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Medical Newsletter

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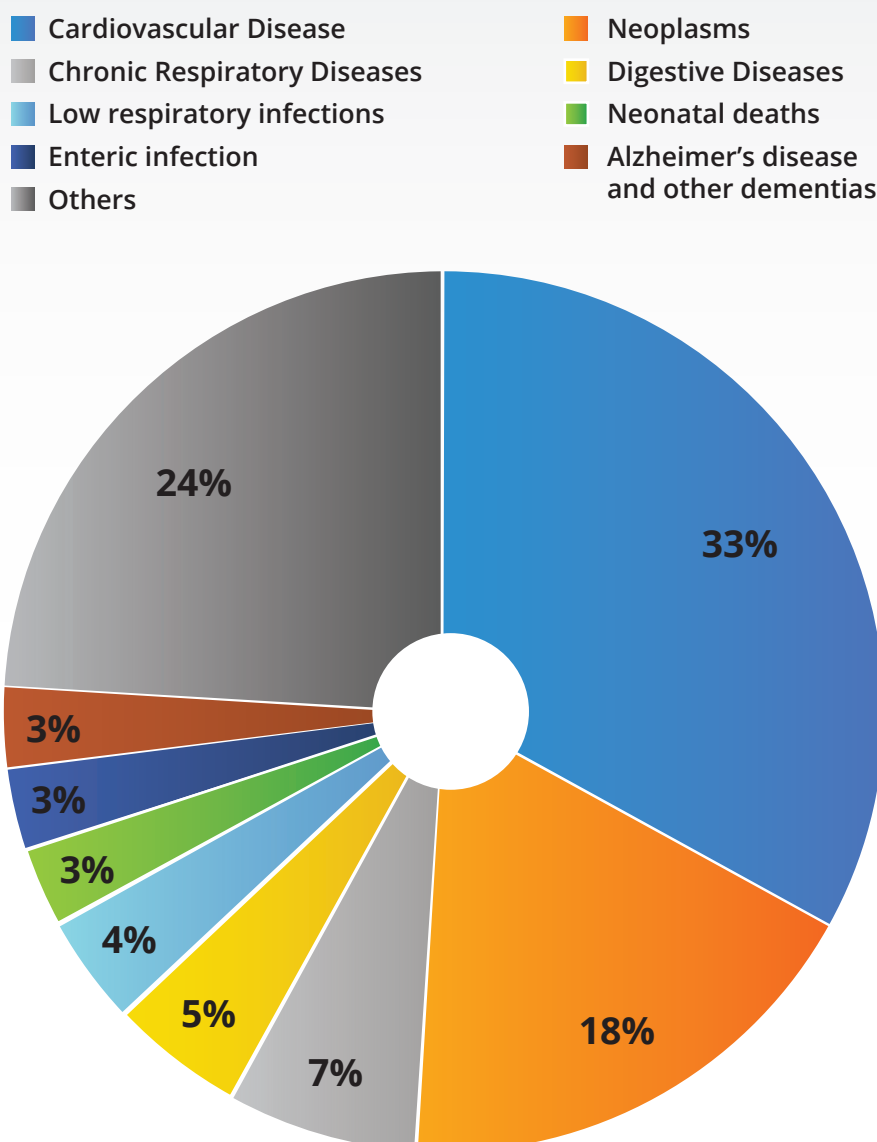
TOPIC 1: HEART DISEASES ON THE RISE IN THE MENA REGION

Every year world heart day is observed on 29 September. This year the theme was *“Use heart for every heart”*, An Inspirational message to use the heart to support humanity, nature, and human health. Over the past few decades, there has been a dramatic change in people's lifestyles which is the leading cause of an increase in cases of diabetes, hypertension, and high cholesterol. This has led to a higher incidence of heart disease.

