# The future of kidney disease care

The future of kidney disease care - a joint call for personalized action

open acces<u>s</u>

# Life/2021 virtual congress September 15-18, 2021 **Preliminary**

program

www.nephrologycampus.com as of May 20, 2021

Enabled by an educational grant of Fresenius Medical Care Deutschland GmbH

welcome to

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# **INTRODUCTION**

# Dear Life/community,

Welcome to the virtual Life/2021 nephrology congress. Meet nephrologists from all over the world, learn about the future of kidney disease care from the renowned faculty and implement new findings directly in your daily clinical practice.

Prof. Dr. C. Wanner University Hospital Würzburg - Germany



**Prof. Dr. P. Stenvinkel** Karolinska University Hospital, Nobel Assembly at Karolinska Institutet, Stockholm - Sweden

2021



# Life/2021 nephrology congress September 15 – 18, 2021





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Over 60 hours of scientific content 19 lectures 24 breakout sessions



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On the way to the congress, new educational buildings will be available to be discovered on the nephrology campus.



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# **Explore four learning pathways**

There are four learning pathways for you to choose from, each one focusing on an area of interest while covering a wide range of topics within this area. Lectures and breakout sessions within each learning pathway are tailored to the focus topic, with some central lectures and breakout sessions available within each learning pathway.

Nephro skills	Advanced analytics personalized therapy Joint decision Covid-19 Kills lab Vascular access Skills lab Vascular calcification Smart dialysis
Home dialysis	HHD pediatrics digital solutions Chronic kidney disease and transition Shared-care Personalized therapy
Hemo- dialysis	Anemia management Self-care Impact on health constitution HDF Advanced ESKD analytics Covid-19 Digital solutions Sodium and potassium
Holistic care and health innovations	New therapy solutionsSodium and potassiumInterdisciplinary approachesSustainability Personalized dialysisGlobal accessSkills labAdvanced analyticsDigital solutionsNutrition Regional challenges

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# About the four learning pathways

# Nephro skills

This learning pathway focuses on the interdisciplinary field of nephrology, comprising various subjects on individual patient care, novel approaches in different renal replacement therapies, and future medical decision making. Quality nephrology demands skills in many different areas: supporting patients with chronic kidney disease, running a dialysis center, performing vascular access surgery, staying up to date with the latest progress in transplantation medicine. Broaden your skill set in the field of nephrology.

# Home dialysis

This learning pathway provides a detailed look at the wide array of recent approaches to facilitating home dialysis. Home therapies represent a set of treatment modalities for chronic kidney disease patients. Home therapy is increasingly appreciated amongst patients as telemedicine or portable devices become available for patient empowerment. Healthcare professionals have already succeeded in overcoming numerous obstacles in their mission to a patient-centric therapy approach. In addition, patients on home therapies benefit from a reduced Covid-19 infection risk during this pandemic.

# Hemodialysis

This learning pathway will update on the latest advances in improving patient outcomes and quality of life. Hemodialysis remains the main therapy in managing end-stage kidney disease (ESKD). Despite many decades of experience with hemodialysis (HD), research is ongoing and provides promising improvements in patient care. Digitalization and data analysis offer new opportunities in personalizing patient therapies. There are novel insights in areas like sodium and anemia management or patient-centered or shared care.

# Holistic care and health innovations

This learning pathway includes topics on nutritional approaches, gut microbiome research for renal preservation, as well as sustainable and economic consequences of renal replacement therapies. A holistic approach to renal therapy requires the inclusion of various perspectives and areas of expertise. Digital solutions and advanced data analysis in nephrology will also be included. These sessions will inspire to rethink therapeutic approaches and renal care.

