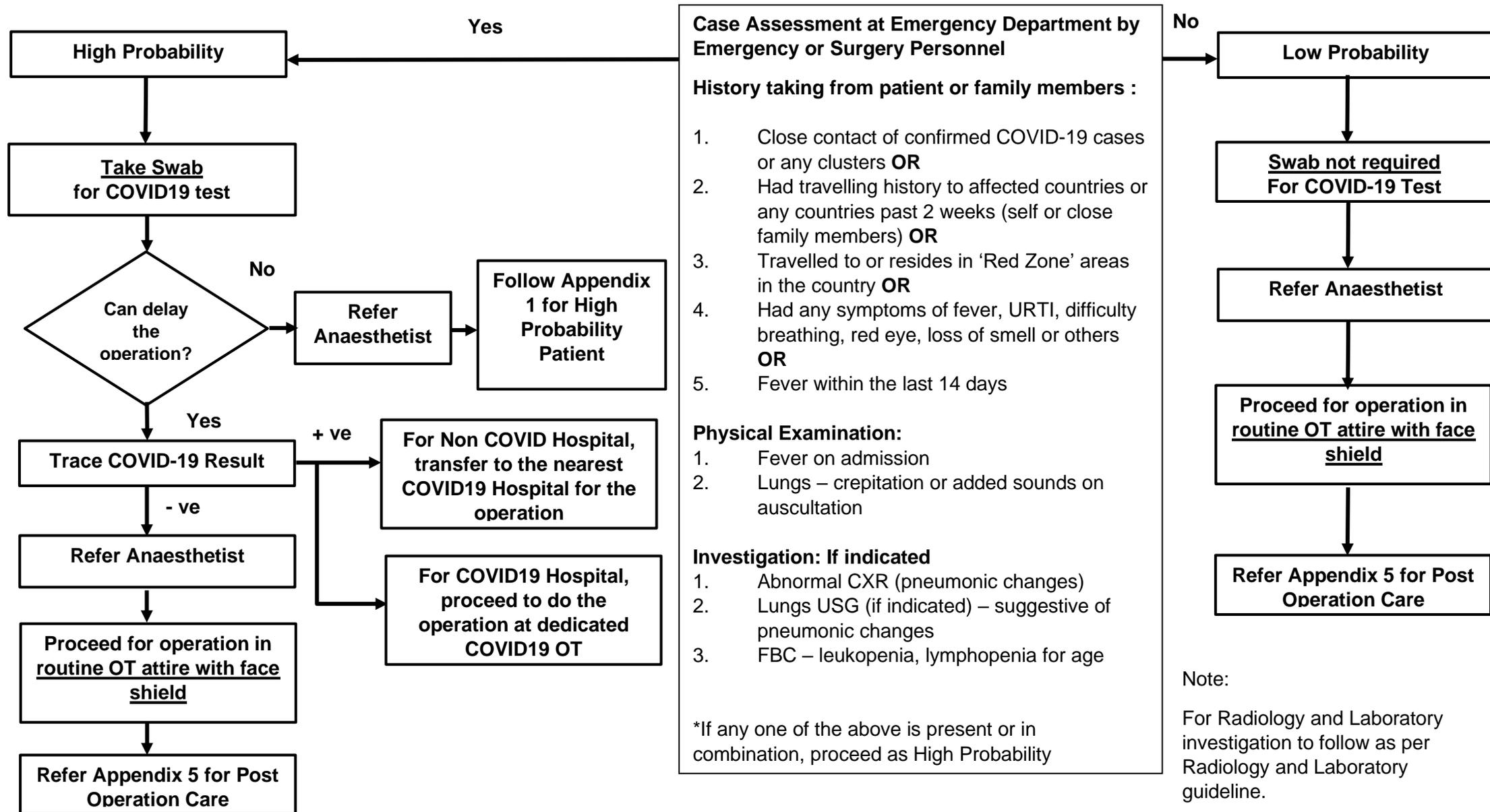
Red Zone as defined by number of positive cases as per KKM guidelines

Note:

^For Radiology and Laboratory investigation to follow as per Radiology and Laboratory guideline.

