

FIGHTING CANCER WITH EXPERTISE AND OPTIMISM

Centre of Excellence:
Oncology



The burden of cancer is increasing every year and Kenya and Sub-Saharan Africa is no exception.

Globally, cancer causes more deaths than HIV, TB and Malaria combined. 70% of the global cancer burden is in low and middle income countries (LMICs). In Kenya, cancer is now the third leading cause of deaths and second among non-communicable diseases accounting for 7% of overall mortality rate.

In Kenya, it is estimated that more than 47,000 new cancer cases and 33,000 deaths are registered annually. For a population of 50 million these are huge numbers. Facilities in Kenya offering cancer treatment are very few and most patients lack access to quality cancer care.

In Kenya, the risk of getting cancer before the age of 75 years is 14% while the risk of dying of cancer is estimated at 12%.

The leading cancers in women are breast, oesophagus and cervical cancers. In men, oesophagus, prostate cancer and Kaposi Sarcoma are the most common cancers.

The prevailing threat of cancer and the potential future consequences call for international standards of cancer care in Africa. We, at Mediheal Group of Hospitals, are at the forefront of addressing this need by providing the most comprehensive and technologically advanced cancer care services through our chain of healthcare facilities across Kenya and Rwanda.

Our centres are staffed with a multi-disciplinary team of clinicians who are competent and trained to treat every type of cancer. The team of doctors is supported by an equally competent team, consisting of well trained nurses, qualified dosimetrists, medical physicists and other support staff. At Mediheal Group of Hospitals, we are equipped with the most modern technology support of world-class infrastructure to help our doctors deliver advanced cancer care to the people of Africa.





“ We have been leading the healthcare segment with high quality medical services and have participated in inspiring improvements with our patients in mind. ”

Africa is the youngest continent in the world today, developing very fast, home to about 1 billion people. This translates to 14% of the world population and very compatible with the modern smart electronic age. Complementing the great African dream with comprehensive healthcare support is Mediheal Group of Hospitals.

We have been leading the healthcare segment with high quality medical services and have participated in inspiring improvements with our patients in mind. Thanks to their incessant trust and support, our spectrum of services has spread across Kenya, Uganda, Tanzania, Rwanda and Burundi.

Today, the world has become very complicated with lot of health problems and one of the leading causes is cancer. By 2030, cancer and heart disease will comprise of 60% of all medical disorders in health. Cancer, apart from the disease itself, is both hereditary and acquired condition. This is also enigma associated, aggravated, accelerated with lot of environmental, socio-economic, cultural and geo-political factors. Though it has a long association with racial, geographic, gender and age factors, today's abrupt and very swift deterioration with nature by human intervention has made cancer a catastrophic threat to human health. The medical fraternities now need to be very cautious and determined to fight the battle against this dreadful, highly prevalent disease with comprehensive cancer care, covering preventive, curative, prognostic health facilities of both personnel and infrastructure.

Every cancer care facility needs to have Medical, Surgical, Radiation and Palliative treatment modalities. Mediheal Group of Hospitals, by the grace of God has taken the initiative to develop state-of-the-art comprehensive cancer care centers in Africa with a great beginning at Eldoret and reaching out throughout the Continent with exemplary services.

We are constantly looking to attract highly qualified medical professionals who live up to the high standards we have set at Mediheal Hospitals. We always procure state-of-the-art equipment that is being used across the world, and make sure that our diagnostic labs consistently meet international standards for accuracy and reliability.

As I look back over the years of successful development and aspirations beginning with the establishment of Mediheal Group of Hospitals, I feel both proud and excited about the future. As a progressive healthcare provider, we aim to keep expanding with new facilities and continue the momentum, as one of the fastest growing healthcare groups in Africa.

Dr. S. R. Mishra

MS-Obstetrics & Gynaecology (India)

Dip. Gynae Endoscopy (Germany)

Chairman-Mediheal Group



“ We, at Mediheal Group of Hospitals, believe in making advanced cancer care affordable and accessible to underdeveloped and underprivileged areas in Africa. ”

In Africa, aging population, economic growth and the increased prevalence of key risk factors have sent the number of cancer cases rising sharply over the past decade. At the same time, the numbers of specialist oncology caregivers have also increased in the African continent due to the focus of local governments and international collaboration to seek effective care for cancer.

We, at Mediheal Group of Hospitals, are adept at delivering precise care due to the adoption of international standard treatment practices, driven by technology, in a comfortable patient-focused environment. We operate as a team, work closely with clinicians of different departments and support staff, aiming for results par excellence, every single time.

With over 10 years of experience in cancer care, I am well versed in managing all solid cancers in adults like Breast, Ovarian, Lung, Colon, Pancreas, Gastric, Gall Bladder, Kidney, Cervix, Endometrium, Head and Neck, Chronic Leukemias, NHL and Hodgkins. Also, I am well versed in using targeted therapy, immunotherapy and monoclonal antibodies.

We, at Mediheal Group of Hospitals, believe in making advanced cancer care affordable and accessible to underdeveloped and underprivileged areas in Africa. As an effort in that direction, we are leveraging latest research, advanced technology and have expert clinicians with multiple years of expertise in treating cancer patients of all age groups and genders.