# Program at a glance

Nephro skills	Home dialysis	Hemodialysis	Holistic care and health innovation	
WEDNESDAY, SEPTE	MBER 15, 2021		2 pm – 7 pm CEST	
Plenary	Welcome and opening			
Plenary L2	Global burden of chronic kidney disease and the need for personalized renal care			
Plenary L3	Conservation about Hypoxia-inducible factor 1-alpha (HIF-1 $\alpha$ )			
BO1 How to run quality care in a dialysis center and home program	BO2 Pediatric dialysis - modality selection and practical aspects to overcome classic hurdles	BO3 Anemia management in the next decade	BO4 Sodium and potassium management Intake, gut microbiome and preservation of kidney function	
BO5 Challenges in transplantation: graft rejection and Covid-19	BO6 Setting up a home hemodialysis program	BO7 Sodium, volume control and cardiovascular outcomes in dialysis patients	BO8 Global access to affordable dialysis	
Plenary	Daily wrap up			
THURSDAY, SEPTEM	BER 16, 2021		12 pm – 7 pm CEST	
Plenary L4	Chronic kidne	ey disease – a clinical model of prematu	re ageing	
Plenary L9	Convection with conviction to CONVINCE			
L5 Joint decision making for personalized therapy	L6 Chronic kidney disease and transition management	L7 Cardiovascular protection in end- stage kidney disease	L8 Global awareness, impact and footprint	
BO09* Nephrological skills lab	BO10* Self-care in dialysis	BO11* Advanced analytics in nephrology	BO12* Digital solutions	
BO13 Vascular access management	BO14 Infection management in peritoneal dialysis	BO15 Uremic toxins and hemodiafiltration	BO16 Solving African challenges in dialysis	
Plenary		Daily wrap up		
FRIDAY, SEPTEMBER	17, 2021		12 pm – 7 pm CEST	
Plenary L10	Today the future becomes re	eality: Utilizing CRISPR to provide a trar	nsplant for every patient	
L11 Multiple aspects to improve current and future peritoneal dialysis management	L12 Cardioprotective dialysis at home	L13 Taking leaps to a personalized iron and anemia management	L14 Interdisciplinary approaches to unlock new therapy solutions to kidney disease	
BO17 Vascular calcification	BO18 Defining patient pathways as routes of personalized therapy	BO19 Challenges in dialysis delivery: Sodium balance, fluid status and organ damage	BO20 Does "one-size-fits-all" still apply to (pre-) dialysis treatment?	
BO21 Models of kidney care – worldwide	BO22 How to start home hemodialysis	BO23 Do we need potassium binders to combat hyperkalemia in patients with	BO24 Solving Eastern and Southeastern European challenges in dialysis	
perspectives and principles of care		advanced chronic kidney disease?		
Plenary	BER 18, 2021	advanced chronic kidney disease?		
Plenary SATURDAY, SEPTEME	BER 18, 2021 L19 Advantages of home dialysis during a pandemic	advanced chronic kidney disease?		
Plenary SATURDAY, SEPTEME	L19 Advantages of home dialysis during	advanced chronic kidney disease? Daily wrap up L16 Covid-19 and nephrology: unprecedented challenges and	10 am – 2 pm CEST	
Plenary SATURDAY, SEPTEME L15 Interconnected renal care Plenary L18 Plenary	L19 Advantages of home dialysis during	advanced chronic kidney disease? Daily wrap up L16 Covid-19 and nephrology: unprecedented challenges and lessons learned Response prediction in nephrology Farewell	10 am – 2 pm CEST	

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# **PRELIMINARY PROGRAM**

# WEDNESDAY, SEPTEMBER 15, 2021

2 pm

# WELCOME AND OPENING



Katarzyna Mazur-Hofsäß Franklin W. Maddux Christoph Wanner Peter Stenvinkel

# Global burden of chronic kidney disease and the need for personalized renal care

### Speakers

Dick de Zeeuw

Adeera Levin

### Chairs

2021

Christoph Wanner Peter Stenvinkel

Plenary lecture

The global burden of chronic kidney disease (CKD) continues to increase not only because of the higher prevalence due to traditional causes of CKD such as diabetes and hypertension, but also because of the increasing incidence of CKD resulting from infections and unknown causes in the so-called CKD hotspots. The first lecture summarizes what is currently known about the epidemiology of CKD and the gaps therein. The second lecture deals with the major steps that have been made in halting or slowing the morbidity of the disease in the last 20 years. However, despite this big success, the residual risk remains still extremely high, therefore showing the need for personalized precision renal care.

L03

# Conservation about Hypoxia-inducible factor 1-alpha (HIF-1α)

Speakers

TBD TBD

Plenary lecture

Chairs

Christoph Wanner Peter Stenvinkel L02

# WEDNESDAY, SEPTEMBER 15, 2021



## How to run quality care in a dialysis center and home program

### Speakers

Wim van Biesen

Stefano Stuard

Natalie Borman

Explore and learn to understand the different challenges in setting up a renal care program and how they can be solved. An expert panel from hospital settings, large provider outpatient clinics and home programs will share various quality measures and controls, which are required to set up a renal care program efficiently while still providing the highest standard of care.

# Pediatric dialysis – modality selection and practical aspects to overcome classic hurdles



# Home dialysis

Speakers

Peter Barany Rukshana Shroff

This workshop will focus on the right modality selection for patients and how the common hurdles can be overcome. Another focus of the discussion will be the advantages of peritoneal dialysis solutions especially for pediatric patients as well as the performance of hemodiafiltration in pediatric therapy.

# Anemia management in the next decade



# Speakers

Chairs

Kai-Uwe Eckardt

Iain Macdougall Lucia Del Vecchio

How can anemia be treated in the future? To answer this question, the adequacy of current iron supplementation and the large potential of hypoxiainducible factor (HIF) stabilizers for future renal anemia treatments will be discussed. Find out more about the future of anemia management.

