

## Editorial

# Kidneys also speak Spanish: Initiatives towards standardisation of our nephrology nomenclature

## Los riñones también hablan español: iniciativas hacia la estandarización de nuestra nomenclatura nefrológica

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DOI of original article:

<https://doi.org/10.1016/j.nefro.2021.04.011>.

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## Introduction

The standardization of scientific nomenclature, including widely employed acronyms (often excessively used even orally), has classically been a goal in many languages but it has been achieved only partially. This standardization attempt tries to establish a well-defined lexicon, allowing any information to be recognized, compared, reused in calculations, used for research or statistics and be stored in documents, without losing information and maintain meaning.<sup>3</sup> Several initiatives of different scope have served to this purpose, such as the basic *International Classification of Diseases Ninth or tenth Revision* (ICD-9 or ICD-10) or the *International Classification of Diseases 9/10* (ICD-9/ICD-10), even though its initial purpose was not necessarily clinically oriented. It is well known that these systems do not adequately identify patients with chronic kidney disease (CKD) and although ICD-10-CM includes CKD (code N18) with its stages (eg: N18.1–N18.5), it is not used frequently and contains frequent errors. Attempts have also been made to standardize the guides of style in the various scientific journals devoted to specific areas of health sciences.<sup>4</sup>

In this declaration of intention, more specifically concerning clinical laboratory sciences, where an extremely large number of results are produced every day, it is necessary the standardization of nomenclature (and units) and they have been pioneers in this field.<sup>5</sup> Regarding initiatives in Spanish, it is of note the document published in 2018 on nomenclature and units<sup>3</sup> as well as the collaboration between the “Working Group on Nomenclature and Spanish Translations of the International Federation of Clinical Chemistry and Clinical Laboratory Sciences”, together with the “Scientific Committee of the Latin American Confederation of Clinical Biochemistry”, and the Terminology Commission and Publications Committee of the Spanish Society of Clinical Chemistry (SEQC). All agreed upon the application of international recommendations, publishing an extensive list of examples<sup>6</sup> (sample in Table 1). These recommendations were poorly accepted perhaps due the practical complexity or lack of involvement of clinicians. It was no longer just that the word “bicarbonate” should not be used but “hidrogenocarbonato”; it was that, for example, considering the words “creatinine” or angiotensin-converting enzyme (ACE) as “incorrect” and should be changed to “creatininio” or “peptidyl-dipeptidase-A”.<sup>6</sup> The idea is not to transform our daily reality (Table 1).<sup>6b</sup> It is true that some of the suggested terms did have unquestionable interest in terms of their scientific and linguistic precision.<sup>6</sup>

## From the definition of chronic kidney disease to the standardization of the (English) nomenclature

In the area purely concerning Nephrology, it is a remarkable milestone the publication of a *Kidney Disease: Improving Global Outcomes* (KDIGO) guideline whose main objective was the standardization of the nephrology nomenclature for scientific articles written in English, following as a fundamental principle the best possible understanding by patients (English speaking patients).<sup>7</sup> This publication was preceded almost two

decades earlier by another even more important guideline, devoted to the evaluation and management of CKD, (containing CKD classification and stratification), initially developed by the *National Kidney Foundation* (NKF) *Kidney disease outcomes Quality Initiative* (KDOQI) which was later adopted, with minor modifications, by the KDIGO.<sup>8,9</sup>

These guidelines on CKD had the positive impact of changing the concept of CKD as a severe condition, which required the assistance by nephrologists, to a very frequent situation, often asymptomatic, and with a wide range of secondary manifestations that also required the attention of general practitioners, and the implementation of strategies for prevention, detection and early management.<sup>10</sup> There is no doubt that these guidelines had a very important effect not only in clinical practice, by unifying the definition, classification and risks associated with CKD, but also in the field of nephrology research and health policies, although they also generated notable and persistent controversies (eg, in relation to the importance of the age factor or methodological inaccuracies).<sup>11</sup>

Following the aforementioned KDIGO<sup>9</sup> guidelines, several national and local initiatives, such as those led by the Spanish Society of Nephrology (SEN) and the Spanish Society of Laboratory Medicine (SEQC), in which several authors of this editorial were involved, resulted in the publication of the recommendations on the use of equations for estimating the glomerular filtration rate (GFR) in adults (2006),<sup>12</sup> tables using the formula derived from the *Modification of Diet in Renal Disease* (MDRD) study,<sup>13</sup> as well as the first consensus document on CKD of the Spanish Society of Family and Community Medicine (SEN-SemFYC) in 2008.<sup>14</sup> Subsequently, the recommendations on the assessment of proteinuria regarding the diagnosis and follow-up of CKD were published,<sup>15</sup> as well as the assessment of the new *Chronic Kidney Disease-Epidemiology Collaboration* (CKD-EPI) for GFR estimation,<sup>16</sup> and tables using the new formula.<sup>17</sup> Finally, KDIGO published in 2012 the guide of clinical practice for the evaluation and management of CKD.<sup>18</sup> In 2014, it was published an important consensus document in Spain, under the direction of the SEN together with other nine medical societies, on the detection and management of CKD addressed to professionals of different specialties, directly or indirectly related to renal patient care, including primary care.<sup>1,19</sup> Similarly, the Latin American Society of Nephrology and Hypertension (SLANH) published in the same year 2014 a clinical practice guideline on the prevention, diagnosis and treatment of CKD stages 1–5, with the participation of 30 external reviewers.<sup>20</sup> Finally, in 2016 the Spanish Ministry of Health published its guide on CKD<sup>21</sup> and a new update of the consensus with ten different specialties will soon be published in this journal.<sup>2</sup>