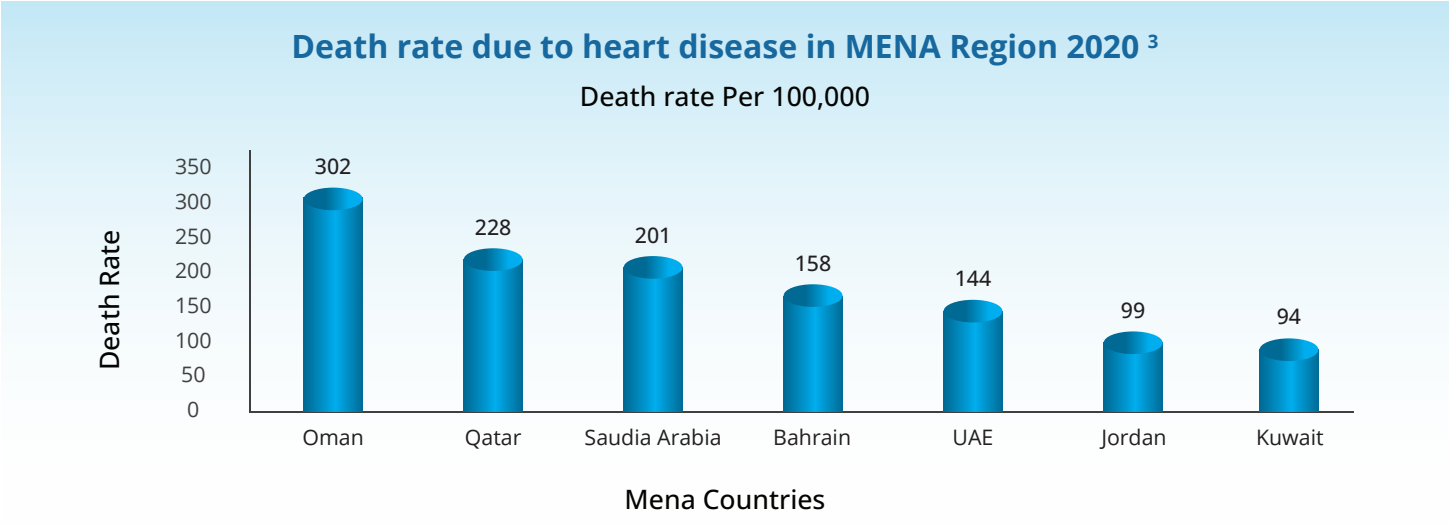
It has been estimated that 26 million people live with heart failure globally, out of which up to 3.8 million live in the Middle East.¹

In 2019, According to the distribution of causes of death worldwide, around 33% of all deaths globally were caused by cardiovascular diseases and almost 18% were caused by Neoplasms.

