CERTIFIED FELLOWSHIP IN BREAST ONCOLOGY

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

Programme Code	:	HLTH14A01
Programme Details	:	2-YEARS HBNI CERTIFIED FELLOWSHIP IN BREAST ONCOLOGY
Programme Learning Outcomes (PLOs / PSOs)	:	MENTIONED [COMMON FOR ALL 2 YRS HBNI CERTIFIED FELLOWSHIPS OFFERED AT TMC]
Eligibility Criteria	:	MCH/DRNB (SURGICAL ONCOLOGY) OR MS/DNB (GENERAL SURGERY).
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. SHALAKA JOSHI (***drjoshishalaka@gmail.com)***

CERTIFIED FELLOWSHIP (BREAST ONCOLOGY)

Programme Code: HLTH14A01

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

The goals of these fellowships are to provide comprehensive, multidisciplinary training to individuals committed to a career in breast surgical oncology. The fellowship training will provide a broad exposure to the all range of clinical problems encountered in a tertiary breast oncology practice. At the termination of a two-year fellowship, the candidate will have developed expertise to independently manage and treat breast cancer patients.

▪ Training Program:

- Multidisciplinary management of breast cancer and evidence-based guidelines
- Appropriate stage-wise surgical management of breast cancer including conservative surgery
- Adjuvant systemic therapy and radiotherapy techniques
- Breast reconstruction — primary and late, latissimus dorsi, microvascular, oncoplasty and implant surgery
- Clinical care and counseling of women with breast cancer
- Clinical research methodology and its practical application in breast cancer research
- Basic Research Training: Introduction in concepts of basic laboratory research in breast cancer
- Management of metastatic breast cancer
- Supervised hands-on training in major and minor surgeries with maintenance of log book records
- Rotational posting in all related specialties in Radiotherapy, Radiology, Medical Oncology, Plastic Surgery, and Preventive Oncology.
- Palliative care and end-stage management of terminal patients

▪ Project work:

- Every candidate will work on one clinical (audit/research project) and one translational research topic.
- Training outline — 104 weeks — plan for 100 weeks
- 50 — Didactic lectures (Syllabus below)
- 50 — Journal club / case presentations (Journals listed below)

▪ General outline for training:

- Every fellow will be allotted a guide.
- The candidate will maintain a log book and get it signed by their respective teacher every month.
- At the end of two years every fellow will have at least two publications in journals of repute and present at least one paper at a national and preferably at an international conference.

▪ Outline training schedule:

- First Six months:
  - Fellow will attend a minimum of Minor OT — 12 sessions — under supervision
  - OPD — 24 sessions
  - Major OT — Will assist for first three months
  - In nert 3 months, will perform in major OT (assisted by a senior)
  - Modified radical mastectomy –3
  - Breast conservation surgery — 3
  - Latissimus Dorsi Pedicle flap — 2
  - Will assist seniors in other cases and will maintain a log book which will be reviewed every month.

- Second 6 months:
  - Fellow will attend a minimum of Minor OT — 12 sessions
  - Will assist in supraclavicular lymph node dissection, Microdiscectomy, etc.
  - OPD —Will work-up patients and present at a joint clinic.
  - Attend OPD with Medical Oncology consultant
  - Attend OPD with Radiation Oncology to learn planning and simulation.
  - In Major OT — will independently perform a minimum of (under supervision):
  - Breast conservation with reconstruction — 8-10 cases Radical and Modified Radical
  - Mastectomy — 8 cases
  - Oophorectomy— 2
  - Intravenous Port placement — 4

- Final Year:
  - Minor OT: Will independently perform Microdochectomy (at least 5) and all minor procedures in minor OT.
  - Major OT: Will independently perform all major surgeries (at least 20) including breast reconstruction with latissimus dorsi flap (at least 5), oncoplasty (at least 10) and assist in breast implant surgery.
  - Also assist the reconstructive surgeons in free microvascular flaps.
  - Will get acquainted with internal mammary cannulation, brachytherapy and high dose radiation brachytherapy implants

Out Patient Department (OPD):

