CERTIFIED FELLOWSHIP IN ONCO-ANAESTHESIA AND PAIN

[Syllabus Approved by Board of Studies, Medical & Health Sciences]

Programme Code	:	HLTH14A12
Programme Details	:	2-YEARS HBNI CERTIFIED FELLOWSHIP IN ONCO-ANAESTHESIA AND PAIN
Programme Learning Outcomes (PLOs / PSOs)	:	MENTIONED [COMMON FOR ALL 2 YRS HBNI CERTIFIED FELLOWSHIPS OFFERED AT TMC]
Eligibility Criteria	:	MD (ANESTHESIOLOGY) OR EQUIVALENT PG DEGREE.
Duration of the Course	:	2 YEARS
Programme Structure (Credit-Based)	:	NA
Detailed Course Syllabus	:	ATTACHED
Teaching–Learning Methodologies	:	2 YEARS PROGRAM
Examination & Evaluation System	:	ANNUAL APPRAISAL FOLLOWED BY UNIVERSITY FINAL EXAMINATION
Internship / Project / Dissertation Guidelines	:	NA
Program In Charge	:	PROF. VIJAYA PATIL (***pimplesa@tmc.gov.in***)

CERTIFIED FELLOWSHIP (ONCO-ANAESTHESIA AND PAIN)

Programme Code: HLTH14A12

Programme Outcome:

- The HBNI Fellowship Programmes at Tata Memorial Centre are designed to develop competent, ethical, and academically oriented healthcare professionals with advanced knowledge and skills in their respective specialties and subspecialties.
- At the completion of the fellowship, candidates are expected to demonstrate excellence in clinical practice, patient-centered care, multidisciplinary teamwork, communication, professionalism, and evidence-based decision-making.
- Fellows shall acquire the ability to independently evaluate, diagnose, plan, and manage patients while adhering to institutional protocols, quality standards, patient safety practices, and ethical principles in healthcare delivery.
- The fellowship programmes also aim to foster academic growth, research aptitude, lifelong learning, and leadership qualities among trainees.
- Fellows are expected to actively participate in teaching, seminars, journal clubs, conferences, audits, and research activities, thereby contributing to the advancement of medical science and institutional development.
- Upon successful completion of the programme, the fellow should be capable of functioning independently as a skilled specialist/subspecialist with competence in clinical services, academics, research, and collaborative healthcare practice in tertiary care and oncology-focused settings.

DETAILED SYLLABUS

- **Theory and Practice of Anaesthesia and Pain in Cancer patients**
  - **Basic Sciences:**
    - Impact of cancer on normal physiology
    - Anatomical characteristics of cancerous lesions with their implications for surgical dissection and anaesthesia management
    - Molecular mechanisms of cancer and impact of anaesthesia techniques and drugs on cancer pathophysiology
    - Pharmacology of chemotherapeutic agents and their anaesthetic implications and drug interactions

- **Clinical Anaesthesia**
  - Preoperative assessment of cancer patients
  - Complications of cancer and cancer therapy i.e. chemotherapy, radiotherapy and surgery and their effect on perioperative care
  - Difficult airway management in patients with airway cancers including fibreoptic intubation and emergency airway techniques
  - Management of massive blood loss
  - Anaesthesia for diagnostic procedures e.g. direct laryngoscopy, bronchoscopy, gastrointestinal scopy, cystoscopy, bone marrow biopsies, etc
  - Anaesthesia for interventional radiological procedures e.g. radio frequency ablation, tumor angioembolisation, CT guided biopsies, etc
  - Anaesthesia for cancer surgeries at various anatomical sites
    - Head and neck : Commando procedure, total thyroidectomy, laser resections, etc
    - Thoracic e.g. oesophagectomy, lung resections, tracheal resection, etc
    - GI : Whipples procedure, radical cholecystectomy, gastrectomy, etc
    - Bone and soft tissue : Joint replacement, Pelvic orthopaedic resection, etc
    - Breast surgeries
    - Reconstruction surgeries including free tissue transfers
  - Anaesthesia for minimally invasive procedures such as laparoscopic resections, VATS, TURBT, endoscopic ENT resections, etc
  - Day care anaesthesia for radiotherapy procedures, short diagnostic and therapeutic surgical procedures.
  - Post anaesthesia care in cancer patients

