

**Research Projects by Department of Preventive Oncology, Tata Memorial Hospital,  
Mumbai.  
Service Projects**

<b>Sr. No</b>	<b>Name of the project</b>	<b>Year of implementation</b>	<b>Implemented by</b>
<b>1.</b>	Health Awareness Sessions for Common Cancers and Breast Cancer Screening for Women Working with Spiritual Organization –Pilot Service Programme.	2023	Dr. Gauravi Mishra,
<b>2.</b>	Campaign for Tobacco - Free Kids (CFTFK) and The Tobacco – Free Kids Action Fund (TFKAF)	2022-2023	Dr. Gauravi Mishra
<b>3.</b>	Oral Cancer Screening Programme among High Risk Population Residing in Low Socio-Economic Settings in Mumbai, Maharashtra: A Organised Service Programme	2022-2023	Dr.Gauravi Mishra, Dr.Sharmila Pimple, Dr. Ashok Mehta, Dr. Vasundhara Kulkarni, Dr. Pranay Pardesi, Mrs. Parishii Majumdar and Dr. Shakthi Dorai B
<b>4.</b>	Establishment of District Preventive Oncology Services:For Maharashtra State : Apublic Private Partnership For 2020-21	2020-2021	Dr. Sharmila Pimple
<b>5.</b>	Knowledge Attitude and Practices regarding tobacco consumption and Prevalence of Tobacco use among Hotel Employees	2012	Dr. Sharmila Pimple

<b>6.</b>	Community based tobacco cessation programme	2012	Dr.Gauravi Mishra, Mrs. Parish Majmudar, Dr. Sheetal Kulkarni
<b>7.</b>	Smoke-free Mumbai Campaign	2011	Dr. Surendra Shastri
<b>8.</b>	Tata Memorial Hospital Mobile Outreach Programme.	2009	Dr. Gauravi Mishra
<b>9.</b>	Tobacco control and Cessation among marginalized Street Children population in Mumbai	2008-2010	Dr. Sharmila Pimple
<b>10.</b>	Prevalence of HPV, Cervical Intraepithelial Neoplasia and Cancer in a Cohort of HIV-Infected Women attending the Preventive Oncology screening services	2007- 2011	Dr. Sharmila Pimple
<b>11.</b>	Tata Memorial Centre Rural Outreach Programme (Ratnagiri-Sindhudurg)	2007	Dr. Sharmila Pimple
<b>12.</b>	Tata Memorial Centre Rural Outreach Program (TMCROP) Ratnagiri Sindhudurg Maharashtra	2003- 2012	Tata Memorial Centre
<b>13.</b>	WHO Supported Tobacco Cessation Clinic	2002	Department of Preventive Oncology, Mumbai.

## **1. Health Awareness Sessions for Common Cancers along with Breast cancer Screening for Women Working with Spiritual Organization” – A Pilot Service Programme**

**Implemented by** : Dr. Gauravi Mishra, Dr. Ashok Mehta  
**Project Initiated** : 2023  
**Funding Source** : Watumull Sanatorium Trust  
**Project Status** : Completed

### **Project Summary:**

This pilot service programme was to create awareness of common cancers and screen Brahmakumaris for breast cancer with Clinical Breast Examination (CBE). The objective were to create awareness regarding risk factors, signs symptoms, methods of early detection and prevention of breast cancer among Brahmakumaris and to evaluate knowledge, attitudes and practices regarding breast cancer and screening before and after participation in health education programme. A day prior, announcements were made at all the meditation halls of Shantivan regarding the screening camps. Preventive Oncology file registration was done for all the Brahmakumaris. After obtaining the informed consent, they were assessed for Knowledge Attitude and Practice (KAP) regarding breast cancers, this was followed by health awareness by trained Medical Social Workers. 90 such health awareness sessions were conducted. Socio-demographic and risk factor assessment were conducted. Around 500 Brahmakumaris were invited for CBE and health assistants took this opportunity to teach them breast self-examination.

### **Results:**

Totally, 500 participants received health awareness and breast cancer screening. Amongst these, 397 participants were screened at Shantivan, Abu Road and 103 were screened at Global Hospital, Mount Abu. Out of those screened, 57 participants were referred for further diagnostic procedures. One case of breast cancer was diagnosed in this programme. She is undergoing treatment at Ahmedabad.

