

Curriculum

DrNB Super Specialty



Gynaecological Oncology

- ◆ Programme Goals and Objectives
- ◆ Syllabus
- ◆ Practical Training Modules
- ◆ The Core Modules
- ◆ Log Book
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I. PROGRAMME GOALS AND OBJECTIVES

Gynaecologic Oncology is a relatively new super-specialty in India where doctors with postgraduate qualifications in Obstetrics and Gynaecology receive additional training for the treatment of women suffering from cancer of the reproductive organs. Super-specialty training and a degree in Gynaecologic Oncology have recently been made available in only a few universities affiliated oncology centres in India in the form of the MCh. As Gynaecologic cancers are the leading cause of death among women who suffer from cancer in India, there is an enormous need for more appropriately trained doctors in this super-specialty.

The training is aimed at developing a general obstetrician gynaecologist into a super-specialist gynaecologic oncologist. A candidate who successfully completes the course will be expected to have gained proficiency in the following:

1. Understand the epidemiology of gynaecologic cancers and also the principles underlying screening, early detection and prevention. The candidate should acquire a high level of competency in colposcopy and related procedures in the management of pre-invasive and micro-invasive lesions of the female genital tract.
2. Acquire a sound knowledge of gross and microscopic pathology and cytology
3. Relevant to gynaecologic oncology. The candidate should be capable of interpreting the details of cytology, histology and immunohistochemistry reports and use this effectively in making decisions regarding planning treatment.
4. Acquire the necessary skillset and competence to safely perform radical surgery for gynaecologic cancers including the ability to prevent, recognize and manage any complications arising thereof.
5. Understand the surgical principles and have the skills necessary to perform appropriate surgical procedures on the Gland urinary tract as and when required in the management of gynaecologic cancer and its complications.
6. Be familiar with principles of management of diseases of the breast.
7. Be able to perform the following invasive diagnostic procedures i.e. cystoscopy, thoracic and abdominal paracentesis, and placement and care of the central lines.
8. Have a detailed knowledge of relevant imaging technologies, (indications and limitations) i.e. Ultrasound, CT, MRI and FDG-PET scans.

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9. Have a sound knowledge of the principles of peri-operative patient care.
 10. Have a sound knowledge of the principles of pain and symptom management, palliative care and end-of-life issues.
 11. Acquire an understanding of the principles of radiobiology and radiation physics.
 12. Be well informed in the principles and techniques of modern radiation treatments.
 13. The candidate must develop the skills necessary to recognize and treat the side-effects and complications of radiation treatment.
 14. Acquire sound knowledge of the clinical pharmacology of cancer chemotherapy and related treatment including targeted treatment modalities. The candidate should develop the skills necessary for the appropriate selection of patients for chemotherapy and the practical use of the available chemotherapeutic options used in the management of gynaecologic cancer patients. The candidate should develop skills in the recognition and management of toxic side effects and acquire the ability to administer them in an independent capacity, if necessary.
 15. Acquire skill in the assessment of the effects of treatment and the care of complications. This includes skill in the assessment of patients after treatment and during follow-up.
 16. Understand cancer survivor's hip issues and the principles underlying the management of fertility issues in gynaecologic cancer patients.
 17. Develop skills in the planning, conduct, reporting and interpretation of clinical audit and research in gynaecologic oncology.
 18. Understand the psycho-sexual, socio-cultural and economic aspects of cancer management among women in the Indian setting.

II. SYLLABUS

1. Basic Sciences:

- i. Principles of oncogenesis
 - a. Cellular growth and death
 - b. Invasion and metastasis
 - c. Angiogenesis
- ii. Molecular biology in gynaecologic oncology and hereditary gynaecologic cancers

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- a. Oncogenes
 - b. Mutations
 - c. DNA, RNA and epigenetic alterations in gynaecologic cancers
 - d. Hereditary breast-ovary cancer syndrome
 - e. Lynch syndrome
- iii. Anatomy
- a. General anatomy and embryology
 - b. Surgical anatomy of the abdomen, pelvis, groin and perineum
- iv. Pathology
- a. Tumour markers
 - b. Immunohistochemistry
 - c. Detailed pathology of gynaecologic cancers including gestational trophoblastic disease
- v. Microbiology
- a. Principles of infection control
 - b. Antibiotic prophylaxis and treatment
 - c. The role of virus in gynaecologic cancer
- vi. Research related topics
- a. Epidemiology of gynaecologic cancers
 - b. Medical statistics and cancer registry
 - c. Methods and principles of clinical research

2. Preventive Oncology

- i. Principles of preventive oncology
 - a. Screening
 - b. Health economics
- ii. Pre-invasive diseases of the female reproductive organs
 - a. Cervix
 - b. Vulva and vagina
 - c. Endometrium
 - d. Fallopian tube and ovary
- iii. Vaccines for the prevention of cervical cancer