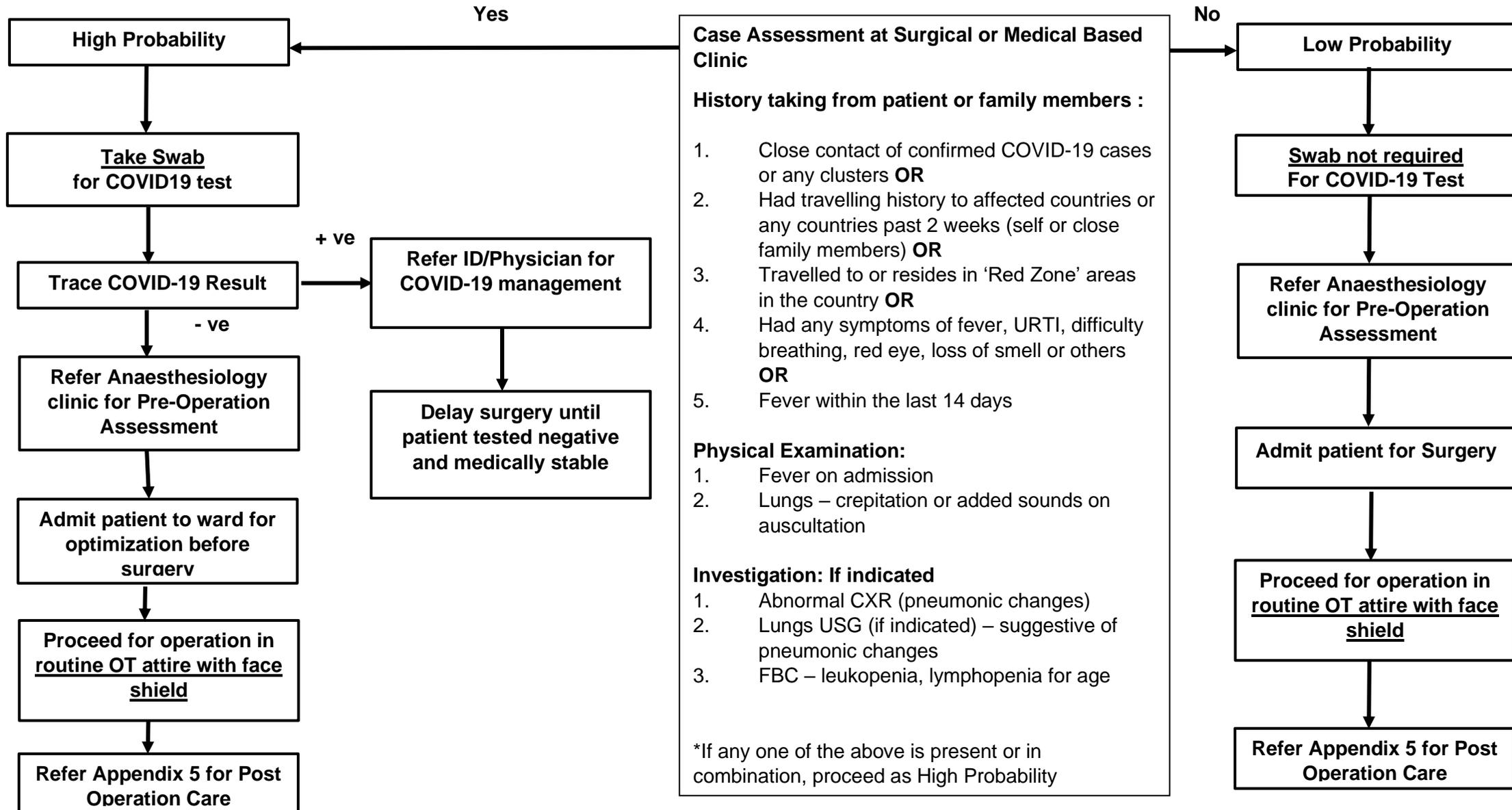
URGENT AND SEMI-URGENT OPERATION GENERAL ANAESTHESIA

APPENDIX 2



ELECTIVE OPERATION GENERAL ANAESTHESIA

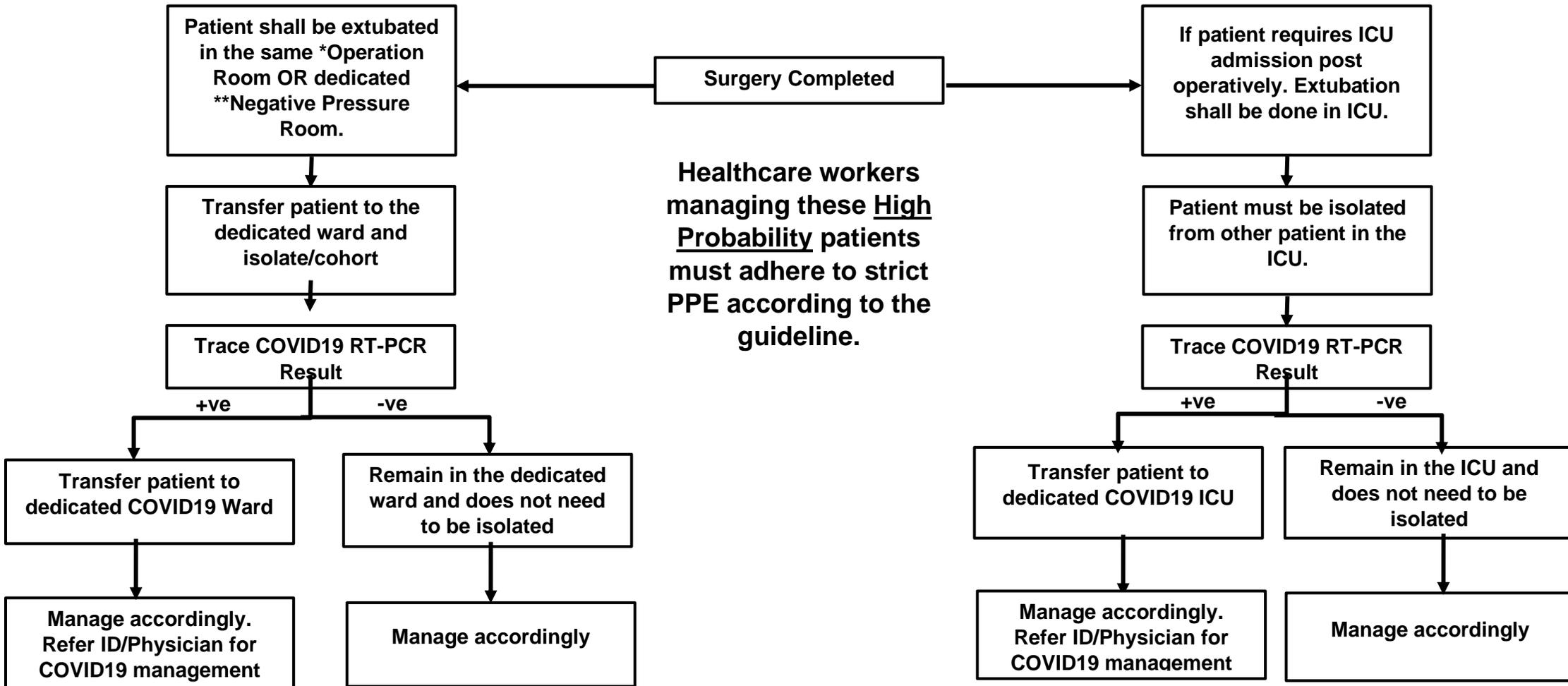
APPENDIX 3



