18th Asian Colloquium in Nephrology

SOTANC

Best Practices in Kidney Care in Asia

19 – 21 July 2019

Incorporating: SOTANC - State-Of-The-Art Nephrology Course (Nursing)
Singapore Society of Nephrology Annual Scientific Meeting
Asia Renal Association - Asian Nephrology Conference

Ensuring access to ESKD care in the Asia Pacific: Are we doing enough?

Masaomi Nangaku
President of the APSN

2018
UNITED NATIONS HIGH-LEVEL MEETING ON NCDs

A CALL TO ACTION ON KIDNEY DISEASE

850 MILLION
PEOPLE
WORLDWIDE
are now estimated to have some form of kidney disease[3].

11TH
LEADING CAUSE OF
GLOBAL MORTALITY
Chronic kidney disease (CKD) causes an estimated 1.2 million deaths per year and is now the 6th fastest growing cause of death. An additional 1.2 million deaths are attributable to reduced kidney function (measured by the glomerular filtration rate (eGFR))[4].

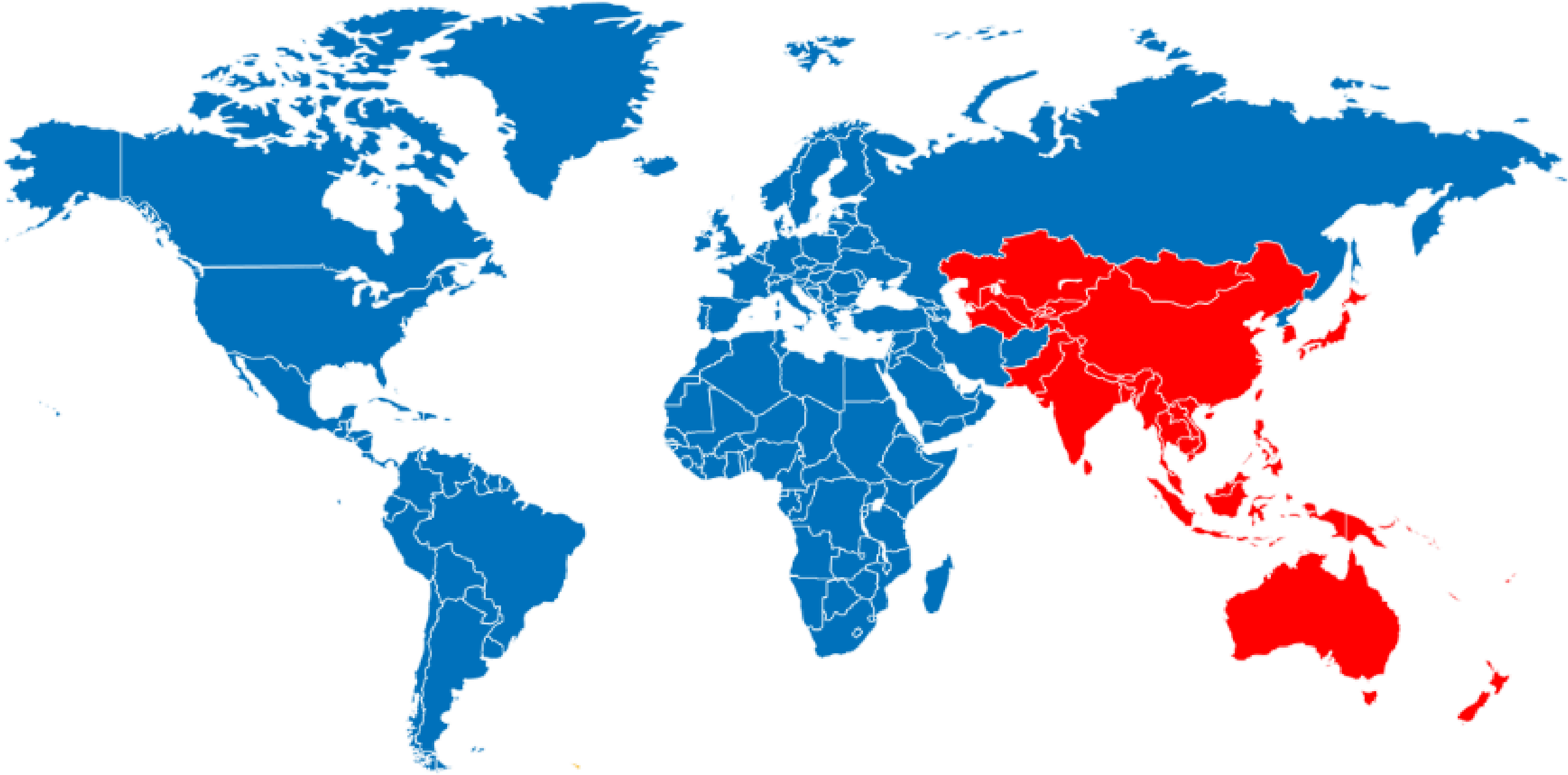
13 MILLION
PEOPLE
AFFECTED WORLDWIDE
Acute kidney injury (AKI), an important driver of CKD, affects over 13 million people worldwide and 85% of these cases are found in low and middle-income countries (LMICs)[5].

2.6 MILLION
RECEIVED DIALYSIS OR TRANSPLANTATION
WORLDWIDE
In 2010, 2.6 million people with end-stage kidney disease (ESKD) or "kidney failure" received dialysis or transplantation worldwide[6], a number projected to increase to 5.4 million by 2030[7].

$35,000 - $100,000
DIALYSIS AND KIDNEY TRANSPLANTATION
ANNUAL COSTS
The cost of treating CKD and its complications is unaffordable for governments and individuals in many parts of the world. Annual costs of dialysis and kidney transplantation alone range between US $35,000 and US $100,000 per patient[8].

BETWEEN 2.3-7.1 MILLION
PREMATURE DEATHS FOR
LACK OF ACCESS TO DIALYSIS AND TRANSPLANTATION
The majority of those deaths occur in countries where resources are insufficient and out of pocket costs are too high[9].

