



# HEAD AND NECK INSTITUTE

CUTTING-EDGE TREATMENT TO IMPROVE SURVIVAL AND QUALITY OF LIFE



## **NARAYANA HEALTH CITY, BENGALURU**



## About Narayana Health

One of the leading private healthcare service providers in India, operating a chain of multispecialty, tertiary and primary healthcare facilities NH has a network of 23 hospitals (multispecialty and superspeciality healthcare facilities which provide tertiary care), 7 heart centres (superspeciality units which are set up in a third party hospital) and 23 primary care facilities (including clinics and information centres), across cities, towns and villages in India including one in Cayman Islands, North America with 5,347 operational beds.

Headquartered in Bengaluru, India, and operate a national network of hospitals in India with a particularly strong presence in the southern state of Karnataka and eastern India, as well as an emerging presence in western and central India. Our first facility was established in Bengaluru with approximately 225 operational beds and we have since grown to 54 facilities with 5,347 operational bed.

\* Bed Count as of 1st May 2016

## About Narayana Health City

Narayana Institute of Cardiac Sciences in NH Health City operates as a "centre for excellence for cardiac sciences" with 706 operational beds exclusively for cardiac surgeries and cardiology procedures of which 80 beds dedicated to pre-operative and post-operative paediatric and neonatal ICU.

Mazumdar Shaw Medical Center in NH Health City is a multispecialty tertiary care hospital with 628 operational beds and has over 30 specialities to offer and is focussed mainly on oncology and renal sciences and also houses one of India's largest bone marrow transplant units.

## About Head and Neck Institute

The mission of Head and Neck Institute is to provide one-stop comprehensive care for patients with head and neck cancer. A multidisciplinary team of globally recognised head and neck, and reconstructive surgeons strive to provide treatment optimised for complete tumour ablation followed by restoration of form and function. The department works closely with departments of radiation oncology, medical oncology, pathology, radiology and pain management to deliver state-of-the-art comprehensive treatment. Special emphasis is given to quality of life and functional rehabilitation of cancer patients.

The head and neck oncology also has a cancer screening and prevention clinic, which besides routine clinical and pathological tests also actively utilises modern molecular assay and imaging techniques for early detection and prevention of cancer in high-risk individuals. The department also runs an active community outreach programme for early detection and prevention of cancer.

The department has molecular research laboratory with focus on cancer stem cells, head and neck cancer genomics leading to personalised therapy and discovering strategies for prevention of oral cancer.

# HEAD AND NECK INSTITUTE

Head and neck oncology department primarily deals with comprehensive management of head and neck cancers, which includes tumors arising from the mouth, throat, nose, salivary gland, thyroid gland, ear and skull base. Head and neck cancers are one of the most common cancers in India with estimated 200,000 new cases detected every year. Smoking, tobacco-betel nut chewing and excessive consumption of alcohol are major risk factors for head and neck cancer.

## Marks of Distinction

- ✦ We are the leading center for the management of head and neck cancers.
- ✦ One of the largest head and neck microvascular reconstruction programs in the world
- ✦ Integrated speech and swallowing therapy program
- ✦ Over 100 cases of functional dental rehabilitation
- ✦ Primary dental implants along with jaw reconstructive surgery
- ✦ 3D planning, CAD CAM model based jaw reconstruction and rehabilitation
- ✦ Minimally invasive endoscopic and laser surgery
- ✦ Post laryngectomy, voice rehabilitation
- ✦ Leading center for head and neck oncology research and center for genome-based cancer therapy
- ✦ Dedicated service for advanced recurrent cancer
- ✦ Over 200 publications in high impact journals
- ✦ Over 30 research projects
- ✦ One of the few centers in india with NIH(USA) supported research project.



# EARLY DETECTION AND PREVENTION CLINIC

What we offer:

## Optical/Molecular image and saliva based diagnostics

Many patients do not experience symptoms of oral cancer until the disease has spread beyond the mouth to the neck, at which point the cure rate is lower and the risk of treatment is higher. Screening high-risk patients increases the likelihood of identifying the disease at an earlier and more curable stage.