Following the same mode of action of the KDIGO on nomenclature and supporting its own recommendations,<sup>7</sup> in November 2020 we claimed in a letter to the Editor in *Kidney International*,<sup>22</sup> and more recently in *Nefrologia*,<sup>23</sup> the need for homogenization of the nephrological nomenclature in each language, Spanish in our case, with special emphasis on the acronyms used. Likewise, we revealed the existence of a certain discrimination against classical medical terminology of Latin origin,<sup>22,23</sup> shared by other groups and forums.<sup>24,25</sup> In fact, it came to our attention that one of the main recom-

**Table 1 – Selection of terminology previously recommended (in Spanish alphabetical order) by the Working Group on Nomenclature and Translations in Spanish of the International Federation of Clinical Chemistry and Clinical Laboratory Sciences, together with the Scientific Committee of the Latin American Confederation of Clinical Biochemistry and the Terminology Commission and Publications Committee of the Spanish Society of Clinical Chemistry and Molecular Pathology.<sup>6</sup>**

Term considered incorrect	Previously recommended term <sup>6</sup>	Comment
Acido Úrico	Urato	The IFCC and IUPAC recommend, and the SEQC assumed the recommendation, that for those molecular entities that give rise to acid-base pairs (according to Brønsted), these pairs be considered as a single component and named using the name of the most ionized form, but omitting the word ion. Refers to uric acid (“ácido úrico”) plus the urate (“urato”) ion The same rule should be followed for creatinine (“creatininio”), ammonia (ammonium or “amoníaco”), folic acid (folate), phosphoric acid (phosphate), lactic acid (lactate), citric acid (citrate), and similars.
Albuminemia	Concentración de albúmina en el plasma (o el suero)	It is commented that the same rule should be followed for calcemia (concentration of calcium in plasma or serum), cholesterolemia (concentration of . . .), creatininemia (concentration of creatinine) and similar construction for the “incorrect” glycemia/glucemia (concentration of . . .), kalemia/potasemia, lipemia, natremia, proteinemia, sideremia or uricemia.*
Albuminuria	Concentración de albúmina en la orina	It is commented that the same rule should be followed for calciuria (calcium concentration in the urine) and similar construction for phosphaturia (concentration of . . .), glycosuria/glucosuria, kaliuria, natriuria, proteinuria, uricosuria and similars.
Anión Gap Bicarbonato Clearance de creatinina Colecalfiferol	Diferencia iónica Hidrogenocarbonato Depuración de creatininio Calcio	Obviously, barbarisms should be avoided “Colecalfiferol” continues to be the most widespread term by unwritten consensus in relation to vitamin D <sub>3</sub> * See “Acido úrico”
Creatinina	Creatininio	See <a href="http://www.ifcc.org/ria/terminology/">http://www.ifcc.org/ria/terminology/</a> <sup>6</sup> creat
ECA	Peptidil-dipeptidasa A	Actually, it has no clinical sense, especially in reference to the use of a commonly used acronym (iECA or inhibitor of ECA, unwritten consensus) for angiotensin (II) converting enzyme inhibitors (ACEi)
Epinefrina Fósforo GFR	Adrenalina, adrenalinio Fosfato Caudal de Filtración glomerular	“Fósforo” as such would be the ionic, reactive and flammable form. Obviously it would be incorrect to use the English acronym. The term considered by the authors as correct would be highly debatable in the nephrology field.
Hemoglobina glicada/glicosilada Nefrona	Glicohemoglobin Nefrón	Undoubtedly, the term “nefrona” remains as the most widespread by unwritten consensus
Parathormone/PTH Reabsorción tubular Unidades	Paratrina Resorción tubular Por ejemplo, mmol/L	Apart from recommending the use of the international system of measurement units adopted and recommended by the General Conference on Weights and Measures and declared of legal use in Spain, in all areas, in 1967, the International Union of Pure and Applied Chemistry and the International Federation of Clinical Chemistry recommend that, if the compound unit is a quotient, the prefix should never accompany the unit found in the denominator (mmol/mL would be incorrect and, obviously, mg/dL would not be either).

IFCC: International Federation of Clinical Chemistry and Laboratory Medicine; IUPAC: International Union of Pure and Applied Chemistry; SEQC: Spanish Society of Clinical Chemistry.

