"This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine(MD) and Board Certification as a Specialist"

POSTGRADUATE INSTITUTE OFMEDICINE

UNIVERSITY OF COLOMBO

SRI LANKA

PROSPECTUS

BOARD CERTIFICATION

IN

SURGICAL ONCOLOGY

2014

Speciality Board in Surgical Oncology

Board of Study in Surgery

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PROSPECTUS – SPECIALTY TRAINING IN SURGICAL ONCOLOGY

1. Introduction

Modern oncological management demands a level of expertise in cancer surgery, radiation, chemotherapy, and other modalities of treatment and a multidisciplinary conceptual approach. This means a specialized training for the individual who so chooses to work in this field.

Oncology is a specialty with a vast armamentarium available for eradicating the cancer cell in its entirety. The role of the surgeon is invaluable: as surgical ablation and surgical cytoreduction is directly related to disease control. Hence a number of difficult surgical procedures may need to be performed to cope with local, regional & even metastatic tumour control, and is best accomplished by surgeons who are frequently exposed to these complicated procedures. Surgical expertise in these uncommon scenarios is directly related to patient outcome. This is a well-known and statistically proven fact.

A surgical oncologist is a specialised surgeon who has obtained additional education and experience in the multidisciplinary approach to the prevention, diagnosis, treatment, and rehabilitation of cancer patients, and who devotes his or her professional practice to these activities and to cancer research. Surgical oncologists interact with other oncologic disciplines and provide leadership to the surgical, medical, and lay communities in matters pertaining to cancer

The speciality board in surgical oncology (SBSO) is the subspecialty board under board of surgery (BOSS) which is responsible in training and assessing surgical oncology trainees.

2. Broad exit Outcomes at the end of the Programme

Cancer care is evolving rapidly the surgical oncologist is needed to keep pace with these changes. With modern standards of care, most solid malignancies are treated in combination of surgery and other multi-modal therapies. As a result, the surgical oncologist is expected to lead the multi-disciplinary team. They must be more than just a technician and must understand the biology and natural history of the disease as well as the contributions made by other disciplines

to the care of cancer patients. The training program ensures that the surgeon becomes a surgical oncologist.

The program is designed to provide the type of training that would equip the final product to treat various stages of solid organ malignancies (except brain tumours) of the human body surgically through the multidisciplinary approach. It is expected that the fully trained specialist would be up-to-date with all recent developments in the field of oncological surgery and would be in a position to provide holistic care for those patients who need the expertise of a Specialist Surgical Oncologist to minimise mortality and morbidity of such patients. The curriculum that has been planned and elucidated later on in this document has incorporated a myriad of training activities that need to be undertaken over the full period of training

The exit outcomes of the training programme are as follows:

i. *Patient care*.

ii. *Medical knowledge*.

iii. *Interpersonal and communication skills*

iv. *Professionalism*

v. *Evidence-based approach*

3. The competencies required by the specialist

In order to fulfil the about exit outcomes at the end of the training programme, the trainee should be able to achieve the following competencies

3.1. Apply knowledge of tumour biology, carcinogenesis, epidemiology, tumour markers and tumour pathology.

3.2. Design and implement a prospective database.

3.3. Conduct a clinical trial

3.4 Apply basic science knowledge to clinical cancer care.

3.5. Train students and juniors in the multimodal management of cancer.

3.6. Train non physicians in specialized cancer care e.g. counselling

3.7. Organize and conduct cancer related public education programs.

3.8. Assessment and early detection of occult cancers by screening as well as established cancers.

3.9. Perform ablative, curative or cytoreductive surgery for cancer at different stages of presentation.

3.10. Perform special and specialized operations in patients with advanced or recurrent neoplasms in premeditated and unpredicted situations

Restore the anatomy and physiology of the human body to an acceptable standard.

3.11. Diagnose and manage rare and unusual presentations of cancers based on the knowledge of the natural history and variations in presentation modes of cancers.

3.12. Determine the disease stage and available treatment options for individual cancer patients.

3.13. Apply the knowledge of other cancer treatment modalities such as radiotherapy, chemotherapy, immunotherapy, endocrine therapy and targeted molecular therapy.

Apply the fundamental biology of cancer, clinical pharmacology, tumour immunology and endocrinology in the adjuvant or neo adjuvant setting.

3.14. Identify potential benefits, risks and potential complications of multidisciplinary therapy.

select of patients for surgical therapy in combination with other forms of cancer treatment.

3.15. Identify and select patients requiring palliative therapy and acquire expertise in palliative techniques and non-surgical palliative treatments.

3.16. Develop and support the institutional programs relating to cancer inclusive of the cancer registry, institutional policies regarding cancer programs/problems and Psycho-social and rehabilitative programs for cancer patients and their families.

3.17. Manage oncological emergencies which need surgical input.

4. Training content and curriculum

The details are described **in Annex 1**

5. Selection Process for the Training Programme and Guidance for Trainees

5.1 *Selection Process*

The candidates will be selected on the merit based ranking results of the Final MD (Surgery) Examination. The positions available will be indicated in the Circular calling for applications for the MD Examination or before the allocation meeting of appointments for specialties. On the basis of the order of merit, would make the appropriate selection for training.

The selected candidates would be provided with full and comprehensive details of the training programme. This would be available at the PGIM for perusal by prospective candidates prior to the Allocation Meeting.

5.2 Guidance *through the Training Programme*

Once the selection is made, the candidate would come under the general purview of the Special Committee of the Board of Study in Surgery (BOSS) that deals with Surgical Oncology (**S**peciality **B**oard in **S**urgical **O**ncology SBSO).

Each candidate would be allocated to a "Board Certified Trainer" from the (SBSO) and would be guided by that personality right throughout the training programme.

6. Training Programme Details and Structure

6.1 Details of logistics

Total duration of training is three years in Surgical Oncology.

Local training	- Two years at two surgical Oncology Units with a board certified trainers recognised by SBSO. Rotation with two different trainers one year in each unit.
Overseas training	- Minimum of one year in a centre which has a multidisciplinary cancer care or is associated to such a cancer centre for the care of oncological patients. The trainee can continue in the same centre or change to a different centre with above facilities for the second year if he/she wishes to continue for the second year.

6.2 Research Project leading to a Dissertation.

Successfully carrying out a research project is a **mandatory requirement** that needs to be fulfilled to be eligible to appear for the Pre-Board Certification Assessment (PBCA).

The Research Project should be undertaken at the commencement of training. It should be a study which is either hospital based or community based and could be in the fields of clinical, epidemiological, genetic or immunological areas of oncology. It may be observational or interventional in type.

All aspects of the study have to be assessed and deemed to be satisfactory by the SBSO ***before embarking on the proposed study***. The project could be undertaken at any time during the higher surgical training period (overseas or local). Evidence of ethical clearance must be submitted before final approval of the proposed study by the SBSO if indicated.

The draft proposal (prepared according to **Annex 2)** should be all-inclusive and detailed with all relevant particulars being included. The supervisor would be the trainer where the work is to be carried out. The SBSO shall appoint a supervisor to assist the trainee (Instructions **to supervisor Annex 4)**

The supervisor should submit a progress report to the SBSO every six months using the form in **Annex 5.** All projects would need informed written consent and interventional studies have to be registered with the Sri Lanka Clinical Trials Registry. The project, once completed should be submitted according to format in **Annex 6).** The two examiners appointed by the SBSO would assess the project based on the marking scheme in **Annex 7**

A minimum mark of 60 per cent is necessary for the dissertation to be accepted by the SBSO.

Final outcome of the dissertation should be publication in a journal or presentation in a forum accepted by SBSO, based on the approved research project. The project report should be submitted within 3 months of completion of clinical program. Either outcome is necessary to be eligible for the PBCA.

6.3 Case record book

The trainee is expected to write up five cases in Surgical Oncology after extensive reading. A published case report in an Index Journal can be substituted for 3cases (CMJ etc.) and substituted for 2 cases in a national journal (SLJS, SLJU etc.) as the trainee being the first author. The supervisor has to certify that the trainee's contribution for the publication justifies exemption from the case record book

6.4 Clinical Audit

It is a mandatory requirement for the trainee to do minimum of one completed Clinical Audit (Audit cycle has to be completed) and formally present it at the hospital where he or she is working. Documentary evidence of such an audit presentation must be provided to the SBSO.

6.5 Portfolio

The portfolio is a framework containing evidence of achievement of learning outcomes over time. This evidence is supplemented by the portfolio builders' reflections on their learning and can be used to provide feedback to the learner. The training portfolio should include evidence of specialized procedures, critical care management of oncological patients, outpatient clinic duties, specialty attendance, grand rounds, conferences, teaching courses, and on-call commitments. The portfolio should be prepared and submitted according to the format indicated in **Annex 8.** The portfolio must be built by the trainee and be up to date at all times during the training period including the overseas period. The portfolio will be regularly inspected and signed by the supervising consultant. The portfolio will have to be produced at the assessments.

The fundamental basis of Portfolio maintenance is Reflective Practice, which is an important tool in postgraduate training.

Reflective practice consists of -

focused self-assessment
reflecting on experience
reflecting on strengths, weaknesses and areas for development
design of own strategies that leads to improvement in practice

Using such a process there is improved training by self-identification of strengths and weaknesses. This is expected to promote deep learning, document what the trainee already knows, identify areas for improvement and help in planning helps in planning further learning. This approach promotes self-directed learning and critical thinking skills

The objective of maintaining a Portfolio is

To help the trainee to record his or her training in brief so that the experience acquired can be assessed and deficiencies identified and remedied.

And

To help supervisors and assessors to evaluate the overall training and provide guidance in areas where it is needed.

The Portfolio should consist of:-

Documentation of all aspects of training and learning experienced by the trainee.
Minimum of 5 case records (same as the case record book 6.4)
Surgical procedures relevant in management of oncological patients and practical skills. (Log book)
Exposure to new technologies.
Details of Continuing Professional Development activities.
Records of Scientific Presentations made. A minimum of 2
Direct Observation of Practical Skill (DOPS). A minimum of ten.
Case Based Discussions (CBD). A minimum of five.
Mini-Clinical Examination (Mini-CEX). A minimum of five.
Regular reflective entrees on all aspects of patient care and professional training

The portfolio should be maintained in separate sections to conform to the above format. Entries in the Portfolio should be made by the trainee at the time of acquiring the skill and authorized by the trainer or supervisor.

The trainee is expected to keep it updated regularly. The trainers and supervisors will use the portfolio to assess the progress of the trainee and to provide a feedback at regular intervals during the training period. The trainers and supervisors are expected to assess the level of competencies in different areas of training and

provide advice and assistance to the trainees to achieve the expected levels of skills empowerment.

It is the responsibility of the trainees, the trainers and the supervisors to ensure that the entries in the Portfolio are authentic and made regularly. It is essential to provide the trainee with accurate feedback on his or her views about his or her performance during the training period.

The Board of Study expects the Trainee and the Trainers to make the best use of the Portfolio in order to achieve the objectives of the training programme. The portfolio should be kept as a ring binder document which will allow easy insertions by the Trainee.