The Head Neck Institute has a dedicated oral cancer screening service for high-risk patients. It employs various techniques such as optical imaging, saliva based diagnostics and molecular imaging to identify abnormal areas of the mucosa that should be biopsied. The Head Neck Institute is one of few institutions worldwide, equipped for this comprehensive early detection techniques. It is involved in various research activities on early detection.



## Who is eligible for screening

- Anyone who has a suspicious oral lesion (white or red patch or ulcer lasting more than two weeks).
- Regular screening is critical for patients who have been treated previously for oral cancer, because the initial cancerous lesion is often surrounded by premalignant lesions that may eventually become malignant. Nearly a third of patients develop a second cancer after treatment for the head and neck cancer.



**Dr. Praveen Birur**

MDS

*"A large proportion of oral cancer develops from pre-cancerous lesions. These can be detected with advanced diagnostic modalities. Early detection saves lives"*

Dr. Praveen Birur is a Professor, & Head of the Department of Oral Medicine and Radiology at K.L.E.S' Institute of Dental Sciences, Bangalore, Consultant at Mazumdar Shaw Cancer Centre, Biocon Foundation and a lead for oral cancer screening program using mHealth (mobile health). He has been involved in various public health programs for down staging oral cancer in rural population in India.

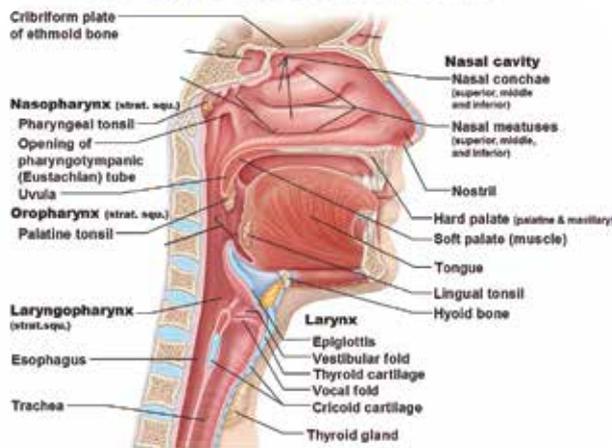


**Dr. Sumsum P. Sunny**

MDS

Dr. Sumsum is a specialist in oral medicine-who has an expertise in pre cancerous lesions.

# MULTI-DISCIPLINARY HEAD AND NECK ONCOLOGY PROGRAM



## We treat the following

- Oral cavity and lip cancer
- Pharyngeal cancer
- Laryngeal cancer
- Nasal cavity and paranasal sinus cancer
- Salivary gland cancer
- Thyroid and parathyroid cancer
- Eye cancer
- Skin cancers of the face, scalp, and neck
- Skull base tumors

## Individualized treatment, planned and delivered by a multidisciplinary team of experts

Treating cancers of the head and neck (upper aero-digestive tract and thyroid gland) can be extremely challenging. Tumors may be difficult to access; treatment may alter the patient's appearance significantly or impair functions such as chewing, speech, swallowing.

The head and neck institute brings together an integrated multidisciplinary team of specialists, all focusing exclusively on cancers of the head and neck, to design a customized treatment plan that will meet both the medical and social needs of each patient. These include surgery (including neurosurgery, reconstructive surgery), radiation oncology, medical oncology, dentistry, maxillofacial prosthetics, speech therapy, nutrition, education and support, and pain management. All services are available in one location - the head and neck institute - providing greater convenience for the patient and their family.

## Service for recurrent metastatic head and neck cancer

About 50% of head and neck cancer develop treatment failure. With the advanced genomic assays and advancement in surgical techniques and reconstruction, many of these tumors can be salvaged. The dedicated genomic tumor board of Mazumdar Shaw Cancer Center addresses this problem and develop an individualized treatment plan.