As it can be seen, despite the “consensus”, many of these terms have not had, currently have, and will not have any possibility of clinical implantation for purely historical reasons of common use in the usual medical language. For example, although from a formal point of view, the terms ending in -emia or -uria, partly adapted from English medical constructions, were considered incorrect. However, there is no doubt that they allow language-saving constructions (hyper -xxx -emia, hipo-xxx- emia, hiper -xxx- uria, hipo-xxx- uria) that are very commonly used in clinical communications and publications in Spanish.

\* We recommend addressing to the appropriate sources (eg reference [6]6b).

mendations made by the KDIGO was to use the term *kidney* instead of the term “renal” for general descriptions of kidney function and kidney disease since it was stated, in the context of English speaking patients, that the word (noun) *kidney* was more familiar than the adjective “renal”.<sup>7,23,24</sup> It is also definitely of great interest that the Latin American Registry of Kidney Dialysis and Transplantation and the SLANH Acute Kidney Injury Committee (IRA) have just published in December 2020 an *Ibero -American consensus proposal* to standardize such nomenclature (initiative now also described in *Nefrologia*).<sup>26,27</sup> Members of the Brazilian, Portuguese and Spanish Society of Nephrology were included in this proposal and certainly, it represents a great first step to achieve the desired objective for each of the Latin languages that stick us together.

### From the standardization of the English nomenclature to the standardization of the Spanish nomenclature

As said, it is not a matter of not recognizing with humbleness that English is currently the richest and most universal language; it is currently the most widespread in politics, commerce, finance, technology, public demonstrations and science.<sup>23</sup> In fact, we must accept and applaud the KDIGO initiative, but claiming at the same time for the use of a non-english terminology that is absolutely correct, precise and even very frequently used in various languages (including English itself!). Not only is Spanish the second most widely spoken language in the world, but some of the proposed changes (eg, the one mentioned on the adjective “renal”) affect many other languages. Furthermore, ‘renal’ stands in relation to anatomical structures (eg ‘renal artery’), historical names such as the *United Kingdom Renal Association*,<sup>22</sup> or nephrological journals (*Journal of Renal Nutrition*). Moreover, we advise in our letters<sup>22,23</sup> not to abandon the use of this term «renal» so that the bibliographic searches are as broad and inclusive as possible (eg, meta-analyses), and we underline the real need to launch an initiative similar to the KDIGO in our language (such as the one already initiated by SLANH and which also includes Portuguese), homogenizing keywords for scientific articles, records, as well as *meta - tags* in search systems.<sup>22,23</sup> The anglophile fixation of the KDIGO has also had a notable impact on social networks and specialized websites.<sup>27</sup> 27b

### Initiatives towards standardization

Independently of frequent misconceptions (eg, the very own definition of chronic kidney disease, kidney failure or insufficiency),<sup>28</sup> the arrival of new renal terminology of English origin (eg, *Acute Kidney Injury* [AKI]), has caused an evident dispersion (from “*fallo o falla, fracaso, insuficiencia, daño, lesión o injuria*”, with its different acronyms). Likewise, there is a lack of unification of other terms (eg, glomerular filtrate or glomerular filtration (GF) or “*tasa*” of GF and, more specifically, in frequently used laboratory parameters such as CAC-IAC-RAC (for “*cociente, índice, razón, relación*” -quotient-index-ratio-of albumin/creatinine in urine). All this dispersion of termi-

nology led us, a broad confluence of nephrologists from very diverse Spanish-speaking countries, to expand our previous claims<sup>22-24</sup> and applaud the great initiative of the first proposal by SLANH.<sup>26,27</sup> However, this editorial is claiming to create a broad and open basis for discussion among nephrologists in our language (Table 2). Likewise, we praise its approach to the original KDIGO proposals, already universalized and implanted (for example, in the staging G1-G5, A1-A3), whose translation would only generate discrepancies, and avoids harsh terms such as «terminal» or «final», or avoid anglicisms and literal translations that have other connotations in Spanish (such as «*injuria*»-for damage or lesion - or «*severo*» -for grave-) (Table 2). Unfortunately, there are still some contradictions (eg renal “failure” with two different definitions) and, on the other hand, some terms that we have used historically should perhaps disappear when the final consensus is achieved and published.

For all these reasons, with great consideration for all these initiatives that have already been launched, we underline the need to share with all Spanish-speaking nephrologists the remaining points of discussion, some of them reflected in this article. In fact, for the elaboration of a final, broad and shared consensus document, we will have to make concessions (linguistically speaking) since, being the same language (Spanish), there are terms that are more familiar to us depending on where we received our training without considering that the “not chosen” terms are incorrect. The uniformity and homogenization of terms acquires greater relevance every day when we think about efficiency, not only in our bibliographic searches but, even more importantly, anticipating and thinking about Artificial Intelligence/*Machine - Learning* tools and the exploitation of Big-Data.<sup>29</sup> In this way, the implementation of computerized medical records is generating a large volume of data that offers a great opportunity to promote knowledge of diseases, improve daily clinical practice, research and education.<sup>29</sup> Obviously, a key point for structuring medical information is to encode each variable so that it is unique and correctly defined to allow technical and semantic interoperability between different databases allowing exchange of information. In this sense, beyond the ICD mentioned, there are general initiatives such as the *Simple Knowledge Organization System* (SKOS), (<http://skos.um.es/unesco6/00>),<sup>29</sup> 29b the project of international standardization of nomenclature for science and technology, *Logical Observation Identifiers Names and Codes* (LOINC),<sup>29</sup> 29c (<http://loinc.org>), or the creation of a dictionary of clinical terminologies using international standards such as the *Systematized Nomenclature of Medicine -Clinical Terms* (SNOMED-CT),<sup>29</sup> 29d which is the broadest, most accurate and comprehensive codified clinical multilingual terminology, developed in the world.