## **2. “Campaign for Tobacco - Free Kids (CFTFK) and The Tobacco – Free Kids Action Fund (TFKAF)”**

**Implemented by** : Dr. Gauravi Mishra

**Project Initiated** : 2022

**Centers:**

- Tata Memorial Hospital, Parel, Mumbai
- Centre for Cancer Epidemiology, Kharghar, Navi Mumbai
- Department of Preventive Oncology, Khopoli
- Mahamana Pandit MMM CC, Varanasi, Uttar Pradesh
- BBCL, Guwahati, Assam
- HomiBhabha Cancer Hospital, Vishakhapatnam
- HomiBhabha Cancer Hospital, Sangrur, Punjab
- HomiBhabha Center, Muzaffarpur.

**Funding Sources** : Tobacco – Free Kids (TFK)

**Funding Period** : 4 months (1<sup>st</sup> June, 2022 to 30<sup>th</sup> September, 2022)

**1<sup>st</sup> Extension** : 31<sup>st</sup> March 2023

**2<sup>nd</sup> Extension** : 31<sup>st</sup> July 2023

**Activity Status** : Ongoing

**Programme Summary:**

The intention for conducting a campaign for tobacco free kids was to compile all the government laws and regulations, including registrations, reporting, and health and safety requirements. Several meetings were held between funders and all the centers before initiation of the project. Each centre had proposed set of activities to be conducted with budget before initiation. After the approval from funders, each centers of Tata Memorial Hospital were asked to utilize the allotted funds by conducting the activities.

**Online meetings:**

Monthly online meetings were held. The agenda was prepared, circulated via email, and followed during the meetings. The individuals in charge of each center prepared PowerPoint presentations (PPTs) and showcased the activities carried out by their respective team members. During these meetings, shortcomings were discussed, and action plans were devised to improve outcomes.

### **CTFK Google Drive:**

A Google Drive was created under the name CTFK, which includes folders dedicated to each center. Within these center folders, sub-folders were created to organize and save various items such as progress reports, presented Power Point presentations (PPTs), photographs or videos of activities, media reports, budget utilization excel sheets, and scanned copies of bills and vouchers. Access to these folders was restricted solely to the respective in-charge personnel of each center.

### **Summary:**

Various activities were organized by each center to raise awareness about the harmful effects of tobacco among school children, children from community, and caretakers. These activities included debate competitions, role plays, poster competitions, drawing competitions, crafts-making, tobacco awareness lectures, interactive sessions with children, rallies, walkathons, creation of an E-book by children, signature campaigns, and oath-taking ceremonies. Winners were rewarded with gifts as an incentive. Additionally, some centers also conducted oral cancer screenings. The activities and achievements of each center were publicized in the local media using the vernacular language. This campaign aimed not only to educate participants but also to make significant contributions towards building a tobacco-free society.

### **Status of the programme:**

Compilation of final report and preparation of UC (Utilization Certificate) is ongoing.

### **3. “Oral Cancer Screening Programme among High Risk Population Residing in Low Socio-Economic Settings in Mumbai, Maharashtra: A Organised Service Programme”**

<b>PI</b>	:	Dr.Gauravi Mishra, Dr.Sharmila Pimple, Dr. Ashok Mehta
<b>Co-I</b>	:	Dr. Vasundhara Kulkarni, Dr.Pranay Pardesi, Mrs. Parish Majumdar and Dr. Shakthi Dorai B.
<b>Project Started</b>	:	Started in 2022

**Funding Source** : Watumull Sanatorium Trust  
**Project Status** : Ongoing Programme

**Project Summary:**

This service program aims to reach individuals residing in the low socio-economic areas of Mumbai who are engaged in smoking, smokeless tobacco use, and alcohol consumption. The study plans to screen approximately 25,000 men and women above 18 years of age, who have been using tobacco and alcohol for over a year, for oral cancers. The selected geographical areas for this study include slums in different wards of Mumbai. The study will span over a period of 24 months.

The objectives of this study are to create awareness about the risks associated with smoking, smokeless tobacco, and alcohol among participants and their families, identify the factors contributing to oral cancer among the enrolled participants, and estimate the prevalence of oral pre-cancers and cancers within Mumbai's low socio-economic settings.

