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## CARDIAC HYPERTROPHY PHENOTYPES: DIFFERENT ETIOLOGIES WITH THICKENED VENTRICULAR WALL

DR. DEVARAJAN K. A.

## RECURRENT PREGNANCY LOSS- DIAGNOSTIC CHALLENGES

DR. CICIJA KALLOOPPARAMBAN

## MINIMALLY INVASIVE THERAPIES IN PROSTATE CANCER: ARE WE APPROACHING A POST-RADICAL ERA?

DR. ABHINEETH K. P.

## PINK PROMISE – BREAST CANCER SCREENING CAMPAIGN

DR. SARAH J. EASAW

## 22 DAYS, 3012 KMS, 5 STATES, AND 2 UNION TERRITORIES.

DR. RUBEN JOHN

## SHAPING THE FUTURE OF CANCER CARE: PLASTIC SURGERY & AESTHETIC ONCO-RECONSTRUCTION AT THE FOREFRONT

DR. SANNIA SALIM

# MESSAGE FROM THE CHAIRMAN

**Shri. P. M. Sebastian**
Chairman
Dr. KM Cherian Institute of Medical Sciences

## Greetings!

I extend my warm greetings to all.
It is with immense pride that I reflect on the progress and accomplishments of Dr. KM Cherian Institute of Medical Sciences. Our institution has established itself as a center of excellence, driven by a vision to deliver compassionate, ethical, and high-quality healthcare.
From the beginning, our focus has been on building a healthcare system that combines advanced medical expertise with genuine care and empathy. Today, I am proud to see that vision being carried forward by a team that is deeply committed to making a difference in the lives of patients and their families. This newsletter stands as a reflection of the intellectual and professional strength of our institution. The articles contributed by our doctors, focusing on clinical case experiences and emerging trends in medicine, highlight our dedication to advancing healthcare through learning and innovation. Such efforts play a crucial role in improving patient care and maintaining high standards in clinical practice.
The strength of our institution lies in our people—our doctors, nurses, administrators, and support staff—who work together with dedication and integrity. Their efforts ensure that we continue to maintain high standards in patient care and clinical outcomes. Looking ahead, we aim to further enhance our capabilities, embrace innovation, and expand our reach to serve the community more effectively. We remain dedicated to our mission of promoting health, healing, and hope.
I extend my heartfelt appreciation to all contributors for their valuable insights and to the editorial team for bringing together this meaningful publication. Your efforts reinforce our vision of combining compassionate care with continuous professional growth.

**Regards,**

**P. M. Sebastian**

# MESSAGE FROM THE MANAGING DIRECTOR

**Rev. Fr. Dr. Alexander Koodarathil**
Managing Director
Dr. KM Cherian Institute of Medical Sciences

## Greetings!

Dr. KM Cherian Institute of Medical Sciences has always been a forerunner in conducting diverse academic programs alongside its clinical achievements. This edition is particularly significant as it showcases insightful articles contributed by our doctors, reflecting on unique clinical cases, treatment approaches, and evolving trends in healthcare. These contributions are a testament to our commitment to continuous learning, academic excellence, and evidence-based practice. By sharing such knowledge, we aim to strengthen clinical outcomes and promote a culture of professional development within our institution.

In an era of rapidly advancing medical science, staying updated with current trends is essential. Our clinicians consistently strive to integrate new knowledge and innovative practices into patient care, ensuring that our services remain both relevant and of the highest quality.

I congratulate all our doctors who have contributed to this newsletter. Their dedication to both patient care and academic growth is truly commendable. I also extend my sincere appreciation to our entire team for their ongoing efforts in upholding excellence.

We remain committed to fostering a learning environment that benefits not only our professionals but ultimately enhances the care we provide to our patients.

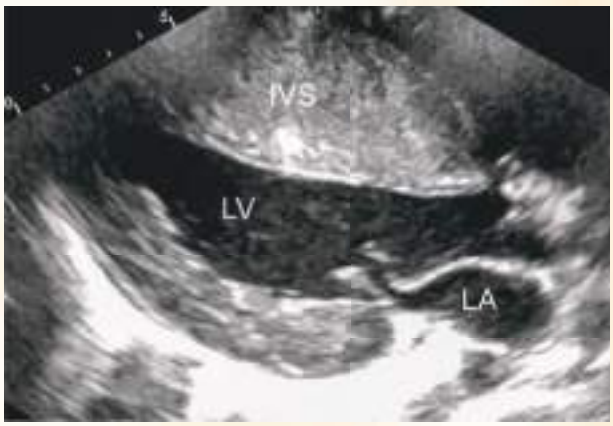
**Regards,**

**Fr. Dr. Alexander Koodarathil**

# CARDIAC HYPERTROPHY PHENOTYPES:
## DIFFERENT ETIOLOGIES WITH THICKENED VENTRICULAR WALL

**Dr. Devarajan K. A.**
MBBS, MD, DM
**Consultant Cardiologist**

Ventricular hypertrophy (VH) is a condition in which there is increase in ventricular mass either due to an increase in wall thickness or due to cavity enlargement or both. The prevalence of left ventricular hypertrophy (LVH) ranges from 36% to 41% in the population depending on the criteria used for defining it. The incidence is similar in men and women (36% Vs 37%).
LVH is classically classified into (1) concentric hypertrophy and (2) eccentric hypertrophy. Concentric LVH occurs when the left ventricular (LV) muscle thickens uniformly due to chronic pressure overload (as in systemic hypertension or aortic stenosis). The heart adds sarcomeres in parallel to increase wall thickness and the ventricular mass increases. Eccentric hypertrophy occurs when the ventricle is subjected to chronic volume overload (as in aortic or mitral regurgitation), leading to dilatation of the chamber, as the heart adds sarcomeres in series.
Deposition of materials like amyloid, glycogen etc in the extra cellular matrix also leads to increased ventricular mass but considered as a different entity than hypertrophy. Several studies have demonstrated that LVH is an independent risk factor for increased cardiovascular morbidity and mortality.
Many studies related to the VH were based on electrocardiography (ECG) criterias. Most widely used criterias were the cornell voltage, the cornell product, the Sokolov-Lyon index, and the Estes – Romhilt point score system. But the ECG has only low sensitivity to detect LVH. The electrical signals may be modified by elements that lie between the heart muscle and ECG electrode like fat, fluid, air, and abnormalities associated with these.
Echocardiogram (Echo) is the most widely used modality to diagnose LVH. Trans- thoracic and trans-oesophageal transducer can be used to measure the LV dimensions and wall thickness accurately. Sjogren, AL determined the LV wall thickness from M – mode measurements in subjects without any heart disease and found that the LV wall thickness in diastole varies from 5-12 mm in men and 4-12 mm in women. The right ventricular wall thickness varies from 3+1 mm to 5 mm1.




Hypertrophic cardio myopathy

LV mass index (LVMI) can be calculated from 2D and 3D measurements incorporating the persons height and weight measurements also.
According to the American society of echocardiography (ASE) guideline 2025, LVH is defined as an increase in LVMI > 115g/m2 in men and > 95 g/m2 in women LV free wall thickness > 12 mm is also considered as features of LVH.
Normal RV free wall thickness is < 0.5 cm. Mild RVH: 0.5–0.7 cm. Moderate RVH: 0.7–0.9 cm and Severe RVH is ≥ 0.9 cm2.
3D Echocardiography is a reliable method for measuring LVH because it avoids the geometric assumptions of 2D methods. Provide true 3D view of the LV allowing more precise quantification of volume and mass.
Cardiac MRI is considered the gold standard for diagnosing VH. It helps to establish a diagnosis, assess ventricular mass and function, determines patterns of hypertrophy, and helps to identify the underlying cause. (crucial for prognosis and treatment planning).

**LVH associated with chronic LV pressure overload**
**Systemic arterial hypertension (HTN)**
Concentric LVH is a compensatory response to chronic pressure overload, but it can become maladaptive over time, creating progressive

myocardial fibrosis and cardiac dysfunction. The precise mechanism of development of LVH is unknown. Researchers show that a key factor is the loss of cardiomyocytes through apoptosis (mediated through a family of enzymes known as caspases, and the renin-angiotensin-aldosterone system) triggered by several factors including chronic mechanical overload, oxidative stress, and inflammatory signalling cascade. The prevalence of LVH in systemic HTN varies from 26–48%.
Diagnosis is mainly by echo and MRI. Artificial intelligence and machine learning have the potential for earlier and more cost-effective diagnosis, the possible role of biomarkers to aid in early diagnosis is under investigation.
Major consequences of LVH in HTN are diastolic dysfunction, heart failure, systolic dysfunction (HFrEF). cardiac arrhythmias including VT / VF increase risk of sudden death, myocardial infarction stroke etc. LVH regression is possible through aggressive antihypertensive therapy with reduction in cardiovascular events3.

**Renal Artery Stenosis (RAS)**
In RAS, activation of Renin-angiotensin – Aldosterone system (RAAS) and fluid retention increase both pressure (after) load and volume load on the heart leading to concentric LVH. Treating the RAS can help alleviate HTN and reduce risk of LVH.

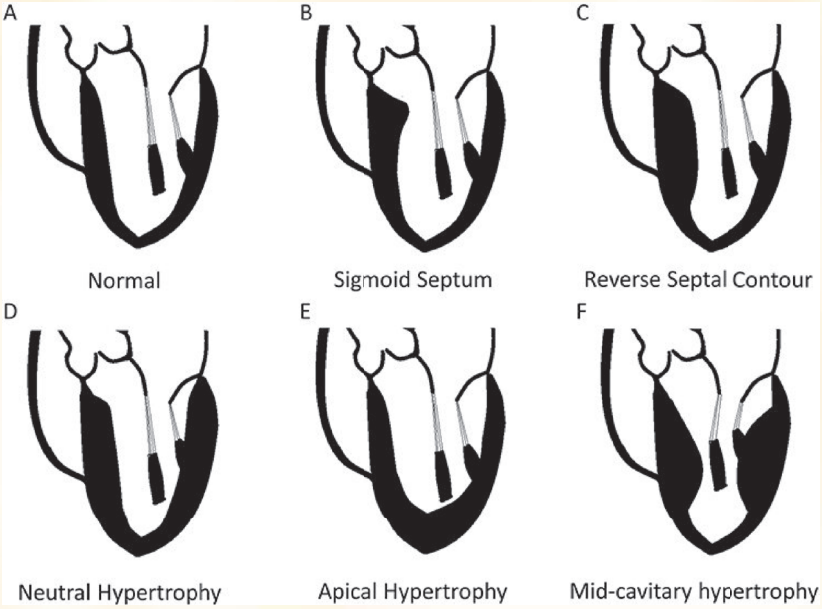
**Chronic Kidney Disease (CKD)**
LVH is prevalent across all stages of CKD and worsens with disease severity independent of blood pressure. LVH is seen as a mixture of concentric (42%) and eccentric hypertrophy (33%). LVH is caused by factors like volume overload due to fluid retention, anaemia and AV Fistula (increased preload) and systemic HTN due to atherosclerosis, endothelial dysfunction, sympathetic stimulation and activation of RAAS (after load).
LV mass increase progressively with duration of dialysis even in normotensive patients.
The clinical importance of LVH is that it is a predictor of cardiac death in dialysed patients, independent of blood pressure. Treatment focuses on controlling BP, managing fluid balance, and addressing anemia.

