Curriculum

DrNB Super Specialty

Surgical Oncology

- Introduction
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I. INTRODUCTION

Surgical Oncology covers the treatment of solid tumours of the oro-eosophagogastrointestinal tract, of parenchymal and endocrine organs and of skin, mesenchymal, neurogenic, bone and soft tissues.

Surgical Oncology also includes prevention, genetic counseling, specific diagnostic and staging procedures, rehabilitation and follow-up care. Surgical Oncology is focused on multimodality therapy.

The Surgical Oncologist differs from his colleagues in general surgery in several respects. With rapid advances in surgery, radiation, medical oncology, and new disciplines such as immunotherapy and hyperthermia, the Surgical Oncologist is in a critical position to help integrate these approaches to the management of an individual patient.

It is likewise critical that the Surgical Oncologists have special training that makes it possible for him or her to understand these divergent fields and appreciate their potential roles in treatment. The Surgical Oncologist should take the responsibility for training new residents and educating the general surgical staff of their hospitals and medical institutions to better define the concepts and indications of advances in cancer diagnosis and management.

II. OBJECTIVES OF THE PROGRAMME:

i. Programme Goal

At the end of the course the candidate should have acquired knowledge, skills, aptitude and attitude to be able to function as an independent clinician/ consultant and a teacher.

ii. Programme AIMS

The trainee should achieve such knowledge during the training period that he/she after qualification, independently or as a responsible surgical member of an interdisciplinary oncology team is able to:

- Recognize symptoms and signs of cancer
- Make a diagnostic programme for suspected tumours or metastasis and perform
- Staging and classification of manifest tumours

- Perform prognostic assessment -4
- Define the role of surgery in a given classified disease reflecting the patient's general condition, including or excluding multimodality approaches in a pretreatment discussion within a multidisciplinary team
- Perform an adequate preoperative work-up
- Perform cancer surgery within his/her specialty with high skill and quality
- Manage postoperative care
- Decide on and perform adequate follow-up
- Implement national guidelines into local practice
- Perform palliative surgical treatment, supportive and terminal care
- Diagnose, score and treat side-effects and complications of surgical treatment
- Assess the impact of surgical interventions on quality of life
- Communicate accurately and adequately to cancer patients and their relatives
- Manage common psychologic reactions to crisis and final stage of life
- Practice medicine in accordance with medical ethics and patient's rights

The surgical oncologist should be specially trained to perform unique and complicated surgical procedures, such as resection of soft tissue sarcomas and total pelvic exenteration, not normally performed by the community-based general surgeon. It is expected that general surgeons will perform most of the standard cancer resections, with more complex and less frequently performed procedures being handled by specialists in surgical oncology.

The surgical oncologist should be involved with clinical and basic science research activities in oncology and should help to organize clinical protocols for the study of cancer patients

Management of each patient's care should be coordinated with medical oncologists, radiation therapists, and other disciplines in the practice of medicine as needed, in order to establish the highest possible standards of care for treatment of cancer

Finally, surgical oncologists must lead fellow surgeons who remain the primary treatment source for most patients with malignant disease. Such leadership includes establishment of protocols for research, convincing colleagues that patients should be entered into clinical trials and other studies, helping to explain the results of such trials, and being critical of ineffective or poorly conceived studies. Thus the surgical oncologist will both

direct and stimulate better investigation and treatment, and also provide a critical viewpoint as new and innovative management approaches come to the clinical arena.

iii. Cancer Prevention

Medical oncologists—because of their knowledge of neoplastic disease and because of their recognition of social, occupational, nutritional, and sexual practices that contribute to neoplasia—have a special obligation among physicians to educate the general public, including other professionals with a less intense interest in cancer prevention. Smoking is the principal correctable cancer-inducing activity. Medical oncologists should counsel patients and families about good nutrition and healthy sexual practices. This is entirely appropriate for conditions known to be associated with a genetic predisposition, but not for all types of cancer. It is usually the medical oncologist's responsibility to assess the risk for a particular disease and to conduct the necessary surveillance.

iv. Clinical Research

No cancer is so well treated that an improvement in outcome or therapeutic approach cannot readily be imagined. Thus, research is imperative. Furthermore, therapies that allow preservation of the involved organ are much to be desired, and investigations that have led, in many patients, to breast preservation, limb salvage, bladder conservation, and avoidance of abdomino-perineal resection are major dividends in the treatment of cancers in these organs. Although in these instances it would appear self-evident, measuring the quality of life is now quantitatively valid and has added a major opportunity to each value judgment. Every established paradigm of medical oncologic management arose from some investigative effort. In many instances, these were one-armed studies that were so successful they became adopted.

