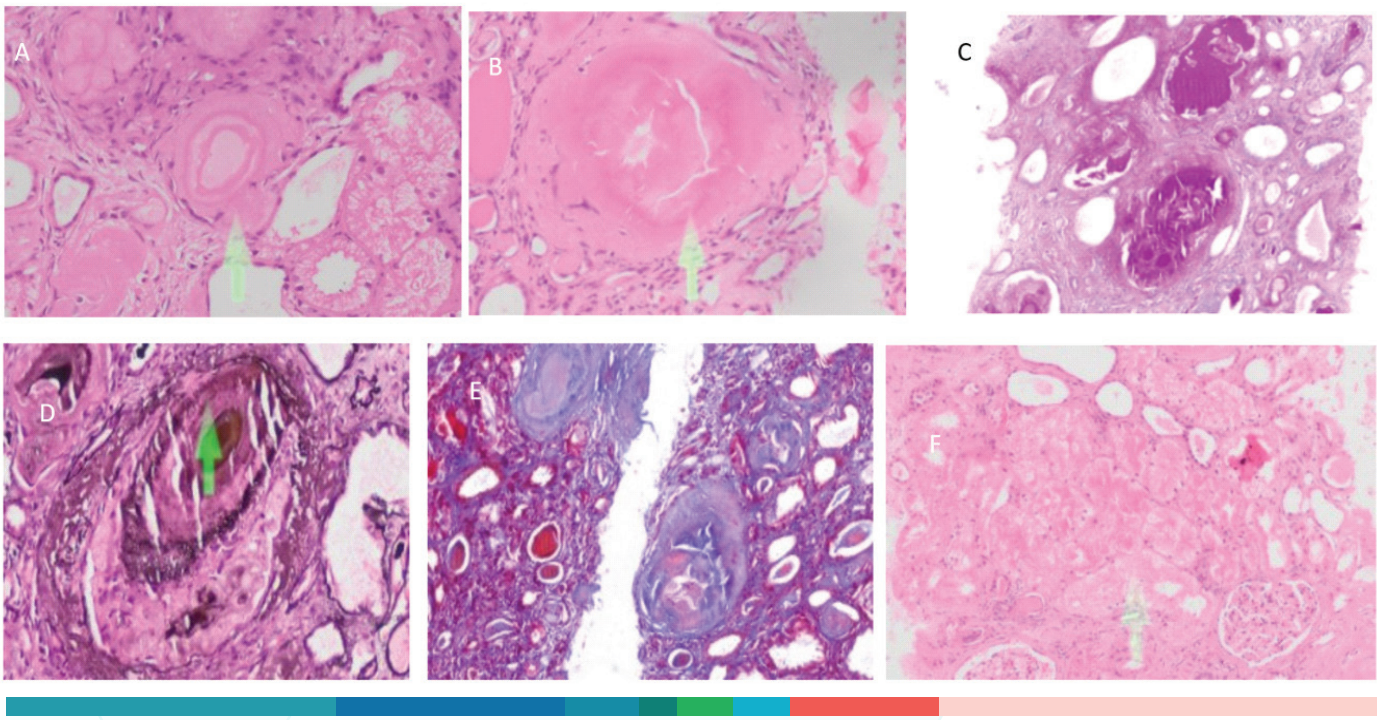
ISSUE 2 | VOL. 3 | July – Sept 2023

HYDERABAD NEPHROLOGY FORUM

HYDERABAD NEPHROLOGY FORUM

# KIDNEY DIGEST




## Highlights of the issue

Swap Transplant Registry- 'Need of the Hour'

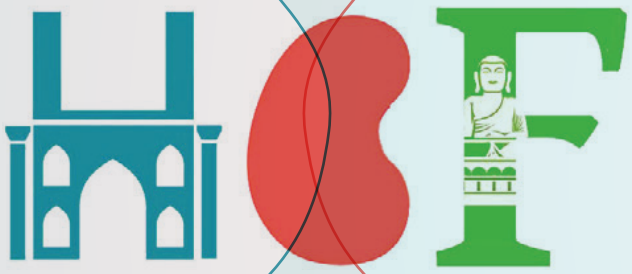
Amyloid cast nephropathy

HIF-PHI inhibitors in anemia of CKD

An official Newsletter of Hyderabad Nephrology Forum, Telangana, India



www.hyderabadnephrologyforum.com



HYDERABAD NEPHROLOGY FORUM

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Dr JCM Shastry, Emiritus Professor of Nephrology, Kamineni Hospital (deceased)

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# Editorial

**Dr Praveen Kumar Etta**
Senior Consultant Nephrologist
TX Hospital, Hyderabad

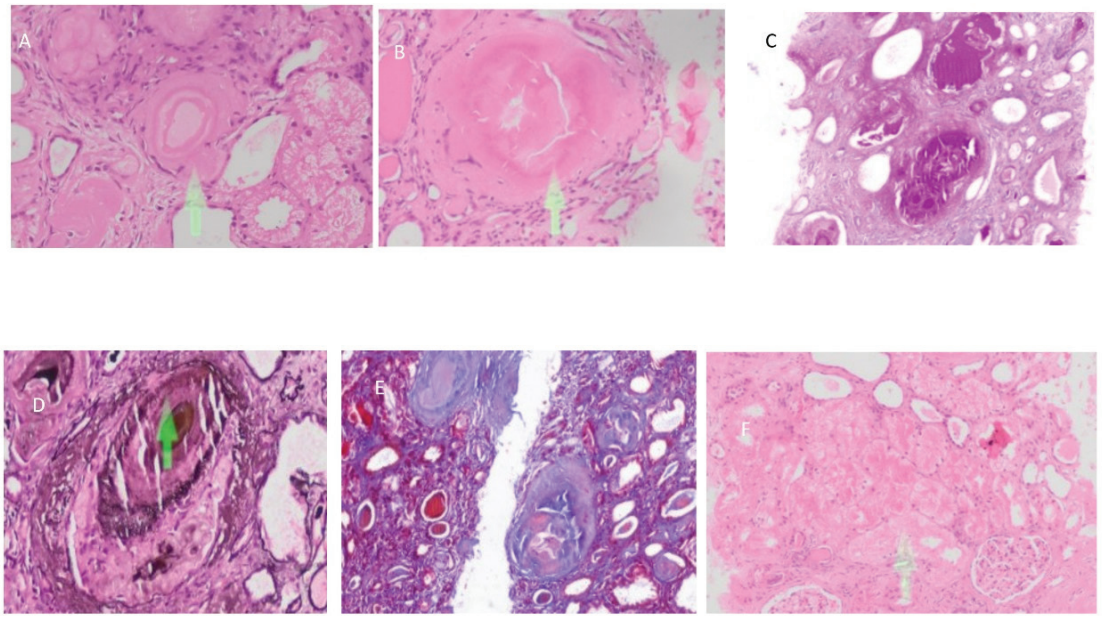
The official newsletter of Hyderabad Nephrology Forum, the "Kidney Digest" has been a wonderful platform to keep all the HNF members updated on the various activities, share achievements of HNF Members, and disseminate their publications in various scientific journals. Our intention to educate the Nephrology students is also fulfilled by discussing few interesting topics in the Newsletter. I would like to thank all the editorial board members, senior faculty, and advisory board of HNF for all the efforts in brining the quarterly issues of Kidney Digest successfully.

HNF conducted an educational program and workshop on Transplant Immunology at NIMS in July. Various esteemed faculty members across the Nation have come and discussed their experiences in the field of transplantation. HNF also conducted a Mock practical exam for final year DM and DNB Nephrology students in August at NIMS. Few of the renowned teaching faculty from various institutes like Dr. Gopalakrishnan, Dr. Narayan Prasad, Dr. Vinay Sakhuja and Dr Sreelatha have attended this mock exam and discussed the exam cases. HNF has started a training program on Biostatistics for Nephrology students once in every 2 weeks at NIMS auditorium. Students are benefitting a lot with all these educational initiatives from HNF board.

I thank Dr Ramiz Panjwani for reviewing the important topic in the field of Nephrology in this newsletter. I thank Dr KS Nayak for giving a valuable message to the forum members in this issue. I sincerely thank Dr. Radhika Patil for providing recent advances and summarizing important topics in the field of Renal Pathology.

I am happy to inform you that Telangana was awarded as the state with highest deceased donations by NOTTO at Delhi in the presence of State and Central ministers on 3rd Aug 2023 on the occasion of National Organ Donation day. Our HNF members have contributed a lot in the success journey of Jeevandan cadaver transplant program in Telangana. HNF along with Jeevandan committee has organized a Donors Felicitation Program on the event of National Organ Donation Day at Hyderabad on 3rd August 2023. In this Newsletter, we have included the announcement and abstract submission notification for ISNSCCON & TSNCON 2024, which will be held in Feb 2024 at Hyderabad.

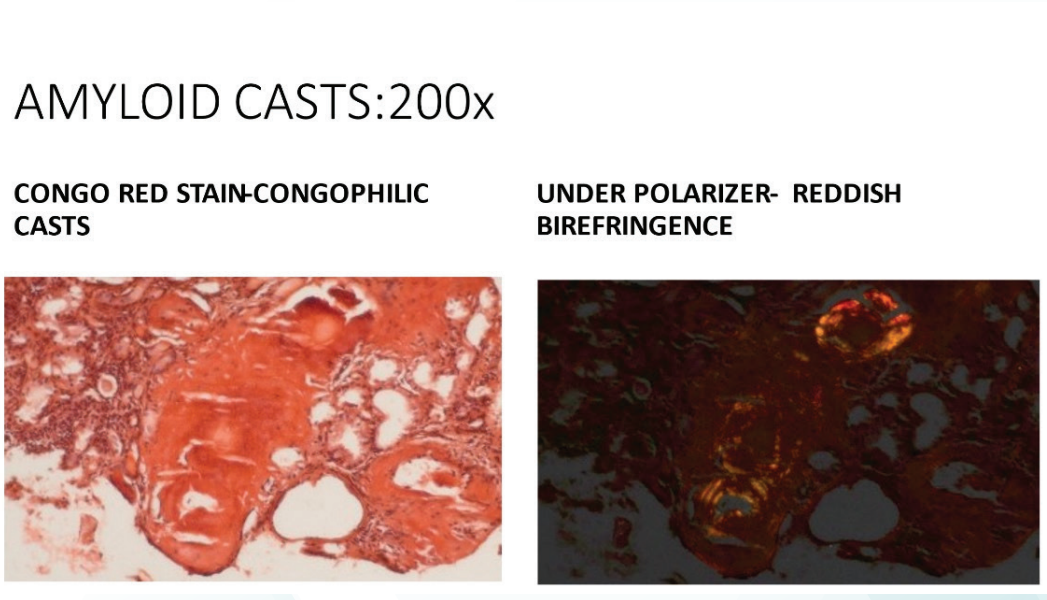
# Cover Image




## Amyloid Casts

Light microscopy showing few dilated distal convoluted tubules in cortex and collecting ducts in medulla containing casts which have fractured planes and central pallor area with lamellated core and spicules formation at their periphery and show Congo red positivity with apple green and reddish birefringence upon polarization. These casts are often associated with a more prominent cellular reaction, numerous tubular ruptures and conspicuous interstitial inflammation.

For detailed information, please see “Renal Pathology Pearls”.