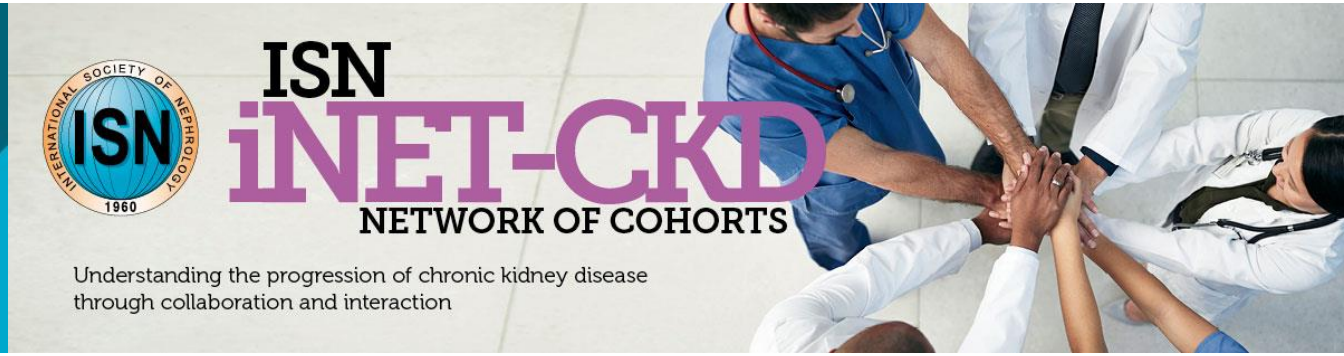
Asia and Oceania: huge and diverse



Research Committee

Chair: Adeera Levine

Co-chair: Masaomi Nangaku



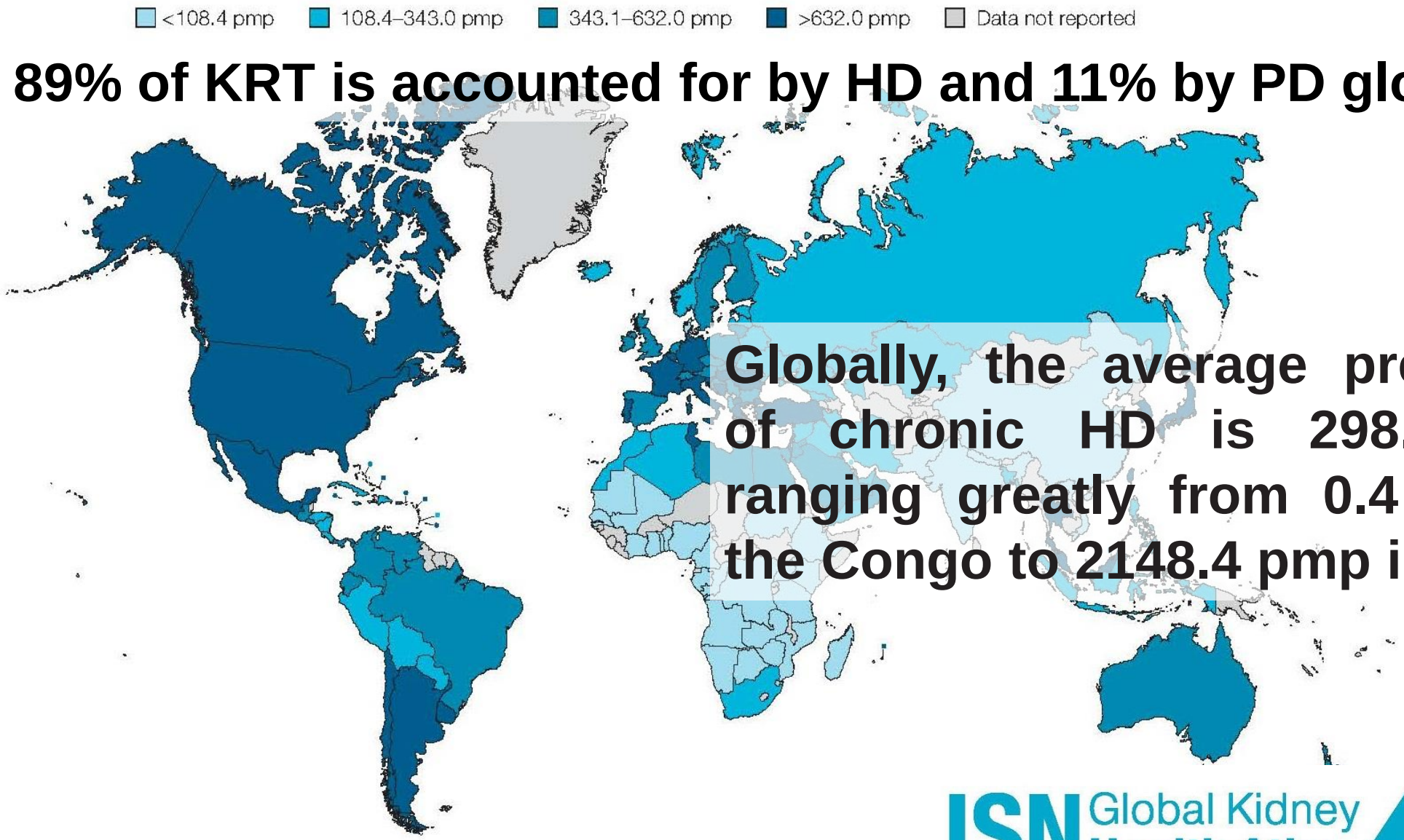
ISN ACT CLINICAL TRIALS

Facilitating more high-quality clinical trials around the world through exchange, training and collaboration.

ISN 60th anniversary celebration by selecting the top 60 discoveries

ISN Research Collaborative Meeting and 1st International Consensus Meeting for the Definition of Kidney Failure in Clinical Trials

Global prevalence of chronic dialysis



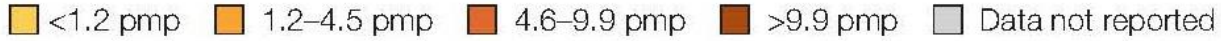
89% of KRT is accounted for by HD and 11% by PD globally

Globally, the average prevalence of chronic HD is 298.4 pmp, ranging greatly from 0.4 pmp in the Congo to 2148.4 pmp in Japan.