Every oncologist's office should be a research station. Every oncologist during his or her training be exposed to, and almost always be a participant in, clinical research. Virtually no regimen or treatment for any tumor is entirely satisfactory. There is much reason to anticipate that progress would be more rapid if clinical research were accepted as an integral part of the practice of medical oncology so that more oncologists and patients would participate than at present. The technology exists in medical informatics for community oncologists to ally themselves with their alma mater or other academic centers to participate in diagnostic, preventive, and therapeutic research trials using the computer, e- mail, and fax as expedient tools. As a part of the commitment to medical oncology, a medical oncologist should reserve a certain number of hours per week for participation in clinical research. This has the virtue of maintaining greater currency with ongoing investigation. Clinical investigation should serve as the bridge to fundamental science and the excitement in the new molecular biologic understanding of the cancer cell.

A set-aside for research, however, constitutes the same imperative commitment as a set-aside for education and updating.

v. Objectives:

The following objectives are laid out to achieve the goals of the course. These objectives are to be achieved by the time a candidate completes the course. The Objectives may be considered under the subheadings:

- Knowledge
- Skills
- Human values, Ethical practice and Communication abilities

a) Knowledge

- Describe etiology, patho-physiology, principles of diagnosis and management of malignancies including emergencies, in adults and children.
- Demonstrate understanding of basic sciences relevant to this specialty
- Identify socio-economic, environmental and emotional determinants in a given case, and take them into account for planning therapeutic measures.
- Describe indications and methods for blood transfusion and pheresis.
- Recognize conditions that may be outside the area of his specialty/competence and to interact with other disciplines.
- Update oneself by self-study and by attending courses, conferences and seminars relevant to the specialty.
- Teach and guide his team, colleagues and other students.
- Undertake audit.
- Use information technology tools and carry out research, both basic and clinical, with the aim of presenting or publishing his/her work in various scientific forum or journals.

b) Skills

- Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis & staging of disease.
- Perform common procedures relevant to the specialty.
- Undertake complete monitoring of the patient.

c) Attitude and Communication Abilities

- Adopt ethical principles in all aspects of his/her practice. Professional honesty and integrity are to be fostered. Care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management and to obtain a true informed consent from the patient & breaking of bad news.
- Provide leadership and get the best out of his team in a congenital working atmosphere.
- Apply high moral and ethical standards while carrying out human or animal research.
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

d) Clinical skills and attitudes by

- Demonstration of examination skills in normal subjects & patients by trainer
- Presenting history, demonstrating clinical findings & use of investigations on ward rounds or tutorial sessions
- Presenting cases for group discussion – grand rounds, PG meetings etc, personal study including the effective use of medical literature, review of paper or electronically based problem cases
- Observation of consultant trainers managing clinical problems in day to day practice
- Observation of consultant trainer communicating with patients and members of team in day to day practice
- Clinical teaching: In OPD, ward rounds, emergency, ICU and operation theater
- Bedside clinical training for patient care management and for bedside manners

III. TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include:

- Case presentations & discussion- once a week

- Seminar – Once a week
- Journal club- Once a week
- Grand round presentation (by rotation departments and subspecialties)- once a week
- Faculty lecture teaching- once a month
- Clinical Audit-Once a Month
- A poster and have one oral presentation at least once during their training period in a recognized conference.

The rounds should include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan) interesting and difficult case unit discussions.