Door-to-door survey is being conducted in the 24 wards of Mumbai. Medical Social Workers(MSWs) collect information on eligible participants, including details about their families, tobacco and alcohol habits. Oral cancer screening is carried out at a nearby location such as a political party office, clinic, or school. Enlisted participants are provided with an informed consent form and are invited to attend a health education sessions on the risk factors and prevention of oral cancers. Trained MSWs collect socio-demographic data and risk factors assessment is on structured questionnaire tablet. Individuals who screen positive are referred to Tata Memorial Hospital for further diagnostic management and treatment. Currently, 13,000 tobacco users have been enrolled in the study.

**4. “Establishment of District Preventive Oncology Services: Maharashtra State” (Public Private Partnership for 2020-21)**

**Proposed & Implemented By:** Dr. Sharmila Pimple Technical Collaborator - Dept. of Preventive Oncology, Tata Memorial Hospital Centre for Cancer Epidemiology Tata Memorial Centre, Mumbai, India

**Project proposal** : Public Private Partnership for 2020-21,FMR Code - 18.1

**Project Initiated** : 2020-2021

To provide the preventive oncology services under NCD clinic at district level in the Following districts NCD Clinic like, Bhandara , Wardha, Satara, Akola, Osmanabad, Nasik, Pune, Sindhudurg, Nanded, Latur, Ahmadnagar, Nandurbar, Jalna, Washim, Ratnagiri, Chandrapur, Amravati and Hingoli.

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	Maharashtra							
Initiating PO Services under NCD Clinics	Commissionerate of Health Services, Government of Maharashtra	-	Report per Districts	Report per Districts	Report per Districts	Report per Districts	Report per Districts	Report per Districts

#### 5. “Knowledge Attitude and Practices regarding tobacco consumption and Prevalence of Tobacco use among Hotel Employees”

**Implemented By :** Dr. Sharmila Pimple

**Project Initiated :** 2012

#### **Project Summary:**

Restaurants and Hotels (Grade II and below) located in the geographic localities of Parel and Wadala around TMH were selected for the Service Program. The Social Workers mapped the geographic units. All the restaurant's units were listed for the service program and later approached for consent to conduct the program. Out of the 36 Restaurants / Hotels listed consented for the program, 6 refused to participate. 27 hotel units consented, and 188 hotel employees were interviewed by student Social Workers with a pretest questionnaire and conducted a Tobacco Awareness program for respective hotel unit employees.

#### 6. “Community based tobacco cessation programme”

**PI :** Dr.Gauravi Mishra;

**Co-I :** Mrs.Parishi Majmudar, Dr. Sheetal Kulkarni

**Funding :** DAE funds and funding was granted on 16.12.2011.

**Project initiate :** 2012

**Project Status :** Completed



**Project Summary:**

The Community Based Tobacco Cessation Programme was been initiated in Trombay with a view to provide a tobacco cessation service at community level and thereby make tobacco cessation counseling easily accessible for the masses at grass root level and also counter the stigma associated with approaching a specialized set-up. The programme enabled establishment of a model community based tobacco cessation programme, which can be replicated in other communities and can be taken up by NTCP, in future. There were 3 interventions given at the interval of 3 months each. The post intervention questionnaire regarding knowledge, attitude and practices were filled at the end of the programme i.e. 9th to 12th month from start of the programme.

**First intervention:**

The first out of three interventions was initiated in July 2012. The intervention was held as three sessions

***First session:***

Filling of baseline proforma questionnaire of the contacted eligibles.

***Second session:***

- Games for rapport building and motivating women to participate in the workshop.
- Health education to educate women about health hazards about tobacco.
- Counseling of women to quit tobacco.

**Results:**

Of the total 358 women tobacco users enrolled, 329 (91.89%) women were contacted and 313 (87.43%) women attended the workshop. 50 (15.19%) women quit tobacco habit.

**Second Intervention:**

Second intervention out of three was conducted in three different sessions.

*First session:* Filling of proforma questionnaire of the contacted eligibles to enquire about their tobacco habits post first intervention.

*Second session:* A cultural programme to encourage the participation of all the enrolled tobacco user women.

*Third session:* All tobacco user women were counseled for tobacco cessation.

**Third Intervention:** This was completed after three months of second intervention.

**Results:**

Of the total 358 women tobacco users enrolled, 324 (90.50%) women were contacted and 293 (81.84%) women attended the workshop. 105 (29.33%) women quit tobacco habit.