Dr. Lalit Varadpande

MBBS, DNB-General Medicine,
DM-Medical Oncology, ESMO Certified
Senior Consultant-Medical Oncology





“ At Mediheal Group of Hospitals we are well equipped to offer quality cancer care to the people in Africa. ”

The African region is facing a major public health challenge due to the rising burden of cancer. Breast and Cervical cancers constitute the most common cancers among women in Sub-Saharan Africa.

Having graduated from Andhra Medical College, Visakhapatnam, India, I trained in General Surgery at Alluri Sita Rama Raju Academy of Medical Sciences in India. My special interest was in donor surgery in LDLT (Living Donor Liver Transplant) and I partnered with Indraprastha Apollo Hospital in introducing research protocols in managing pre-transplant patients which make the operation safe both for the donor as well as the recipient. I was actively involved in managing Thyroid Cancers (Total Thyroidectomy with Modified Radical Neck Dissection), Breast Cancer (Simple Mastectomy, Modified Radical Mastectomy), Gastrointestinal Cancers (Gastrectomy), Colorectal Cancers (left and right Hemicolectomy, Anterior Resection, Abdominoperineal Resection), Pancreatic and Periampullary Tumours (Whipple procedure), Hepatocellular Carcinoma Segmentectomy (left and right Hepatectomy), Gall Bladder Cancer (Cholecystectomy with Central Hepatectomy), Oral Cancers, Lip, Tongue & Cheek and Buccal Musosa (Composite, Commando, Glossectomy), and Penile & Testicular Cancers (Penectomy, Orchidectomy).

At Mediheal Group of Hospitals, we are well equipped to offer quality cancer care to the people in Africa. We adopt a multi-disciplinary approach in treating cancer in women wherein our clinicians collaborate to provide the best possible care to the female cancer patients in the African region.

Dr. Chandra Mohan V

MBBS, MS General Surgery, FMAS



“ We have continuously expanded our infrastructure capabilities with evolved technology and trained manpower to maintain the effectiveness of our services despite increasing demand. ”

Gynaecological cancers present a significant health threat to women in Africa. In Sub-Saharan Africa, the risk of death among women with breast and cervical cancer is much higher than in high-income countries. An estimated 94,378 new cases of breast cancer are diagnosed in Sub-Saharan Africa annually. Cervical cancer accounts for 20% of all cancers in African women, making it the second most common cancer in women after breast cancer. In Africa, 28 out of every 1,00,000 women are diagnosed with cervical cancer and 20 out of every 1,00,000 women die from the disease every year.

Having worked for the past several years in this field, I have been a witness to the rising cases of gynaecological cancers in women. Cancer is becoming an increasingly important public health problem as more people live longer. It is time to develop programs for the prevention, early detection, treatment and palliation of cancer sufferers in Africa.

At Mediheal, we offer advanced cancer care for women in the region. Every year, we treat numerous cancer patients at our advanced facilities. We have continuously expanded our infrastructure capabilities with evolved technology and trained manpower to maintain the effectiveness of our services despite the increasing demand.

Dr. Pallavi Mishra

MBBS, MS-Obstetrics & Gynaecology



“ We, at Mediheal Group of Hospitals, believe in making advanced Urological cancer affordable and accessible to underdeveloped and underprivileged areas in Africa. ”

Urological cancer poses a great threat to the people of the African continent. Socio-economic, educational, cultural, and genetic factors, as well as variations in care delivery and treatment selection, contribute to the high rate of urological cancer in Africa. Among urological cancers, prostate cancer tops in Africa.

Having trained in Genitourinary Surgery and Renal Transplant from the prestigious PGMIER (Chandigarh, India) I acquired expertise in all sub-specialties including Uro-Oncology (Urological Cancers). We, at Mediheal Group of Hospitals, are adept at delivering targeted cancer therapies by adopting international standard treatment practices, driven by technology. We operate as a team, are ready to work under any circumstances and aim for results par excellence every single time.

At Mediheal Group of Hospitals, we believe in making advanced Urological cancer affordable and accessible to underdeveloped and underprivileged areas in Africa. We also encourage monthly testicular self-examinations, annual medical check-ups and cancer screening for early detection, as symptoms don't always present until cancer has spread.

Dr. Sananda Bag

MBBS, MS-Surgery, M.Ch-Urology (PGIMER)
Fellow Renal Transplant Surgery
Robotic Surgery Training-Roswell Park, Buffalo (USA)



“ Our patients remain the centre of all our endeavours as we evolve with changing times. Thousands of smiling Africans bear testimony to our dedication. ”

We, at Mediheal Group of Hospitals, have always strived to raise the bar for healthcare in Africa to meet the highest international medical standards. A warm and friendly ambience, high-quality medical services and personalized nursing care have always been the hallmark of our hospitals since inception.

Our patients remain the centre of all our endeavours as we evolve with changing times. Thousands of smiling Africans bear testimony to our dedication, to the quality of care and sensitivity to everyone who walk through our doors. The continuum of care is an added edge that we offer as we aim to elevate the overall health of the society.

With eminent doctors leading each practice, we are committed to delivering world-class healthcare to an increasing number of people who have come to consider Mediheal as their preferred choice of hospital.

We recruited doctors with training and experience at top international hospitals and implemented evidence-based protocols that are followed by leading global institutions. They provide treatment, supportive care and preventive measures spanning over 15 specialties and super-specialties of medicine. We receive a large number of international patients every year trusting our expertise and services.

We believe technology plays a vital role in delivering superior healthcare and hence have made effective outlays in procuring the best of equipment to serve our patients. We have introduced several cutting-edge technologies and procedures to the people of Africa which improved the clinical outcomes significantly.