ISN Global Kidney Health Atlas

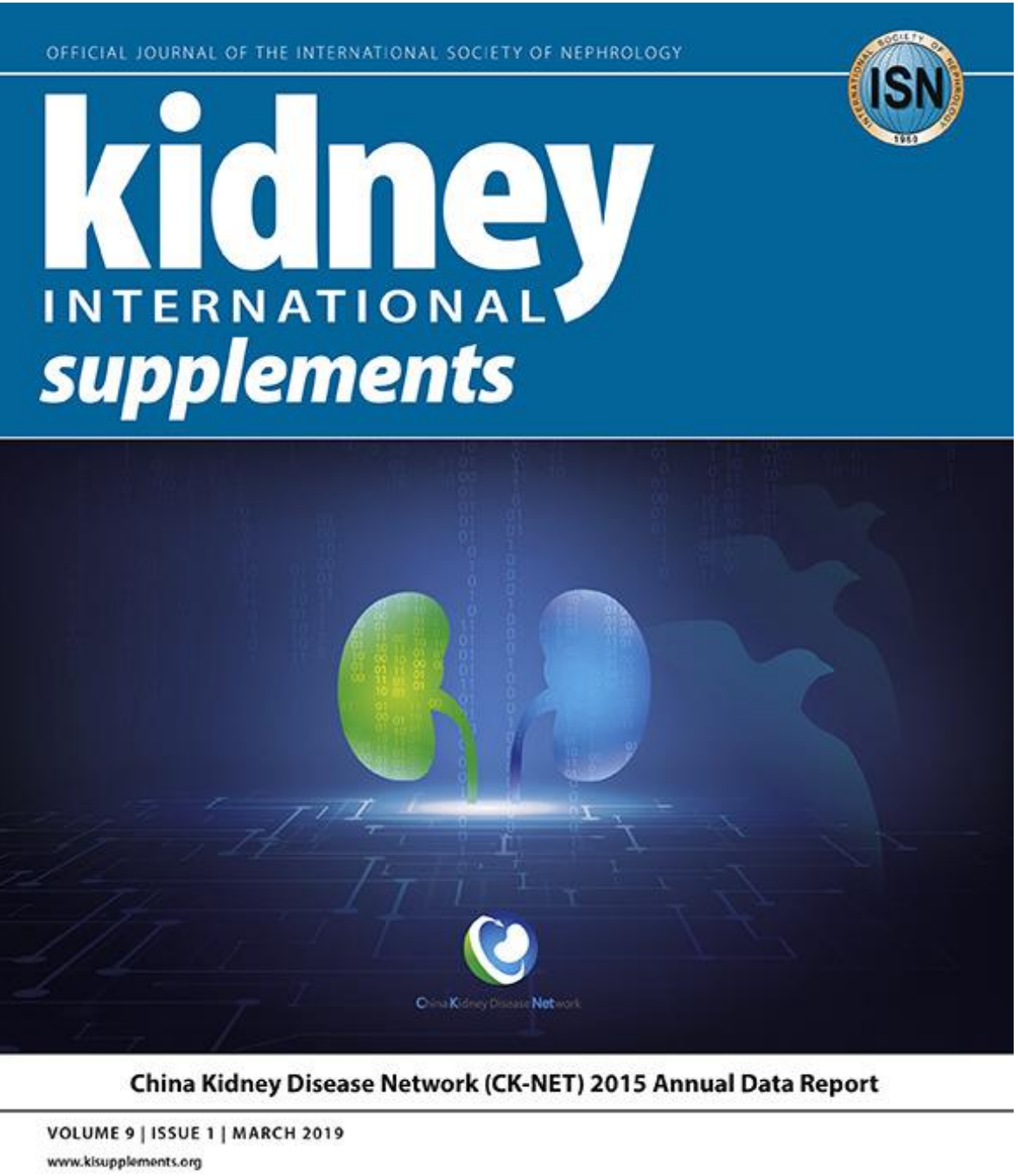
theisn.org

Availability of centers that provide chronic dialysis



Countries with the highest HD center density include Taiwan (35.4 pmp) and Japan (34.8 pmp).

Countries with the lowest density include Mozambique (0.1 pmp), Chad (0.1 pmp), and Burundi, the Congo, Ethiopia, Guinea, Madagascar, Niger, and Uganda (all 0.2 pmp)

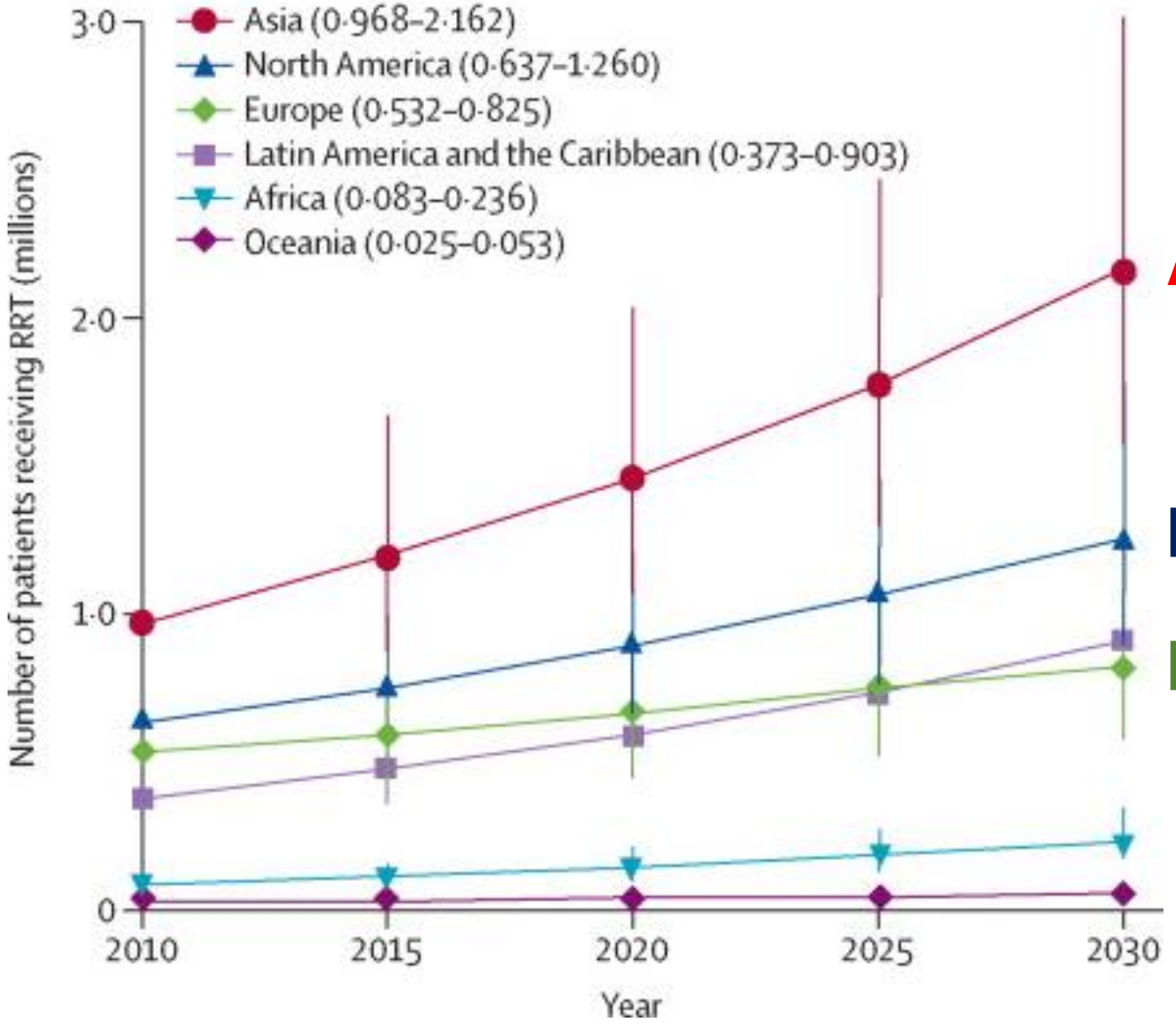


China Kidney Disease Network (CK-NET)

The mean age of prevalent dialysis patients was 55.0 years, which was younger than that reported from the US and Japan (59.1 and 66.6 years, respectively).
For all prevalent dialysis patients, HD was the major modality (90.96%).

The estimated prevalence of HD and PD was 402.18 pmp and 39.95 pmp, and the corresponding number of HD and PD patients was 553,000 and 55,000 in 2015, respectively.

number of patients and prevalence receiving RRT



Asia

North America

Europe

Liyanage et al. Lancet 2015

Accessibility to KRT is low in South Asia and OSEA

less than half of patients with ESKD in 83% and 33% of countries, respectively, are able to access dialysis at the onset of kidney failure

