

INTERVENTIONAL CARDIOLOGISTS

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HEALTHCARE



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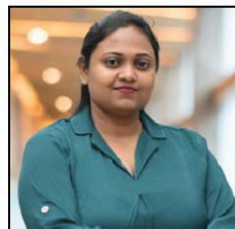
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Editorial

Precision Interventional Cardiology Meets Metabolic Risk Lifesaving Action

Interventional Cardiology an evolving field dedicated to minimally invasive treatment of complex heart diseases. A remarkable case involves Roje Kumari, a 28-year-old woman from Bhagalpur in 24th week diamniotic twin pregnancy with severe rheumatic mitral stenosis and NYHA Class IV heart failure. She underwent emergency Balloon Mitral Valvotomy at Manipal Hospital EM Bypass under Dr Dilip Kumar, addressing critical valve narrowing, pulmonary hypertension, and refractory dyspnea.

Through this synergy of specialties, blood flow to the new mother was restored, her condition stabilized and both children's lives were saved; it is a significant development in the provision of high-stakes obstetric interventional cardiology and successful collaborative care. Cardiologists and Interventional Cardiologists provide patient care at the intersection between emergency medicine and the pursuit of long-term prevention of vascular diseases; often within minutes of being able to relieve life-threatening vascular blockages.

They are also inextricably linked to the metabolic health of patients because conditions such as diabetes, lipid disorders, and obesity cause accelerated progression of vascular disease. Modern interventional cardiology utilizes advanced imaging, pharmaceutical medications and device-mediated approaches to restore coronary and structural integrity of the heart.

Interventional cardiologists are well-trained in their respective areas of specialty and possess the skills to perform procedures quickly and with precision, with the ability to make rapid, informed decisions when needed to provide immediate patient care. In essence, interventional cardiologists connect science and survival during those critical moments when patients present with emergent cardiovascular issues.

In the current 'Top 10 Prominent Interventional Cardiologist - 2026', June edition **siliconindia** features the doctors who prioritize strong doctor-patient relationships, transforming evolving healthcare policies into opportunities for informed discussions, greater patient awareness, and safer cardiovascular care.

Mandvi Singh

Managing Editor

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Dr Anuj Chawla is one of the best and very few fellowship trained Foot And Ankle Surgeon In Delhi NCR. He is an orthopaedic surgeon with a vast academic background and experience. He did his MBBS from prestigious Maulana Azad Medical College, Delhi in which he was a distinction holder. He then joined Safdarjung Hospital and Vardhman Mahavir Medical College where he finished in post-graduation in Orthopedic. Both Maulana Azad Medical College and Vardhman Mahavir Medical College have been in the top 10 medical colleges of India. After working for 3 years in Lok Nayak Hospital in Delhi, his zeal to learn more made him travel to Singapore where he worked in Tan Tock Seng Hospital for nearly 7 years. He is one of the best Foot And Ankle Doctors In Delhi. He is currently working as Director Orthopaedics in CK Birla Hospital Gurgaon & Delhi and in Sian Ortho and Foot Clinic, Sec 67 Gurgaon

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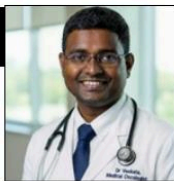
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C O N T E N T S . . .

IN MY OPINION

12

Shadows in the Safety Net: Addressing Critical Gaps in Pharmaceutical Patient Assistance Programs for Rural India



DR VENKATA PRADEEP BABU KOYYALA,
CEO & DIRECTOR AND SENIOR CONSULTANT & HEAD
- MEDICAL ONCOLOGY,,
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EDITORIAL EXCLUSIVE

8

INDIA'S SILENT CARDIAC CRISIS:
WHY YOUNGER ADULTS ARE
FACING MORE HEART DISEASE



CXO INSIGHTS

18

Redefining Nutraceuticals with Cutting-Edge Research & Technology



SURESH GARG,
FOUNDER & CMD,
ZEON LIFESCIENCES

32

Can Cell and Gene Therapy Rewrite the Future of Heart Failure Treatment?



NAVEEN KULKARNI,
CEO,
QUANTUMZYME

IN FOCUS

10 - 11

28

Transforming Cancer Care: Futuristically Integrating Precision Surgery and Compassion-Driven Oncology



DR ARUN KUMAR GIRI,
DIRECTOR,
**AAKASH HEALTHCARE SUPER
SPECIALITY HOSPITAL**

36

How Diet, Nutrition & Lifestyle Support Trauma Healing



DR RAVISHANKAR M R,
HEAD OF ORTHOPAEDIC TRAUMA,
**HOSMAT HOSPITALS & CHAIRMAN
FOR HOSMAT TRAUMACON**

LAST WORD

38

What If Your PMOS Symptoms Are Linked More to Lifestyle Than Genes



DR UMESH WADHAVANI,
DIET COACH & HEALTH EDUCATOR
(OXFORD QUALIFIED)

Si TOP 10
PROMINENT
INTERVENTIONAL CARDIOLOGISTS **2026**

**26 DR G. V.
SENTHILNATHAN**

30 DR VIVEK SINGLA

**COVER
STORY - 14**

DR GULLA SURYA PRAKASH

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INDIA'S SILENT CARDIAC CRISIS: WHY YOUNGER ADULTS ARE FACING MORE HEART DISEASE

By Sejal Singh B G, Correspondent, siliconindia



Why India is Increasingly Facing Silent Cardiac Crisis

On the morning of June 12, 2026, India lost Jaspal Rana. The 49-year-old shooting legend and coach had been on a flight back from the ISSF World Cup in Munich when he fell ill mid-air. By the time the plane landed in New Delhi, his condition had worsened significantly. Doctors placed a stent. However, he passed away at Max Hospital in Saket, Delhi leaving behind a career that had given India some of its greatest sporting moments and a generation of shooters who wouldn't exist without him.

He was 49. But for decades where cardiovascular disease was considered a health challenge associated with aging populations, today outcomes portray a completely different story. Across India, an increasing number of heart attacks, cardiac arrests, and chronic cardiovascular conditions are being reported among individuals in their 30s and 40s, creating what many experts describe as a silent cardiac crisis.

India is facing a silent cardiac crisis, one that is unfolding not among the elderly, but within its most productive and economically active population. As cardiovascular diseases continue to emerge earlier in life, healthcare experts are raising a critical question: Why

younger adults are becoming increasingly vulnerable to cardiovascular risks that were once seen primarily in older populations?

The Alarming Shift in the Age Profile of Heart Disease

India already carries one of the world's largest burdens of cardiovascular disease. What particularly alarms the healthcare experts today is the age at which these conditions are now appearing. Many cardiologists report that patients below the age of 45 are increasingly coming up with cases of heart attacks, coronary artery disease, arrhythmias, and heart failure.

Unlike previous generations, today's younger adults are presented with multiple health risks. The result is a significant acceleration in cardiovascular cases that often remain undetected until a major cardiac event occurs.

As concerning this situation is, this shift can't be considered a mere healthcare challenge now; it's calling upon social and economic adversities. When heart disease affects individuals during their peak working years, the consequences extend beyond hospitals and families into workforce productivity, healthcare expenditure, and national economic output. However, the question

remains- “What is driving this unprecedented rise in cardiovascular disease among India's younger population?”

Dr Sadhana Dhavapalani, Internal Medicine Specialist, Apollo Heart Centre, Chennai, infers about the situation, “We have been noticing a troubling trend of younger patients developing heart disease, diabetes, and high blood pressure, largely due to stress. It's crucial for those under stress to manage it by boosting metabolism, eating well, including more fruits and vegetables, exercising, and ensuring adequate sleep, which is vital for good health. Regularly checking blood sugar and blood pressure levels is important to catch issues early and seek treatment. Uncontrolled diabetes and high blood pressure can clog arteries, leading to heart attacks, which many young people mistakenly believe they are immune to. Over the past decade, we've seen a significant rise in heart-related problems among younger individuals due to the fast pace of life”.

The Lifestyle Time Bomb

One of the most significant contributors to rising heart disease among younger adults is undefined lifestyle today. Though modern lifestyle has bestowed all with abundant convenience, but at the cost of health. Urbanization, digital work environments, and following sedentary routines has majorly drawn people in the pit of life and work that's distressing.

Especially, the hype of processed food consumption and less movement doing desk jobs or excessive screen time altogether leads to unhealthy body having poor cardiovascular fitness with clogged arteries. Leading such lifestyle with lack of exercise, and additionally abusing our body with cigarettes and alcohol majorly challenges the human body.

Research increasingly links inadequate sleep to elevated blood pressure, inflammation, insulin resistance, and higher cardiovascular risk.

These cumulatively are creating a generation that appears productive on the surface but may be carrying significant hidden cardiovascular risks.

The Diabetes and Obesity Connection

India's growing burden of diabetes and obesity is closely intertwined with its cardiovascular crisis.

Type 2 diabetes and high blood-pressure is common amongst youngsters than ever before. Many individuals develop insulin resistance and metabolic syndrome much before diagnosis affirms their health situation. During this period, silent damage is often occurring within blood vessels and the cardiovascular system.

Excess body weight, particularly abdominal obesity, increases the risk of hypertension, abnormal cholesterol levels, and systemic inflammation. Together, these factors

accelerate the development of coronary artery disease. Moreover, it all centres around metabolic standard, hence this advancing overlap between diabetes, obesity, and cardiovascular disease has been rise coined up as - cardiometabolic health. Experts attentively emphasize that managing heart disease requires addressing multiple interconnected metabolic conditions rather than treating cardiovascular symptoms in isolation.

Is Genetics Causing More Vulnerability?

Indian genetics again stand the question of heart diseases as they are more prone to it comparative of the West, holding central obese cases (abdominal fat). Even, adverse lipid profiles are detected amongst Indians at relatively normal body weights.

Family history largely influences cardiovascular disease. This genetic predisposition does not make heart disease inevitable, but it does mean that prevention and early intervention become even more critical.

Stress that Hovers Over Lives Unknowingly

Beyond physical health, psychological and mental stress levy a great weight on heart health.

The pressures of modern life is immeasurable accounting demanding careers, financial responsibilities, social expectations, and constant digital connectivity have created an environment of chronic stress. Increased stress hormones such as cortisol and adrenaline lead to hypertension, inflammation, and endothelial dysfunction over time. Experts view the emotional well-being of individuals as an integral component of heart disease prevention.

Dr. Richa Agrawal, Interventional Cardiologist as published under Metro Group of Hospital's analytical blog says, “It is time to prioritize health as much as career and financial goals. By adopting healthier habits, getting regular check-ups, and managing stress, young Indians can safeguard their hearts”.

The Hidden Risks Many Young Adults Ignore

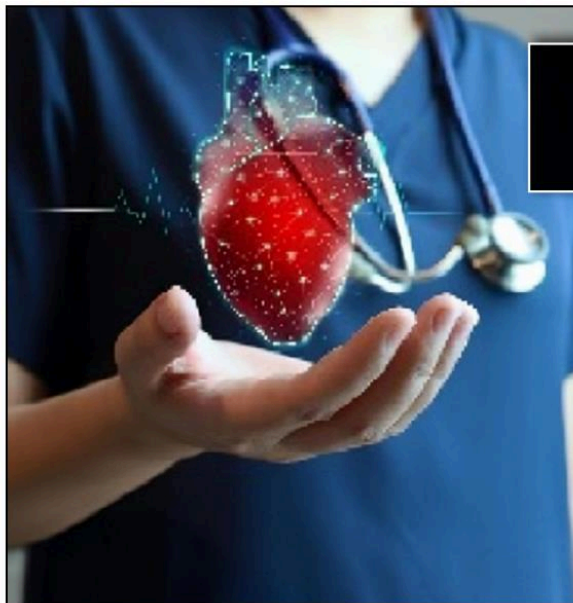
Perhaps the most dangerous aspect of cardiovascular disease is that it often develops silently.