POST OPERATION CARE FOR HIGH PROBABILITY PATIENTS

APPENDIX 4

GENERAL ANAESTHESIA



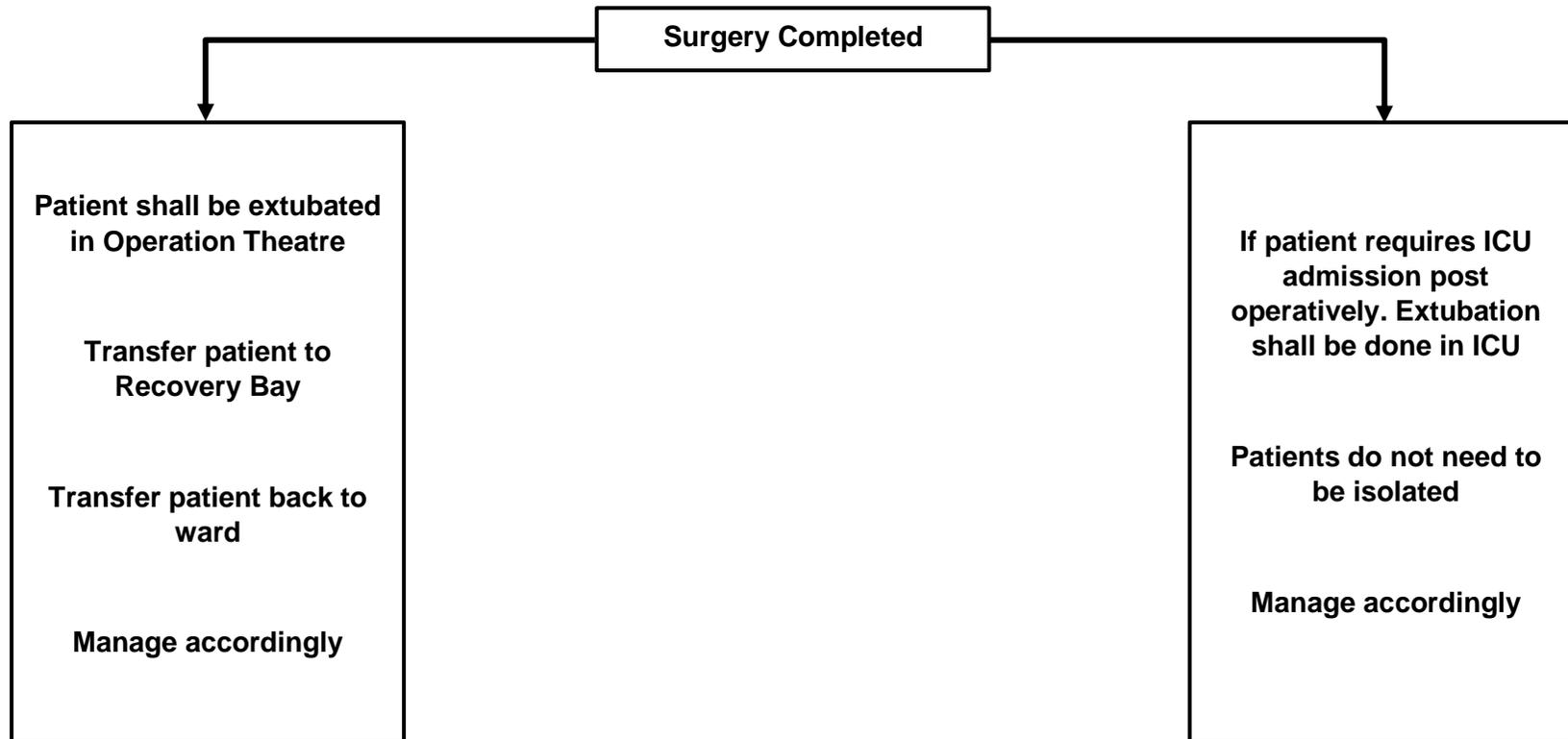
* If patient extubated in OT, the patient shall remain in OT during the recovery period. The patient shall not be transferred to Recovery Bay. OT cleaning should be based on Policies and Procedures on Infection Prevention and Control Ministry of Health Malaysia, Chapter 12: Environmental.