# Sodium and potassium management: Intake, gut microbiome and preservation of kidney function



Page 8

# Speakers

Denis Fouque Charles Chazot Carla Avesani

Disorders of sodium and potassium are commonly encountered in chronic kidney disease and can have serious consequences. In this workshop, you will learn more about the impact of high sodium and potassium intake and the growing body of literature supporting links between sodium intake and microbiota, which may play a role in the development and maintenance of high blood pressure.

# Holistic nephrology

Nephro skills

Hemodialysis

# WEDNESDAY, SEPTEMBER 15, 2021

### Challenges in transplantation: graft rejections and Covid-19

### Speakers

Lionel Rostaing Miriam Banas Mario Cozzolino

Nephro skills

Post-transplant surveillance for acute rejection is mainly based on regular monitoring of serum creatinine levels and transplant biopsies upon functional renal impairment. This talk gives an overview about alternative approaches to detect and monitor kidney transplant rejection. Additionally, this session will address organ transplantation challenges in times of the Covid-19 pandemic. Discuss and learn more about:

Novel monitoring and detection tools for transplant rejection, explore antibodydepletion techniques to overcome transplantation challenges for a successful AB0- and/or human leukocyte antigens (HLA)-incompatible transplantation. Find out about the effects of immunoadsorption in combination with membrane filtration and the impact on complement markers. This session will shed light on diagnostic tools to acquire data and interpret these appropriately regarding hemostasis parameters and thrombin generation in the context of doublemediated rejection.

### Setting up a home hemodialysis program



# Speakers

Eric J. Goffin James G. Heaf Maria F. Slon Roblero

Explore the benefits and hurdles of setting up a home hemodialysis program for patients. Discuss how patients can be motivated and empowered for home therapies; solutions and best practices will be discussed.

# Sodium, volume control and cardiovascular outcomes in dialysis patients



### **Speakers**

Peter J. Blankestijn Bernard Canaud

Explore the cardiovascular impact through effective volume control and fluid management. The workshop will show you how to best diagnose and reduce hypervolemia in your patients, using effective medication or ultrafiltration. Interesting case studies will be discussed and will address water and sodium overload as well as the prevention thereof to improve cardiovascular disease and mortality. Early detection is the key to prevention of pathogenesis and can be supported by using lung ultrasounds and biomarkers.

Hemodialysis

Home dialysis

# WEDNESDAY, SEPTEMBER 15, 2021



# Global access to affordable dialysis

### Speakers

Sidy M. Seck Peter Kotanko

Currently, more than 2 million people die each year due to the lack of affordable dialysis and if no solution is found this number will increase over the next years. We propose allo-hemodialysis (alloHD) as a simple and low-cost HD alternative. In alloHD, the patient's blood is dialyzed against the blood of a healthy subject (buddy), who receives the excess fluid and uremic solutes and excretes them via his/her healthy kidneys. By eliminating the "classical" dialysate, both technical complexity of hemodialysis and machine costs are significantly reduced, making it an affordable HD alternative.



<u>Holistic nephrology</u>

### Daily wrap up

Franklin W. Maddux Christoph Wanner Peter Stenvinkel

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# Chronic kidney disease – a clinical model of premature aging

### Speaker

Chairs

Peter Stenvinkel

Adeera Levin Goce Spasovski

Chronic kidney disease (CKD) shares phenotypic similarities with other chronic burdens of lifestyle diseases that accumulate with age, such as type-2 diabetes, heart failure, vascular and neurodegenerative diseases. These, often coexisting, diseases share a prematurely aged phenotype, involving early vascular disease with calcification, osteoporosis, frailty, cognitive dysfunction, depression, and muscle wasting. Nine hallmarks of aging have been identified that are common across taxa, highlighting their fundamental importance. These include dysregulated mitochondrial metabolism and telomeres biology, epigenetic modifications, cell-matrix interactions, proteostasis, dysregulated nutrient sensing, stem cell exhaustion, "inflammageing" and immunosenescence. Uremic inflammation, which resembles "inflammageing" in the general population, is part of an intermediate inflammatory phenotype mechanistically related to mechanisms involved in the aging process, such as telomere shortening, tissue hypoxia, oxidative stress, repressed Nrf2-Keap1 expression, mitochondrial dysfunction, and altered nutrient sensing, which can have a direct effect on cellular and tissue function. Deeper mechanistic insight into the phenomena of premature aging might improve the application of novel interventions and provide novel leads to combat premature aging processes in the chronic burden of lifestyle diseases. Novel opportunities to better understand and target premature aging have recently emerged. As an example, comparative patterns among several species endowed with amazing longevity and unique metabolic profiles in the animal kingdom should be exploited to better understand aging and age-related diseases. Moreover, recent data indicate that the uremic milieu promotes somatic mutations that resemble the ones documented in children with Hutchinson-Gilford Progeria syndrome. Finally, as accumulating evidence show that the skewing towards a more carnivorous diet with processed food in the Western world has resulted in a dietary association with the "diseasome of aging" a transformation of food systems should be considered.