Figure 6.7 | Accessibility of KRT at the onset of ESKD, by ISN region

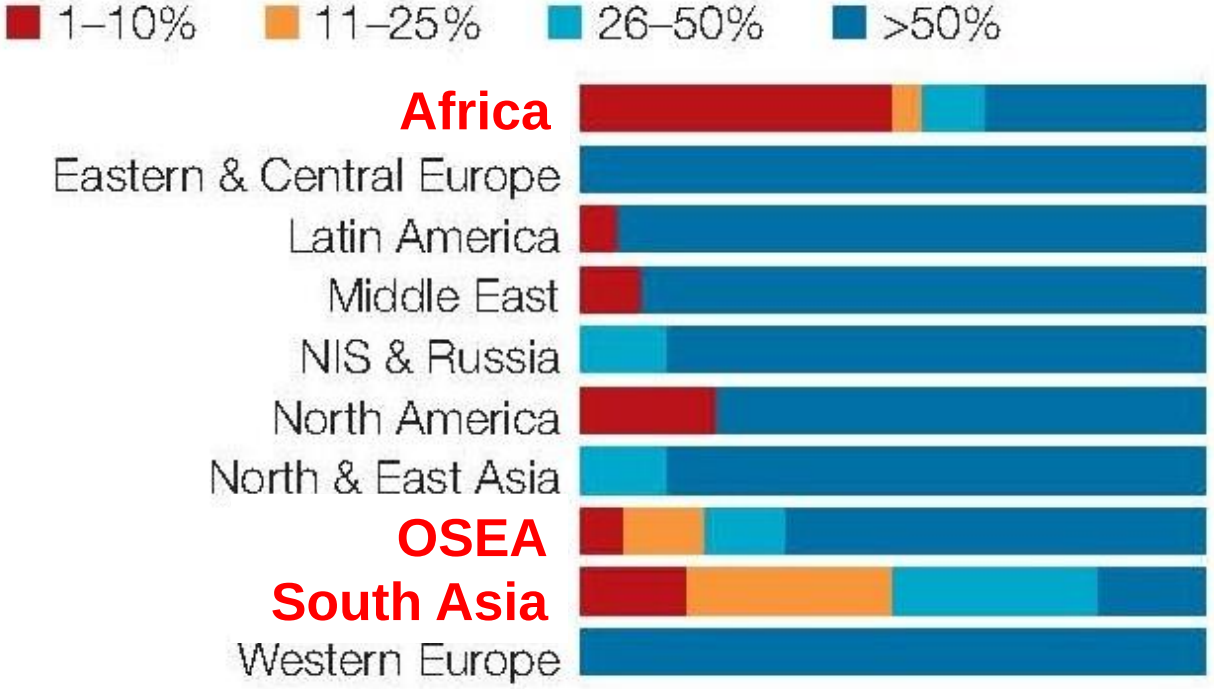
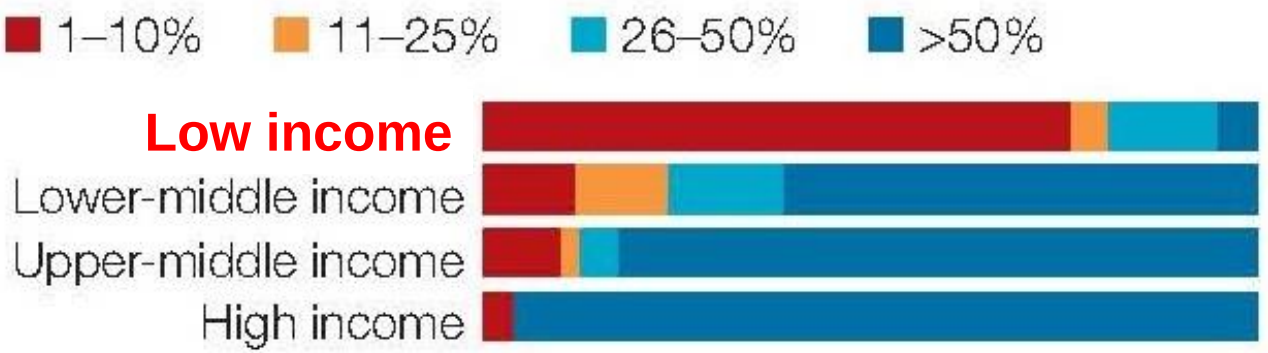
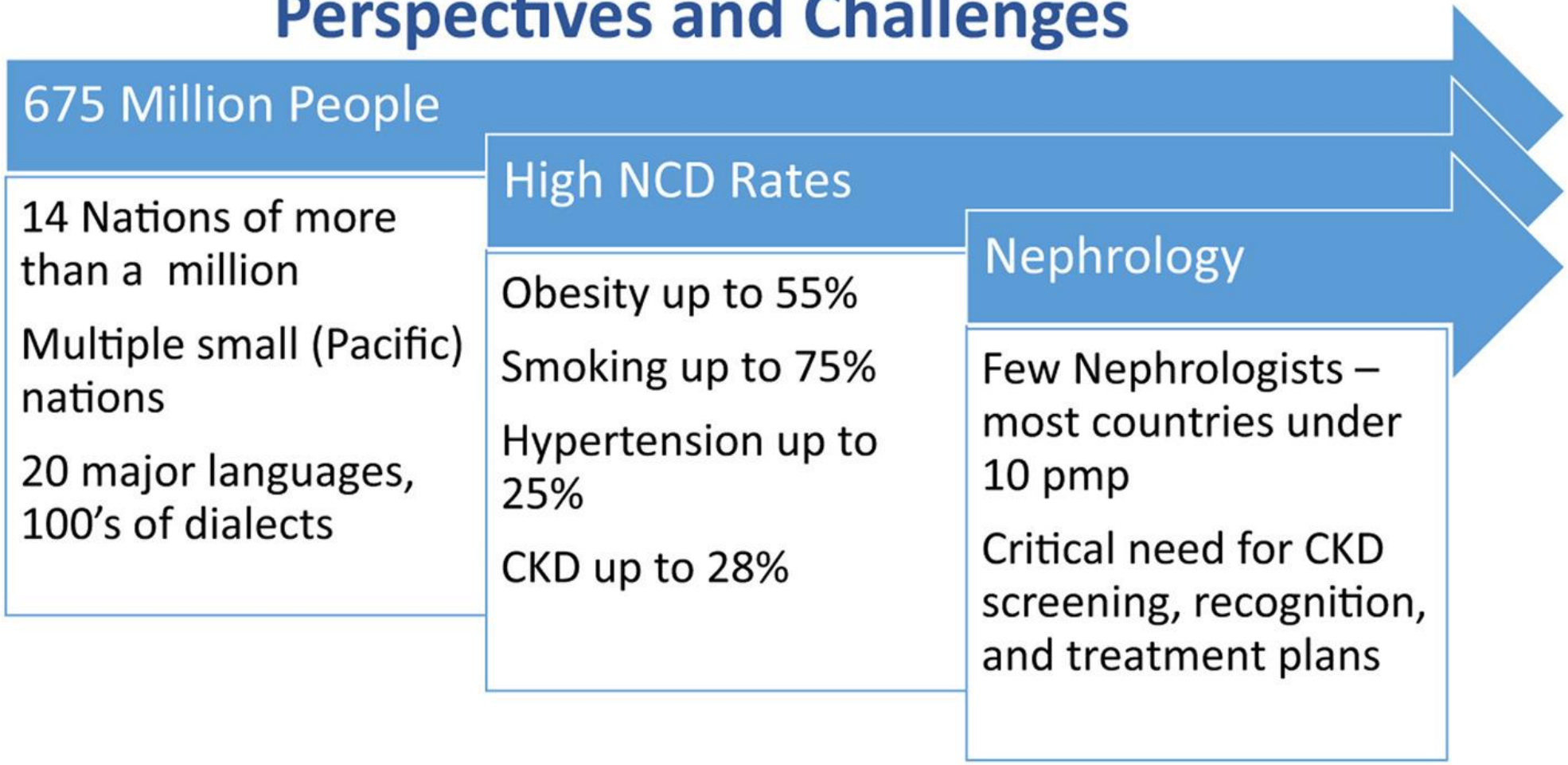


Figure 6.8 | Accessibility of KRT at the onset of ESKD, by World Bank income group



Nephrology in the Oceania-South East Asia Region: Perspectives and Challenges



ISN Programs to promote: Engagement, Education, Capacity and Advocacy

Peter Kerr, Huong T.B. Tran, Hai-An Ha Phan, Adrian Liew, Lai Seong Hooi, David W. Johnson, Adeera Levin

Kidney Int 2018

ISN WCN'19
APRIL 12-15 - MELBOURNE, AUSTRALIA

ISN Global Kidney Policy Forum Series: Focus on South East Asia and Oceania 2019

"Seeing kidney disease patients struggling against movable barriers to dialysis and transplantation is heart-breaking."