The training program would focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

i. **Theoretical:** The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

ii. **Symposia:** Trainees would be required to present a minimum of 20 topics based on the curriculum in a period of three years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

iii. **Clinical:** The trainee would be attached to a faculty member to be able to pick up methods of history taking, examination, prescription writing and management in rehabilitation practice.

iv. **Bedside:** The trainee would work up cases, learn management of cases by discussion with faculty of the department.

v. **Journal Clubs:** This would be a weekly academic exercise. A list of suggested Journals is given towards the end of this document. The candidate would summarize and discuss the scientific article critically. A faculty member will suggest the article and moderate the discussion, with participation by other faculty members and resident doctors. The contributions made by the article in furtherance of the scientific knowledge and limitations, if any, will be highlighted.

vi. **Research:** The student would carry out the research project and write a thesis/ dissertation in accordance with NBE guidelines. He/ she would also be given exposure to partake in the research projects going on in the departments to learn their planning, methodology and execution so as to learn various aspects of research.

IV. SYLLABUS

A trainee in Surgical Oncology has to become familiar with the basic principles of:

- Surgery
- Radiotherapy
- Chemotherapy
- Endocrine therapy
- Immunotherapy
- Evaluation of the choices of treatments
- Adverse effects with these treatments
- Interactions of these treatment modalities with those of surgery

i. Part I

Basic Sciences

A broad knowledge is needed to plan optimal treatment for an individual cancer patient throughout the disease course. The trainee in Surgical Oncology must therefore have a knowledge of fundamental biology of cancer including etiology and epidemiology, natural history of malignant diseases, cancer biology as well as tumor immunology.

a) Etiology and epidemiology of malignant diseases
   - Genetic Predisposition to Cancer
   - Chemical Carcinogenesis
   - Hormones and the Etiology of Cancer

- Ionizing Radiation
- Ultraviolet Radiation Carcinogenesis
- Physical Carcinogens
- Trauma and Inflammation
- Tumor Viruses
- Herpes viruses
- Papilloma viruses and Cervical Neoplasia
- Hepatitis Viruses
- Parasites
- Environmental factors in carcinogenesis

b) Prognosis and natural history of malignant diseases

- Mechanisms and patterns in local, regional and distant dissemination of malignant diseases
- Differences in natural history between hereditary and sporadic forms of cancer
- Diseases predisposing to malignancy e.g. Inflammatory bowel disease or primary sclerosing cholangitis
- Prognostic and predictive factors
- Genetics of hereditary malignant diseases

c) Cancer biology

- Cell kinetics, proliferation, apoptosis and the balance between cell death and cell proliferation
- Angiogenesis and lymphangiogenesis
- Genome maintenance mechanisms to prevent cancer
- Intercellular and intermolecular adhesion mechanisms and signaling pathways
- Potential effects of surgery and surgery-related events on cancer biology (e.g. Angioenesis)

d) Tumor immunology

- Cellular and humoral components of the immune system
- Regulatory mechanisms of the immune system
- Tumor antigeneity
- Immune-mediated antitumour cytotoxicity
- Effect of cytokines on the tumor
- Effects of the tumor on anti-tumor immune mechanisms

- Potential adverse effects of surgery and surgery-related events (like blood transfusions) on the immunological responses

e) Cancer Screening and Early Detection

- Cancer screening and early detection

f) Basic principles of cancer treatment

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ii. Part II

a) Cancer Epidemiology

- Cancer Epidemiology

b) Cancer Prevention

- Prevention of tobacco-related cancers
- Nutrition in the etiology and prevention of cancer
- Chemo-prevention of cancer
- Cytokinetics
- Drug resistance and its clinical circumvention
- Principles of dose, schedule, and combination
- Chemotherapy
- Regional Chemotherapy
- Animal models in developmental therapeutics
- In vitro and in vivo predictive tests
- Pharmacology
- Toxicology by organ system

c) Chemotherapeutic Agents

- Folate Antagonists

- Pyrimidine and Purine Antimetabolites
- Alkylating Agents and Platinum Antitumor Compounds
- Anthracyclines and DNA Intercalators
- Epipodophyllotoxins / DNA Topoisomerases
- Microtubule – targeting anticancer drugs derived from plants and microbes
- Vinca Alkaloids, Taxanes, and Epothilones, Asparaginase
- Recent Advances/concepts