Will work-up patients and present at the joint clinics (held 4 times in a week, 3 being multidisciplinary)

- Common Lectures or Course material or other training program during course curriculum:
  - Epidemiolou and Biostatistics
    - 1-5 September 2009
    - Introduction to computer environment and statistical computing 7-9 September 2009
    - Pubmed searching and basics of scientific writing
    - 15-20 September 2009
    - Cancer epidemiology
    - 12 Oct-12 November 2009
    - Biostatistics
    - July-Aug 2010
    - Clinical Research Methodology
  - Cancer Screening & Prevention
  - Oncosurg Course (June)

Course topics and Lectures: (Areas to cover)

- Management of Early Breast Cancer including sentinel node biopsy
- Locally advanced breast cancer
- Recurrent breast cancer and Metastatic breast cancer
- Evolution of breast cancer management
- Systemic chemotherapy for breast cancer - principles governing use of chemotherapy, dose intensity & combinations, drug resistance, immune therapy etc

- Neoadjuvant chemotherapy and hormonal therapy
- Adjuvant hormonal therapy in breast cancer — premenopausal women, postmenopausal women
- Radiation therapy for breast cancer
- PET scan in breast cancer
- Breast imaging and screening
- Microarrays in breast cancer
- Molecular biology — cell cycle, apoptosis, angiogenesis, invasion, metastasis, circulating tumor cells
- Quality of life and breast cancer
- Palliative care, pain management and Hospice
- Targeted therapy - HER2neu, EGF, IGF, etc
- Interventional Radiology
- Biomarkers
- Oncological emergency in breast cancer
- Newer approaches — Stem cells, immune therapy, nanotechnology

References

▪ Journals:

- New England Journal of Medicine (NEJM)
  Journal of National Cancer Institute (JNCI)
- Journal of Clinical Oncology (JCO)
- Lancet Oncology
- The Lancet
- Cancer
- Cancer Clinical Research
- Breast
- The Breast Journal
- Mammology (Official Journal of IBG)
- British Journal of Cancer
- Breast Cancer Research and Treatment

▪ Books:

1. Atlas of breast cancer, Ha es Daniel F, Mos, 2000
2. Atlas of breast ima, Ja, 2002
3. Benign Disorders and Diseases of The Breast Co Ts and clinical Management, Hughes

LE, W. B. Saunders Company, 2000

4. Breast cancer, Omar Sherif, National Cancer Institute, 2001
5. Breast cancer - incidence, risk factors, and survival rates, Rao DN, Tata Memorial Hospital, 1999
6. Breast cancer: cellular and molecular biolo, Lippan Marc E, Kluwer Academic Publishers, 1988
7. Breast cancer: present perspective of earl dia, Brunner S, Springer Verlag, 1987
8. Breast cancer: treaunent and prognosis, Stoll BA, Blackwell Scientific Publications, 1986
9. Breast cancer management: application of clinical and translational evidence to patient care, Nabholtz JeanMarc, Lippincott Williams and Wilkins, 2003
10. Disease of the breast, Harris Jay R, Lippincott Williams and Wilkins, 2004
11. The Oxford Textbook of Cancer
12. De Vita
13. Hospital cancer registry, Breast cancer incidence, Risk factors and Survival Rates, Dinshaw K A, 1999
14. Breast imaging, Kopans Daniel B, Lippincott Williams & Wilkins, 2007
15. Breast WIRI: fundamentals and technical, Hendrick RE., Springer, 2008
16. Di osticlma. breast, W.A., 2006
17. Current perspectives in breast cancer, Mittra I, Tata McGraw Hill Publications, 1988
18. The medical management of breast cancer, Williams CJ, Castle House Publications, 1987
19. Hi -risk breast cancer: Dia, Ragaz J, Springer-Verla, 1989
20. Early breast cancer from screening to multidisciplinary management, Morgau MWE, Harwood Academic Publishers, 1998
21. Breast cancer screening, International Agency for Research on Cancer, International Agency for Research on Cancer, 2002

- **Project work:**

1. Clinical Research (audit/epidemiological study)
2. Translational Research (laboratory basic research)