Plenary lecture

L04

# **Convection with conviction to CONVINCE**

### Speakers

### Chairs

Peter J. Blankestijn

Christoph Wanner Bernard Canaud

Online hemodiafiltration (HDF) is an established renal replacement modality for patients with end stage chronic kidney disease that is now gaining clinical acceptance worldwide. Currently, there is a growing body of evidence indicating that treatment with HDF is associated with better outcomes and reduced cardiovascular mortality for dialysis patients.

In this presentation current evidence on the effects on clinical outcome is summarized and possible mechanisms of beneficial effect are discussed. Currently, treatment with HDF appears to improve the survival of dialysis patients predominantly due to a reduction in their cardiovascular burden, and this reduction is linked to the sessional convection volume exchanged. Information on the effects on patient reported outcome measures is very limited. Presently, large clinical trials are progressing, which hopefully will deliver definite answers in the near future. Information on rationale, design and present status will be shared with the audience.

### Joint decision making for personalized therapy

L05

**Speakers** Jolanta S. Malyszko Monika Lichodziejewska-Niemierko Natalie Borman Anabela Rodrigues

Adeera Levin Natalie Borman

Chairs

This lecture highlights new perspectives in managing self-care with the establishment of home peritoneal dialysis (PD) and home hemodialysis (HHD). Further, it will teach about how the hurdles for HHD and how such barriers can be overcome. Finally, some very promising new perspectives in the approach of personalized self-care will be shared.

Plenary lecture

**Nephro skills** 

### Chronic kidney disease and transition management

### Speakers

### Chairs

Ziad A. Massy Dick de Zeeuw Marie Evans Pedro Ponce Dick de Zeeuw Marie Evans

Home dialysis

Chronic kidney disease (CKD) is associated with multiple comorbidities and a particularly high level of polymerization. Recent results from CKD cohort studies describe the complexity of prescription in the CKD setting, due in part to the lack of up-to-date guidelines on dose level adjustments in patients with impaired kidney function. However optimal drug management should be an important target for preserving kidney function. Many interventions have been tested to reduce the risk, but we are nowadays still confronted with a high unmet need. Target findings and the search for new interventions must change to include more individual and precise approaches to delay the transition to renal replacement therapy (RRT).

For people with advanced chronic kidney disease and evidence of progression to renal replacement therapy, personalized transition management offers a better option to prepare these patients for dialysis, transplantation, or conservative care. Patient involvement in the decision-making process is important and requires unbiased patient education. Another very important aspect of the proper transition of CKD patients into dialysis is the preparation of timely access management by e.g., fistula creation.

### Cardiovascular protection in end-stage kidney disease

### Speakers

### Chairs

Jürgen Floege

Maarten W. Taal Bernard Canaud Jürgen Floege Andrzej Wieçek Francesca Mallamaci

Andrzej Wieçek

Hemodialysis

End-stage kidney disease (ESKD) is associated with significantly increased morbidity and mortality resulting from cardiovascular disease (CVD), which is an underlying disease affecting the majority of dialysis patients. This is likely due to ventricular hypertrophy as well as other risk factors, such as chronic volume overload, sodium imbalance, vascular calcification and mineral bone disorder, atrial fibrillation and many other aspects related to uremic milieu. Better understanding the impact of these numerous factors on CVD might be an important step for the prevention and treatment of ESKD. The lecture will demonstrate how the adjustment of hemodialysis parameters as well as therapeutic and preventive measures like physical exercise can be beneficial for patients on dialysis.

L07

### Global awareness, impact and footprint

# Speakers

### Chairs

Christoph Wanner Gloria E. Ashuntantang James Fotheringham Raymond Vanholder Peter J. Blankestijn Christoph Wanner Gloria E. Ashuntantang

Although the number of patients undergoing dialysis is constantly increasing, there is a significant variability due to different resources worldwide. Factors like access to dialysis, treatment strategies, the timing of dialysis initiation, and the classical dialysis schedule will be discussed during this session. How will the increasing costs of renal replacement therapy affect the future treatment options for individual patients and the healthcare burden in individual countries? Among medical therapies, the environmental impact of dialysis seems to be particularly high, suggesting that the nephrology community has an important role to reduce resource usage like reusing reverse osmosis reject water, usage of renewable energy and improving waste management.