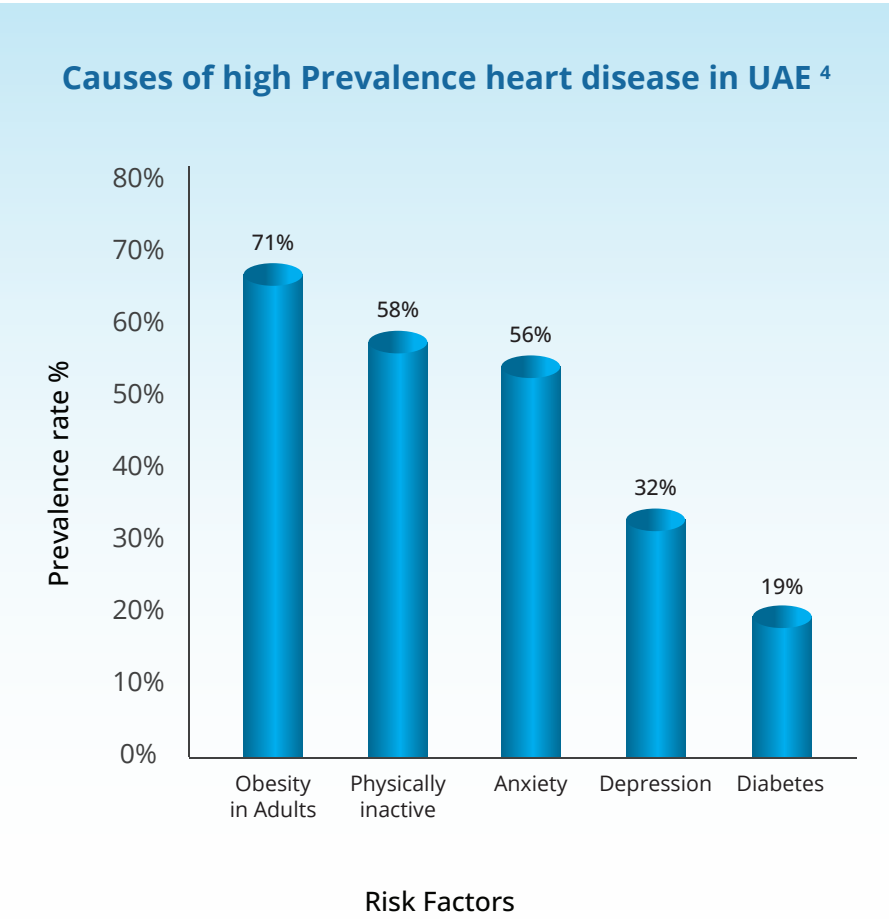
Top Global Causes of Death - 2019 ²



According to the WHO data published in 2020, the death rate per 100,000 due to coronary heart disease out of the total death in MENA countries is very high. The most important behavioral risk factors of heart disease and stroke are unhealthy diet, physical inactivity, and tobacco use in the region. From the MENA region countries, Oman ranked 5th globally for death due to heart disease. This is because chronic non-communicable diseases related to lifestyle, namely coronary heart disease, hypertension, diabetes mellitus, and cancer, are now emerging health challenges for the country.³



The death rate due to heart disease in the UAE reached 144 per 100,000 cases, which is almost double the death rate in other countries in the region. At least 50% of heart attack patients in the UAE are under the age of 50.³



According to more surveys in UAE, there is a strong correlation between obesity and heart disease. Obesity and sedentary lifestyles are creating a generation prone to cardiovascular disease in the region. Almost 71% of people in the UAE's serious or moderate cases of obesity are linked to cardiovascular and heart problems which lead to 40% of deaths in the country. The prevalence of other risk factors leading to heart diseases in UAE include that 58% of people are Physically inactive, 56% of people are dealing with Anxiety, 32% of the population are at risk of Depression, and 19% of the population has Diabetes in the region.

Innovations in medical imaging are helping to detect heart diseases

The adoption of the latest medical imaging in a routine and cost-effective manner will have a massive impact on healthcare. The advanced medical imaging techniques during the present century have made it possible for doctors to see in 3D, and the introduction of new medicines, Different medical tests, and new bariatric surgical approaches have dramatically shifted preventive cardiology to a new era.

Some of these tests are:

Electrocardiogram (ECG) is used to detect the 'rhythm' of the heart. On average, it costs around AED 185 in UAE. Ukraine offers the best prices worldwide at AED 12.⁵

An echocardiogram is an ultrasound of the heart. The price ranges from a minimum cost of AED 500 to a maximum cost of AED 2,000.⁶

Exercise stress test/TMT is conducted to check how the heart responds to external stress or physical activity. It usually involves walking on a treadmill or riding a stationary bike to monitor the heart.

Coronary angiogram(CAG) uses X-ray imaging of the blockage in coronary arteries. According to a study, the procedure has a success rate of around 97.6%. It can cost around AED 7,717 in Abu Dhabi, AED 15,000 in Sharjah, and AED 15,459 in Dubai. Russia offers the best cost worldwide at AED 1,294.⁷