Nicki Scholes-Robertson
Patient

Challenges to access to kidney care in South East Asia and Oceania

Geographies

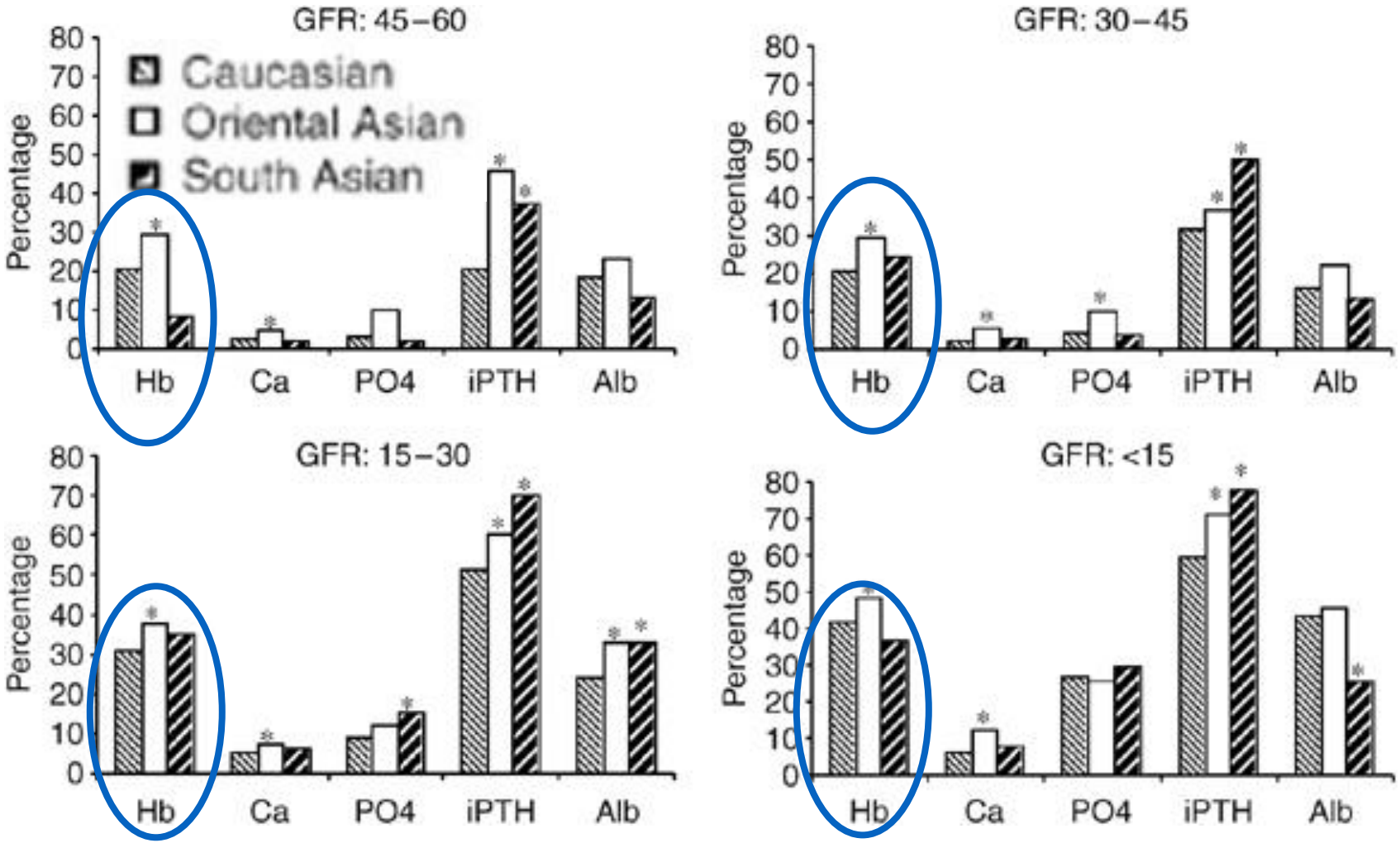
The geography of the multiple dispersed islands, with small populations, inconsistent supply of clean water, disruptions due to natural disasters (drought, typhoons etc.) and inadequate dialytic fluid disposal systems pose huge challenges tin access to and deliver of equitable quality kidney care, compounded by a limited workforce and resources

Varying economic structures, cultural and ethnic diversity

The region encompasses a broad heterogenous range of countries and incomes. In the economically weaker countries, government does not support funding for dialysis/kidney replacement therapy. Even the more affluent countries have vulnerable populations that experience unsurmountable barriers to accessing adequate kidney care, with concerns about ethnic bias.

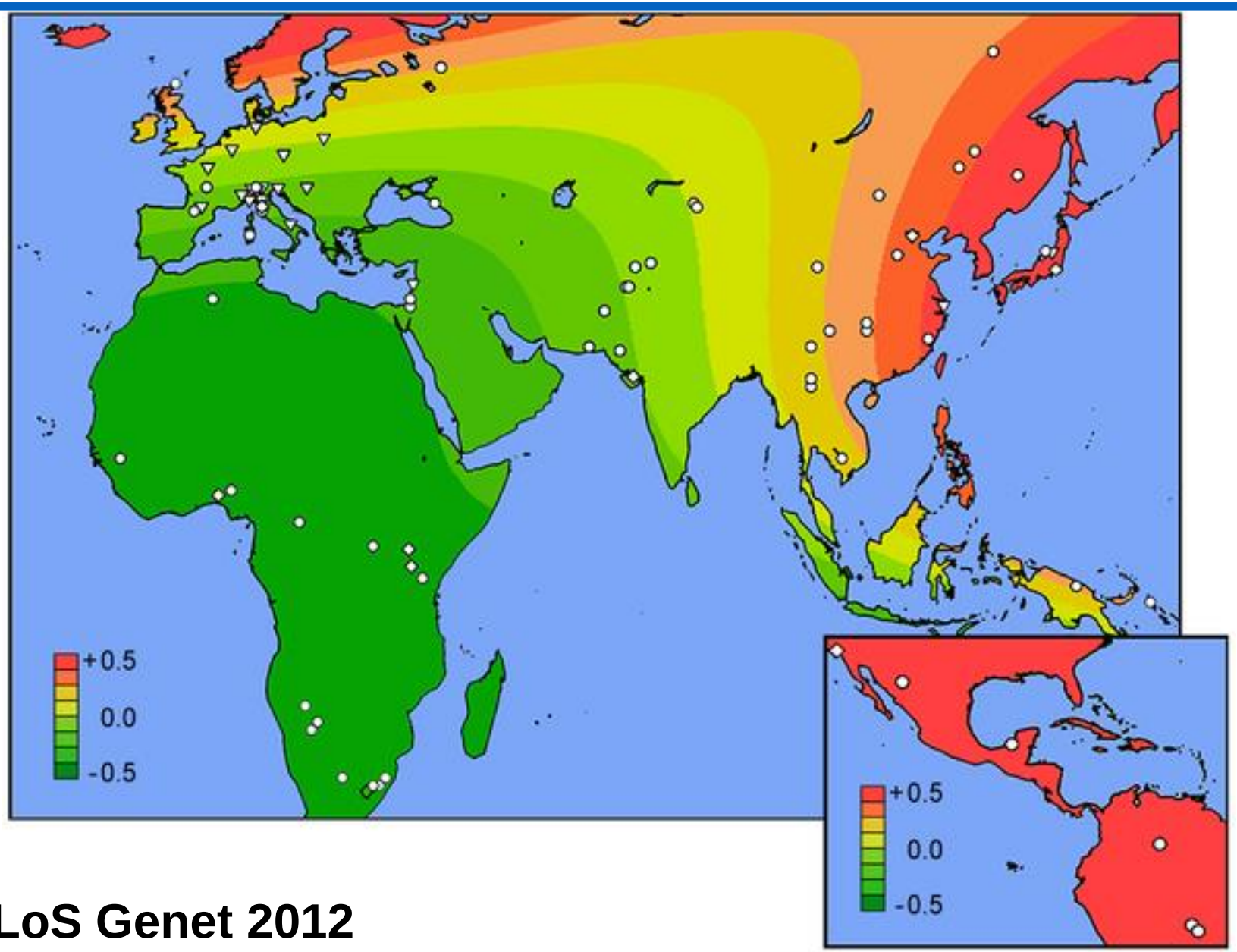
Oriental Asians tend to develop anemia in CKD