### Nephrological skills lab

### Speakers

Detlef Klein Maximilian J. Roeder Ulrich Moissl Catharina V. Schramm Kai Lopau Daniel Kraus

**Nephro skills** 

1.Fistula care: This session will demonstrate fistula sonography and discuss (a) useful recommendations for shunt monitoring, (b) optimal preparation for shunt surgery and what prior examinations are useful, (c) different fistula puncturing strategies using sonography according to recent ERBP vascular guidelines

2.Peritoneal dialysis (PD) catheter care and implantation techniques: This session will discuss and demonstrate (a) PD catheter implantation preparation of the patient, (b) exit site care and what to do in case of infection, (c) discuss approaches to infection in line with 2019 ISPD guidelines

3.Body Composition Monitoring: Training and hands on practice. The value of bio-impedance measurements in daily routine hemodialysis care to determine optimal dry weight

4.Renal Biopsy: Required instruments and equipment, procedures, short videos on how to find the kidney, complications to avoid

5. Atrial catheter implantation: Practical training

# Self-care in dialysis

# BO10

# Speakers

James Fotheringham Martin Wilkie Tania Barnes

Care to care? Find out about the importance of patient involvement in therapy and how shared care prepares for successful transition to home hemodialysis. Learn from the experts how to start and facilitate a shared or supported selfcare program in your unit.

# Advanced analytics in nephrology



# Speakers

Markus Ketteler Hiddo J. Lambers Heerspink Luca Neri

What can nephrology expect from the digital revolution? Visit this workshop to take part in lively discussions and catch a glimpse of the future. See how "advanced analytics" can be applied to help improve individual patient care. Learn what impact predictions from electronic medical records can have, how to implement personalized treatment approaches to delay the progression to end-stage kidney disease (ESKD), how to prepare patients for transition to dialysis and many more applications of applied data analytics.

# **Digital solutions**

### **Speakers**

Jeroen P. Kooman Len Usvyat Stefan Moenk

Explore the opportunities the translation of recent technological breakthroughs offer to improve patient care. Can virtual reality help improve patient self-care? Will real-time data transmission and analytics make therapy management easier? Find out which benefits can be expected from handheld devices, remote monitoring and pervasive sensing, as well as what developments are imminent and how analytics and artificial intelligence (AI) can improve future personalized care delivery.



Holistic nephrology

Home dialysis



### Vascular access management

### Speakers

Anabela Rodrigues

Anna Caroli

**Nephro skills** 

Home dialysis

Pedro Ponce

Discover how integrated patient management based on organizational models and technical advances as well as primary and secondary vascular access prevention may improve patient outcomes. Additionally, you will find out more about pre-operative assessment for arteriovenous fistula placement for dialysis and the value of predicting vascular access outcome.

### Infection management in peritoneal dialysis



### Speakers

Jolanta S. Malyszko Olof Heimburger

Peritoneal dialysis (PD)-related peritonitis remains the most frequent treatmentrelated infection and is the greatest contributor to infection-related morbidity, including hospitalization risk and temporary or permanent transfer to hemodialysis. Many treatment innovations have been shown to be effective in reducing the risk for exit site infection and PD-related peritonitis. This breakout session reviews current knowledge in diagnosing and managing PD-associated infections (exit site and peritonitis).

### Uremic toxins and hemodiafiltration

### Speakers

Raymond Vanholder Vincenzo Panichi

Hemodialysis

Since the seminal work on classification, concentration, and interindividual variability of uremic toxins, new aspects of 'modern' dialysis treatment have emerged. Uremic toxins (UT) have been identified and related to higher rates of morbidity and mortality in dialysis patients. Find out more about their effects on cardiovascular disease and how to improve the removal of UT during dialysis. Usual doses of erythropoiesis-stimulating agents (ESAs) have limited impact on chronic kidney disease - associated anemia. This session will discuss online high-volume hemodiafiltration and the remediation of ESA resistance in patients suffering from uremic inflammation, in reference to the REDERT study.





# Solving African challenges in dialysis

### Speakers

Charles R. Swanepoel Rasha Hussein Gloria E. Ashuntantang

Holistic nephrology

Explore how different challenges of renal care can be solved and what best practices have been established recently. Take part in the discussion between expert nephrologists from academia and large provider networks. A special focus will be the pediatric treatment, lack of workforce and overall access to treatment and dialysis in several African countries. Exchange on cases and participate in the development of a plan that will impact care implementation and the quality of future care delivery.



# Daily wrap up

Franklin W. Maddux Christoph Wanner Peter Stenvinkel

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# Today the future becomes reality: Utilizing CRISPR to provide a transplant for every patient

# Speakers

# Chairs

Peter Stenvinkel

Christoph Wanner

Fiona Loud TBC

Plenary lecture

Michael Curtis

The 2020 Nobel Prize in Chemistry was given for discovering one of gene technology's sharpest tools: the CRISPR/Cas9 genetic scissors. Researchers can use these tools to alter the DNA of animals, plants and microorganisms with extremely high accuracy. This technology revolutionized the molecular life sciences, brought new opportunities for plant breeding, is contributing to innovative cancer therapies and may help curing inherited diseases.