3. Diagnosis and Management of Gynaecologic Cancers

- i. General Principles
 - a. Assessment and diagnosis of gynaecologic cancer
 - Confirming initial diagnosis
 - Treatment planning
 - b. Basic surgical principles
 - Opensurgery
 - Minimal access surgery
 - Post-operative care
 - Fluid and electrolyte balance
 - Pain and symptom management
 - Nutrition
 - Care of the critically ill
 - c. Imaging related to gynaecologic oncology
 - X-ray
 - Ultrasound scan
 - CT scan
 - MRI scan
 - PET-CT/MR
 - d. Radiation oncology
 - Radiobiology
 - Radiation physics
 - Cellular response to radiation
 - Radiation production
 - Clinical use
 - e. Pharmacology and therapeutics of anticancer medications
 - Chemotherapy
 - Immunotherapy
 - Hormones
 - Targeted treatment
 - f. Additional subjects
 - Communication skills

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- Liaison
 - Breaking bad news
 - Handling grief and anger
 - Pain management and other symptom control
 - Nutrition
 - Quality of life
 - Palliative care
 - End of life care

4. Organ Specific Topics

- i. The sites included are
 - a. Vulva
 - b. Vagina
 - c. Cervix
 - d. Uterus and endometrium
 - **Epithelial tumours**
 - **Stromal tumours**
 - e. Ovary, fallopian tube and peritoneal surface malignancy
 - Epithelial tumours
 - Non-epithelial tumours
 - f. Gestational trophoblastic disease

5. These should be taught under the following Headings

- i. Epidemiology
- ii. Surgical anatomy
- iii. Pathology
- iv. Clinical presentation
- v. Diagnosis
- vi. Staging
- vii. Treatment
- viii. Follow up
- ix. Recent advances and trials underway

III. PRACTICAL TRAINING MODULES

1. Core Gynaecologic Oncology

- i. Pre-treatment assessment and work up of a gynaecologic oncology patient
- ii. Pre, and post-operative care
- iii. Generic surgical skills
 - a. Open surgery
 - b. Minimal access surgery
- iv. Training in the management of organ specific diseases
 - a. Cancer of the ovary, peritoneum and the tubes
 - b. Cancer of the uterus
 - c. Cancer of the cervix
 - d. Cancer of the lower genital tract (vagina and vulva)
 - e. Gestational trophoblastic disease
- v. Preventive oncology
 - a. Cervical screening
 - b. Colposcopy
 - c. Familial cancer
- vi. Additional training
 - a. GI oncology
 - b. Uro oncology
 - c. Breast surgery
 - d. Medical oncology
 - e. Radiation oncology
 - f. Basic sciences (Histopathology, cytology, microbiology)
 - g. Imaging
 - h. Communication and interview skills
 - i. Palliative care
- vii. Clinical audit and research

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- a. The candidate must undertake a research activity during the training and write a dissertation based on that research
 - b. To follow DrNB guideline in writing and submitting the dissertation
- viii. Candidates are also encouraged to undertake clinical audits, however this is not mandatory

IV. THE CORE MODULES

1. General Assessment of a Gynaecologic Oncology Patient

The trainee is expected to develop the skills and attitudes and demonstrate the knowledge, required to make an appropriate clinical assessment of a patient with a suspected or known gynaecologic cancer. The areas of work will include the general outpatient clinic, special clinics like colposcopy, outreach screening clinics, inpatients including patients admitted to intensive care or high dependence units.

KNOWLEDGE

The trainee is expected to maintain a broad knowledge of the pattern of presentation of gynaecologic malignancies, of care pathways for suspected gynaecologic cancer and of investigations required to confirm diagnosis. They are also expected to undertake preoperative investigations of patients to evaluate fitness for surgery. The trainee should be able to make appropriate assessment of the stage of the disease and clinical condition of the patient to counsel them and their relatives regarding the benefits and risks involved with the treatment of cancer. The trainee should be equipped with the knowledge of the physical and psychosexual morbidity of cancer diagnosis and treatment.

SKILLS

- i. Obtain an appropriate history
 - a. Symptoms and comorbidity
 - b. Family history and genetic susceptibility
- ii. Perform an appropriate clinical examination
- iii. Communicate results of prior investigations
- iv. Initiate further investigations
- v. Communicate clinical plan to patient and relatives
- vi. Ability to counsel patients regarding entry into clinical trials

2. Pre and Postoperative Care

The trainee will be required to plan appropriate surgery, identify surgical and anaesthetic risks, prepare patients for surgery, and manage postoperative complications. The trainee should also develop a clear concept about intensive care of patients undergoing radical and ultra-radical proactively identify early signs of complications and institute remedial measures to avert them.

KNOWLEDGE

The trainee should be fully aware of the type of surgery appropriate for each gynaecologic cancer, fluid and electrolyte balance and nutrition during the postoperative period. They should have a thorough understanding of infection-control policies and rational use of antibiotics.