- Management of post-operative pain including use of epidural infusions of local anaesthetics, epidural opioids, patient-controlled epidural analgesia, intravenous patient-controlled analgesia and multi-modal therapy
- Recognition and management of complications in the early post-operative period
- Of
- Management of fluid and electrolyte balance and blood and blood product therapy
- Invasive and non-invasive monitoring of various systems like the respiratory, cardiovascular and central nervous system
- Principles and practice of invasive and non-invasive mechanical ventilation
- Prevention, recognition and management of post-operative organ dysfunction Il. Infection control techniques in OT and PACU

- **Skills:**
  - **Airway**
    - Fibre optic intubation, retrograde intubation, blind nasal intubation o Use of airway aids such as gum elastic bougie, video laryngoscopes, various laryngeal mask airways
  - **Regional anaesthesia techniques**
    - Use of nerve locator and ultrasound for localizing neural structures for regional blocks e.g. brachial plexus block, femoral and sciatic blocks
    - Thoracic and lumbar epidural anaesthesia, combined spinal epidural anaesthesia
  - **Vascular access**
    - Arterial canulation with institution of continuous pressure monitoring and cardiac output monitoring o Use of ultrasound for central venous access.
    - Pain
  - **To understand theory and practice of acute and chronic pain**
    - To know anatomy, physiology and psychology of pain and pain perception with special reference to cancer pain
    - To learn the advantages of and indications of postoperative pain management in cancer surgeries
    - To learn current pain management techniques, including physiology, pharmacology, modes of delivery, indications, benefits and contraindications of oral intramuscular, and intravenous narcotics and patient controlled analgesia.
    - Assess and manage patients with chronic cancer pain as per the WHO pain ladder
    - To learn the techniques, assessment, risks, benefits, complications and contraindications to bolus and continuous infusion of intrathecal and epidural narcotics and the signs and symptoms of overdose and side effects, including treatment of it.
    - To learn importance of available adjuvant for post operative pain relief including antidepressant therapy, hypnotic therapy and anxiolytic therapy of

- To learn the indications for consultation of multidisciplinary specialties e.g. neurosurgery, orthopedics, neurology, psychiatry, rehabilitation medicine and social services in the management and treatment of chronic pain
- To learn techniques, indications, risks benefits and complications of sympathetic nervous system blockade, special consideration for sympathetically mediated pain
- Knowledge of cancer pain syndromes, diagnostic and therapeutic interventions and interactions with other disciplines to manage chronic pain
- To learn special consideration in the management of malignant pain viz. use of oral and transdermal opioids, use of neurolytic blocks and radiofrequency ablation in cancer pain syndromes, issue of death and dying
- To learn in- patient management of cancer pain
- To learn pain management in children with cancer
- Understanding role of patient education and awareness in management of pain
- Introduction to palliative care including symptom control, counselling and end-of-life issues
- Planning home care, hospice and end of life care for terminally ill patients

- **Skills**
  - To develop skill of assessment of cancer pain in acute pain setting
  - Neuroaxial catheters, perform regional anaesthesia and nerve blocks for post operative continuous pain control — use of ultrasound for blocks
  - Recognise the side effects and manage the side effects and complications of neuroaxial and IV administration of narcotics or LA.
  - Operate and program drug infusion pumps
  - Provide appropriate documentation of patient care
  - Conduct acute pain management rounds
  - Co-ordinate and operate an acute pain service through working with nursing, pharmacy and hospital administration

- **Academic Activities**
  - Didactic Lectures : Once a week
  - Seminar : Once every fortnight
  - Case Presentation : Daily to OT consultant
  - Ward Round : Acute and chronic Pain Service

- **General**
  - Understand evidence —based medicine and critical appraisal of published papers
  - Exposure to clinical research, ethical and legal aspects of anaesthesia practice.

- Participation in regional and national CME's, seminars and conference in anaesthesia
- Undertake at least one research project during the 2 year course period
- Atleast one presentation at national / international conferences and publication of at least I paper in a peer reviewed journal during the 2 year course period • Affiliation with anaesthesia organizations is desirable