d) Principles of Endocrine Therapy
- Steroid Hormone Binding and Hormone Receptors
- Hypothalamic and Other Peptide Hormones
- Corticosteroids
- Estrogens and Anti-estrogens
- Clinical use of Aromatase Inhibitors in Breast Carcinoma
- Progestins
- Androgen Deprivation Strategies in the treatment of Advanced Prostate Cancer

e) Principles of Cancer Pathology
- Principles of cancer pathology

f) Principles of Imaging
- Imaging neoplasms of the head and neck and central nervous system
- Imaging neoplasms of the thorax
- Imaging neoplasms of the abdomen and pelvis
- Cross-sectional imaging of musculoskeletal neoplasms
- Imaging the breast
- Ultrasound in cancer medicine
- Radionuclide imaging in cancer medicine
- Perspectives in imaging
- Interventional radiology for the cancer patient

g) Principles of Surgical Oncology
- Principles of Surgical Oncology
- Vascular access in cancer patients

h) Principles of Radiation Oncology
- Physical and biologic basis of Radiation Oncology
- Principles of Hyperthermia
- Photodynamic Therapy for cancer

i) Principles of Medical Oncology
- Principles of Medical Oncology

j) Principles of Biotherapeutics
- Immunostimulants
- Active specific immunotherapy with vaccines
- Interferons
- Cytokines: biology and applications in cancer medicine
- Hematopoietic Growth Factors.
- Monoclonal Serotherapy
- Cancer Gene Therapy
- Hepatitis Viruses
- Parasites

k) Neoplasms of the Thorax
- Cancer of the Lung
- Malignant Mesothelioma
- Thymomas and Thymic Tumors

l) Neoplasms of the Female Reproductive Organs
- Neoplasms of the vulva and vagina
- Neoplasms of the cervix
- Endometrial cancer
- Neoplasms of the fallopian tube
- Ovarian cancer
- Gestational Trophoblastic Disease

m) Neoplasms of the Breast
- Neoplasms of the breast

n) Neoplasms of the Skin
- Neoplasms of the skin

o) Malignant Melanoma
    - Malignant melanoma

p) Neoplasms of the Bone and soft Tissue
    - Bone Tumors & Sarcoma of non- osseous tissues

q) Neoplasms of the Hematopoietic System
    - Myelodysplastic Syndrome
    - Acute Myeloid Leukemia in adults
    - Chronic Myeloid Leukemia
    - Acute Lymphocytic Leukemia
    - Chronic Lymphocytic Leukemia
    - Tumors of the heart and great vessels
    - Primary germ cell tumors of the Thorax
    - Metastatic tumors in the Thorax
    - Hairy – Cell Leukemia
    - Hodgkin's Disease
    - Non – Hodgkin's Lymphomas
    - Mycosis Fungoides and the Sezary Syndrome
    - Plasma cell tumors
    - Mast cell Leukemia and other mast cell neoplasms
    - Polycythemia vera and essential thrombocythemia

r) Neoplasms of the Alimentary Canal
    - Neoplasms of the Esophagus
    - Neoplasms of the Stomach
    - Primary Neoplasms of the Liver
    - Treatment of Liver Metastases
    - The Gallbladder
    - Diagnosis and Management of Biliary Tract Cancer
    - Neoplasms of the Ampulla of Vater
    - Neoplasms of the Exocrine Pancreas
    - Neoplasms of the small intestine, vermiform appendix, and peritoneum, colon and rectum & anal canal

s) Neoplasms of the Genitourinary Tract
    - Renal Cell Carcinoma
    - Neoplasms of the Renal Pelvis and Ureter