Many young adults assume they are healthy because they feel healthy. Yet conditions such as hypertension, elevated cholesterol, prediabetes, fatty liver disease, and early-stage coronary artery disease frequently produce no obvious symptoms.

Scan the QR code to read the full Article



IN FOCUS



UNIHEALTH ELEVATES CARDIAC CARE WITH ADVANCED IVUS TECHNOLOGY

Unihealth Hospitals Limited has successfully completed its first Intravascular Ultrasound (IVUS)-Guided Coronary Intervention at UMC Hospitals, Navi Mumbai, marking a significant advancement in cardiac care. The procedure was performed by interventional cardiologist Dr. Shrikant Naigude using advanced IVUS technology, which provides detailed, real-time imaging from inside the coronary arteries.

Unlike conventional angiography, IVUS enables precise assessment of plaque, vessel size, calcium deposits, and blockages, helping doctors choose the right stent size and ensure optimal placement. This improves treatment accuracy, enhances patient safety, and reduces the risk of complications such as stent thrombosis and restenosis.

The technology is especially beneficial for treating complex cardiac conditions, including calcified lesions and multi-vessel coronary artery disease. The milestone reflects UMC Hospitals' commitment to adopting advanced medical technologies and delivering world-class cardiac care.

Unihealth Hospitals Founder and MD Dr. Akshay Parmar said the achievement aligns with the company's vision of making cutting-edge healthcare accessible while improving patient outcomes. 



AIIMS Mangalagiri expands holistic care with new AYUSH unit strengthening integrative healthcare services



TELANGANA PLANS AI-BASED DIAGNOSTICS EXPANSION IN DISTRICT HOSPITALS

Telangana Health Minister Damodar Rajanarasimha has announced plans to expand AI-powered diagnostic systems across district hospitals, aiming to improve healthcare access and diagnostic accuracy in rural and underserved areas. The announcement was made at the international conference, 'AI in Healthcare 2.0 - Powering Precision & Personalising Care,' held at Yashoda Hospitals in Hyderabad.

The initiative seeks to bring advanced medical services closer to remote communities by leveraging artificial

intelligence for faster and more accurate disease detection. AI-driven diagnostic tools can analyze medical data, assist clinical decision-making, and help identify health conditions at earlier stages, reducing the need for patients to travel to urban centers for specialist consultations.

Rajanarasimha highlighted AI's growing role in transforming healthcare from reactive treatment to predictive, preventive, and personalized care. The proposed deployment aligns with broader efforts to modernize public healthcare infrastructure, enhance patient outcomes, and make quality healthcare more accessible and affordable for millions across Telangana. 

IN FOCUS

INDIA CURBS OTC COUGH SYRUPS TO STRENGTHEN HEALTHCARE OVERSIGHT



India's pharmaceutical sector is adapting to new regulations that now require prescriptions for all cough and cold syrups, ending their over-the-counter sale from June 16. The move aims to improve patient safety, reduce self-medication, and strengthen oversight of medicine use across the country.

According to a Kotak report, the cough and cold syrup market is valued at around Rs 57 billion, accounting for 2.2% of the Indian Pharmaceutical Market. While the regulation may initially impact sales volumes, analysts believe the long-term benefits will outweigh short-term challenges.

The policy is expected to encourage patients to seek medical advice before using such medications, leading to better treatment outcomes and more responsible drug consumption. It may also accelerate market consolidation, benefiting established pharmaceutical companies with strong prescription portfolios and trusted brands.

Industry experts view the change as a positive step toward creating a safer, more transparent, and quality-driven pharmaceutical ecosystem that supports sustainable growth while prioritizing patient well-being. ^{si}



PULSUS TO INVEST RS 500 CRORE IN TELANGANA AI HEALTHCARE HUB

PULSUS Group has announced a Rs 500 crore investment to expand its AI Healthcare and Digital Innovation Hub in Ameenpur, Telangana, following a Supreme Court ruling that upheld the project's IT/ITeS park and Special Economic Zone (SEZ) status. The 35-acre campus near Miyapur is set to become a major center for artificial intelligence, healthcare technology, and digital services.

The project is expected to create around 6,000 direct jobs and support nearly 30,000 indirect employment opportunities as development progresses. PULSUS CEO Dr. Gedela Srinubabu said the company will now accelerate expansion plans after overcoming regulatory hurdles.

The hub aims to bring together healthcare professionals, researchers, engineers, and technology experts to drive innovation in AI-powered healthcare, clinical research, bioinformatics, healthcare analytics, and digital services. PULSUS also plans to collaborate with universities, startups, and research institutions to strengthen innovation.

The investment further reinforces Telangana's position as a leading destination for technology, healthcare, and innovation-driven growth. ^{si}



Maharashtra signs \$1.2 billion deal for Navi Mumbai MediCity healthcare hub development project deal



SHADOWS IN THE SAFETY NET: ADDRESSING CRITICAL GAPS IN PHARMACEUTICAL PATIENT ASSISTANCE PROGRAMS FOR RURAL INDIA

Dr Venkata Pradeep Babu Koyyala is a Senior Medical Oncologist, researcher, and academic leader with extensive experience in delivering comprehensive cancer care across resource-constrained regions of Northeast India. As Lead, Medical Oncology at Shankara Cancer and Research Institute, he has played a pivotal role in developing multidisciplinary oncology services integrating systemic therapy, molecular diagnostics, precision oncology, and real-world evidence generation.

**Dr Venkata Pradeep Babu Koyyala,
CEO & Director and Senior Consultant & Head - Medical
Oncology,
Shankara Cancer & Research Institute (SCRI)**



Deeply committed to health equity, he actively leads outreach oncology services in underserved regions including Nagaland, focusing on access-driven cancer care, implementation science, genomics research, education, mentorship, and community-centered oncology initiatives.

In the sweltering heat of rural Uttar Pradesh, a patient we will call Rajesh Kumar scraped together ₹1.2 lakhs, his life's savings from odd jobs and a small plot of land—to buy just 10 tablets of a life-saving oncology drug for 10 days of treatment of his father diagnosed with Lung Cancer.

The full month's supply would have cost triple that amount. Hoping for support through a leading pharmaceutical company's Patient Assistance Programme (PAP), he called the helpline.

The third-party assessor began with a detailed questionnaire covering demographics, economic status, employment, and family background. While such details are necessary for verification, they can add unnecessary burden on already exhausted caregivers.

In Rajesh's case, the assessor asked whether his late mother, a retired central government employee, was covered under the Central Government Health Scheme (CGHS). Rajesh explained that she had been entitled to CGHS but had never received the physical card due to long-standing bureaucratic delays. The call ended abruptly. No assistance was provided, and no clear offline or online appeal process was communicated.

As the treating oncologist, I personally spoke with the assessor, explaining that this family had already sold precious assets and exhausted their savings, before learning of the exclusion criteria, just to buy 10 days' worth of medicine, hoping for inclusion in the Patient Assistance Program.

Had they known about the exclusion criteria earlier, they might have made a different decision. The response remained the same: "I am sorry, Sir. The rules do not allow extension of the benefit."

This is not an isolated incident. It is one example of the many patient stories I encounter daily as a practicing medical oncologist—stories often reduced to impersonal statistics of "treatment drop-outs" in annual reviews.

A single death is a tragedy; a million becomes a statistic. But behind every statistic lies real human suffering that statistics alone cannot convey.

Leading multinational pharmaceutical companies have introduced Patient Assistance Programmes to support low-income patients with high-cost therapies for cancer, rare diseases, and chronic conditions.

These programmes, which emerged prominently after the Uniform Pricing Policy, have helped lakhs of patients by providing subsidized or free medicines.

Yet, in clinical practice across India, certain operational features repeatedly create unintended barriers that prevent the very patients they aim to serve from receiving timely support.

The Promise and the Persistent Gaps

Many PAPs offer 50–100% cost coverage based on income thresholds (typically below ₹5–10 lakhs annually), valid prescriptions, and proof of financial need. Prominent programmes have collectively supported thousands of cancer patients.

However, when these programmes are largely managed through third-party vendors, rigid protocols can sometimes clash with the ground realities of India's diverse population.

The Digital Divide: A Barrier Too High for Rural Patients

Rural India, home to approximately 65% of the population, faces well-documented connectivity challenges. According to NSSO data, only about 31% of rural households have reliable internet, and smartphone ownership among low-income groups remains limited.

Many PAPs rely heavily on mobile applications for enrolment, invoice uploads, OTP-based verification, and treatment reminders. While these tools work efficiently in urban settings, they frequently become insurmountable hurdles in villages with poor network coverage and low digital literacy.

Patients and caregivers often report repeated app crashes, OTP delivery failures, and the inability to upload scanned documents without adequate data or devices. These technical requirements, though intended for security and efficiency, inadvertently widen the urban-rural divide in access.

Eligibility Rules and Government Scheme Overlaps

A recurring challenge arises when PAP eligibility criteria intersect with government health schemes such as CGHS or Ayushman Bharat. CGHS covers millions of central government employees, retirees, and their families, yet delays in card issuance—often due to Aadhaar mismatches or administrative backlogs—affect a significant percentage of beneficiaries.

When PAP guidelines exclude patients “eligible for” any government scheme, families who have not yet received their physical cards find themselves caught in a no-man’s-land: neither government support nor PAP assistance materialises.

Parliamentary discussions and Ministry of Health and Family Welfare observations have repeatedly highlighted such verification-related denials. Private PAPs, being outside direct government oversight, are not bound by recent directives requiring hospitals to explain denials, leaving patients in double jeopardy.

The Human Cost and the Path Forward

These gaps are not deliberate; they stem from well-intentioned programmes that have not been fully adapted to India’s unique socio-economic and infrastructural landscape.

A 2024 Access to Medicine Foundation report noted that while PAPs demonstrate strong intent, integration with public systems and offline alternatives remain areas for strengthening. Rural patients already bear 2–3 times higher out-of-pocket expenses and experience treatment drop-out rates approaching 40%.

The solution lies in collaborative reform:

- Introduce hybrid enrollment options (toll-free helplines, clinic-assisted registration, and paper-based processes alongside apps).
- Provide training to third-party teams on rural realities, regional languages, and empathetic handling of complex cases.
- Develop seamless digital linkages with government

schemes such as CGHS through secure APIs, so verified eligibility does not become an automatic disqualification.

- Ensure transparent, time-bound appeal mechanisms that patients and physicians can access offline.
- Regulators can support this by strengthening oversight under existing UCMP guidelines to promote vendor accountability and patient-centric design.

India’s healthcare safety net must reach every corner of the country. Programmes that began with the noble goal of expanding access must evolve to eliminate the very barriers they inadvertently create.

Patients like Rajesh and the thousands more whose stories never reach the headlines—deserve a system that truly catches them when they fall.

Table: Common Application Phases and Associated Access Barriers in Patient Support Programmes – Indian Scenario.