# Guest Editorial

**Dr KS Nayak**

Chief Nephrologist and HOD

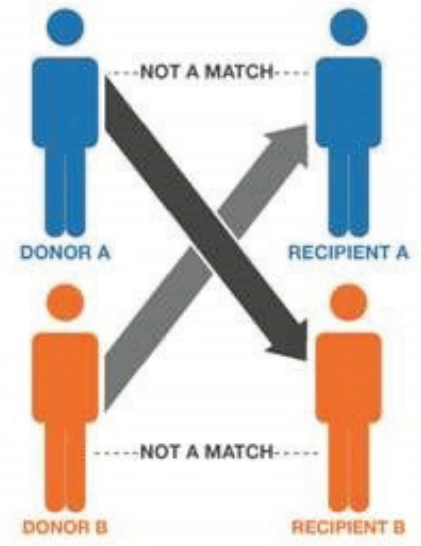
Virinchi Hospital, Hyderabad

## Swap Transplant Registry- 'Need of the Hour'

There is a gross disparity between supply and demand for kidney transplantation in India. All efforts are to be made to increase the supply of quality organs to the waiting transplant recipients. Swap donation of kidneys is one such process for increasing supply of organs to patients waiting for transplantation. The Indian Chronic Kidney Disease registry in 2010 reported that at the time of enrollment in registry, 61% of ESKD patients were not on any form of renal replacement therapy, and only 32% were on hemodialysis, 5% on peritoneal dialysis and a meagre 2% were being worked up for kidney transplantation. Up to 90% of kidney donors are living donors, while Cadaveric Transplant programs are still evolving in most parts of India. Swap transplantation enables two incompatible donor recipient pairs to receive compatible kidneys. In this, a living kidney donor who is otherwise incompatible with the recipient exchanges kidneys with another such pair. In India, in the absence of national kidney Swap program, only single-center KPD is practiced. ABO incompatible kidney transplants are being practiced using complicated de-sensitization protocols at about thrice the cost with significantly poorer results.

Data shows that 90% of incompatible donor recipient pairs were not aware about Swap transplantation as a cost-effective kidney transplant option with excellent long-term outcome. It is estimated that such a program has the potential to increase the availability of family donors by 25-40%, cost-effectively.

## Schemata of a Swap single pair donation




## Legal aspects of Swap kidney donation:

The Transplantation of Human Organ Act (THOA) and rules in India were promulgated in 1994 and subsequently amended in 2008 and 2011 to streamline organ donation and transplantation activities including Swap organ donation. The recent amendment in THOA in 2014 permitted authorization committee to give permission for Swap trans plantation. As of now, only first-degree near relatives can donate kidney under this program.

By performing the first Inter-State, Inter-Hospital Swap kidney transplant in the country, we have shown that, with . diligent efforts, we can overcome hurdles to make a national swap transplant program a reality

## Expected Future Model of the Telangana Swap Registry

Promote ethical Swap kidney transplants in the State of Telangana after obtaining the necessary legal permissions from the authorization committee.

It helps in all donor recipient pairs who are not compatible due to blood group incompatibility, and hypersensitization.

Website will include a clear description of the various options available to the patient and some basic information about other available choices such as ABO incompatible transplants and Cadaveric Transplantation.

Transplant centers in Telangana will be encouraged to enroll all of incompatible pairs thus increasing the quality of matching and number of Swap Transplants and reduction of 'wait times'. It should be necessary to upload the HLA data of incompatible living donor for all potential recipients.

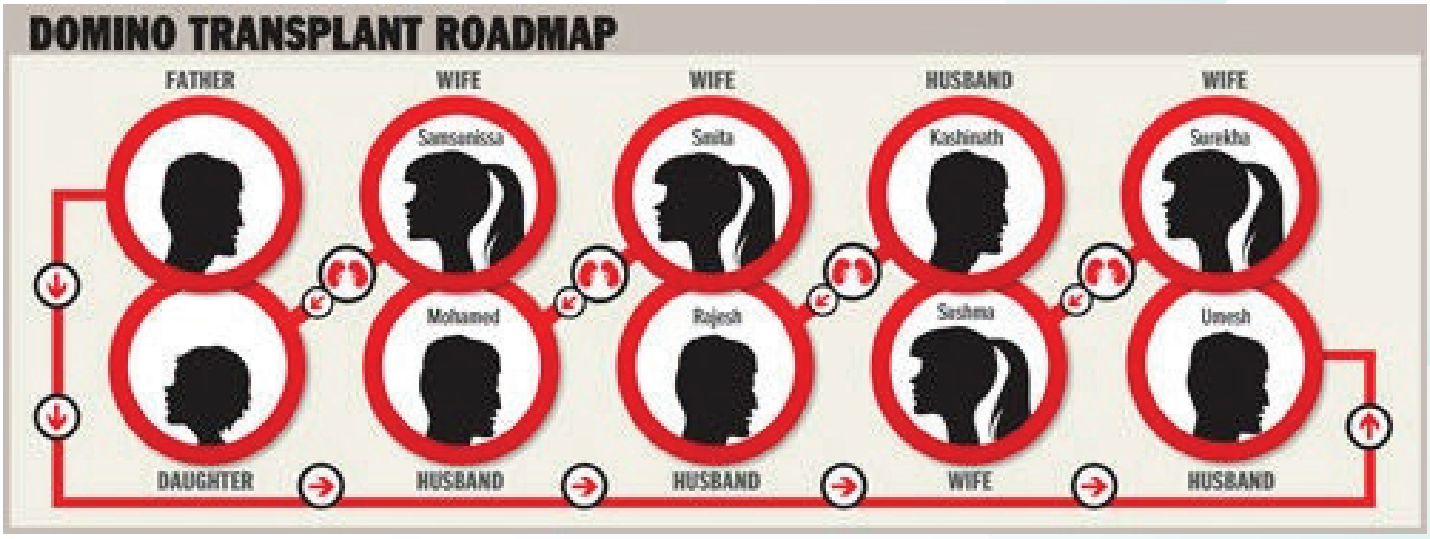
Database of incompatible donor recipient pairs in addition to regular transplant data include information on demographics, physical characteristics, HLA profile, unacceptable and amenable antigens, discretionary exclusion criteria, certification of registration, suspension or withdrawal date and reason, dates of registration and update, contacts at recipient's center, and reason for joining KPD with co-registered recipient (ABO incompatible, lymphocyte cross-match positive, flow cross-match positive, Luminex DSA positive, donor is compatible and joined KPD for better HLA/donor age matching. An authorized person such as program director in the registering transplant center must attest all documents as per the standard guidelines and regulations. Medical fitness should be completed for kidney transplant and kidney donation by a multidisciplinary team consisting of but not limited to transplant physician, transplant surgeon, anesthetist, psychiatrist, gynecologist, HLA laboratory person, and other medical experts such as cardiologist and infectious disease physician as per the stan dard guidelines.

All data will be available to the registered centers of Telangana in a transparent manner and pairing will be done using various clinically proven and scientific algorithms.

All efforts will be made to promote Swap transplants in the State and make it into a fore-runner for a National Swap transplant Registry.

Liase with NGOs and the Governmental agencies for the stated goals.

Promote long chain domino transplants.(see below)



# Renal Pathology Pearls


**Dr. Radhika Krishna Patil**

MD (Pathology), DPB, FISN-ANIO, PDCC (Renal & Transplant Pathology)

Director& Consultant Nephropathologist

Shri Balaji Diagnostics & Polyclinic, Madhapur, Hyderabad

Vice President (Basic Sciences) - ISOT


## Amyloid Cast Nephropathy

A 40 -year old hypertensive female admitted with renal dysfunction, on examination she found to be anemic, CUE: RBCs: nil/HPF, WBCs: 3 to 4/HPF, proteinuria: 2+, ANA: negative.

A renal biopsy was performed: Serial sections and stains (H&E, PAS, Methanamine Silver & Masson Trichrome) studied show two cores of renal cortices with adjoining medulla with up to 23 glomeruli and a large artery. A single glomerulus is globally sclerosed. The viable glomeruli appear normal with no evidence of significant increase in cellularity, segment of sclerosis, basement membrane thickening or crescents. There is mild to moderate tubular injury with flattening and denudation of the lining epithelium along with loss of the brush border. Few distal convoluted tubules in cortex and collecting ducts in medulla are dilated and contain casts which have fractured planes and central pallor area with lamellated core and spicules formation at their periphery which is PAS positive, silver positive and bluish on Trichrome stain and show Congo red positivity with apple green and reddish birefringence upon polarization. These casts seen were associated with a more prominent cellular reaction, numerous tubular ruptures and conspicuous interstitial inflammation. Occasional other PAS-positive hyaline and granular casts are also seen. Few of the proximal tubules approximately 30% show desquamation and fragmentation of tubular epithelial cells. Tubular atrophy is seen over 10% of the cortex sampled. The interstitium is widened and fibrosed around the atrophic tubules with a moderately dense patchy lymphocytic infiltration and few plasma cells with rare eosinophils and neutrophils. The artery shows intimal fibrosis.

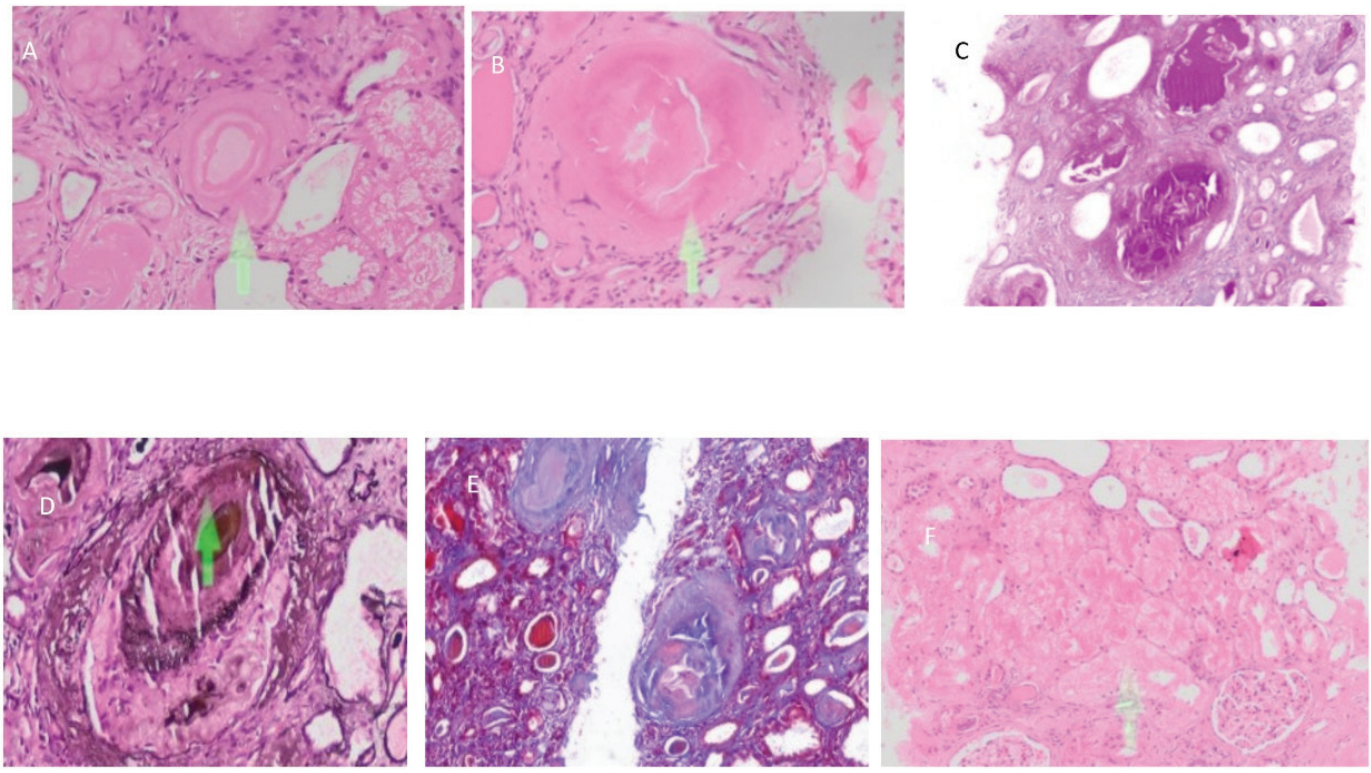
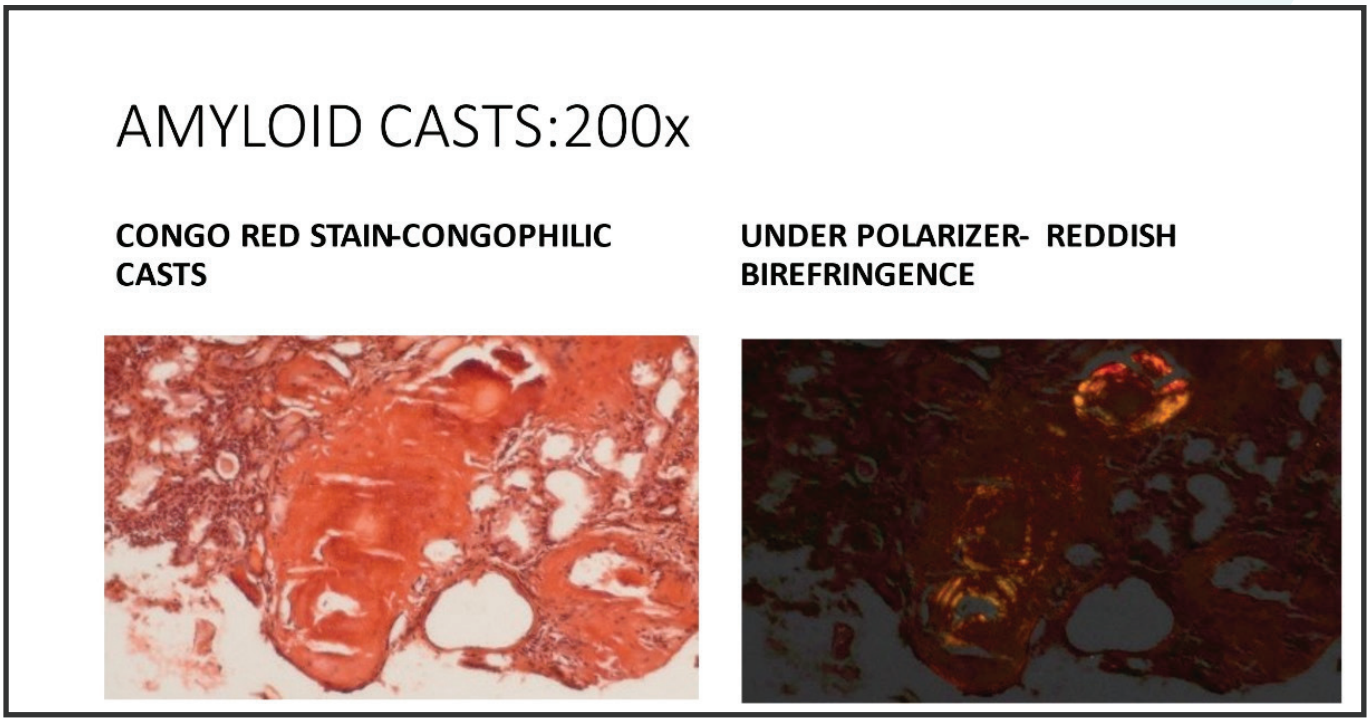