### Dr. Vijay Pillai

BDS, MDS, Fellow Head & Neck Surgery

*"Head & Neck cancer is a team sport rather than an individual game. Every patient undergoing treatment in our institute is discussed in a multi-disciplinary tumor board. All specialists required for treatment are available under one roof".*

Dr. Pillai has trained in medicine and maxillofacial surgery and done an advanced fellowship training in head and neck surgical oncology. His area of prime interest is in oral malignancies and their reconstruction.

## Minimally-invasive Head and Neck Surgery Program

Advanced Techniques Improve Disease Control, Speedy Recovery, Preserve Quality of Life. This is critical in tumors affecting the head and neck region, where every treatment has the potential to affect vital functions such as vision, speech swallowing, chewing and breathing. It is also essential to minimize esthetic impact of treatment. Minimally invasive surgical procedure plays a critical role in achieving this goal. Endoscopic laser surgery of the larynx has the potential to preserve voice. Endoscopic skull base surgery can improve visualization of the tumor without the need for large facial incisions. With the use of Image guided surgical technology in our center, we can not only assess the extent of the tumor but also find minimally invasive methods to navigate and remove the tumor in-toto.

# MULTI-DISCIPLINARY HEAD AND NECK ONCOLOGY PROGRAM



## Dr. Naven Hedne

MBBS, MS, MCh, Fellow Neuro-otology Head and Neck Surgery

*"We always consider the use of most effective but least invasive surgical approach to achieve complete tumor removal while preserving function and esthetics".*

Dr. Naven Hedne completed MCh from AIMS Kochi followed by specialised training in neuro-otology and skull base surgery from Freemantle Hospital, Perth, Australia.

Department of Radiodiagnosis:  
Advanced imaging for diagnosis, treatment planning, surveillance and tumor control



## Dr. Sunil H V

MD

Dr. Sunil H V is the consultant and Head of the department of Nuclear Medicine. He has done his MD in Nuclear Medicine from PGIMER Chandigarh. He has several publications to his credit.

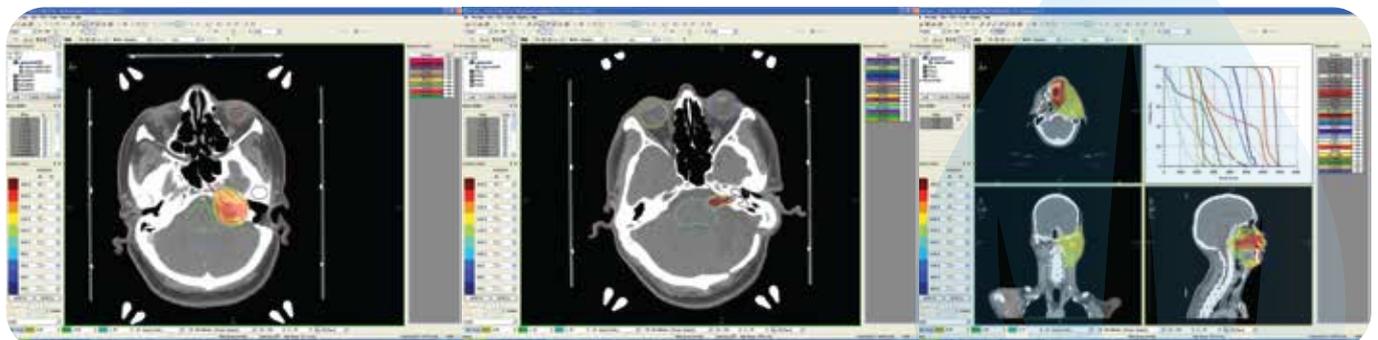


## Dr. Venkataraman Bhat

MBBS, MD, MNAMS, FRCR(Lon), CCT (UK)

*Our center is equipped with modern state of the art facilities required for imaging and diagnosis of head and neck tumors.*

Dr. Venkataraman Bhat is the Director of Imaging Services, a Senior Consultant and HOD of Radiology and Imaging at Mazumdar Shaw Medical Center located at Narayana Health City.