**Athletes Heart**
Due to increased dynamic load, the hearts of the endurance athletes respond predominantly with eccentric hypertrophy (resulting from volume and pressure overload), while strength training is associated with marked elevation of systolic and diastolic BP leading to concentric LVH. The upper limit to which LVH appears 16 mm. So, if the LVH is >16mm, other conditions like hypertrophic cardiomyopathy (HCM) to be considered. The LVH is not associated with diastolic dysfunction or arrhythmias and regress quickly when training is discontinued.

**LV out-flow tract obstruction**
Degeneration of aortic valve cusps with calcification is the commonest mechanism of aortic stenosis (AS) in adults. Bicuspid aortic valve (BAV) and Rheumatic heart disease are other important causes. Chronic LV pressure overload from hemodynamically significant AS leads to LVH, through cellular hypertrophy, extra cellular matrix expansion, fibrosis, and ischemia. Capillary rarefaction leads to diastolic dysfunction progressing to systolic dysfunction, finally leading to pulmonary hypertension, heart failure and dysrhythmia, ischemic heart disease and sudden death. After correction of AS with surgery or TAVI the largest decline in LV mass is observed within first 6-12 months, (17-31%) with a much smaller continued decline over following years.
BAV has a prevalence of 1-2% in general population (75% in men), can be associated with VSD, PDA, coarctation of aorta or sub valvular stenosis. Clinical progression of BAV can range from Severe AS in childhood to asymptomatic disease until old age. In adults significant AS usually occurs after the age of 40 yrs leading to LVH.
Other congenital lesions like sub valvular AS or supra valvular AS also can result in LVH many of these conditions are associated with VSD or coarctation of aorta.

**Hypertrophic cardiomyopathy (HCM)**
HCM is an autosomal dominant cardiomyopathy. About 60% of patients are associated with mutations in sarcomere genes including myosin heavy chain 7 (MYH7) and myosin binding protein C3 (MYBP C3). About 40% of patients do not have any genetic explanations for their condition. Prevalence of HCM in the general population is 0.2%. 2024 ACC / AHA and 2023 ESE guidelines emphasize criteria like >15mm maximum LV wall thickness in adults and > 13mm for children with positive family history or LV outflow tract obstruction for diagnosis of HCM.
Any pattern and distribution of LV wall thickening can be observed. Can be limited and focal confined to only one or two LV segments with normal LV mass. Systolic anterior motions of mitral valve need not required for diagnosis. Morphological variants: (Syed etal 2008) Reverse curvature, Sigmoid septum, neutral septum, concentric and apical HCM. Rare varieties like mid ventricular, isolated lateral and isolated infero septal are also described. Obstructive HCM (HOCM) was classified (Cui, H etal 2025) in to 3 subtypes. (1) High percentage of sarcomere mutations and the highest inter ventricular septal thickness. (2) Featured by left atrial enlargement and a high percentage with Atrial Fibrillation. (3) Characterized by high LV out flow tract gradient, serious inflammatory cell infiltration. Increased LVH leads to dynamic LVOT obstruction diastolic dysfunction, myocardial ischemia, autonomic dysfunction, arrhythmias and SCD.

**Apical HCM**
Accounting 13-15% of HCM in Asian population




25% of case had detectable genetic defects. Myocardial biopsy from apex shows less myocyte disorganization (10% Vs 86% of HCM). LVH is predominantly in the apex with wall thickness >15mm (and a ratio of maximal apical to posterior wall thickness >1.5). No LVOT obstruction, SAM or MR. Can occur with or without mid ventricular obstruction. Apical aneurysm formation in 13-15% cases. Sub classified in to (1) pure – isolated apical hypertrophy (2) Mixed – with apical and septal hypertrophy, but with apex thickest12. (3) Relative – early apical HCM phenotype with typical apical HCM – ECG changes. Apical thickness <15mm. Can be associated with LA dilatation, apical aneurysm, and myocardial scar. Incidence of AF in 20-25%. Annual death rate of 0.5-4%. High risk features are (1) Complete and systolic cavity obliteration at the level of papillary muscles. (2) Paradoxical diastolic flow jet by echo. (3) Apical asynergy – Malignant ventricular arrhythmias and mortality has been linked to apical aneurysm8.

**VH in patients with skeletal muscular dystrophy**

In Duchenne and beckers type of muscular dystrophies, typical cardiac lesions are ventricular dilatation. But less commonly VH also can occur and has been linked to same genetic defects affecting the heart and skeletal muscles. In Limb – Girdle dystrophy, cardiac involvement is uncommon. Rarely apical hypertrophy has been reported. LVH has been reported in myotonic dystrophy also.

**Endocrine Disorders Causing LVH**

**Diabetic Cardiomyopathy**

VH is a common finding in Type 2 DM and is known as diabetic cardiomyopathy. Lipid accumulation within cardiomyocytes leads to cellular damage and hypertrophy. Activation of RAAS due to hyper glycemia and insulin resistance promote cardiac fibroblast proliferation leading to VH, diastolic dysfunction and heart failure.

**Thyroid Disease**

VH can occur in hyperthyroidism due to various mechanisms (1) Increased cardiac workload due to tachycardia and increased force of contraction (2) T3 induced ROS accumulation in cardiac myocytes (3) Involvement of RAAS. (4) Increased thyroid hormone markedly stimulate cardiac protein synthesis.
With proper treatment of thyroid disease can reverse the LVH. If untreated, it can lead to heart failure and arrhythmia's.

**Cushing's Syndrome**

In Cushing's Syndrome, VH can occur due to (1) Direct effect of excessive Cortisone level on myocardium (2) Concomitant systemic HTN. Diastolic dysfunction can lead to left atrial hypertrophy. Treatment of hypercortisolism can reverse the VH.

**Primary Hyperaldosteronism**

Aldosterone induced myocardial remodelling, oxidative stress and collagen deposition can lead to LVH, myocardial fibrosis and arrhythmias.

**Acromegaly**

IGF – 1 mediated myocyte hypertrophy, interstitial fibrosis and altered calcium signalling leads to concentric LVH, diastolic dysfunction and arrhythmias.

**Primary Hyper parathyroidism**

Oxidative stress, endothelial dysfunction inflammatory cytokine release, vascular and myocardial smooth muscles proliferation and atherosclerosis leads to myocardial hypertrophy.

**Pheochromocytoma**
Pheochromocytoma (incidence 3-8/ million) is a tumour that massively produce catecholamines which leads to high BP, which causes concentric or eccentric LVH and can mimic HCM. It can also produce catecholamine myocarditis, Tako-tsuba cardiomyopathy or DCM. LVH is mostly reverted after surgical removal of the tumour.

**Obesity Cardiomyopathy**
LVH occurs due to an increase in heart's workload, requiring the heart muscle to enlarge to meet increased demands (obesity cardiomyopathy). High blood volume, systemic HTN, Insulin resistance and Lipid accumulation in cardiomyocytes, activation of RAAS and sympathetic nervous system all contribute to LVH. Weight loss can help to reduce heart size and improve cardiac performance.

**Obstructive Sleep Apnea (OSA)**
Intermittent Hypoxemia, sympathetic over activity and elevated BP can lead to increased. Stress on the myocardium leading to LVH. OSA is common among patients with HCM

**Right Ventricular Hypertrophy (RVH)**
Right Ventricular Hypertrophy occurs when there is chronic pressure overload resulting from Idiopathic pulmonary artery hypertension, chronic obstructive pulmonary disease, Severe mitral valve stenosis and chronic pulmonary thromboembolism. Congenital heart disease like pulmonary stenosis Eisenmenger's atrial septal defect also results in RVH.

**Eccentric Left Ventricular Hypertrophy**
In eccentric LVH, chamber size increases and wall thickness decreases, but overall muscle mass increases. LV may become more spherical in shape. This usually occurs in volume loading conditions (like aortic and mitral valve regurgitations, VSD etc) where new sarcomeres are added in series to existing sarcomeres.

**II – Other conditions that can present with thickened ventricular wall**
These conditions are not included under VH. Thickened ventricular walls occurs due to deposition of substance and not due to hypertrophy of myocytes.

**Intra cellular deposit storage disorders**
1. Pompes disease (Glycogen storage disease type II, Accumulation of glycogen in the myocardium leads to VH. Severe forms can lead to cardiomyopathy, especially in infants.
2. Fabry disease – Accumulation of Globotriaosylceramide leads to LVH. Diagnosis is vital because they have distinct treatment and management strategies.
3. Damon disease – Rare genetic disorder. Can result in severe LVH, heart failure and SCD.

**Extracellular Deposit storage disorders**

**1. Cardiac Amyloidosis (CA)**
Cardiac Amyloidosis is an infiltrative disease of insoluble amyloid protein fibrils in the myocarotid extra cellular space resulting in progressive thickening and stiffening of ventricular walls. Echo, usually show septal hypertrophy in 71% of cases. Amyloid deposition progresses from septum to the inferior wall, followed by lateral wall and finally to the apex of the heart (hence relative apical sparing in 67% of patients). Granular speckling of LV myocardium is seen in 53% of cases. Biventricular hypertrophy is reported in 23% of cases. Atrial involvement is seen in 55.7%.

**2. Cardiac oxalosis**
A rare cause of LVH. Extracellular deposition of Oxalate due to over production caused by a deficiency of alanine glyoxalate amino transferase liver enzyme. LVH in 30% of patients.
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**Mitochondrial myopathies**
In conditions like MELAS syndrome and sengers syndrome, LVH can occur due to defects in mitochondrial function, leading to damage and changes in heart muscle architecture.

**Noonan Syndrome**
Primarily caused by mutations in genes like RAF1 and RIT1, which activates the RAS / IMAPK pathway leading to cardiac muscle overgrowth. Typically occur in infancy and childhood in 20-30% of patients leading to LVOT obstruction, heart failure and SCD.

**Drug Causing Ventricular Hypertrophy**
Certain drugs that stimulate the myocardium or have adverse effects on blood pressure can contribute to LVH. Examples are cocaine, chlorogenic Ephedrine, Tobacco, Amphetamine, Hydralazine, Anti-Psychotic drugs, Chemo therapeutic agents like Doxorubicin, Paclitaxel, VEGF inhibitors and Tyrosine Kinase inhibitors.

**Cardiac Tumors**
Cardiac tumors can mimic VH or HCM. Tumors like Rhabdomyomas and Fibromas are found in ventricles. Hamartomas and cardiac lipoma also can cause thickened ventricular walls. Sarcomas also can cause ventricular infiltration and hypertrophy. Diagnosis can be made by imaging modalities like Echo, Cardiac MRI, CT or PETScan.