The completed portfolio should be submitted after completion of training for the purpose of assessment. It will be assessed by a panel of two examiners appointed by the SBSO as described later (**Marking scheme in Annex 9)**

7. Evaluation of Progress

7.1 The trainers should submit a progress report using the form (**Annex 10 and Annex 11) six monthly to SBSO.**

7.2 The trainee with the trainer should submit a Peer Team Rating (PTR) form (**Annex 12) every six monthly to SBSO.**

8. Pre – Board Certification Assessment (PBSA)

8.1 Eligibility to sit for the PBCA

The following criteria have to be accomplished to be eligible to appear for the PBSA.

8.1.1 Provision of satisfactory Progress Reports/PTR Reports for ***ALL*** stages of training.

8.1.2 Successful completion of the case record book

8.1.3 Successful completion of the research project and acceptance of dissertation or research paper submitted to PGIM

8.1.4 Successful conduct and presentation of a Clinical Audit. – include as part of the portfolio

8.1.5 Successful completion and a mark of 60% or more for the portfolio viva.

8.2 Details of PBCA

PBCA is conducted at the end of 3 years of training.

This shall consist of 3 components (Total marks 100):

C1. SEQ paper –6 questions to be answered in 3 hours – 40 marks

C2. Case discussions – Three cases for thorough oncological case discussions. Cases are chosen by the examiners. 30 minutes for each case.

1½ hours 40 marks

The examiners would be appointed by the SBSO according to the rules and regulations laid down by the PGIM. Each station will have two examiners.

C3. Viva voce – 45 minutes – 20 marks

There shall be two examiners

This is to evaluate knowledge, clinical competence and depth of experience. The Viva will comprise discussion on recent advances in Surgical-oncology, evidence-based surgery and all components of the training including the appraisal of the training portfolio, progress reports from trainers, the case record book and research/audit conducted by the trainee during the training period

8.3 Pass mark

The candidate will also have to secure a minimum of 60% in component C1, component C2 and component C3 and a minimum of 60% of the total 100 marks to be eligible for Board Certification.

8.4 Failed candidate

Board certification shall be deferred if the candidate fails the PBCA. A failed candidate would need to follow a Counselling Session within 2 months of the failed examination and sit for the PBCA again within a period of 3 months. The candidate would need to repeat only the component/s in which he or she failed to achieve 60 per cent. In the repeat examination, the candidate should achieve a mark of 60 per cent, in the component in which he or she was earlier unsuccessful, to qualify.

On successful completion at the first attempt after counselling, the date of Board certification shall be backdated. If unsuccessful, the date of Board certification will be the date of passing the subsequent assessment following further training for a minimum period of six months in a unit allocated by the SBSO.

9. Requirements to be eligible for Board Certification

9.1 Secure a minimum of 60 per cent in each component and a minimum of 60 per cent Of the total 100 marks for the PBCA

AND

9.2 A Presentation acceptable to the SBSO indicating a self-evaluation of the training received and the trainee's vision for the future development of patient care services in Sri Lanka and further career development.

Method of Delivery and Learner Support System

Text books and journal oriented knowledge, theory and practical knowledge of special equipment. Patient oriented discussions, cyber learning, grand ward rounds discussions and presentations at multidisciplinary meetings.

Training Centres and Trainers

Local training in Surgical Oncology

The training will be done in a centre recognized by the PGIM for training in Surgical Oncology. The trainer should be a Board-certified Consultant Surgical Oncologist with a minimum of five years after board certification. The training centre should possess the following minimum requirements: details.

Clinical Oncology Unit with chemotherapy and radio therapy

Operating facilities to perform complex surgical procedures.

Critical care facilities (ICU and HDU) for the patients undergoing major surgical procedures.

Training in both male and female patients –

The training centre should have adequate number of patients of both sexes. The trainer must provide the statistics of the unit, with his/her qualifications to the

SBSO prior to the commencement training senior registers (Post MD) in the case of new trainer.

Facilities outside the training centre (including the private sector) may be utilized by the trainer, with the approval of the SBSO and the BOSS, solely for enhancing the training experience.

Training in Radiology related to Surgical Oncology

The training should be in a centre recognized by the PGIM with adequate facilities for imaging. There should be a Board-certified Consultant Radiologist who has experience in interpreting Mammograms, staging CT scans, CT of recurrent and complex cancers, MRI scans of soft tissue tumours and PET scans.

Training in Histopathology related to Surgical Oncology

The training should be in a centre recognized by the PGIM and with access to adequate facilities for histopathology with Immunohistochemistry to identify rare malignancies and to guide the clinicians to manage the patients optimally.

Training in multidisciplinary approach in cancer care.

The training centre should have multidisciplinary team meeting for management of cancer patients. The multidisciplinary team should minimally consist of Consultant Oncological Surgeons, Consultant Clinical Oncologists, Consultant Radiologist and Consultant Pathologists. The team should meet at least once a week and discuss patient management with multimodal treatment options, investigation options; follow up plans and palliative care of cancer patients.

Overseas training

The training centre must have a multidisciplinary approach to cancer care or should be affiliated to such a cancer centre for the care of oncological patients. The majority work load of the unit needs to be cancer care. The trainer and the training programme should be approved by the Specialty Board in Surgical Oncology.

12. Details of Trainers

The current panel of Board Approved Trainers who are Board Certified Consultants with MS/MD or those with foreign qualifications and are eligible for Privileges of Board Certification with employment in the Ministry of Health or the Universities would carry out the training locally. Foreign training would be carried out by recognized Consultants in centres approved by the SBSO/BOSS. All trainers would provide an honorary service for which no payment will be made by the University or the PGIM

13. Recommended text books and other learning material

Textbooks:

- Principles and Practice of Oncology. V DeVita, M Rosenberg (The main reference text book)

- Essentials of surgical Oncology.M Sabel, V Sondak, J Sussman
- The MD Anderson Handbook of Surgical Oncology
- Relevant sections of Rob & Smith's Operative Surgery –Head and Neck 1&2, Abdomen 1&2, Urology, Plastic surgery, Breast and of Gynaecology
- Atlas of Regional and Free Flaps for Head and Neck Reconstruction
Mark L. Urken, Sharon Ellis

Trainee has the freedom to explore and study new and updated text books of relevance

Journals and periodicals:

- Surgical Oncology Clinics of North America
- Oncology clinics of North America
- Journal of Surgical Oncology
- European Journal of Surgical Oncology (EJSO)
- Surgical Oncology
- Annals of Surgical Oncology
- World Journal of Surgical Oncology

Other oncology and surgery journals to expand the surgical and oncological knowledge of the trainee.

Web Based learning and guidelines –

- NCCN guidelines (http://www.nccn.org)
- NCI (http://www.cancer.gov/cancertopics/types/alphalist)
- NICE (http://www.nice.org.uk/guidance)
- European Society of Surgical Oncology (http://www.essoweb.org/eursso).

Trainee is encouraged to explore and study new and updated sites in WWW for the expansion of his oncological and surgical intellect.

ANNEX 1

CURRICULUM

BASIC SCIENCES

Applied surgical anatomy

- **Blood vessels:** trainees should be able to describe, the course, relations, surface anatomy, branches and collateral circulation of major blood vessels and corresponding veins such as
Common carotid, internal carotid, external carotid, aorta, in-nominate. Subclavian, axillary, brachial, radial, ulnar, common iliac, external iliac, internal iliac, femoral, popliteal, anterior tibial, post tibial, peroneal, dorsalis pedis

In addition trainees should have the knowledge of describing and surface marking vascular pedicles of commonly used pedicle and free flaps.

- **Nerves**: trainees should describe, course, relations, surface anatomy and branches.
Cranial nerves and branches especially V, VII, IX, X, XI, and XII
Sympathetic trunk, Brachial plexus, radial nerve, median nerve, ulnar nerve, musculocutaneous nerves.
Lumbar plexus, femoral nerve, obturator nerve, sciatic nerve, Tibial nerve, common peroneal nerve.

- **Lymphatic:** Cervical lymph node groups and their draining regions. Axillary nodes, inguinal and Iliac nodes
Lymphatic drainage of Oesophagus, Stomach, Pancreas, Large and small bowel, Rectum, Kidneys, Testis, Uterus and Ovaries
Breast lymphatics and anatomical basis of sentinel node biopsy

- **Muscles**: Trainee should have complete anatomical knowledge about muscles which are used for mayo-cutaneous flaps. (Pectoral muscles, gracilis, Rectus Abdominis, latissimus dorsi etc.)

- **Anatomy of the breast –** trainee should have widespread and comprehensive knowledge about the human breast and axillary anatomy

- Head and neck – The trainees should have a comprehensive knowledge about the following head and neck structures.

- The salivary glands, Deep fascia of the neck, Triangles of the neck, Thyroid & parathyroid glands, Larynx, Pharynx, Trachea, great vessels of the neck and nerves around the head and neck structures.

- Gastrointestinal Tract Anatomy - The trainees should have very good and comprehensive knowledge about the Anatomy of the following gastrointestinal tract organs.
Oesophagus, Stomach, Duodenum, Small bowel, large bowel & appendix, Rectum, Anal canal Liver (including the segmental Anatomy), gall bladder and the biliary system, pancreas and Spleen

- Urogenital anatomy - The trainees should have very good and comprehensive knowledge about the Anatomy of the following urogenital organs.
Kidneys, Adrenal glands, Ureter, Urinary bladder, Urethra, Scrotum, testis and the epididymis Ovaries, Uterus and Tubes and Para- aortic lymph nodes.

Surgical Physiology and Intensive Care Management

The Surgical intensive care deals with cancer patients following major surgery and also with patients with medical problems undergoing moderate or minor surgery. This includes efficacy and safety of postoperative care, optimal clinical use and the development of new therapeutic modalities.

The trainee should have outstanding practical skills and knowledge of

1. Common causes of admission to intensive care units in postoperative cancer patients and its potential benefits.

2. Examination of the unconscious patient, provide adequate care of the unconscious patient and the principles of brain stem death diagnosis.

3. Principles of mechanical ventilation, as well as the use of ventilation in critically ill surgical patients

4. Uses and limitations of monitoring equipment, the content of an ICU record and discuss the likely outcome based upon severity scoring.

5. Causes and management of acute life threatening conditions that might affect various systems of the body postoperatively in cancer patients

6 Recognize, stabilize and appropriately refer critically ill postoperative surgical patients for ICU.

7. Perform cardiopulmonary resuscitation.

8. Initiate controlled mechanical ventilation in a critically ill surgical patient

9. Water & electrolyte balance: Use of intravenous fluids appropriate for use in major fluid loss, and their pharmacology. Describe the basic anatomy of neck, upper thorax, arms, wrists, inguinal region and foot relevant to insertion of venous and arterial access. Insert adequate peripheral venous access sufficient to manage major haemorrhage, and insert central venous lines in indicated cases. Blood transfusion – transfusion of blood products.

10. Acid base balance: - Trainee should have the knowledge of the vocabulary and the common blood gas abnormalities and how to correct those.

11. Physiological response to stress

12. Cardiovascular Physiology: - The common causes of cardiac and respiratory arrest. Describe the basic cardiac dysrhythmias that could be encountered in postoperative surgical patients and their initial management. Discuss pathophysiology and management of pulmonary embolism, investigation and management of cardiac failure.