SKILLS

- i. Counsel patients and relatives regarding management with risks and benefits of treatment
- ii. Able to select and plan appropriate surgical management of gynaecologic cancer according to patient's needs
- iii. Manage fluid and electrolyte balance peri-operatively
- iv. Order and supervise appropriate thromboprophylaxis
- v. Liaise with nutritional support team and decide when parenteral nutrition or enteral feeding is appropriate
- vi. Liaise with infection control team to prevent and treat sepsis
- vii. Pre-empt signs of post-operative complications
- viii. Manage postoperative thrombosis, infection, bowel obstruction, chest complications, and electrolyte imbalance
- ix. Conduct multidisciplinary team meeting and convey decisions to patients and
- x. relatives, including prognosis and palliative care
- xi. Provide support to colleagues in other surgical departments when asked for

DOCUMENTATION

- i. Multidisciplinary team meeting attendance
- ii. Audit of complications

3. Generic Surgical Skills

The trainee will achieve surgical skills appropriate for a subspecialist gynaecologic oncology surgeon. He/she should be thoroughly conversant with the relevant anatomy and apply this through appropriate techniques in surgical skills. Undertaking continuous personal performance audit will aid in improving techniques of surgery.

KNOWLEDGE

The trainee should develop a thorough knowledge about the anatomy of the female abdomen and pelvis and the retroperitoneal space including the blood supply, nerve supply venous and lymphatic drainage of all the organs in the abdomen.

SKILLS

- i. Prepare surgical waiting list and prioritise
- ii. Position patients according to the type of surgery
- iii. Plan operating steps during the progress of surgery
- iv. Handle tissue with respect
- v. Choose suture materials appropriately
- vi. Apply different types of knots using hands and instruments
- vii. Choose electrosurgical equipment and use them at appropriate settings
- viii. Use gynaecologic endoscopic equipment with confidence
 - a. Hysteroscopy
 - b. Laparoscopy
- ix. Undertake surgical staging using different scoring tools
- x. Clearly communicate with anaesthetic and nursing colleagues

DOCUMENTATION

- i. Surgical case log
- ii. Audit of surgical procedures and complications

4. Cancer of the Ovary, Tube and Peritoneum

At the completion of this training the candidate should be able to undertake appropriate initial assessment and investigations of suspected ovarian, tubal or primary peritoneal cancer, plan subsequent management with regards to confirmation of diagnosis and treatment and communicate with multidisciplinary team to organise adjuvant treatment and plan follow-up.

KNOWLEDGE

The Trainee should be thoroughly up-to-date with the knowledge about aetiology, clinical presentations, and pathology of different types of ovarian, tubal and primary peritoneal cancer. They should be able to apply FIGO staging, have clear concept about indications, techniques, limitations and complications of surgical treatment, make radiological assessment for preoperative diagnosis and guided biopsy and plan surgical and medical pathway of suspected ovarian cancer. The Trainee should be knowledgeable in case selection, primary and secondary cyto-reductive surgery, interval debulking surgery and fertility conserving surgery, medical management of ascites, pleural effusions and bowel obstruction and the principles of best supportive and palliative care.

SKILLS

- i. Ability to formulate and implement a plan of management based on histological variant of ovarian cancer
- ii. Ability to appropriately stage ovarian cancer
- iii. Ability to decide on appropriate surgery, including resection of bowel and formation of stoma and urinary diversion where appropriate
- iv. Counsel patient and relatives sensitively and respecting confidentiality about:
- v. diagnosis and further therapy, surgical options and complications, medical options and prognosis
- vi. Perform advanced cytoreductive surgery
- vii. Manage recurrent disease by appropriately selecting patients for repeat surgery or referring them for other treatment modalities including palliative care

DOCUMENTATION

- i. Surgical case log

5. Cancer of the Body of the Uterus

The trainee will be trained to understand and demonstrate appropriate skills and attitudes in relation to managing a patient with a diagnosis of uterine cancer. They should be able to undertake primary surgical (Open and laparoscopic) management, understand management options to address co-morbidity and manage recurrent disease.

KNOWLEDGE

The trainee is expected to gain a thorough knowledge in aetiological factors leading to endometrial cancer, histological types of endometrial cancer, FIGO staging and their prognostic implications. They should be able to decide on the type of surgery appropriate for endometrial cancer and decide on the role of radio therapy and chemo therapy in the treatment of endometrial cancer. The trainee will need full understanding of the risk factors and patterns of recurrent disease and the management options for recurrent disease. They should have thorough knowledge about the rare uterine tumours, e.g. sarcomas.

SKILLS

- i. To counsel patients regarding diagnosis, management and risks of treatment
- ii. Ability to select and perform appropriate surgical management of endometrial cancer according to patient's needs
- iii. Perform surgery, both open and laparoscopic procedures
- iv. Recognise and manage intra-operative complications, postoperative care and complications arising
- v. Recognition of recurrence of disease and its management
- vi. Decide need for adjuvant therapy
- vii. Follow up patients appropriately

DOCUMENTATION

- i. Surgical case log

6. Cancer of the Uterine Cervix

In this module, the trainee will be trained to diagnose, investigate and manage a patient with cancer of the cervix. They should develop appropriate skills to perform appropriate surgery for cervical cancer, liaise with radiotherapy department for those who would need this modality of treatment and manage treatment complications.