**Conclusion**
Commonest causes of VH are long standing systemic HTN, LVOT obstruction and hypertrophic cardiomyopathies, intracellular and extra cellular storage disorders also can present as VH. Pathological LVH leads to diastolic dysfunction, heart failure and serious arrhythmias which may lead to SCD. Early detection of VH is important because effective interventions can lead to reversal in many cases

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# Pink Promise - Breast Cancer Screening Campaign

**Dr. Sarah J. Easaw**
MBBS, MD, FACP
**Medical Director & Consultant Oncologist, Oncology Centre, Dr. KMC Hospital**

Pink Promise Campaign was designed to create awareness about breast cancer in our communities.

Breast cancer is the most common cancer among women, worldwide. Compared to western countries, the risk of dying from breast cancer is higher in India. This is because more women are diagnosed at advanced stages.
If diagnosed and treated early, breast cancer can be cured in a majority of women.
We designed this campaign to help women diagnose breast cancer early and to prevent breast cancer related deaths.

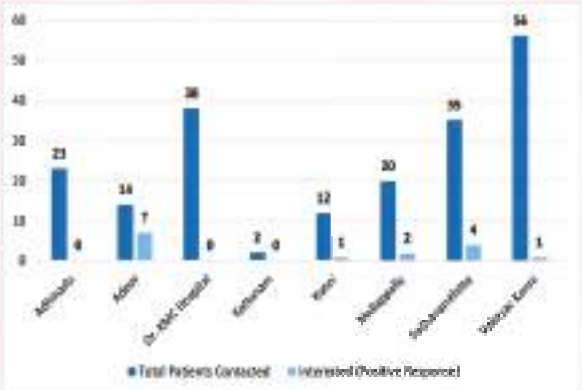
Our goals are to:
- » Promote awareness about breast cancer.
- » Educate women about the warning signs and symptoms of breast cancer.
- » Encourage women to participate in breast cancer screening by doing annual mammograms.
- » Offer latest treatment methods to treat breast cancer safely and effectively.
- » Advocate support groups for breast cancer survivors.

The program was launched on October 31, 2024 with an inaugural meeting graced by the presence of Her Highness Pooyam Thirunal Gouri Bhai Thampuratti.
As part of the campaign, we conducted screening camps and awareness seminars in various parts of Kerala.
The campaign involved direct contact, followed by telephonic follow up, and responses were recorded as interested, not interested, already screened, or unreachable.

The following report presents an area-wise analysis, including total patients contacted, positive responses (interested), reasons for non-participation, and key observations to support future planning.
Even though hundreds of women were reached through these camps, only a few were available for data collection for the purpose of this report.

### 1. Overall Campaign Summary

| Indicator | Count |
|---|---|
| Total patients contacted | 207 |
| Total interested (positive response) | 15 |
| Overall positive response rate | 7.25% |



**Reasons for Non-Interest (Observed Patterns)**

- No symptoms perceived
- Working women citing lack of time
- Already completed mammography elsewhere
- Lack of awareness about importance of early screening
- Call connectivity issues (switched off, wrong number, range issue)

The awareness classes were received with a great level of enthusiasm; however, the follow-up rates were much lower than an anticipated. The overall interest level was low, indicating the need for improved awareness strategies, targeted counselling, and better follow-up mechanisms.

The closing ceremony of Pink Promise campaign was conducted in October 2025. Mrs. Mallika Sukumaran was our Chief Guest. A Pink Promise Walk-a-thon was also organized on the same day, to create awareness among the public.

Even though the official campaign was for one year, we plan to continue our screening programs and awareness sessions in the community.

# Recurrent pregnancy loss- diagnostic challenges

**Dr. Cicija Kalloopparamban**
MBBS, MS, DNB, FRM
**Consultant Reproductive Medicine**

**CLINICAL CASE DETAIL**
Mrs. X, 30 Years, & Mr. Y,36 Years, previously evaluated and treated for secondary infertility presented initially to our OPD on September 2023. Couple, married for 6 years, was suffering from secondary infertility. Previously, the couple had five miscarriages (conceived twice spontaneously and 3 times following ART, FET in UK, 2022; first two spontaneous pregnancies landed in missed abortion around 8 weeks).Apart this she had undergone multiple failed ovulation induction cycles previously at UK.

**Couple's previous ART detail:**
ART treatment Antagonist protocol @ UK, 2022 couple had, 3 frozen embryo transfers done-first spontaneous bleed at 7 weeks, rest two missed abortion at 8 weeks; underwent evacuation, done abortus karyogram for the last one, turned normal)

Their previous major reports
Female APLA panel, 2023, from UK-negative
Their recent relevant reports evaluated here

- Mrs. X -
  MRI Pelvis: No significant abnormality detected.
- AMH - 1.07 ng/ml
- Mr. Y -
- Left varicocele, Grade II

SDFI, Sperm DNA Fragmentation Index 32 %

Couple counselled regarding treatment options; husband was put on antioxidant therapy.

Thereafter couple reviewed after 9 months. Option of pre-genetic testing for aneuploidy (PGTA) discussed with the couple. As the couple had pending cryopreserved embryos (6D5 Embryos) stored at UK, they opted for PGTA from there if needed and decided for ART treatment from our center.

Couple underwent ART-ICSI treatment. Antagonist cycle, 7D3 embryos (2 x compacting,4 x 8-12 celled D3 Grade I,1 X 10 celled D3 Grade III) cryopreserved Thereafter patient was prepared for HRT-FET(Hormone replacement therapy - Frozen embryo transfer ) in the subsequent two cycles but could not be proceeded as the(USG) uterine endometrium showed persistent thin and poor pattern .

In the subsequent cycle, option of Hysteroscopy over Modified natural cycle- FET discussed with the couple. As they opted MNC-FET(where there is a chance of natural ovulation & corpus luteum supporting the endometrial lining), proceeded with monitoring, but the menstrual cycle prolonged and the ovarian and uterine response did not appear good as expected, serum estrogen level continued to be persistently low.
In that aspect, as there had been no response to therapy, option of surrogacy discussed with the couple. After obtaining the District Medical Board, State ART Board Appropriate Authority clearances, National Surrogacy Board issued permission, the transfer of frozen set of embryos from our level 2 ART clinic to the surrogacy clinic was done.
From the surrogacy center,7d3 embryos were cultured to 4d5, Grade 3-5AA blasts, proceeded with 2d5 frozen embryo transfer to the surrogate. She conceived in the first cycle transfer, carrying DCDA Twin pregnancy, FTS-low risk, TIFFA-normal;underwent elective CS at 35 weeks delivering twin babies. Intended mother evaluated for her endometrial defect by a combined endocrine & surgical Gynaec team at UK, she underwent Asherman's lysis & now

she is continuing HRT.

### Crucial points in this case

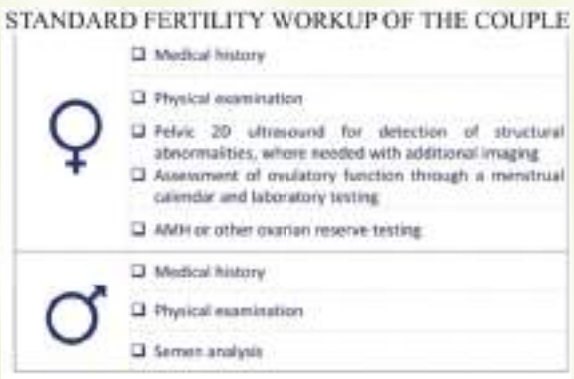
1. Evaluation and correction of the male factor which was otherwise incomplete previously
2. Suggestion of hysteroscopy & endometrial evaluation as directed by the 3d cavity scan
3. Avoidance of the trial transfer as endometrial defect suspected
4. Planned extended embryo culturing to blast stage in view of their previous history of RPL

### Learning points & recommendations

1. Uterine cavity screening is important especially in a couple of RPL
2. Male factor evaluation should not be omitted particularly in previous loss patients
3. Minimal stimulation ART & optimal number of oocytes can bring a favorable outcome
4. Timely upgradation, implementation of evidence-based interventions and treatments
5. .Legal & official clearances through the proper channel

### Scope of ART

ART provides treatment options for heterosexual couples having difficulties conceiving naturally, single people, and same-sex couples. Despite advances in treatment approaches and laboratory technologies, many people fail to conceive with these technologies. When failure arises after serial attempts at IVF, the term 'recurrent implantation failure' is often used. However, apparently unexplained repeated failure of IVF treatment is a frequently encountered, distressing, and difficult-to-manage clinical problem.




### KEY MESSAGES OF SOGC CLINICAL GYNEACOLOGY COMMITTEE (2025)

1. The approach to patients with RPL requires an awareness of the etiology, diagnostic challenges, and therapeutic options. 2. The management of patients with RPL should be compassionate and trauma-informed, attending to both their physical and emotional needs. 3. Evidence-based investigation, empathetic counselling, and personalized treatment plans will reduce the psychological burden and improve outcomes.

RECOMMENDATIONS

1. Healthcare providers should optimize modifiable risk factors and support substance use reduction to minimize early pregnancy loss (strong, moderate)
2. Investigations for thyroid disease, diabetes mellitus and hyperprolactinemia, should include serum TSH, Hba1c or fasting plasma glucose or 75g OGTT, and serum prolactin (Strong, High)
3. Positive TPO antibodies should not alter the management of thyroid function if TSH levels are within the normal range. Treatment decisions should be based on TSH levels rather than the presence of TPO antibodies alone (Strong, High)
4. Healthcare providers should target a TSH <2.5 in patients on levothyroxine who are attempting conception. When a positive pregnancy test is found, levothyroxine should be increased by 2 additional doses per week, and target aTSH of <2.5 with TSH monitoring every 4-6 weeks (Strong, High)
5. Hyperprolactinemia should be confirmed before initiation of treatment of RPL (Strong, High)
6. Screening of chronic endometritis to assess for plasma cells could be considered in patients with RPL. Biopsy should be performed in the luteal phase (Conditional, low)
7. Screening for inherited thrombophilia's should not be performed except in individuals with a personal history of thrombus, or a family history of inherited thrombophilia (Strong, High)
8. Screening for antiphospholipid antibodies is recommended in patients with RPL or intrauterine fetal demise beyond 10 weeks of a non-anomalous foetus (Strong, High)
9. In patients with antiphospholipid antibody syndrome and RPL, the use of low dose aspirin initiated prior to conception, and prophylactic heparin once an intrauterine pregnancy is confirmed is recommended (Strong, High)
10. Immune testing should not be a routine part of the RPL work up (Strong, High)
11. Testing for coeliac disease can be considered in patients with RPL, however there is no evidence for a glute free diet in asymptomatic patients (Conditional, Low)
12. Immunomodulation treatments are not recommended (Strong, High)

13. Screening for anatomic factors should be included in RPL investigation (Strong, High) with uterine septum resection considered in outlets with RPL (Conditional, Low)
14. Patients with RPL and intrauterine adhesions should have hysteroscopic adhesiolysis to increase the likelihood of conception (Strong, High)
15. Products of conception testing should be offered after two first trimester pregnancy losses or after a single mid-trimester loss (> 12 weeks but before 20 weeks of gestation) to guide further investigations and management (Strong, High)
16. Parental karyotyping may be considered after3 or more first trimester losses (Conditional, low) or if the analysis of products of conception demonstrate unbalanced structural chromosomes or translocations (Strong, High)
17. Consider preimplantation genetic testing to shorten time to live birth and/or lower pregnancy loss rate in patients where one of the partners has a balanced reciprocal or Robertsonian translocation (Conditional, Low)
18. Psychological support, serial follow up and early evaluation should be offered to patients with RPL to improve pregnancy outcome (Strong, Moderate)
19. Progesterone supplementation should be offered in patients with first trimester vaginal bleeding and one or more previous pregnancy losses (Strong, Moderate)
20. Prophylactic progesterone supplementation could be offered in patients with idiopathic RPL (Conditional, Low)

## DEFINING RIF: FROM POPULATION TO THE INDIVIDUAL

Recurrent implantation failure describes the scenario in which the transfer of embryos considered to be viable has failed to result in a positive pregnancy test sufficiently often in a specific patient to warrant consideration of further investigations and/or interventions.