13. Shock – types of shock and initial investigations and management of each type.
Use and Pharmacology of Vasopressors and Inotropes in shock, sepsis and cardiac dysfunction

14. Discuss the management of sepsis and endotoxemia in intensive care choice of antibiotics for intensive care surgical patients. Explain the aetiology, pathophysiology and presentations of multiorgan failure.

15. Discuss the management of surgical emergencies of cancer patient and their immediate care and post operative care.

The trainees should have very good and comprehensive knowledge about the following Basic bodily processes.

Haemostasis:

Disorders of haemostasis

Congenital.

Acquired:

The use of thromboprophylaxis

Surgical Nutrition:

Metabolism in normal persons (starvation& hypercatabolic states).

Squeal of under nutrition.

Assessment of malnutrition.

Enteral nutrition.

T.P.N.: Indications – complications

Physiology and function of the endocrine system

Pituitary gland

Thyroid gland

Parathyroid glands

Suprarenal cortex and medulla

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Surgical Pathology

The trainees are expected have an outstanding knowledge about the General Pathology and widespread, updated knowledge about tumour pathology

General Pathology

Acute inflammation: Abscess, carbuncle, necrotizing fasciitis, gangrenes, septicaemia.
Chronic inflammation: T.B, Syphilis, Actinnomycosis, Sarcoidosis
Wound healing: Stages of wound healing, types, factors affecting wound healing and complications of wound healing
Antigen antibody reaction: Types of rejection, Immunosuppression.
Knowledge about Renal, hepatic, cardiac, pancreatic transplantation. (Indications, basic management and complications).

Tumour Pathology

The trainee should explore the cellular and molecular mechanisms underlying cancer development with the aim of understanding how changes in the normal growth and division processes lead to the formation of tumours.
At the end of the training program the trainee must be able to:
1. Describe the mechanisms that govern normal cell growth and development.
2. Explain how cell division functions in reproduction, growth, and repair.
3. Describe the stages of the cell cycle, including the role of checkpoints, and Identify factors that influence cell cycle control. Explain how abnormal cell division of cancer cells escapes cell cycle controls Outline the significance of apoptosis in cancer and methods of assessment
4. Define oncogenes and tumour suppressors and inheritance of cancer, list several examples of each, and explain the role of both in the onset of cancer. Types of oncogenesis (Physical, Chemical, viral, and immunological)
5. Describe the cellular and molecular basis of cancer and tumour progression.

6. Identify pathologic criteria of malignancy and distinguish between benign, malignant, and metastatic tumours.

7. Describe the natural history and spread of all solid cancers.

8. Describe the diagnostic features of cancers

9. Discuss therapy-guiding and prognostic factors in cancer.

10. Relate the molecular basis of cancer to the use of molecular techniques in diagnosis and staging of cancer.

11. Recognize the role of cytology in the diagnosis of tumours.

12. Use the techniques of molecular biology to analyse factors that help him in diagnosis and follow up cancers.

13. Appreciate the role of the pathologist in the cancer management team.

14. Explain the utility of different techniques used in pathology for the diagnosis, staging, and targeted therapy for tumours.

15. Explain the principles of immunohistochemistry and evaluate the role of immunohistochemistry in classification of tumours

16. Interpret a pathology report including pathologic prognostic and predictive factors. Interpret reports of immunohistochemistry

17. Communicate effectively with the pathologist regarding the clinicopathologic features that may assist in the management of tumours.

18. Work in teams to promote translational research that assists in proper management of tumours.

Cancer Biostatistics

The trainee must have a sound knowledge of the principles and methods used in biostatistics; to be competent with the use of simple and basic tools of biostatistics. It provides the trainee with sufficient understanding of biostatistics concepts and statistical methodology to be able to read critically research papers published in different medical publications.

1. Identify the types of variables and scales of measurement Calculate different descriptive statistics for different type of variables
2. Explain methods of descriptive Statistics and displaying data
3. Identify Normal and Sampling distribution
4. Identify methods to compare two independent and two dependent groups and compare and detect differences between studied groups
5. Recognize the basics of inferential statistics
6. Handle data and analysis techniques relevant to survival analysis
7. Explain the concepts and principles of clinical trials
8. Present data set with the suitable way of presentation
9. Perform statistical tests to compare groups
10. Knowledge to plan for different stages of clinical trials
11. Deduce the results of survival analysis
12. Communicate properly with the statistician during medical research

Cancer Epidemiology

Trainees should how to do good epidemiologic research and help them to understand and evaluate research reported by others.

1. Define measures of disease frequency as they reflect the health status of a population. Interpret variations in disease frequency according to characteristics of person, place, and time
2. Recognize measures of association between a given risk factor and disease and calculate measures of association between a given risk factor and a disease.
3. Describe and interpret variations in disease frequency according to characteristics of person, place, and time.

4. Identify the appropriate study design that addresses a specific research question

5. Describe how to assess the validity and reliability of diagnostic test.

6. Create and review frequency tables and data summaries.

7. Trainees should be able to appraise research papers that evaluate screening tests.

9. Evaluate effect modification.

10. Design a randomized trial, cohort study, or case – control study to evaluate whether a certain exposure is causally associated with a certain health outcome.

11. Understand the importance of cancer registry and difficulties of maintaining such a registry in order to plan future strategies to control cancer

Cancer Treatment Principles of Other Modalities

Chemotherapy

Basic principles action and side effects of cytotoxic chemotherapy

Pharmacology of commonly used chemotherapy agents for solid malignancies

Chemotherapy regimens for common malignancies of Sri Lanka and their side effects

The place of neoadjuvant chemotherapy for solid malignancies and there effects

Radiotherapy

Basic Principles of Radiotherapy in cancer treatment

Effects of ionizing radiation in cells and organs

Common radiation fields and principles of radiotherapy planning

Principles of radioactive Iodine Therapy

Surgical complications of radiotherapy and management

Advantages and disadvantages of chemo-radiation

Hormonal Therapy

1. Pharmacology Oestrogen receptor modulators and Aromatase Inhibitors
2. Therapeutic indications and uses of Bisphosponates in cancer care
3. Replacement therapy of hormones following endocrine gland surgery and their pharmacology

Immunotherapy

Uses and Pharmacology of Interferons and Interleukins in cancer treatment

Uses and Pharmacology of Antiangiogenesis Agents in cancer care

Uses and Pharmacology of Monoclonal Antibodies in cancer care

Anti Cancer Vaccines

Uses and indications of Preventive Cancer Vaccines

The trainees are expected to acquire some of the above mention basic skills and knowledge of basic sciences prior to and during their MD training program as surgical registrars.

The post MD Oncosurgical trainees are expected to recapitulate and update their knowledge and skills, and gather new knowledge needed for the specialized training.

Organ Specific knowledge and Skills

The training program is design to produce oncological surgeons with theoretical and evidence based foundations of surgical oncologic practice. It is descriptive in terms of the epidemiology, classifications and staging of different cancers that involves surgical treatment. The trainees should acquire knowledge of comprehensive presentation of the pathology, diagnosis, and management of cancer with special focus on the surgical role in management.

The trainee should acquire the theoretical knowledge required to perform surgical procedures, the effect of these procedures on the functions of the body, the complications of the procedures, and the advantages and disadvantages of surgical options available for treatment. The trainee should also know the advantages and disadvantages of tumour down staging with neoadjuvant therapy. The course provides the knowledge for making clinical decisions and for problem solving in difficult cases.

The Breast

1. Recall the anatomy, physiology, development and evolution of the breast
2. Summarize breast changes during pregnancy and lactation
3. Outline the aetiology, clinical presentation and differential diagnosis of nipple problems and clinical presentation, diagnosis management of benign breast conditions.
4. Discuss the epidemiology, risk factors, pathology, staging and prognosis of breast cancer
5. Explain the rationale underlying breast cancer screening programs
6. Take clinical history and perform breast examination for patients presenting with breast or nipple complains
7. Request appropriate investigations or imaging procedures needed to diagnose the condition
8. Involve oncology specialists and radiotherapy in cases of breast cancer
9. Perform adequately preoperative assessment
10. Observe, assist in or perform under supervision the procedures mentioned in the procedure list according to the stage of training
11. Manage the postoperative care including postoperative complications

Topics:

Anatomy of the breast

Problems of lactation: Milk engorgement – acute mastitis – breast abscess.

Mammary duct ectasia.

Fibrocystic disease.

Gynecomastia

Nipple discharge

Benign breast neoplasms.

Carcinoma of the breast

- Pathology
- Tumour Types
- Immunohistochemistry for identifying receptor status
- Chemotherapy agents for breast carcinoma in adjuvant and neoadjuvant setup
- Radiotherapy planning for breast carcinoma
- Management of male breast carcinoma
- Management of breast carcinoma in the young female
- Management of breast carcinoma in pregnancy and lactation
- Management of loco-regional recurrence of breast carcinoma
- Management of Phyllodes tumours of breast

Operative Procedure list

- Treatment of breast abscess
- Fine needle aspiration cytology with and without ultrasound scan guidance
- Core biopsy with and without ultrasound scan guidance
- Excision of breast lump
- M**astectomy (modified radical, radical)**
- **Wide excision of breast tumours / Breast conservative surgery**
- Axillary dissection
- Breast reconstruction - Pedicel flaps, free flaps & prosthesis
- Regional flaps for mastectomy defects of advance and recurrent breast carcinoma
- Sentinel node biopsies
- Oncoplastic breast surgeries

Bone and soft tissue sarcoma (including GIST)

1. Discuss epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment, surgical results, adjuvant treatment, and surveillance.

2. Take history and perform appropriate diagnosis and evaluation of cases of soft tissue masses including interpretation of clinical possible diagnosis and CT, MRI findings

3. Knowledge of the histological types and immunohistochemistry markers of mesenchymal tumours. The trainee must use this knowledge in Performing core and open biopsy.

4. Updated knowledge of neoadjuvant and adjuvant treatment of bone and soft tissue sarcomas.

5. Knowledge about limb prosthesis & rehabilitation

Operative Procedure list

1. Core biopsy for bone and soft tissue sarcoma (with or without image guidance)
2. Open biopsy for bone and soft tissue sarcoma
3. Wide local excision for upper limb soft tissue sarcoma
4. Wide local excision for lower limb soft tissue sarcoma
5. Upper limb amputations (minimum of one forequarter amputation)
6. Lower limb amputations (minimum of one hindquarter amputation)
7. Surgery for retroperitoneal sarcoma
8. Surgery for GIST
9. Surgery for recurrent limb sarcomas
10. Surgery for recurrent retroperitoneal sarcomas

Head and neck Malignancy

1. Trainees should be able to discuss Epidemiology, staging, clinical presentation, preoperative evaluation, and pathology, general principles of treatment, adjuvant and neoadjuvant treatment, surveillance of the malignancies of the following areas.