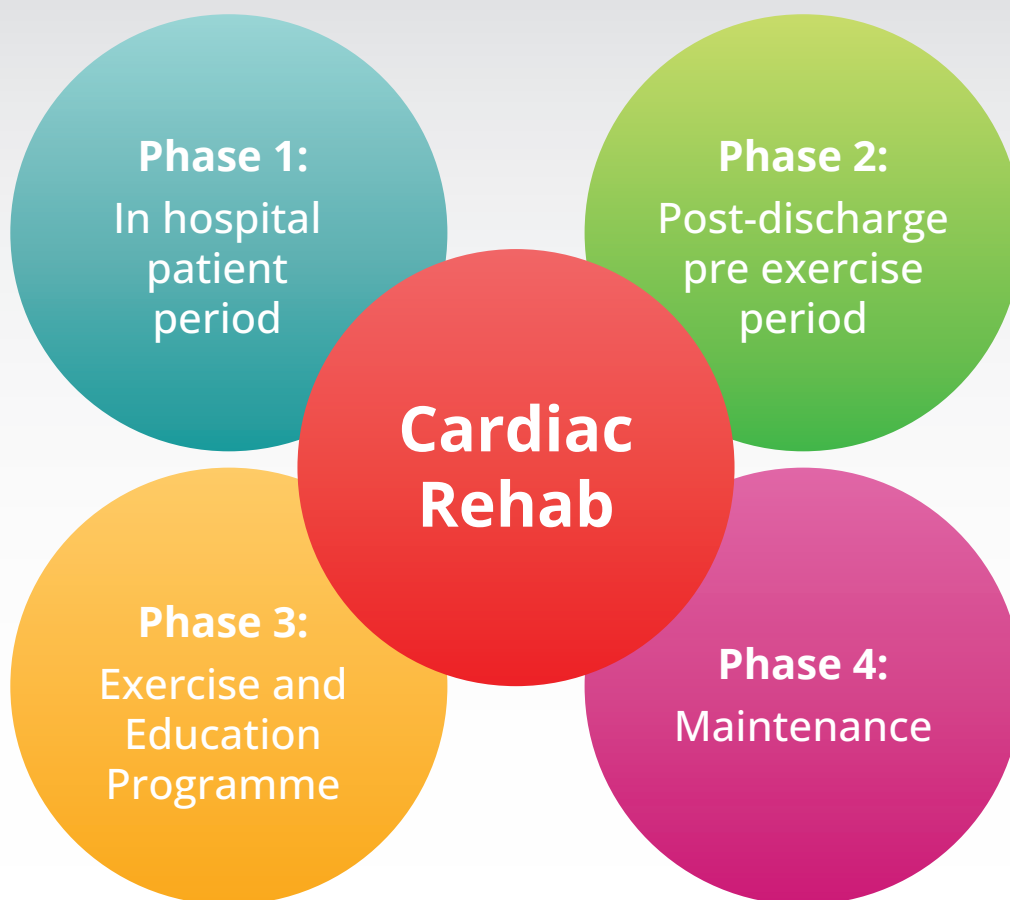
Magnetic resonance imaging (MRI) is a non-invasive medical procedure used in evaluating the anatomy and function of the heart chambers, heart valves, size, and blood flow, it does not require surgery. This type of Diagnostic Imaging procedure is relatively affordable, especially in Dubai.

Coronary computed tomography angiogram (CCTA) is a noninvasive imaging test that looks at the arteries that supply blood to the heart. However, this technology is costly and may not be easily available. It also exposes the patient to a certain degree of radiation.

Promising research is in progress where a simple chest X-ray is taken through two x-ray beams instead of the conventional single x-ray beam will provide a similar result as the CT scan. This inexpensive, easily available, and safer imaging will enable healthcare providers to detect millions of people at risk of developing heart diseases.

Cardiac Rehabilitation in UAE

Another way to combat cardiac diseases, UAE has adopted outpatient chronic disease management Cardiac rehabilitation program to help patients with heart disease or post-surgery recovery. Cardiac rehabilitation (CR) has many benefits including reducing mortality by up to 25% and decreasing re-hospitalization, which is certainly cost-effective.



Worldwide, CVD treatment and rehabilitation costs are increasing, with direct cost in the USA for example more than \$400 billion annually, Medicare also provides coverage for cardiac rehabilitation.⁴

There is a need to find more efficient and cost-effective therapy, although only a reported 38.8% of countries globally have Cardiac Rehabilitation programs. Cardiac Rehabilitation services that include the delivery of structured exercise, education, and risk reduction are available in many high-income countries, including the UAE, although there is a great need to both promote and prioritize resources to support Cardiac Rehabilitation.