The recommended threshold for the cumulative predicted chance of implantation to identify RIF for the purposes of initiating further investigation is 60%. When a couple have not had a successful implantation by a certain number of embryo transfers and the cumulative predicted chance of implantation associated with that number is greater than 60%, then they should be counselled on further investigation and/or treatment options. This term defines clinical recurrent implantation failure for which further actions should be considere

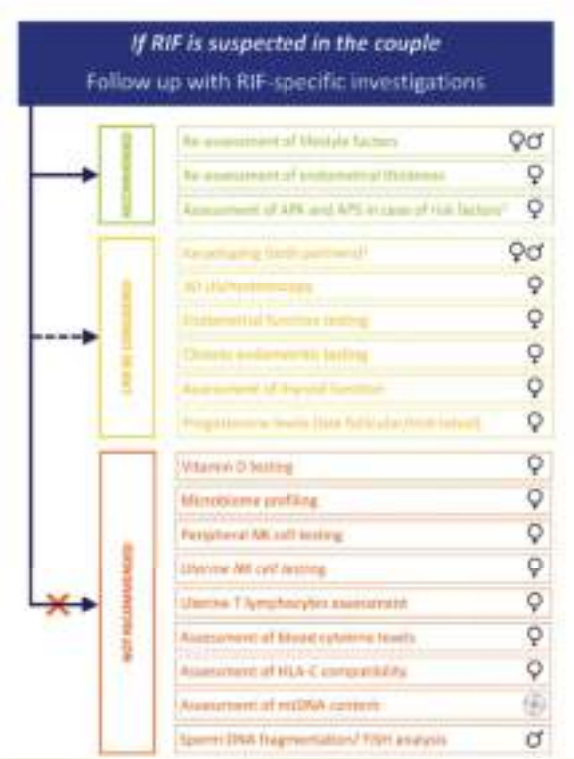




## PATIENT CARE & COUNSELLING

It has been suggested that the stress level experienced by women with RIF may fluctuate in response to the amount of supportive care that they receive from the clinical staff, the results of investigative procedures (which influence the prognosis), and the experience and outcome of any subsequent treatment, but this has not been studied . Still, as psychosocial care is considered an essential part of fertility treatment and should be provided before, during, and after ART treatments, efforts should be made to provide supportive care to couples with RIF.

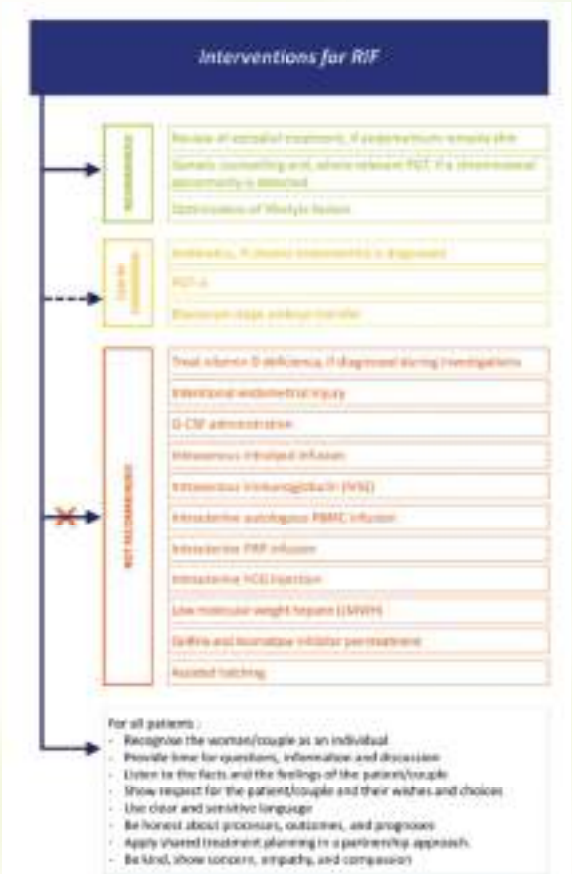
Be honest about processes, likely outcomes, and prognoses, and avoid false reassurance. This includes being honest about the evidence and benefit (or lack of benefit) for the investigations and treatments that have been proposed for RIF and are




being applied in clinical practice without solid ground. Patients/couples can further be reassured based on their individual estimation of the likelihood of implantation in the next cycle that simply continuing with ART treatment is a good option for them.

**The need for further research in RIF**

The need for research into the causes of implantation failure has been identified as one of the top 10 research priorities in medically assisted reproduction. This is indeed key to making progress in the clinical management of RIF. Further studies of empirical interventions in patients with RIF of unknown cause are unlikely to be helpful and may be considered a waste of research resources. Apart from the clinical aspect of RIF, more insight and data are needed on the impact of RIF on the stress, mental health, and well-being of patients, and on supportive treatment options that could minimize such impact and lead to better care.

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# 22 DAYS, 3012 KMS, 5 STATES, AND 2 UNION TERRITORIES.

**Dr. Ruben John**
MBBS, DPM, DNB, MRCPsych(UK)
**Consultant Psychiatrist**

**"Travel far enough, you meet yourself"**
-David Mitchell
There are very few things that feel as fulfilling as checking off items from a bucket list, and recently I got an opportunity to do just that: "#8 - Solo bike tour - Check". It was made possible by a surprising month-long gap between the publishing of the DNB results and DNB residency allotments.

I reached Delhi on Feb 6th, 25 days prior to the counselling date, and rented a beautiful red Bajaj Avenger. My choice was secondary to the possibly misplaced belief that anybody who owns a spanner can fix a Bajaj.

**DAY 1:**
Woke up at 5 am the next day, packed my travel bag, tied it to the back of the bike with a rope and bungee cords, and then hit the NH1. The fact that I am a rookie became obvious within the first 30 minutes when my bag slid off the passenger seat, nearly touching the road due to my poor/lack of any knot-tying skills - Rookie mistake #1.
Heavy traffic in Delhi delayed my entry onto NH1, which in turn resulted in me being stuck on the NH1 in peak-hour traffic. I most likely would have reached Sonipat faster had I walked. After this setback of 2 hours, I finally got through the bottleneck and started my 450 km rodeo to Amritsar.

It was perfect - the wind in my hair, the engine roaring, the open highway, and the feeling of absolute freedom. The Bajaj people lived up to their advertisements; I did 'Feel Like God'. It definitely would have been very difficult to kill my buzz, but I made it easy for Mother Nature to freeze it, which brings us to Rookie mistake #2: The woollen mitten-like gloves and the Crocs/rubber floaters that constituted my riding gear let the cold February air seep in unrestricted. I couldn't feel my hands or feet by the time I made my lunch stop at Ambala 4 hrs later. Being too tired to Google local eateries of interest, I stopped to eat at a Domino's Pizza outlet. The hot Margherita pizza was everything I needed. I sat for 5 minutes with my hands over the pizza, almost as if it were a warming fire.

Next stop - Ludhiana. I wanted to meet CMC Ludhiana - cousin to the college that refused my MD Psych application. I paid the price for that visit in the form of the hour I took to get out of Ludhiana. Then started the last leg of the 450 km ride to Amritsar. The road was still being constructed with partially completed flyovers and multiple diversions. The heavy traffic added on to make this the most tiring stretch of the journey. Tyres began to heat up and skid because of the constant braking over the 100 km stretch. 9 hrs and substantial paraesthesia later - Amritsar. Never have I ever seen so much vehicular chaos, so much pollution, and such disregard for traffic rules. Waiting at a red signal is what could actually cost you your life. I booked myself into the first decent hotel I found

and thawed myself for 2 hours under a hot shower.

**DAY 2-4:**
Woke up the next day to find my body still trying to make sense of the physical torment I had put it through. I decided that it would be better to spend the entire day just sitting inside Sri Harmandir Sahib; meditating, a.k.a. waltzing in and out of sleep. I would infrequently get up to drink the water they provided and eat the Guru-Ka-Langar. There is something about the community dedication to their Gurdwara duties, about the rich-poor, old-young, man-woman, shop owner-watchman sitting and washing plates together, sans barriers, that displays what humans are capable of with the right motivation.

That day's high point was my ride to the LOC at Wagah, Attari. The road is a beautiful stretch and provides for sheer riding pleasure. It completely preps you up for the high-energy Retreat Ceremony at Wagah. Later that day, I started my search for the much-talked-about Kesar da Dhaba. Needless to say, I found it, and


I loved it. Rookie mistake #3 - When in Amritsar, never leave the wider ring road to bike into the inner roads in search of local eateries. Always park and then walk it with your trusted Google Map.

**DAY 5-10:**
I put Amritsar in the rearview and hit the road to Pathankot, then further up to Dalhousie. The climb to Dalhousie was very challenging because of the winding roads, the hairpins, and broken-down sections. I decided to take it up a notch the next day and rode the stretch from Dalhousie to Chamba-Khajjiar and back. The ride was as beautiful as it was difficult.


Temperatures had dropped to -2°C. I realized in Dalhousie that there are only a few things that can compare to sitting outside after a hot shower, wrapped up in a thick blanket, on a very cold night, while sipping hot coffee between foggy breaths.

**DAY 10-12:**
Said my goodbyes and decided that I would ride out to Chandigarh via a detour just outside of Jalandhar. It turned out to be a really good

decision as the stretch was a well-built but less-driven road. So, nature had been left to its own devices for the most part, resulting in something inexplicably soothing about that 3-hour ride. I spent a good amount of time riding around the perfection that is Chandigarh.

**DAY 12-14:**
The next day I set my bike on the newly completed Himalayan Expressway en route to Shimla, slowly climbing up via Solan over 5-6 hrs. I have two words - Architectural brilliance. All the signals that my body would send up saying "please quit and go home" were suppressed by the sheer beauty of the sights that the ride offered. I decided to visit a sleepy town called Mashobra, which is a 1-2 hr climb from Shimla. The trip offered some really good views and is worth it if you are willing to spend half an hour just sitting at a clearing and taking it all in.