- The oral cavity
- Odontogenic tumours and tumours of the mandible
- Laryngeal caner
- Oropharyngeal, Hypopharyngeal cancer, and cervical oesophagus
- Tumours of the salivary glands
- Parapharyngeal tumours and skull base
- The thyroid gland
- Parathyroid
- The tumours of the nose and paranasal sinuses

2. Trainees should have proficiency in taking history, diagnosis and evaluation of lesion in the previously mentioned sites, interpretation of clinical differential diagnosis and CT, MRI findings

3. They also should have proficiency in taking history, diagnosis and evaluation of cervical lymph node metastasis of unknown origin

Operative Procedure list (minimum number)

Perform examination under anasteasia and evaluate the tumour for extent, resectability and do open biopsy

Perform cervical lymph node biopsy

cervical block dissections and its varieties

Perform superficial conservative parotidectomy

Total conservative parotidectomy

Radical parotidectomy

submandibular sialadenectomy

Perform total thyroidectomies

Lip resection and reconstruction with local advancement or free flaps

Surgical procedures of resection of oral cavity cancers and reconstructive options including local flaps, distant pedicel flaps and free flaps

Surgical procedures of resection of tumours of oropharynx and reconstructive procedures

Total Laryngectomy

Procedure of mandibular resection and reconstruction with local flaps, distant pedicel flaps and free flaps

Procedures of maxillectomy and anterior craniofacial resection.

Perform resection of skin cancers in the face and scalp and reconstructive options

Reconstruction after major ablative surgery

The trainee should have the skills to create the relevant pedicle or free flap according to the defect and site.

Some common free flaps the trainee should know

Radial forearm facio-cutaneous flap

Latissimus dorsi mayo-cutaneous

Iliac crest ossio-mayo-cutaneous

Fibulae ossio-mayo-cutaneous

The trainee needs to have an open mind and an extensive knowledge of available reconstructive options to decide which procedure to be used on individual patient basis.

Gastrointestinal tract

Oesophageal cancer

1. The trainee should have an experience and knowledge to discuss epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment, surgical options, adjuvant/neoadjuvant treatment and post treatment surveillance for oesophageal cancer.

2. The trainee should be able to take history and perform diagnosis and evaluation of a case of dysphagia including UGI endoscopy and biopsy, interpretation of clinical differential diagnosis, interpretation of CT, MRI endoscopic ultrasound scan findings and evaluate the biopsy report with regard to premalignant conditions and various types of malignant oesophageal lesions.

3. The trainee must be able to plan the management of early tumour with regard to primary surgery; neoadjuvant therapy followed by surgery or primary chemo-radiation and advanced disease for palliative radiotherapy, palliative surgery or stenting.

4. Flexible and rigid endoscopy for patient with symptoms of oesophageal carcinoma. Follow up endoscopy for patient treated for oesophageal carcinoma with surgery or radiotherapy.

5. Trainees should have an excellent knowledge about neoadjuvant and adjuvant therapy for oesophageal carcinoma including chemotherapy agents, radiation fields and different radiation doses for radical, palliative, and neoadjuvant.

6. The trainee should have the knowledge about the surgical procedures available for the patient including the critical care management of postoperative patients and should be actively involved in post-op patient care.

7. The trainees are expected to constantly to update themselves regarding the latest changes in management of oesophageal malignancy.

Operative Procedure list (minimum number)

1. Flexible UGI endoscopy
2. Rigid endoscopy
3. Oesophageal dilatation
4. Endoscopic stenting of the oesophagus
5. Trans hiatal (Oringer's) oesophagectomy
6. Ivor Lewis's two stage oesophagectomy*
7. Three field Oesophagectomy*
8. Palliative Oesophagectomy for advance and recurrence (following radiotherapy) oesophageal carcinoma and use of various conduits including stomach, colon & jejunum

* The trainees are expected to observe minimum 3 and assist for minimum 2 of the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Gastric cancer

1. Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment, surgical results, adjuvant treatment and surveillance.

2. The trainee should be able to take history and perform diagnosis and evaluation of a case of gastric carcinoma including UGI endoscopy and biopsy, interpretation of clinical differential diagnosis, interpretation of staging CT, MRI endoscopic ultrasound scan findings, staging laparoscopy and evaluate the biopsy report with regard to premalignant conditions and various types of malignant gastric lesions including Gastric lymphoma.

3. The trainee must be able to plan the management of early tumour with regard to primary surgery; neoadjuvant therapy followed by surgery and advanced disease for palliative chemotherapy, palliative bypass-surgery.

4. Trainees should have an excellent knowledge about neoadjuvant and adjuvant therapy for gastric carcinoma including chemotherapy agents in neoadjuvant and adjuvant settings.

5. The trainee should have knowledge of presentation, diagnosis, staging and treatment of for management of gastric lymphoma.

6. Experience in the procedure of different types of radical gastrectomy (D1, D2, and D3) and postoperative management including critical care management.

Operative Procedure list (minimum number)

1. Flexible endoscopy
2. D1 Gastrectomy
3. D2 Gastrectomy
4. D3 Gastrectomy*
5. Gastro-oesophagectomy*
6. Palliative gastro-jejunostomy
7. Laparoscopic assessment for resectability

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Gall bladder cancer:

1. Discuss the epidemiology, aetiology, pathology, staging, clinical presentation, preoperative evaluation of gall bladder carcinoma.
2. The trainee must be able to interpretation of staging CT, MRI, ultrasound scan findings and laparoscopic findings and plane for appropriate surgical procedure for the patient.
3. The trainee should be able to evaluate a post cholecystectomy patient who had a non-oncological resection for gallbladder carcinoma.
4. Knowledge about preoperative assessment and preparation, surgical treatment, with or without liver resection

5. The trainee must have the knowledge about multimodality (chemotherapy, radiological palliative procedures) treatment, and surveillance of gallbladder carcinoma.

Operative Procedure list

1. Laparoscopic assessment for resectability
2. Open cholecystectomy for carcinoma of gallbladder
3. Radical cholecystectomy
4. Liver segmentectomy with cholecystectomy

Cancer of extra hepatic bile duct carcinomas, pancreatic cancer and periampullary cancer

1. Discuss epidemiology, aetiology, pathology, staging, clinical presentation, preoperative evaluation, surgical treatment, surgical results and adjuvant treatment.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of obstructive jaundice, including interpretation of clinical differential diagnosis and CT and MRI findings

3. The trainee must have a working knowledge of management of cystic tumours of pancreas, other cysts of pancreas and tropical and hereditary types of pancreatitis.

4. Knowledge about multimodality treatment and palliative non-surgical procedures (PTC and stenting ERCP and stenting) and surveillance.

5. The trainee should have the knowledge about the radical and palliative surgical procedures available for the patient and including the critical care management, specifically management of acute pancreatitis of postoperative patients and should be actively involved in post-op patient care.

Operative Procedure list

1. Laparoscopic assessment for resectability
2. Choledoco-jejunostomy by-pass procedures
3. cholecysto-jejunostomy by-pass procedures
4. Triple bypass procedure
5 Pancreatico-duodenectomy (Whipple's procedure) and it's modifications

Pancreatic endocrine tumours and multiple endocrine neoplasias:
Discuss the epidemiology, clinical presentation, biochemical diagnosis, tumour localization, and treatment of every type of those tumours.

The trainee must be able to discuss preparation and procedures of distal and total Pancreatectomy including management its complications

Hepatocellular cancer and Metastasis to the liver
1. Discuss the epidemiology, risk factors, staging, and clinical presentation, preoperative evaluation of operative risk, pathology, surgical treatment, surgical results, chemotherapy, multimodality treatment and surveillance.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of hepatic malignancy, including interpretation of clinical differential diagnosis and CT, MRI findings, blood investigations and histopathology reports.

3 The trainee should have the knowledge about the radical and palliative surgical procedures available for the patients, including the pre-op preparation post op management, specifically management of hepatic failure and should be actively involved in post-op patient care.

4. The trainee should have the knowledge about procedures of local management such as radiofrequency ablation, cryotherapy, and chemoembolization and their complications for unresectable liver tumours

Operative Procedure list

1. Left Hepatic Lobectomy/ Hepatectomy
2. Right Hepatic Lobectomy/ Hepatectomy
3. Segmentectomy
4. Non anatomical resection
5. Wide local excision of small liver lesions
6. Open liver biopsy

Small bowel malignancies and characinoid tumours

1. Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment, surgical results, adjuvant treatment and surveillance.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of small bowel tumour including interpretation of clinical differential diagnosis and CT, MRI findings

3. The trainee should be able to an exploratory laparotomy for small intestinal obstruction due to peritoneal and intestinal metastasis with a view of palliation.

Operative Procedure list

1. Perform the procedure of resection anastomosis
2. Palliative bypasses operations for intestinal obstruction
3. External stoma creations

Colo-rectal cancer

1. Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment options, surgical results, adjuvant / neoadjuvant treatment and surveillance.

2. Updated knowledge of management of advanced disease, recurrent and metastatic disease

3. Knowledge of management of uncommon colorectal tumours as lymphoma, carcinoid, sarcoma and anorectic melanoma and Paget s disease

4. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of colorectal and anal cancer including interpretation of clinical differential diagnosis and CT, MRI findings

5. The trainee should have the knowledge about the surgical procedures available, including laparoscopic procedures and perform procedures of different types of colostomy, sphincter saving procedures and Abdomino-perineal resection of rectum. He/she should involve in the critical care management of postoperative patients and should be actively involved in post-op patient care.

6. Standard neoadjuvant radiotherapy methods and chemo-radiation methods and their effects on tumour.

Operative Procedure list

Lower GI Endoscopy for diagnostic biopsy & screening purposes
Lower GI Endoscopy & snare polypectomy
Anterior resection with anastomosis with staplers and with hand suturing
Laparoscopic anterior resection*
Open Abdomino-perineal excision and end colostomy formation
Laparoscopic Abdomino-perineal excision and end colostomy formation*
Posterior exenteration
Anterior pelvic exenteration
Total pelvic exenteration
Palliative colonic resections, stenting and stoma creations for advance tumours

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Lymphoma of the GIT

The trainees should have a good knowledge about lymphomas of the gastrointestinal tract, their management and complications.

Operative Procedure list

Perform biopsies and surgical resections of lymphomas of the gastrointestinal tract as a standard surgical procedure appropriate to the involve part of the GI tract

Neuroendocrine tumours

1. The trainee should have outstanding knowledge about these rare tumours, pathology, clinical presentation, staging and management

2. The trainee must have the knowledge of interpretation of clinical differential diagnosis, interpretation of biochemical test results and CT, MRI findings

Operative Procedure list
Perform the standard surgical procedures relevant to the involved system

The spleen

1. The trainee must have a working knowledge of common oncological indications of splenectomy and the complications of primary condition and effects of splenectomy

2. The trainee should be able to discuss the functions of the spleen, and how to minimize the effects of splenectomy

3. Preoperative assessment and post-operative management of splenectomy patients.

Operative Procedure list

Laparoscopic splenectomy
Open splenectomy

Uro-oncology

Renal carcinoma (including TCC of the renal pelvis)

The trainees must have a good knowledge of Tumours of the kidney and the differential diagnosis of mass in the loin

Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment options, surgical results, adjuvant treatment and surveillance of renal cell carcinoma.

Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of

Renal tumour including interpretation of clinical differential diagnosis and CT, MRI findings

4. The trainee should have the knowledge about the surgical procedures available, including laparoscopic procedures and perform procedures such as radical nephrectomy, radical nephroureterectomy. He/she should involve in the critical care management of postoperative patients and should be actively involved in post-op patient care.