Observational cross-sectional study (n=5,322)



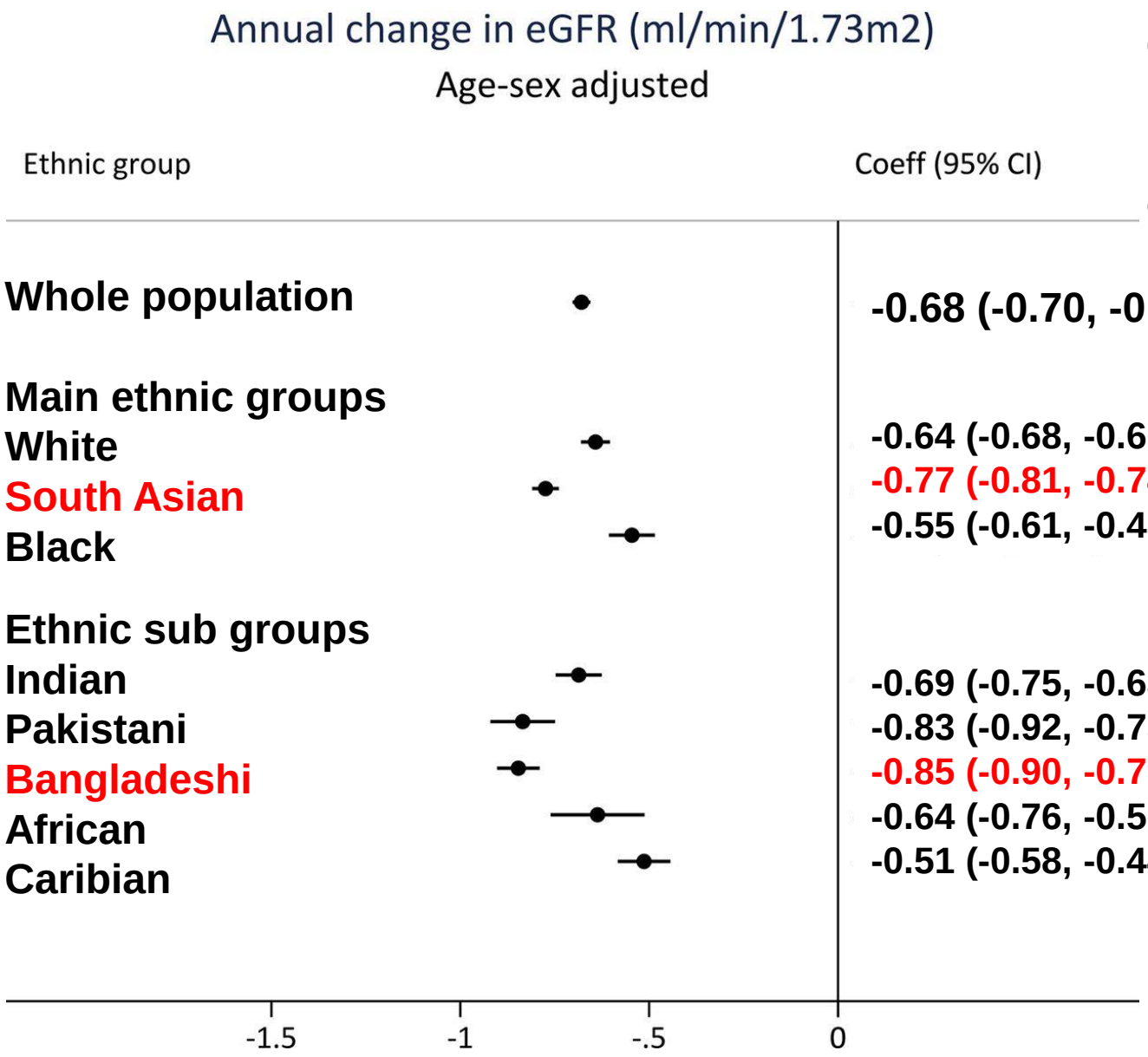
Barbour et al. Kidney Int 2008

geospatial risk analysis of IgA nephropathy



Kiryluk et al. PLoS Genet 2012

eGFR decline in DKD was faster in the South Asian

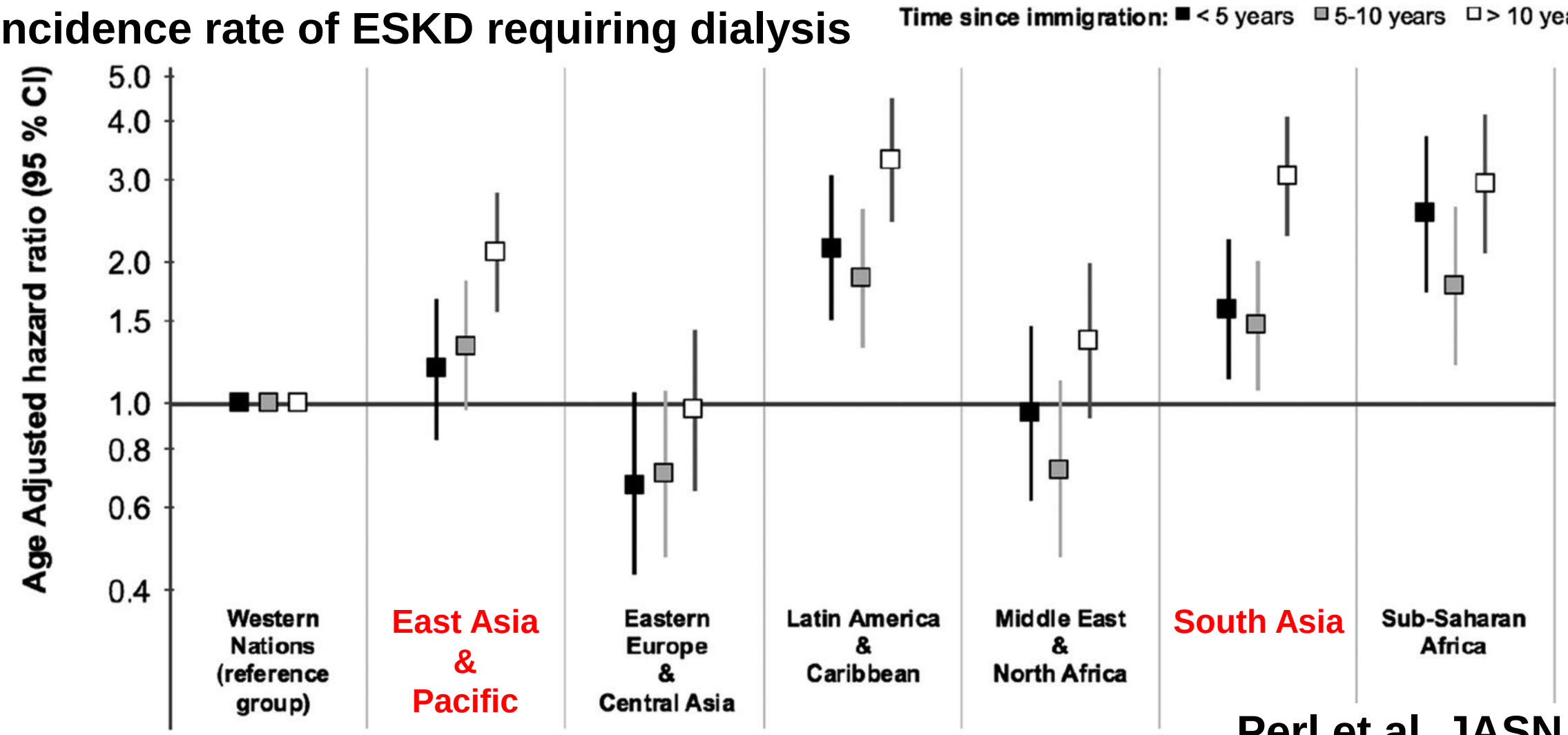


Observational community-based cohort study of UK diabetic population

Mathur et al. BMJ Open 2018