Finally, we believe that it is important to highlight that it is no longer a question of defending our common language and that “renal” is our natural adjective for the kidney in the scientific field, but rather and above all, we clinicians cannot forget that, in the current scenario the individual patient plays a central role in making decisions that must be shared.<sup>23,30</sup> This fact is particularly relevant in our specialty, where the degree of evidence of our decisions and clinical actions are generally more in the degree of “suggestions” (evidence grade 2) than that of “recommendations” (grade 1).<sup>30</sup> Therefore, we

**Table 2 – Example of terms that would require a broad consensus to unify the nephrology nomenclature used in Spanish. Format adapted from the KDIGO guidelines and the SLANH 2020 document.<sup>7,26</sup>**

Most used acronym	Interpretation of the acronym	SLANH	Avoid (Final consensus required)	Comments
FG	Filtrado o filtración glomerular	Tasa de filtración glomerular (TFG)	Índice de FG	It should be specified if it is <i>measured</i> or <i>estimated</i> , as well as the correct units (mL/min/1.73 m <sup>2</sup> -the most common in GFR estimation formulas- or mL/min). GFR is not the same as creatinine clearance (Acl <sub>Cr</sub> ) The acronyms TFG or FG should be unified. Some authors consider that the use of the word “ <i>tasa</i> ” (literal English translation) also complicates the acronym on whether it has been measured or estimated with formulas (TFGm or TFGe) (See next) Glomerular filtration specifically measured with different techniques. The method must be specified (eg <sup>51</sup> Cr, iohalamate, iohexol ...)
FGm	Filtrado o filtración glomerular medid@	Filtración glomerular medida (FGm)	Índice de FGm	
FGe	Filtrado o filtración glomerular estimad@	Filtración glomerular estimada (FGe)		Estimated glomerular filtration rate by formulas The formula used must be specified [p. eg CKD-EPI, MDRD (IDMS), MDRD-4, FAS, BIS1...] The biomarker used (eg, creatinine, cystatin, or both) should also be specified as a suffix (eg, eGFR <sub>Cis-Cr</sub> ). Units must be expressed (usually mL/min/1.73 m <sup>2</sup> ) although the correction for standard body surface area (GFR x Body Surface Area/1.73 m <sup>2</sup> ) can be eliminated (eg, for dosing of highly toxic drugs) <sup>2,*</sup>
Acl <sub>Cr</sub>	Aclaramiento de creatinina (medido)	Aclaramiento medido (por ej, de creatinina = Acl <sub>mCr</sub> )	Depuración de creatinina Clearance de creatinina	“ <i>Depuración</i> ” is a correct term but its acronym is not familiar FG is not the same as clearance (“ <i>depuración</i> ”) of a specific substance (biomarker) (eg, creatinine)*. Units must be expressed (often in mL/min) Clearance of urea, calcium or others can also be expressed similarly, changing the suffix
Acle <sub>Cr</sub>	Aclaramiento estimado de creatinina	Acle (por ej., de creatinina = Acle <sub>Cr</sub> )		“ <i>Aclaramiento</i> ” estimated by formulas (eg Cockcroft-Gault) <sup>*</sup>
FR	Fallo renal	Falla renal	Consenso necesario	Impaired kidney function (acute or chronic) Literal English translation ( <i>renal or kidney failure</i> ), not very specific, whose use (if at all) should be agreed upon and clearly defined. The term “ <i>fallo o falla</i> ” contains contradictions in the KDIGO and SLANH guidelines themselves, being defined in one place simply as duration of kidney disease >3 m and, in another, as equivalent to kidney “ <i>failure</i> ” or CKD G5 (with or without RRT)* Abnormalities of renal structure or function, present for more than 3 months, with health implications.*
ERC	Enfermedad renal crónica	Enfermedad renal crónica (ERC)	Insuficiencia renal crónica (IRC) Fallo (falla) renal crónico Deterioro, disfunción renal crónica	It is classified according to the CGA format, based on the Cause, FG (G) and Albuminuria (A).* Staging according to KDIGO G1–G5, G5D, 1T–5T (D = Dialysis, T = Kidney transplant).*/** Stages (according to categories of G and A) G1–2 require kidney “ <i>damage</i> ” markers to be classified as CKD* Chronic renal “ <i>insuficiencia</i> ” initially referred only to CKD ≥ G3* The KDIGO classification thus defines risk categories (low, moderate, high and very high)*