Skull base surgery unit at Mazumdar Shaw Medical Center is a multidisciplinary team adequately trained and equipped to treat the most complicated tumors. We have advanced Facilities such as nerve monitors, neurophysiological monitor, neuronavigation, state of the art microscope and endoscopes to make surgery very safe for patients. Our surgeons have extensive experience and expertise in skull base surgery (tumors located between the brain and the face) and have performed

# SKULL BASE SURGERY

a large number of procedures on multiple occasions resecting tumors that were previously deemed unresectable. Our group has developed unique surgical approaches to remove these tumors. These techniques have now been adapted world wide by other surgeons.

In addition, our center offers various procedures including endoscopic endonasal surgery, facial translocation surgery and at times using both open and endoscopic techniques with an image-guidance system.



## Dr. Vidya Bhushan R

MS (ENT), DNB, FHNS

Dr. Vidya Bhushan R has pursued his Undergraduation and Post graduation (MS – ENT) in St. Johns Medical College, Bangalore. He has completed Fellowship in Head and Neck Surgical oncology from Mazumdar Shaw Cancer centre. His area of interest is Endoscopic Skull Base surgery. He has numerous publications to his credit.

*“By endoscopic surgeries, tumors involving skull base and beyond can be safely resected without disfiguring our patients”*



“As a neurosurgeon, we are often involved in treating skull base tumors along with the head and neck surgeons. This team approach takes advantages of the expertise of both the specialties for the ultimate benefit of the patient.”- Dr. Kiran M. (MS, MCh) who is part of the neurosurgery unit.



Disassembly of facial subunit carried out to access previously inaccessible tumors of the skull base



## Dr. Moni A. Kuriakose

MD, FDSRCS, FFDRCS, FRCS (Edn), FRCS

*“With the aid of image-guided surgery and advances in tumor-access procedures, it is rare for a head and neck cancer to be considered unresectable.”*

Dr. Kuriakose is the professor and director of head and neck institute. He is the author of a four volume book in oral cancer and editor-in-chief of a new international journal on Oral Cancer.

# RECONSTRUCTIVE AND MICROVASCULAR SURGERY

Head & Neck Institutes plastic, microvascular & reconstructive surgery unit provides a full menu of services to preserve or restore the function and/or appearance of any region of the body. We treat simple and complex problems related to cancer, trauma, developmental disorders and delayed effects of chemotherapy or radiation treatment.



## Dr. Vivek Shetty

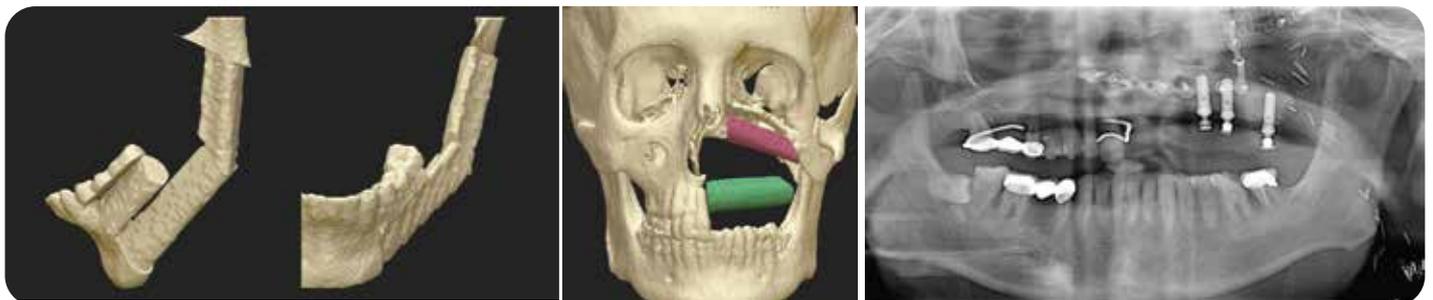
MS General Surgery, Fellowship in Head and Neck Oncology and Reconstruction

MBBS from KMC Mangalore, MS General Surgery from Father Muller Medical College, Mangalore. Fellowship in Head and Neck Oncology and Reconstruction. Area of interest is functional reconstruction of head and neck defects.