As we evolve, we try to sustain the highest level of competence through various academic programs and initiatives for our staff. Together, we aim to bring our vision for Africa to life by embarking on a journey to redefine healthcare in Africa.

Mr. Gokul Prem Kumar

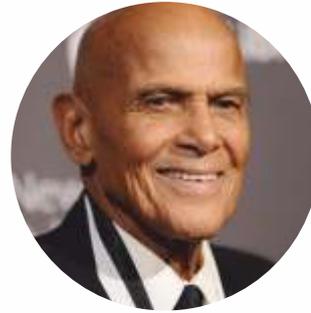
Vice President - International Patient Services

STORIES OF HOPE FROM CELEBRITIES WHO FOUGHT CANCER



Robin Roberts

In 2007, the “Good Morning America” co-host underwent treatment for breast cancer. Roberts found a lump during a self-examination, an experience she spoke about in a prevention.com article. She also voices her opinions in the article on how women should approach their own health, and her opinions on health insurance.



Harry Belafonte

The singer/songwriter battled and overcame prostate cancer in 1996. He has been very open about his experience after surgery, including emotional and physical side effects. Today, he is a cancer awareness activist.



Hoda Kotb

The Egyptian-American co-host of “Today’s Talk” was diagnosed with breast cancer in 2007. Kotb underwent a mastectomy and reconstructive surgery following her diagnosis and today she is an advocate for breast cancer awareness.



James Brown

In December of 2004, this soul singer was diagnosed with prostate cancer and underwent a prostatectomy - a very invasive procedure. Within weeks of his surgery, Brown was performing again.



Diahann Carroll

Carroll was one of the first black actors to appear in major studio productions in the '50s. At age 63, the actress was diagnosed with breast cancer following a routine mammogram. Today, Carroll is a public breast cancer awareness activist.



Nelson Mandela

The former South African president survived prostate cancer - something he battled several times during his life. At the age of 83, he was diagnosed with the cancer, but 16 years prior to that, he had undergone surgery to remove benign tumors. Mandela died at age 95 after a prolonged respiratory infection.



Wanda Sykes

The standup comedian and actress was diagnosed with breast cancer in 2011. The cancer was found when Sykes went in for a cosmetic procedure - she wanted a breast reduction - but following that discovery she underwent a double mastectomy.



Colin Powell

Former Secretary of State Colin Powell had a cancerous prostate gland surgically removed in 2003. Today, he is a spokesman for prostate cancer prevention and has worked with the Prostate Conditions Education Council.

“ **STRENGTHENING THE FIGHT
AGAINST CANCER WITH OPTIMISM** ”

CANCER CAN TAKE AWAY
A LOT OF THINGS...

**BUT
NOT**

HOPE

Two hands are shown in silhouette, holding the word "HOPE" in a bold, red, sans-serif font. The hands are positioned on either side of the word, with the fingers gripping the top and bottom edges. The background is a bright, cloudy sky with a warm, golden glow, suggesting a sunrise or sunset. The overall mood is one of resilience and optimism.

WHAT IS CANCER?

Cancer is a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. Cancer or malignancy is caused due to group of cells displaying uncontrolled growth, with intrusion and destruction of adjacent tissues which sometimes spread to other locations in the body via lymph or blood. The latter process is referred to as metastasizing. Metastases are a major cause of death from cancer.

For example, if breast cancer cells spread to a bone, it means that the individual has metastatic breast cancer to bone. This is not the same as “bone cancer,” which would mean the cancer had started in the bone.

Almost every organ of the human body and every age group can be affected with cancer.





WHAT CAUSES CANCER?

Cancer arises from the transformation of normal cells into tumour cells in a multistage process that generally progresses from a pre-cancerous lesion to a malignant tumour.

These changes occur due to:

- Physical carcinogens, such as ultraviolet and ionizing radiation
- Chemical carcinogens such as asbestos, components of tobacco smoke, aflatoxin (a food contaminant), and arsenic (a drinking water contaminant)
- Biological carcinogens, such as infections from certain viruses, bacteria, or parasites

Ageing is another factor for the development of cancer. The incidence of cancer rises dramatically with age, most likely due to a build-up of risks for specific cancers that increase with age.



Exposure to radiation



Pollution



Occupation
(miners, heavy metal workers)



Radon gas



Smoking/
tobacco



Second-hand smoke



Aging



Family history



Other illnesses
(such as COPD,
tuberculosis, etc.)



CANCER SYMPTOMS AND SIGNS

Signs and symptoms of cancer depend on the individual cancer. The seven warning signs of cancer are:

1. A sore that does not heal
2. Change in bowel or bladder habits
3. Unusual bleeding or discharge
4. Thickening or lump in the breast or elsewhere
5. Indigestion or difficulty in swallowing
6. Obvious change in a wart or mole
7. Nagging cough or hoarseness

RISK FACTORS FOR CANCERS

Unmodifiable factors and modifiable lifestyle factors impact the forming of cancers. Some factors associated with the risk of developing cancers are mentioned here under:

- Age
- Alcohol
- Cancer-causing substances
- Chronic inflammation
- Diet
- Hormones
- Immunosuppression
- Infectious agents
- Obesity
- Radiation
- Sunlight
- Tobacco

DIAGNOSIS & MANAGEMENT OF CANCER

Management of a cancer patient is best done at hospitals equipped to manage cancer patients. This is important as the best outcomes are possible only when a cancer patient gets treated by a multi-disciplinary oncology team. Cancer can be treated only when it is proved pathologically. This implies performance of a biopsy (sample of tissue) or a FNAC (needle test) that is examined by a trained pathologist to confirm the presence of cancer.