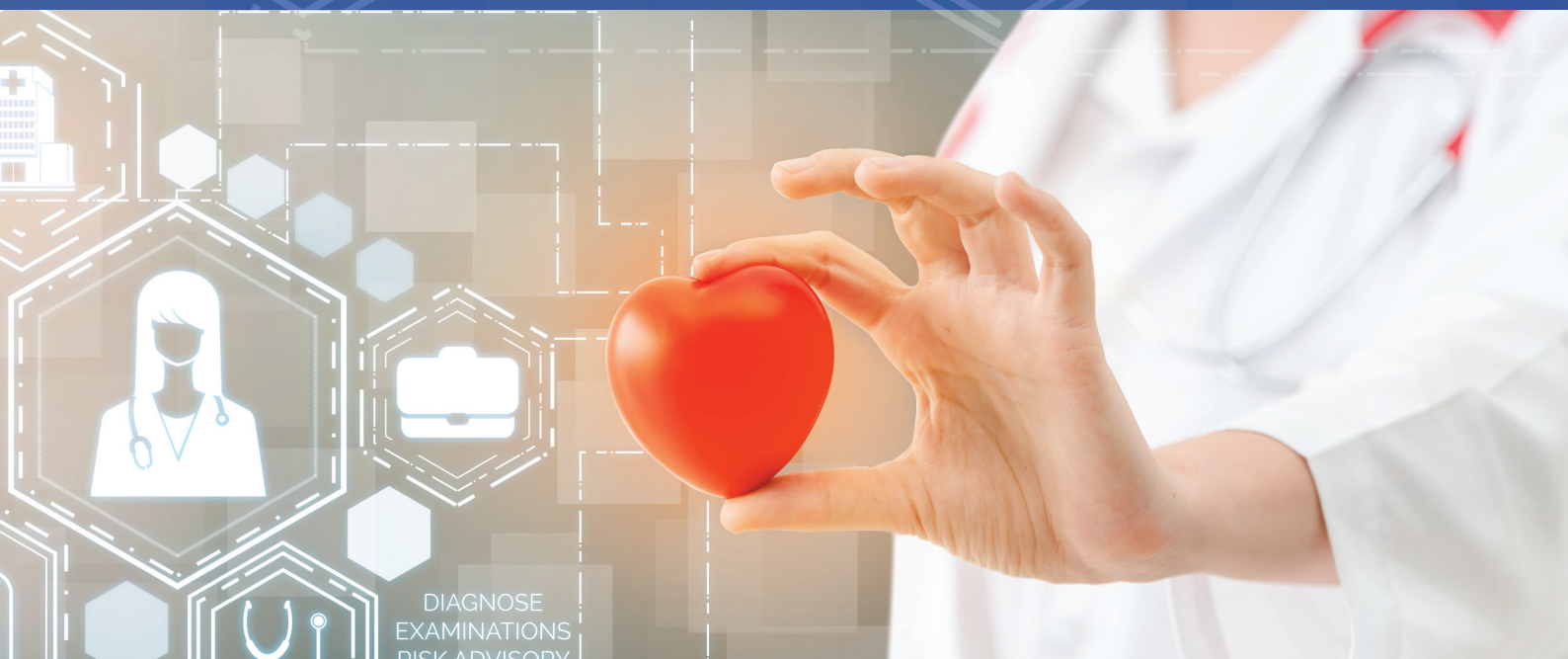
The Five Basic strategies to protect the heart

In the future, the burden of cardiovascular disease is predicted to increase further. Doctors advised a five-step strategy for a healthier lifestyle to prevent heart disease.