- Bladder Cancer
- Neoplasms of the Prostate
- Neoplasms of the Penis
- Neoplasms of the Testis
- Neoplasms in Acquired Immunodeficiency Syndrome

t) Neoplasms of Unknown Primary Site
- Neoplasms of unknown primary site

u) Neoplasms in Children
- Principles and practice of pediatric oncology
- Incidence, origins, epidemiology
- Principles of pediatric radiation oncology
- Late effects of treatment of cancer in children and adolescents
- Childhood Acute Lymphoblastic Leukemia
- Pediatric Acute Myeloid Leukemia
- Hodgkin's disease in children and adolescents
- Non – Hodgkin's Lymphoma in children
- Langerhan's Cell Histiocytosis
- Hepatic tumors
- Renal tumors of childhood
- Germ cell tumors
- Neuroblastoma
- Soft tissue sarcoma of childhood

v) Complications of Cancer and its Treatment
- Management of cancer pain
- Anorexia and Cachexia
- Antiemetic Therapy
- Neurologic complications
- Dermatologic complications of cancer chemotherapy
- Skeletal complications
- Hematologic complications of cancer
- Blood bank support
- Coagulopathic complications of cancer
- Urologic complications
- Cardiac complications
- Respiratory complications

- Liver function and hepatotoxicity in cancer
- Gastrointestinal complications
- Oral complications
- Gonadal complications
- Endocrine complications
- Secondary cancers : incidence, risk factors, and management

w) Infections in Patients with Cancer
- Infections in patients with cancer

x) Oncologic Emergencies
- Oncologic Emergencies

y) Other areas in which knowledge is to be acquired:
- Biostatistics, Research Methodology and Clinical Epidemiology
- Ethics
- Medico legal aspects relevant to the discipline
- Health Policy issues as may be applicable to the discipline

z) Rotation and Posting in Other Departments

Name of service/dept	**Duration**
GIS Services	4 months
GUS Services	4 months
Thoracic Services	3 months
Breast services	4 months
Thyroid Services	4 months
Bone & Soft tissue	4 months
Oral Oncology Unit	3 months
Head & Neck Oncology	3 months
Gynaec Oncology	3 months
Radiation Oncology	1 month
Medical Oncology	1 month
Surgical Pathology	1 month
Supportive and Rehabilitative Care	1 month

aa) Optional Rotation

- Clinical rotation at an outside reputable national or international cancer institute as an Observer for 1 month

V. COMPETENCIES TO BE ACQUIRED BY THE CANDIDATES

The trainee in Surgical Oncology must achieve knowledge and skills in performing complex cancer operations in her/his specialty. The final aim with surgical training is to develop skills in performing RO (radical) resections, adequate diagnostic procedures, lymph node dissections and meaningful palliative procedures. The numbers of operations are not fixed but should be guidance to what is needed to accomplish relevant skills.

The trainee should have experience in the following procedures:

i. Breast Unit:

- Modified radical mastectomy
- Radical Mastectomy
- Breast conservation surgery – wide local excision + axillary clearance
- Lumpectomy
- Breast reconstruction

ii. Gastrointestinal unit

- Total radical gastrectomy + reconstruction
- Partial Radical gastrectomy + reconstruction – lower & upper
- Duodenal local excision + reconstruction
- Whipples pancreatic duodenectomy
- Total pancreaticoduodenectomy
- Distal pancreatectomy
- Splenectomy
- Segmental small bowel resection with reconstruction
- Right & left hemicolectomy
- Total colectomy
- Extended colectomy
- APR with TME
- Anterior resection
- Hartmann's procedure
- Pelvic exenteration – anterior / posterior / total

- Wide local excision of rectal / anal tumors
- Colostomy
- Ileostomy
- Mesentric tumors excision
- Retro peritoneal tumor excision
- Right & left hepatectomy
- Extended right & left hepatectomy
- Segmentectomy
- Non Anatomical resection
- Excision of extra biliary tumors with reconstruction

iii. Genitourinary Unit

- Radical Nephrectomy
- Radical cystectomy with reconstruction
- Partial cystectomy
- Radical Prostectomy
- Pelvic lymphadenectomy
- Ureteric Tumor excision with reconstruction
- RPLND
- Radical/High Orchiectomy
- Hemi scrotectomy
- Penectomy – Partial/Total
- Inguinal/Ilio-Inguinal lymphadenectomy

iv. Thoracic Oncology Unit

- Pneumonectomy (R) & (L)
- Lobectomy
- Segmental resection
- Non-Anatomical resection
- Hilar lymphadenectomy
- Mediastinal Tumors resection
- TranshiatalEsophagectomy
- RAO
- Ivor-lewis transthoracic Esophagectomy
- Mckeowns three stage Esophagectomy
- Total Esophagectomy with three field lymphadenectomy