It is very important to remember that treating for cancer on clinical suspicion or imaging is incorrect as other potentially curable conditions can mimic cancer.





TREATING CANCER

Cancer treatment is based on the stage of the cancer. Commonly four stages are assigned for cancers with stage 1 being the early stage and stage 4 being incurable. Imaging tests like CT scan, MRI scan, PET-CT etc. help the oncologist determine the stage of the cancer.

The three important modalities of treating a cancer are by chemotherapy, radiotherapy and surgery. This is done by a medical oncologist, radiation oncologist and surgical oncologist, respectively.

Most patients may need a combination of chemotherapy, radiotherapy and surgery.

TYPES OF CANCER

There are over 200 different types of cancer, and each is classified by the type of cell that is initially affected. The major types of cancer are: Carcinoma, Sarcoma, Melanoma, Lymphoma and Leukemia.

- **Carcinoma:** Originate in the skin, lungs, breasts, pancreas and other organs and glands.
- **Sarcoma:** Arise in bone, muscle, fat, blood vessels, cartilage or other soft or connective tissues of the body. They are relatively uncommon
- **Melanoma:** Cancers that arise in the cells that make the pigment in skin
- **Lymphoma:** Cancers of lymphocytes
- **Leukemia:** Cancer of the blood. It does not usually form solid tumours

Cancer specialists, called Oncologists, have made remarkable advances in cancer diagnosis, prevention and treatment. Today, more people diagnosed with cancer are living longer. However, some forms of the disease remain difficult to treat. Modern treatment can significantly improve quality of life and may extend survival.



Cancer is a leading cause of death worldwide among women. Breast cancer and gynecological cancers are among the most common cancers in women. Cancer in women, is an emerging health problem in Africa and needs to be dealt with appropriately to sustain public health advances that have already been achieved through collaborative efforts of governments and health care service providers.

Some of the most prevalent cancers in women in the African region include breast cancer, cervical cancer, endometrial cancer, ovarian cancer, uterine cancer, vaginal cancer and vulvar cancer. Knowing about these diseases and what you can do, can save lives. All women are at risk for these cancers and the risk increases with age.



BREAST CANCER

Breast cancer is one of the most common cancers diagnosed in women worldwide. Typically, the cancer forms either in the lobules or the ducts of the breast. Lobules are the glands that produce milk, and ducts are the pathways that bring the milk from the glands to the nipple.

Common symptoms and signs of Breast Cancer:

- Pain in the breast or nipple
- Nipple discharge (other than breast milk)
- Irregular lump in one or both breasts
- Swelling of all or part of the breast, even if no lump is detected
- Skin irritation or dimpling
- Nipple retraction (nipple turning inward)
- Redness, scaliness or thickening of the nipple or breast skin

Treatment options for Breast Cancer:

Treatment options may consist of surgery, chemotherapy, radiation therapy or a combination of these treatments depending on the stage of the cancer.

Surgery for breast cancer is commonly known as lumpectomy and is performed in order to remove the tumour in the breast, possibly the surrounding tissues and nearby lymph nodes. This is usually followed by radiation therapy to kill any cancerous cells that may be present in the tissue.

Mastectomy is a procedure where the affected breast is removed through a surgical procedure. After the surgical procedure, the doctors may also advise removing one or more lymph nodes in the armpits.



CERVICAL CANCER

Cervical cancer happens when cells change in a woman's cervix, the organ, which connects her uterus with her vagina. It is due to the abnormal growth of cells that have the ability to invade or spread to other parts of the body. All women are at risk of cervical cancer. It occurs most often in women over age 30. Almost all cases of cervical cancer are caused by a virus called Human Papillomavirus (HPV). HPV can cause cells in the cervix to grow abnormally and become cancerous.

Common Symptoms and Signs of Cervical Cancer:

- Abnormal vaginal bleeding
 - ◆ Bleeding that occurs between regular menstrual periods
 - ◆ Bleeding after sexual intercourse, douching or a pelvic exam
 - ◆ Menstrual periods that last longer and are heavier than earlier
 - ◆ Bleeding after going through menopause
- Increased vaginal discharge
- Pelvic pain
- Pain during intercourse

Cervical Cancer is totally preventable through a routine PAP Smear test.

Treatment options for Cervical Cancer:

Surgery and radiation therapy are the most common treatments for invasive cervical cancer. Others are chemotherapy and biological therapy.

If the cancer is only on the surface of the cervix, the doctor can remove or destroy the cancerous cells with procedures like LEEP or cold knife conization. As with surgery, the radiation affects cancer cells only in the treated area. The treatments might be external, internal or both.

External beam uses localized high energy radiation beams to eliminate cancer cells and keep them from growing. Brachytherapy uses a radioactive substance, usually in the form of seeds which are placed directly into or near the cancer which helps to shrink the tumour.





OVARIAN CANCER

A cancer that forms in the tissues of the ovary is termed as ovarian cancer. Epithelial carcinoma and malignant germ cell tumours are the two main types of cancer that can arise in the ovaries. Epithelial carcinoma is the most common ovarian cancer where cancerous cells form on the surface of the ovary. Malignant germ cell tumours originate within the egg cells.