KNOWLEDGE

The trainee will be equipped with detailed knowledge of the anatomy of the female pelvis, understand the epidemiology of cervical cancer especially the Indian perspective and understand the pathophysiology of cervical intraepithelial neoplasia (CIN) and the role of human papillomavirus (HVP) in an etiology and development of CIN and cervical cancer. They

should have a clear concept about the presentation, diagnosis, and staging of cervical cancer. They should know pathology of cervical cancer, understand the management of all stages of cervical cancer including surgery and chemo radiation and be conversant about the short term and long term adverse effects of treatment. The trainee should have knowledge of pattern of disease recurrence and appropriate management of this.

SKILLS

- i. Undertake clinical staging of cervical cancer including cystoscopy
- ii. Perform radical hysterectomy, pelvic lymphadenectomy and para-aortic lymph node dissection
- iii. Counsel patients about the diagnosis, investigations and appropriate treatments for cervical cancer, including adverse effects and complications of treatment
- iv. Interpret results of radiological investigations
- v. Recognise and manage complications of treatment
- vi. Diagnose, investigate and manage recurrent cervical cancer
- vii. Select patients for exenterative surgery

DOCUMENTATION

- i. Surgical case log

7. Cancer of the Lower Genital Tract (Vulva And Vagina)

The trainee will be trained to understand and demonstrate appropriate skills and attitudes in relation to managing a patient with a diagnosis of vulval and vaginal cancer, undertake primary surgical procedures and manage recurrent disease.

KNOWLEDGE

The trainee must be fully conversant with the anatomy of the vulva, vaginal region and lower abdominal wall, and femoral triangle including blood supply, nerve distribution and lymph drainage of the region, aetiology of vulval and vaginal cancer, including sarcoma and metastatic lesions. They should also have very clear conception about benign and premalignant conditions of the vulva and vagina. The trainee must know the clinical presentation, investigation necessary for FIGO staging and management of lower genital tract cancer, epidemiology and aetiology of vulval cancer. They should be thorough in their knowledge about short term and long term complications of treatment and appropriate management of complications.

SKILLS

- i. Take a history and perform an appropriate examination including vaginoscopy and vulvoscopy
- ii. Perform vulval and vaginal biopsy
- iii. Undertake staging and imaging investigations
- iv. Perform partial vaginectomy (abdominal and vaginal approach) and assist in radical vaginectomy
- v. Perform a wide local excision of vulva and simple vulvectomy
- vi. Perform a radical vulvectomy
- vii. Perform a simple rotation flap to achieve primary closure of vulval wound and liaise with plastic surgeons when appropriate
- viii. Perform a sub-fascial groin node dissection including sentinel node detection
- ix. Ability to organise anterior, posterior and total exenteration and leading the surgical procedure

DOCUMENTATION

- i. Surgical case log

8. Gestational Trophoblastic Disease and Neoplasia

The trainee will be trained to diagnose, investigate, and manage a patient with gestational trophoblastic disease and neoplasia (GTD, GTN).

KNOWLEDGE

The trainee should have detailed knowledge about definition, classification, and pathology of GTD, clinical features and behaviour of different entities of GTD and their principles of management. They should be competent in diagnosis, WHO risk scoring and staging of GTD, fully conversant with the histopathological features and plan the need for prophylactic chemotherapy. They should have full knowledge about the complications of treatment and management, management of chemoresistant and relapsed neoplasia and the role of surgery and radiotherapy in the management of GTD. The trainee is also expected to be aware of issues related follow up and to future pregnancy and contraception.

SKILLS

- i. Perioperative management of patients undergoing suction evacuation for molar pregnancy
- ii. Appropriate follow-up of patients following GTD/GTN
- iii. Decide need for and perform hysterectomy in emergency situations
- iv. Diagnose, stage, and risk score gestational trophoblastic neoplasia
- v. Liaison with medical oncologist regarding plan of management of GTN and manage complications of treatment

DOCUMENTATION

- i. MDTM records

9. Preventive Oncology

CERVICAL SCREENING

The objective of this module is to introduce the trainee to the community where population based cervical cancer screening is undertaken in order to prevent the incidence of and deaths from cervical cancer. An integral part of the training will be field visits to understand the role of mass communication and different methods of cervical screening. This module is prepared to help the trainee in different aspects of cervical screening from development of population screening infrastructure and spread of awareness, to development of human resources. They will receive training in outreach clinics setting up a temporary clinic in VIA/VILI and field colposcopy.