– Table 2 (Continued)

Most used acronym	Interpretation of the acronym	SLANH	Avoid (Final consensus required)	Comments
ERC G1–G5	ERC estadio/categoría G1–G5 (determinado por el Filtrado Glomerular)	ERC estadio G1–G5	Estadio (no existe este término en español) Grado	It is important to keep in mind that for a correct description of CKD, the KDIGO guidelines recommend classification following the CGA criteria [Cause-G(FG)-Albuminuria] that takes into account the original cause (C)* G1–G5 allows international homogeneity* It is recalled that stages G1–2 require that the patient present markers of kidney damage in order to be classified as having CKD. CKD G3a defines a mild to moderate decrease in GFR (KDIGO)* CKD G3b defines a mild to moderate decrease in GFR (KDIGO)* CKD G4 defines a moderate to severe decrease in GFR (KDIGO)* CKD G5 defines a severe decrease in GFR (KDIGO)* SLANH recommends avoiding the terms mild, moderate, severe, early, advanced* GFR < 15 mL/min/1.73 m <sup>2</sup> without renal replacement therapy ERC G5ND (non-dialysis) is commonly used as opposed to ERC G5D (see below)
ERC G5	ERC estadio/categoría 5 (determinado por el Filtrado Glomerular < 15 mL/min/1,73 m <sup>2</sup> )			
ERC G5D	ERC estadio/categoría 5D	No especificado	Consenso necesario ERC terminal ERT IRCT	GFR < 15 mL/min/1.73 m <sup>2</sup> in dialysis According to KDIGO, renal “failure” or “failure” refers to stage 5 CKD (eGFR <15 mL/min/1.73 m <sup>2</sup> or on dialysis) The term “failure” contains contradictions in the KDIGO guidelines themselves, being defined in one place as equivalent to kidney “failure” and, in another, to simple duration of kidney disease >3 m The use of the adjective “terminal” as a pejorative, as well as the adjectives “definitive” or “final” is discouraged. G5D allows international homogeneity*
ERA	Enfermedad renal aguda	Enfermedad renal aguda	Discusión en curso <sup>‡</sup> Consenso necesario <sup>‡</sup>	New term under discussion that refers to deterioration of renal function of LESS than 3 months of evolution (>7 days) It generally refers to the evolution after an acute episode in transition to CKD criteria It would be advisable not to stage or clarify whether the staging attempt refers to AKI staging (for acute kidney injury) or CKD.
IRA	Insuficiencia renal aguda	Lesión renal aguda (LRA)	Discusión en curso <sup>‡</sup> Consenso necesario <sup>‡</sup>	“IRA” can be confused with Acute Respiratory Failure (“Insuficiencia Respiratoria Aguda”) The SLANH proposal specifies that the definition of the KDIGO guidelines (“IRA is a subcategory of ERA”) should be followed, avoiding the terms IRA and FRA. A clear distinction should be made between the terms acute kidney “lesión” (damage) and dysfunction. It should be clearly specified that it should be followed by current staging (according to AKI 1–3) based on serum creatinine and urine output* (see below)

– Table 2 (Continued)

Most used acronym	Interpretation of the acronym	SLANH	Avoid (Final consensus required)	Comments
FRA	Fracaso renal agudo	Disfunción renal aguda, estadio 3	Discusión en curso <sup>¶</sup> Consenso necesario <sup>¶</sup>	“Fracaso” should be equivalent to <i>Acute Kidney Injury</i> (AKI) stage 3 in Anglo-Saxon terminology [Increase in Cr <sub>s</sub> > 300% from baseline or Cr <sub>s</sub> ≥ 4 mg/dL (≥354 μmol/L) after an acute increase greater than 0.5 mg/dL (44 μmol/L)].* The terms acute renal “daño, injuria, lesión, fallo o falla” (for damage, injury, injury, failure) do not necessarily imply renal “fracaso”. If their use is agreed upon, they should necessarily be followed by current staging (according to AKI 1–3)* It has been suggested not to use acute kidney “daño” or “injuria” for several reasons** A clear distinction should be made between the terms IRA and FRA. FRA (for acute renal failure instead of IRA) avoids confusion with Acute Respiratory Failure but would not apply to IRA 1–2 Stage 3 acute renal failure-dysfunction (AKI 3) treated with dialysis
FRA 3D	Fracaso renal agudo 3D	Disfunción renal aguda (DRA), estadio 3D		
FE <sub>Na</sub>	Fracción excretada de sodio	Fracción de excreción de sodio	Excreción fraccional de sodio	Excreted fraction of urea and others can also be expressed similarly, changing the suffix
CACo	Cociente albúmina/creatinina en orina (CACo, CACr <sub>or</sub> )	Relación albumin-uria/creatininuria (I Alb <sub>u</sub> /Creat <sub>u</sub> ) CAC <sup>b</sup>	Razón	The acronym should underscore the need to use “orina” (urine) (“o”) or <i>urinaria</i> (u) creatinine for the ratio calculation. “Relación” as a term and acronym expressed as an index? Albumin/creatinine “cociente” is the term used in the Spanish SEN-SEQC guidelines Urea, phosphorus, etc. can also be expressed similarly, changing to suffix.
CPCo	Cociente proteína/creatinina en orina	Relación protein-uria/creatininuria (I Prot <sub>u</sub> /Creat <sub>u</sub> )	PCR Razón	The acronym should underscore the need to use <i>urine</i> (“o”) or <i>urinary</i> (“u”) creatinine for the ratio calculation.
A1-3	Categorías de albuminuria o proteinuria según KDIGO	Categorías de albuminuria según KDIGO		This acronym underscores the need to use <i>urine creatinine</i> for the ratio calculation. There may be more proteins in the urine than just albumin (eg, nonselective proteinuria, light chains).
A2	Aumento moderado de la concentración de albúmina en orina		Microalbuminuria <sup>d</sup>	Albuminuria or moderately increased proteinuria [CACo 30–300 mg/g (3–30 mg/mmol; 30mg/d)* [CPCo 150–500 mg/d; 150–500 mg/g (15–50 mg/mmol)]*