Operative Procedure list

Radical nephrectomy with IVC tumour evacuation & lymphadenectomy
Partial nephrectomy*
Radical nephroureterectomy

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Carcinoma of the Urinary Bladder

The trainees must have a good knowledge of Tumours of the Bladder and the differential diagnosis of haematuria

Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment options, surgical results, adjuvant treatment and surveillance of Bladder carcinoma. And the trainee should know when to proceed and when to refer to an urologist.

Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of Renal tumour including interpretation of clinical differential diagnosis and CT, MRI findings

The trainee should have the knowledge about the surgical procedures available, including TURBT and perform procedure such as radical Cystectomy with urinary diversion. He/she should involve in the critical care management of postoperative patients and should be actively involved in post-op patient care.

The trainee should have the knowledge and the ability to evaluate a pelvic tumour with bladder or ureteric involvement and plan the appropriate surgical procedure with bladder replacement, urinary diversion or ureteric replacement methods.

Operative Procedure list

1. Cystoscopy
2. TURBT*
3. Radical cystectomy with lymphadenectomy
4. Ileal conduit
5. Mainz II Pouch*
6. Ureteric replacements*
    - Boari Flap
    - Appendix
    - Ileum
7. Ureteric Reimplantation (The Politano-Leadbetter Technique, Lich-Gregoir Technique)*
8. Neo-bladder creations*

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the adequate minimum number required in the list, it is the responsibility of both trainee and

trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Carcinoma of the Penis

1. Discuss the epidemiology, risk factors, premalignant conditions, clinical presentation, staging, preoperative evaluation, pathology, available treatment options including radiotherapy, surgical results, and adjuvant treatment for carcinoma of the penis.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of penile carcinoma including interpretation of clinical differential diagnosis and evaluation of inguinal nodal status preferably sentinel node sampling.

3. The trainee should have the knowledge about the treatment options available, including surgery, radiotherapy and chemotherapy

Operative Procedure list

1. Circumcision
2. Biopsy of the penis lesion
3. Partial amputation of the penis
4. Total amputation of the penis
5. Inguinal block dissection
6. External Iliac lymphadenectomy

Prostate cancer

1. Discuss the epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including radiotherapy, surgery, Hormonal manipulation and their results, and adjuvant treatment for carcinoma of the prostate.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of prostate carcinoma including interpretation of clinical differential diagnosis and evaluation of PSA and biopsy results.

3. The trainee should have the knowledge about the treatment options available, including surgery, radiotherapy, hormonal treatment and palliative care.

Operative Procedure list

1. Transrectal biopsy of the prostate with or without ultrasound guidance
2. Sub-capsular orchidectomy
3. Radical Prostatectomy*

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Testicular cancer

1. Discuss the pathological classifications, epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including radiotherapy, surgery, Chemotherapy and their results for testicular tumours

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of testicular tumour including interpretation of clinical differential diagnosis and evaluation of CT, MRI, tumour markers and other biochemical test results.

3. The trainee should have the knowledge about the treatment options available, including surgery, radiotherapy and chemotherapy.

Operative Procedure list
1. Inguinal exploration of the testis
2. Radical Inguinal Orchidectomy
3. Para-aortic (Retroperitoneal) lymphadenectomy

Adrenal Tumours

The trainees must have a good knowledge of Tumours of the Adrenal cortex and Medulla and other retroperitoneal tumours and endocrine tumours.

Discuss the epidemiology, risk factors, staging, clinical presentation, preoperative evaluation, pathology, surgical treatment options, surgical results, adjuvant treatment and surveillance of primary adrenal tumours and secondary deposits in the adrenal glands.

Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of Adrenal tumour including interpretation of clinical differential diagnosis and CT, MRI findings and biochemical tests.

The trainee should have the knowledge about the surgical procedures available; including laparoscopic procedures. He/she should involve in the Perioperative management of patients and should be actively involved in post-op patient care.

Operative Procedure list

1. Open adrenalectomy
2. Laparoscopic adrenalectomy*

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Gynaecological malignancies

In the Sri Lankan setup, occasionally the surgical oncologist is requested to help the Gyneacological surgeon in the management of advance gynaecological malignancies. Therefore the trainees of oncological surgery are expected to know about common gynaecological malignancies and their management.

Ovarian cancer

1. Discuss the pathological classifications, epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including surgery, Chemotherapy and their results for Epithelial and non-epithelial malignant ovarian tumours

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of advance ovarian tumour including interpretation of clinical differential diagnosis and evaluation of CT, MRI, tumour markers.

Operative Procedure list

1. Total abdominal Hysterectomy with bilateral salpingo-oophorectomy*
2. salpingo-oophorectomy *
3. Total Omentectomy and Para-aortic (Retroperitoneal) lymphadenectomy*

Endometrial cancer

1. Discuss the epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including surgery, Chemotherapy and their results for endometrial carcinoma.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of advance endometrial malignancy including interpretation of clinical differential diagnosis and evaluation of CT, MRI, tumour markers.

Operative Procedure list

1. Total abdominal Hysterectomy with bilateral salpingo-oophorectomy*
2. Pelvic nodal dissection*
3. Omentectomy and Para-aortic (Retroperitoneal) lymphadenectomy*

Cervical cancer

1. Discuss the epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including surgery, Chemotherapy, radiotherapy and their results for cervical carcinoma in various stages of the disease.

2. Take appropriate clinical history and conduct accurate diagnosis and evaluation of a case of carcinoma of the cervix, including the methods of staging and planning of the management for each stage of the disease.

Operative Procedure list

Total abdominal Hysterectomy with bilateral salpingo-oophorectomy *

Radical hysterectomy*

2. Pelvic nodal dissection

* The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the minimum number required in the list, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training.

Miscellaneous Conditions

Cancer of unknown primary

1. The trainees must have a good knowledge of how to investigate for a primary tumour then secondary deposits are found.

2. The trainee should be able to take appropriate clinical history and conduct accurate examination and evaluation of a case of secondaries of an unknown primary.

3. He/she must know the basic investigations and advance investigations CUP syndrome (CT, MRI, and PETCT) and plan the investigations according to the clinical findings, preliminary investigations.

4. The trainee should have an excellent knowledge about immunohistochemistry and use the facility in the management of CUP syndrome.

The trainee should have the knowledge of treatment options to manage the secondaries in the case of primary is not found even after the available investigations.

Cutaneous malignancies

1. The trainee must have an outstanding knowledge about cutaneous malignancies including squamous cell carcinoma, basal cell carcinoma and malignant melanomas. He/she should be able to discuss the epidemiology, risk factors, clinical presentation, staging, pathology, available treatment options including surgery, Chemotherapy, radiotherapy.
2. The trainee should be able to take appropriate clinical history and conduct accurate examination and evaluation of a case of cutaneous malignancy including imaging (USS, CT, and MRI).
3. The trainee must have the ability to resect the primary lesion, reconstruct the defect without compromising the oncology and manage the regional nodes appropriate to the stage of the disease.

Operative Procedure list

1. Wide local excision of primary cutaneous malignancy with primary closure
2. Wide local excision of primary cutaneous malignancy with regional flaps
3. Wide local excision of primary cutaneous malignancy with free flaps
4. Lymph node dissection (Axilla, Inguinal, Cervical)

Palliative care of the cancer Patient

The purpose of this course is to equip the candidate with necessary skills for comprehensive history taking, detailed physical examination together with appropriate interpretation of diagnostic imaging and neurophysiologic testing used for accurate evaluation of **terminal cases with Cancer**. The course also provides the candidate with the sound knowledge and practice of different pharmacologic and non-pharmacologic therapeutic options radiotherapy, chemotherapy and pain management for advanced cancer patients.

The Trainee should be able to

1. Explain proper assessment of pain.

2. Prescribe proper pharmacologic therapy for pain; guided by WHO analgesic ladder.

3. Recognize palliative interventions related to radiotherapy and chemotherapy.

4. Recognize percutaneous nerve blocks to control pain (Ex-Trigeminal block).

5. Identify psychological assessment and behavioural treatment of chronic pain.

6. Recognize the role of physical therapy in pain management.

7. Perform procedures for back pain management (epidural steroids, facet blocks, and sacroiliac joint block)

8. Perform sympathetic nerve blocks.

9. Work in a multidisciplinary team with other colleagues from different specialties in managing pain.

10. Discuss informed consent with the patient or his relatives regarding terminal care and end of life pathways

Oncosurgical emergencies

The trainee should be able to handle surgical emergencies of cancer patients. As these patients are

Acute upper airway obstruction due to advance head and neck malignancies or metastasis

Acute haemorrhage from tumours requiring unplanned excision of tumours to control bleeding

Intestinal obstruction due to malignant tumour or peritoneal deposits

Intestinal perforation from tumour.

ANNEX 2

FORMAT OF DETAILED PROJECT PROPOSAL

Section 1

Name of trainee

Name(s) of supervisor(s)

Training centre

Section 2

Project title

Background and justification

Objectives of study

Research plan

- Design
- Setting
- Method
- Sample size and sampling techniques
- Outcome measures
- Statistical analyses and plan of presentation of results
- Ethical considerations
- Work plan and time lines

References

Funding for study

Signature of trainee

Section 3

Recommendation of supervisor(s)

Signature of Supervisor 1	Signature of Supervisor 2
Date	Date

Section 4

Date of submission to PGIM

Date of approval by BOSS	Signature of Secretary BOSS

ANNEX 3
REPORT OF THE RESEARCH PROJECT REVIEWER

Name of Trainee:

Training Centre:

Supervisor:

Reviewer:

Name:

Designation: Address Official:

Tel//Fax: Email:

Title of Project:

Please comment on each of the following headings.

Introduction: Rationale (Justification) – problem identified and quantified. Hypothesis and expected outcome, impact and relevance of the study.

Comment: …….

Literature Review: Adequacy (evidence of a systematic search for related. similar, relevant studies)

Comment: ……..

Objectives: Clearly defined. Relevant and stated in measurable terms.

Comment: ……..

Method: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed

Comment: ……..

Results: Order of presentation and appropriate presentation of tables, figures, graphs. Appropriate statistical analyses and interpretations

Comment:

Discussion: The findings of the study should be discussed taking into consideration findings of relevant studies, within and outside the country. The discussion should not be a repetition of the results only. Limitations should be included.

Comment:

Conclusion and recommendation: Based of the results of the study and to address the objectives

Comment: ……

Limitations: Any inherent and / or inadvertent biases and how they were dealt with.

Comment:

References: According to the Vancouver system and relevant to the study. Properly documented in the Bibliography and appropriately cited in the text

Comment: ……

Institution(s) where work would be carried out:

6.11 Ethical considerations/institution from where ethical approval will be /has been obtained:

Comment: ……

Overall presentation: Overall presentation of the proposal (grammar, spelling, typographical mistakes etc.

Comment: ……

Recommendation of reviewer:

Comment: ……

Is the dissertation acceptable? Yes / No

If No, What corrections are required? (Attach a separate sheet of paper if necessary)

Signature: **Date:**

Recommendation of the SBSO:

Signature of Chairperson/Secretary: **Date:**

ANNEX 3

INSTRUCTIONS TO DISSERTATION SUPERVISORS

The post MD dissertation for the Surgical Oncology is based on a 1-2 year research project.