ESKD among immigrants to Ontario, Canada: A population-based study

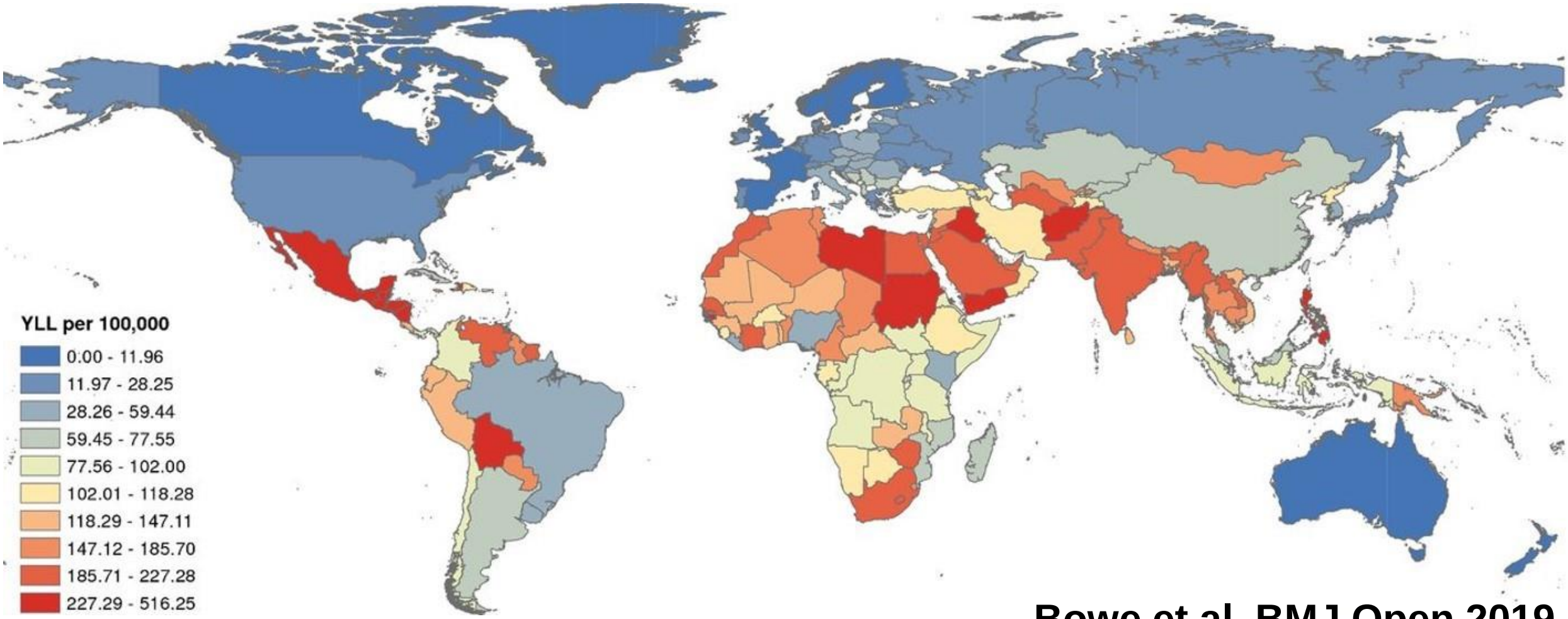
Age-adjusted hazard ratios for the incidence rate of ESKD requiring dialysis



Perl et al. JASN 2018

kidney disease attributable to air pollution

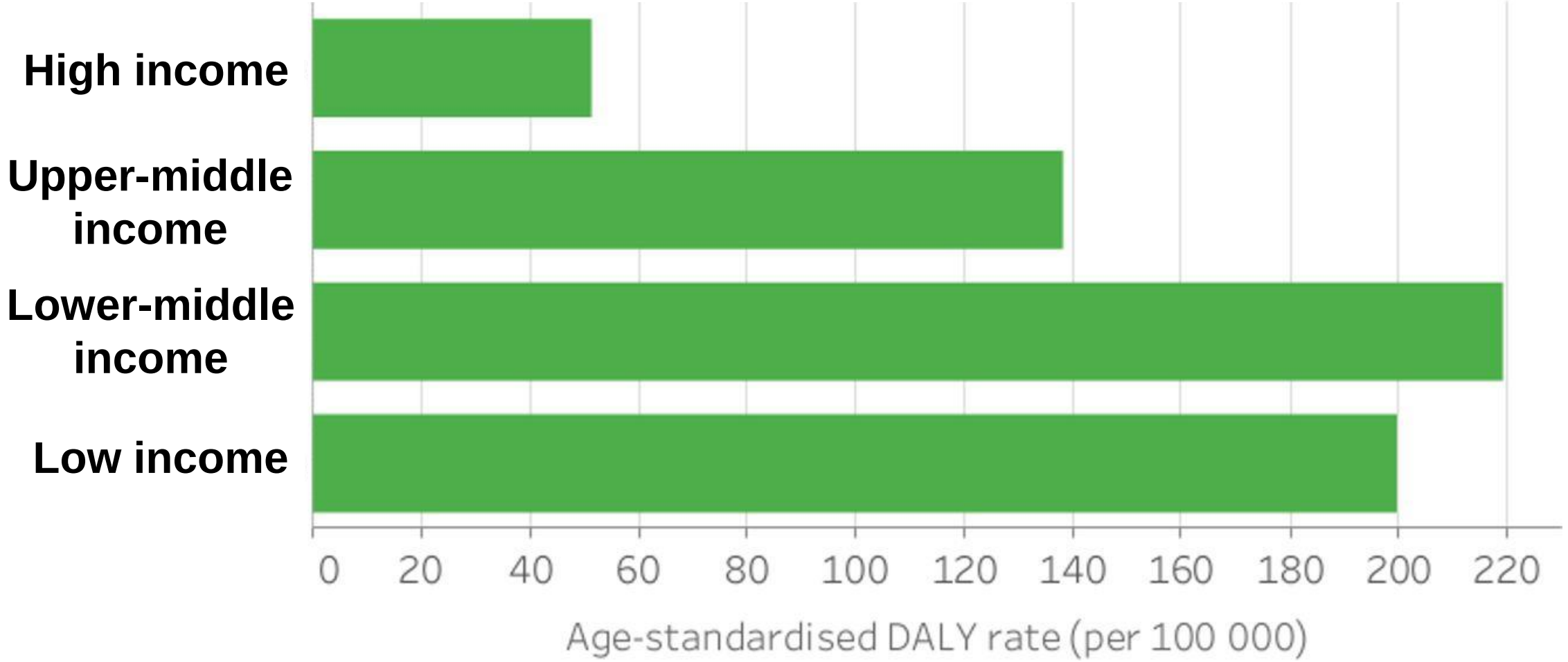
Age-standardized "years of life lost" due to incident CKD attributable to $PM_{2.5}$ per 100 000 population