Phase of Application Process	Operational Barriers Identified	Digital / Access Barriers Identified
1. Physician Referral / Initial Contact	Dependency on clinician awareness and initiative; inconsistent referral pathways; variable helpline responsiveness.	Limited multilingual helpline support; language barrier during telephonic screening; call wait times; rural connectivity issues.
2. Digital Enrolment (App/Web-Based Registration)	Requirement for independent patient enrolment; limited assisted enrolment mechanisms.	Mandatory smartphone ownership; internet access requirement; digital literacy constraints; English/Hindi-only interfaces limiting regional language users.
3. Document Submission (Prescription Upload)	Strict documentation format requirements; rejection due to incomplete/unclear uploads.	Need for document scanning or high-quality photo capture; file size/format restrictions; challenges for elderly or digitally inexperienced patients.
4. Income Verification & Socioeconomic Assessment	Multiple income proofs required; unclear eligibility criteria; repetitive documentation requests.	Upload portal complexity; limited guidance in regional languages; privacy concerns; difficulty digitizing physical certificates.
5. OTP / Identity Authentication	Reliance on patient controlled mobile number; delays in verification.	Network instability; OTP delivery failures; exclusion of patients without personal mobile access; dependency on third parties for OTP retrieval.
6. Third-Party Eligibility Review	Multiple verification calls; prolonged assessment timelines; limited transparency in decision-making.	Communication gaps due to language mismatch; missed calls in low-connectivity regions; digital fatigue from repeated submissions.
7. Program Approval & Notification	Delayed communication of approval status; lack of structured follow-up reminders.	App-only notifications; limited SMS fallback; dependence on continuous app access and updates.
8. Ongoing Treatment Support / Reauthorization	Periodic renewal documentation; Repeated income verification; administrative burden on clinic staff.	Re-login issues; password resets; repeated uploads; digital drop-off risk among long-term beneficiaries.
9. Assisted / Clinic-Based Enrolment (Hybrid Model)	Dependence on hospital staff or NGO facilitation; variability across centres; documentation backlog.	Partial digitization; manual to digital transfer errors; inconsistent regional language support during data entry.

Cross-cutting systemic barriers—digital divide, limited digital literacy, language constraints, dependence on intermediaries, and repetitive verification cycles, apply across all phases and underscore the urgent need for inclusive redesign.

This article is written in my capacity as a practicing oncologist based on direct clinical observations and publicly available reports. It aims to contribute constructively to the ongoing conversation on improving patient access to life-saving therapies across India. 



DR GULLA SURYA PRAKASH

REDEFINING CARDIAC CARE THROUGH EXPERTISE, COMPASSION, AND PREVENTIVE MEDICINE

BY DEEPSHIKHA

Heart disease continues to remain one of the leading health concerns worldwide, with rising cases linked to stress, diabetes, hypertension, obesity, and increasingly sedentary lifestyles. As awareness around cardiovascular health grows, people today are becoming more proactive about preventive screenings, early diagnosis, and long-term heart care. In this evolving healthcare landscape, interventional cardiologists play a critical role in not only treating life-threatening cardiac conditions but also improving survival outcomes and quality of life through advanced minimally invasive procedures and timely interventions.

Interventional cardiology has transformed modern heart care by enabling procedures such as angioplasty, stenting, structural heart interventions, and advanced imaging-guided treatments that reduce recovery time and improve patient outcomes. However, beyond technology and procedural expertise, successful cardiac care also requires clinical judgment, patient trust, and a compassionate approach toward treatment. Among the distinguished names in this field is Dr Gulla Surya Prakash, a senior interventional cardiologist with more than 35 years of experience in cardiology, emergency cardiac care, and preventive medicine. Widely respected for his expertise in coronary interventions, heart failure management, hypertension care, and rural healthcare outreach, Dr Prakash has consistently balanced advanced treatment with deeply patient-centric care. His contribution extends beyond hospitals into preventive cardiology programs, free rural medical camps, affordable healthcare initiatives, and mentoring future generations of doctors.

What makes Dr Prakash stand out is his ability to combine cutting-edge interventional cardiology with a strong commitment to accessibility and preventive healthcare. While he performs highly complex cardiac procedures using advanced technologies, he remains equally dedicated to serving underserved communities and educating patients about long-term heart health. His journey reflects a rare blend of medical excellence, ethical practice, and social responsibility.

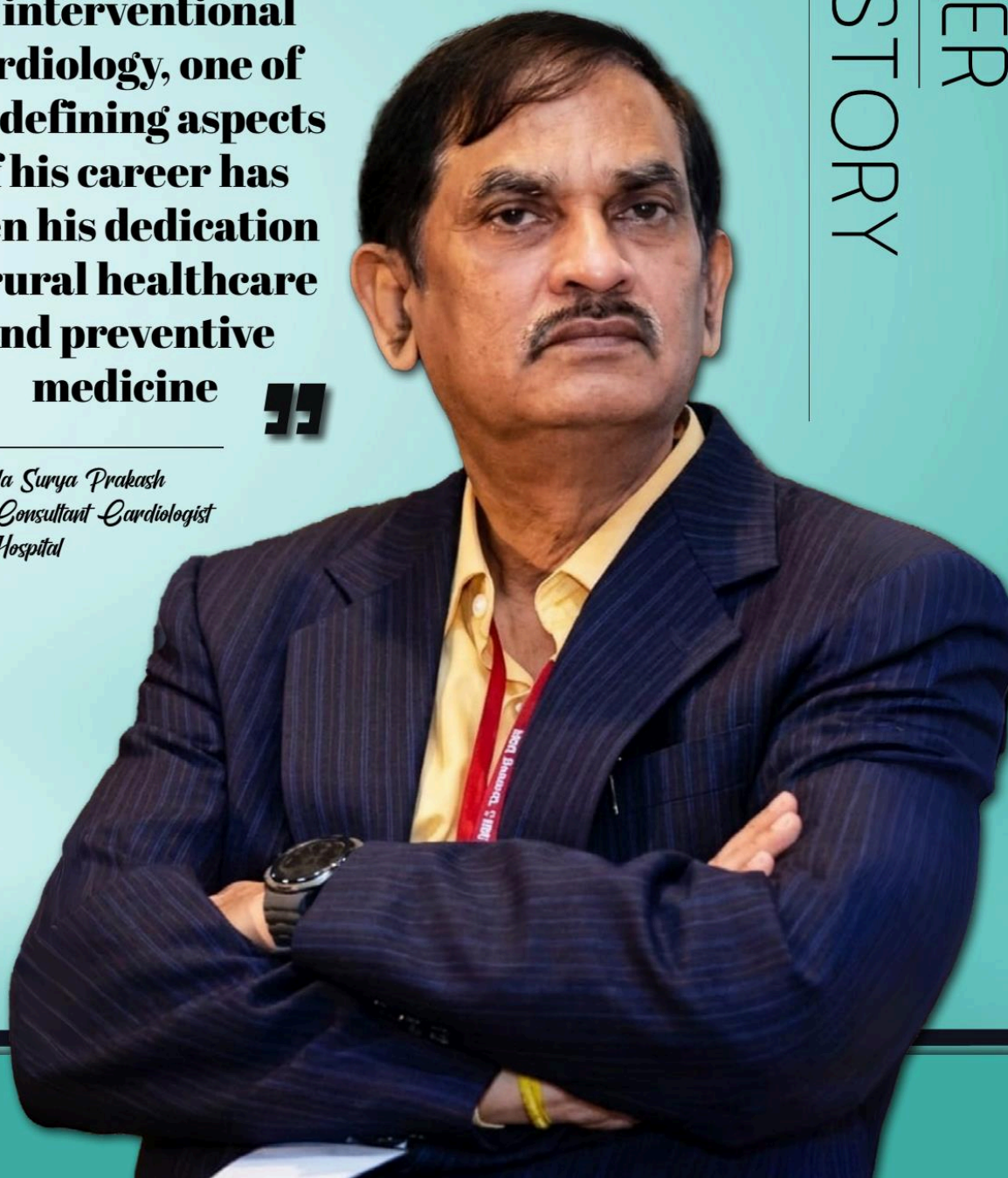
“

While Dr Prakash is widely recognized for his expertise in interventional cardiology, one of the defining aspects of his career has been his dedication to rural healthcare and preventive medicine

”

*Dr Gulla Surya Prakash
Senior Consultant Cardiologist
Care Hospital*

COVER
STORY



A Career Driven by Purpose

Dr Gulla Surya Prakash's journey into medicine was shaped by personal experiences and the healthcare realities of rural India. Raised in a remote village in Andhra Pradesh, he witnessed firsthand how the lack of medical access often delayed treatment for serious illnesses. During his MBBS years at Andhra Medical College, the illness of his grandfather, who suffered from heart failure that remained largely undiagnosed, deeply impacted him and inspired him to pursue cardiology.

Determined to specialize in heart care, he completed his MD in Internal Medicine from the All India Institute of Medical Sciences (AIIMS), New Delhi. He later underwent senior residency training in Emergency Medicine and Cardiology at AIIMS before pursuing his DM in Cardiology from Nizam's Institute of Medical Sciences (NIMS), Hyderabad, in 1994.

Over the years, his academic and professional contributions earned him several prestigious international recognitions, including Fellowship of the American College of Cardiology (FACC), Fellowship of the Society for Cardiovascular Angiography and Interventions (FSCAI), and Fellowship of the European Society of Cardiology (FESC). He also completed an MBA in Hospital Administration, reflecting his interest in healthcare systems and patient-focused medical management.

After serving as faculty at NIMS, Dr Prakash became part of the founding team behind CARE Hospitals, where he later held several leadership positions while continuing his clinical practice, academic and clinical research involvement.

Expertise across Advanced Cardiology

Over the course of his career, Dr Prakash has developed expertise across multiple areas of cardiology, including hypertension management, coronary artery disease, heart failure treatment, structural heart disease, and preventive cardiology.

One of his major focus areas has been hypertension, a condition he considers one of the most neglected contributors to severe cardiovascular complications. He has consistently emphasized the importance of early diagnosis, regular monitoring, and treatment adherence to prevent long-term damage caused by uncontrolled blood pressure.

In coronary artery disease management, Dr Prakash has performed thousands of angioplasty and stenting procedures, including highly complex interventions involving calcified arteries and multi-vessel disease. His expertise includes advanced technologies such as intravascular ultrasound (IVUS), OCT-guided imaging, rotational atherectomy, and intravascular lithotripsy, which allows greater procedural precision and improved outcomes.

Heart failure management is another important area of his practice. He has worked extensively with advanced device

therapies such as pacemakers, cardiac resynchronization therapy (CRT), CRT-D implantation, and structural heart interventions that improve both survival and quality of life for patients with advanced cardiac disease. Established a Heart Failure Registry under the "Smiling Hearts" initiative, enrolling over 1,600 patients for long-term follow-up and improving chronic care outcomes.

Dr Prakash is also actively involved in Transcatheter Aortic Valve Replacement (TAVR/TAVI), particularly for elderly patients and individuals who are considered unsuitable for conventional open-heart surgery.

Despite the rapid advancement of medical technology, Dr Prakash strongly believes that clinical examination, patient history, and physician-patient trust remain central to effective treatment. According to him, technology should support medical judgment rather than replace it.