Acceptance of the dissertation is a requirement prior to overseas training.

The trainee should write up the project work as a dissertation conforming to the format approved by the Board of Study in SBSO.

The supervisor should guide the student in planning and designing, carrying out the research and in presentation of the work.

The supervisor should obtain recommendation of the research proposal from a reviewer.

The supervisor should forward Progress Report(s) in the prescribed form at the end of 3 months after the trainee commences work on the research project and 3 months after completing the project work.

The objective of the dissertation is to prove the trainee's capability to plan, carry out and present his / her own research. The purpose of this training is to ensure maturity, discipline and scholarship in research.

The dissertation should comprise the trainee's own account of his / her research.

It must contribute to existing knowledge of diseases relevant to Sri Lanka and abroad evidence of originality as shown by independent, critical assessment and / or discovery of new facts in the area under study.

It should be satisfactory as regards literary presentation.

The dissertation should be certified by the supervisor as suitable for submission.

General Comments on the contents: The objectives should be clearly stated and should be feasible to achieve within the time frame. Other published work relevant to the problem (both international and local) should be comprehensively covered and critically evaluated. An appropriate study design and method should be used to achieve the objectives stated. The results should be appropriately analysed, interpreted and presented effectively. The discussion should include comments on the significance of results, how they agree or differ from published work. If they differ, the probable reasons for these differences need to be discussed. Theoretical / practical applications of the results, if any should be given. The conclusions should be valid and be based on the results obtained on the study.

Ethics: The candidate should confirm and document that procedures followed were approved by the Ethical Committee of the institution where the work was carried out and ethical approval was obtained by a recognized Ethical Review Committee.

The trainee is required to make a short (10 min.)presentation of the project proposal in May / December of their year 1 post MD training to obtain a feedback from other trainers and invitees, regarding feasibility, appropriateness of study design and method and statistical considerations, prior to commencement of the project.

Prior to submission of the dissertation, the trainee will be required to make a short (15 – 20 minutes) presentation of the project once completed, to the SBSO members and other invitees This will give the trainee an opportunity to discuss his / her work and obtain a feedback from peers and colleagues. It will not be used for evaluation in any form. The supervisors will also be invited for these presentations.

The trainee will be questioned on the dissertation at the viva-voce examination.

If at any time the supervisor is not satisfied with the work progress of the trainee, the trainee should be made aware of the deficiencies and corrective measures suggested. This should be conveyed in writing to the trainee with a copy to the SBSO. In such instances, a follow-up report should be forwarded within three months or earlier if necessary to the SBSO.

ANNEX 5

DISSERTATION PROGRESS REPORT

To be forwarded by the supervisor to the SBSO at least once in SIX months

Name of trainee:

Training Centre:

Supervisor:

Title of project:

Description of work carried out to date:

To be filled in by trainee: briefly describe progress in lab / field work and dissertation writing

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Supervisor's comments

Is the work on schedule? Yes / No

Progress in dissertation writing: satisfactory / unsatisfactory

Constraints (if any)

Recommendation of supervisor:

Signature: Date:

Recommendation of the SBSO:

Signature of Secretary : Date:

ANNEX 6

DISSERTATION SUBMISSION FORMAT

General instructions

It is essential to start writing the dissertation early and in all cases before the data collection is completed. At the same time, you should make arrangements to have your manuscript word-processed. Your supervisor should be consulted before you start to write and thereafter at regular intervals. It is much easier to make corrections if the draft is double-spaced and printed on only one side of the paper.

The past tense should be used. To avoid exceeding the given word limit, it is suggested that an approximate running total is kept. The metric system and the International System (SI) of units should be used whenever possible.

Length

An ideal length of text is approximately 8000 words, which equals to about 20 - 30 pages. With figures, references, etc., the total length is likely to be in the region of 30 - 40 pages.

Number of copies

Three copies should be submitted to the Director/ PGIM, spiral-bound in the first instance. One will be retained in the PGIM, one will be sent to the internal examiner and one to the overseas examiner. After acceptance (and necessary corrections), all three copies should be bound in hard covers (black) with the author's name, degree and year printed in gold on the spine. The front cover should carry the title, author's name and year printed in gold. One copy will be returned to the student, one retained by the supervisor, and the third housed in the PGIM library.

Layout

The dissertation should be word-processed and printed single-side only, on A4-size photocopying paper.

Layout of typescript

There should be 1.5" on left-hand and top margins, and 1.0" on right-hand and bottom margins. It is especially important that the left-hand (binding) margin is of the regulatory size.
Line spacing should not be less than 1.5.
Lettering should be in Times New Roman, font size 12.
All pages should be numbered consecutively throughout, including appendices. Page numbers should be inserted in the bottom right hand corner.
Tables, diagrams, maps and figures

Wherever possible, these should be placed near the appropriate text. Tables should be numbered in continuous sequence throughout the dissertation. Maps, graphs, photographs, etc., should be referred to as Figures. Each of these should also be numbered in a continuous sequence. Colour should be avoided in graphic illustrations (unless it is essential) because of the difficulty of photographic reproduction; symbols or other alternatives should be used instead.

Notes

Notes, if essential, should be inserted, in reduced font, at the foot of the relevant page. If too voluminous for this to be practicable, they should be placed in an Appendix. Notes may be typed in single spacing.

Abbreviations

Where abbreviations are used, a key should be provided.

Preliminaries

The preliminaries precede the text. They should comprise the following:

Title page

Title of dissertation
Author's name
MD (Surgical Oncology)
Post Graduate Institute of Medicine
University of Colombo
Date of submission

Statement of originality: The work presented in the dissertation should be the trainee's own and no part of the dissertation should have been submitted earlier or concurrently for any other degree. The statement should be signed by the author, and countersigned by the supervisor.

Abstract: Should be structured (introduction, objectives, method, results, conclusions) Should not include figures, tables, graphs or references Should be limited to 500 words or less

Table of contents: The table of contents immediately follows the abstract and lists in sequence, with page numbers, all relevant divisions of the dissertation, including the preliminary pages.

List of tables: This lists the tables in the order in which they occur in the text, with the page numbers.

List of figures: This lists all illustrative material (maps, figures, graphs, photographs etc.) in the order in which they occur in the text, with the page numbers.

Acknowledgments

Text

The dissertation should be divided into clearly defined chapters. Chapters may be subdivided and a decimal number system can be helpful to identify sections and subsections. Topics of the sections should not be mixed, e.g. Results should not appear in the Materials and Methods.

> Section 1 – Introduction: The current position and the reasons for carrying out the present work (Rationale /Justification and problem/s identified and quantified.) Hypothesis and expected outcome, impact and relevance of the study should be stated. Generally, only a few references should be cited here.
>
> Section 2 – Literature Review: This section should be reasonably comprehensive, and most of the references to be quoted normally occur here. The relevant references dealing with the general problems should be reviewed first and this should be followed by a

detailed review of the specific problem. The review is in many cases approached as a historical record of the development of knowledge of the subject.

Section 3 – Objectives Clearly defined, general, specific and any subsidiary objectives should be stated

Section 4 – Materials and Methods: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed

Section 5 – Results: Presentation of data in a logical sequence commencing with the basic / baseline characteristics of the subjects. Summarize the data with a figure, table or graph when appropriate Present appropriate statistical analyses and interpretations. Each figure, table or graph should be complete and clear without reference to the text. Concise explanations in legends and explanation of abbreviations are needed. The text should complement the figure, table or graph not simply describe them but should give valid interpretations of the results. Complete (raw) data should not be included but should be contained in tables in an Appendix if needed. Only data from the present study should be included and in particular no comparison should be made at this stage with results from other studies.

Section 6 – Discussion: Interpret and explain the results so as to provide answers to the study question(s). Comment on the relevance of these answers to the present knowledge of the subject. Consider alternate interpretations. Comment on interesting or unexpected observations and about the method. Critically compare the results with results and conclusions of other published studies within and outside the country, and explain possible reasons for any differences observed. Comment an unexpected outcomes Comment on further follow-up research required on the subject.

Section 7 Limitations Any inherent and / or inadvertent limitations / biases and how they were dealt with should be described

Section 8 Conclusions and recommendations: Based of the results of the study and to address the objectives

References

These are given so that the reader can refer to the original papers for further study. Uniformity is essential, but errors and inconsistencies are very common and authors are advised to check the references most carefully. Examiners will mark students down for inconsistencies in their references, either omissions or failure to follow the recommended format as given in the following section.

References are very important and must be complete and accurate. All literature referred to should be listed in a consistent form and style, and must contain sufficient information to enable the reader to identify and retrieve them.

There are different styles of citing sources, listing references and compiling a bibliography. The Vancouver style is widely accepted in scientific writings, and is recommended for MD (Surgical Oncology) dissertation.

List all references that are cited in the text, using the Vancouver System

Type the references double - spaced in the Vancouver style (using superscript numbers and listing full references at the end of the paper in the order in which they appear in the text). Online citations should include date of access. Use Index Medical for journal names. If necessary, cite personal communications in the text but do not include in the reference list. Unpublished work should not be included. References should be listed in the following style:

The arrangement of the references at the end of the dissertation should be in numerical order as they are cited in the text.

The order of the items in each reference should be:

For journal references: name(s) of author(s), title of paper, title of journal, year, volume number, and page numbers.

(b) For book references: name(s) of author(s), title of book, edition, volume, town of publication, publisher. Year, chapter and/or page number
Authors' names should be in roman letters, and arranged thus:

Smith, C.O., James, D.E.Frank, J.D.

Where an author's name is repeated in the next reference it should also be spelt out in full.

The title of the paper is then included, without quotation marks. The journal title should be unabbreviated, *in italics*, and be followed by year; **volume number in bold** (the issue /number): and the first and last page numbers.

1 Ford D, Easton DF, Bishop DT, et al.: Risks of cancer in BRCA1-mutation carriers. Breast Cancer Linkage Consortium. *Lancet* **(**8899): 692-5, 1994.

2: Edge SB, Byrd DR, Compton CC, et al., Eds.: Breast. In: AJCC Cancer Staging Manual. 7th ed. New York, NY: Springer, 2010, pp 347-76.

3. World Health Organization. *Priority Medicines for Mothers and Children* 2011. Department of essential medicines and pharmaceutical policies. Geneva, World Health Organization 2011 (WHO/EMP/MAR/2011.1).

Websites

Author's name (if available) must be listed first, followed by the full title of the document in italics, the date of publication or last revision (if available), the full http address (URL). and the date accessed in parentheses

Examples:

National Institute for Health and Clinical Excellence. *Induction of Labour NICE Clinical Guideline 70, 2008.* available at http://www.nice.org.uk/CG070fullguideline (Accessed 21 October 2011)

Hofmeyr JG. *Antenatal corticosteroids for women at risk of preterm birth: RHL Commentary* (last revised 2 February 2009) The WHO Reproductive Health Library 2011, Geneva, World Health Organization www.who.int/rhl . (Accessed 21 October 2011)

Crowther CA, Hardin JE. *Repeat doses of prenatal corticosteroids for women at risk of preterm birth for preventing neonatal respiratory disease.* Cochrane Data Base of Systematic Reviews 2007, Issue 3. Art .No: CD003935. DOI: 10.1002/ 14651858. CD003935 pub 2. (Accessed 21 October 2011)

ANNEX 7

DISSERTATION MARKING SCHEME

The two examiners appointed by the SBSO shall use the following marking grid to allocate marks for the dissertation.