Common symptoms and signs of Ovarian Cancer:

- Pressure or pain in the abdomen, pelvis, back or legs
- Swollen or bloated abdomen
- Fatigue, nausea, indigestion, gas, constipation or diarrhea

Treatment options for Ovarian Cancer:

Treatment options may consist of surgery, chemotherapy, radiation therapy or a combination of these treatments. Surgery may be an option where the surgeon may remove one or both ovaries.

Chemotherapy uses anti-cancer drugs to kill or stop the growth of cancer cells.

Radiation therapy uses high-energy radiation beams to eliminate cancer cells or stop them from growing.





ENDOMETRIAL CANCER

Endometrial cancer is a type of uterine cancer that starts in the inner lining of the uterus. This lining is called the endometrium. Most cases of endometrial cancer occur in women after the age of 55. Endometrial carcinomas can be divided into different types such as: Adenocarcinoma; Uterine carcinosarcoma or CS; Squamous cell carcinoma; Small cell carcinoma; Transitional carcinoma and Serous carcinoma.

Common signs and symptoms of Endometrial Cancer:

- Vaginal bleeding or discharge not related to menstruation (periods)
- Vaginal bleeding after menopause
- Pain in the pelvic area
- Bleeding between periods

Treatment options for Endometrial Cancer:

Surgery is the main treatment for most women with this cancer. But in some cases, more than one type of treatment may be used; it may include chemotherapy and radiation.

The choice of treatment depends largely on the type of cancer and stage of the disease when it's found.



UROLOGICAL MALIGNANCIES:

Cancers involving the urinary systems are common, usually seen in people aged over 50 years, (except testicular cancers occurring before 35 years age). Some types can be experienced by both men and women, such as bladder and kidney cancer, and others are gender specific, such as testicular cancer for men and vaginal cancer for women.

Smoking, consuming processed food, lack of fresh fruits and green vegetables, and some genetic predispositions are major risk factors. Early detection and proper multi-modal treatment are curative in majority of cases, and also can have good results in advanced stages.



KIDNEY CANCER

- Comprise of 3% of all cancers in adult - 85% of them are Renal Cell Carcinoma (RCC - clear cell variant)
- Median age 65 years; Incidence increasing @ 2.0% per year
- Risk factors – smoking, exposure to Aniline dye and glass industries, long term dialysis condition and family history of Von Hippel-Lindau (VHL) disease

Common symptoms and signs of Kidney Cancer:

Early kidney cancers usually do not cause any signs or symptoms, but larger ones might. Symptoms don't show in early stage of the disease as well; 60% are detected on routine ultrasound screening.

Surgical excision of tumour (Radical / partial nephrectomy) alone in early / localised (40-50%) stage is curative; 10 year survival >90%.

Treatment options for Kidney Cancer:

About 15% kidney cancers are locally advanced. They involve surrounding viscera (bowel, adrenal, spleen, liver, pancreas) or spread to IVC / reach up to heart. They usually present with haematuria, flank pain, leg swelling etc. Radical Surgical Excision along with immunotherapy gives good long-term survival of 40-70% for 5 years.

25-30% of patients present with Metastatic RCC; another 30% develop metastases on follow up. They can have bone pain, pathological, paraplegia, breathing problems, seizures.

Immunomodulators (Tyrosine Kinase Inhibitors like Sunitinib, Pazopanib, Sorafenib, Temsirolimus) are available and effective. Immunotherapy with palliative / Cyto-reductive surgery, symptomatic treatment and selective radiation (brain & bone mets) are recommended; which impart median survival of 11-26 months in up to 40% patients.



PROSTATE CANCER (CAP)

Cancers of prostate are the most common malignancy in men - (8% lifetime risk), associated with high mortality and morbidity. Most prostate cancers are slow growing; however, some grow relatively quickly. Survival has increased for all stages due to early detection and proper treatment from the past 20 years.

Common symptoms and signs of Prostate Cancer:

- A painful or burning sensation during urination or ejaculation
- Frequent urination, particularly at night
- Difficulty in starting or stopping urination
- Sudden erectile dysfunction
- Blood in urine or semen
- Back/hip pain

Prostate cancer can be detected by biopsy in patients with raised PSA in blood or abnormal nodule in prostate felt on rectal examination or USG.

Treatment options for Prostrate Cancer:

- **Low risk disease (low grade & stage) – patients' life expectancy <10years watchful waiting** – late Androgen deprivation
- **Moderate / high grade localized disease**
 - ♦ **Life expectancy <10 years** - radiation or hormonal treatment
 - ♦ **Life expectancy >10 years** - surgery (radical prostatectomy) / RT (Brachy / IMRT), late ADT with chemotherapy
- **Advanced / Metastatic stage**
 - ♦ Hormone therapy &/or chemotherapy (combo); Abiraterone / Enzelutamide
 - ♦ Palliation for pain, paraplegia
 - ♦ Channel TURP for urinary obstruction / stenting or urinary diversion for ureter obstruction





URINARY BLADDER CANCER

Bladder cancer is an uncontrolled abnormal growth and multiplication of cells in the urinary bladder, which have broken free from the normal mechanisms that keep uncontrolled cell growth in check. Invasive bladder cancer (like cancers of other organs) has the ability to spread (metastasize) to other body parts, including the lungs, bones, and liver.