– Table 2 (Continued)

Most used acronym	Interpretation of the acronym	SLANH	Avoid (Final consensus required)	Comments
A3  Síndrome nefrótico	Aumento grave de la concentración de albúmina en orina	Alb <sub>u</sub> > 2.200 mg/día (IALb <sub>u</sub> /Creat <sub>u</sub> > 200 mg/g (> 220 mg/mmol) Prot <sub>u</sub> > 3.500 mg/día (IALb <sub>u</sub> /Creat <sub>u</sub> > 3.500 mg/g (> 350 mg/mmol)	Macroalbuminuria <sup>d</sup>	Albuminuria or severely increased proteinuria [CACo > 300 mg/g (>30 mg/mmol); >30 mg/d] <sup>*</sup> [CPCo >500 mg/d; >500 mg/g (>50 mg/mmol)] <sup>*</sup> This clarification of the analytical values of the KDIGO (and SLANH) is important for the definition of nephrotic syndrome when only the excretion of albumin in the urine (instead of proteinuria) is taken into account. Pending of final publication of the new KDIGO guidelines on glomerular disease. It should be clearly specified whether a nephrotic RANGE proteinuria is with or without nephrotic SYNDROME, as indicated by the presence of hypoalbuminemia (with edema and hyperlipidemia in most cases), as it is helpful in its differential diagnosis (eg primary or secondary focal and segmental glomerulosclerosis) and for subsequent therapeutic decisions. Attention should be paid to the use of commas as thousands separators, which is inappropriate in Spanish (in Spanish thousands are separated by periods and only decimals are separated by commas). In English it is exactly the opposite. Note that the corrected definition corresponds to, eg, Alb <sub>u</sub> > 2,2 g/day and the classic Prot <sub>u</sub> > 3,5 g/day.
TRS	Tratamiento renal sustitutivo (TRS)	Tratamiento renal de sustitución (TRS)	Tratamiento de reemplazo renal Terapia renal sustitutiva Terapia de reemplazo renal Discusión en curso <sup>†</sup> Consenso necesario <sup>†</sup>	Includes dialysis and transplant, so it must be specified The SLANH guidelines also use the term “sustitutivo” and the long term (with/without renal replacement therapy), but note that the term could be revised at the KDIGO AKD consensus conference ( <i>Acute Kidney Disease</i> )
TR <sup>e</sup>	Trasplante renal	Trasplante renal	Trasplante renal	Kidney transplant (functioning or not) Several registries use the term FUNCTIONING kidney transplant with the acronym TRF.

<sup>a</sup>When describing grades (categories, stages) of CKD, the use of the adjective “severo/a” should be avoided and the use of “grave” should be used instead. Severa is a literal translation of the English “severe”, but in Spanish the word “severe” does not mean serious but rigorous.

<sup>c</sup>SEN-SEQC = Spanish Society of Nephrology-Spanish Society of Clinical Chemistry and Molecular Pathology.

<sup>\*</sup> We recommend addressing to the appropriate sources.

<sup>\*\*</sup> It has been suggested not to use acute kidney «daño» or «injuria» for several reasons: (1) lack of tradition, (2) the term “injuria” is a merely cosmetic change since it continues to be defined by renal function and not by objective markers of damage, independent of renal function. Theoretically, it would be possible for there to be patients with acute renal function impairment [IRA (AKI 1–3) or FRA (AKI 3)] and acute kidney injury, but also patients with acute kidney injury but without IRA or FRA.

<sup>b</sup> The acronym CAC does seem to be considered subliminally in the SLANH proposal.

<sup>d</sup> Despite the enormous implantation of these terms, especially beyond nephrology, it was considered that the terms micro- or macro- were not adequate because it is not about the existence of a “small” or a “big” albumin.