Boehringer Ingelheim launches new website to support patients living with heart failure

In Dubai, Boehringer Ingelheim, one of the world's leading pharmaceutical companies, has launched a website called 'Heart Talks' for heart failure patients and their caregivers in the region to provide disease-related information to understand heart failure, seek medical help on time, and to manage their condition in a better way.⁸





TOPIC 2: HEALTH UPDATES IN MIDDLE EAST REGION

DoH and Malaffi launch the Malaffi Health Portal

The Department of Health - Abu Dhabi (DoH) as an extension of the region's first Health Information Exchange platform, Malaffi launches the Malaffi Health Portal to provide the community with secure access to their unified medical records via a website and application. Through the Health Portal, patients will be able to access the latest information such as doctors' visits, laboratory results, radiology reports, medications, allergies, immunizations, discharge summaries, and other medical information.

This platform will strengthen the doctor-patient relationship and will be particularly helpful in chronic conditions such as diabetes and heart disease where patients have frequent doctor visits.⁹

Abu Dhabi Public Health Centre Launches Disease Registry Electronic Platform

Abu Dhabi Public Health Centre (ADPHC) in collaboration with the Department of Health – Abu Dhabi (DoH) has launched its Disease Registry Electronic Platform.

This platform will enable healthcare facilities in the Emirate to submit vital data and clinical information on chronic diseases such as Diabetes, Cancer, Mental Health, Comprehensive Examinations, Obesity, Artificial Insemination Technology, Cardiovascular Diseases, Chronic Respiratory Diseases, Osteoporosis, Chronic Kidney Failure.

It also aims to monitor the challenges of chronic diseases among patients and facilitate the identification of risk factors leading to diseases. Moreover, the platform will play an important role in advancing Abu Dhabi's public health ecosystem and improving patient outcomes. It will also assess the impact of current prevention and early detection programs. This will help healthcare providers to identify trends and create personalized treatment and prevention plans for patients across the Emirate.¹⁰

UAE brings Lifesaving, AI technology for treating stroke

The use of Artificial Intelligence (AI) in healthcare is driving a revolution, automating administrative tasks, and analyzing large patient data sets to reach Diagnosis more quickly and accurately than ever before, Stroke is the third leading cause of death in the world.



In UAE, stroke is the second leading cause of disability after road accidents. Annually 7,000-8,000 patients in UAE get a stroke, which means every hour, one person gets a stroke. 50% of stroke patients are below the age of 45 years.¹¹

UAE has adopted the region's most advanced stroke interventional system ARTIS Icono, incorporating 2D and 3D imaging with artificial intelligence. It is a life-changing innovation now being made available for patients suffering from stroke. This has made neuro-thrombectomy much faster, and more precise and exposes the patient to less harmful radiation. Data analysis is challenging and very time-consuming, which is why many hospitals around the world have invested in AI to help speed up this process. Multiple hospitals in the UK has deployed e-stroke to analyze images from patients' brain scans with great success. e-stroke is also helping physicians to analyze in making accurate treatment decisions for strokes. It generates brain scan results within 1-2 minutes, hugely speeding up the diagnostic process with a successful rate.¹²



New blood test for cancer Trucheck now available across the UAE

The Gulf countries are witnessing a spike in the number of cancer patients with the World Health Organization projections shows a 1.8-fold increase in cancer incidences by 2030. A highly accurate, non-invasive blood-based multi-cancer screening test 'Trucheck' to nip cancer in the bud has been now introduced in UAE. Early detection of cancers also guarantees less expensive and timer saver in diagnosing 70 types of cancer with one blood test with 96% accuracy and 99% specificity. Generally, traditional screening procedures are intrusive, inconvenient, expensive, and can be painful, followed by lengthy wait times. Trucheck screening test collects 15-20ml of blood to detect the presence of Circulating Tumor Cells providing results to patients within two weeks.¹³

Bahrain also adopted blood-based cancer care solutions throughout the kingdom. This development in Bahrain is a major step toward early cancer detection, especially as it can eventually replace traditional screening procedures. People have the choice to opt for single-organ cancer or multi-cancer tests. Test prices start at AED 2,192 although a full test for all 70 types of cancers will cost AED 4,628. Trucheck can be combined with existing annual health check-up programs across healthcare groups, corporates, and insurance. Adoption of such a system not only offers cost-effectiveness and efficiency but also significantly reduces the number of avoidable referrals and alleviates the burgeoning burdens on the cancer management infrastructure.¹⁴