**DAY 16-22:**
I was pretty much ready to go back home because it had been 2 weeks and 2000 km. But the Jat Reservation protests in Haryana had left the NH1 piled up. Sitting down with a map, I realized that the only way back into Delhi would be from Uttar Pradesh via Ghaziabad. This extended the trip by one week. I have a lot to write about my experiences during that entire week, but it will lengthen this article significantly.

The final trip turned out as:
"DELHI - AMBALA - LUDHIANA - AMRITSAR - WAGAH (LOC) - PATHANKOT - DALHOUSIE - CHAMBA-KHAJJIAR - JALANDHAR - CHANDIGARH - SHIMLA - MASHOBRA - ZIRAKPUR - YAMUNANAGAR - SAHARANPUR - DEHRADUN - MUSSOORIE - RISHIKESH - HARIDWAR - ROORKEE - MEERUT - GHAZIABAD - DELHI".

**Why I decided to do the trip:**
Ever since Google and blogging became popular, there rarely remain any surprises at the destination per se. So I love to 'bike it' because the journey is clearly all that remains to inspire.

**What I Learnt:**
I always knew somewhere inside that such a trip will have lessons to teach, and the trip did not disappoint:
1 - It shows you who you are. Are you a quitter? At what point do you get frustrated and throw your hands up/call it? How much pain and aches can you tolerate? What is more powerful in you, mind or body? Can you manipulate the original plan and budget in the face of the 10 factors that changed abruptly in 5 minutes?
2 - This is a beautiful country, from each corner to the other. The change in socio-occupational-cultural dynamics that occurs every 200 km is phenomenal. There's much to be proud of.

**RIDE SAFE**

# MINIMALLY INVASIVE THERAPIES IN PROSTATE CANCER: ARE WE APPROACHING A POST-RADICAL ERA?

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**Consultant Urologist**

For decades, radical prostatectomy and radiation therapy have defined curative treatment for localized prostate cancer. While oncologically effective, both strategies are associated with significant morbidity, including urinary incontinence, erectile dysfunction, and bowel toxicity. Advances in prostate imaging, lesion characterization, and ablative technologies have catalysed a shift toward minimally invasive, organ-preserving approaches that challenge the necessity of radical treatment for all patients.

The widespread adoption of multiparametric MRI and MRI-targeted biopsy has revealed that clinically significant prostate cancer is frequently driven by a dominant index lesion. This insight has enabled focal and subtotal treatment strategies, aligning prostate cancer management with precision oncology principles already established in other solid tumours.

## Minimally Invasive Modalities

Cryotherapy and high-intensity focused ultrasound (HIFU) represent the most mature minimally invasive modalities. Cryotherapy induces cellular apoptosis through controlled freeze–thaw cycles, while HIFU delivers precise thermal energy to achieve coagulative necrosis. When applied focally, both techniques demonstrate excellent functional preservation with acceptable short- to intermediate-term oncologic control in carefully selected patients.

Emerging image-guided technologies, including irreversible electroporation, photodynamic therapy, and MRI-guided transurethral ultrasound ablation, further refine tissue selectivity and minimize collateral damage. These innovations support a stepwise treatment paradigm, reserving radical intervention for salvage rather than upfront therapy.

## Guideline Positioning (EAU & AUA)

The European Association of Urology acknowledges focal therapy as an investigational option for selected patients with low- and favorable intermediate-risk prostate cancer, emphasizing informed consent and treatment within experienced centers. Similarly, the American Urological Association recognizes focal therapy as an emerging strategy but highlights the need for long-term oncologic data before widespread adoption.

Both guidelines underscore the importance of patient selection, rigorous follow-up, and the continued role of radical therapy for high-risk or metastatic disease. Neither organization currently endorses focal therapy as a standard-of-care alternative to radical prostatectomy.

## Future Directions

As long-term outcome data mature and biomarkers are integrated with advanced imaging, minimally invasive therapies may redefine frontline management for localized prostate cancer. The future treatment algorithm may prioritize oncologic sufficiency over maximal intervention, reframing radical surgery as a salvage option rather than the default.

**Conclusion**

Minimally invasive prostate cancer therapies represent a critical inflection point in urologic oncology. With continued technological refinement, structured surveillance, and robust comparative trials, these approaches have the potential to move prostate cancer care beyond radicalism toward durable, function-preserving precision treatment.

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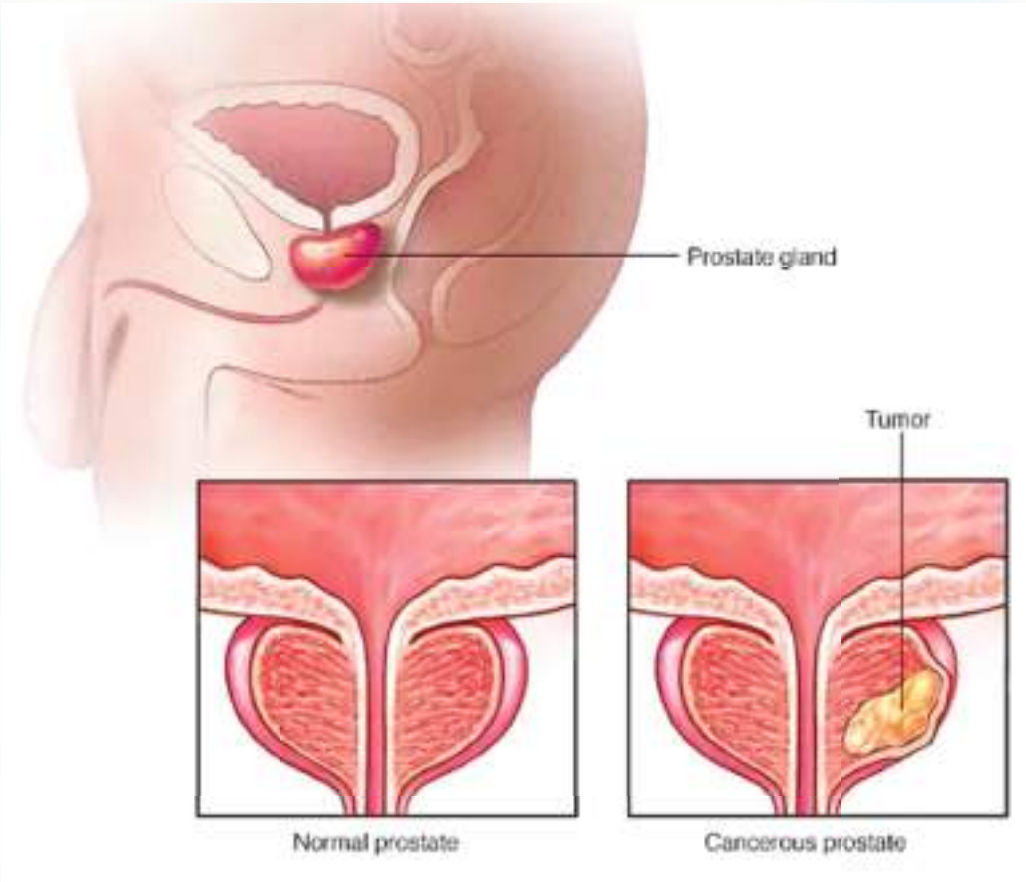


# SHAPING THE FUTURE OF CANCER CARE: PLASTIC SURGERY & AESTHETIC ONCO-RECONSTRUCTION AT THE FOREFRONT

**Dr. Sannia Salim**
MBBS, DrNB, Fellowship in Oncoreconstruction & Advanced Microsurgery -TMC Kolkata, IAAPS Fellowship in Cosmetic Surgery, Fellowship in Oncoplasty & Microsurgery - MGUMST Jaipur
**Consultant Plastic Reconstructive & Aesthetic Surgeon**

Plastic surgery is often perceived as synonymous with cosmetic enhancement, but its scope extends far beyond aesthetics. In the realm of cancer care, plastic surgeons play a critical role in oncoreconstruction—the restoration of form function and aesthetics after life-saving oncological surgeries.

### From Survival to Quality of Life

Cancer surgery is often about removing disease, but what follows can be equally important: restoring the patient's appearance, function, and confidence. Aesthetic onco-reconstruction ensures that recovery is not just about surviving cancer, but about returning to life with dignity and self-assurance.

### What is Onco-Reconstruction?

Onco-reconstruction is a specialised branch of plastic surgery focused on rebuilding the body after tumour removal. Whether it is the head and neck, breast, skin, or other parts of the body, these procedures aim not only to restore appearance but also to preserve essential functions like speech, swallowing, breathing, and mobility.
Onco-reconstruction is a highly demanding field that requires additional fellowship training after completing a plastic surgery residency. Surgeons undergo rigorous training in microvascular surgery, super microsurgery, and virtual surgical planning, often at high-volume cancer centres. This expertise allows them to integrate advanced technologies like CAD-CAM and 3D printing into surgical planning and execution, ensuring each reconstruction is precise, functional, and aesthetically refined.

### Common Cancers Requiring Reconstruction

Reconstructive surgery plays a vital role in the treatment of several cancers where tumour removal can affect both appearance and function. These include:

**Oral cancers** – where restoration of the mouth and jaw is essential for speech, chewing, and swallowing.
**Breast cancers** – where reconstruction can restore symmetry, balance, and self-confidence after mastectomy or lumpectomy.
Sarcomas – affecting soft tissues or bones, often requiring large resections that need careful rebuilding.
**Skin cancers** – particularly on the face, scalp, or limbs, where precise reconstruction preserves both aesthetics and mobility.
**Head and neck tumours** – where reconstruction protects vital functions like breathing and speech, while maintaining a natural appearance

### The Collaborative Approach

In complex cancer cases, treatment often involves a multidisciplinary team. Plastic surgeons work closely with surgical oncologists, head and neck surgeons, maxillofacial surgeons, and rehabilitation specialists. This collaboration ensures that the cancer is removed effectively while also planning for optimal reconstruction—often in the same surgical session.

### Advanced Techniques in Reconstruction

Modern plastic surgery offers a range of advanced techniques, including:
Microvascular free tissue transfer – Using

microvascular free flap surgery, tissue from another part of the patient's body is transplanted to the cancer site with its blood vessels reconnected under a microscope. This technique provides robust, living tissue that heals well and integrates naturally—restoring both structure and function.

**Perforator flaps** – Minimising donor site morbidity while providing well-vascularised tissue.
**Functional reconstruction** – Techniques to restore muscle movement, speech, or swallowing.
**Supermicrosurgery**: The Next Level of Precision In selected cases, we go even further with supermicrosurgery, where vessels as small as 0.3–0.8 mm in diameter are joined. This allows us to salvage limbs, improve lymphatic drainage, and perform intricate reconstructions with less donor site damage and faster recovery.