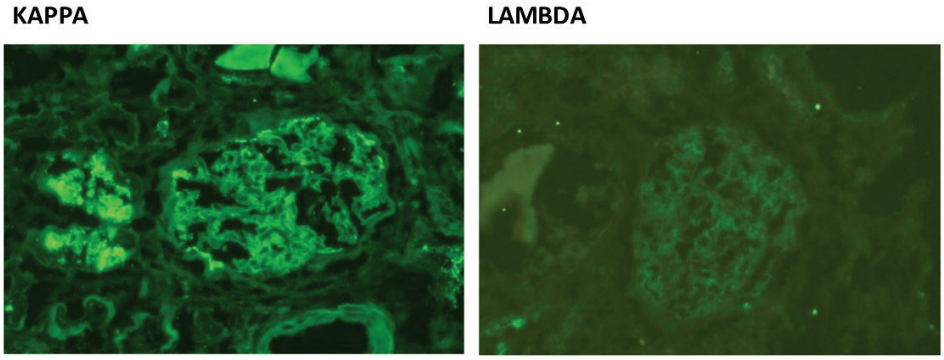

Figure. Light microscopic appearance of distal tubular casts; A. Haematoxylin & Eosin (H&E) stain (200x) tubular cast-central pale area and lamellated appearance, B. H&E stain (400x) large cast with fractured planes, C. Periodic acid Schiff (PAS) stain-(200x) alternate negative and positive appearance; D. Periodic Acid Silver Methanamine (PASM) stain (200x) arrow showing spiculated silver positive periphery of the cast, E. Masson Trichrome (MT) stain showing bluish periphery of the cast, F. H&E stain (200x) fragmentation and desquamation of proximal tubular epithelial cells.



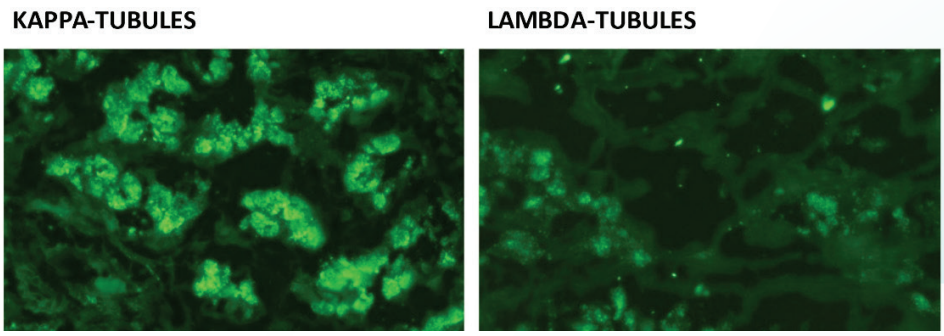
## Immunofluroscence:

IF study shows 08 glomeruli. Kappa light chain restriction seen in many tubular casts and glomeruli showing peripheral (capillary wall) linear smooth deposits along the GBM and Bowman capsule of glomeruli and along the tubular basement membranes (TBM) and tubular epithelial cells (TEC).

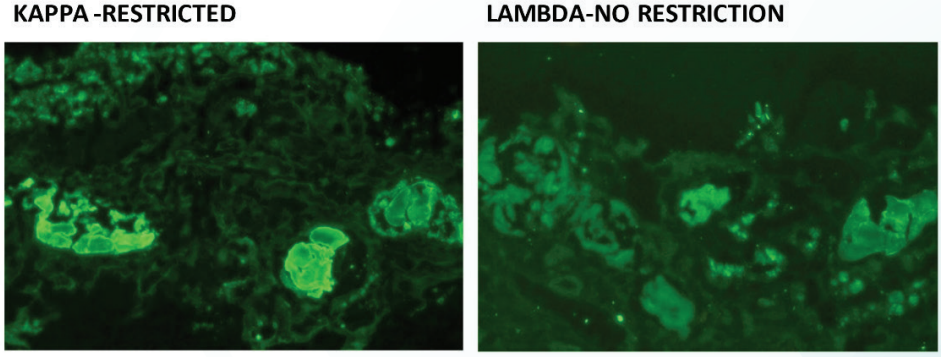
GLOMERULUS-200x




TUBULAR EPITHELIAL CELLS-200x




TUBULAR CASTS-200x




Primary diagnosis: Amyloid cast nephropathy, Kappa light chain restriction was seen.

Comments: There is also confluent staining for Kappa light chain only along the glomerular capillary walls, Bowman capsule, tubular basement membrane and along the vessel walls to some extent. This may be seen in following two possibilities which require Electron microscope study to rule out and confirm.

1. The earliest evidence of a light chain deposition disease (LCDD): which often occurs concurrently with myeloma cast nephropathy; which on EM study shows fine granular, punctuate, powdery, electron-dense deposits distribut ed along GBM, TBM and vascular basement membranes.

2. Light Chain Deposition By Immunofluroscence only: monotypic light chain staining of GBM and TBM by IF, but no deposits detectable by EM and no changes by light microscopy, especially seen in cases of light chain cast nephropathy and it show uncertain significance : may be artifactual IF staining representative of monoclonal protein in urine.

In view of Kappa light chain restriction in the cytoplasm of the tubular epithelial cells, Proximal Tubulopathy (Kappa light chain mediated) cannot be completely ruled out. Advised bio-chemical tests and clinical correlation to rule out a possibility of an associated Fanconi syndrome.

Advised serum immunofixation electrophoresis and serum free light chain assay which showed M band, and monoclonal Kappa light chains elevated.

## References:

Rajagopal MD, Nachiappa Ganesh R, Parameswaran S, Puthiyottil D. Unusual morphology of amyloid cast nephropathy in renal biopsy portending poor prognosis. BMJ Case Rep. 2018 Dec 22;11(1):e225899.

# Past and Upcoming Events

Last Friday of every month, we are conducting monthly forum meets and we have discussed many interesting cases and their management. We have invited few of the eminent National and International faculty to give guest lectures in the past Forum meets. HNF conducted an educational program and workshop on Transplant Immunology at NIMS in July. Various esteemed faculty members across the Nation have come and discussed their experiences in the field of transplantation. HNF also conducted a Mock practical exam for final year DM and DNB Nephrology students in August at NIMS. Few of the renowned teaching faculty from various institutes like Dr. Gopalakrishnan, Dr. Narayan Prasad, Dr. Vinay Sakhuja and Dr Sreelatha have attended this mock exam and discussed the exam cases. HNF has started a training program on Biostatistics for Nephrology students once in every 2 weeks at NIMS auditorium. Students are benefitting a lot with all these educational initiatives from HNF board. HNF along with Jeevandan committee has organized a Donors Felicitation Program on the event of National Organ Donation Day at Hyderabad on 3rd August 2023. In this Newsletter, we have included the announcement and abstract submission notification for ISNSCCON & TSNCON 2024, which will be held in Feb 2024 at Hyderabad.

HYDERABAD NEPHROLOGY FORUM

WOMEN IN NEPHROLOGY INDIA

Hyderabad Nephrology Forum Monthly Activity on

# IMMUNOLOGY WORKSHOP

**Venue:**

Venue Auditorium 5th floor, Trauma block, NIMS Hospital

**Timings**

16th July 2023
9:00 am to 5:00 pm

CLICK BELOW

REGISTER NOW

# PROGRAMME SCHEDULE

| S.NO | TIME | SESSION | SPEAKER | CHAIRS |
|---|---|---|---|---|
| 1 | 09:00 AM - 09:30 AM | Basics of Transplant Immunology | **Dr. Seerapani Gopaluni** Consultant Nephrologist, Citizens Hospital, Hyderabad | Dr. Anuradha Raman<br>Dr. Manjusha Yadla<br>Dr. Kiranmai |
| 2 | 09:30 AM - 10:00 AM | HLA Typing - Will increasing resolution resolve problems? | **Dr. Neeraja** Consultant Transplant Immunology, Apollo Hospitals, Hyderabad | Dr. Girish Narayan<br>Dr. Gangadhar Taduri<br>Dr. Vijaykumar |
| 3 | 10:00 AM - 10:30 AM | CDC Crossmatch - Old is Gold | **Dr. Rajeshwari Basavanna** Consultant - Transfusion Medicine PD Hinduja Hospital, Mumbai | Dr. KV Dakshinamurthy<br>Dr. D. Sreebhushan Raju<br>Dr. G. Jyothsna |
| **TEA BREAK (15 min)** | | | | |
| 4 | 10:45 AM - 11:15 AM | Flow Crossmatch - Is Flow alone enough? | **Dr. Anil Handoo** Director, Laboratory Services BLK-MAX Super Speciality Hospital New Delhi | Dr. Pradeep Deshpande<br>Dr. Rajashekhar Chakravarthy<br>Dr. Srikanth |

# PROGRAMME SCHEDULE

| S.NO | TIME | SESSION | SPEAKER | CHAIRS |
|---|---|---|---|---|
| 5 | 11:15 AM - 11:45 AM | Solid Phase Assays and their Clinical use | **Dr. Shruti Tapiawala** Consultant Nephrologist Global Hospitals, Mumbai | Dr. Krishnan<br>Dr. Ramesh Chada<br>Dr. Dhanalakshmi |
| 6 | 11:45 AM - 12:15 PM | Epitope Matching - Match made in heaven? | **Dr. Feroz Aziz** Consultant Nephrologist Aster MIMS, Calicut | Dr Kamal Kiran<br>Dr. Urmila Anandh<br>Dr. Sridhar G |
| 7 | 12:15PM - 12:45 PM | Setting up of a Transplant Immunology lab | **Dr. Ankit Mathur,** Additional Medical Director, Rotary TTK Blood Center, BMST, Bengaluru | Dr. Krishna Mohan<br>Dr.Shashikiran<br>Dr. Karthik |
| 8 | 12:45 PM - 01:15 PM | Conclusion - Interpretation of all Immunological tests | **Dr. Rajeshwari Basavanna** Consultant - Transfusion Medicine PD Hinduja Hospital, Mumbai | Dr. Tarun Kumar Saha<br>Dr. Ratan Jha<br>Dr MV Rao |