**7. “Smoke-free Mumbai Campaign”**

**Funding Source** : Bloomberg Global Initiative for Tobacco Control  
**Implemented By** : Dr. Surendra Shastri  
**Project Initiated** : 2011

**Project Summary:**

India was among the first countries to sign and ratify the Framework Convention for Tobacco Control (FCTC) of the WHO. The major provisions of this law e.g. smoke-free public area, ban of sale to minors, have remained mostly ineffective, due to a very uncertain enforcement mechanism. The Investigator had proposed, through the Department of Preventive Oncology, Tata Memorial Hospital and in collaboration with the Mumbai Municipal Corporation, the Mumbai Police and several NGOs a “Smoke-Free Mumbai” campaign to make Mumbai city smoke-free (in the lines of Smoke-free London, Smoke-free New York etc.). This proposal involved massive public media and advocacy campaigns, training, and tobacco cessation schemes, and was funded by the Bloomberg Global Initiative for Tobacco Control.

**8. “Tata Memorial Hospital Mobile Outreach Programme”**

**Funding Source** : DAE  
**Total Population Screened** : 14000  
**Implemented By** : Dr. Gauravi Mishra  
**Project Initiated** : 2009

**Project Summary:**

Cancers of the uterine cervix, breast and oral cavity accounted for 134,420, 115,251 and 24,375 cases respectively and were responsible for 52.8% of total cancers among women in India in 2008. These three cancers were responsible for 142,968 deaths accounting for 45.8% of total cancer deaths among Indian women.

A community based cancer-screening programme was initiated in the year 2009 among socio-economically disadvantaged women in Mumbai, India. The major objectives of the programme were creating awareness regarding common cancers, detecting pre-cancers of cervix and oral cavity and early cancers of breast, cervix and oral cavity by conducting screening with use of simple low cost technology [viz. naked eye oral visual inspection (OVI), Clinical Breast Examination (CBE), Visual inspection of cervix after application of 5% Acetic Acid (VIA) and Lugol's Iodine (VILI)] by trained primary health care workers (PHW), facilitating confirmation of diagnosis among the screen positives and treatment and follow-up of the diagnosed cases.

The process involved a selection of clusters, cluster mapping, household surveys, health education, and screening the eligible women for common cancers by primary health care workers at a temporarily set-up clinic within the community. The programme was planned to cover 125,000-disadvantaged population in time duration of five years.

### **Breast cancer screening results were published in International Journal of Preventive Medicine: 2019**

The compliance to screening, referral and treatment were 90.58%, 74.22% and 100% respectively. The results of multivariate logistic regression analysis demonstrate literate women, having family history of cancer, with tobacco habit, being treated for breast abnormalities, being ever pregnant and having history of contraceptive use were positive predictors while, women belonging to Muslim religion or speaking mother-tongue other than Marathi or Hindi were negative predictors of participation to screening. Educational status was the only significant predictor of compliance to referral. Screen-positive women with education of secondary school level or more were more likely to comply with referral.

### **Results of oral cancer published in IJCM 2022**

138,383 population was surveyed, out of which 13,492 eligible women were enlisted for oral cancer screening. Among these, 12,495 were contacted and 11,895 (95.12%) women participated

in a cancer awareness program and 11,768 (94.18%) participated in oral cancer screening. According to results of multivariate logistic regression analysis, women belonging to Hindu religion 94.57%, with mother tongue Marathi 94.76%, and with family history of cancer 95.84% complied significantly higher to oral cancer screening as compared to other women.

### **Results of oral cancer screening published in IJCM 2022**

A total of 138,383 population were surveyed, of which 21,422 eligible women were contacted and 16,424 (82.50%) complied for cervical cancer screening. According to the results of univariate and multivariate analysis, women belonging to the age group of 30–39 (80.69%), literate women with school level or education up to Senior College (78.97% and 80.86%) (Odds ratio [OR], 1.323;  $P \leq 0.001$ ) and (OR, 1.402;  $P \leq 0.001$ ), belonging to Hindu religion (77.20%), speaking Marathi (77.07%), and with a family history of cancer (81.93%) had higher participation for screening, while women belonging to the Muslim community (73.95%) (OR, 0.743;  $P \leq 0.001$ ), speaking other than Marathi and Hindi language (73%) (OR, 0.872;  $P = 0.017$ ), illiterate women (70.71%), and graduate women (70.78%) had lower participation.