### Pure Skin Perforator Flap

One of the latest game-changers in reconstruction is the pure skin perforator flap and its refined version, the ultra-thin flap. These techniques allow us to transfer only the skin and the fine blood vessels that nourish it—without unnecessary fat or muscle.
Plastic Surgeons and Extremity Sarcomas
When it comes to extremity sarcomas—tumours affecting the arms or legs—plastic surgeons are uniquely equipped to manage both the removal and the reconstruction. These cancers often require wide excision to ensure complete tumour clearance, which can leave significant defects exposing bone, nerves, or blood vessels. Plastic surgeons have the microsurgical expertise to cover these areas with well-vascularised tissue, restore function, and, most importantly, salvage the limb.
By combining cancer clearance with advanced reconstruction techniques—such as microvascular free flaps, perforator flaps, and functional muscle transfers—plastic surgeons give patients the best chance at keeping their limb, regaining movement, and returning to an active life.

### Why this matters:

- Better contour & aesthetics – Ultra-thin flaps match the thickness and texture of the surrounding skin, avoiding the bulky appearance sometimes seen with conventional flaps.
- Less donor site damage – Because no muscle is taken, patients recover faster and maintain better strength in the donor area.
- Greater versatility – These flaps can be sculpted to fit delicate areas like the face, eyelids, or neck, where every millimetre counts.
- Compared to older conventional flaps or local flaps, these newer techniques offer:
- More precise colour and texture match
- Improved mobility and flexibility in the reconstructed area
- Reduced scarring and bulk
- A more "natural" result that blends with the body

At the heart of this progress is the skill of the plastic surgeon—trained to see not just the defect, but the whole person. From the first incision to the final stitch, our aim is to deliver the best possible beauty, harmony, and function for every patient, because in cancer reconstruction, looking good and feeling whole again is never a luxury—it's a vital part of healing.

### Precision with CAD-CAM & 3D Printing

Modern onco-reconstruction isn't just about surgical skill—it's about combining that skill with cutting-edge technology.
CAD-CAM (Computer-Aided Design & Computer-Aided Manufacturing) allows surgeons to plan reconstruction on a computer with extreme accuracy. Using CT or MRI scans, a virtual model of the patient's anatomy is created. This helps the surgical team map out exactly how much tissue or bone is needed, where it should be placed, and how it will fit with the surrounding structures.
3D Printing then brings this virtual plan into the real world. Special printers create life-sized models, cutting guides, or even implants that match the patient's anatomy perfectly.

### Why this matters for patients:

- Better precision – The reconstruction is customised down to the millimetre.
- Shorter surgery time – Because everything is pre-planned, the procedure is more efficient.
- Improved aesthetics & function – The

reconstructed area looks and works more like the original.

- From rebuilding a jaw after oral cancer to reshaping facial bones after tumour removal, CAD-CAM and 3D printing help ensure that patients get the most natural, functional, and aesthetically pleasing result possible.
- Fat Grafting for Soft Tissue Restoration
- Using the patient's own fat to improve contour, texture, and softness of reconstructed areas, enhancing both aesthetics and comfort.
- Nerve Coaptation & Sensory Restoration
- Reconnecting nerves during reconstruction to restore sensation in areas like the breast or face, improving overall quality of life.

### Impact on Quality of Life

The goal is not just survival, but a return to a full and meaningful life. A patient who can speak clearly after oral cancer surgery, or a woman who regains breast symmetry after mastectomy, experiences a profound boost in confidence and emotional well-being.

### Changing Lives, One Patient at a Time

For a breast cancer survivor, reconstruction can restore balance and confidence.
For an oral cancer patient, it might mean speaking clearly at a family wedding.
For someone with skin cancer, it can mean walking into a room without fear of stares.
Thanks to advances in microvascular surgery, 3D planning, and aesthetic reconstruction techniques, today's patients have more possibilities than ever to regain what cancer took away.
Aesthetics are not a luxury—they are a powerful part of healing. When patients look in the mirror and see a familiar face or body, it reinforces their sense of self, strength, and hope. The urge to restore and reclaim one's normal life is natural, and modern plastic surgery makes it possible not just to survive cancer, but to live again with dignity, confidence, and joy.

### When to Ask for a Plastic Surgeon

Many people don't know they can ask for a plastic surgeon during cancer treatment. A short box could say:
"If your cancer surgery will affect appearance or function—such as in the face, head & neck, breast, or limbs—ask if a plastic surgeon can be part of your treatment team from the start. Early planning often means better results."

### Myths vs. Facts About Cancer Reconstruction

Myth: Reconstruction is just for appearance.
Fact: It restores essential functions such as speech, swallowing, breathing, and mobility—often making daily life easier and more comfortable.

Myth: It's only for women.
Fact: Men benefit equally, especially after head & neck, skin, or oral cancer surgery.

Myth: Reconstruction must be done immediately after cancer surgery.
Fact: While immediate reconstruction is possible in many cases, it can also be done months or even years later, depending on medical needs and patient preference.

Myth: It's only about large, visible defects.
Fact: Even small, delicate areas—like the eyelids, lips, or fingertips—can be reconstructed to restore both appearance and precise function.

Myth: All reconstruction leaves big scars.
Fact: Modern techniques such as pure skin perforator flaps, ultra-thin flaps, and microsurgery greatly reduce scarring and create a more natural look.

Myth: Reconstruction is the same everywhere.
Fact: Outcomes depend heavily on the surgeon's expertise, the technology available, and whether the procedure is tailored to the individual patient.

### Research & Innovations in Onco-Reconstruction

Modern plastic surgery is driven not only by surgical skill, but by continuous research that pushes boundaries and transforms patient outcomes. Here are some of the most exciting advances making a real difference in cancer reconstruction today:
Pure Skin Perforator Flaps – Offer better contour matching and reduce donor site morbidity compared to conventional flaps, resulting in faster healing and more natural results.
Ultra-Thin ALT Flaps – Provide superior functional and aesthetic results in head and neck reconstruction, improving speech and swallowing while avoiding bulky tissue.
CAD-CAM & 3D Printing – Used to design surgical templates and implants for jaw and facial reconstruction, cutting operative time and improving precision.

Limb Salvage in Extremity Sarcomas – Microvascular free tissue transfer allows tumour clearance while preserving the limb, maintaining mobility and independence.
Supermicrosurgery for Lymphedema – Lymphovenous bypass and vascularised lymph

node transfer significantly reduce swelling and improve quality of life after cancer treatment. Immediate vs. Delayed Breast Reconstruction – Evidence shows immediate reconstruction offers higher patient satisfaction without increasing complication rates, when carefully selected. Reconstruction in Irradiated Fields – Success rates above 95% can be achieved with well-planned free flap surgery, even in previously radiated tissues.

**Plastic Surgeons: Innovators, Problem-Solvers, and Artists**

Every cancer journey is deeply personal, and every reconstruction is a unique blend of science and art. We innovate with cutting-edge techniques, solve complex challenges when the path isn't straightforward, and shape outcomes with an artist's eye for beauty and harmony.In the operating theatre, we are guided by precision and evidence.

At the same time, we carry the creativity to rebuild what was lost in a way that feels natural, personal, and life-affirming. Because in the end, our role is not just to treat disease—it is to restore dignity, confidence, and the joy of living.

# EVENTS


Dr. KM Cherian Institute of Medical Sciences, in association with the Surgery Club Alappuzha, organised the CME on "Onconeoconstruction: Where Function, Aesthetics and Plastic Surgery Finesse Unite" by Dr. Sanvia Salim (Consultant Plastic Reconstructive & Aesthetic Surgeon)


"Allergic disease trajectories up to adolescence" – Scientific session by Dr. Winnie Elizabeth Jose (Consultant Pulmonologist) at Pulmocon 2025 held at Kumarakom.


As part of the initiative by Kerala State Blood Transfusion Council, Department of Pathology at Dr. KM Cherian Institute of Medical Sciences, Chengannur, organized the Blood Donation Drive – Raktadan Amrit Mahotsav 3.0.


Departments of Obstetrics & Gynecology and Dentistry at Dr. KM Cherian Institute of Medical Sciences organized an awareness class on the 'Importance of Oral Health in Pregnancy'.
The session was led by Dr. Raveena P. John (Consultant Endodontist).


Department of Reproductive Medicine at Dr. KM Cherian Institute of Medical Sciences organised the 3rd Anniversary of Lullabee Fertility Centre.
The function was presided by Rev. Fr. Dr. Alexander Koodarathil (Managing Director, KMC Hospital Chengannur) and was graced by the presence of Dr. Geovarghese K. Mathew (Medical Superintendent & Consultant Cardiothoracic & Vascular Surgeon), Dr. Kavitha L. S. (Sr. Consultant Reproductive Medicine & Cosmetic Gynaecologist), Dr. Cicily Kalloopparamban (Consultant Reproductive Medicine), Dr. Rebecca John (Chief Operating Officer), Shri. Renin Paul. K (Chief Finance Officer) along with several other doctors and staff from Dr. KMC Hospital.


Mr. Renin Paul (Chief Finance Officer) inaugurated the distribution of privilege cards for one lakh Kudumbashree members in Alappuzha district by handing them over to Kudumbashree District Coordinator Shri. Ranjit Sankar during the Kudumbashree Micro Enterprises Award Ceremony.

# EVENTS


On World Heart Day, Department of Cardiology and Cardiothoracic & Vascular Surgery at Dr. KM Cherian Institute of Medical Sciences organized an awareness session. Dr. Madhu Paulose Chandy (Sr. Consultant Cardiologist) and Dr. Geevarghese K. Mathew (Medical Superintendent & Consultant Cardiothoracic & Vascular Surgeon) led the session.


On World Heart Day, Dr. KM Cherian Institute of Medical Sciences, organized ATPP (Accident Treatment Program with Public Support) training for the students and teachers of Providence College of Engineering & School of Business, Chengannur. The ATPP session was led by Dr. Ruben Mammen (Emergency Medicine). Dr. Pradeep. S (Dean, Providence School of Business) and Prof. Reeba John were also present at the programme.


"Advances in Head & Neck Reconstruction" – Scientific session by Dr. Sannia Salim, Consultant Plastic Reconstructive & Aesthetic Surgeon, at Pathanamthitta ENT Association General body meeting held at Thiruvalla.


As part of Breast Cancer Awareness Month, Department of Oncology at Dr. KM Cherian Institute of Medical Sciences, Chengannur, organized the "Pink Promise Walkathon" to raise awareness about breast cancer. The event commenced at the Chengannur KSRTC Bus Stand and concluded at Dr. KMC Hospital, with around 200 participants joining the walk.
The walkathon was flagged off by Chengannur DySP Mr. M.K. Binukumar.