*Cancers of the head and neck affect the most basic of human functions, which are eating, breathing and speaking. We strive to achieve not just disease control, but also rehabilitation and reintegration of our patients back to society.*

## Services we offer

- Computer planned reconstructive surgery/ Virtual surgical Planning
- Reconstruction of the oral cavity, floor of mouth, upper oral airway, and larynx
- Reconstruction using local, regional and distant flaps
- Free flap surgery using microvascular techniques.
- Autologous fat grafting.
- Microsurgical nerve repair and nerve grafting
- Facial reanimation, to restore movement and improve appearance following paralysis related to injury, surgery, or illness.
- Amelioration of complications related to orthopedic surgery, such as necrosis-related hardware exposure.
- Secondary deformity correction and dental rehabilitation following accidents.
- Correction of jaw and facial bone alignment
- Complex dental implantology, zygomatic implants, bone grafting



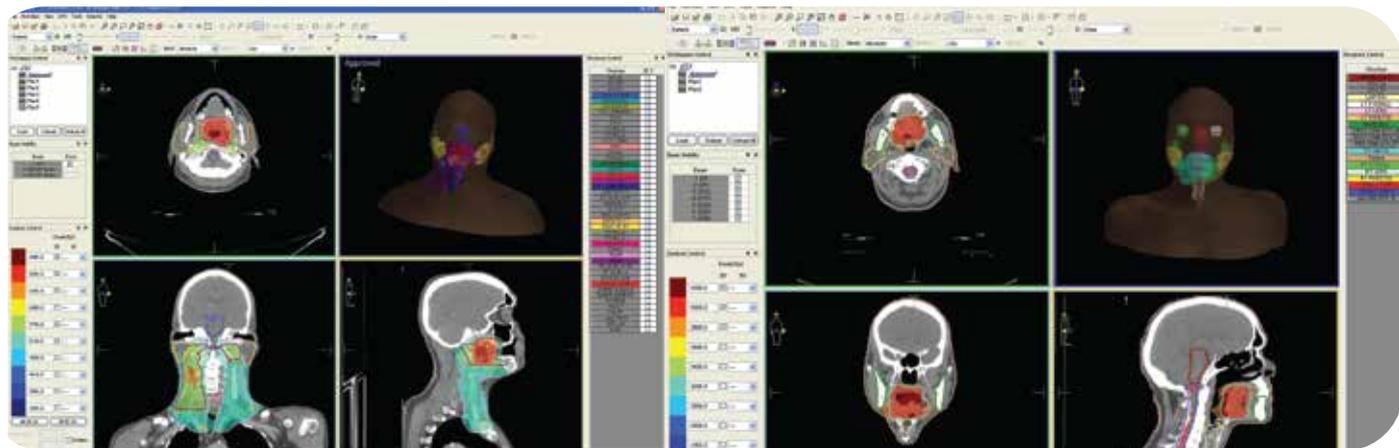
## Dr. Vinay V. Kumar

MDS, DMD, PhD.

*"In many cases we virtually plan the surgery and with the aid of 3-D models of the patient, we are able to plan and execute complete jaw reconstruction including implants and the dentition at the same time, in one surgery".*

Dr. Kumar is an Oral & Maxillofacial surgeon and Implantologist with special interest in jaw reconstruction and rehabilitation. He completed his Dr. Med. Dent. (DMD) from Johannes Gutenberg University, Germany where he also is a Guest Doctor. He is a fellow of the International team for Implantology (ITI), Switzerland.

# COMBINED MODALITY THERAPY FOR HEAD & NECK MALIGNANCIES



## Image-Guided Radiation Radiation Medicine:

Targeted Therapy and On-Time Treatment Schedule Targeted radiation is usually part of the treatment plan for patients in majority of head & neck cancers. Head and Neck Institute offers Intensity-Modulated Radiation Therapy (IGRT), and Volumetric-Modulated Arc Therapy (VMAT), which zero-in on the tumor site while protecting healthy tissue from radiation exposure.