# PROGRAMME SCHEDULE

| S.NO | TIME | SESSION | SPEAKER | CHAIRS |
|---|---|---|---|---|
| **LUNCH BREAK (30 min)** | | | | |
| 9 | 01:45 PM- 02:15 PM | The evolving role of Hematopoetic stem cells as Immune tolerance strategy for live donor renal transplant. | **Dr. Ganesh** Lead Consultant and Head, Dept of Hematology & BMT, Yashoda Hospital, Somajiguda | Dr. Sadasivudu<br>Dr. Praveen Etta<br>Dr. Shyam Sunder |
| **CASE DISCUSSIONS** | | | | |
| 10 | 02:15 PM - 02:45 PM | Case Discussion 1 | NIMS Team | **Panelists**<br>Dr. Swarnalatha. G<br>Dr. Urmila Anandh<br>Dr. Manjusha Yadla<br>Dr. Rajeshwari B<br>Dr. Anil Handoo<br>Dr. Shruti Tapiawala<br>Dr. Feroz Aziz<br>Dr. Ankit Mathur<br>Dr. Anuradha K |
| 11 | 02:45 PM - 03:15 PM | Case Discussion 2 | NIMS Team | |
| 12 | 03:15 PM - 04:00 PM | Case Discussion 3 | Osmania Team | |

# HYDERABAD NEPHROLOGY FORUM

# MOCK PRACTICAL EXAM SCHEDULE

# DATE : 19th & 20th AUGUST 2023

# VENUE: Auditorium, 5th floor Trauma block, NIMS.

| DAY1: 19/08/2023 (Saturday) | | | | |
|---|---|---|---|---|
| **TIME** | **CANDIDATE** | **CASE ALLOTTED** | **INTERNAL EXAMINER** | **EXTERNAL EXAMINER** |
| 9am-10am | Dr. Nath | 1 Long case | Dr. Anuradha Raman<br>Dr. Girish Narayan | Dr. Vinay Sakhuja<br>Dr. Sreelatha |
| 10-11am | Dr. Lavanya | 2 Short cases | | |
| 11-12pm | Dr. Shankar gadwal | 1 Long case | | |
| 12-1pm | Dr. Rahul Nair | 2 Short cases | | |
| **1pm-1.30pm** | | **LUNCH BREAK** | | |
| 1.30-2.30pm | Dr. Keerthana | 1 Long case | Dr. KV Dakshinamurty<br>Dr. Gangadhar T | |
| 2.30-3.30pm | Dr. Anitha | 2 Short cases | | |
| 3.30-4.30pm | Dr.Kajareegiri | 1 Long case | | |
| 4.30-5.30pm | Dr. Aman | 2 short case | | |

| DAY2: 20/08/2023 (Sunday) | | | | |
|---|---|---|---|---|
| 9am-10am | Dr. Kaushik sridhara | 2 Short cases | Dr. Sree Bhushan Raju | Dr. Gopalakrishnan<br>Dr. Narayan Prasad<br>Dr. Sreelatha |
| 10-11am | Dr. Prasanna | 1 Long case | | |
| 11-12pm | Dr. Avinash | 2 Short cases | Dr. Manisha Sahay | |
| 12-1pm | Dr. Chetan | 1 Long case | | |
| 1pm-1.30pm | LUNCH BREAK | | | |
| 1.30-2.30pm | Dr. Yogesh Jadav | 2 Short cases | Dr. Kiranmai Ismal | Dr. Gopalakrishnan<br>Dr. Narayan Prasad<br>Dr. Vinay Sakhuja |
| 2.30-3.30pm | Dr. Suneetha P | 1 Long case | | |
| 3.30-4.30pm | Dr. Nagarjuna | 2 Short cases | Dr. Manjusha Yadla | |
| 4.30-5pm | Dr. Nirmal P | 1 short case | | |

- 1 Long case – 60min (20min for presentation, 30min for discussion, 10min for histopathology slide).
- 2 Short cases – 25min/case (10min for presentation, 15min for discussion, 10min for histopathology slide).
- Exam venue – 5th floor trauma block, NIMS hospital
- Cases will be allotted 1day prior to exam at Millenium block 2nd& 3rd floor, NIMS hospital.

HYDERABAD NEPHROLOGY FORUM

# HYDERABAD NEPHROLOGY FORUM

## Monthly Academic Activity-Webinar

## 29th Sept 2023, Time: 7pm to 9pm

**Mistress of Ceremony - Dr Ramapriya Assistant Prof, NIMS**

| Time | Topic | Speaker | Chair persons |
|---|---|---|---|
| 7:00 – 7:30 pm | Rare cause of Acute cortical necrosis in renal transplant recipient | **Dr Niranjan Ganesh**<br>Senior Resident<br>NIMS Hospital | **Dr Karthik** (NIMS)<br>**Dr Saha** (Yashoda)<br>**Dr Krishna Patil** (Sunshine) |
| 7:30 – 8:00 pm | Navigating vascular access challenges by Nephrologist | **Dr Deepti**<br>Assistant Prof<br>ESI Hospital | **Dr Dhanlakshmi** (ESI)<br>**Dr Vikram Kumar** (Gandhi)<br>**Dr Shyam Sunder** (KIMS) |
| 8:00 – 8:30 pm | A rare neurological complication of Tacrolimus | **Dr Lavanya**<br>Senior resident,<br>AINU, Banjara hills | **Dr Anuradha** (Osmania)<br>**Dr Vijay Chandra** (NIMS)<br>**Dr Anitha** (AIIMS ) |
| 8:30 – 8:45 pm | Q & A | | |

# HYDERABAD NEPHROLOGY FORUM

## CME ON EXTRACORPOREAL THERAPIES

**Venue:** Auditorium, 5th floor, Trauma block, NIMS Hospital, Punjagutta.

15th October 2023 | 9:00 am to 4:30 pm

| SI. NO | TIMINGS | TOPIC | SPEAKER | MODERATORS |
|---|---|---|---|---|
| 1 | 9:00 am to 9:45 am | CRRT Essentials: Principles, machine, membrane, circuits and fluids | **Dr. Sakthirajan**<br>Senior Assistant Professor<br>MMC, Chennai | **Dr. Anuradha Raman**<br>**Dr. Sanjay Mitra**<br>**Dr. P S Vali** |
| 2 | 9:45 am to 10:30 am | CRRT prescription: Tailoring Therapy for individual patients | **Dr. Rajshekar Chakravarthi**<br>Senior Consultant Nephrologist<br>Yashoda hospital ,<br>Hitech city ,Hyderabad | **Dr. Girish Narayan**<br>**Dr. Manisha Sahay**<br>**Dr. Raja Karthik, NIMS** |
| 3 | 10:30 am to 11:00 am | Anticoagulation strategies in CRRT: Ensuring safe therapy | **Dr. Mahesh**<br>Consultant Nephrologist<br>Yashoda hospital,<br>Hitech city, Hyderabad | **Dr. Dakshimamurty**<br>**Dr. Kiranmai**<br>**Dr. Praveen Etta** |
| **TEA BREAK 11:00 am to 11:15am** | | | | |
| 4 | 11:15 am to 11.45 am | Monitoring, alarms, troubleshooting, complications and drug dosing in CRRT- A Comprehensive Guide | **Dr. Siva Parvathi**<br>Consultant Nephrologist<br>Amara Hospital, Tirupati | **Dr. Sai Ram Reddy**<br>**Dr. Rana Fatima**<br>**Dr. Vikram Kumar** |
| 5 | 11:45 am to 12:30 pm | Sepsis/ Cytokine Storm -Role of Haemadsorption | **Dr. Rajib Paul**<br>Apollo Hospital,<br>Hyderabad | **Dr. Pradeepdeshpande**<br>**Dr. Manjusha Yadla**<br>**Dr. Srikanth, AINU** |
| 6. | 12:30 pm to 1:15 pm | ECMO/ ECCOR: The future life support | **Dr Vamshi Kumar A**<br>Consultant Cardiac Anesthetist Heart and Lung Transplant Unit<br>KIMS,Hospital Hyderabad | **Dr. Padmaja Durga**<br>**Dr. Gangadhar Taduri**<br>**Dr. Ratan Jha** |
| **LUNCH BREAK 1:15 pm to 2:00 pm** | | | | |
| 7 | 2:00 pm to 2:45 pm | Hemodialysis Technology Demystified | **Dr. Valentine Lobo**<br>Consultant Nephrologist<br>KEM Hospital Pune | **Dr. Urmila Anandh**<br>**Dr. Sree Bhushan Raju**<br>**Dr. Tarun Kumar Saha** |
| 8 | 2:45 pm to 3:30 pm | Optimizing Hemodiafiltration: Clinical approach | **Dr. Phanishree**<br>Asst Prof Nephrology<br>NIMS Hyderabad | **Dr. Anuradha K, (OGH)**<br>**Dr. Vijay Chandra**<br>**Dr. Ramapriya** |
| 9 | 3.30 pm to 4.15 pm | Online Hemadiafiltation: Technical insights | **Mr. Jayraman**<br>Clinical Manager<br>Tamil Nadu | **Dr. G Swarnalatha**<br>**Dr. Ravi Tej**<br>**Dr. Priyajohn** |
| **HIGH TEA** | | | | |

**Click here to register**

**Dr. Ramiz Panjwani**
Consultant Nephrologist
Omni Hospital
Hyderabad

# HIF-PHI's in anemia of CKD - Certainly a game changer molecule!

## Introduction:

World Health Organization defined anemia as a hemoglobin level of less than 13.0 g/dl for adult males and post-menopausal women and less than 12.0 g/dl for premenopausal women. Based on these criteria, nearly 90% of patients with a glomerular filtration rate (GFR) of less than 25–30 ml/min have anemia. Anemia remains one of the major complications of chronic kidney disease (CKD). The presence of anemia reduces quality of life and is associated with worsening of cardiovascular morbidity and accelerated rate of kidney damage and it is an independent predictor of mortality in CKD patients.

Recommended therapies for anemia in patients with CKD include erythropoiesis-stimulating agents, oral or intravenous (iv) iron, and red blood cell transfusion. RBC transfusion is associated with risks including infection and allosensitization. ESAs are an established therapy for anemia and effective at increasing hemoglobin (Hb) and reducing the need for RBC transfusion, safety concerns noted with ESAs have stimulated the development of alternative treatments for anemia. Oral iron is associated with gastrointestinal side effects and barriers exist to administration of iv iron. Accordingly, research has focused on developing alternative therapies for patients with anemia of CKD on the basis of the physiologic pathways of erythropoiesis.

## Pharmacology Category - HIF-PHI inhibitors:

Orally bioavailable hypoxia-inducible factor prolyl hydroxylase inhibitor (HIF-PHI) promotes coordinated erythropoiesis through HIF-mediated transcription. In presence of oxygen HIF- α rapidly metabolized by enzyme propyl hydroxylase. HIF PHI inhibitor prevent degradation of HIF-α which in turn leads to increased erythropoietin production and also stimulate other genes involved with iron metabolism, angiogenesis and mitochondrial genesis.

## Dosing in adults:

Roxadustat was either 70 to 100 mg (in patients weighing 45 to <60 kg) or 100 to 120 mg (in patients weighing ≥ 60 kg). The maximum dose was capped at the lower of 3.0 mg/kg or 300 mg per dose administration.

## Approval:

The United States FDA has approved daprodustat (DPD) as the first oral treatment option for anemia due to chronic kidney disease (CKD) in dialysis patients.

Roxadustat is currently approved in China, Japan, Chile, and South Korea.

"Currently, Desidustat (Oxemia, a product of Zydus Lifesciences) is approved by the Drugs Controller General of India on 7th March 2022 and is the only available HIF-PHI in India."