v. Bone & Soft tissue Oncology

- Amputations/Disarticulation
- Forequarter
- Shoulder Disarticulation
- Above and below elbow Disarticulation
- Above and below elbow Amputation
- Ray Amputation
- Hemipelvectomy
- Hind quarter Amputation
- Extended Hemipelvectomy
- Above/Below Knee Amputation
- Hip disarticulation
- Symes Amputation
- Transmetatarsal Amputation
- Limb conserving procedures
- Wide excision with reconstruction with or without Lymphadenectomy of soft tissue and skin tumors
- Compartmental excision with reconstruction

vi. Head and Neck Oncology

- Tracheostomy
- Neck Dissections
- Radical Neck dissection
- Modified neck dissections
- Selective neck dissections
- Hemi mandibulectomy
- Marginal mandibulectomy
- Alveolectomy
- Total Glossectomy
- Hemi glossectomy
- Composite resections
- Partial Maxillectomy
- Total Maxillectomy
- Orbital tumors
- Enucleation
- Exenteration
- Skull Base surgeries
- Wide field laryngectomy

- Conservative laryngectomy
- LaryngopharyngoOesophagectomy
- TrchioEsophagal Prosthesis (TEP)
- Superficial parotidectomy
- Radical parotidectomy
- Excision of submandibular gland tumors
- Hemi thyroidectomy
- Total thyroidectomy
- Wide excision & reconstruction of scalp tumor & other skin tumor of Head and Neck

vii. Gynec Oncology
- Cone excision/ LEEP
- Radical hysterectomy for ca cervix
- Staging laporatomy for ca ovary
- Anterior / Total exenteration

viii. Endoscopic & Laparoscopic procedures
- Eg. TURPT, TURBT, Polypectomy
- Diagnostic & therapeutic Laparoscopic procedures Laparoscopic surgery
- Staging laparoscopy for GI cancer
- Staging laparoscopy for malignant lymphoma
- Laparoscopic resection of malignant tumours

ix. Others
- Melanoma and sarcoma:
- Excision of melanoma
- Regional node dissection
- Regional perfusion
- Surgery of abdominal sarcomas
- Surgery of trunk and limb sarcomas

The surgical oncologist should be involved with clinical and basic science research activities in oncology and should help to organize clinical protocols for the study of cancer patients. Management of each patient's care should be coordinated with medical oncologists, radiation therapists, and other disciplines in the practice of medicine as needed, in order to establish the highest possible standards of care for treatment of cancer. Finally, surgical oncologists must lead fellow surgeons who remain the primary treatment

source for most patients with malignant disease. Such leadership includes establishment of protocols for research, convincing colleagues that patients should be entered into clinical trials and other studies, helping to explain the results of such trials, and being critical of ineffective or poorly conceived studies. Thus the surgical oncologist will both direct and stimulate better investigation and treatment, and also provide a critical viewpoint as new and innovative management approaches come to the clinical arena.

VI. LOG BOOK

A candidate shall maintain a log book of operations (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

This log book shall be made available to the board of examiners for their perusal at the time of the final examination.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s) The candidate will maintain the record of all academic activities undertaken by him/her in log book.

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations
6. Every candidate, at the time of practical examination, will be required to produce performance record (log book) containing details of the work done by him/her during the entire period of training as per requirements of the log book. It should be duly certified by the supervisor as work done by the candidate and countersigned by the administrative Head of the Institution.
7. In the absence of production of log book, the result will not be declared.