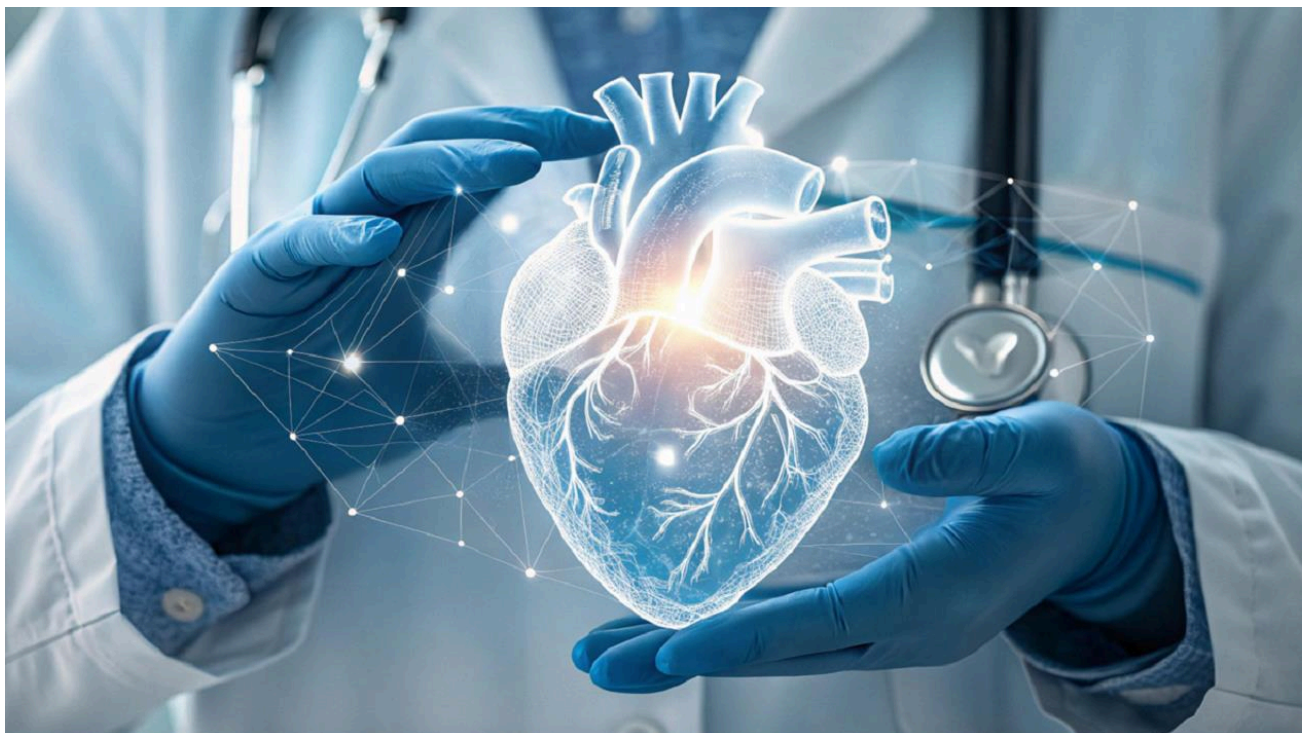
Blending Advanced Cardiology with Compassionate Care

- Over 30 years of expertise in interventional cardiology, heart failure, and preventive cardiac care.
- Actively conducts free rural healthcare camps and preventive cardiology outreach programs across Andhra Pradesh.
- Specializes in complex angioplasty, advanced stenting procedures, TAVR, and imaging-guided cardiac interventions.
- Contributed to affordable cardiac treatment initiatives, including the development of the Kalam-Raju Stent.
- Recognized for combining advanced cardiac treatment with ethical, patient-centric, and compassionate care.

Dr Surya Prakash played a pivotal role in establishing the Department of Cardiac Rehabilitation at Care Hospital, Hyderabad in 2007. This rehabilitation facility helped over 18000 patients who had undergone cardiac interventions and surgical procedures and those who were severely ill but were not fit to undergo any treatment. These services helped many severely sick patients improve their quality of life to lead reasonably active life.

Beyond Hospitals and Procedures

While Dr Prakash is widely recognized for his expertise in interventional cardiology, one of the defining aspects of his career has been his dedication to rural healthcare and preventive medicine.



For more than 35 years, he has conducted regular free medical camps in villages across Andhra Pradesh, including his native region. These programs provide consultations, diagnostic services, medicines, and long-term follow-up care to economically weaker populations who otherwise struggle to access specialized cardiac treatment.

A significant milestone in this journey was his association with former President Dr A.P.J. Abdul Kalam, who served as honorary chairman for a rural healthcare initiative dedicated to providing free medical care. Inspired by Dr Kalam's vision of accessible healthcare, Dr Prakash continues to focus strongly on preventive cardiology and community awareness.

Through these outreach initiatives, he educates patients about hypertension, diabetes, obesity, smoking, stress, and lifestyle-related cardiac risks. He firmly believes that many serious heart conditions can be prevented through awareness, regular screening, and long-term lifestyle management.

Dr Prakash also contributed to affordable cardiac treatment through his involvement in the development of the Kalam-Raju Stent, an indigenous coronary stent designed to reduce the cost of angioplasty procedures in India. At a time when imported stents were expensive and inaccessible for many patients, this innovation played an important role in making advanced cardiac interventions more affordable.

A Legacy Built on Trust and Service

Throughout his career, Dr Gulla Surya Prakash has handled

numerous complex and high-risk cases that demonstrate both his clinical expertise and humanitarian approach to medicine.

One memorable case involved a young patient from a remote village diagnosed with a rare heart tumor known as atrial myxoma. Coming from a financially disadvantaged background, the patient required immediate surgery that was beyond the family's means. Dr Prakash arranged for the patient's transfer, treatment, accommodation, and surgery free of cost, ensuring timely intervention and recovery.

"Another challenging case involved an elderly patient with severe coronary artery disease combined with extensive peripheral vascular disease, where conventional access routes for angioplasty were unavailable. Despite the complexity and surgical risk, we successfully completed the intervention through a left radial approach. The case was later presented and appreciated at an international cardiology conference in the United States", shares Dr Gulla Surya Prakash, Senior Consultant Cardiologist.

Over the years, Dr Prakash has received several state, national, and international recognitions, including honors such as Vaidya Ratna, Vaidya Shiromani, and Ugadi Puraskar for his contribution to medicine and society.

Even today, he continues to actively practice, mentor younger doctors, participate in international conferences, and expand preventive cardiology initiatives in rural India. His journey stands as a powerful example of how medical excellence, compassion, affordability, and ethical healthcare can come together to create a lasting impact in the field of cardiology. 

CXO INSIGHTS

REDEFINING NUTRACEUTICALS WITH CUTTING-EDGE RESEARCH & TECHNOLOGY



**Suresh Garg,
Founder & CMD,
Zeon Lifesciences**

With over 39 years in nutrition, healthcare, dairy, and nutraceuticals, Suresh Garg founded Zeon Lifesciences with the vision of 'A Promise of Good Health' transforming it into a leading contract manufacturer of nutraceuticals and herbal products. Known for his strategic insight, he has expanded Zeon globally, driving innovation, operational excellence, and sustainable growth.

In a recent interview with M R Yuvatha, Senior Correspondent at siliconindia, Suresh Garg, Founder & CMD, Zeon Lifesciences, shared his insights on innovations and safety in the nutraceutical industry.

With nano-encapsulated ingredients gaining popularity, what measures are being taken to ensure their long-term safety, metabolic impact, and regulatory compliance?

Nano-encapsulation has become the buzz this past decade, but personally, I think the more interesting part is why it's taken off. A lot of good ingredient, Curcumin, Resveratrol, Omega-3 are simply bad survivors. Heat knocks them out, light breaks them down, and by the time the body gets them, half their strength is gone. Nano-carriers help, no question about that.

But, and this is important, anything that enters the body at that scale needs to be understood properly. You can't just say, 'It improves absorption' and call it a day.

Right now, companies are doing three things quite seriously:

One, Long-Term Safety Work.

And I mean real studies not just routine toxicity tests. Researchers are tracking where these nanoparticles actually go, how long they stick around, whether the liver or spleen ends up storing them, and what happens when they pick up a 'protein coat' in the bloodstream. That protein corona phenomenon... it can completely change how the immune system reacts. So yes, we study that too.

There's also a big shift to biodegradable carriers. If the delivery system quietly breaks down and exits the body, it makes everyone researchers, regulators, consumers a lot more comfortable.

Two, The Regulatory Environment Is Finally Catching Up.

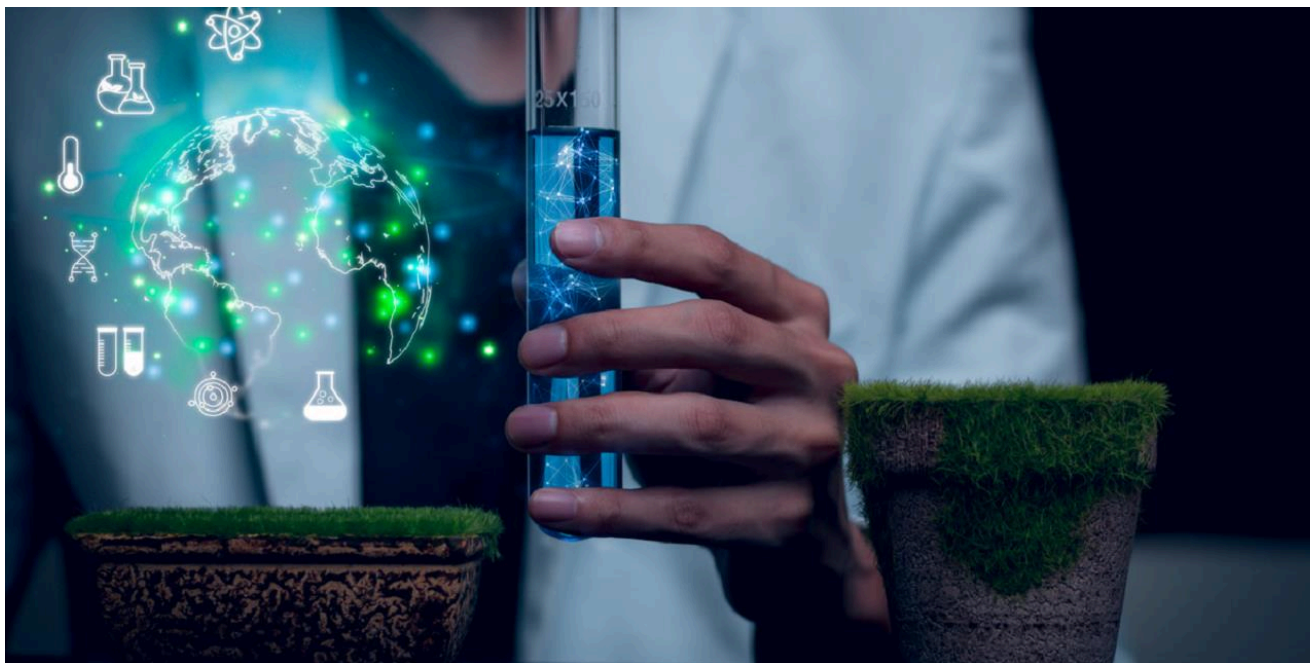
The FDA, EFSA, and others have become far more alert. And in India, regulators want clearer explanations of particle size, surface behaviour, and reactivity. That's fair. Nano is not 'just a smaller version of the same material'. It behaves differently. It deserves its own scrutiny.

Three, Quality Systems Are Getting Tighter.

Once you work in the nano range, you realise how even tiny shifts in process can change particle size or stability. That's why a lot of manufacturers now lean on Quality-by-Design methods, more process monitoring, more characterisation. You want the same behaviour every time, or the science becomes unreliable.

So yes, nano-encapsulation is promising, but it's also something we handle with a lot of respect.

In the era of AI-driven personalised nutraceuticals, what steps are companies



taking to use consumer data ethically, avoid bias, and validate results scientifically?

AI in nutrition is fascinating, honestly. When you combine genetics, microbiome data, sleep patterns, blood markers, you get insights we couldn't imagine twenty years ago. But the flip side is that these datasets are incredibly personal. If you mishandle them, you lose trust instantly.

The responsible players are doing three main things:

First, Being Transparent.

People should know what data is being collected and why. No hidden clauses. No 'surprise' permissions. More companies are adopting stricter global standards because it's the right thing to do not just because it looks good.

Advanced privacy tools are becoming common too. Federated learning, differential privacy, encrypted modelling, these let AI systems learn without exposing raw user data. Honestly, this is where the industry needed to go.