## Uses:

Treatment of anaemia of chronic kidney disease in both non-dialysis dependent and dialysis-dependent adult patients.

## Adverse reactions:

Hyperkalemia
Constipation
Viral upper respiratory tract infection
Hypertension
Pedal edema

## Safety concerns:

Tumor growth/Angiogenesis
Kidney fibrosis
Enhanced progression of polycystic kidney disease

## Recent trials-

## Dialysis patients-

**Roxadustat treatment for anemia in patient undergoing long term dialysis - trial published in NEJM 2019.**

A trial conducted in China randomly assigned (in a 2:1 ratio) patients who had been undergoing dialysis and erythropoiesis-stimulating agent therapy with epoetin alfa for at least 6 weeks to receive roxadustat or epoetin alfa three times per week for 26 weeks. A total of 305 patients underwent randomization (204 patients to the roxadustat group and 101 to the epoetin alfa group). During the primary-analysis, the mean (±SD) change from baseline in the hemoglobin level was an increase of 1.9±1.2 g per deciliter in the roxadustat group and a decrease of 0.4±0.8 g per deciliter in the placebo group ($P<0.001$). The mean reduction from baseline in the hepcidin level was 56.14±63.40 ng per milliliter in the roxadustat group and 15.10±48.06 ng per milliliter in the placebo group. The reduction from baseline in the total cholesterol level was 40.6 mg per deciliter in the roxadustat group and 7.7 mg per deciliter in the placebo group. Hyperkalemia and metabolic acidosis occurred more frequently in the roxadustat group than in the placebo group. The efficacy of roxadustat in hemoglobin correction and maintenance was maintained during follow up.

**Roxadustat (FG-4592): Correction of Anemia in Incident Dialysis Patients- Published in JASN 2016.**

Its open-label, randomized hemoglobin correction study in anemic (Hb<10.0 g/dl) patients on hemodialysis (HD) or peritoneal dialysis (PD). Sixty patients received no iron, oral iron, or IV iron while treated with roxadustat for 12 weeks. Mean Hb increases of 2 g/dl were achieved within 7 weeks regardless of baseline iron repletion status, iron supplementation regimen, and dialysis modality. A greater Hb change from baseline was observed in the groups receiving iron supplementation. Patients with elevated C-reactive protein (CRP) responded as well to roxadustat as did patients with normal CRP levels.

## Non-Dialysis patients-

**Roxadustat for Treating Anemia in Patients with CKD Not on Dialysis: Results from a Randomized Phase 3 Study-**

Randomised double blind trial in non-dialysis dependent CKD stages 3–5 and hemoglobin <10.0 g/dl (1:1) - to thrice-weekly 70-mg oral roxadustat or placebo. 2781 patients, 1393 received roxadustat and 1388 received placebo. The mean change in hemoglobin from baseline was 1.75 g/dl with roxadustat versus 0.40 g/dl with placebo (P<0.001). Among 411 patients with baseline elevated high-sensitivity C-reactive protein, mean change in hemoglobin from baseline was 1.75 g/dl with roxadustat versus 0.62 g/dl with placebo, (P<0.001). Roxadustat reduced the risk of red blood cell transfusion by 63%. The most common adverse events with roxadustat and placebo, respectively, were ESKD (21.0% versus 20.5%), urinary tract infection (12.8% versus 8.0%), pneumonia (11.9% versus 9.4%), and hypertension (11.5% versus 9.1%).

**Roxadustat for CKD-related Anemia in Non-dialysis Patients-Published in Kidney International Reports (2021)**

A global Phase 3 randomized study in which adults with stage 3–5 CKD not on dialysis received roxadustat or placebo. In roxadustat (616) and placebo (306) groups, hemoglobin mean (SD) change from baseline over weeks 28–52 was significantly larger for roxadustat versus placebo corresponding to least-squares mean difference of 1.85 g/dl (P < 0.0001). The proportion of patients achieving a response at week 24 was larger for roxadustat versus placebo (P < 0.0001). The proportion of patients receiving rescue therapy at week 52 was smaller for roxadustat (8.9%) versus placebo (28.9%); hazard ratio, 0.19 (P < .0001).

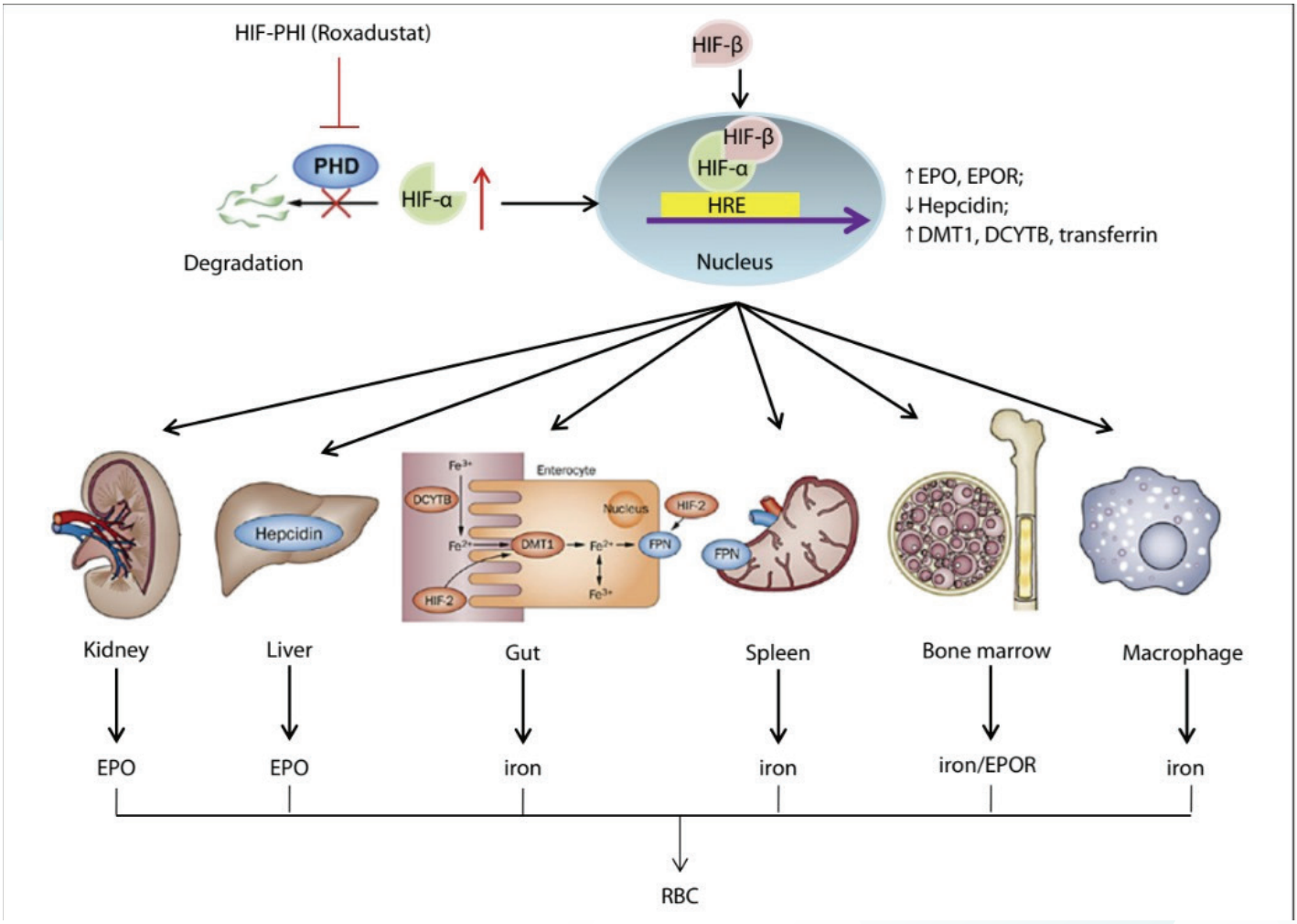



Figure. HIF coordinates erythropoietin production with iron metabolism. HIF PHIs stabilize HIF via suppressing the function of PHDs directly. EPO synthesis is stimulated by HIF in the kidney and liver. HIF activation could suppress hepcidin expression, which increases FPN expression on enterocytes, hepatocytes and macrophages, resulting in increased iron absorption and mobilization from internal stores. HRE: hypoxia responsive element; DCYTB: duodenal cytochrome b reductase 1; DMT1: divalent metal transporter-1; FPN: ferroportin.

| Potential advantages of roxadustat |
| --- |
| – Increases or maintains Hb levels effectively |
| – Increases endogenous EPO expression in physiological range |
| – Regulates iron metabolism (hepcidin reduction in particular) |
| – Increases iron absorption and is not influenced by inflammation |
| – Oral route |
| – Inhibits HIF-PHD reversibly and transiently |
| – No risk of hypertension |
| – Lowering of cholesterol levels |
| – Avoidance of high EPO levels |
| – Avoidance of side effects induced by iron supplementation |

Table. Advantages of Roxadustat

## Assessment of Biomedical Waste Generation in Dialysis Units: A Prospective Observational Study—Is it Time for "Green Dialysis"?

**Introduction:** Chronic kidney disease and as a consequence end-stage kidney disease (EKSD) is increasing globally. More and more people across the world are requiring hemodialysis (HD). The HD procedure produces a large quantity of biomedical waste. In addition, HD consumes a large quantity of water. In this study, we estimated the waste generated from our governmentfunded HD unit.

**Materials and methods:** It is a prospective study that was carried out in the dialysis unit in the nephrology department over a period of 1 year. The daily dialysis waste generated by the unit was measured using a spring balance. The proportion of plastic and nonplastic waste was determined. The quantity of biomedical waste generated per person in 1 year was calculated. Water input to the dialysis unit was noted. Water consumption per dialysis was calculated. Liquid chemical waste consumed was determined. Electricity consumed by the unit was measured by the electricity meter. The cost of waste disposal was calculated. The cost of electricity consumption and water consumption was also calculated.

**Results:** The approximate weight of waste disposables generated in one dialysis was 0.75 kg. Approximately each person generates 1.29 kg of waste per dialysis. Each dialysis required 125 L of reverse osmosis (RO) water and to generate 125 L of RO water 250 L of raw water was used. This happens as 125 L of water are rejected during the generation of 125 L of RO water. Thus, the net water consumption for each dialysis was 250 L. Chemical waste generated per dialysis includes 90 mL citric acid per dialysis and 130 mL bleach. Each dialysis consumes 3 kWh (three units) of electricity. The cost of electricity for each dialysis was 25.5 INR and the cost of water was 25 INR per dialysis. The cost of waste disposal for each dialysis bed was 6 INR.

**Discussion:** Each dialysis patient produced 1.29 kg of waste per dialysis which was like other studies. Unlike other studies, the waste was not being reprocessed or recycled.

**Conclusion:** Hemodialysis produces substantial biomedical waste. Proper waste disposal techniques and policies to promote reduction, reuse, and recycling will go a long way toward promoting green dialysis and reducing environmental as well as economic burdens.

**Sahay M, Sahay RK, Seshadri B, et al. Assessment of Biomedical Waste Generation in Dialysis Units: A Prospective Observational Study—Is it Time for "Green Dialysis"? J Assoc Physicians India 2023;71(10):49–52.**

## Efficacy and Safety of Directly Acting Antivirals in Patients with Hepatitis C Infection on Hemodialysis.

**Introduction:** The high prevalence of hepatitis C virus (HCV) infection among patients on maintenance hemodialysis (MHD) has been reported in India. Due to the strong association of HCV infection with death and cardiovascular disease, it is important to treat the infection. However, treatment poses a challenge since only a few directly acting antivirals recommended in the guidelines for HCV treatment in the dialysis population are available in India. Pangenotypic sofosbuvir has concerns about its safety due to its renal elimination.