VII. RECOMMENDED TEXT BOOKS AND JOURNALS

i. Molecular biology

- Molecular Diagnosis of Cancer, Cotter.F.E
- Molecular Biology for Oncologist, Yarnold.J.R. et al
- Cancer Chemotherapy Handbook, Baquiran Delia

- The Lymphomas, Canellos.G.P.et al
- Chemotherapy Source Book, Perry.M.C
- Leukemia, Henderson. E.S.et al
- Cancer Medicine, Holland. J .F.et al
- Atlas of Clinical Haematology, Begemann
- Text book of Malignant Haematology, Degos.L et al
- Clinical Hematology, Rochard Lee.et al
- Clinical Oncology, Abeloff et Al
- Important Advances in Oncology, Devitha,V.T
- Cancer Principle And Practice Of Oncology, Devitha,V.T. et al
- Decision Making in Oncology Evidence Based Management, Djulbegovic
- .B and Sullivan.
- AJCC Cancer Staging Manual (Americal Joint Committee on Cancer)
- Cancer Treatment, Halnane.E
- Cancer Treatment ,Haske.L
- Oncology for Palliative Medicine, Hoskin Peter And Wendy
- Regional Therapy of Advanced Cancer, Rubin.J.T
- The non Hodgkin's Lymphoma, Magrath.I.
- Comprehensive Text book of Oncology, Vol 1-2,Mossa, A.R
- Oxford textbook of Oncology Peckham. M et al
- A Multi- disciplinary Approach for Physicians and Students, Rubin Clinical Oncology
- Atlas of Diagnostic oncology, Skarin.A.T
- Basic Science of Oncology,TannocK,E.I
- Pediatric Oncology, Philip Lanszowsky
- Comprehensive Text Book of Thoracic Oncology, AisnerJ,at al
- Pediatric Surgical Oncology, Andrassu, R.J
- Breast: Comprehensive Management of Benign and Malignant Disorders, Bland
- Gleenn's Thoracic and Cardiovascular Surgery, Baue.A.E et al
- Surgery of Childhood Tumours, Carachi. R. et al
- Cancer of the Colon, Rectum and Anus, Cohen, A.M
- Atlas of Surgical Oncology, Daly.J.MAndCady.B
- Cancer of the Prostate, Das.S&Crawford ,E.D
- Prostate Cancer, Ernstoff,M.S.et al
- Bone Marrow Transplantation, Forman, S.J
- Minimal Access Surgery in Oncology, Geraghty,J.G.et al
- Clinical Management of Bladder Cancer, Hall,R,R 1999 (Acc.No.3667

- Soft Tissue Tumours, Harms D & Beattie, E.J
- Cancer Surgery, Harvey,J.C and Beattie,E.J
- Testicular Cancer: Investigation and Management, Horwich. A
- Bone Tumor: Diagnosis, Treatment and Prognosis, Huvos. Andrew G
- Reconstrction and Plastic Surgery: Grab's Encyclopedia of flaps.
- Bailey & Love's Short Practice of Surgery ,Manrl, C.V.Russel R.C.G
- Surgical Emergencies , Monson .J. et al
- Gastric Cancer, Nishi.M
- Superficial Bladder Cancer, Pagano.F. et al
- Carcinoma of the Kidney, Testis and Rare Urologic Malignancies, PetrovicH .Z. et al
- Breast Cancer, Roses.D.F
- Breast Cancer, Singlets .D.E
- Atlas of Esophageal Surgery, Skinner D.B.
- Surgery of the Breast: Principles and Art, Spear.S.L. et al.
- Gastric Cancer, Sugimori. T &Sasaki.M.
- Colorectal Cancer, Williams.N.S
- Campbell's Urology, Walsh. et.al
- Soft Tissue, Weiss.S.W. & Brooks J.S.J.
- Urological Oncology Waxmanj, J. Williams.
- Prevention and Early Detection of Colorectal Cancer, Young.G.P. et.al
- Maingot's Abdominal Operations, Zinner M.J.

ii. Anesthesiology

- Pharmacology and Physiology in Anesthetic Practice, Stoelting .R.K
- Anesthesiology: Problem – Oriented Patient Management, Yao .F.S.F.

iii. Head & Neck Oncology

- Essentials of Head & Neck Oncology, Close.I.G.
- Head & Neck cancer: A Multidisciplinary approach, Harrison L.B.
- Complication in Head & Neck Surgery, Ossoff.R.H
- An Atlas of Head & Neck, Lore.J.M.
- Management of Head & Neck Cancer: Multidisciplinary Approach, Million.C.R.
- Color Atlas of Head & Neck Surgery Face, Skull &Neck ,Shah.J.P
- Color Atlas of Operative Technology in Head and Neck Surgery, Parotid.
- Soft Tissue and Reconstructive Surgery. Shah.J.P
- Surgery of Cancer of the Larynx and Related Structures, Silver E.E.