<sup>e</sup> It is possible that the nomenclature associated with transplantation, barely existing in the KDIGO initiative on nomenclature and with Anglo-Saxon terminology well established even in daily practice (eg borderline, DGF due to delayed graft function, etc.), deserves itself an initiative of the respective transplant societies. It should be assessed whether a translation would improve the understanding of the texts, expand or speed up the results of search engines, improve the exchange of information between the different actors in the world of transplantation or, on the contrary, it would be a “new learning” that it would displace an already integrated knowledge without additional input.



cannot forget that, for our patients, what is really fundamental is not that we scientists or nephrologists use to understand each other by using a common scientific language, but rather that our “kidney” (“renal”) patient understands from us by using plain words of any origin, adapted individually, and even resorting to colloquial or more popular language, whether we are for him “nefró-logos” or “riñón-logos”.<sup>23</sup>

## Financing

The production of this editorial has not received any financial support.

## Conflict of interests

The authors have no conflicts of interest related to this article.

## REFERENCES

- Martínez-Castelao A, Górriz JL, Bover J, Segura-de la Morena J, Cebollada J, Escalada J, et al. Documento de consenso para la detección y manejo de la enfermedad renal crónica. *Nefrología*. 2014;34:243–62.
- García-Maset R, et al. Actualización del documento de consenso para la detección y manejo de la enfermedad renal crónica. *Nefrología*. 2021.
- Gella Tomás FJ, Andrés-Otero MJ, Rigo-Bonnin R, Canalias-Reverter F, Cano-Corres R, Esteve-Poblador S, et al. Nomenclatura y unidades de las propiedades biológicas. Recomendación (2016). *Rev Lab Clin*. 2018;11:87–92.
- Fuentes-Arderiu X. Diccionario de ciencias de laboratorio clínico. Interamericana de España S.L: McGraw-Hill; 1998. ISBN 8448602013.
- Olesen H. Properties and units in the clinical laboratory sciences, I. Syntax and semantic rules (recommendation 1995). International Union of Pure and Applied Chemistry (IUPAC) and International Federation of Clinical Chemistry (IFCC). *Eur J Clin Chem Clin Biochem*. 1995;33:627–36.
- Fuentes-Arderiu X, Antoja-Ribó F, Castiñeiras-Lacambra MJ. Manual de estilo para la redacción de textos científicos y profesionales. Barcelona, Universitaria de Bellvitge, 2003. [E-book]. <https://universoabierto.org/2015/12/14/manual-de-estilo-para-la-redaccion-de-textos-cientificos-y-profesionales/> (última visita 24/12/2020 International Federation of Clinical Chemistry and Laboratory Medicine. Comentarios de Terminología. [consultado 7 Ago 2021]. Disponible en: <http://www.ifcc.org/ria/terminology/#creat>.
- Levey AS, Kai-Uwe Eckardt KU, Dorman NM, Christiansen SL, Hoorn EJ, Ingelfinger JR, et al. Nomenclature for kidney function and disease: report of a Kidney Disease: Improving Global Outcomes (KDIGO) Consensus Conference. *Kidney Int*. 2020;97:1117–29.
- National Kidney Foundation. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Am J Kidney Dis*. 2002;39(S1).
- Levey AS, Eckardt KU, Tsukamoto Y, Levin A, Coresh J, Rossert J, et al. Definition and classification of chronic kidney disease: a position statement from Kidney Disease: Improving Global Outcomes (KDIGO). *Kidney Int*. 2005;67:2089.
- Levey AS, Stevens LA, Coresh J. Conceptual model of CKD: applications and implications. *Am J Kidney Dis*. 2009;53:54.
- Delanaye P, Jager KJ, Bökenkamp A, Christensson A, Dubourg L, Eriksen BO, et al. CKD: a call for an age-adapted definition. *J Am Soc Nephrol*. 2019;30:1785–805.
- Gracia-García S, Montañés-Bermúdez R, Bover-Sanjuan J, Cases-Amenós A, Deulofeu-Piquet R, de Francisco ALM. Recomendaciones sobre la utilización de ecuaciones para la estimación del filtrado glomerular en adultos. *Nefrología*. 2006;26:658–65.
- Canal C, Pellicer R, Rocha CI, Calero F, Gracia S, Montañés R, et al. Tables estimating glomerular filtration rate from plasma creatinine. *Nefrología*. 2008;28:317–24.
- Alcázar A, Egocheaga MI, Orte L, Lobos JM, González Parra E, Alvarez Guisasola F, et al. SEN-SEMFYC consensus document on chronic kidney disease. *Nefrología*. 2008;28:273–82.
- Montañés-Bermúdez R, Gràcia-García S, Pérez-Surribas D, Martínez-Castelao A, Bover-Sanjuan J. Documento de Consenso. Recomendaciones sobre la valoración de la proteinuria en el diagnóstico y seguimiento de la enfermedad renal crónica. *Nefrología*. 2011;31:331–45.
- Montañés-Bermúdez R, Bover-Sanjuan J, Oliver-Samper A, Ballarín-Castán JA, Gràcia-García S. Valoración de la nueva ecuación CKD-EPI para la estimación del filtrado glomerular. *Nefrología*. 2010;30:185–94.
- Canal C, Pellicer R, Facundo C, Gràcia-García S, Montañés-Bermúdez R, Ruiz-García C, et al. Tables for estimating the glomerular filtration rate using the new CKD-EPI equation from serum creatinine concentration. *Nefrología*. 2014;34:223–9.
- Improving Global Outcomes (KDIGO) 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int Suppl*. 2013;3:1–150.
- Martínez-Castelao A, Górriz JL, Bover J, Segura-de la Morena J, Cebollada J, Escalada J. Documento de consenso para la detección y manejo de la enfermedad renal crónica. *Aten Primaria*. 2014;46:501–19.
- Obrador-Vera GT, Bourlón de los Ríos MT, Gómez-Sámano MA, Laris-González A, Contreras-Estrada D, Correa-Rotter R, et al. Guías Latinoamericanas de Práctica Clínica sobre la Prevención, Diagnóstico y Tratamiento de los Estadios 1-5 de la Enfermedad Renal Crónica. [Accessed 24 December 2020] Available from: [https://www.slanh.net/wp-content/uploads/2014/07/enfermedad\\_renal.cronica.pdf](https://www.slanh.net/wp-content/uploads/2014/07/enfermedad_renal.cronica.pdf).
- Grupo de trabajo de la Guía de Práctica Clínica sobre la Detección y el Manejo de la Enfermedad Renal Crónica. Guía de Práctica Clínica sobre la Detección y el Manejo de la Enfermedad Renal Crónica. Ministerio de Sanidad, Servicios Sociales e Igualdad. Instituto Aragonés de Ciencias de la Salud. 2016 [Accessed 24 December 2020]. Available from: [https://portal.guiasalud.es/wp-content/uploads/2018/12/GPC\\_559\\_ERC\\_IACS\\_compl.pdf](https://portal.guiasalud.es/wp-content/uploads/2018/12/GPC_559_ERC_IACS_compl.pdf).
- Bover J, Haarhaus ML, Furlano M, Ureña P, Vervloet M, DaSilva I, et al. English-Latin nomenclature conundrum: should we use kidneylogy, kidneylogist? *Kidney Int*. 2020;98:1352–3.
- Bover J, Bosch R, Ureña P, Trinidad P, Jara A, Górriz JL, et al. Los riñones también hablan español. *Nefrología*. <https://doi.org/10.1016/j.nefro.2020.11.002> [Accessed 5 December 2020]. Available from: <https://www.revistanefrologia.com/es-los-rinones-tambien-hablan-espanol-avance-S0211699520301818>.
- da Silva-Santos I, Araújo MJCLNA, Jorgetti V, Elias RM, Bover J. Rins também falam português. *Braz J Nephrol (J Bras Nefrol)*. 2021. <http://dx.doi.org/10.1590/2175-8239-jbn-2020-0264> [Accessed 7 August 2021]. Available from: 43.
- Kalantar-Zadeh K, McCullough PA, Agarwal SK, Beddhu S, Boaz M, Brunchfeld A, et al. Nomenclature in Nephrology: Preserving ‘Renal’ and ‘Nephro’ in the Glossary of Kidney Health and Disease. *J Nephrol*. 2021;34, 639–548. (in press) <https://www.springer.com/journal/40620>