KNOWLEDGE

The trainee should be fully conversant with the incidence and prevalence of cervical cancer in India and the role of oncogenic HPV and other risk factors for cervical cancer. They should be aware of the different methods of cervical screening (Pap smear, VIA/VILI, HPV test) their advantages and limitations and how these screening strategies are changing lives globally. The trainee should have basic understanding of population survey and medical statistics. He/she should be aware of the criteria for screening for diseases in the community, the benefits and disadvantages of screening and different screening programs undertaken in diverse populations in different parts of the world. The candidate must have a comprehensive knowledge about the role of vaccines in the prevention of cervical cancer.

SKILLS

- i. Ability to communicate in small gathering, group discussion and one to one discussion to explain the role of cervical screening
- ii. Organise cervical screening through field clinics
- iii. Undertake VIA and VILI
- iv. Supervise and train health workers and field workers if the institution also runs outreach cervical screening clinics
- v. Use colposcope

DOCUMENTATION

- i. Log book of cervical screening and colposcopy
- ii. Field visit record

10. Pre-Invasive Lesions of the Vulva and Vagina

The objective of this section is for the trainee to understand and manage women with premalignant lesions of the vulva and vagina, appropriately monitor the and treat them as and when necessary so that they do not progress to invasive disease or even if they progress, they are diagnosed very early and completed recovery can be contemplated.

KNOWLEDGE

The candidate should have a thorough knowledge of the anatomy and histology of the vulval skin and the appendages. They should understand the pathophysiology of vulval dystrophies and pre- invasive lesions of the vulva and vagina, and risk of progression from premalignant and pre- invasive lesions to invasive lesions to counsel patients accordingly.

SKILLS

- i. Undertake vulval biopsies under local anaesthesia
- ii. Use colposcope to examine and treat premalignant conditions of the vulva and vagina
- iii. Treat and follow up patients of vulval dystrophies
- iv. Undertake ablative and excisional treatment for vaginal intra-epithelial neoplasia

DOCUMENTATION

- i. Log book of procedures

11. COLPOSCOPY

Training in colposcopy will include digital or binocular and video-colposcopy for the diagnosis and management of pre-invasive and early invasive lesions of the cervix, vulva, and vagina.

KNOWLEDGE

The trainee should be fully aware of the principles of colposcopy and should be familiar with the colposcope and the accessories used. They should have comprehensive knowledge about different benign, pre-invasive, and invasive lesions of the vulva, vagina and cervix. They should be aware of the current national and international guidelines regarding management of these conditions.

SKILLS

- i. Dexterity of use of the colposcope
- ii. Interpret VIA/VILI, smear result and HPV test
- iii. Differentiate between benign, pre-malignant and malignant lesions using the colposcope
- iv. Undertake colposcopically directed punch and wedge biopsy
- v. Treat benign and pre-malignant lesions of the cervix using cryotherapy and diathermy loop excision
- vi. Communicate colposcopy findings and test results with the patients and arrange appropriate follow up for those who are treated and those who are kept under surveillance

DOCUMENTATION

- i. Log book of cervical screening and colposcopy
- ii. Field clinic visit record where available

12. Hereditary Cancers

Training in this field is aimed at making the candidate familiar with the expanding field of molecular biology and genetics in cancer and its application in clinical settings with respect to gynaecologic cancers.

KNOWLEDGE

The trainee should be fully aware of the principles of molecular biology and the role of genetic and other different factors important for cell growth, death, and repair in relation to carcinogenesis. They must have a complete understanding of hereditary gynaecologic cancers and management of women at increased risk of gynaecologic cancer.

SKILLS

- i. Undertake hereditary cancer risk assessment based on family history
- ii. Advice appropriate genetic tests
- iii. Counsel ovarian and endometrial cancer patients and relatives regarding risk of similar malignancy to other family members
- iv. Counsel women at higher risk of hereditary cancers regarding genetic testing and appropriate relevant investigations and risk reducing procedures

DOCUMENTATION

- i. Attendance at genetic cancer clinic if available

13. Gastro-Intestinal Surgery

This module is designed to help the trainee to understand the indications and principles of bowel resection and repair in the context of gynaecologic oncology. They would be trained to deal with accidental bowel injury and undertake elective bowel resection. The training will also include resection of metastasis of ovarian cancer in the upper abdomen.

KNOWLEDGE

The trainee should be fully conversant with the anatomy and physiology of the hepatopancreatico-biliary and gastrointestinal tract, pathophysiology of intestinal function, principles of surgery of gastrointestinal tract, and the principles of resection and repair of intestinal tissues. They should understand the indications to perform bowel surgery in a gynaecologic oncology setting, use of radiology in investigation and management of gastrointestinal tract disorders in order to appropriately select of patients who will benefit

from bowel surgery. The trainee should be competent to undertake preoperative preparation required for a patient who may or will have bowel surgery.