1. Title (05)
2. Author's name and address
3. Abstract (10)
4. Table of contents
5. List of tables
6. List of figurers
7. Introduction (20)
8. Objectives (15)
9. Review of literature (20)
10. Materials and methods (50)
11. Results (40)
12. Discussion (including limitations) (45)
13. Conclusion and recommendations (if any) (10)
14. Acknowledgements
15. References (15) (Vancouver system should be used)
14. The overall presentation (20 marks)

Two examiners will be appointed by the SBSO to assess and award a mark independently out of 100 using the marking system described above. The final mark for the dissertation out of 200 shall be the total of the marks given by each examiner.

To Pass the Dissertation the trainee should score 60 % or more. If it is less than 60% the trainee should resubmit the Dissertation at a prescribed date attending to the recommended amendments and improvement for reassessment by the same pare of examiners. At the repeat assessment the maximum mark to be awarded shall be 60%. This process to be continued in the same manner until the minimum 60% is obtained.

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

TRAINING PORTFOLIO - SECTION 2 (POST MD)
LOG OF CLINICAL ACTIVITIES

DOCTOR OF MEDICINE (MD)

AND

BOARD CERTIFICATION
IN
Surgical Oncology

2014

Speciality Board in Surgical Oncology

Board of Study in Surgery

Post Graduate Course Conducted by

Board of Study in Surgery for Oncological Surgery

Post Graduate Institute of Medicine,

University of Colombo

Training Portfolio - Section II (Post MD)

Introduction

Candidates who are successful at the MD (Surgery) Part II Examination have to complete a total 36 – month period in-service training: a 24 month period in Sri Lanka as a Senior Registrar and minimum of another 12 month period at a centre abroad. During this 36 month period, the trainee has to document the progress during this training period and maintain a comprehensive record in the form of a Training Portfolio. This will enable the Trainee to reflect on his training experience and identify and correct any weaknesses in the competencies expected from him, and also recognise and analyse any significant clinical events experienced, so that appropriate changes in management could be adopted in order to reduce the risks arising from such situations in the future. The Trainer needs to conduct regular assessments and certify that the Trainee has satisfactorily acquired the required competencies. This Training Portfolio will be used to evaluate the trainee's competence to practice independently as a Specialist in Surgical Oncology at the Pre Board Certification Assessment.

Objectives

To be appointed as a Specialist in Oncological Surgery to practice independently in Sri Lanka, on completion of the 36 – month period in-service training after the MD (Surgery) Part II Examination, the Trainee should:

have administrative and organizational skills

be able to clearly document and prioritize problems

have skills appropriate to a specialist (diagnostic, operative, counselling, risk management, management of medico-legal issues)

have appropriate attitudes

be able to carry out and also supervise research and clinical audits

be committed to Continuous Professional Development

be able to disseminate knowledge effectively

have adequate knowledge of the English Language and be able to communicate effectively

have adequate knowledge and skills in Information Technology

COMPONENTS

PAGE

C1. LOG OF SURGICAL PROCEDURES PERFORMED INDEPENDENTLY (SKILL LEVEL 3)

Trainee should document on a book, using the given procedure headings

Procedure

Breast surgery

Treatment of breast abscess

Fine needle aspiration cytology with and without ultrasound scan guidance

Core biopsy with and without ultrasound scan guidance

Excision of breast lump

Mastectomy (modified radical, radical)

Wide excision of breast tumours

Axillary dissection

Breast reconstruction - TRAM flap , Latismas dorsi flap, DIEP flaps and prosthesis

Regional flaps for mastectomy defects of advance and recurrent breast carcinoma

Sentinel node biopsies

Oncoplastic breast reductions

Sarcoma

Core biopsy for bone and soft tissue sarcoma (with or without image guidance)

Open biopsy for bone and soft tissue sarcoma

Wide local excision for upper limb soft tissue sarcoma

Wide local excision for lower limb soft tissue sarcoma/ compartmental excision

Upper limb amputations minimum of one forequarter amputation

Lower limb amputations minimum of one hindquarter amputation

Surgery for retroperitoneal sarcoma

Surgery for GIST

Surgery for recurrent limb sarcomas

Surgery for recurrent retroperitoneal sarcomas

Head and Neck

Perform examination under anasteasia and evaluate the tumour for extent, resectability and do open biopsy

Perform cervical lymph node biopsy

cervical block dissections and its varieties

Perform superficial conservative parotidectomy

Total conservative parotidectomy

Radical parotidectomy

submandibular sialadenectomy

Perform total thyroidectomies

Lip resection and reconstruction with local advancement or free flaps

Surgical procedures of resection of oral cavity cancers and reconstructive options including local flaps, distant pedicel flaps and free flaps

Surgical procedures of resection of tumours of oropharynx and reconstructive procedures

Total Laryngectomy

Procedure of mandibular resection and reconstruction with local flaps, distant pedicel flaps and free flaps

Procedures of maxillectomy and anterior craniofacial resection.

Perform resection of skin cancers in the face and scalp and reconstructive options

Reconstruction after major ablative surgery

The trainee should have the skills to create the relevant pedicle or free flap according to the defect and site.

Some common free flaps the trainee should know

Radial forearm facio-cutaneous flap

Latissimus dorsi mayo-cutaneous

Iliac crest ossio-mayo- cutaneous

Fibulae ossio-mayo- cutaneous

Gastrointestinal

- Flexible UGI endoscopy
- Rigid endoscopy
- Oesophageal dilatation

- Endoscopic stenting of the oesophagus
- Trans hiatal (Oringer's) oesophagectomy
- Ivor Lewis's two stage oesophagectomy
- Three field Oesophagectomy*
- Palliative Oesophagectomy for advance and recurrence (following radiotherapy) oesophageal carcinoma
- D1 Gastrectomy
- D2 Gastrectomy
- D3 Gastrectomy*
- Gastro-oesophagectomy*
- Palliative gastro-jejunostomy
- Laparoscopic assessment for resectability
- Open cholecystectomy for carcinoma of gallbladder
- Radical cholecystectomy
- Liver segmentectomy with cholecystectomy
- Choledoco-jejunostomy by-pass procedures
- cholecysto-jejunostomy by-pass procedures
- Pancreatico-duodenectomy (Whipple's procedure)
- Left Hepatic Lobectomy/ Hepatectomy
- Right Hepatic Lobectomy/ Hepatectomy
- Segmentectomy
- Wide local excision of small liver lesions
- Open liver biopsy

Perform the procedure of resection anastomosis of small bowel

Palliative bypasses operations for intestinal obstruction

External stoma creations

- Lower GI Endoscopy for diagnostic biopsy & screening purposes
- Lower GI Endoscopy & snare polypectomy
- Anterior resection with anastomosis with staplers and with hand suturing
- Laparoscopic anterior resection *
- Open Abdomino-perineal excision and end colostomy formation

- Laparoscopic Abdomino-perineal excision and end colostomy formation*
- Posterior exenteration
- Anterior pelvic exenteration
- Total pelvic exenteration
- Palliative colonic resections and stoma creations for advance tumours
- Perform biopsies and surgical resections of lymphomas of the gastrointestinal tract as a standard surgical procedure appropriate to the involve part of the GI tract
- Perform the standard surgical procedures for **Neuroendocrine tumours** relevant to the involved system

Laparoscopic and open splenectomies for splenic secondaries and hypersplenism of blood malignancies

Urology

Radical nephrectomy

Partial nephrectomy*

Radical nephroureterectomy

Cystoscopy

TURBT *

Radical cystectomy with lymphadenectomy

Ileal conduit

Mainz II Pouch*

Ureteric replacements*

Boari Flap

Appendix

Ileum

Circumcision

Biopsy of the penis lesion

Partial amputation of the penis

Total amputation of the penis

Inguinal block dissection

External Iliac lymphadenectomy

Transrectal biopsy of the prostate with or without ultrasound guidance

Sub-capsular orchidectomy

Radical Prostatectomy*

Inguinal exploration of the testis

Radical Inguinal Orchidectomy

Para-aortic (Retroperitoneal) lymphadenectomy

Open adrenalectomy

Laparoscopic adrenalectomy*

Gyneacological Surgeries

Total abdominal Hysterectomy with bilateral salpingo-oophorectomy*

Salpingo-oophorectomy*

Total Omentectomy and Para-aortic (Retroperitoneal) lymphadenectomy*

Pelvic nodal dissection*

Skin Cancers

Wide local excision of primary cutaneous malignancy with primary closure

Wide local excision of primary cutaneous malignancy with regional flaps

Wide local excision of primary cutaneous malignancy with free flaps

Lymph node dissection (Axilla, Inguinal, Cervical)

*** The trainees are expected to observe or assist the above procedures. If the trainee could not achieve the adequate number, it is the responsibility of both trainee and trainer that the trainee is send to centre where he can obtain the relevant experience prior to completion of the local training. The SBSO assessment committee will evaluate the trainees log book for the adequacy of Oncosurgical Procedures before the trainee leave for overseas training.**

SURGICAL PROCEDURES PERFORMED INDEPENDENTLY, ASSISTED OR OBSERVED (SKILL LEVEL 3) – (EXAMPLE)

01. Breast surgery

No	Name	Age	Surgery	BHT No / Hospital	Observed/ Assisted/ Performed	Date of Surgery	Signature of Supervisor
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

C2. SUMMARY OF TASKS

Audits- [2]

Research projects- [1]

Lectures to Medical Students / Doctors - [5]

Attending specialized training away from place of work- [3]

Writing Reports [2]:

Reflective practice [16] * Four (4) significant clinical events which you think are important for you to reflect

Journal clubs [6]

CME Article discussion [2]

Clinico- Pathology meetings [3]

Workshops - attendance [4]

C3. REFLECTIVE PRACTICE

Learning to reflect on and learn from difficult clinical situations in which you have been directly involved, is a vital part of continuous professional development in being a good doctor. This is an integral part of clinical risk management which requires the recognition and analysis of significant clinical situations so that appropriate changes in management could be adopted to reduce the risks arising from such situations in the future. Reflective practice enables you to describe what happened and why, justify or identify any possible lapses in your management, what you have learnt from this experience and, most importantly, what you would do differently next time, considering current best available evidence.

Use the reflective practice format to document and analyse 12 out of the 16 clinical scenarios specified in the section Specific Tasks. In addition to this, whenever you are involved in a difficult clinical situation, record the event and your thoughts about it in the reflective practice format. Discuss as soon as possible with your Trainer at least four such clinical events that you think you should reflect on, especially cases that has been particularly distressing for you. You may need to examine previously held beliefs about your practice and accept that you may have been wrong and therefore need to change your practice. This process will help you to recognize and learn from prior experiences and improve your clinical practice. It is your responsibility to gather and record the material required for this process. The material you record will demonstrate your ability to maintain good continuous professional development by using every learning opportunity to be a reflective self-directed learner. Each clinical event you reflect on will be evaluated by your trainer.