### Dr. Sandeep Jain

MD, Ex-fellow and registrar, Tata memorial hospital, Fellowship- High precision radiotherapy, Liverpool

*“Targeted therapy and clinical skill are only part of the equation for improving treatment outcomes. To keep patients on track, we have introduced a comprehensive support system that begins during the first week of radiation therapy. Patients and their families are educated about the importance of schedule adherence, and patients receive assistance with nutrition, psychosocial needs, pain management, and other issues that may interfere with treatment”.*

**The Medical Approach:** Access to Novel Agents Chemotherapy may be given either alone or in combination with radiation therapy - either as the primary therapy or following surgery - for patients with head & neck cancers. In addition to the standard chemotherapies, patients have access to a wide range of novel therapeutics, including tyrosine kinase inhibitors, monoclonal antibodies, or immunotherapy agents.



### Dr. Santosh Gowda

MD, MS, AB (USA)

*“I mainly focus on Integrative Oncology that delivers holistic care and I believe in patient and family empowered care with personalized medicine”.*



### Dr. Pragnya Coca

MD, DM

*“Chemotherapy improves the survival of patients treated curatively for head and neck cancers when given concomitantly with radiation. Additionally, many patients in our center have the option of enrolling in clinical studies of novel agents- including targeted therapies”.*

# MULTIDISCIPLINARY THYROID & PARATHYROID DISEASE GROUP

The MSCC thyroid disease group has a dedicated endocrinologist, nuclear medicine physician and surgeon. We also provide minimally invasive endoscopic surgery for this condition.



**Dr. Subramanian Kannan**

MD, ABTM, PG

*"Thyroid nodule & Cancer: under one roof"*

## DENTAL ONCOLOGY & MAXILLOFACIAL PROSTHETICS



**Dr. P. C. Jacob**

MDS, Cert. Maxfac Prosthetics.

*"We anticipate postsurgical needs well in advance by evaluating cases alongside head and neck surgeons. This enables us to create a temporary prostheses for use immediately after surgery, so that the patient can continue to eat and talk until permanent prostheses can be provided"*

After post graduation, Dr. Jacob pursued a residency Program in Maxillofacial Prosthetics at the UCLA Medical Center, California, on an American Cancer Society fellowship. He has over 25 years in maxillofacial prosthetics and is considered as a pioneer in this field in India.



**Dr. Trupti C. Kolar**

MDS, FELLOWSHIP IN ORAL ONCOLOGY

Consultant - Head and Neck Oncology.

*Meeting the unique dental and oral health care needs of individuals battling various forms of cancer at all stages. Treating and managing oral side effects and complications that arise due to chemotherapy and radiotherapy*

Treatment of head and neck cancers are complex: both the disease and its treatment can affect on not only the patient's overall health but also appearance, ability to eat, swallow, and communicate; and psychological and emotional wellbeing. From the time of diagnosis, the Dental Oncology & Maxillofacial Prosthetics team plays an important role in developing a treatment plan aimed at protecting the patient's quality of life. We address treatment related complications such as cavities, reduced mouth opening post surgery, mouth dryness, dental prophyllaxis. These procedures require expertise of dental professionals working exclusively in an oncology environment.



# INTEGRATED ONCOLOGY SERVICES: COORDINATED CARE, GREATER CONVENIENCE

## Supportive services

The Head & Neck Institute is distinguished by the range of services it provides. Our patients who have been diagnosed with head and neck cancers have access to a full complement of support services specific to their needs during and after treatment, including:

- Speech & Swallowing Therapy
- Audiology
- Physical therapy
- Nutrition counselling
- Clinical Genetic counseling
- Social work support
- Pain management
- Yoga therapy
- Ayurveda and naturopathy



### Dr. Gopukrishnan Pillai

MBBS, MSc Vitality and Ageing  
Consultant Geriatrician and Director (Assisted Living)

*"Cancers of Head and Neck have profound impact on the sufferer's quality of life. Not only does it interfere with intake of food and medicines, but also have significant impact on self-image and social interaction due to the frequent disfigurement of face and upper body. This makes it necessary to have a holistic approach to the patient as well as the caregivers who have to spend time with the patient over a prolonged period of time."*

Dr. Gopukrishnan Pillai is a graduate of Govt Medical College, Trivandrum and University of Leiden, the Netherlands. He is a consultant in Geriatrics and Palliative Medicine with a special interest in rehabilitation and end of life care. He is an active participant in numerous academic and research programs and sits in many inter-governmental advisory groups on health policy and economics.

