

nephropathic cystinosis: development of a PCR-based detection assay. *Am J Hum Genet.* 1999;65:353–9.

10. Kalatzis V, Cohen-Solal L, Cordier B, Frishberg Y, Kemper M, Nuutinen EM, et al. Identification of 14 novel CTNS mutations and characterization of seven splice site mutations associated with cystinosis. *Hum Mutat.* 2002;20:439–46.

Mara Medeiros^{a,b,*}, Sandra Enciso^a, Ana María Hernández^a, Hector Rodrigo García Hernández^a, Georgina Toussaint^a, Claudia Pinto^c, Elsy Maureen Navarrete Rodríguez^d, Blanca E. del-Rio-Navarro^d, Omar Josué Saucedo-Ramírez^d, Patricia Medina Bravo^e, Sergio Miranda^f, Liliana Worona^f, Germán Sosa^c, Leticia Belmont Martínez^g, Miguel Ángel Alcántara Ortigoza^h, Laura Escobarⁱ, Ricardo Muñoz Arizpe^a

^a Laboratorio de Investigación en Nefrología y Metabolismo Mineral Óseo, Hospital Infantil de México Federico Gómez, México, D.F., Mexico

^b Departamento de Farmacología, Facultad de Medicina, Universidad Nacional Autónoma de México, México, D.F., Mexico

^c Departamento de Nefrología «Dr. Gustavo Gordillo Paniagua», Hospital. Infantil de México Federico Gómez, México, D.F., Mexico

^d Servicio de Alergia e Inmunología Clínica Pediátrica, Hospital Infantil de México Federico Gómez, México, D.F., Mexico

^e Departamento de Endocrinología, Hospital Infantil de México Federico Gómez, México, D.F., Mexico

^f Departamento de Gastroenterología, Hospital Infantil de México Federico Gómez, México, D.F., Mexico

^g Laboratorio de Errores Innatos del Metabolismo y Tamiz, Instituto Nacional de Pediatría, México, D.F., Mexico

^h Departamento de Biología Molecular, Instituto Nacional de Pediatría, México, D.F., Mexico

ⁱ Departamento de Fisiología, Facultad de Medicina, Universidad Nacional Autónoma de México, México, D.F., Mexico

* Corresponding author.

E-mail addresses: medeiro.mara@gmail.com, maramedeiros@hotmail.com (M. Medeiros).

2013-2514/© 2015 Sociedad Española de Nefrología. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<http://dx.doi.org/10.1016/j.nefro.2016.04.006>

Creation of the Working Group on Diagnostic and Interventional Nephrology of the Spanish Society of Nephrology[☆]

Creación del Grupo de Trabajo en Nefrología Diagnóstica e Intervencionista de la Sociedad Española de Nefrología

Dear Editor,

At its meeting of 9 July 2014, the Board of Directors of the Spanish Society of Nephrology (SEN) approved the creation of the SEN Working Group on Diagnostic and Interventional Nephrology (DIN). This letter, based on the group's founding document, which is available on the SEN website, aims to set forth the reasons why it is necessary to create this group, its objectives and its plan for action.

Ultrasound is an essential tool in the practice of medicine, with multiple applications in kidney patients. In addition to being a very informative and non-invasive diagnostic method, it is the vehicle through which interventions such as biopsy on the kidneys may be performed.^{1–5} Furthermore, it is crucial for performing various interventions that are not strictly related to the kidneys, but are the responsibility of the nephrologist,

such as placing central lines and managing arteriovenous fistulas for haemodialysis.⁶ Finally, it allows the arteries to be visualised for early diagnosis of subclinical artery disease, or evolution of atheromatous disease, which is known to be the basis of the majority of cardiovascular events and mortality in the general population and to an even greater extent in the kidney population.⁷

For this reason, it is important that the nephrologist learn appropriate ultrasound techniques so as to perform and interpret ultrasound examinations in order to achieve more comprehensive and efficient patient management.

Suitable and timely placement of the appropriate catheter for peritoneal dialysis determines the prognosis for the patient and the technique. The nephrologist is trained to place and remove peritoneal catheters, and this is in fact what happens in some Spanish departments of Nephrology.

[☆] Please cite this article as: Rivera Gorrín M, Cornago Delgado I, Betriu Bars À, Lanuza Luengo M, Ceballos Guerrero M, Paraíso Cuevas V, et al. Creación del Grupo de Trabajo en Nefrología Diagnóstica e Intervencionista de la Sociedad Española de Nefrología. *Nefrología.* 2016;36:325–326.

The above set of activities is called DIN. It is a subspecialty of nephrology that has been expanding since it was named and defined in 2000.^{1,8-10} Several scientific societies of nephrology have working groups in this regard, such as the American Society of Diagnostic and Interventional Nephrology (ASDIN), the Latin American Society of Nephrology and Hypertension (SLANH), the Argentinian Society of Nephrology (SAN) and, most recently, the Chilean Society of Nephrology (SCN).

There is significant demand among Spanish nephrologists for training in this field. In the majority of nephrology departments, these activities are assigned to other units and departments, and there is growing dissatisfaction when it is seen that patients' clinical care needs are not suitably covered. Performing activities related to the diagnosis of kidney disease, which revolve around ultrasound, as well as recovery from nephrology interventions, would represent not only significant healthcare improvement, but also a boost to the specialty, rendering it more attractive to future residents, and probably an improvement in career opportunities.