26. Ferreiro-Fuentes A, González-Bedat MC, Lombardi R, Lugon J, Mastroianni G, Mira F, et al. Consenso iberoamericano para uniformar la nomenclatura de la función y las enfermedades renales: una propuesta de la SLANH. *Nefro Latinoam*. 2020;17:55-67.
27. Sánchez-Alvarez JE, Ferreiro-Fuentes A, Gonzalez-Bedat MC, Rosa-Diez GJ, Limbardi R, Lugón J, Mira F, Mastroianni G. Sobre ña necesidad de armonizar la terminología nefrológica en los países latinoamericanos. *Nefrología 2021* (en prensa) Marlene Busko. 'Kidney' vs 'Renal': Experts say words matter. [consultado 7 Ago 2021]. Disponible en: <https://www.medscape.com/viewarticle/940518>.
28. Perez-Gomez V, Bartsch LA, Castillo-Rodríguez E, Fernandez-Prado R, Fernandez-Fernandez B, Martin-Cleary C, et al. Clarifying the concept of chronic kidney disease for non-nephrologists. *Clin Kidney J*. 2020;12:258-61.
29. Hueso M, Haro L, Calabia J, Dal-Ré R, Tebé C, Gibert K, Cruzado JM, Vellido A. Leveraging data science for a personalized haemodialysis. *Kidney Dis (Basel)*. 2020;6:385-94. Proyecto de nomenclatura internacional normalizada relativa a la ciencia y la tecnología. [Accessed 7 August 2021]. Available from: <https://skos.um.es/unesco6/00/html>
30. Bover J, Ureña-Torres P, Mateu S, DaSilva I, Gràcia S, Sánchez-Baya M, et al. Evidence in chronic kidney disease—mineral and bone disorder guidelines: is it time to treat or time to wait? *Clin Kidney J*. 2020;13:513-21.