SKILLS

- i. Perform laparotomy and identify abnormalities throughout abdominal cavity, including liver, spleen, omentum, appendix, peritoneum, pancreas and large and small bowel
- ii. Over-sew serosal injury to bowel, repair mucosal injury to small bowel, select area to be respected and perform primary anastomosis of small bowel
- iii. Learn use of use of appropriate staples for different indications
- iv. Select area and perform ileostomy
- v. Perform appendicectomy
- vi. Select appropriate tissue and resect large bowel with formation of colostomy.
- vii. Manage postoperative care of patients following bowel surgery

DOCUMENTATION

- i. Surgical case log
- ii. Placement record

14. UROLOGY

The trainee will be taught to deal with the effect of gynaecologic cancer and its treatment on the renal tract. They should be able to diagnose the problems and liaise with the urology colleagues to plan management of such complications.

KNOWLEDGE

The trainee should have complete knowledge about the anatomy and physiology of kidney, ureter, bladder, and urethra and the effects of gynaecologic malignancy upon urinary tract. They should be totally conversant with the effects of treatment for gynaecologic malignancy on urinary tract; e.g. radical surgery and radiotherapy. The trainee should be aware of the principles of repair of injury to the ureter, bladder, and urethra.

SKILLS

- i. Ability to appropriately investigate and diagnose disorders of the urinary tract in a gynaecologic cancer setting

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- ii. Recognition and management of injury to urinary tract
 - iii. Selection of patients who would benefit from intervention surgery involving the urinary tract; e.g. urethral stenting, fistula repair, exenterative surgery
 - iv. Undertake diagnostic Cystoscopy
 - v. Dissection of ureter
 - vi. Insert supra-pubic catheter
 - vii. Perform surgical repair of bladder injury
 - viii. Repair of ureter, ureteric re-implantation, primary anastomosis of ureter
 - ix. Perform cystectomy, and urinary diversion.

DOCUMENTATION

- i. Surgical case log
- ii. Placement record

15. Breast Surgery

The candidate will be taught to understand the role/limitations of screening for breast cancer, and clinical care and counseling of women with breast symptoms and breast lumps. They should understand hereditary breast cancer syndromes, genetic testing and the implications. They should have adequate knowledge about imaging in breast cancer and comprehend the principles underlying the multidisciplinary management of breast cancer and principles of treatment in different stages of breast cancer including metastatic breast cancer.

KNOWLEDGE

The trainee should have the ability to counsel women about breast cancer screening and to conduct a comprehensive physical assessment of the female breast. The candidate should be able to counsel patients with a breast lump and advice regarding clinical management path ways and plan surgical management of breast cancer in association with the colleagues in the breast team.

SKILLS

- i. To have a good overview of the relevant literature of the subject
- ii. Ability to do a comprehensive clinical/diagnostic work up of patients with suspected or clinical breast cancer

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- iii. Ability to discuss management plans with colleagues from the breast cancer unit

DOCUMENTATION

- i. Placement Record

16. Medical Oncology

The aim of this module is to help the trainee understand the role of chemotherapy in the management of gynaecologic cancers, to understand the pharmacology of the major drugs used in chemotherapy and be aware of the latest trial results of chemotherapy in gynaecological tumours. The trainee is expected to shadow the medical oncologist of their multidisciplinary team to facilitate acquiring the knowledge and skills as follows:

KNOWLEDGE

The trainee needs to understand relevant cell biology including cell-cycle kinetics, log kill hypothesis and cycle and phase specificity. They should be conversant with the classes of chemotherapeutic agents and their mechanism of action, pharmacology of the main agents used in gynaecologic cancers, principles of dose calculation and scheduling and understand the benefits and limitations of single-agent and combination chemotherapy including short- and long-term toxicity, both general and drug-specific. The trainee should also understand the concept of adjuvant and neoadjuvant therapy and the role of hormonal and other agents.

SKILLS

- i. Counsel patients about the basics of chemotherapy, including adverse effects and complications
- ii. Recognition, assessment and management of acute and chronic toxicity
- iii. Ability to discuss management at multidisciplinary team meeting, including most
- iv. appropriate chemotherapy regimen, according to patient's disease and medical status
- v. Ability to liaise with colleagues and other health professionals regarding coordinating investigations and management strategies pertinent to individual patients
- vi. Ability to counsel patients about clinical trials

DOCUMENTATION

- i. Placement records
- ii. MDT (Tumour board) attendance record

17. Radiation Oncology

This module is designed to provide familiarity with principles and practice to inform patients appropriately and recognise complications of radiotherapy.

KNOWLEDGE

The trainee should know about cell-cycle kinetics, radiation effects, recovery, and repair of tissues, potentiation of effects, protection, sensitivity of different organs and different types of radiation. They should be aware of inverse square law, time–dose relationships and half-life of isotopes, ionisation and modifying factors, radiation units and isodose curves. They should also acquire the basic concepts in principles of fractionation, orthovoltage and supravoltage, CT planning and dosimetry, types of fields, types of sources and methods. The trainee should understand how radiotherapy affects organs and radiosensitivity of different cancers and how to plan patients for radiotherapy.