Second, They're Fighting Algorithmic Bias.

If your AI model is trained only on Western datasets, it will produce nonsense for many Indian users. Diets are different. Microbiomes are different. Lifestyles are different. So companies are building more diverse datasets.

Explainable AI matters as well. If an algorithm tells someone, 'Take this supplement', they deserve to know why. Doctors want that reasoning even more than the users do.

Third, Validation. Real Validation.

We can't rely on algorithms alone. Companies are running multicentre trials, controlled studies, and long-term tracking to see whether the AI's recommendations actually lead to improved health markers. And the gap between 'AI suggests it' and 'clinically proven to work' is narrowing, but it must be approached carefully.

AI is powerful but only if ethics, science, and common sense stay in the driver's seat.

Innovations like 3D-printed structures, oral films, and sustained-release pellets are transforming supplement delivery. What impact are they having on adherence, dosage precision, and real-world effectiveness?

Honestly, this is the part of the industry that excites me the most because you can literally see the difference it makes for consumers.

You take oral thin films they dissolve instantly. For kids or older adults who struggle with pills, this is a game-changer. Compliance shoots up because the whole experience becomes easier.

Then you have 3D printing, which people often assume is 'fancy tech', but it's incredibly practical. You can fine-tune the exact dose. You can design internal structures that release ingredients slowly, or in bursts, or only after reaching specific pH levels. No more breaking tablets and hoping you got the right half.

Sustained-release pellets solve another everyday problem: frequent dosing. If someone only needs one dose a day instead of three, they're far more likely to stick with it.

But effectiveness that's the real win here. Many nutraceuticals are poorly soluble. With these newer systems amorphous dispersions, engineered matrices we're improving bioavailability in very real terms. The ingredient doesn't just reach the body, it reaches it ready to work.

So yes, these technologies aren't gimmicks. People feel the difference, and clinicians appreciate the predictability.

As nutraceuticals and pharmaceuticals converge, what strategies help companies deliver prescription-grade efficacy while keeping products accessible, safe, and wellness-focused?

The lines are blurring because consumers expect more now. They want supplements that actually deliver measurable results, and pharmaceutical science helps us make that happen.

One big shift is adopting pharma-style R&D discipline. Instead of relying only on ingredient-level studies, companies are testing complete formulations dissolution, stability, dose-response, everything. This gives much stronger evidence for claims.

Manufacturing is another part of the story. Pharma-grade processes good documentation, cleanroom workflows, validated equipment translate extremely well into nutraceuticals. You get safety, consistency, and in many cases, lower wastage.



The goal is to combine scientific rigour with the accessibility and preventive mindset that defines this industry

There's also a growing trend of collaborative development. Pharma experts bring deep formulation knowledge. Nutraceutical researchers bring botanicals, bioactives, and wellness insights. When those worlds collaborate instead of working in silos, the outcomes are far better.

And yes, regulatory harmonisation is slowly improving. Clear standards give stability. When companies know the rules, they can innovate responsibly and predictably.

The goal is not to turn nutraceuticals into drugs. The goal is to combine scientific rigour with the accessibility and preventive mindset that defines this industry.



With nutraceuticals targeting lifestyle diseases, what methods are being used to track measurable outcomes, integrate digital monitoring, and demonstrate cost-efficiency?

Suresh Garg, says, "Lifestyle diseases need proof. People want real changes lower HbA1c, improved lipid profiles, reduced inflammation. Not vague ideas of 'feeling healthier'".

So more companies are relying on objective biomarkers. Glycaemic markers for diabetes risk, LDL and triglycerides for heart health, hs-CRP for inflammation these give hard numbers that both clinicians and users trust.

Then comes digital monitoring. Wearables and apps are now part of the ecosystem. CGMs, sleep trackers, step tracking, food logs they provide a continuous stream of data instead of a once-in-three-months clinic visit. That feedback loop helps adjust interventions faster.

The last part is cost-efficiency, which people often underestimate. If a supplement can delay medication, reduce hospital visits, or improve long-term health outcomes, it's economically significant. That's why Health Technology Assessment (HTA) frameworks are becoming popular they help calculate long-term value, not just upfront cost.

This combination clinical markers, digital feedback, economic value makes lifestyle-focused nutraceuticals far more credible and easier to integrate into healthcare routines. 

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Si TOP 10 **PROMINENT** INTERVENTIONAL CARDIOLOGISTS **2026**

India's interventional cardiology enters a new phase of precision and minimally invasive care; specialists are increasingly adopting advanced technologies that improve patient outcomes while enhancing procedural safety. A landmark example is Metromed International Cardiac Centre, Kerala, which performed the state's first Pulsed Field Ablation (PFA) procedure for atrial fibrillation on the very first day of the technology's launch in India.

This breakthrough highlights the growing role of Indian cardiologists in bringing globally advanced therapies to patients with complex cardiovascular conditions. Today's interventional cardiologist is not only a skilled procedural expert but also a pioneer driving innovation in structural heart disease, electrophysiology, and coronary interventions.

In the current 'Top 10 Prominent Interventional Cardiologists - 2026', June edition **siliconindia** features the doctors who prioritize strong doctor-patient relationships, transforming evolving healthcare policies into opportunities for informed discussions, greater patient awareness, and safer cardiovascular care.

The foundation of every successful intervention is not just clinical expertise, but a trusted doctor-patient relationship built on communication, transparency, and informed decision-making



Stop Guessing, Start Closing: The Rise of the GTM Operating System

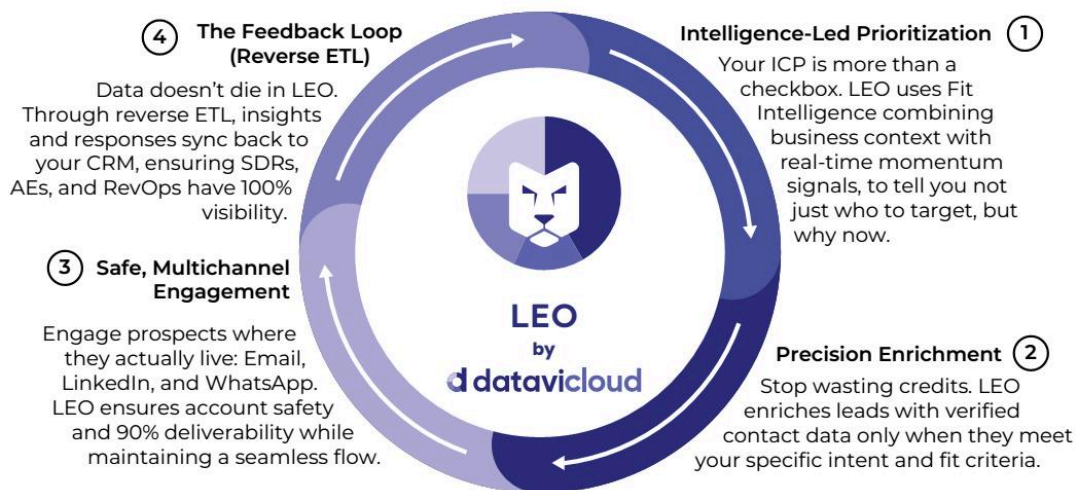
In an era where enrichment credits are wasted on dead leads and "spray and pray" outreach is a recipe for a burned domain, DataviCloud's LEO is rewriting the GTM playbook.

The Problem? The "Volume" Trap

Most GTM teams are stuck in a cycle of high volume and low signal. They spend hours on manual research, landscape accounts that won't convert, and push multichannel messages that feel like noise.

The Solution: LEO

LEO isn't just another tool; it's your AI-powered GTM companion designed to turn cold outbound chaos into a predictable revenue engine.



Outcome-Driven ROI: Why GTM Teams are Switching

Feature	The Old Way (Fragmented)	The LEO Way (Unified)
Lead Research	Manual, fragmented, and slow-reps lose 1 hour daily on admin.	80% Research Reduction: Focus exclusively on selling, not digging.
Data Costs	High spend on bulk enrichment; 20-25% of B2B data decays annually.	90% Precision Enrichment: Spend credits only on leads that truly matter.
Visibility	Siloed data between SDRs and AEs; 70% of teams can't sync CRM with automation.	Full-Funnel Visibility: 100% metric transparency across SDR, AE, and RevOps.
Deliverability	Single-channel, low response; ~84% global inbox placement.	95% Deliverability: Multichannel safety (Email/LI/WA) ensures your landing is secure.

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S TOP 10 **PROMINENT** INTERVENTIONAL CARDIOLOGISTS **2026**

Dr Gulla Surya Prakash
Senior Consultant
Cardiologist

Care Hospital
Hyderabad
carehospitals.com

With over 35 years of expertise in cardiology, emergency cardiac care, and preventive medicine, he specializes in coronary interventions, heart failure treatment, hypertension management, and rural healthcare outreach initiatives

Dr Juned Savanur
Interventional Cardiologist

Sapthagiri Super
Speciality Hospital
Bangalore
snpsu.edu.in

He has specialized training in coronary and structural interventions, with extensive experience in high-volume tertiary care settings, managing complex PCI, bifurcation procedures, intracoronary imaging, congenital defect closures, and advanced echocardiography

**Dr Mahantesh
Charantimath**
Managing Director & Sr.
Interventional Cardiologist

Tathagat Heart Care
Centre
Bangalore
tathagathearthospital.com

Specializes in coronary angiography, angioplasty, PTCA stenting, primary and complex PTCA, pacemaker and heart failure device implantation, renal and carotid interventions, and critical cardiac care for heart attack patients

Dr Mansoor Ahmed
Sr. Consultant Interventional
Cardiologist

Park Hospital
Jaipur
parkhospital.in

He possesses extensive experience in interventional and non-interventional cardiology, with special expertise in emergency cardiac procedures and comprehensive cardiac critical care management for patients

Dr Mayur Jain
Consultant Interventional
Cardiologist

Jinkushal Cardiac Care
Thane
jinkushalcardiacare.com

With over a decade of cardiology expertise, he has successfully performed numerous procedures, including angioplasties, angiographies, chronic total occlusion (CTO) interventions, and complex bifurcation cases

TOP 10 PROMINENT INTERVENTIONAL CARDIOLOGISTS - 2026

Dr Sandip K Rane
Founder & Interventional
Cardiologist

Mumbai Heart Clinic
Mumbai
mumbaiheartclinic.com

He brings 32 years of experience in cardiology, having performed complex angioplasties and authored numerous publications, with primary areas of interest including heart failure and pulmonary hypertension

Dr G V Senthilnathan
Cardiologist

Sugam Hospitals
Chennai
sugamhospital.com

He is recognized for precision-guided interventions and patient-centric treatment strategies, with contributions spanning procedural cardiology, clinical leadership, mentorship, and the advancement of evidence-based cardiac care practices

Dr Sridhara G
Consultant Interventional
Cardiologist

Vikram Hospital
Bangalore
vikramhospital.com

He is proficient in treating diverse cardiac conditions and performing angioplasties (PTCA), cardiac electrophysiology procedures, pacing therapies, pacemaker implantations, and conventional RF ablations with clinical expertise

Dr Srinivasa Prasad
Sr. Consultant
Interventional &
Lead Structural Heart
Cardiologist

Apollo Hospitals
Chennai
apollohospitals.com

He specializes in structural heart interventions, with experience in TAVI, TMVR, TEER, TTVR, LAAC, heart valve replacement, MitraClip procedures, and complex angioplasty, focusing on clinical and interventional cardiology

Dr Vivek Singla
Interventional Cardiologist

Singla Cardio Care
Patiala
drviveksingla.com

With years of extensive training and high-volume procedural experience, he provides comprehensive interventional cardiology care, specializing in coronary interventions, pacemaker implantation, CRT-D devices, and advanced cardiac procedures

DR G. V. SENTHILNATHAN



Redefining Precision and Patient-Centered Excellence in Interventional Cardiology



Dr G. V. Senthilnathan
Cardiologist

Cardiologists today occupy one of the most critical positions in modern healthcare. As cardiovascular diseases continue to account for a significant share of global mortality, the demand for highly skilled interventional cardiologists has grown substantially. Beyond performing complex procedures, these specialists are now expected to deliver precision-driven care, adopt advanced technologies, respond effectively in emergency situations, and guide patients through long-term cardiovascular management. The field has evolved from conventional intervention to a more comprehensive model that combines clinical expertise, evidence-based decision-making, minimally invasive technologies, and compassionate patient engagement.