Department of Oncology at Dr. KM Cherian Institute of Medical Sciences organized the closing ceremony of the 'Pink Promise Campaign' – One-year breast cancer awareness initiative. The event was inaugurated by renowned film actress Smt. Mallika Sukumaran. The keynote address was delivered by Dr. Maria Oommen. The function was presided over by Rev. Fr. Dr. Alexander Koodarathil (Managing Director, Dr. KMC Hospital), who stated that advanced cancer treatments such as immunotherapy, targeted therapy and advanced reconstructive surgery following cancer treatment are available at Dr. KMC hospital. Dr. Sarah J. Easow (Medical Director & Consultant Oncologist, Oncology Centre) presented the report summarizing the year-long breast cancer awareness programs and medical camps organized by the Oncology Department which has world-renowned Oncologist Dr. M. V. Pillai as the Advisory Board Chairman.


Department of Oncology at Dr. KM Cherian Institute of Medical Sciences, Chengannur, in collaboration with Sevabharathi Chennithala, organized the cancer awareness class at Mahatma Public School, Chennithala, Alappuzha. The awareness class was led by Dr. Sarah J. Easow (Medical Director & Consultant Oncologist, Oncology Centre, Dr. KM Cherian Institute of Medical Sciences).

# EVENTS


Department of Oncology at Dr. KM Cherian Institute of Medical Sciences, Chengannur, in collaboration with the Mannar Lions Club, organized the district-level inauguration of the 'Childhood Cancer' programme and the awareness class at Sree Bhuvaneswari Higher Secondary School, Mannar.


On World Trauma Day, Dr. KM Cherian Institute of Medical Sciences, Chengannur, organized ATPP (Accident Treatment Program with Public Support) training for the employees of Bharat Petroleum Corporation Ltd., Kochi. The ATPP sessions were led by Dr. Arun Raj S. L (Consultant Emergency Medicine), Dr. Sreenath P. R (Consultant Neurosurgeon) and Dr. Ruben John (Consultant Psychiatrist).


Department of Oncology at Dr. KM Cherian Institute of Medical Sciences in collaboration with Mar Thoma Syrian Church Vikas Centre, organized the cancer awareness class at Ebenezer Marthoma Church, Othera, Pathanamthitta.


Department of Infection Control and Prevention at Dr. KM Cherian Institute of Medical Sciences organized the 'Community Awareness Programme' on 20th October 2025, during the International Infection Prevention Week Celebrations. The introductory speech was delivered by Dr. Pooja Raghunath (Deputy Medical Superintendent, Consultant Microbiologist, Infection Control Officer & Clinical Quality Coordinator) and the function was graced by the presence of Dr. Geevarghese K. Mathew (Medical Superintendent & Consultant Cardiothoracic and Vascular Surgeon), Dr. Rebecca John (COO).


Dr. Madhu Paulose Chandy (Consultant Cardiologist) receives Excellence in Cardiac Care Award.


Department of Pathology at Dr. KM Cherian Institute of Medical Sciences, Chengannur, in association with KSBTC (Kerala State Blood Transfusion Council) and POL-Blood (Kerala Police), organized the Blood Donation Drive – SAMRAKSHA. The blood donation drive was inaugurated with the first donation by Shri. Vishnu K. G (SHO, Chengannur Police Station) along with other CPOs. The function was graced by the presence of Dr. Pooja Raghunath (Deputy Medical Superintendent, Consultant Microbiologist, Infection Control Officer & Clinical Quality Coordinator), Dr. Ali Abdul Latheef (Consultant Pathologist) and staff from various departments.

# EVENTS


Department of Infection Prevention and Control at Dr. KM Cherian Institute of Medical Sciences organized the Closing Ceremony of International Infection Prevention Week, followed by the prize distribution. A range of activities took place throughout the week, including Hide and Seek (Smiley Hunt), Quiz Competition, Segregation Race, Awareness session, Reel-O-Graphy (Reel Competition), Poster Competition, Skit and Flash Mob.


Memorandum of Understanding (MoU) signing ceremony between Dr. KM Cherian Institute of Medical Sciences and Senior Citizen's Forum Chengannur. MoU has been handed over by Rev Fr. Dr. Alexander Koodarathil (Managing Director, Dr. KMC Hospital) to the President of Chengannur Senior Citizen's Forum, Shri P. A. Thomas, AGM (Retd.), UCO Bank.


Dr. Cicilia Kalloopparamban (Consultant Reproductive Medicine) participated in a panel discussion at the All Kerala ISAR Conference 2025, organized by the Kerala Chapter of ISAR.


Dr. KM Cherian Institute of Medical Sciences organized the ATPP (Accident Treatment Program with Public Support) training session for the Police Officers of Chengannur Subdivision.
The ATPP session was led by Dr. Noel George (Emergency Medicine).


Dr. Rebecca John(COO) inaugurated the distribution of privilege cards for members of the Kerala Union of Working Journalists (KUWJ) by handing them over to the KUWJ office bearers during the 61st Kerala State Journalists' Conference held in Pathanamthitta.


Scientific sessions on "Microvascular Management of Diabetic Foot – A Plastic Surgeon's view on Diabetic Ulcer Management" by Dr. Brian Oommen Thomas (Consultant Plastic & Reconstructive Surgeon) and "Spectrum of Neurovascular Interventions" by Dr. Laxmikanth Jella (Consultant Neurovascular & Interventional Radiologist) were held during the IMA General Body Meeting, Pala.

# EVENTS


"Role of GINA Guidelines for Initiating and Monitoring Asthma Treatment" – Panel discussion by Dr. Winnie Elizabeth Jose(Consultant Pulmonologist) at the 27th National Conference on Pulmonary Disease (NAPCON 2025), Jaipur.


Dr. KM Cherian Institute of Medical Sciences, Chengannur, in-association with the Orthopaedic Society of Pathanamthitta, organized a scientific session on 'Approach to Inflammatory Arthritis' by Dr. Rachel Oommen (Consultant Rheumatologist).


Scientific sessions on "Circumcision in Children: Is it Really Necessary?" by Dr. Cherian Jerin Oommen (Consultant Pediatric Surgeon) and "Spectrum of Neurovascular Interventions" by Dr. Laxmikanth Jella (Consultant Neurovascular & Interventional Radiologist) were held at the IMA General Body Meeting, Haripad.


Dr. KM Cherian Institute of Medical Sciences in association with District Health Department, Alappuzha, organized the ATPP (Accident Treatment Program with Public Support) training session for the Police Officers at Mannar Police Station. The ATPP session was led by Dr. Ruben Mammen (Emergency Medicine).


Dr. KM Cherian Institute of Medical Sciences in association with District Health Department, Alappuzha, organized the ATPP (Accident Treatment Program with Public Support) training session for the Police Officers at Mavelikkara Police Station. The ATPP session was led by Dr. Noel George (Emergency Medicine).


The Department of Behavioural Sciences & De-addiction at Dr. KM Cherian Institute of Medical Sciences, Chengannur, organized the national seminar inPSYght'25: "Addiction and Borderline Personality Disorder – Crossroads." The seminar was inaugurated by the Vice Chancellor of Mahatma Gandhi University, Dr. C. T. Aravindakumar. The Consul General of Maldives, Ms. Aminath Shifana, attended as the Guest of Honour, while the keynote address was delivered by Dr. P. S. V. N. Sharma, Chief Psychiatrist at Manipal Hospital. The event was presided over by the Managing Director of Dr. KMC Hospital, Rev. Fr. Dr. Alexander Koodarathil.

Scientific sessions were led by Prof. Dr. Varghese Punnoose (Principal, Government Medical College, Kottayam), Dr. Suma Udupa (Manipal Hospital), Dr. Radhika M. S. (Anitara Hospital, Kolkata), Sr. Dr. Johan Chunkapura (Principal, TRADA, Kottayam), Psy. Priya Varghese, Dr. Manju Peethambaran, Dr. Jayashankar G., Psy. George Mathew, Dr. Anoop G., and Dr. Ruben John (Psychiatrist, Dr. KMC Hospital).

# EVENTS


Dr. Cioja Kallopparamban (Consultant, Reproductive Medicine) served as a resource person at the state conference on 'Exploring the Multifactorial Dimensions of Infertility: A Comprehensive Perspective', held at St. Thomas College of Nursing, Alappuzha.


Dr. Preethy V. Varghese (Consultant Neurologist) participated in and chaired sessions at the Kerala Association of Neurologists Mid Term Meet held at Kumarakom.


'Menopause matters' – scientific session by Dr. Kavitha L. S, Sr/Consultant Reproductive Medicine and Cosmetic Gynaecologist) at COCON 2025 (2nd Cosmetic Gynaecology Congress) organized by the Laser Vaginal Rejuvenation Institute of India (LVRII) at Chennai.


Very Rev. Mathew Varghese Cor Episcopa (Chengannur Diocese, Malankara Orthodox Syrian Church) delivered the Christmas message during the Christmas celebration 2025 at Dr. KMC Hospital.


Dr. KM Cherian Institute of Medical Sciences at Santa Harmony – Thiruvalla 2025


Department of Behavioural Sciences at Dr. KM Cherian Institute of Medical Sciences organized the Mental Health Awareness Programme on 'Behavioural Issues in Children Due to Social Media' at Mar Thoma Residential School, Kuttapuzha, Thiruvalla.
The awareness sessions were led by Dr. Ruben John (Consultant Psychiatrist) and Dr. Sreeja Sambath (Clinical Psychologist).

# EVENTS


Dr. KM Cherian Institute of Medical Sciences, in association with the Central Travancore Physicians Club, organized the scientific session on 'Approach to Inflammatory Arthritis' by Dr. Rachel Oommen (Consultant Rheumatologist) at Thiruvalla.


Scientific session on 'Clinical Discussion & Prospects of Onco Freezing' by Dr. Cicija Kalleopparamban (Consultant Reproductive Medicine) at the monthly CME organized by Kottayam Obstetrics and Gynaecological Society - KOGS.


Scientific sessions on 'Spectrum of Neurovascular Interventions' by Dr. Laxmikanth Jella (Consultant Neurovascular & Interventional Radiologist) and "Oncoreconstruction: Where Function, Aesthetics and Plastic Surgery Finesse Unite" by Dr. Sannia Salim (Consultant Plastic Reconstructive & Aesthetic Surgeon) at the IMA General Body Meeting, Chengannur.


"Cancer Care in Kerala vs the West" - Scientific session by Dr. Sarah J. Easaw, Medical Director & Consultant Oncologist, Oncology Centre, Dr. K. M. Cherian Institute of Medical Sciences, at the Global Preventive Onco Summit 2026, held in Thiruvananthapuram.


Dr. KM Cherian Institute of Medical Sciences in association with District Health Department, Alappuzha, organized the ATPP (Accident Treatment Program with Public Support) training session for the Police Officers at Venmony Police Station. The ATPP session was led by Dr. Nikhil. M (Emergency Medicine).


"Multiple Myeloma: Diagnosis and Management" - Scientific session by Dr. Sarah J. Easaw (Medical Director & Consultant Oncologist, Oncology Centre) and Dr. Nidhun V. Ashok (Consultant Oncologist), held at the IMA General Body Meeting, Adoor.