### **9. “Tobacco Control and Cessation among Marginalized Street Children Population in Mumbai”**

**Implemented By** : Dr. Sharmila Pimple

**Project Initiated** : 2008

**Project Completed** : 2010

#### **Project Summary:**

Street Children are a marginalized group who are socially challenged and known to adopt high risk behavior in the form of substance abuse and tobacco use. Considering the challenges they encounter in lives spent on the streets or shelters, suitable, sustainable innovative strategies for preventing and stopping tobacco use behavior were adopted for the program.

The program consisted of Focus Group Discussions in first contact. Second contact involved Role Play and Games based on Tobacco abuse. Third contact will look for in any change in behavior towards tobacco use

In this service program, 1243 street children from 19 NGOs were contacted. Focus Group Discussions about harmful effects of tobacco consumption was conducted at their doorsteps or

shelters they were residing. 117 children were screened for oral pre cancer. Out of whom 7 were referred to TMH for further evaluation. Children Post health awareness 35 children were assessed for improvement in the knowledge and attitude regarding tobacco and its harmful effects.

**10. “Prevalence of HPV, Cervical Intraepithelial Neoplasia and Cancer in a Cohort of HIV-Infected Women attending the Preventive Oncology screening services”**

**Implemented By** : Dr. Sharmila Pimple  
**Project Initiated** : 2007  
**Project Completed** : 2011

**Project Summary:**

NGO's active in the field of HIV/AIDS are identified for extending the cervical cancer awareness and early detection services to the women living with HIV/AIDS currently under their care for various other health and social scheme. The women were enlisted and contacted through volunteers and peer educators for taking the benefit of early detection services. Women's Cancer awareness sessions were planned within their premises/communities in groups of 25-30 each and were motivated to avail the early cancer detection facilities at the Dept. of Preventive Oncology at TMH. The activity was initiated in September 2007 and till March 2011, 219 HIV positive women were recruited and screened for cervical cancer in the program. 81 (37%) were positive for HPV DNA by HC II. The program detected 24 cases of CIN 1, 17 cases of CIN 2 and 3 of Invasive cancers.

**11. “Tata Memorial Centre Rural Outreach Programme (Ratnagiri-Sindhudurg)”**

**IEC Project** : Service programme  
**Implemented By** : Dr. Sharmila Pimple  
**Funding Source** : Department of Atomic Energy  
**Project Initiated** : 2007

Since 1974, the National Cancer Control Programme in India had been operational. However, it had been lacking clear guidance when it comes to cancer prevention and early detection. Taking into account the insights gained from the rural Osmanabad-Barshi study and the urban outreach programme R01 funded NIH study, Investigator developed a two-district Model Cancer Control

Programme for the population of over 25 lakh residing in the districts of Ratnagiri and Sindhudurg in rural Maharashtra, India. The necessary funds were sanctioned from the DAE 10th Plan to implement this programme, which was inaugurated on August 17, 2007, following a year of planning.

This comprehensive programme includes various components such as population surveys, outreach screening for oral, breast, and cervix cancers, as well as diagnosis and treatment at the BKLW Hospital located in Dervan, Chiplun, and Ratnagiri. The sanctioned funding continued during the 11th Plan as well. In August 2008, the BKLW Hospital also established Radiation Oncology facilities. In addition to these initiatives, the programme incorporates a Tele-Radiology: Tele-Pathology project and a Hospital-based Cancer Registry Programme, both of which were supported by a donation from the Bristol Meyer Squibb Foundation. Furthermore, a Cervical Cancer Vaccine Programme, backed by a donation from Merck, is also included in this programme. As a result, this model of District Cancer Control in India stands out as the first truly comprehensive initiative of its kind.