** If patient extubated in Negative Pressure Room (NPR), the patient shall remain in the NPR during the recovery period before the patient is transferred back to the ward.

POST OPERATION CARE FOR LOW PROBABILITY PATIENTS

APPENDIX 5

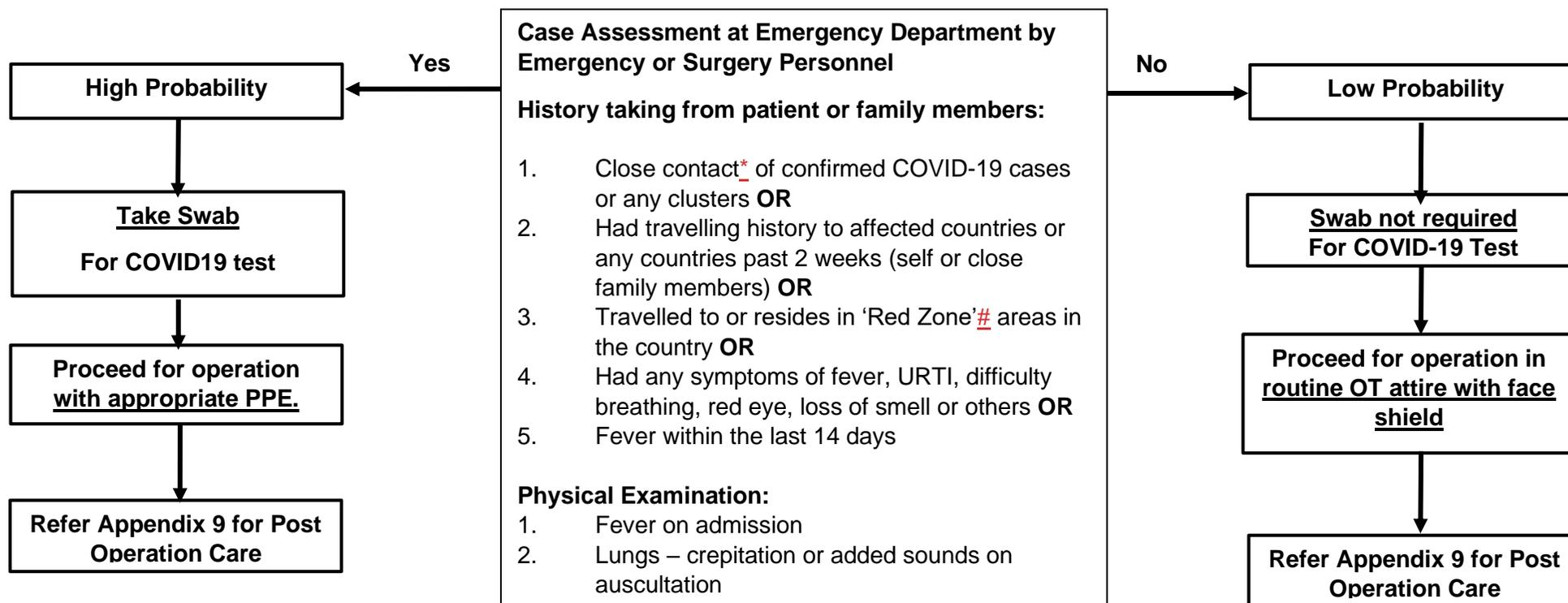
GENERAL ANAESTHESIA



ACUTE EMERGENCY AND EMERGENCY OPERATION

APPENDIX 6

LOCAL ANAESTHESIA



Note:

*Live in same house/ occupy same office / job space

Red Zone as defined by number of positive cases as per KKM guidelines

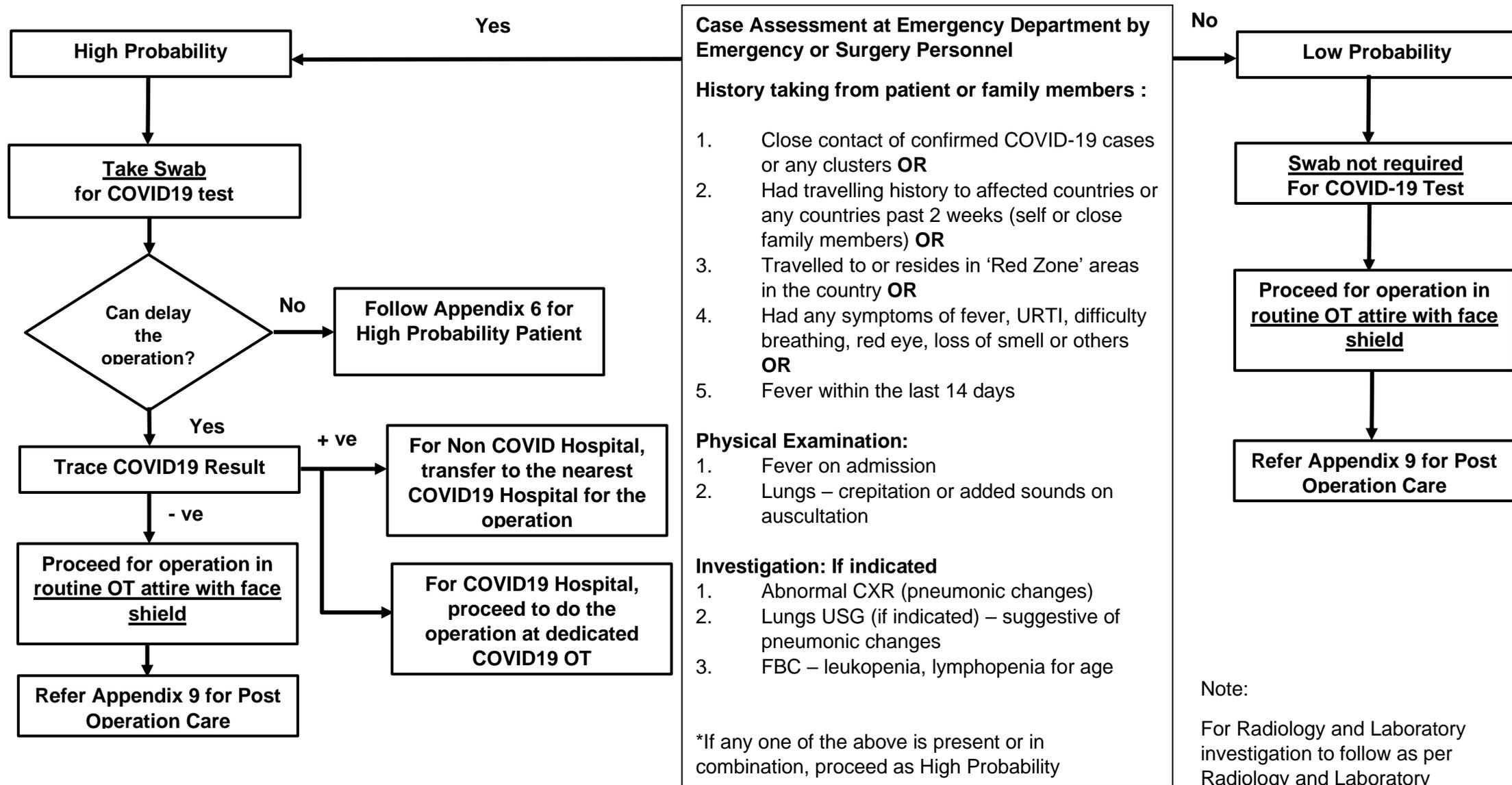
Note:

^For Radiology and Laboratory investigation to follow as per Radiology and Laboratory guideline.