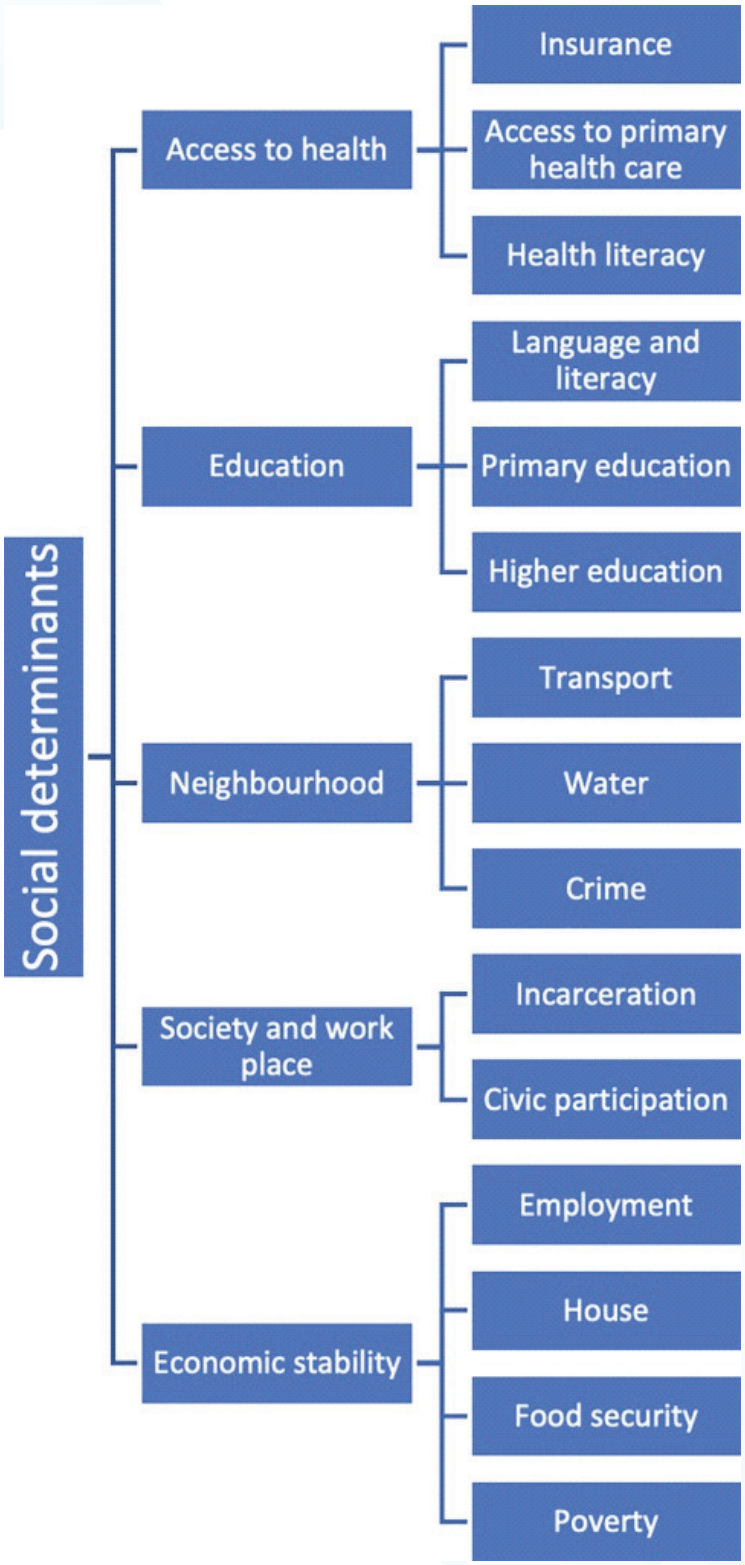
**Materials and methods:** This prospective study was undertaken between 2019 and 2020 among patients on hemodialysis with HCV infection. Clinical details, biochemical parameters, viral load, and genotyping were recorded and the outcome of treatment with sofosbuvir in combination with velpatasvir/daclatasvir for 12 weeks was noted. Descriptive and inferential statistical analysis was carried out. The Chi-squared/Fisher exact test was used.

**Results:** In the present study, 54 hemodialysis patients with HCV were treated with full doses of sofosbuvir and velpatasvir/daclatasvir. Genotype 1 was the most common, seen in 75.9% (n = 41). Around 96.29% (n = 52) of patients achieved sustained virological response (SVR) at the end of the study. None of the patients experienced serious side effects requiring dose reduction or discontinuation of the treatment.

**Conclusion:** Sofosbuvir combination therapy offers an excellent response in dialysis patients irrespective of the genotype and presence of cirrhosis with minimal monitoring as in non-chronic kidney disease (CKD) patients.

**Sahay M, Priyashree, Ismal K, Anuradha K, Lakshmi J. Efficacy and Safety of Directly Acting Antivirals in Patients with Hepatitis C Infection on Hemodialysis. The Journal of the Association of Physicians of India. 2023 Aug;71(8):11-2.**

## Social determinants of kidney health: a global perspective.

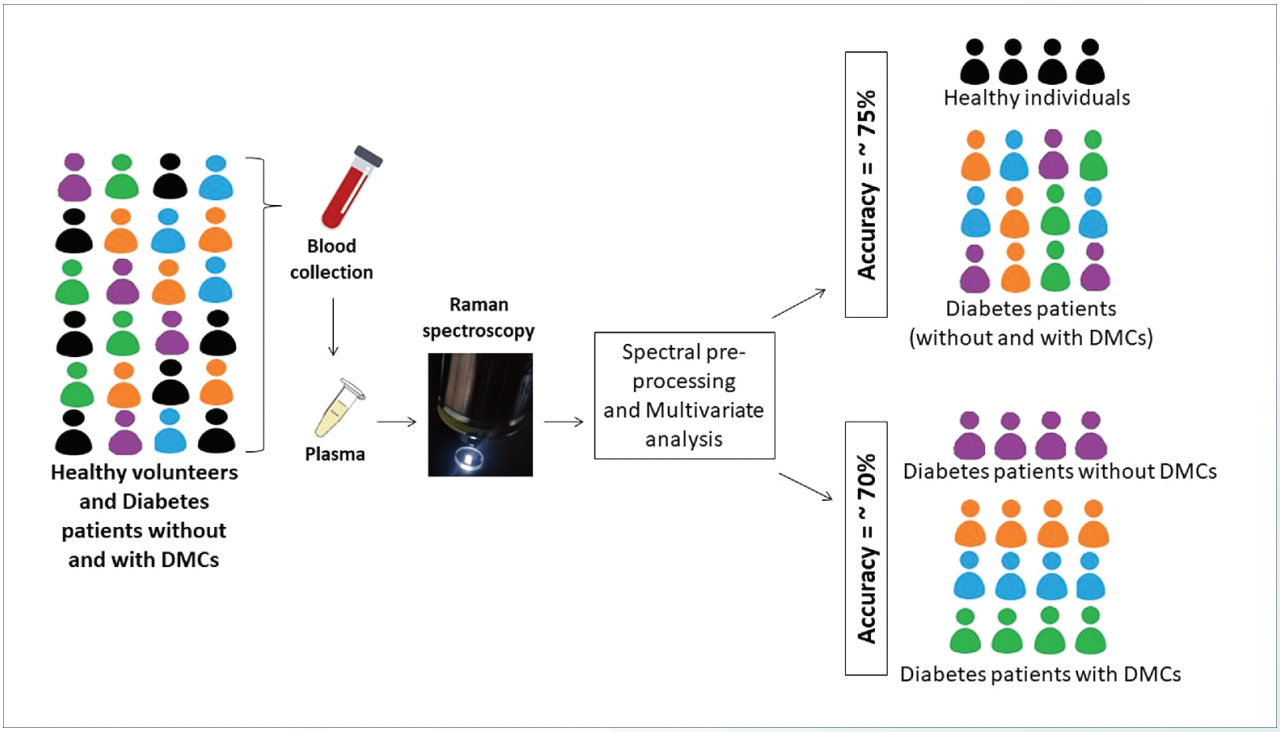



Social determinants of health (SDH) are the circumstances in which people are born, grow, work, live and age, including the broader set of forces and systems that influence the conditions of everyday life. They include a variety of factors such as education level, income, employment, housing, transportation, and access to healthy food, clean air and water, and health care services.

**Garcia-Garcia G, Norris KC, Sahay M, Ulasi II. Social determinants of kidney health: a global perspective. Frontiers in Nephrology. 2023;3.**

## Raman spectroscopy analysis of plasma of diabetes patients without and with retinopathy, nephropathy, and neuropathy.

Diabetes is now one of the major public health challenges, globally. Prolonged diabetes leads to various diabetic microvascular complications (DMCs) like retinopathy, nephropathy, and neuropathy. Multiple factors are likely to be involved in predisposing diabetic individuals to complications. Early detection or diagnosis is essential in developing strategies to reduce the risk factors and management costs of these diabetic complications. In this study, we employed Raman Spectroscopy (RS) to analyse the plasma samples of diabetes patients without and with DMCs along with the plasma samples of healthy subjects. Spectral comparisons revealed decrease in protein content in Diabetes group and further subsequent decrease in proteins in DMC groups when compared with control group, which corroborates with the fact that there exists increased secretion of proteins in urine and corresponding decreased protein content in their blood in case of diabetic individuals. Among all study groups, it was noted that 75% of control spectra show correct classification, while spectral misclassification is high amongst the subjects with Diabetes and DMCs. Interestingly, very few Diabetes and DMC plasma spectra are misclassified as control spectra. Findings demonstrate that 70% of the Diabetes subjects without complications can be correctly identified from diabetes with complications. Further, investigations could also attempt to explore the use of serum instead of plasma to reduce the spectral misclassifications as one of the abundant constituents namely clotting factors could be avoided. The outcome of RS study may be imminent for the early detection or diagnosis of DMCs.




**Jadhav PA, Hole A, Sivaprasad M, Viswanath K, Sahay M, Sahay R, Reddy GB, Krishna CM. Raman spectroscopy analysis of plasma of diabetes patients without and with retinopathy, nephropathy, and neuropathy. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. 2023 Sep 9:123337.**

## Practice of dialysis access interventional nephrology procedures in the Asia-Pacific region: Getting lay of the land.

**Aim:** This cross-sectional survey aimed to determine the prevalence of Interventional Nephrology (IN) practice amongst nephrologists in the Asia-Pacific Region (APR), specifically related to dialysis access (DA).

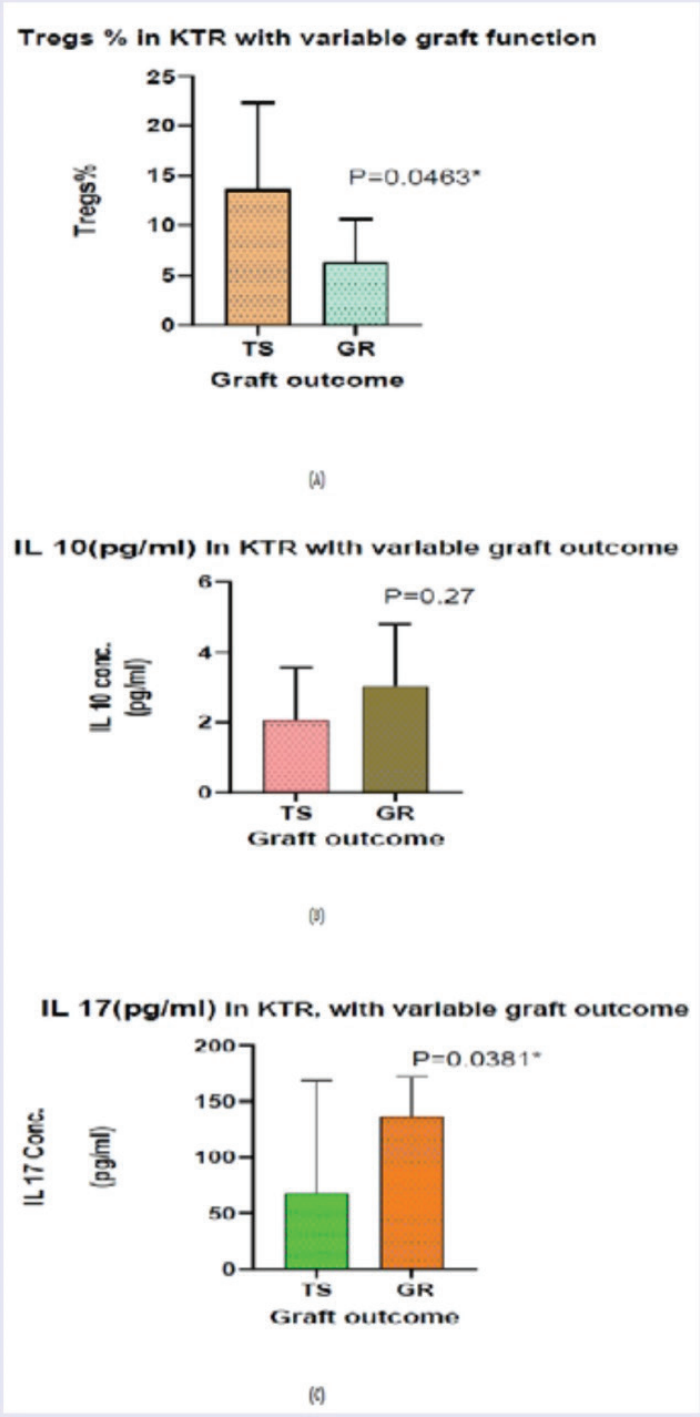
**Methods:** The Association of VA and intervenTionAl Renal physicians (AVATAR) Foundation from India conducted a multinational online survey amongst nephrologists from the Asia-Pacific to determine the practice of IN in the planning, creation, and management of dialysis access. The treatment modalities, manpower and equipment availability, monthly cost of treatment, specifics of dialysis access interventions, and challenges in the training and practice of IN by nephrologists were included in the survey.