## Areas of expertise

- Pretreatment Counselling
- Management of Treatment Related Side Effects
- Symptom Control
- Pain Management
- End-of-life Care
- Respite Care
- Lymphoedema Care
- Mucositis Management



### Smita Caren Mathias

B. (ASLP), M. (ASLP), MS (Clinical linguistics-Neuroscience) Netherlands-Germany PHD Ongoing (Head & Neck Oncology)

*"Head and neck cancers hinder speech and swallowing functions either due to the tumor, the treatment or both. If speech, voice and swallowing are affected the overall quality of life gets drastically impacted. Modern diagnostic and management techniques aid us in overcoming the problem".*

Smita Caren Mathias is a Senior Speech Swallow Specialist at Muzumdar Shaw Cancer Centre, Narayana Health, Bangalore.

## Specialized in

- Videofluoroscopy swallow study (VFSS)
- Fiberoptic Endoscopic Evaluation of swallow (FEES)
- Pre operative counseling for laryngectomy, gastric pull up, glossectomy, skullbase surgeries, laryngeal preservation surgeries
- Speech and swallow management for total/partial removal of tongue-glossectomy.
- Voice and swallow management of total/partial removal of vocal cords-laryngectomy
- Certified in TEP
- Alaryngeal speech like TEP, electrolarynx, buccal speech, oesophageal speech, gastric speech
- Post operative voice and swallow management-tracheostomy/speech valve.
- Speech and swallow management in oral cancers
- Radio chemotherapy induced swallowing issues
- Strictures, fistulas, clefts
- Functional Assessment and planning of prosthetics
- Professional voice care

# DEPARTMENT OF OTOLARYNGOLOGY



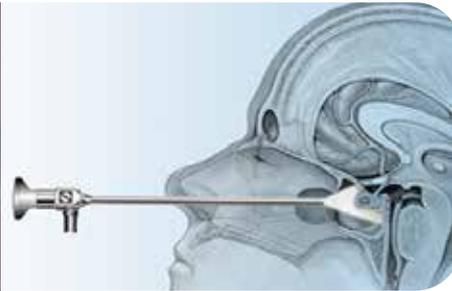
## Dr. Suhel Hasan

MS, DLO RCS, (Eng.), FICS, JLO Fellow (UK)

*“Technological advances in instrumentation has enhanced access to lesions, considerably decreased morbidity, improved outcomes and cure rates”.*

Dr. Suhel Hasan is the Head of the Department of Otolaryngology (ENT), Examiner-Diplomate of the National Board, JLO fellow, consultant to the ICF. Special interests include airway surgery and phonosurgery.

- Tympanoplasty / mastoid surgeries
- Endoscopic sinus & skull base surgery with navigation assisted procedures
- Cochlear implantation
- Microlaryngeal laser surgery
- Phonosurgery
- Surgery for Laryngotracheal stenosis



## FACIAL PLASTIC AND COSMETIC SURGERY

### Services include

- Contouring, Reshaping and Reconstructive Surgery of Facial Bones (Chin, Jaw and Cheek bones)
- Comprehensive management of abnormalities of soft tissue and bony tissues of the face
- Rejuvenation of the eyelids- Blepharoplasty, Brow lift
- Tumors of the orbit and reconstruction
- Facelift and holistic face rejuvenation
- Rhinoplasty: Aesthetic and Reconstructive
- Primary and secondary cleft lip and palate deformities
- Skin Cancer
- Sleep Apnoea



## Dr. N. Ravindranathan

MBBS, FRCS, Dip. American Board of Cosmetic Surgery,  
Fellow, American Academy of Plastic &  
Reconstructive Surgery.