- Unlike other tumours, cancers of urinary bladder (ca UB) present very early by hematuria (passing blood in urine).
- 70% are superficial (not invaded into detrusor muscle) – cystoscopic resection (TURBT) alone is curative. High grade, large and multiple tumours recur in 70% cases and may advance to higher stage – need intravesical therapy (mitomycin / BCG / Gemcitabin) instillation along with regular check cystoscopy and resection of recurrent tumours.
- 25% are muscle-invasive radical cystectomy (removal of bladder) is almost curative. Urinary diversion requires ileal conduit or orthotopic neobladder reconstruction. Adjuvant chemo-radiation in locally advanced cases give good long-term results.

- 5% cases are metastatic – median survival is about 6-15 months. Chemo-radiation with palliative surgery (cystectomy) may improve quality of life and survival in selected cases.

Common symptoms and signs of Bladder Cancer:

The most common symptom of bladder cancer is bleeding in the urine (hematuria). Most often the bleeding is 'gross' (visible to the naked eye), episodic (occurs in episodes), and is not associated with pain painless hematuria.

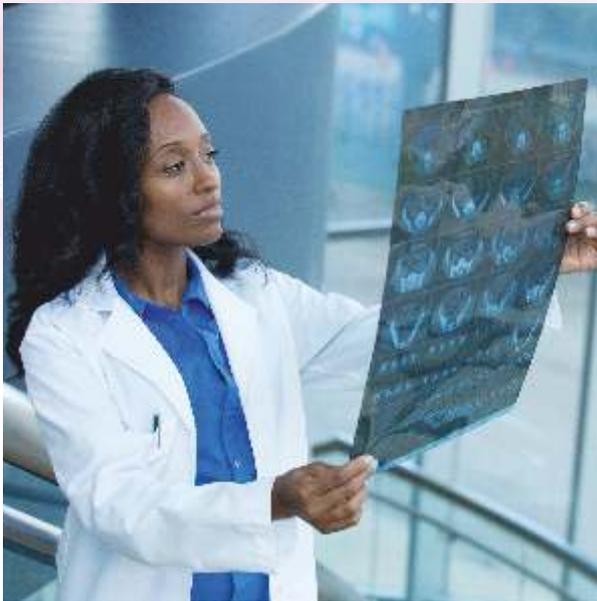
Treatment option for Bladder Cancer:

- TURBT - A procedure in which bladder tumours can be removed from the bladder wall
- Intravesical therapy in superficial cases
- Regular follow up - detect recurrence and progression
- Muscle invasive disease
- Radical cystectomy +/- chemoradiotherapy
- Advanced & metastatic disease
- Chemo-radiotherapy
- Palliative surgery
- Palliative TT for pain / obstructive uropathy



REDUCING THE CANCER BURDEN

Between 30-50% of cancers can currently be prevented by avoiding risk factors and implementing existing evidence-based prevention strategies. The cancer burden can also be reduced through early detection and management of patients who develop cancer. Many cancers have a high chance of cure if diagnosed early and treated adequately.



EARLY DETECTION

Cancer mortality can be reduced if cases are detected and treated early.

There are 2 components of early detection:

EARLY DIAGNOSIS

When identified early, cancer is more likely to respond to effective treatment and can result in a greater probability of surviving, less morbidity, and less expensive treatment. Early diagnosis is relevant in all settings and in the majority of cancers. Curative treatment may no longer be an option for patients who are diagnosed at late stages.

SCREENING

Screening aims to identify individuals with abnormalities suggestive of a specific cancer or pre-cancer who have not developed any symptoms and refer them promptly for diagnosis and treatment. A few screening methods include:

- **Visual Inspection with Acetic Acid (VIA)** for cervical cancer in low-income settings
- **HPV Testing** for cervical cancer
- **PAP Cytology Test** for cervical cancer in middle and high-income settings
- **Mammography** screening for breast cancer in settings with strong or relatively strong health systems



MEDIHEAL: CANCER EXPERTISE AT WORK

In recent years, cancer treatment and therapies have progressed significantly. Countless patients have been cured, while others' lives have been extended far longer than possible with these advanced treatment options.

We, at Mediheal Group of Hospitals, provide comprehensive cancer management powered by a multi-disciplinary team, clinical excellence, world-class technology as well as international protocols.

We stand at the forefront of treatment excellence offering comprehensive care for all types of cancers in all age groups and genders.



TREATMENT MODALITIES OFFERED AT MEDIHEAL HOSPITALS

MEDICAL ONCOLOGY

Medical Oncology uses specialized medications to treat cancer in an effective manner. A medical oncologist is responsible for the management and oversight of a patient's chemotherapy regimen and the complications which may arise over the course of several weeks, months, or years.

WHAT IS CHEMOTHERAPY?

Chemotherapy is the use of medicines to kill cancer cells. This can be administered orally, intravenously, subcutaneously etc. Chemotherapy works in a pattern of stopping or slowing the growth of cancer cells, which grow and divide quickly.

Chemotherapy can be given alone or in conjunction with other treatments. Chemotherapy that is given before surgery or radiation therapy in order to reduce the size of a tumour is known as neo-adjuvant chemotherapy.

Chemotherapy is done in the outpatient setting and the time taken ranges from few minutes to hours.

Apart from chemotherapy, targeted therapy and immunotherapy are also used to treat cancer. These are newer modalities of treatment that are more precise in attacking the cancer.