# EVENTS


"Comprehensive Plastic Surgery Training: The Cornerstone of Safe & Ethical Aesthetic Practice" - Scientific session by Dr. Sannia Salim (Consultant Plastic Reconstructive & Aesthetic Surgeon), AESURG 2026 Kerala Brand Ambassador and Faculty, at the Annual Conference of the Indian Association of Aesthetic Plastic Surgeons (IAAPS) 2026, Mumbai.


Dr. KM Cherian Institute of Medical Sciences in association with District Health Department, Alappuzha, organized the ATPP (Accident Treatment Program with Public Support) training session for the Police Officers at Nooranadu Police Station. The ATPP session was led by Dr. Noel George (Emergency Medicine).


Awareness Sessions by Dr. Kavitha L. S. (Senior Consultant Reproductive Medicine & Cosmetic Gynaecologist) & Dr. Sreeja Sampath (Clinical Psychologist) at the Annual Parent-Student Empowerment Programme – SYNERGY 2025 organized by Gayatri Central School, Kayamkulam.


Remembrance prayer service held in memory of Late Dr. K. M. Cherian on his first death anniversary at Dr. KMC Hospital.
Rev. Fr. Dr. Alexander Koodarathil (Managing Director, Dr. KMC Hospital) shared his recollections on Dr. K. M. Cherian's legendary journey and enduring legacy. Dr. Sunil Agarwal (Consultant Cardiothoracic and Vascular Surgeon) shared heartfelt memories and expressed his deep gratitude.


Department of Cardiothoracic and Vascular Surgery & Critical Care Medicine at Dr. KM Cherian Institute of Medical Sciences organized the 'Dr. K. M Cherian Memorial Symposium'. Rev. Fr. Dr. Alexander Koodarathil, (Managing Director, Dr. KMC Hospital) inaugurated the CME and delivered the Dr. K. M. Cherian Memorial Oration. The scientific sessions featured expert talks by Dr. Dipanjan Chatterjee (President of ESOI and Director of ECMO Services at Manipal Hospitals, Kolkata), Dr. Jobin Abraham (Sr. Consultant in Anaesthesiology and Critical Care, Aster Hospital, Kochi), Dr. Sunil Agarwal (Consultant Cardiothoracic and Vascular Surgeon) and Dr. Geevarghese K. Mathew (Director of the ECMO Program and Consultant Cardiothoracic and Vascular Surgeon).


Providence College of Engineering and Dr. KM Cherian Institute of Medical Sciences, in association with the Rotary Club of Chengannur, organized the Walkathon to raise awareness on Mental Health, Road Safety and Drug Abuse. The walkathon commenced from Chengannur and was flagged off by Smt. Mariamma George Mathew (Chairperson, Providence College of Engineering), concluding at Dr. KMC Hospital.
Rev. Fr. Dr. Alexander Koodarathil (Managing Director, Dr. KMC Hospital), delivered the awareness session on the anti-drug campaign. Awareness session on Road Safety was Delivered by Dr. Vishnu P. S. (Consultant Neurosurgeon).

# EVENTS


World Cancer Day awareness programme and the launch of Lung Cancer Screening Campaign at Dr. KM Cherian Institute of Medical Sciences were inaugurated by the world-renowned Oncologist Dr. M. V. Pillai (Advisory Board Chairman, Oncology Centre, Dr. KMC Hospital).
The function was presided over by the Managing Director, Rev. Fr. Dr. Alexander Koodarathil, who presented the guidelines developed for comprehensive studies on lung cancer prevention.
Dr. Sarah J. Easaw (Medical Director & Consultant Oncologist, Oncology Centre, Dr. KMC Hospital), presented the study report of the 'Pink Promise' breast cancer awareness programme and screening camps conducted across Kerala over the past year. Dr. John Thomas (Consultant Surgical Oncologist), Dr. Boaz Vincent (Consultant Radiation Oncologist), and Dr. Nidhun V. Ashok (Consultant Oncologist) also addressed the gathering.


"Longevity medicine in reproductive and aesthetic gynaecology" – Scientific session by Dr. Kavitha L. S. (Sr. Consultant – Reproductive Medicine and Cosmetic Gynaecologist) at 48th AKCOG – All Kerala Conference of Obstetricians & Gynaecologists organized by the Cochin Obstetric & Gynaecological Society.


"Anastomotic Chimerism of the Free Fibula Flap in Head and Neck Reconstruction" – Scientific session by Dr. Sannia Salim (Consultant Plastic Reconstructive & Aesthetic Surgeon) at the 17th Biennial Conference of the Indian Society for Reconstructive Microsurgery (ISRM), held in Jaipur.


"Controversies and Dilemmas – Making ART Crystal Clear" Panel Discussion by Dr. Cicija Kalloopparamban (Consultant Reproductive Medicine) at 48th All Kerala Congress of Obstetrics & Gynaecological Society held at Kochi.


Management session at Dr. KM Cherian Institute of Medical Sciences by Rev. Fr. Alexander J. Kurien (Deputy Associate Administrator, White House Faith Office Liaison & Executive Director, U.S. Government, Washington D.C.) on integrating "WHO's 10 Core Life Skills" into leadership practice and institutional culture.


"Bronchiectasis – Lets Rewind" – Scientific session by Dr. Winnie Elizabeth Jose (Consultant Pulmonologist) at Monthly Meeting and CME of Alappuzha Respiratory Society.

# Hearty Welcome

**Dr. Vishnu P. S.**
MBBS, DrNB Neurosurgery
Fellowship in Neuroendoscopy
**Consultant Neurosurgeon**

**Dr. Athul S. Sanjeev**
MBBS, DNB (General Medicine),
DM Neurology (SCTIMST),
MRCP(UK) SCE Neurology
**Consultant Neurologist**

**Dr. Varsha Vipin**
MBBS, DNB (General Medicine),
DrNB (Nephrology)
**Jr. Consultant Nephrologist**

**Dr. Annup Balan. B**
MBBS, MPH, MD, FCID
**Consultant Infectious Disease**

**Dr. Amith Itty**
MBBS, DNB Radiodiagnosis
**Consultant Radiologist**

**Dr. Abhijith P. G.**
MBBS, Diploma
Family Medicine
**Jr. Consultant Family Medicine**

**Dr. Pradeep M. M.**
MBBS, MD Anaesthesiology
**Sr. Consultant Anesthesia**

**Dr. Keerthi K. Kuttan**
MBBS, MS OBG, DNB OBG
Fellowship in Reproductive Medicine
**Consultant Reproductive Medicine**

**Dr. Junith Thomas**
MBBS, MD (Immunohematology & Blood Transfusion)
**Consultant Transfusion Medicine**

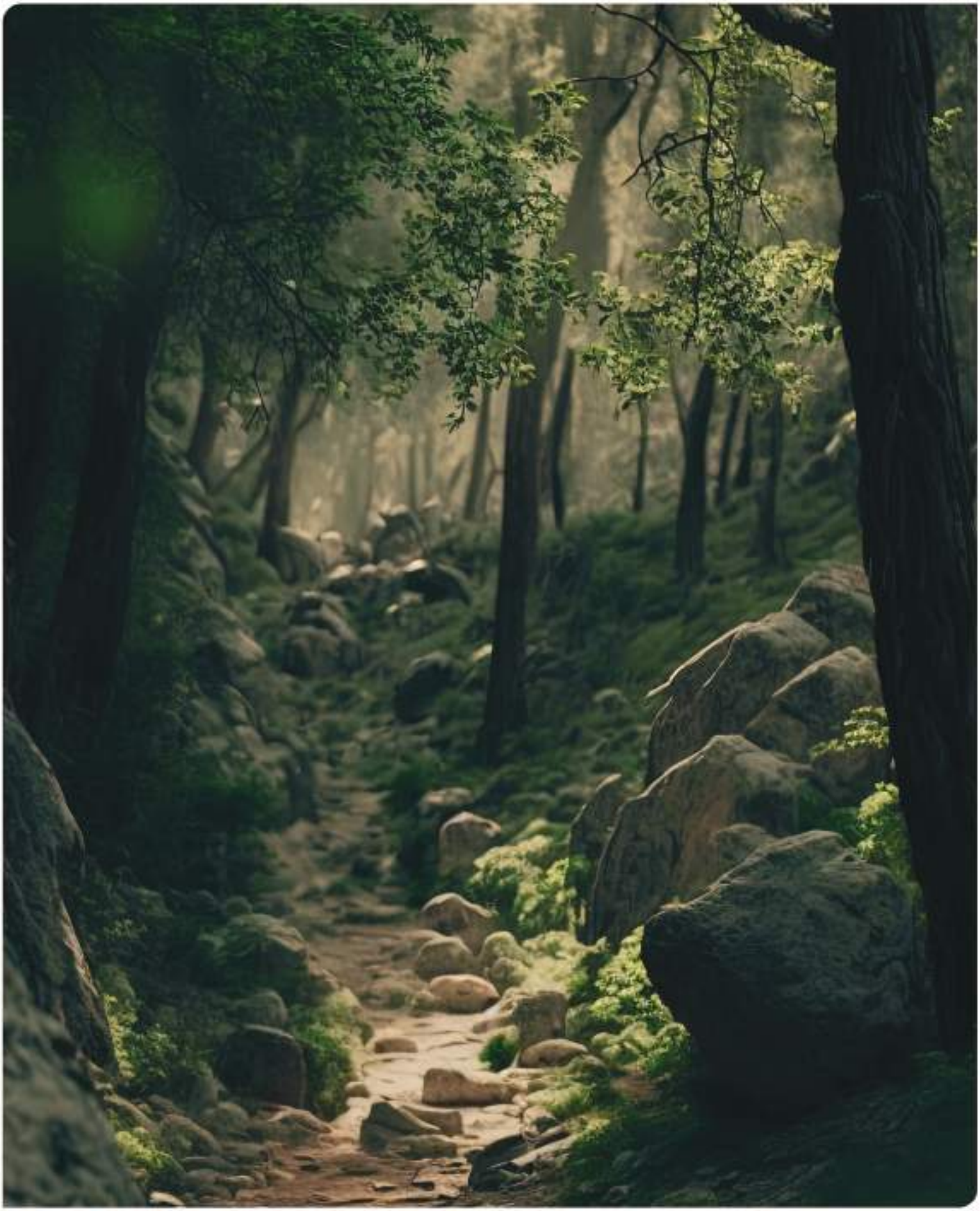
**Dr. Visal Mohan**
MBBS, MD (Emergency Medicine)
**Consultant Emergency Medicine**

**Dr. Akhila Sekhar**
MBBS, MD (Pathology)
**Consultant Pathologist**

**Dr. Melvin K. Ninan**
MBBS, DNB (Anaesthesiology)
DrNB (Neuroanaesthesia)
**Consultant in Neuroanaesthesia and Neuro Critical Care**

**Dr. Mariya Mohan**
MBBS, DNB (Emergency Medicine)
**Consultant Emergency Medicine**

**Dr. Vinod John**
MBBS, MD (General Medicine)
**Sr. Consultant – General Medicine**



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