*“We offer a service which focuses on the face as wellness index of the body, harmonizing appearance, mind and facial skin care”.*

# INTEGRATED HEAD AND NECK ONCOLOGY RESEARCH PROGRAM, MSCTR

Translational research conducted at MSCTR speeds the most promising diagnostic methods, treatments, and practices to our patients.

## Diagnosis / Prognosis

- A mobile app to help community dental surgeons identify suspicious oral lesions in high-risk patients.
- A saliva-based test to screen for oral cancer and provide prognostic information.
- An intra-operative molecular assay system to confirm lymph node metastasis in head & neck squamous cell carcinoma, to avoid overtreatment and such related morbidities as lymphedema.
- A panel of biomarkers to predict likely response to chemo-radiation, an organ preserving alternative to surgery, in laryngeal/pharyngeal cancer patients
- Delineation of the mechanism of cancer stem cell mediated drug resistance to enable informed treatment choices and suggest novel therapeutic targets.
- Preclinical models for evaluating pathway based therapy

## Precision genomic medicine

In association with Strand Life science and MSCTR, a panel of genes with actionable mutations have been developed. This is used to direct personalized therapy in patients, who are refractory to conventional treatment.

### Notable achievements:

Dept. of Biotechnology Center of Excellence (Program Support) grant  
NIH (USA) 1 million USD award for early detection of cancer



### Dr. Amritha Suresh

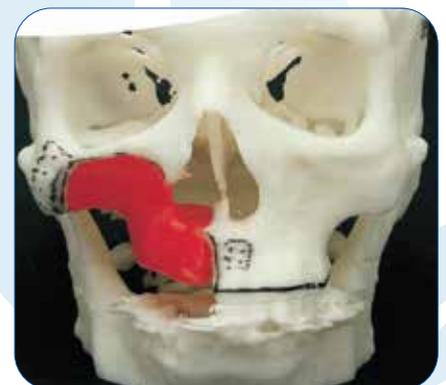
PhD

*"The research program housed at MSCTR works closely with clinicians to develop molecular solutions to clinical questions. Research enables a detailed understanding of the question, drives better care/treatment that in turn relates to improved outcomes".*

Dr. Amritha Suresh is the Principal Investigator, Integrated Head and Neck Oncology Research Program, MSCTR and a visiting faculty of the Roswell Park-Mazumdar Shaw Cancer Center-collaborative Research program. After completion of PhD from CCMB, Hyderabad, she has been investigating various aspects of head and neck oncology research for possible clinical applications.

## Tissue engineering:

In partnership with the Johannes Gutenberg University of Mainz, Germany and Universitätsmedizin Rostock, Germany we have developed a cooperative program on head and neck tissue engineering. The focus of research is to develop computer designed bone substitute materials and surface modification of biomaterials for better tissue integration.



## PROVIDING WORLD CLASS EDUCATION AND TRAINING

The department runs one of the most sought after university-affiliated Head and Neck Oncology Fellowship programs. The fellows receive world-class training in head and neck oncology and reconstructive surgery.

In addition, the department supports observership program of 4-6 weeks duration to provide guidance to national and international students interested in the field of head and neck oncology.

Head and Neck oncology research program offers PhD training positions to motivated postgraduates with basic sciences qualifications

# Meet our team!





## Services

Head & Neck Surgery | Reconstructive and Microvascular Surgery | Facial Plastic Surgery  
ENT Surgery | Dental and functional rehabilitation | Speech and Swallowing | Radiation  
Oncology | Medical Oncology | Integrated Oncology | Supportive care

### Consultant Call:

- ☎ **Phone: +91 80 7122 2222**
- ✉ **Mail: [msmc.headneck@gmail.com](mailto:msmc.headneck@gmail.com)**
- 📞 **Whatsapp: +91 973900 1680**



**For Emergency Call**  
**1800 4250 4250**



Unit of Narayana Health

OPD Timings: **9:00 am to 5:00 pm**, Monday to Saturday