## **12. “Tata Memorial Centre Rural Outreach Program (TMCROP) Ratnagiri Sindhudurg Maharashtra [2003- 2012]”**

<b>Funding Source</b>	:	DAE X <sup>th</sup> Plan
<b>Total Population Screened</b>	:	Proposed 5 lakh men and women to be screened.
<b>Implemented By</b>	:	Tata Memorial Centre
<b>Project Initiated</b>	:	2003
<b>Project Completed</b>	:	2012

### **Key personnel:**

Dr. R. Badwe	:	Project Director
Dr. S. S. Shastri	:	Officer In-charge
Dr. S. D. Banawali	:	Project Co-ordinator, TMH
Dr. Suvarna Patil	:	Project Co-ordinator, BKLWH
Dr. Sharmila Pimple	:	Project Co-ordinator, TMH

### **Project Summary:**

The Tata Memorial Centre commissioned a Model Rural Cancer Control Program in Ratnagiri and Sindhudurg districts of Maharashtra under the DAE X<sup>th</sup> plan projects, on 17<sup>th</sup> August 2003 with

the following specific objectives. Districts with poor access to health care services having a high incidence/prevalence of common cancers and are within a reasonable distance from the Tata Memorial Hospital were selected for the program.

**Objectives:**

1. To set up a rural community based cancer registry.
2. To create awareness regarding tobacco related cancers, breast and cervix cancer.
3. To screen for precursors/early stages of cervix, breast and oral cancer among women and oral cancer among men.
4. To treat detected cases.
5. To conduct research for prevention and control of common cancers.

This project had undertaken systematic cancer awareness and screening activities in the entire populations of the districts of Ratnagiri & Sindhudurg through **Mobile Education-cum-Screening Units** (MESUs). The screen positive cases received confirmation of diagnosis at their village through mobile First Referral Level Units (FRLUs). Walavalkar hospital located at Dervan village, Chiplun taluka in Ratnagiri district was selected as the base hospital for the project, and the screen detected cases were provided treatment at the hospital by consultants from Tata Memorial Hospital, who visited the project site once a month. Consultants from the Walavalkar hospital were also trained during the project to enable them to treat cancer cases. Cancer morbidity and mortality in the region was maintained by the registry.

Extensive in house and onsite training of the recruited staff took place before the commencement of the program. The staff was trained in organizing and administering cancer awareness, surveys and screening activities in community based screening programs. Around 5 lakhs eligible men & women from the two districts were expected to participate in the screening program. The screening was completed by 2012.

**Results:**

Around 2,90,066 women were screened for breast and cervical cancers and 3,63,519 men and women were screened for oral cancers till 31<sup>st</sup> March 2012. Nearly 400,000 persons participated in the Health Awareness Program. Till date 170 cervical cancers, 262 breast cancers and 991 oral cancers cases have been detected and treated by the program. The project provides an ideal setting for telemedicine services (mainly Tele-pathology and Tele-consultations) which are integral part of the project. Hardware and satellite communication are provided by ISRO

### **Benefits and Outcomes:**

1. Local capacity building and technology transfer: The project resulted in establishment of comprehensive cancer care facilities in the backward Konkan region of Maharashtra.
2. Reduction of disease burden and economic gain: The project resulted in reduction of incidence of and mortality due to common cancers in the districts of Ratnagiri and Sindhudurg, leading to an improvement in the average DALY (disease adjusted life years) scores for the people of the region.
3. National Gain: The valuable experience gained in the project, in terms of reduction in the incidence and mortality due to Oral, Cervix and Breast cancer were transferred to the National Cancer Control Program (NCCP) and is expected to form the basis of future Cancer Control Programmes in the country.

A National level Training Programme in Preventive Oncology was arranged during February 6-7, 2005. Medical Officers from Regional Cancer Centres across the country participated in the two day training programme on the practice of evidence based screening for common cancers in India and in the planning & management of rural community based cancer screening and treatment strategies.

### **13. “WHO Supported Tobacco Cessation Clinic”**

**Implemented by** : Tata Memorial Hospital

**Project Initiated** : 2002

### **Project Summary:**

Department of Preventive Oncology was providing tobacco cessation counseling for tobacco users. These services were upgraded when WHO introduced Tobacco Cessation Clinics in India, in the year 2002. WHO-India office decided to fund tobacco cessation activities in the country and the investigator from Department Preventive Oncology was called upon to contribute in preparing a plan for countrywide cessation clinics. The investigator had conceptualized a plan that included a locally acceptable clinical algorithm. Training of manpower was provided by WHO. Initially 13 clinics were introduced in India and the Clinic at Department of Preventive Oncology was the only one in Maharashtra.