Among the names gaining recognition in this evolving landscape is Dr G. V. Senthilnathan, known for his balanced approach to innovation and ethical care. Dr Senthilnathan has built a reputation around precision-guided interventions and patient-focused treatment strategies. His contribution extends beyond procedural cardiology into mentorship, clinical leadership, and the advancement of evidence-based cardiac care systems. With a strong emphasis on reducing unnecessary interventions and improving procedural accuracy through modern technologies, he represents a new generation of specialists focused not only on treatment outcomes, but also on sustainable, patient-centric healthcare delivery.

Leading with Clinical Vision and Purpose

For Dr G. V. Senthilnathan, leadership in cardiology is deeply connected to responsibility and continuous

learning. His transition from academic medicine into leading interventional cardiology departments was shaped by a clear vision: delivering healthcare that prioritizes both precision and patient well-being. Early in his career, he recognized that successful cardiology practice extends far beyond performing technically sound procedures. It requires building systems that ensure timely diagnosis, efficient intervention, and continuity of care.

This philosophy has also influenced his approach to leadership within clinical teams. Dr Senthilnathan places strong emphasis on mentoring younger doctors, encouraging collaboration, and fostering a culture where innovation directly benefits patient outcomes. In high-pressure medical environments, especially in emergency cardiac care, teamwork and structured decision-making become essential.

Acute coronary syndromes and complex emergency cases often require immediate action under intense pressure. According to Dr Senthilnathan, the greatest challenge lies in balancing rapid clinical judgment with procedural precision. Hemodynamic instability, high-risk coronary anatomy, and the need for seamless coordination among multidisciplinary teams, demand exceptional focus and preparedness. His approach remains rooted in calm assessment, evidence-based decisions, and effective communication with both clinical teams and patients' families.

Advancing Precision through Modern Cardiac Technologies

One of the defining aspects of Dr Senthilnathan's practice is his strong advocacy for precision-guided interventional

cardiology. He believes the future of cardiac care lies in objective, physiology-based decision-making rather than relying solely on visual angiographic interpretation.

A key example is the use of Fractional Flow Reserve (FFR), a technology that evaluates whether a coronary lesion is genuinely responsible for ischemia. This allows cardiologists to determine whether stenting is clinically necessary. By avoiding unnecessary stenting procedures, physicians can reduce procedural risks, lower healthcare costs, and minimize long-term complications for patients. For Dr Senthilnathan, this shift reflects one of the most important advancements in modern cardiology because it aligns intervention strategies with genuine patient benefit.



For aspiring cardiologists, Dr Senthilnathan emphasizes the importance of building a strong foundation in internal medicine while remaining committed to lifelong learning

He also highlights the transformative impact of technologies such as Intravascular Ultrasound (IVUS) and Optical Coherence Tomography (OCT). IVUS provides detailed visualization of vessel anatomy and supports accurate stent sizing and deployment, while OCT delivers high-resolution imaging for precise lesion characterization. Together, these technologies have significantly improved procedural accuracy and long-term outcomes in coronary intervention.

“I believe that evidence-guided intervention is reshaping the future of cardiology. The combination of advanced imaging, physiological assessment, and minimally invasive techniques is helping clinicians achieve greater precision while improving patient safety and recovery”, shares Dr Senthilnathan.

Balancing Technology with Compassionate Care

While technological advancements continue to redefine

cardiology, Dr Senthilnathan believes the human element of medicine remains equally important. Today's patients are more informed and actively involved in healthcare decisions than ever before. They expect transparency, personalized treatment plans, quicker recovery, and improved quality of life. This shift has encouraged clinicians to move beyond procedural expertise and strengthen patient communication and trust.

For aspiring cardiologists, Dr Senthilnathan emphasizes the importance of building a strong foundation in internal medicine while remaining committed to lifelong learning. He views cardiology as a demanding yet deeply rewarding specialty that requires discipline, resilience, empathy, and ethical clarity. Technical proficiency alone, he notes, cannot define excellence in healthcare. True success comes from combining scientific expertise with compassion and humility.

Prevention also remains central to his outlook on cardiovascular care. He consistently advocates for preventive strategies such as regular physical activity, healthy nutrition, stress management, smoking cessation, and routine health screenings. Early diagnosis and management of conditions like hypertension, diabetes, and high cholesterol, he believes, are critical to reducing long-term cardiovascular risk.



Looking ahead, Dr G. V. Senthilnathan aims to create a legacy built on clinical excellence, mentorship, and patient-centered innovation. His interest in educational publishing and knowledge-sharing reflects a broader commitment to bridging the gap between academic research and real-world clinical practice. As interventional cardiology continues to evolve, his work stands as a reflection of how precision medicine, ethical leadership, and compassionate care can collectively shape the future of modern healthcare. 

TRANSFORMING CANCER CARE: FUTURISTICALLY INTEGRATING PRECISION SURGERY AND COMPASSION-DRIVEN ONCOLOGY

Dr Arun Kumar Giri, Director, Aakash Healthcare Super Speciality Hospital

Dr Arun Kumar Giri is a highly experienced surgical oncologist and robotic surgeon with over two decades of experience in advanced cancer care. Recognized for precision-driven cancer surgery, he specializes in minimally invasive and robotic techniques that improve outcomes and recovery.



He holds MBBS and MS from Banaras Hindu University and DNB in Surgical Oncology. He specializes in robotic and minimally invasive procedures for gastrointestinal, thoracic, breast, thyroid and gynecologic cancers. He trained in CRS/HIPEC (USA) and minimally invasive GI surgery (Japan) and is member of global surgical oncology societies.

There is a radical change in the field of cancer care. In the last twenty years, the cancer burden around the world has been rising steadily, with International Agency on Research on Cancer (IARC, GLOBOCAN 2020) estimating close to 20 million new cancer cases every year globally. In most malignancies, the survival has been greatly enhanced by the advances in diagnostics, surgical innovation, systemic therapies, and radiation methods.

Nevertheless, with the advances in technology, there is an increasing understanding that ideal cancer treatment should be deeply based not in accuracy alone but in empathy as well. The future of oncology is to achieve a smooth combination of precision surgery with patient-oriented and compassionate care which is state of the art.

The Evolution of Precision Surgery in Oncology

Precision surgery is a paradigm shift of radical anatomy-based resections to tumor-specific interventions, which are carefully planned. The presence of modern imaging modalities including high-resolution MRI, PET-CT, and intraoperative navigation systems facilitates a surgeon to establish the boundary of tumors with very high precision and accuracy. This has resulted in increased organ-sparing operation, decreased surgical morbidity and functional outcomes without jeopardizing oncologic safety.

Laparoscopic and robotic-assisted surgeries are the least invasive procedures, which have transformed surgical

oncology. Robotic platforms offer better visualization, tremors blocking and better dexterity particularly in areas of the body that are anatomically difficult like in the pelvis and thorax. Articles in peer-reviewed journals like The Lancet Oncology and JAMA Surgery have shown that with minimally invasive methods used, blood loss is reduced, hospital stays are shortened and recovery rates are faster in certain types of cancer.

Sentinel lymph node mapping is another foundation of precision surgery. In breast cancer and melanoma, to give a few examples, sentinel node biopsy has mostly replaced the widespread lymph node dissection, which has highly reduced the likelihood of complications such as lymphedema, without impairing staging. A new doctrine of less is more has turned out: stripping away everything that is necessary, maintaining quality of life, and making interventions specific to tumor biology.

Molecular Profiling and Personalized Treatment Planning

Surgical and systemic approaches have been further refined with the collaboration of genomic and molecular profiling. Tumors are no longer defined using their location of origin but using their molecular signature. Next-generation sequencing provides a possibility to identify actionable mutations, which directs targeted therapies and immunotherapies.

The Cancer Genome Atlas (TCGA) data has shown the heterogeneity of what appear to be similar cancers. Indicatively, breast cancer can now be diagnosed as a number of molecular subtypes, namely, HER2-positive, hormone receptor-positive, and triple-negative which need different treatment algorithms. This type of knowledge affects the surgical decision-making process, the time to undergo surgery following neoadjuvant therapy, and the amount of resection.

In the case of rectal, breast, and esophageal cancer, especially, neoadjuvant therapy often improves the tumor shrinkage before surgery. This strategy has the potential to transform inoperable past tumors into resectable ones and potentially permit sphincter-saving or breast-saving surgeries. Prognostic information on the basis of pathological response analysis after surgery offers a mechanism of adjuvant therapy and represents a very personalized continuum of care.

The Imperative of Compassion-Driven Oncology

Although precision medicine helps improve the clinical outcomes, compassion is the pillar of healing. Cancer diagnosis is not a biological process but a crisis of the greatest emotions and psychological disturbances to the family and patients. Studies conducted in Psycho-Oncology suggest that 40 percent of cancer patients turn to be stressed considerably during treatment.

Active listening, effective communication and joint decision-making are all a part of compassion-driven oncology. The Journal of Clinical Oncology evidence proves that hospitals whose patients note increased adherence to treatment schedules and record improved overall satisfaction in general are more responsive and informed.

Empathy Leads To Better Trust and Trust Leads To Better Therapeutic Achievements

Breaking bad news, talking about prognosis, and making complicated treatment decisions necessitate cultural sensitivity and awareness. Integration of palliative care since diagnosing the disease, particularly at its advanced stages, has been proven to improve the quality of life and even prolong life of some groups of people, as revealed in historical studies in The New England Journal of Medicine. Early palliative intervention is a re-definition of the task of cancer care as a curative endeavor to a comprehensive model that considers pain, nutrition, emotional wellbeing, and spiritual issues.

Multidisciplinary Collaboration as the Future Standard

Cancer care in the future lies on strong multidisciplinary tumor boards. Medical oncologists, surgical oncologists, radiation oncologists, radiologists, pathologists, genetic counselors, psycho-oncologists, and palliative care specialists have to cooperate to develop personalized treatment patterns.

According to the data provided by the European Society of Medical Oncology (ESMO), the accuracy of staging and the appropriateness of treatment are enhanced with the use of organized multidisciplinary conversations. Care

pathways are of great use in complex cancers like pancreatic, head and neck and gynecologic malignancies. This type of cooperation will guarantee the availability of precision surgery that is accompanied with the best systemic therapy, radiation planning, and rehabilitation.

Rehabilitation and survivorship care are also part and parcel of holistic oncology. Five-year survival rates with any of the advanced treatment methods have increased radically with improvements in treatment; the survival rate of breast cancer is over 90% in the early stages in most developed areas (SEER Program, National Cancer Institute). Survivorship clinics are concerned with long-term toxicity, screening of secondary malignancy, preservation of fertility and psychosocial reintegration.