Aware of this demand, the Board of Directors of the SEN has sponsored various university courses, such as the University Master's Degrees in Imaging of the Nephrology Departments at Hospital Universitario Ramón y Cajal in Madrid (Universidad Alcalá de Henares) and Hospital Universitario Arnau de Vilanova (Universitat de Lleida) and the vascular access ultrasound course at Hospital de Sabadell.

We believe that the creation of a Working Group on DIN could give a major boost to the expansion of this discipline and would allow for the greater participation of Spanish nephrologists. This could make the specialty more attractive for future generations.⁸⁻¹⁰

The fundamental objective of the Working Group on DIN is to incorporate ultrasound into the nephrologist's clinical practice and to re-establish techniques specific to our specialty as part of the central role of the nephrologist. Therefore, its activity shall consist of: bringing together all nephrology specialists who are interested in or who perform DIN in part or in full, as well as boosting the implementation of DIN in the nephrology departments in Spain that are in favour. We shall provide training and scientific activities in the field of DIN through specific courses and workshops. Finally, we would like to promote contacts and joint activities with scientific societies for related specialties, to join forces in a multidisciplinary approach and in the interests of collaborative research.

To carry out these objectives, given that DIN encompasses a broad spectrum of activities, we have considered dividing the activity of the group into several sections (kidney, cardiovascular risk and peritoneal dialysis) for which one or more of the founding members would be responsible. The group is open to broadening its field of action to new disciplines based on incorporating ultrasound into nephrology that may be useful for the nephrologist's routine clinical practice, and that do not enter into conflict with other SEN groups that have already been established.

We encourage all nephrologists interested in performing and promoting DIN to join the group.

REFERENCES

1. Rivera M, Querreda C. Nefrología diagnóstica e intervencionista: una oportunidad para los nefrólogos españoles. *Nefrología*. 2011;31:131-3.
2. Rivera M. Incorporación de la ecografía a la práctica rutinaria del nefrólogo: nuestra experiencia. *Nefrología*. 1995;15:104-7.
3. Rivera M, Ortuño J. Ultrasonography in nephrology. *Am J Kidney Dis*. 1998;32:703.
4. Rivera M, Querreda C. La ecografía realizada por el nefrólogo: nuestra experiencia. *NefroPlus*. 2009;2:9-16.
5. O'Neill WC. The new nephrologist. *Am J Kidney Dis*. 2000;35:978-9.
6. Ibeas J, Vallespín J, Rodríguez-Jornet A, Branera J, Fortuño JR, Bermúdez P, et al. Portable Doppler-ultrasound used by the nephrologist in the hemodialysis unit for the immediate detection of fistula pathology and ultrasound guided cannulation: consolidation of a technique inside a protocolized interdisciplinary team with vascular surgeons, interventional radiologists and infirmary. A 4 years experience. *J Am Soc Nephrol*. 2008;19:254A.
7. Fernández E, Martínez-Castelao A. Proyecto NEFRONA: banco de datos de libre utilización. *Nefrología*. 2011;31:5-8.
8. Berns JS, O'Neill WC. Performance of procedures by nephrologists and nephrology fellows at U.S. nephrology training programs. *Clin J Am Soc Nephrol*. 2008;3:941-7.
9. Dohan DE. Procedures in nephrology fellowships: time for change. *Clin J Am Soc Nephrol*. 2008;3:931-2.
10. Bernis Carro C por la Comisión Nacional de la Especialidad de Nefrología en España. Evolución de las plazas asignadas a nefrología en la convocatoria MIR (1985-2008). *Nefrología*. 2011;31:155-61.

Maite Rivera Gorrín^{a,*}, Iñaki Cornago Delgado^b,
Ángels Betriu Bars^c, Manuel Lanuza Luengo^d,
Manuel Ceballos Guerrero^e, Vicente Paraíso Cuevas^f,
José Ibeas López^g, Ramón Roca Tey^h,
Pedro Luis Quirós Gangaⁱ

^a Servicio de Nefrología, Hospital Ramón y Cajal, Madrid, Spain

^b Servicio de Nefrología, Hospital Galdakano, Usansolo, Vizcaya, Spain

^c Servicio de Nefrología, Hospital Universitari Arnau de Vilanova, Lleida, Spain

^d Servicio de Nefrología, Hospital Virgen de la Arrixaca, Murcia, Spain

^e Servicio de Nefrología, Hospital Puerta del Mar, Cádiz, Spain

^f Servicio de Nefrología, Hospital del Henares, Coslada, Madrid, Spain

^g Servicio de Nefrología, Hospital de Sabadell, Sabadell, Barcelona, Spain

^h Servicio de Nefrología, Fundacio Privada Hospital de Mollet, Mollet del Vallès, Barcelona, Spain

ⁱ Servicio de Nefrología, Hospital Puerto Real, Cádiz, Spain

* Corresponding author.

E-mail address: maiteelizabeth.rivera@salud.madrid.org
(M. Rivera Gorrín).

2013-2514/© 2015 Sociedad Española de Nefrología. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).
<http://dx.doi.org/10.1016/j.nefro.2016.04.009>