The developments and advancements to the clinic and novel approaches to treat human disease using CRISPR-based genome and epigenome editing will be discussed.

# Multiple aspects to improve current and future peritoneal dialysis management

### Speakers

# Chairs

Wim van Biesen Simon J. Davies Monica Lichodzierjewska-Niemierko Claus P. Schmitt Wim van Biesen Jolanta S. Malyszko

Nephro skills IC IC IC Th Th

This lecture will share important insights from recent publications related to peritoneal dialysis (PD) management: from the optimization of the patient's fluid status as understood from the IPOD-PD study to managing sodium and fluid overload to avoid membrane failure and possible infections such as peritonitis. Insights from the consortium of the European research and innovation program Horizon 2020 will be shared. The focus will be set on improving aspects of fluid status of PD patients to prevent future development of heart disease and other comorbidities leading to technique failure.

# Cardioprotective dialysis at home

# Speakers

# Chairs

Allan Collins James G. Heaf Maria Slon Roblero Allan Collins Eric J. Goffin

Home dialysis

One of the most concerning risk factors for end-stage kidney disease (ESKD) patients is cardiovascular damage. Home hemodialysis (HHD) is a means of personalizing the approach to renal replacement therapy (RRT) and enabling reduction of the high incidence of cardiovascular disease. This lecture will show how stress on the heart and vascular system will contribute to the kidneys, which fail to efficiently remove excess fluid, causing elevated blood pressure. Consequently, fluid status needs close monitoring and frequent adjustments. Treatment options such as home-based therapies like the HHD modality allows for the detection and control of fluid overload and hypertension, cardiac remodeling, and vascular calcification as essential factors to preserve and improve the cardiovascular health of individual patients.

# Taking leaps to a personalized iron and anemia management

### Speakers

# Chairs

Iain Macdougall Kai-Uwe Eckhardt Stefano Stuard lain Macdougall Kai-Uwe Eckhardt

Hemodialysis

In this session, current and future options in the management of anemia in dialysis patients will be presented and discussed. Iron supplementation has been shown to be a well-tolerated method to decrease erythropoiesisstimulating agents (ESA) doses and improve cardiovascular safety. The new therapeutic agents HIF-PHIs are potentially safe alternatives to ESAs to maintain physiological levels of erythropoietin in addition to enhancing iron utilization and suppressing hepcidin production. However, the HIF-PHIs is currently still under investigation for anemia treatment in non-dialysis and especially in dialysis patients. Maintaining hemodialysis (HD) patients within narrow hemoglobin targets, preventing cycling outside target, and reducing ESA dosing to prevent adverse outcomes requires considerable attention from caregivers. Predictive models calculating the long-term response to the ESA/iron therapy support decision-making regarding anemia management in HD patients treated in the center.



L13

Interdisciplinary approaches to unlock new therapy solutions to kidney disease

# Speakers

# Chairs

Ali Gharavi Lionel Rostaing Juliana Blum Ziad A. Massy Lionel Rostaing

Holistic nephrology

Genomic medicine including Next Generation Sequencing (NGS) technologies aims to use genetic information of patients to improve the understanding of many human diseases. These new approaches and strategies have great potential to revolutionize nephrology research and to be translated into clinical practice. Recent examples will be presented in this session.

The number of kidney transplant candidates is increasing sharply. Among those patients, many transplant recipients are hyperimmunized or incompatible to the transplant organ. In this lecture, various strategies will be discussed to ensure successful kidney transplantation in such high-risk patients.

Availability of vascular conduits that can provide safe, infection-free, and durable access for hemodialysis patients remains a substantial challenge and an unmet clinical need. New devices, biological approaches and techniques are in development for fistula placement and will be discussed in this session.

### Vascular calcification

### **Speakers**

Pieter Evenepoel Juan M. Rodriguez Portillo Marc Vervloet

The early vascular aging process mediated by medial vascular calcification results in a marked discrepancy between chronological and biological vascular age in chronic kidney disease. Medial vascular calcification is associated with excessive cardiovascular morbidity and mortality. In this workshop, you will have the opportunity to learn more about novel preventive options from dedicated leaders in this field.

### Defining patient pathways as routes of personalized therapy



### Speakers

Marie Evans Sandip Mitra Elke Schäffner

Recently, many connections of pre-dialysis care to dialysis outcomes and modality choices have been made. Learn how self- and supported care ensure care continuity and soft transitioning, when renal replacement therapy (RRT) should be initiated and how to combine therapy and dialysis structure as best fitting for your individual patients.