HOW IS CHEMO ADMINISTERED?

Chemotherapy can be administered under the following settings:

- **Neo-adjuvant:** Administered before definitive surgery or radiotherapy to reduce the bulk of the tumour so that surgery or radiotherapy can be performed easily
- **Adjuvant:** Given after definitive surgery or radiotherapy to minimize the risk of recurrence
- **Palliative:** Administered when cure is not possible to reduce the symptoms

RESPONSE ASSESSMENT

Response assessment is needed to check if the patient is responding to the treatment. This is done by clinical examination and imaging tests. Treatment is continued for those who respond and changed for those who don't.

CHEMOTHERAPY MYTHS BUSTED

There are myths regarding chemotherapy that prevent patients from taking chemotherapy:

- **Chemotherapy is painful:** There is no pain associated while receiving chemotherapy
- **Side effects:** Though there are side effects which are sometimes serious, the medical oncologist will tailor the treatment suitable for the patient. With newer antiemetics and growth factor injections, cancer associated nausea, vomiting and neutropenia are greatly reduced
- **Can't work/go to school or college:** Patients can continue to do their jobs and go to school or college
- **Permanent side effects:** Most side effects due to chemotherapy are temporary and reversible, including hair loss





SIDE-EFFECTS OF CHEMOTHERAPY

As Chemotherapy targets cells that divide quickly, they sometimes harm healthy cells in the mouth and intestines or cells that help your hair to grow. Side effects may occur when healthy cells are damaged.

Common adverse effects of chemotherapy are: nausea, vomiting, hair loss, weakness, fall in haemoglobin, WBC and platelet count. However, once the treatment is complete, these side effects tend to fade away.



CHEMOTHERAPY AT MEDIHEAL

Mediheal Hospitals is equipped to manage chemotherapy for all patients. Well trained nurses and duty doctors ensure that treatment is delivered as per guidelines. Since all cancer patients are affected by the disease in different ways, we put a high premium on personalized and individualistic treatment plans. Proper understanding of the patient's physiology, medical history, genetics and tumour characteristics allows us to fight the disease and ensure patient well-being. Our skilled, multi-disciplinary team of doctors follow world-standard protocols and cutting-edge technology that enables us to aggressively track and fight the disease in each patient.

We perform the procedure in a recreational atmosphere, which minimizes discomfort and keeps the patient pleasantly occupied.



WORLD-CLASS CHEMOTHERAPY WARD



TrueBeam



RADIATION ONCOLOGY

Radiation therapy is a type of cancer treatment which uses high doses of x-rays, called radiation, to kill cancer cells. There are two types of radiation therapies, depending on where the source of the radiation is.

- **External-beam radiation therapy:** This therapy delivers radiation from a machine outside the body. External beam radiation therapy can be generated by a linear accelerator, a machine that accelerates electrons to produce x-rays or gamma rays
- **Internal radiation therapy:** This therapy is also called brachytherapy. This includes both temporary and permanent placement of radioactive sources that are sealed in needles, seeds, wires, or catheters, and implanted directly into or near a tumour on a temporary or permanent basis
- **Brachytherapy** is a common treatment for cancers of the prostate, uterus, cervix or breast. These treatments may require a brief hospital stay

Doctors can use radiation to treat many different types of cancers. Some people are treated only with radiation therapy, others are given radiation therapy along with other cancer treatments.

Before you start treatment, you will meet with a team of doctors and nurses to plan your radiation therapy. They will do a physical exam and perform some tests. A small dot of ink is put on your body to mark the area that will be treated. They might also make a mould or mask of a part of your body for you to wear during treatment. This is to help keep your body still while you are getting radiation therapy.



SURGICAL ONCOLOGY

Surgical oncology is a modality of treatment in cancer care which focuses on using surgery to diagnose, stage and treat cancer. Surgical oncology usually works in conjunction with medical oncology or radiation oncology to give the best clinical outcome. Surgical oncologists may also perform palliative surgeries to help control pain, increase a patient's comfort level and manage cancer-related symptoms and side effects.

Despite the advances in medical and radiation oncology, surgery is still the modality with the potential to cure most solid cancers. Surgeons have a pivotal role in cancer treatments and research, leading the diagnostic and treatment pathways for most cancers from counselling patients about their diagnosis through to surgery and aftercare.

Whether a patient is a candidate for surgery depends on factors such as the type, size, location, grade and stage of the tumour, as well as issues related to the patient's health, including age, physical fitness and other medical conditions.

SURGERY IN CANCER CARE IS USED TO:

- Remove the whole cancer (tumour)
- Remove some, but not all of the tumour. A surgeon may not be able to safely remove all of the cancer as it could harm other parts of the body. This is often called a debulking surgery
- Ease symptoms caused by the cancer. This is called palliative surgery
- To return/change the body's condition after a surgery. This is called reconstructive or restorative surgery. Examples of this type of surgery are breast reconstruction or reversal of colostomy
- Technical side of surgery has also been transformed in the past few decades with advances including:
 - ◆ Minimally invasive cancer surgery
 - ◆ Improved understanding of surgical margins (the TME in rectal cancer for example)
 - ◆ Sentinel node biopsy
 - ◆ Intraoperative chemotherapy and radiation therapy (limb perfusion, HIPEC, IORT)
 - ◆ Reconstructive surgery (breast oncoplastics, head and neck surgery, bladder replacement techniques)

PROVEN DATA OF CANCER CASES AT MEDIHEAL HOSPITALS

Between December 2018 and February 2020, 1500 specimen were examined and out of which 260 samples turned out to be cancer cases in a biopsy test taking it to 17% of the samples tested.