1.2 REFLECTIVE PRACTICE DOCUMENTATION – (Guideline to trainee)

Describe the management of the selected case:

What problems did you see and observe?

What did you do?

Justification for what you did:

What did you learn from this experience?

What is done differently in other clinical units: local and foreign?

What would you do differently next time?

Evidence for suggesting these changes:

Has this experience highlighted any deficiencies in your training?

What learning needs did you identify from above?

Have you addressed these learning needs? If so How?

Summary of discussion with Trainer:

……

……

Comments of the trainer:

……

Comments of the trainee:

……

Assessment: mark/grade

Signature of Trainer: Signature of Trainee: Date:

Comments of the External Assessors:

……

…… Date:

ASSESSMENT OF REFLECTIVE PRACTICE

Documentation Skills :

Clarity, Brevity, Correct sequence, Focused presentation

	Marks
Bad Failure	**7**
Borderline failure	**8**
Pass	**9**
Good pass	**10**
Excellent pass	**11**

Reflective Ability

		Marks
Bad Failure	**Has not completed Reflective cycle**	**7**
Borderline Failure	**Has only described the learning experience**	**8**
Pass	**Analysed the reasons for the experience & the reasons for outcome**	**9**
Good Pass	**Evaluated how the outcome could have been different if a different course of action was taken**	**10**
Excellent Pass	**Provided high quality evidence for implementing changes**	**11**

Signature of Trainer: ……....

Date: ……/……/……..

C4. LECTURES/TEACHING (undergraduates / postgraduates/nurses)

	Grade / Marks	Date	Review Date	Signature of Trainer
Teaching a Small Group (< 10)				
Teaching a Large group (> 20)				
Bed- side Clinical Teaching				
Teaching Practical Procedure (One to one / small group)				
Organization of Teaching Seminars/Workshops				

C5. RESEARCH, AUDIT, CLINICAL RISK MANAGEMENT & GOVERNANCE

	Grade / Marks	Date	Signature of Trainer	Review Date	Signature of Trainer
Ability to Assist, Monitor and Supervise a Research Project					
Scientific writing					
Critically Appraise a Scientific Paper					
Perform an Audit					
Prepare or Revise a Guideline or Care-pathway					
Organizing Risk Management Meetings					
Oral Presentations / Guest lectures at Local / Regional / National or International Conferences					

C6. INFORMATION TECHNOLOGY

	Grade / Marks	Date	Signature of Trainer	Review Date	Signature of Trainer
Use of computer software - **MS Office** **SPSS** **Epi Info**					
Internet, World Wide Web & E mail					
Literature Search using **PubMed** **Cochrane Data Base** **WHO-RHL** **Google**					

C7. ETHICS AND MEDICO LEGAL ISSUES

1. Consent
2. Next of kin issues
3. Divulging of information
4. Breaking bad news
5. Management of dying patient
6. Conflicts with colleagues

C8. PROFESSIONAL DEVELOPMENT

	Grade / Marks	Date	Signature of Trainer	Review Date	Signature of Trainer
Responsibility and initiative					
Reliability regarding patient Care					
Team work ability					
Leadership skills					
Communication and rapport with patients					
Communication with colleagues					
Relationship with the other professionals					
Documentation and organizational skills					
Issuing signed certificates					
Written communications					
Participation in SLCS Activities & hands on workshops					

GUIDELINES TO TRAINEES ON ASSESSMEN OF PROFESSIONAL DEVELOPMENT

Assessment of Generic skills (administration, documentation, attitude, feedback from other staff

Trainers should always accentuate the positive comments and have a critical yet constructive approach for progression.

Administration, documentation, attitudes

Mini Clinical Evaluation Exercises (mini-CEX)

The Trainer observes and assesses the Trainee directly, during the process of history taking

Clinical examination, formulating management plans and communicating with

Patients. Results should be fed back and discussed immediately after the assessment.

Case-based Discussions

Hypothetical case discussions with Trainees.

- Relevant to knowledge criteria and competences
- assess clinical decision making, knowledge and application of knowledge.
- each case-based discussion should involve slightly different clinical situations in the area to be tested.
- Discussion should focus on the information that would be given to the patient and recorded in the notes

Objective Structured Assessment of Technical Skills

- The Trainer observes and assesses the Trainee directly, when the Trainee is carrying out a procedure
- A pre-determined format (which will vary depending on the procedure) will be used for the assessment

Peer Team rating forms

Not a confidential document and the trainee should be aware of the contents.

This process of 'multisource feedback' is intended to provide information for both the Trainee and the Trainer about the Trainees relationships with staff and patients etc. It is only one element of the information that helps the Trainer to assess whether the Trainee is are progressing well

The selected assessors should include:

at least three senior medical colleagues
senior nurses
member of the theatre team
staff from the specialist clinics that the trainee has been working in
anaesthetic colleagues

Review of Progress by the Trainer

The Trainers should conduct reviews of the Trainee's progress after there (3), nine (9), fifteen (15) and eighteen (18) months of the training period.

During these reviews the trainee's specific strengths and areas which need improvement should be identified.

1. **Review after three months**

Strengths……

Areas for improvement…….

General comments…….

Signature of Trainer: ……

Date: ……..

2. **Review after nine months**

Strengths……

Areas for improvement…….

General comments…….

Signature of Trainer: ……

Date: ……..

3. **Review after fifteen months**

Strengths……

Areas for improvement…….

General comments…….

Signature of Trainer: ……

Date: ……..

4. **Review after eighteen months**

Strengths……

Areas for improvement…….

General comments…….

Signature of Trainer: ……

Date: ……..

ANNEX 9

FORMATIVE ASSESSMENT OF THE PORTFOLIO (F.5)

Documentation:

Clarity, Brevity, Correct sequence, Focused presentation

	Marks/10
Fail	**3**
Borderline	**4**
Pass	**5**
Good pass	**6**
Excellent pass	**7+**

Surgical skills:

Number, different types, competency

	Marks/10
Fail	**3**
Borderline	**4**
Pass	**5**
Good pass	**6**
Excellent pass	**7+**

CPD Activities

Workshops, Seminars, Conferences

	Marks/10
Fail	**3**
Borderline	**4**
Pass	**5**
Good pass	**6**
Excellent pass	**7+**

Reflective Ability

		Marks/10
Fail	**Has not completed Reflective cycle**	**3**
Borderline	**Has only described the learning experience**	**4**
Pass	**Analysed the reasons for the experience & the reasons for outcome**	**5**
Good Pass	**Evaluated how the outcome could have been different if a different course of action was taken**	**6**
Excellent Pass	**Provided high quality evidence for implementing changes**	**7+**

5. Teaching (undergraduates/ nurses)

	Marks/10
Fail	**3**
Borderline	**4**
Pass	**5**
Good pass	**6**
Excellent pass	**7+**

Total Mark out of 50 Examiner 1=

Total Mark out of 50 Examiner 2=

Mark out of 100 =

Signature of Examiner 1: ……....

Signature of Examiner 1: ……....

Date: …../……/……

ANNEX 10
FORMAT FOR PROGRESS REPORT ON TRAINEES

NAME OF TRAINEE:

PERIOD OF TRAINING: **SPECIALTY:**

HOSPITAL AND UNIT: **COUNTRY:**

NAME OF THE CONSULTANT:

	Excellent	**Good**	**Average**	**Poor**
Theoretical knowledge				
Clinical decision making				
Clinical skills				
Operative skills				
Ability to cope with emergencies & complications				
Thinks independently & rationally				
Seek appropriate consultations				
Ability to follow instructions				
Quality of documentation				
Dedication to work				
Professional attitudes				
Reliability				
Availability/punctuality				
Communication skills				

Doctor-patient relationship

Relationship with colleagues

Relationship with other staff

Supervises & help juniors

Teaching of medical students/junior staff

Other Comments:

ANNEX 11
FORMAT FOR PROGRESS REPORT- OVERSEAS APPOINTMENT

NAME OF TRAINEE:

PERIOD OF TRAINING: **SPECIALTY:**

HOSPITAL AND UNIT: **COUNTRY:**

NAME OF THE CONSULTANT:

	Excellent	**Good**	**Average**	**Poor**
Theoretical knowledge				
Participation in Educational Activities (Seminars/ workshops/ Journal club/ Clinical meetings)				
Research interest				
Clinical decision making				
Clinical skills				
Operative skills				
Ability to cope with emergencies & complications				
Thinks independently & rationally				
Seek appropriate consultations				
Ability to follow instructions				
Quality of documentation				

Dedication to work

Professional attitudes

Reliability

Availability/punctuality

Communication skills

Doctor-patient relationship

Relationship with colleagues

Relationship with other staff

Other Comments:

ANNEX 12

PEER TEAM RATING FOR ASSESSMENT OF REGISTRARS/ SENIOR REGISTRARS

PTR Form

(Rater Assessment 1-20)

PGIM Roll No. **Date of assessment (DD/MM/YY)** **Year training**

PGIM/ | | | | | / | | | - | | | | | | | | | | 1 2 3 4 5 6

Name of Rater

(You can remain Anonymous)

Please indicate your profession by filling in one of the following circles

Consultant	Registrars	SHO or HO	Other Specify
Allied Health Professional	SR	Clerical or Secretarial Staff	……

Please mark one of the circles for each component of the exercise on a scale of 1 (extremely poor) to 9 (extremely good). A score of 1-3 is considered unsatisfactory, 4-6 satisfactory and 7-9 is considered above that expected, for a trainee at the same stage of training and level of experience. Please note that your scoring should reflect the performance of the trainee against that which you would reasonably expect at their stage of training and level of experience. You must justify each score of 1-3 with at least one explanation/example in the comments box, failure to do will invalidate the assessment. Please feel free to add any other relevant opinions about this doctor's strengths and weaknesses.

THE PTR IS NOT AN ASSESSMENT OF KNOWLEDGE OR PRACTICAL SKILLS

1.	**Attitude to staff: Respects and values contributions of other members of the team**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
2.	**Attitude to patients; Respects the rights, choices, beliefs and confidentiality of patients**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
3.	**Reliability and punctuality**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
4.	**Communication skills: communicates effectively with patients and families**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
5.	**Communication skills: communicates effectively with healthcare professionals**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
6.	**Honesty and Integrity, do you have any concerns?**				**Yes**			**No**		

7.	**Team player skills: Supportive and accepts appropriate responsibility; Approachable**								
	Don't know	1	2	3	4	5	6	7	8	9
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
8.	**Leadership skills: Takes responsibility for own actions and actions of the team**								
	Don't know	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		
9.	**OVERALL PROFESSIONAL COMPETENCE**								
	Don't know	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
		UNSATISFACTORY			SATISFACTORY			ABOVE EXPECTED		

Comments about the trainee (BLOCK CAPITALS PLEASE) – Write in English/ Sinhalese/ Tamil

(You can remain Anonymous)

Your Signature:

Please place form in the attached self-addressed envelope and return to the PGIM (PTMU) named on the envelope. DO <u>NOT return to the Registrar or Senior Registrar</u>.

We are very grateful for your independent and honest rating our all trainees.