- Multimodality Therapy for Head and Neck Cancer, Snoks.G.B
- Comprehensive Management of Head and Neck tumors, Thawley.S.E et.al
- Basal & Squamous Cell Skin Cancer of the Head and Neck , Weber.R.G.et.al

iv. Oral Oncology

- Burker's Oral Medicine: Diagnosis and Treatment .Lynch. M.A
- Malignant Tumor's of the Mouth. Jaws and Salivary Glands, Langdonj. I.D &Henk. J.M
- Cancer of the Face and Mouth: Pathology and Management for Surgeons. Mcgregor. I.A &Mcgregor. F.M.
- Oral Oncology, (Proceedings of the 3rd International congress on oral cancer), Varma. A. K.

v. Gynecologic Oncology

- Practical Gynaecologic Oncology, Berekj&Hacker .W.F
- Gynecological oncology : Guide to Clinical Management, Blake Peter et.al
- Gynaecologic Oncology: Fundamental Principles & Clinical Practice, Copplegon. M
- New Development in Cervical Cancer Screening and Prevention, Franco. E &Monsoneco. J
- Principles and Practice of Gynecologic Oncology, Hosking W.J et al.
- Ovarian Cancer : Controversies in Management, Gershenson .D.M &Mcguire.W.P
- Essentials of Gynaecologic Cancer, Lakiton.F et al
- Epithelial Cancer of the Ovary, Lawton. Frank. G. et.al
- Hand Book of Colposcopy, Luesely. D. et.al
- Cancer and Pre-Cancer Of The Cervix, Luesley.D.M&Barrass.R
- Gynaecologic Cancer Surgery, Morrow.C.P et.al
- Synopsis of Gynecologic Oncology ,Morroki.C.P&Curtun.J.P
- Multimodality Therapy in Gynecologic Oncology, Sevin .B.U. et al
- Ovarian Cancer, Sharp.F. et.al
- Cancer of the Cervix, Shingleton H.M &Orr.J.W

vi. Pediatric oncology

- Color Atlas of Pediatric Hematology .Hann. I.M

- Manual of Pediatric Hematology and Oncology .Lanzkowsky Philip.
- Principles & Practice of Pediatric Oncology. Pizzo.P.A&Popla CK

vii. Optional Reading

- The most cited articles on each of the 7 disease sites are listed on the website of SSO and the students may use this as an additional resource with the lead publications in each disease site within Surgical Oncology- http://www.surgonc.org/disease-sites

viii. Journals

- Annals of Surgical Oncology
- American Journal of Pediatrics
- ActaOncologica
- Hematology / Oncology
- British Journal of Cancer
- Cancer
- CA.A.Cancer Journal For Clinicians
- Cancer Detection & Prevention
- Cancer Genetics and Cytogenetics
- Cancer Journal (Scientific American) (NP)
- Cancer Survey (NP)
- Cancer Treatment Review
- Clinical Oncology
- Current Problem In Cancer
- Current Opinion In Oncology
- European Journal of Surgical Oncology
- European Journal of Surgical Oncology
- Genes, Chromosomes And Cancer
- Gynecologic Oncology
- Hematological Oncology
- Hematology Oncology Clinics of North America
- Indian Journal of Cancer (Indian)
- International Journal of Cancer (UICC)
- International Journal of Gynecological Cancer
- International Journal of Radiation Oncology
- Journal of Cancer Education (NP)
- Journal of Clinical Oncology
- Journal of National Cancer Institute (Gift)

- Journal of Psycho Social Oncology
- Journal of Surgical Oncology
- Medical & Pediatric Oncology
- Nutrition and Cancer
- Oncology (NP)
- Psycho-Oncology
- Radiotherapy & Oncology
- Seminars In Oncology
- Seminars In Oncology Nursing
- Seminars In Radiation Oncology
- Seminars In Surgical Oncology
- Surgical Oncology Clinics of North America

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