**Nephro skills** 

Home dialysis



Challenges in dialysis delivery: Sodium balance, fluid status and organ damage

### Speakers

Vincenzo Cantaluppi Simon J. Davies Maarten W. Taal

Do we know what are the effects of kidney disease and dialysis treatment on the human body? Follow discussions and case studies on how perfusion of the brain and other organs is affected by uremic toxicity and dialysis treatments, how organ damage can be prevented by adequate and individual treatment calibration. Sodium levels are one important parameter which can have harmful effects such as hemodynamic stress. The session will elaborate on how this parameter can be balanced to ensure hemodynamic stability during hemodialysis.

### Does "one-size-fits-all" still apply to (pre-) dialysis treatment?

### **Speakers**

Dick De Zeeuw Christoph Wanner

This workshop will discuss the impact of recent and current pharmacologic interventions targeting albuminuria and renal function. It will address how we can improve in the future in relation to clinical studies. During the transition phase into maintenance hemodialysis treatment, mortality rates are high and preventive pharmacologic interventions are often abandoned. Patients often become frail, challenges arise of studying patients on dialysis and personalized treatment approaches are often preferred. What questions need to be solved (treatment time, dialysis sodium prescription, anticoagulation) and what pragmatic approaches can be taken?

# Models of kidney care - worldwide perspectives and principles of care

### **Speakers**

- Kitty Jager
- Adeera Levin

Explore how care delivery is impacted by different models of renal care. Chronic kidney disease (CKD) prevalence steadily increases and global developments such as the coronavirus crisis, differences in healthcare systems and an increasing variety of patient conditions call for individual models of kidney care on a national and personal level. This breakout session will provide up-to-date information on different models of kidney care and encourages you to ask and discuss personal questions or problems regarding the best model of kidney care for your patients.

**Nephro skills** 



302

BO2



# How to start home hemodialysis

# Speakers

Allan Collins Maxence Ficheux Ercan Ok

This workshop will emphasize how to implement and grow home hemodialysis programs. You will learn how to support physicians and nurses effectively and efficiently to sustain and improve quality care and overcome limitations, how to optimize hemodialysis through new technologies and how to deal with patients' fears and possible hurdles such as high costs.

# Do we need potassium binders to combat hyperkalemia in patients with advanced chronic kidney disease?

# Speakers

# Chair

Ziad A. Massy

Jürgen Floege Andrzej Wieçek Ziad A. Massy

Should potassium be managed conservatively in dialysis and pre-dialysis chronic kidney disease (CKD), or should we focus on sufficient reninangiotensin-aldosterone-system blocking and use potassium binders to maximize cardiovascular protection? Follow an interesting debate on milestones and best practices to fight hyperkalemia in CKD patients and participate with your own arguments.

# Solving Eastern and Southeastern European challenges in dialysis

### Speakers

Goce Spasovski Monica Lichodzierjewska-Niemierko

Renal care varies worldwide because of country specific demographic and socioeconomic characteristics. Leading nephrology experts from academia and a large provider network in Eastern and Southeastern Europe will present best clinical practices to guarantee high-quality renal care and perspectives on how to overcome challenging demographic and socioeconomic conditions in that region for renal care. Discuss your ideas, exchange your cases and take part in the elaboration of a plan on how to impact care implementation and future quality care delivery.



Holistic nephrology

# Daily wrap up

Franklin W. Maddux Christoph Wanner Peter Stenvinkel

Home dialysis



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SAVE THE DATE Sep 15 – 18, 2021 om

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# SATURDAY, SEPTEMBER 18, 2021

### 10 am

### Interconnected renal care

### Speakers

# Chairs

Jeroen P. Kooman Wim Van Biesen Franklin W. Maddux Franklin W. Maddux Hiddo J. Lambers Heerspink

This session starts with the newest examples and questions whether currently available wearable sensor technology will potentially benefit chronic kidney disease (CKD) patients. The success of such wearable medical devices very much depends on how they will fit into healthcare structures.

Over the last decades, individualized healthcare decision-making became technically feasible. To enhance patient-centered healthcare, tools using big data and artificial intelligence (AI) were developed to support shared decision-making and to explain and visualize the effect of different interventions on patients.

The fast-growing global epidemic of chronic kidney disease demands immediate attention and a long-term strategy to cope with the implications of this worldwide challenge. In the last talk, the vision of interconnected intelligence will be introduced to you. This vision will result in a greater capacity for understanding CKD-specific implications, innovation, and progress to individualized treatment and improve healthcare systems.