Saudi Health Ministry launches first e-platform in the Middle East for Oncology

The Saudi Health Ministry has announced the first electronic platform in the Middle East for Oncology to improve the health quality services for cancer patients. The e-platform aims to enable transiting knowledge and exchange experiences between specialists in the field of oncology located inside and outside the Kingdom. The platform aims to improve the quality of healthcare services provided to oncology patients through the early detection of tumors and the development of appropriate treatment plans by international standards. MOH has initiated this platform to support healthcare services in many delicate and rare specialties. By the end of 2025, the plan aims to have 88% of the Saudi Arabian population covered by inclusive health services, including residents of rural areas. In terms of digital transformation, one of the KPIs as well are that 100% of Saudi Arabians will be covered by the unified digital medical records system.¹⁸

High Prevalence of diabetes in the MENA Region leading to diabetic retinopathy

Diabetes has entered the top 10 causes of death in the MENA region and has been responsible for over 796,000 deaths in 2021. In 2021, the following is estimated for diabetes in the MENA region:



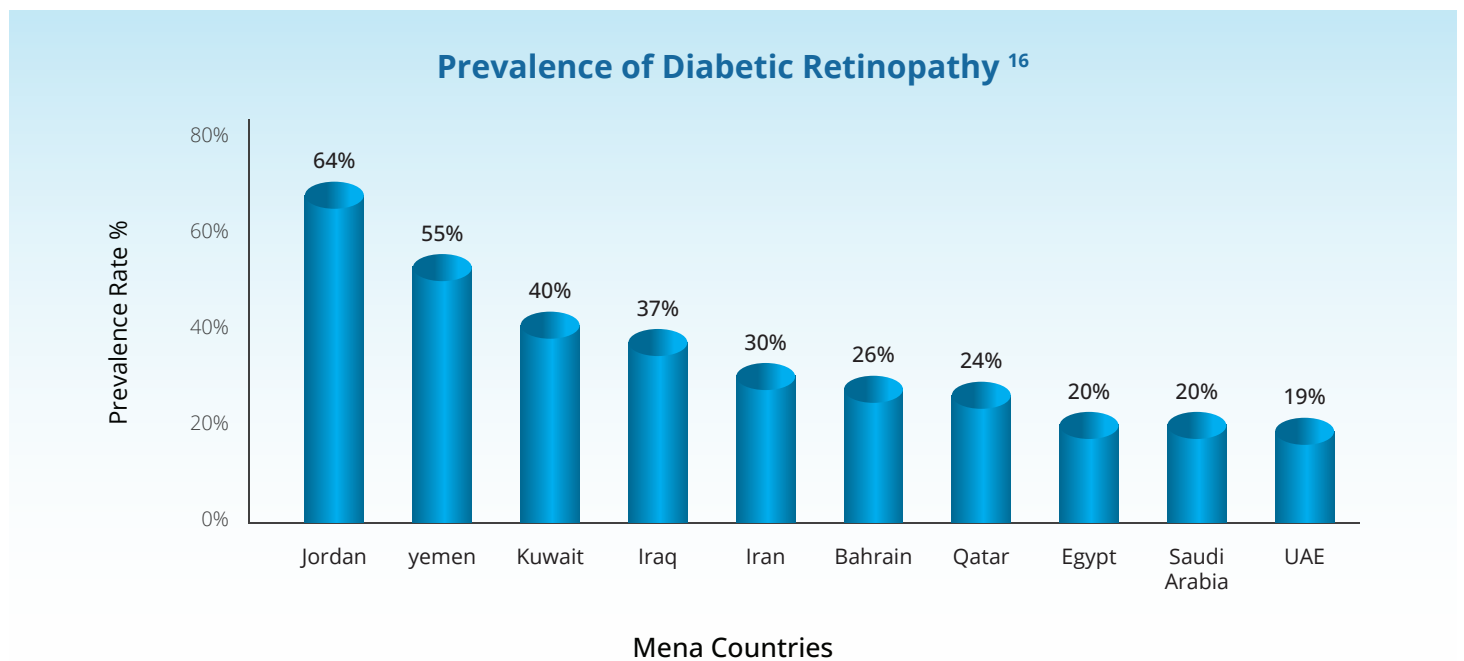
Worldwide, diabetic retinopathy, a complication of diabetes, caused by high blood sugar levels damaging the retina is the leading cause of blindness among adults. The global burden of diabetes includes:





A new study shows a small quantity of whey protein before meals can help regulate blood sugar levels. Whey protein is found in dairy products and can be used as a supplement. It works in two ways, firstly, by slowing down how quickly food passes through the digestive system, and secondly, by stimulating up several important hormones that control blood sugar. Based on the new study's results, whey protein can change gut function, slowing gastric emptying and stimulating the hormone secretion of incretin, which helps with high glycemia.¹⁷

Six of the 10 countries with the highest prevalence of diabetes in the world are in the Middle East. The prevalence of diabetic retinopathy ranges from 19% in the UAE to 64% in Jordan.¹⁶



Retinopathy can cause blindness if left undiagnosed and untreated. However, it usually takes several years for diabetic retinopathy to reach a stage where it could threaten sight. The Bahrain medical team states that diabetic retinopathy and glaucoma are the leading causes of visual impairment in Bahrain.

US FDA approves Fennec's hearing loss therapy

The US Food and Drug Administration has approved Fennec Pharmaceuticals Inc's intravenous therapy to prevent chemotherapy-induced hearing loss to reduce the risk of ototoxicity in children aged over one month who have undergone chemotherapy using the drug cisplatin. Cisplatin is used in treating a range of cancers in children such as liver, bone, and brain cancer, but can cause permanent hearing loss. Pedmark is now the only approved therapy to prevent cisplatin-induced hearing loss in the United States.

The World Health Organization reports that annually an estimated 400,000 children and adolescents under the age of 19 years develop cancer. Younger patients are at a higher risk of developing hearing loss with cisplatin treatment compared to older patients. Nearly, 10,000 children in the US and Europe receive chemotherapy with cisplatin or similar drugs each year, and the incidence of hearing loss depends on the duration and dosage of the therapy.

The recommended dose is:¹⁹

Actual Body Weight	PEDMARK Dose
Less than 5 kg	10 g/m2
5 - 10 kg	15 g/m2
Greater than 10 kg	20 g/m2

The FDA approval of Pedmark represents an important breakthrough for pediatric patients with localized, non-metastatic solid tumors at risk for a cisplatin-induced hearing loss around the world. The indicated price of the drug will cost around \$11,417 as the wholesale acquisition cost for a single treatment vial.



Our Team



Hatim Maskawala
Managing Director



Zaheer Ahmed
Deputy Manager



Akash Haider
Senior Actuarial Analyst



Affrah Khalid
Senior Actuarial Analyst



Syeda Kissa
Junior Actuarial Analyst



Huzaifa Siddiqui
Junior Actuarial Analyst

How we can help



Pricing and Predictive Analysis



Fraud Waste and Abuse



Cost Containment Alternative



Performance Monitoring and Analytics



Profit Optimization



Provide Network Structure

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Get in Touch with us!

+971-4-3207-250

<https://www.linkedin.com/company/badri-management->

www.badriconsultancy.com

Email: info@badriconsultancy.com

DUBAI OFFICE

2107 SIT Towers,
PO Box 341486,
Dubai Silicon Oasis,
Dubai, UAE

KSA OFFICE

No 2 Alhadlaq Commercial
Complex, Anas Bin Malik
Street, AlMalqa District,
Riyadh, PO Box 13524

KARACHI OFFICE

5B-2/3, 5th Floor,
Fakhri Trade Center,
Shahrah-e-Liaquat,
Karachi 74200, Pakistan

LAHORE OFFICE

POPCORN STUDIO, Co-Working
Space, Johar Town 59-B,
Khayaban e Firdousi, Block B,
Phase 1, Johar Town, Lahore