**Results:** Twenty-one countries from the APR participated in the survey. Nephrologists from 18 (85.7%) countries reported performing at least one of the basic dialysis access-related IN procedures, primarily the placement of non-tunnelled central catheters (n-TCC; 71.5%). Only 10 countries (47.6%) reported having an average of <4% of nephrologists performing any of the advanced IN access procedures, the most common being the placement of a peritoneal dialysis (PD) catheter (20%). Lack of formal training (57.14%), time (42.8%), incentive (38%), institutional support (38%), medico-legal protection (28.6%), and prohibitive cost (23.8%) were the main challenges to practice IN. The primary obstacles to implementing the IN training were a lack of funding and skilled personnel.

**Conclusion:** The practice of dialysis access-related IN in APR is inadequate, mostly due to a lack of training, backup support, and economic constraints, whereas training in access-related IN is constrained by a lack of a skilled work force and finances.

**Jasuja S, Gallieni M, Jha V, Sahay M, et al. Practice of dialysis access interventional nephrology procedures in the Asia-Pacific region: Getting lay of the land. Nephrology (Carlton). 2023 Sep 11.**

# Immune Biomarkers in Renal Transplant Recipients and Long-Term Graft Outcome, a Retrospective Observational Cross-Sectional Indian Study




**Bejugama K, Guditi S, Taduri G. Immune Biomarkers in Renal Transplant Recipients and Long-Term Graft Outcome, a Retrospective Observational Cross-Sectional Indian Study. J Clin Nephrol Res 2023;10(1):1111.**

Background: A major challenge for successful renal transplantation is to develop an efficient regulation to prevent allograft rejection. T helper 17 cells (Th17) (pro-inflammatory) and many regulatory T cells (CD4+CD25+; Tregs) (anti-inflammatory) have opposite functions influencing allograft survival. In contrast, IL-10, produced by multiple cells has potent anti-inflammatory properties. Authors have examined whether the evaluation of the percentage of Treg cells (Tregs %) in peripheral blood leukocytes (PBLs) as well as serum concentrations of IL-17 and IL-10 levels may correlate with allograft dysfunction and rejection. Methods: This retrospective study included 57 patients who underwent kidney transplantation at the Nizam's Institute of Medical Sciences (NIMS). All patients were followed up for a minimum of two years. The Tregs% in PBLs and serum concentrations of IL 10 and IL-17 were measured simultaneously by the flow cytometry and sandwich Enzyme-linked immunosorbent assay (ELISA) method, respectively. Conclusions: The level of Tregs% was significantly decreased in PBLs of patients during allograft rejection (GR) in comparison to patients with stable transplant (ST) (median 6.25% vs. 5.85%, $p<0.05$). Serum IL-17 concentrations increased significantly in patients with graft rejection than in those with ST. While serum IL-10 levels also increased in GR than that in ST but they were statistically not significant. Furthermore, the Treg% levels, as well as the ratios of Treg/IL-10, Treg/IL-17, and IL-17/IL-10, can predict the long-term graft outcome. Further epigenetic studies are required to understand the variability of IL-10 levels with variable graft function.

## Posttransplant Cortical Necrosis in a Kidney Transplant Recipient

Posttransplant cortical necrosis (PTCN) is characterized by patchy or diffuse ischemic necrosis of all the elements of the renal cortex resulting from significantly diminished renal arterial perfusion due to vascular spasm and microvascular injury. It is commonly encountered in deceased-donor transplantation and can affect both the recipients of donor kidneys as noted in our case. The common predisposing factors for PTCN are severe and prolonged ischemia and hypotension, vascular insults (vascular thrombosis, thromboembolism, vasculitis, and surgical factors), disseminated intravascular coagulation, infections (sepsis and angioinvasive infections such as Aspergillus and Mucormycosis), immunological (systemic lupus erythematosus and anti-phospholipid antibody syndrome), TMA, and severe vascular rejection (usually as a part of antibody-mediated rejection). The factors that could have contributed to PTCN in our patient are poor deceased-donor management, prolonged warm ischemia due to the harvesting of multiple organs, and significant hypotension in the recipient intraoperatively. Although we could not perform, preimplantation or procurement biopsy can be a valuable tool in some of these cases at the time of organ harvesting.

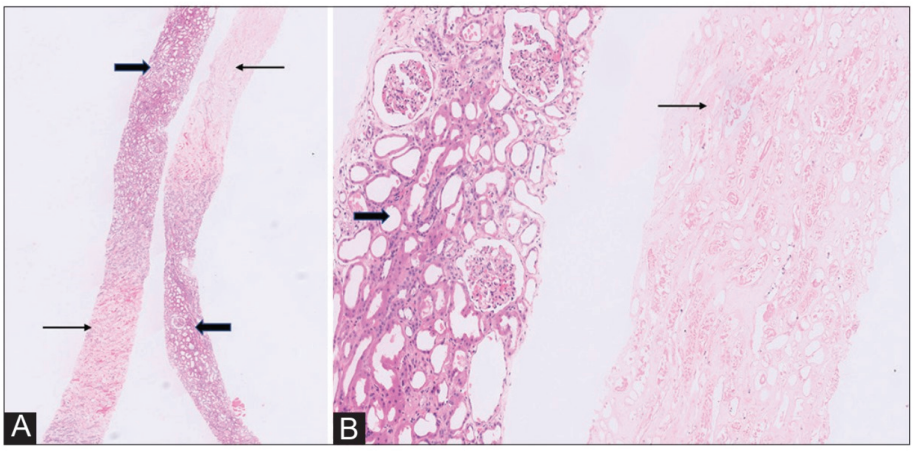



**Figure 1:** Light microscopy examination of the kidney allograft biopsy specimens showing areas of patchy cortical necrosis with ghost outlines of necrotic tubules (long and thin arrows). The intervened areas show acute tubular necrosis with vacuolization, flattening, and denudation of lining epithelium of tubules (short and thick arrows) (H and E; A: low-power; B: ×10)

**Etta PK, Madhavi T, Panjwani RS. Posttransplant cortical necrosis in a kidney transplant recipient. Indian J Transplant 2023;17:151-2.**

## What is the choice of anticoagulation in CKRT? RCA vs Heparin – What does the evidence say?

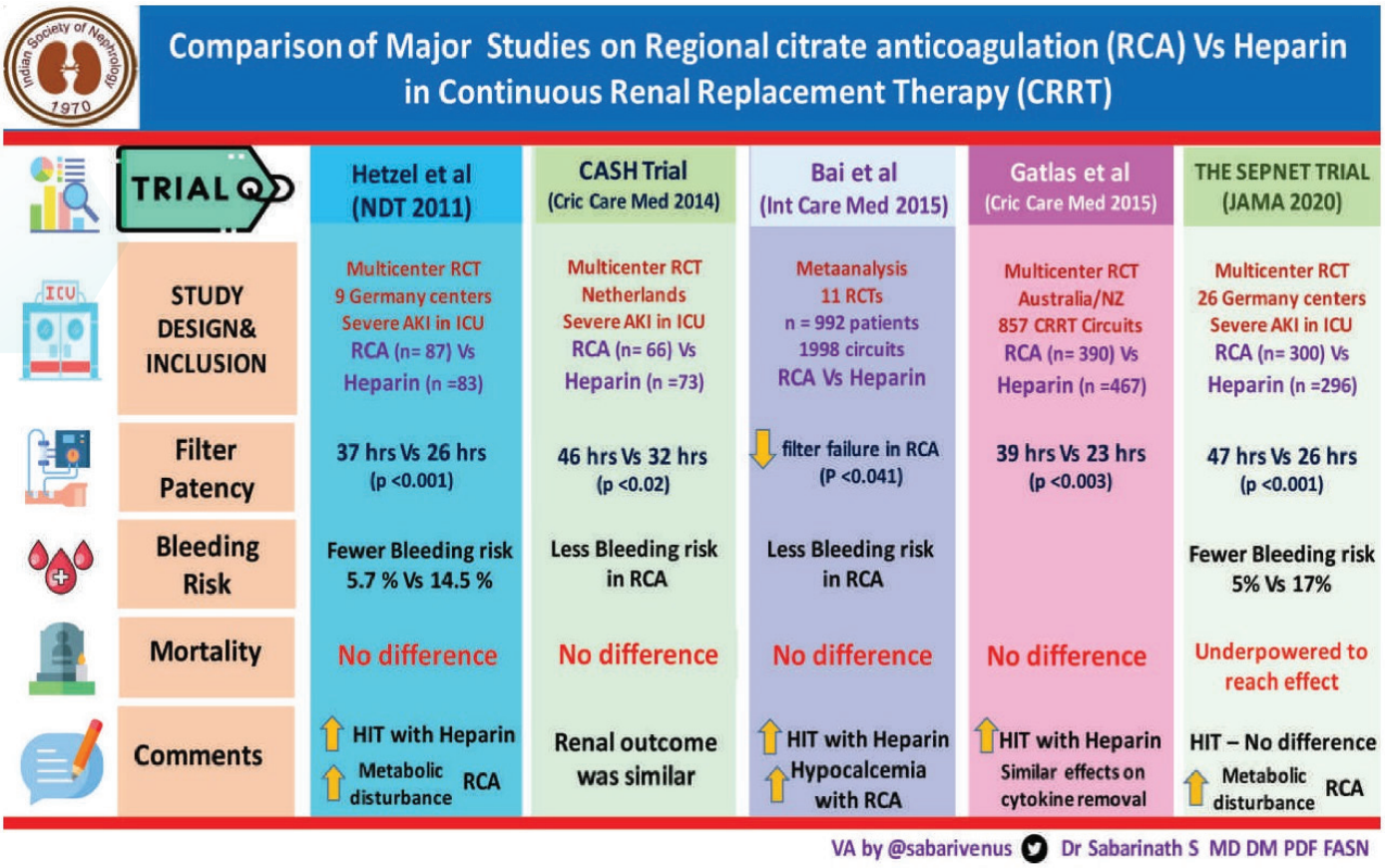
The choice between RCA and heparin anticoagulation in CKRT depends on various factors such as patient characteristics, comorbidities (coagulation status, bleeding risk, liver function), and institutional experience. The use of RCA in CKRT has several advantages. First, it provides effective anticoagulation, reducing the risk of circuit clotting. Second, it has a lower risk of bleeding complications compared to heparin, as it does not have systemic effects. Third, citrate has been shown to have potential benefits in modulating the inflammatory response and improving filter lifespan. However, RCA also has some considerations and challenges. One of the main concerns with citrate anticoagulation is the risk of metabolic complications, particularly in patients with liver dysfunction or impaired citrate metabolism. Citrate can lead to a decrease in ionized calcium levels, which can result in hypocalcemia. Hypocalcemia can manifest as cardiac arrhythmias, muscle spasms, and neurologic symptoms. To mitigate this risk, citrate anticoagulation requires careful monitoring of ionized calcium levels and adjustment of citrate infusion rates. Both the anticoagulant options have their benefits and challenges, and the decision should be made on a case-by-case basis, considering the individual patient's needs and circumstances. RCA is particularly advantageous in patients with increased bleeding risk or liver dysfunction. However, it requires careful monitoring of electrolytes and acid-base status. Heparin remains a viable option, especially when there are concerns regarding citrate metabolism. It is important to involve a multidisciplinary team, including nephrologists, intensivists and critical care specialists, in determining the most appropriate anticoagulation strategy for CKRT.