# Advantages of home dialysis during a pandemic

### Speakers

# Chairs

**Bernard Canaud** 

Natalie Borman Allan Collins

Patients with advanced chronic kidney disease constitute a Covid-19 vulnerable population and a challenge in the prevention and control of the disease. Homebased renal replacement therapies offer an opportunity to manage patients remotely, thus reducing the likelihood of infection due to direct human interaction. Patients are seen less frequently, limiting the close interaction between patients and healthcare workers who may contract and spread the disease. Increasing home hemodialysis (HHD) utilization results in improved patient outcomes, engagement, and overall quality of life.

Hemodialysis

Home dialysis



# SATURDAY, SEPTEMBER 18, 2021



### Speakers

**Nephro skills** 

# Chairs

Tobias Huber Annette Bruchfeld Stefano Stuard Christoph Wanner

The Covid-19 pandemic has changed the world, affected millions of patients, healthcare professionals and changed how infected patients are treated. It also changed the way we approach vaccination as the most effective to contain and end this pandemic.

This lecture will discuss approaches tackling the Covid-19 pandemic, from identification of SARS-Cov-2 virus, diagnostic of the virus to the current vaccination progression with the different platforms.

In this lecture and discussion, the panel of experts will share their experiences during this pandemic, address selected topics related to the virus, disease and will finalize with vaccination progress to date, leading to the first lessons learned from this pandemic.

# Food as medicine

### **Speakers**

Carla Avesani Charles Chazot Denis Fouque Peter Stenvinkel Chairs

Denis Fouque Peter Stenvinkel

Holistic nephrology

The role of nutritional therapy as a strategy to slow down chronic kidney disease (CKD) progression and how to maintain the appropriate diet during dialysis will be discussed in this session. Traditional dietary recommendations for patients with CKD focus on the amount of nutrients consumed. These restrictions can result in a low intake of fruits and vegetables and a lack of diversity in the diet. However current evidence suggests that a plant-based diet has few risks but potential benefits for the primary prevention of CKD and progression to end-stage kidney disease. Another approach is the very low-protein diet (LPD) supplemented with essential amino acids plus ketoacid (KA) in order to assure an adequate essential amino acid supply. The current evidence suggests that KAs supplemented LPD diets should be included as part of the clinical recommendations for both the nutritional prevention and metabolic management of CKD. Finally, also serum albumin level as a marker of protein-energy wasting and of mortality in patients on hemodialysis will be discussed in relation to nutritional management of in-center patients.



# SATURDAY, SEPTEMBER 18, 2021

# Response prediction in nephrology

### Speakers

Plenary lecture

Plenary

### Chairs

Hiddo J. Lambers Heerspink

Christoph Wanner Peter Stenvinkel

In the last two years, several new drug classes have been demonstrated to reduce the risk of kidney failures such as SGLT2-inhibitors, endothelin receptor antagonists, and mineralocorticoid receptor antagonists. Despite the efficacy of these drugs on a population level, not every patient benefits to the same extent. It appears that a large individual variation in the response is present. Understanding the underlying mechanisms for the variation in drug response will pave the way for personalized therapy approaches. The objective of this lecture is:

- 1. To review variation in drug response in patients with Chronic Kidney Disease
- 2. To evaluate patient characteristics and biomarkers of individual drug response
- To explore strategies to overcome therapy resistance at an individual patient level

### Farewell

### Speakers

Katarzyna Mazur-Hofsäß Franklin W. Maddux Christoph Wanner Peter Stenvinkel



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# THE FUTURE OF NEPHROLOGY

**BENEFIT FROM EXCHANGING WITH** SENIOR EXPERTS AND PEERS

# **RESIDENT COMMITTEE**





Peter Stenvinkel Karolinska University Hospital, Karolinska Institute, Stockholm, Sweden





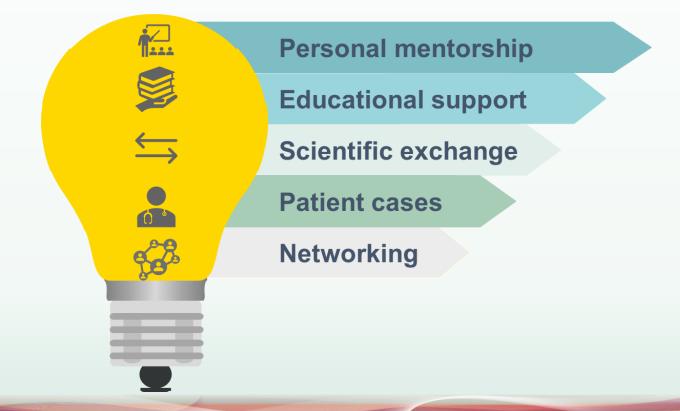


**Miriam Banas** University Hospital Regensburg Germany

Wim van Biesen University Hospital Ghent Belgium

Life/2021 resident program is a special offer to support physicians in residency with additional lectures and workshops to exchange with peers and experts; an invitation to actively participate in an informal event to foster your medical-scientific knowledge and network.

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