The future of cancer care lies not only in precision-guided treatment, but in treating every patient with empathy, dignity, and hope; where advanced science and compassionate healing walk hand in hand

Technological Innovations and the Road Ahead

Oncology is going to be further changed by artificial intelligence and machine learning. Artificial intelligence-based image interpretation improves the process of early diagnosis and operation. Predictive analytics are useful in estimating the risks of recurrence and personalizing follow-up schedules. Real-time monitoring of minimal residual disease may soon be achievable by liquid biopsies which identify circulating tumor DNA.

Immunotherapy has changed the treatment landscape in melanoma, lung cancer and renal cell carcinoma. Checkpoint inhibitors have obtained long-term reactions in patients in previously considered incurable subsets. Multiple ongoing clinical trials are evaluating combinations of surgery, immunotherapy, and targeted agents in early and advanced disease settings.

Nevertheless, technological change should not enhance healthcare disparities. The world health organization estimates that almost 70 percent of cancer death is experienced in low and middle-income nations. Equal access to screening, diagnostics and cutting-edge therapies is an international problem. Innovations, policy reforms, and cost-effective treatment are needed as a way of making sure that progress is made in favor of all populations. 

DR VIVEK SINGLA



Advancing Interventional Cardiology with Precision, Compassion & Accessibility



Dr Vivek Singla,
Interventional Cardiologist

In the rapidly evolving landscape of modern medicine, interventional cardiology has become a cornerstone in the fight against cardiovascular diseases, redefining how critical heart conditions are diagnosed and treated. Today, the field demands specialists who not only adopt advanced technologies but also deliver impactful care across diverse patient populations. Among such distinguished professionals is Dr Vivek Singla, a highly accomplished interventional cardiologist whose journey reflects resilience, clinical excellence, and an unwavering commitment to improving patient outcomes.

Interventional cardiologists today are at the forefront of life-saving procedures, ranging from emergency angioplasties to complex device implantations, requiring both technical precision and rapid decision-making. In regions where access to advanced cardiac care remains limited, the role of such specialists becomes even more critical. Dr Vivek Singla stands out as a practitioner who bridges this gap by bringing world-class cardiac interventions to underserved areas, ensuring that quality healthcare is not confined to metropolitan cities but reaches those who need it the most.

A Journey Rooted in Determination and Excellence

Dr Vivek Singla's journey into medicine is deeply personal and inspiring. Born and raised in Sangrur, Punjab, he was motivated early in life by his mother's aspiration for him to become a doctor after the loss of his father at a young age. He pursued his MBBS from Maharani Lakshmi Bai Medical College, Jhansi, followed by an MD in Medicine

from Motilal Nehru Medical College, Allahabad, both secured in his first attempt, reflecting his academic excellence.

It was during his postgraduate training that he witnessed the alarming rise of cardiovascular diseases and the stark lack of cardiac care infrastructure, particularly in smaller cities. This exposure became a turning point, inspiring him to specialize in cardiology. He further honed his skills at premier institutions such as Escorts Hospital, New Delhi, and trained under eminent cardiologists before completing his DM in Cardiology from the prestigious Sri Jayadeva Institute of Cardiovascular Sciences, Bengaluru one of Asia's largest cardiac centers.

Delivering Advanced Cardiac Interventions with Precision

With years of extensive training and high-volume procedural exposure, Dr Singla offers a wide spectrum of interventional cardiology services. His expertise spans simple and complex coronary interventions, pacemaker implantations, CRT-D devices, and advanced cardiac procedures. What distinguishes his practice is the diversity of interventions he performs, especially in regions where such services are not readily available.

Beyond conventional cardiology, Dr Singla is recognized for his work in peripheral artery interventions, carotid angioplasty, and dialysis-related vascular procedures. He is among the few specialists in his region performing complex procedures such as central venous stenting, fistula salvage interventions, and embolization techniques for managing life-threatening bleeding

conditions. This multidisciplinary approach significantly enhances patient outcomes and expands the scope of cardiac care in semi-urban settings.

Embracing Innovation for Better Outcomes

Cardiology is a field driven by constant innovation, and Dr Singla has consistently stayed ahead by integrating advanced technologies into his practice. Techniques such as Intravascular Lithotripsy (IVL) have revolutionized the treatment of heavily calcified arteries, allowing safer and more effective stent placement. Similarly, the use of drug-eluting balloons has opened new avenues for treating small vessel disease, reducing the risk of re-occlusion without leaving behind permanent implants.

He also employs advanced imaging modalities and specialized tools like rotablation and cutting balloons to manage complex lesions. These technological advancements have significantly improved procedural precision, minimized complications, and enhanced patient recovery. Dr Singla strongly believes in adopting globally recognized best practices to ensure that his patients receive the highest standard of care.



Cardiology is a field driven by constant innovation, and Dr Singla has consistently stayed ahead by integrating advanced technologies into his practice

Compassionate Care and Community Impact

While clinical expertise is vital, Dr Singla places equal emphasis on compassionate patient care. Managing cardiac emergencies often involves not only treating critically ill patients but also supporting emotionally distressed families. His approach is rooted in transparency and communication, ensuring that patients and their relatives are fully informed about the condition, treatment options, and expected outcomes.

One of the most defining aspects of his career is his commitment to community service. Through numerous

free medical camps, he has extended cardiac care to economically disadvantaged populations, offering consultations, medications, and subsidized treatments. His efforts have played a significant role in raising awareness about heart health and promoting early diagnosis.

A Vision for Accessible Cardiac Care

Looking ahead, Dr Vivek Singla envisions a healthcare ecosystem where advanced cardiac treatments are accessible and affordable to all. While technological innovations have greatly enhanced treatment outcomes, their high costs remain a barrier for many patients. Dr Singla is focused on bridging this gap by advocating for cost-effective solutions and wider adoption of advanced interventions in emerging healthcare regions.

His contributions to clinical research, including over 20 international publications, further reflect his dedication to advancing the field of cardiology. Through a combination of clinical excellence, innovation, and community outreach, Dr Singla continues to redefine the standards of cardiac care.



Dr Vivek Singla's journey is a testament to how passion, perseverance, and purpose can come together to create a meaningful impact in healthcare. As an interventional cardiologist, he not only saves lives but also inspires a future where quality cardiac care is within everyone's reach. 

CAN CELL AND GENE THERAPY REWRITE THE FUTURE OF HEART FAILURE TREATMENT?

Naveen Kulkarni is a seasoned leader with deep expertise in computational enzyme engineering, sustainability, and deep-tech commercialization. He is recognized for advancing science-driven solutions that make industrial processes cleaner, more efficient, and environmentally sustainable. His work spans biotechnology innovation, climate technology, public-private partnerships, and technology policy, with active engagement across government, industry, and research ecosystems. A strong advocate for innovation-led growth, he is committed to accelerating the commercialization of emerging technologies and fostering a more sustainable, technology-driven future.

Naveen Kulkarni, CEO, Quantumzyme

In a recent email interaction with Priyanka R, Copywriter at siliconindia, Naveen Kulkarni, CEO at Quantumzyme, shared his insights on 'Can Cell and Gene Therapy Rewrite the Future of Heart Failure Treatment?'



Hear failure remains one of the world's most complex and costly health challenges, affecting millions of patients despite significant advances in treatment. While conventional therapies have improved symptom management and survival rates, they often fall short of addressing the underlying biological causes of disease. This has intensified interest in cell and gene therapies, which offer the potential to repair damaged tissues, correct genetic defects, and deliver highly personalized treatment approaches. However, translating these scientific breakthroughs into scalable, affordable, and widely accessible solutions remains a major challenge. This article explores how innovation, infrastructure, policy, and commercialization must evolve together to unlock the full potential of advanced therapies in reshaping the future of heart failure care.

Cell and gene therapies are often described as the next frontier in medicine, but commercialization remains a major challenge. From a biotechnology innovation perspective, what barriers must the industry overcome before these therapies can become mainstream treatment options?

Cell and gene therapies represent one of the most promising frontiers in modern medicine, but their journey to mainstream adoption is constrained by a few structural challenges.

First, manufacturing scalability remains a critical bottleneck. Unlike traditional drugs, these therapies often involve complex, patient-specific processes that are difficult to standardize and scale efficiently. Second, the regulatory ecosystem is still evolving, with varying frameworks across regions adding uncertainty and extending development timelines.

Equally important is infrastructure readiness. Delivering these therapies requires highly specialized facilities, cold-chain logistics, and skilled clinical teams—capabilities that are not yet widely distributed, particularly in emerging markets. Additionally, long-term safety and efficacy data are still maturing, which naturally slows broad clinical adoption.

Finally, the issue of cost and economic viability cannot be overlooked. The current high cost of therapies limits access and puts pressure on healthcare systems.

Advanced therapies have shown promising clinical results, yet affordability remains a concern. How can biotech companies balance breakthrough innovation with the need to make these treatments accessible to larger patient populations?

Balancing innovation with accessibility requires a fundamentally different approach—one where affordability is not addressed at the end, but engineered into the system from the very beginning.

A critical step is early and proactive engagement with key stakeholders- including regulators, insurers, and government bodies. In markets like India, where healthcare financing is highly price-sensitive and largely out-of-pocket, aligning early on approval pathways, reimbursement mechanisms, and pricing expectations can significantly reduce downstream friction. This ensures that therapies are not only scientifically viable but also commercially and socially sustainable.

From a technology standpoint, platform-based innovation remains essential. Reusable platforms across multiple indications can distribute R&D costs more efficiently. At the same time, process innovation like automation, closed-system manufacturing, and standardized workflows will be key to lowering production costs and enabling scale.

For India specifically, there is a strong opportunity to leverage frugal innovation principles- designing therapies with cost, manufacturability, and local infrastructure constraints in mind. This could include decentralized manufacturing models, regional treatment hubs, or hybrid approaches that reduce logistics and cold-chain dependencies.

Equally important is the evolution of pricing and payment models. Given the high upfront cost of cell and gene therapies, models such as outcome-based pricing, government-backed risk-sharing schemes, and insurance-linked annuity payments can help distribute financial risk while improving patient access.



India has a unique opportunity to play a meaningful role across multiple layers of the global cell and gene therapy value chain- not just as a cost advantage destination, but as a center for innovation and scale

You have often advocated for Technology Readiness Levels (TRLs) as a framework for innovation maturity. Where do you believe cell and gene therapies currently stand on the commercialization journey, particularly in emerging markets like India?

From a Technology Readiness Level (TRL) perspective, cell and gene therapies globally are transitioning from TRL 6 to

TRL 8- moving from late-stage clinical validation toward early commercialization.

In developed markets, a few therapies have already reached TRL 9, with regulatory approvals and commercial deployment. However, in emerging markets like India, the ecosystem is still largely concentrated around TRL 3 to TRL 5, where foundational research, early translational work, and pilot-scale development dominate.

That said, the trajectory is clearly upward. India benefits from a strong base in academic research, cost-efficient innovation, and a rapidly evolving startup ecosystem, all of which are accelerating progress along the TRL curve.

The key gap lies in translational infrastructure including GMP-grade manufacturing facilities, regulatory agility, and risk capital- to bridge the 'valley of death' between lab-scale innovation and clinical or commercial deployment.

India is building momentum in biotechnology and deep-tech innovation. What opportunities do you see for Indian startups and research institutions to participate in the global cell and gene therapy ecosystem?

India has a unique opportunity to play a meaningful role across multiple layers of the global cell and gene therapy value chain- not just as a cost advantage destination, but as a center for innovation and scale.

One of the most immediate opportunities lies in contract research, development, and manufacturing (CRDMO) services. India's proven strengths in generics and biologics manufacturing can be extended into advanced therapies, particularly in areas like viral vector production, cell processing, and analytical services.