SKILLS

- i. Select patients for radiotherapy according to disease, tumour type and stage
- ii. Counsel patient on how radiotherapy works, how it will affect them and what complications may occur
- iii. Management of long-term effects of radiotherapy: Vaginal stenosis, ovarian failure,
- iv. edema, osteopenia, fistula
- v. Recognition, investigations, and management of recurrent gynaecologic cancer following primary radiotherapy and chemoradiation

DOCUMENTATION

- i. Placement records
- ii. MDT (Tumour board) attendance record

18. Basic Sciences

Brief placements in histopathology, cytology, cytogenetics, and microbiology are included in the training for the candidate to have basic idea of how the laboratory expertise influences the clinical management of the gynaecology patients.

In histopathology and cytology laboratory the trainee should learn about specimen grossing, use of different stains and the use of immunohistochemistry in the accurate diagnosis of tumour. At the cytogenetic laboratory the trainee gets exposure to understand how genetic diagnosis is made. In the microbiology department the trainee will learn about diagnosis of infections by different micro-organisms and their drug sensitivity along with principles of infection control.

DOCUMENTATION

- i. Placement record

19. IMAGING

This module is aimed at helping the trainee understand the role of imaging in gynaecologic cancer. They should be able to interpret X-rays, ultrasound scans, CT scans and RGNI scans. The Trainee should also be taught to undertake pelvic and transvaginal ultrasound scan.

KNOWLEDGE

The trainee should understand the principles of different modalities of and request appropriate radiological investigations in management of gynaecologic cancers. They should be aware of the physics behind the main imaging modalities including nuclear medicine in gynaecologic oncology. They should also be conversant with the principles of image optimisation in ultrasound scan and be able to apply this while undertaking pelvic ultrasound scan themselves.

SKILLS

- i. Interpret images
 - a. X-rays
 - b. Ultrasound scan
 - c. CT scan
 - d. MRI scan

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- e. PET CT and isotope bone scan
 - ii. Discussion of images with relevance to clinical scenario with radiologist and other trainers
 - iii. Undertake pelvic ultrasound scan
 - iv. Undertake image guided procedures

DOCUMENTATION

- i. MDT record

20. Communication and Interview Skills

It is mandatory for any oncologist to be trained in communication skills both by observing consultants communicating with patients and their relatives and by attending training sessions.

KNOWLEDGE

Clinicians need to be comfortable interviewing and managing patients from a diverse cultural background. It requires practice and an active learning approach to become comfortable in handling different clinical scenarios for different patients. Since all individuals are in some way unique, it is important to be sensitive and be able to respond to needs of patients and families in an individualised way. However, keeping in mind some simple steps and preparing for the commonly encountered scenario makes professionals more confident in dealing with more extreme situations. Communications skills are best learnt by a combination of trainees modelling on senior clinicians whom the juniors look up to, supplemented by workshops on specific topics.

SKILLS

- i. Basic interviewing skills
- ii. Managing angry and aggressive patients
- iii. Breaking bad news
- iv. Handling 'Do not tell my mom scenarios'
- v. Looking after staff and identifying 'burn out' in yourself and others.
- vi. Arrange terminal care
- vii. Looking after delirious patients
- viii. Identifying risk of suicide

21. Palliative Care

Palliative care is an integral part of any oncology service. As majority of women with ovarian cancer and many other women cervical cancer present late in their disease, understanding the role of palliative care and end of life support remains an essential part of this training.

KNOWLEDGE

The trainee should have a clear understanding of when to recommend palliative care. They should know the principles of pain management and management of other distressing symptoms of terminal illness.

SKILLS

- i. Select patients for referral to palliative care team according to symptoms
- ii. Advocate appropriate pain and other symptom management
- iii. Counsel patient and relatives when escalation of treatment is not in the best interest of the patient.
- iv. Counsel patients and relatives regarding end of life care
- v. Discuss and liaise with relevant agencies relating to end of life care

DOCUMENTATION

- i. MDT record
- ii. Placement record

22. Clinical Audit and Research

In this module, the trainee is expected to undertake clinical audit in several areas relevant to patient care and maintaining standard of care. Their dissertation will be based on an original research. The trainee is expected to present their audit and research in various local, national, and if possible international scientific conferences. In addition, it is desirable that they are associated with other research activities of the department and have their work published in peer-reviewed journals.

KNOWLEDGE

The trainee needs to have complete understanding of the scope and principles of clinical governance and audit related to this. They should be able to follow the steps in an audit cycle to undertake their own clinical audits and present the data at appropriate forum. The trainee should know the research methodologies, principles of designing a research and methods of application for ethical approval and for funding. They should have a broad idea about bio- statistics.