URGENT AND SEMI-URGENT OPERATION

LOCAL ANAESTHESIA

APPENDIX 7

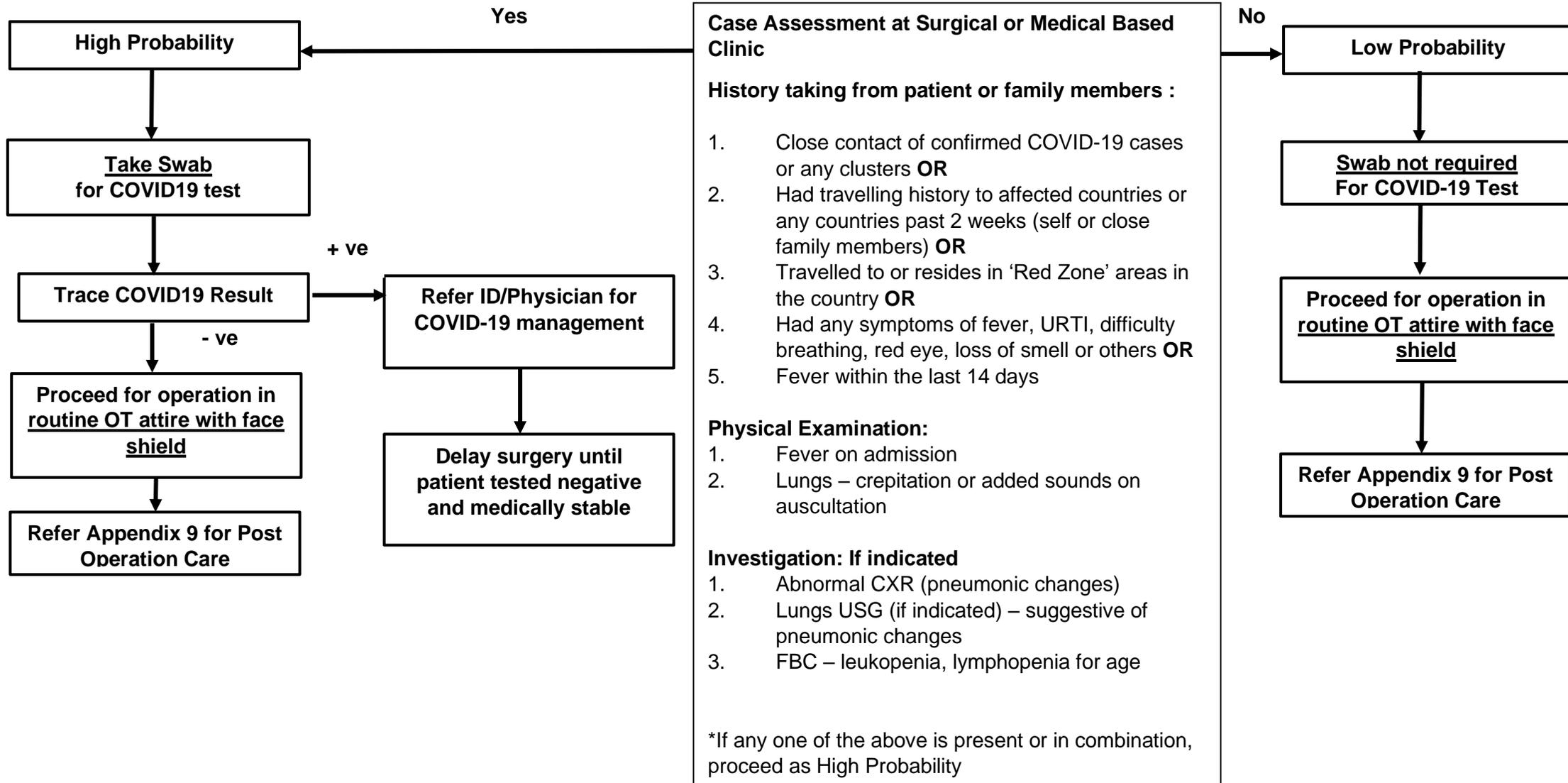


*If any one of the above is present or in combination, proceed as High Probability

Note:
For Radiology and Laboratory investigation to follow as per Radiology and Laboratory guideline.

ELECTIVE OPERATION LOCAL ANAESTHESIA

APPENDIX 8



POST OPERATION CARE FOR LOCAL ANEASTHESIA PATIENTS

APPENDIX 9