Beyond services, there is significant potential for indigenous innovation. Indian startups and research institutions can focus on developing novel platforms and enabling technologies- whether in vector engineering, RNA-based therapeutics, or bioprocess optimization. Given the constraints of the local market, this innovation is often driven by necessity, which naturally lends itself to cost-efficient and scalable solutions with global relevance.

Another powerful lever is frugal innovation at scale. India can pioneer models that rethink how these therapies are delivered- through decentralized manufacturing, regional treatment centers, and integration with digital health platforms. These approaches could dramatically lower the cost of delivery and become blueprints for other emerging markets.

Collaboration will be critical. By building strategic partnerships with global biotech companies, academic institutions, and healthcare providers, Indian players can integrate into international innovation networks while accelerating capability building domestically.



If cell and gene therapies successfully move from niche treatments to scalable healthcare solutions, how could they reshape the future of healthcare innovation and precision medicine over the next decade?

If cell and gene therapies successfully scale, they could fundamentally redefine the way we approach healthcare—from incremental disease management to potentially curative and highly personalized interventions.

At the core, this shift is about moving from a reactive model to a precision-driven, preventive paradigm. Instead of managing chronic conditions over a lifetime, we may increasingly see one-time or limited-duration treatments that correct disease at its genetic or cellular root. This has profound implications not just for patient outcomes, but for the overall economics of healthcare.

The next decade will likely see a deep convergence between advanced therapeutics, diagnostics, and digital technologies. Genomics, AI-driven drug development, and real-world data platforms will enable earlier diagnosis, better patient stratification, and more targeted interventions making precision medicine more actionable at scale.

At the system level, this evolution will force a rethink of healthcare infrastructure and financing models. Hospitals may evolve into specialized centers for advanced therapies, while payers and governments will need to adopt innovative reimbursement frameworks that reflect long-term value rather than upfront cost.

For emerging markets like India, this transformation presents both a challenge and an opportunity. While access

and affordability remain key concerns, the ability to build cost-efficient, scalable delivery models from the ground up could allow India to leapfrog traditional healthcare pathways and become a leader in democratizing precision medicine.

Ultimately, as these therapies mature, they won't just improve how we treat disease, they will reshape how we define it, shifting healthcare toward earlier intervention, higher efficacy, and truly individualized care.

In essence, the success of cell and gene therapies will not be defined solely by scientific breakthroughs, but by how effectively we translate them into accessible, scalable solutions. This will require the healthcare ecosystem itself to evolve in parallel. Clinicians will need earlier exposure and training in advanced therapies as part of medical education, so adoption is driven by confidence and familiarity. Investors must be willing to take a long-term view, recognizing that breakthroughs in this space often require patient capital and sustained commitment. At the same time, governments and regulators have a critical role in enabling faster, more adaptive approval pathways without compromising patient safety, while also supporting reimbursement frameworks that encourage adoption.

Equally important is building public awareness, strengthening translational infrastructure, and fostering collaboration across stakeholders. The next decade will be less about proving that these therapies work and more about ensuring that the systems, incentives, and capabilities around them are ready. Only then can we truly realize their promise at scale, and make transformative healthcare accessible to all. 



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HOW DIET, NUTRITION & LIFESTYLE SUPPORT TRAUMA HEALING

With over 29 years of experience, Dr Ravishankar M R (MBBS, MS-Ortho, PGIMER-CHD) is a leading orthopaedic trauma specialist at HOSMAT Hospital, Magrath Road. He focuses on complex trauma, elbow and shoulder reconstruction, revision and salvage surgeries, arthroplasty, and arthroscopy guidance. An NBE-accredited faculty, examiner, and author of 22 international publications, he has received multiple academic excellence awards, including the Rising Star recognition from the TIMES group in 2019, highlighting his expertise and contribution to orthopaedics.

In a recent interview with M R Yuvatha, Senior Correspondent at siliconindia, Dr Ravishankar M R shared his insights on how expert surgery, proper nutrition, and a positive mindset support trauma recovery.



Dr Ravishankar M R,
Head of Orthopaedic Trauma, HOSMAT Hospitals & Chairman for HOSMAT Traumacon

In an era where technology dominates conversations around healthcare, the critical role of lifestyle factors in trauma recovery often receives less attention. While medical treatments form the cornerstone of care, effective healing after trauma, particularly orthopedic injuries, also hinges significantly on diet, nutrition, sleep patterns, and everyday living habits.

Economic and Clinical Challenges in Orthopedic Trauma Recovery

Orthopedic injuries usually take weeks to months to heal and are not a one or two-day program. A knee fracture or any upper limb fracture typically takes six weeks, while lower limb fractures require three months, plus or minus another six weeks for additional considerations. Technically, this can result in a person being confined to bed for almost four to five months. This extended period represents a big economic and financial loss, as the individual may not have income during recovery yet still requires a quality lifestyle.

In response, healthcare organizations like HOSMAT Hospitals have established strict protocols covering the

surgery plan, diet, and use of supplementary medications.

Significant resources are often allocated to physiotherapy and post-operative recovery. However, this creates a substantial financial burden. There is no second chance for orthopedic surgery it must succeed on the first attempt, as re-surgery can be draining.

Many patients end up losing their house, land, or jewels due to these costs. Consequently, leading hospitals like HOSMAT plan for single-shot procedures. Even in cases of compound fractures, a single procedure combined with plaster management is often preferred as the optimal approach.

The Integration of Nutrition, Sleep, and Mindset with Advanced Care

When considering technology such as wearable devices and health trackers for monitoring healing, accessibility remains a challenge. Many patients lack the financial means to invest in them. Insurance coverage includes private corporate health insurance and state government schemes, though options are limited beyond programs like Arogya Bhagya. As a result, many individuals travel to



reputed facilities and pay from their own pocket to receive the best possible brand and quality treatment. Investing in health proves to be one of the wisest decisions.

Nutrition, sleep, and lifestyle factors play a definitive supportive role. Nutritional additions and nutraceuticals definitely aid recovery, as does proper sleep. At the end of the day, successful outcomes depend on surgical skill. Above all, luck must favor the patient by ensuring they reach the right hospital, the right doctor, at the right time. This triad must align perfectly, or problems can arise. Patients often come from across Karnataka and beyond.

For instance, a patient recently arrived from Mandya with a very rare fracture pattern involving vascular injury. Despite arriving after the ideal window, specialized management was provided. Such rare cases highlight expertise, with the National Archive of America reporting only seven similar instances, potentially marking this as the first in the Indian subcontinent. People bypass multiple medical colleges and private hospitals between Mandya and Bangalore to seek superior care at HOSMAT Hospitals.

Regarding specific nutrition for speeding up tissue and muscle healing in trauma, it remains fundamentally a matter of time. Calcium supplementation shows some equivocal results. *Cissus quadrangularis*, a widely used herb in bone healing processes worldwide, is often incorporated. While complete fracture union may take nine months, additives ensure nothing is missed. Throughout recovery, patients benefit immensely from maintaining a good spirit and positive mindset.



Nutrition, sleep, and lifestyle factors play a definitive supportive role. Nutritional additions and nutraceuticals definitely aid recovery, as does proper sleep

Looking Ahead!

Ultimately, trauma healing in orthopedics represents a multifaceted journey. By combining precise surgical expertise with supportive diet, nutrition, quality sleep, and a positive lifestyle, recovery can be enhanced even amid significant challenges. This balanced, patient-centered approach not only addresses immediate clinical needs but also mitigates the broader economic and personal impacts of injury, fostering better long-term outcomes in trauma .

LAST WORD

WHAT IF YOUR PMOS SYMPTOMS ARE LINKED MORE TO LIFESTYLE THAN GENES

Dr Umesh Wadhavani, Diet Coach & Health Educator (Oxford Qualified)

Dr Umesh Wadhavani is an evidence-based diet coach, TEDx speaker, and lifestyle wellness expert with over 13 years of experience across India and UK. He created the 'Ghar Ka Khana' (Food from Home) approach, promoting sustainable fitness without cutting favourite foods. Using science, storytelling, humour, and practical strategies, he has helped thousands of people including teams at KPMG, PwC, Deloitte. His mission is to make healthy living simple, relatable, and actionable, helping people build medication-free, balanced lifestyles without extreme dieting.



In an interaction with Sejal Singh B G, Correspondent at siliconindia. Dr Umesh Wadhavani shared his insights on 'What If Your PMOS Symptoms Are Linked More to Lifestyle Than Genes'.

Why do many experts now view PCOS as a broader metabolic condition (PMOS) rather than just a hormonal or fertility disorder?

Polycystic Ovarian Syndrome (PCOS) is not only a hormonal or reproductive disorder but also a metabolic condition that affects multiple systems in the body, extending far beyond reproduction.

Although PCOS is commonly diagnosed through ovarian dysfunction and hormonal imbalance, research links it strongly with metabolic issues such as insulin resistance, obesity, glucose intolerance, type-2 diabetes, and cardiovascular disease. Common symptoms include acne, excessive hair growth, thinning hair, irregular periods, fatigue, mood disorders, and other mental health concerns.

Because of its wide-ranging effects, some healthcare providers describe PCOS as a Polyendocrine Metabolic Ovarian Syndrome (PMOS), highlighting the interaction between hormones and metabolism. This broader perspective helps reduce the narrow focus on fertility, supports earlier diagnosis, holistic treatment, and improves long-term health outcomes. This broader perspective also helps reduce the narrow focus on fertility, supports earlier diagnosis, holistic treatment, and improves long-term health outcomes.

How insulin resistance, diet, weight, inflammation, and lifestyle are linked to PCOS symptoms, and does the term PMOS better reflect this broader metabolic reality?

PMOS more accurately depicts the reality of this condition than PCOS because it includes more than hormones and fertility. PCOS is linked to insulin resistance and the level of stress on the body.



PMOS is not just a condition written in genetics; it is often a reflection of how modern lifestyle, stress, sleep, nutrition, and movement shape hormonal health every single day

Diet plays an important role as it affects blood sugar levels, weight, and inflammation. Excess body fat can also contribute to hormonal and metabolic imbalance, making it harder to manage the condition. Inflammation from poor nutrition and unhealthy lifestyle habits affects overall body function. Support symptom management.

In India, how important are nutrition and lifestyle changes in

managing PCOS/PMOS among young women before medication or fertility treatment is needed?

In managing PCOS/PMOS, nutrition and lifestyle changes are vital in India, with many young women suffering from sedentary lifestyles, stress, eating processed foods, being overweight, and at risk for diabetes. Hormonal medications help by easing some symptoms, such as irregular periods, but don't fix the underlying problems created by a poor diet/poor lifestyle combination.

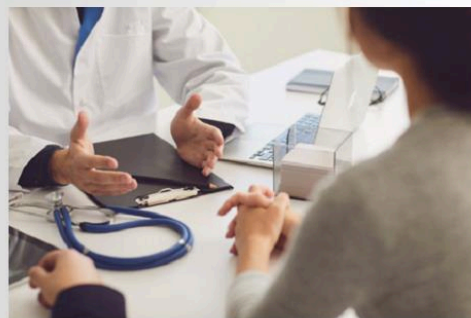
So, medications should be viewed as simply a temporary boost as part of a comprehensive healthcare program; not as a cure-all for women with PCOS/PMOS. Most often, improving dietary habits should be a woman's first focus. Women should focus on balancing carbohydrates with protein, fiber, and healthy fats; increasing physical activity; getting more sleep; and reducing stress.

This does not mean that you have to stop eating Indian food or traditional favorite meals! Many women have successfully controlled their PCOS/PMOS through sustainable diet and lifestyle modifications with the help of a qualified nutrition professional. Nutrition and lifestyle are essential components for ongoing good health, maintaining fertility and controlling symptoms of both PCOS/PMOS. 



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