SKILLS

- i. Lead audit team
- ii. Undertake clinical audit using a systematic approach
- iii. Present audits at relevant forum and conferences
- iv. Design research
- v. Apply for ethical approval
- vi. Apply for research grant
- vii. Complete research projects

DOCUMENTATION

- i. Audit reports
- ii. Records of poster and oral presentations
- iii. Ethics submission records
- iv. Dissertation
- v. Other research publications

23. Rotational Posting

Department/Area of Rotation	Tentative Period
• Radiation Oncology	15 days
• Medical Oncology	1 month
• Gastrointestinal Surgical Oncology	2 month
• Uro-oncology/ Urology	1 month
• Breast Surgery	15 days
• Pain and Palliative Medicine	15 days
• Surgical and Cyto – Pathology, Microbiology	15 days

V. 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.

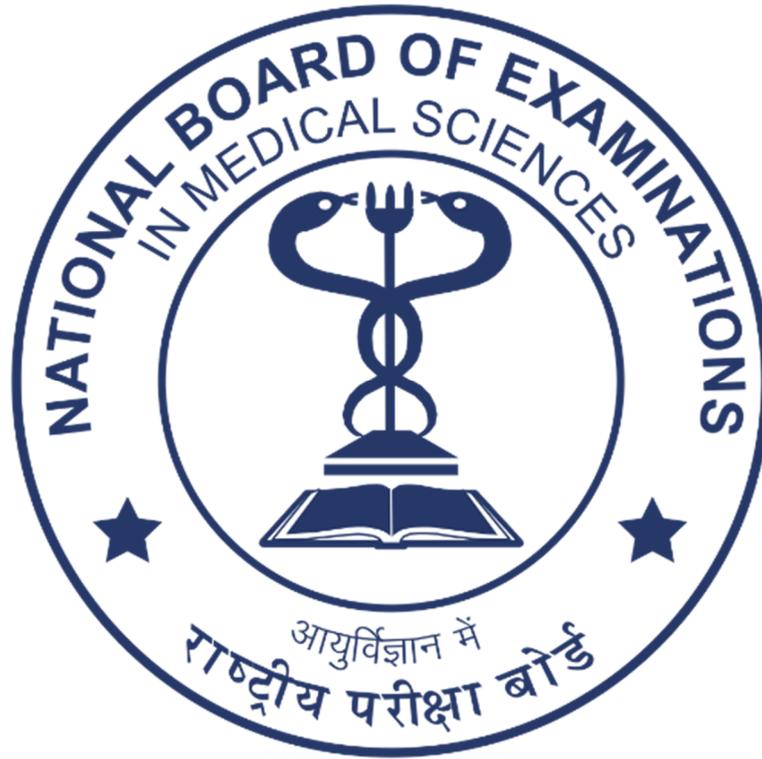
The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s)) The candidate will maintain the record of all academic activities undertaken by him/her in log book.

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

VI. RECOMMENDED TEXT BOOKS AND JOURNALS

Name	Author	Publisher
Berek & Hacker's Gynecologic Oncology	Berek. J. S	LWW
Barkat: Principles and Practice of Gynecology Oncology	Barakat. R.R	Lippincott Williams & Wilkins
Clinical Gynecologic Oncology	Disaia.P.J	Elsevier
Hoskin's: Prin. & Prac. of Gynecologic Oncology	Hoskins.W.J.	Lippincott Williams & Wilkins
Devita, Hellman & Rosenberg's Cancer Principle & Practice of Oncology	Devita.V.T	Wolters Kluwer
Atlas of Laparoscopic Surgery in Gynecologic Oncology (DVD)	Putambekar S	Jaypee Brothers Medical Publisher
Atlas of Gynecologic Cancer Surgery	Vergote.I	Jaypee Brothers Medical Publisher
Atlas of Procedures in Gynecologic Oncology	Abu-Rustum Nadeem R	CRC Press
Atlas of Gynecologic Oncology Imaging	Akin Oguz	Springer Nature
AJCC Cancer Staging Hand Book	AJCC	Springer
Controversies in the Management of	Ledermann	Springer

Gynecological Cancer	Jonathan A.	
Precancerous Lesions of Cervix	Ahuja Maninder	Jaypee Brothers Medical Publisher
DX/RX: Cervical Cancer - Diagnosis and treatment of pre-cancerous lesions and cervical cancer · M	DS Dizon	Boston Jones and Bartlett
Rare and Uncommon Gynecological cancer : A clinical Guide	Reed .N	Springer
The Vulva: Anatomy, Physiology and Pathology	Farage M.A	Informa Healthcare
Telinde'S Operative Gynecology	John A. Rock, Howard Jones	Lippincott Williams and Wilkins
Williams Gynecology		McGraw-Hill Education
Atlas of Pelvic Anatomy and Gynecologic Surgery	Baggish, Michael	Elsevier
Modern Colposcopy Textbook and Atlas	ASCCP	Lippincott Williams and Wilkins
Gynecologic Oncology A Pocketbook	EskanderRamez N	Springer
Hand book of principles and practice of Gynaecologic Oncology	Douglas a lavine	Wolters Kluwer
Handbook Radiation Medicine Rounds gynecologic cancer	Arno J. Mundt	demosMedical
Handbook chemotherapy of gynecologic cancer	Stephen C. Rubin	SGO



आयुर्विज्ञान में राष्ट्रीय परीक्षा बोर्ड
स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार
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