| | Choice of anticoagulant for CKRT | |
|---|---|---|
| **Clinical condition** | **No liver failure** | **Severe liver failure** |
| Low risk of bleeding | RCA, UFH | UFH, no anticoagulation |
| High risk of bleeding | RCA | No anticoagulation |
| Heparin-induced thrombocytopenia | RCA, Argatroban | Bivalirudin |

**Table. Selection of anticoagulant for CKRT**

CKRT: continuous kidney replacement therapy, RCA: regional citrate anticoagulation, UFH: unfractionated heparin

**Authored by Dr Praveen Kumar Etta, published by ISN Kidney Kolumns, July 2023 (https://isn-india.org/isn-news-letters)**


Comparison of Major Studies on Regional citrate anticoagulation (RCA) Vs Heparin in Continuous Renal Replacement Therapy (CRRT)
TRIAL
Hetzel et al (NDT 2011)
CASH Trial (Cric Care Med 2014)
Bai et al (Int Care Med 2015)
Gatlas et al (Cric Care Med 2015)
THE SEPNET TRIAL (JAMA 2020)
STUDY DESIGN& INCLUSION
Multicenter RCT 9 Germany centers Severe AKI in ICU RCA (n= 87) Vs Heparin (n =83)
Multicenter RCT Netherlands Severe AKI in ICU RCA (n= 66) Vs Heparin (n =73)
Metaanalysis 11 RCTs n = 992 patients 1998 circuits RCA Vs Heparin
Multicenter RCT Australia/NZ 857 CRRT Circuits RCA (n= 390) Vs Heparin (n =467)
Multicenter RCT 26 Germany centers Severe AKI in ICU RCA (n= 300) Vs Heparin (n =296)
Filter Patency
37 hrs Vs 26 hrs (p <0.001)
46 hrs Vs 32 hrs (p <0.02)
filter failure in RCA (P <0.041)
39 hrs Vs 23 hrs (p <0.003)
47 hrs Vs 26 hrs (p <0.001)
Bleeding Risk
Fewer Bleeding risk 5.7 % Vs 14.5 %
Less Bleeding risk in RCA
Less Bleeding risk in RCA
Fewer Bleeding risk 5% Vs 17%
Mortality
No difference
No difference
No difference
No difference
Underpowered to reach effect
Comments
HIT with Heparin
Metabolic disturbance RCA
Renal outcome was similar
HIT with Heparin
Hypocalcemia with RCA
HIT with Heparin
Similar effects on cytokine removal
HIT – No difference
Metabolic disturbance RCA
VA by @sabarivenus Dr Sabarinath S MD DM PDF FASN

# Achievements

- Our HNF senior consultants and faculty members have participated in the World Congress of Nephrology held at Bangkok, Thailand in April 2023. Several of them have been elected as the governing body members of International Society of Nephrology.
  - **Dr Swarnalatha Guditi, Dr Manjusha Yadla, and Dr Manisha Sahay** were elected as members of regional board, ISN
  - **Dr Manisha Sahay -** Deputy chair, ISN CME committee
  - **Dr Manjusha Yadla -** Deputy chair, ISN SoMe committee
  - **Dr Manjusha Yadla -** Executive Member, ISN

- The Osmania team comprising **Dr Sakthi and Dr Giri** won the 1st prize in PD Quiz competition among 27 teams at 10th Asian Pacific Chapter Meeting of the International Society for Peritoneal Dialysis (APCM - ISPD 2023) conference conducted from September 22-24, at New Delhi.

- **Dr Radhika Patil** got elected as Vice President (Basic Sciences) for ISOT and took her charges from october 2023.

- **Dr Manisha Sahay, Dr Manjusha Yadla and Dr Swarnalata Guditi** were invited as speakers at Bangladesh Renal Association annual conference in September 2023

- **Dr Manisha Sahay, Dr Manjusha Yadla, Dr Swarnalata Guditi, Dr Srikant Gundlapalli** and **Dr Praveen Kumar Etta** were invited as speakers/ chair persons at APCM-ISPD conference, held at Delhi in September 2023

- **Dr Anuradha Raman, Dr Manisha Sahay, Dr Manjusha Yadla,** and **Dr Swarnalata Guditi** were invited as speakers/ chair persons at ISOT conference, held at Kolkata in October 2023

- **Dr Manisha Sahay** was selected as Chair CME committee International society of Nephrology (will take over from April 2024)

- **Dr Manisha Sahay** was invited to Prague as KDIGO Anemia working group member for KDIGO update on anemia guidelines

- **Dr Manisha Sahay** was invited as speaker at DIACON held at Ahmedabad in September 2023

- **Telangana** was awarded as the state with highest deceased donations by NOTTO at Delhi in the presence of State and Central ministers on 3rd Aug 2023 on the occasion of National Organ Donation day

- **Telangana** got the best SOTTO award from Regional Organ and Tissue Transplant Organisation (ROTTO), Chennai, on 23rd September 2023

## Registration & Abstract Submission Notification

On behalf of ISNSC Organizing Committee,

We are pleased to open the submissions for abstracts for the upcoming Southern chapter of ISN, scheduled from 8th February 2024 at Hyderabad. This is an excellent opportunity for professionals to share their research, findings, and contributions with a wider audience.

## Key Dates:

Last date for abstract submission: 30th November 2023

Online registration closes on: 30th January 2024

Abstracts submitted after the deadline will not be considered, so we encourage you to prepare and submit your abstracts well in advance.

Details for abstract submission and conference registration can be found from the brochure here :

**https://virtualcme.live/PDF/isnsc1.pdf**

We look forward to your participation and contribution to what promises to be a highly informative and enriching event for the nephrology community.

Warm regards,

Organizing Committee,

Indian Society of Nephrology, Southern Chapter.

2024 HYDERABAD ISNSCCON
8th 9th 10th & 11th FEBRUARY

HYDERABAD NEPHROLOGY FORUM

# 43rd ANNUAL CONFERENCE
## INDIAN SOCIETY OF NEPHROLOGY
## SOUTHERN CHAPTER &
## 6th CHAPTER TSNCON

**8th to 11th February, 2024**

**Venue:** Hyderabad International Convention Centre (HICC) Hyderabad, Telangana

# ABSTRACTS
ARE NOW OPEN

Last date for abstract submission
**30th November 2023**

**CLICK HERE TO SUBMIT**

2024 HYDERABAD ISNSCCON

8th 9th 10th & 11th FEBRUARY

HYDERABAD NEPHROLOGY FORUM

# 43rd ANNUAL CONFERENCE

## INDIAN SOCIETY OF NEPHROLOGY SOUTHERN CHAPTER &

## 6th CHAPTER TSNCON

**REGISTRATION WILL OPEN SOON!**

**8th to 11th February, 2024**

**Venue:** Hyderabad International Convention Centre (HICC) Hyderabad, Telangana

2024 HYDERABAD ISNSCCON
8th 9th 10th & 11th FEBRUARY

HYDERABAD NEPHROLOGY FORUM

# REGISTRATION TARIFF (*All Amounts in INR)

| Category | EARLY BIRD Till NOV 30TH 2023 | REGULAR Dec 1st 2023 onwards till January 30th 2024 | SPOT REGISTRATION January 31st 2024 onwards |
|---|---|---|---|
| Delegate | 7000 | 10000 | 12000 |
| Postgraduate | 3000 | 5000 | 6000 |
| Accompanying person | 6000 | 9000 | 11000 |

## ONLINE REGISTRATION CLOSED BY 30TH JANUARY 2024

### Terms and conditions :

Registration fee is exclusive of GST 18%
Accompanying person above age 12 years need to be registered.

### Registration fee includes :

Admission to scientific program, Lunch and Dinner, refreshment during breaks
Registration material and participation kit, certificate
Accompanying person : Lunch and Dinner, refreshment during breaks

### Cancellation policy:

Till 15th January 2024, 50% cancellation fee & 50%refund will be processed.
After 15th January, no refunds! Cancellation requests have to be received by the mail: isnsccon2024@gmail.com

### Payment Details:

Account Name: NEPHROLOGY FORUM,
Bank Name: Union Bank of India,
Account Number: 107910100032051
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Brand Name: NIMS BRANCH,
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Pancard No: AABAN7890F

# Photo Gallery

## Photos from Immunology Workshop, NIMS, July 2023

## Photos from Mock Practical Exam, NIMS, August 2023

# Photo Gallery

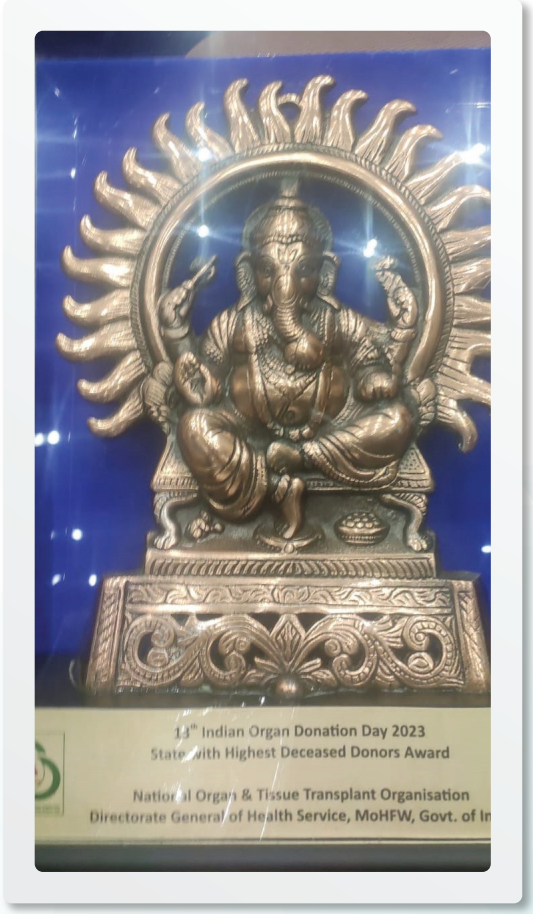
## Photos from Donors Felicitation Program on the event of National Organ Donation Day, Hyderabad, August 2023

# Photo Gallery




# Photo Gallery

## Photos from Indian Organ Donation Day Celebrations organized by NOTTO, Delhi, August 2023



**Telangana was awarded as the state with highest deceased donations by NOTTO at Delhi in the presence of State and Central ministers on 3rd Aug 2023 on the occasion of National Organ Donation day**

# Photos from Regional Organ and Tissue Transplant Organisation (ROTTO) meeting, Chennai, September 2023




**Telangana got the best SOTTO award from ROTTO, Chennai on 23 rd Sept 2023**

## Photos from WIN – ICON 2023, Bangalore, August 2023

# Photos from CME on Deceased Donor transplant challenges and solutions, at Gauhati Medical College, September 2023



## Photos from ISN SARB meeting held at Bagladesh, September 2023

**Dr Manisha Sahay, Dr Manjusha Yadla and Dr Swarnalata Guditi attended ISN SARB meeting held at Bagladesh on 9th September 2023**

# Photos from Bagladesh Renal Association annual conference, September 2023



# Fitness Corner


**Marathon event at Siddipet on 6th August 2023**



**NMDC Hyderabad Marathon event on 27th August 2023**

# Sponsors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