The break-up of various cancer cases are given hereunder:

- Gastrointestinal tumours – **100 cases (38.5%)**
- Breast and female genital tract – **48 cases (18.5%)**
- Hematolymphoid malignancy - **30 cases (11.5 %)**
- Brain and spine tumours – **22 cases (8.5%)**
- Other tumours - **60 cases (23%)**

Histopathology and Cytopathology Diagnostic Services:

In-house tissue processing for histo-cytopathology and biochemical tumour markers with in-house consultant histopathologist having 13 years of experience post MD. Intra-operative consultation by squash/imprint cytology

Time taken for the diagnostic tests:

- Quick Turn Around Time (TAT) : Cytology – 1 day
- Diagnostic small biopsies – 2 days
- Immunohistochemistry, PCR/FISH based molecular tests – outsourced to SRL Mumbai or Dr. Lal Path Lab, New Delhi, India with 10 days TAT

Pre-operative / Pre-chemo-radiotherapy Diagnostic Services Packages

- **Gastrointestinal System** - Endoscopy/Colonoscopy procedure + biopsy reporting + few routine lab tests + reflex IHC tests and staging by CT/USG if positive for malignancy.
- **Breast Tumor** – USG/mammography + FNAC/trucut biopsy + histo-cyto reporting + few routine lab tests + reflex IHC tests and staging by CT/USG if positive for malignancy.
- **Thyroid Swelling** – USG Neck + thyroid function tests + FNAC procedure and reporting
- **Prostate Enlargement / Urinary Bladder Cancer** – Serum PSA levels + USG + Prostate trucut biopsy / cystoscopic exam and biopsy of urinary bladder mass + reporting + few routine lab tests + reflex IHC tests and staging by CT/USG if positive for malignancy.
- **Hemato-Lymphoid Malignancy** – USG + serum LDH + CBC/PS exam + bone marrow aspiration and biopsy + lymph node biopsy + flowcytometry / IHC /PCR based tests + Staging by CT/USG.
- **Female Genital Tract Cancers** – PAP smear + Serum CA125, USG, endometrial curettage / Cervix biopsy procedure and reporting + staging by CT/USG if positive for malignancy.
- **Any intra-thoracic / pelvic / abdominal /neck mass** Radiology + guided FNAC/ biopsy + tumour markers + histopathology reporting and if malignant reflex IHC and staging.
- **Free consultation** of physician (for co-morbid conditions) + surgeon + oncologist + anaesthetist

Siemens 1.5 Tesla MRI



Siemens 64 Slice CT



PET Scan



STATE-OF-THE-ART DIAGNOSTIC FACILITIES



Hi-end facilities in...

- Histopathology
- Cytology (Gynac & Non-Gynac)
- Clinical Chemistry
- Hematology
- Immunoassay
- Micro-biology
- Clinical Pathology
- Blood Banking & Transfusion



FULLY-EQUIPPED BLOOD BANK



PROPOSED MEDIHEAL CANCER INSTITUTE



**MEDIHEAL HOSPITAL
DOCTORS PLAZA - ELDORET**



**MEDIHEAL HOSPITALS
- EASTLEIGH**



MEDIHEAL GROUP OF HOSPITALS

MEDIHEAL HOSPITAL AND FERTILITY CENTRE, ELDORET

Nandi Road, PO Box: 7905 - 30100, Eldoret, Kenya

T: +254 723 578 895 / 735 864 169

E: info@medihealgroup.com / info.eldoret@medihealgroup.com

MEDIHEAL HOSPITAL (PARKLANDS), NAIROBI

PO Box: 39698 - 00623, Parklands Mediplaza

3rd Parklands Avenue, Opp. Aga Khan Hospital, Nairobi, Kenya

T: +254 73663 8073 / 722 218 416

E: info@medihealgroup.com / customerservice@medihealgroup.com

MEDIHEAL DIAGNOSTIC, DIALYSIS & DAY CARE CENTRE, NAIROBI

PO Box: 39698 - 00623, Real Tower, Hospital Road, Next to KNH

Upper Hill, Nairobi

T: +254 712 935 390

E: info@medihealgroup.com

MEDIHEAL HOSPITALS, NAKURU

Nakuru - Nairobi Highway, PO Box:17226 - 20100, Nakuru, Kenya

T: +254 735 000 735 / 78027 8000

E: info@medihealgroup.com / info.nkr@medihealgroup.com

MEDIHEAL HOSPITALS, EASTLEIGH

1st Avenue, Section 3, 19th Street, Opp. Bafra Estate

Adj. to Delta Petrol Pump, Eastleigh

T: +254 781 445 566 / 740 445 566

E: info@medihealgroup.com

MEDIHEAL DIAGNOSTICS & FERTILITY CENTRE, KIGALI

Plot No. 252, Kimihurura Main Road, KN 14 A7, Near Cadillac Club,

PO Box: 958, Kimihurura, Kigali, Rwanda

T: +250 78918 4444 / 72660 2020

E: info@medihealgroup.com



www.medihealgroup.com

For International Patient Department queries, please contact:

+254 710701708 / internationalpatientservice@medihealgroup.com