Bowe et al. BMJ Open 2019

kidney disease attributable to air pollution

$PM_{2.5}$ attributable age-standardised CKD "disability-adjusted life-years" by World Bank income classification



Bowe et al. BMJ Open 2019

Ensuring access to ESKD care in the Asia Pacific

Increase access to ESKD care

Decrease necessity of ESKD care

Featured strategies of the CKD/ESKD care study cases

Country	Featured Strategy
Prevention of CKD and CKD progression	
Taiwan	**Screening of high-risk populations based on risk factor analysis, instituted in general practitioner's offices since 2011 along with reimbursement to patients for pre-ESKD care**
Thailand	**Use of community nurses and village health volunteers to provide information on lifestyle modifications, and referral of CKD cases during home visits**
Integrated CKD/ESKD care	
Japan	**Mandated medical check-ups by individual health insurance companies**

Yang, Nangaku et al. *manuscript in submission*

Featured strategies of the CKD/ESKD care study cases

Country	Featured Strategy
Increasing access to RRT	
China	Increasing home-based PD, including rural areas, along with optimal management.
Malaysia	Funding dialysis through a mix of public, private and NGO financing
South Korea	Promotion of deceased organ transplantation through registries, seminars, research grants, and awards

Yang, Nangaku et al. *manuscript in submission*

Differences in approaches

Country differences in

- burden of disease
- available human or financial resources
- cultural considerations
- political context
- competing interests from other stakeholders

etc.

Yang, Nangaku et al. *manuscript in submission*

In LMICs with limited resources, prioritization of kidney replacement therapy must be balanced against other pressing societal needs such as sanitation, clean water, prevention and treatment of infectious diseases and and reproductive and pediatric health.

Harris et al. Kidney Int Supp 2019

The Asian Pacific Society of Nephrology

Aims

- To promote & encourage the advancement of scientific knowledge & research in all aspects of nephrology.
- To promote the exchange & dissemination of this knowledge in the Asian Pacific region.

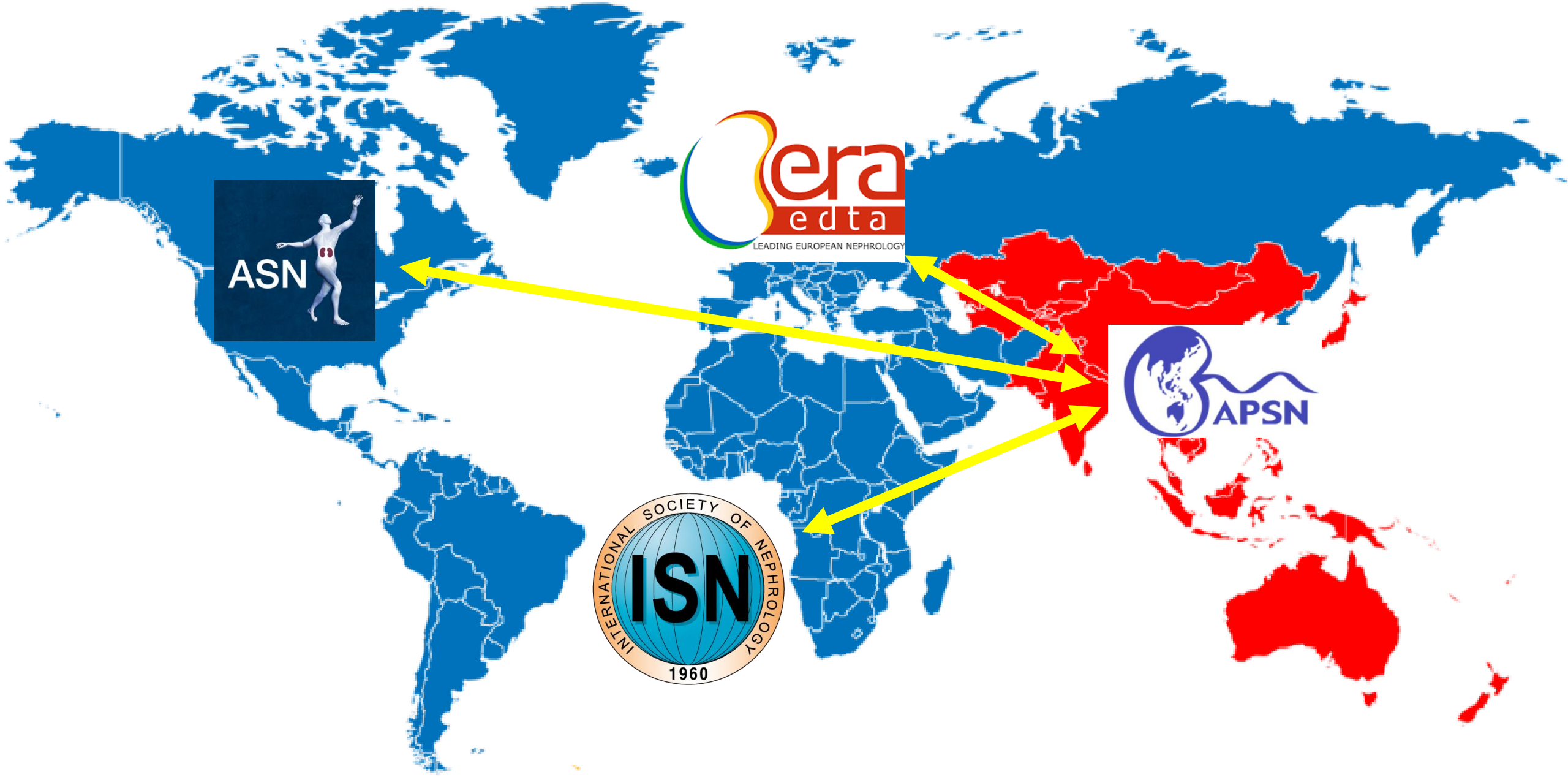
Particular focus on fostering the development of high quality nephrology in the less well developed countries of the region.

Asian Pacific Clinical Practice Recommendations

- Working group formed to study gaps in existing clinical practice guidelines from the perspective of the Asian Pacific region
- Particular focus on making relevant to resource limited low- and low- middle income countries in the region
- First Asia Pacific Clinical Practice Recommendation to be released - “Evaluation and management of diabetic nephropathy”

APSN Young Nephrologists Committee

- **Purpose: To be a voice for the young nephrologist's of the region**
- **12 members: from Australia, Bangladesh, Brunei, Cambodia, China, Fiji, Hong Kong, India, Japan, Korea, Taiwan & Thailand**
- **'Young Nephrologists' Retreat' in HK Sep 2018 to allow members to exchange ideas**
- **Regular teleconferences to understand unmet needs of young fellows from different countries.**


ASN
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LEADING EUROPEAN NEPHROLOGY
APSN
INTERNATIONAL SOCIETY OF NEPHROLOGY
ISN
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A call to action on UHC for kidney health