

# Les datas: pourquoi faire?

## Notre expérience

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**Docteur Paul Stroumza**  
Directeur médical Diaverum France

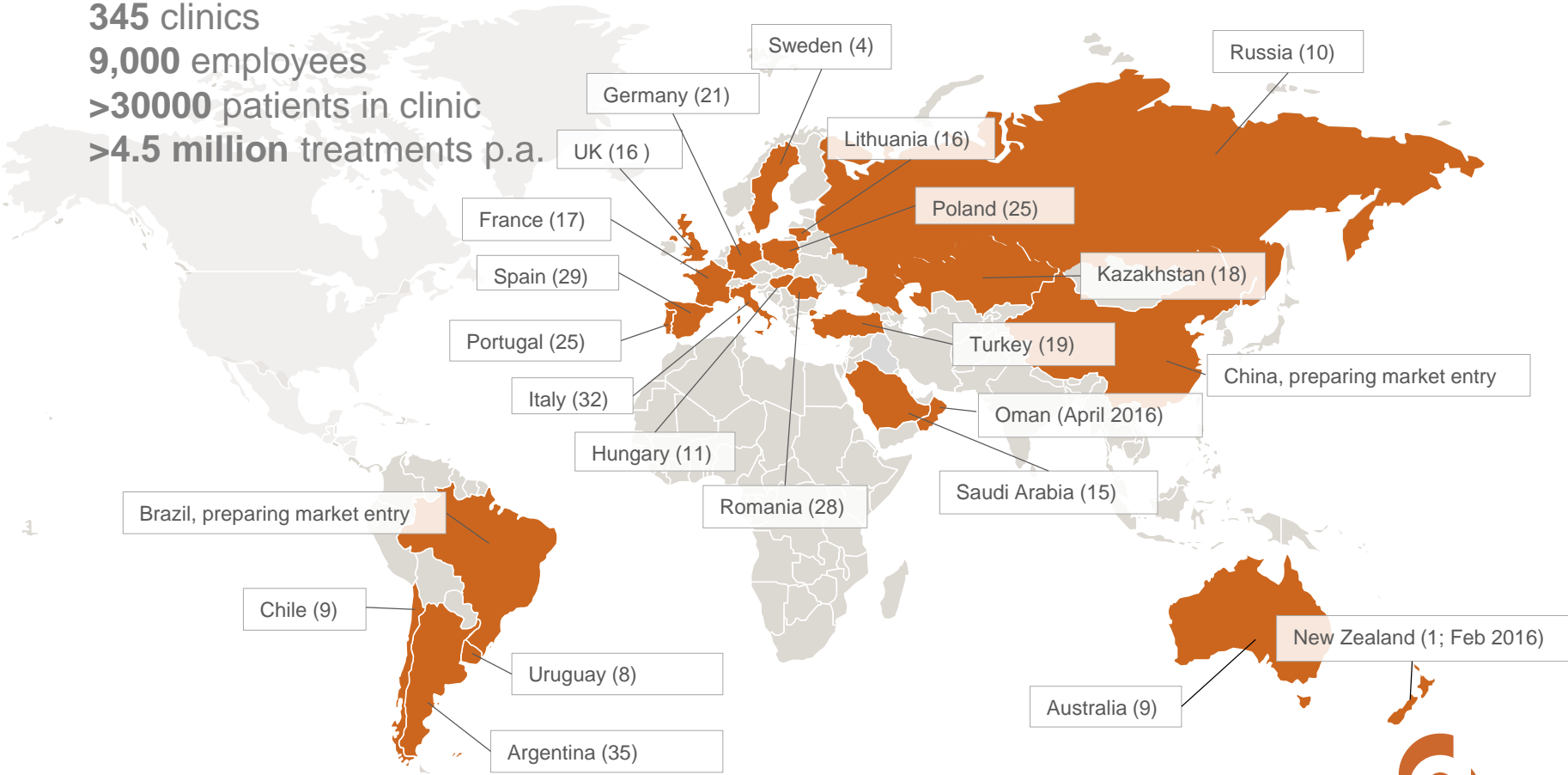
Maladie rénale chronique: Actualité et  
devenir de la prise en charge  
21 juin 2016 – Paris



**DIAVERUM**

# Comment délivrer la même qualité partout

**20** countries  
**345** clinics  
**9,000** employees  
**>30000** patients in clinic  
**>4.5 million** treatments p.a.



\*No of clincs as of Jan 31, 2016



# Conséquences financières de l'IRC



- En 2010, le nombre de patients en IRCT dans le monde était estimé à 3 millions
- Le coût de la prise en charge de ces patients avoisinait 1 trillion de US\$
- Fin 2014 , 45000 Patients sont dialysés en France (35000 greffés). Le coût moyen annuel est d'environ 80000€ par patient.
- Enorme poids des soins de santé pour la société!



# Le challenge aujourd'hui



Réduire le coût des soins de dialyse, et simultanément améliorer la qualité des soins et assurer la sécurité des patients

# Comment réussir?



- Fournir des soins de grande qualité médicale avec une faible variabilité à travers le monde
- Toujours prioriser la sécurité des patients
- Travailler en accord avec l'évidence scientifique
- Recueillir régulièrement des données auprès des cliniques pour mesurer la performance (scoring)



# Outils

Standards of care

Reportings et CPM score

Evènements indésirables

Audit clinique annuel

Revue trimestrielle

Recherche et publications



DIAVERUM

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# Standards of Care

## Standards of Care in Hemodialysis 2013-2014

Rationale, explanations and elaborations  
November 1, 2013





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# Collecter les données est important



- Assurer la sensibilisation sur la qualité et la sécurité du traitement
- Etre conforme aux réglementations et recommandations nationales et internationales
- Suivre les résultats et analyser les écarts améliore la qualité en soi
- Faire preuve d'excellence dans les soins auprès des intervenants différents (patients, famille, correspondants, tutelle et payeurs
- Etre payé pour la performance un jour?



# Clinical Performance Measures (CPM) en Hémodialyse 2016



- Kt/V (single pool)  $\geq 1.4$
- Albumine  $\geq 35$  g/l
- Hémoglobine  $\geq 10.0$  and  $\leq 12.0$  g/dl
- Ferritine  $\geq 200$  and  $\leq 800$   $\mu\text{g/l}$
- Phosphore  $\geq 2.5$  and  $\leq 5.5$  mg/dl
- Calcium x Phosphore  $< 55$   $\text{mg}^2/\text{dl}^2$
- PTH intacte  $\geq 150$  and  $\leq 600$  pg/ml
- Pression artérielle moyenne avant dialyse  $< 105$  mmHg
- Prise de poids interdialytique  $< 4\%$
- Durée hebdomadaire de traitement  $\geq 720$  minutes
- Prévalence des FAV

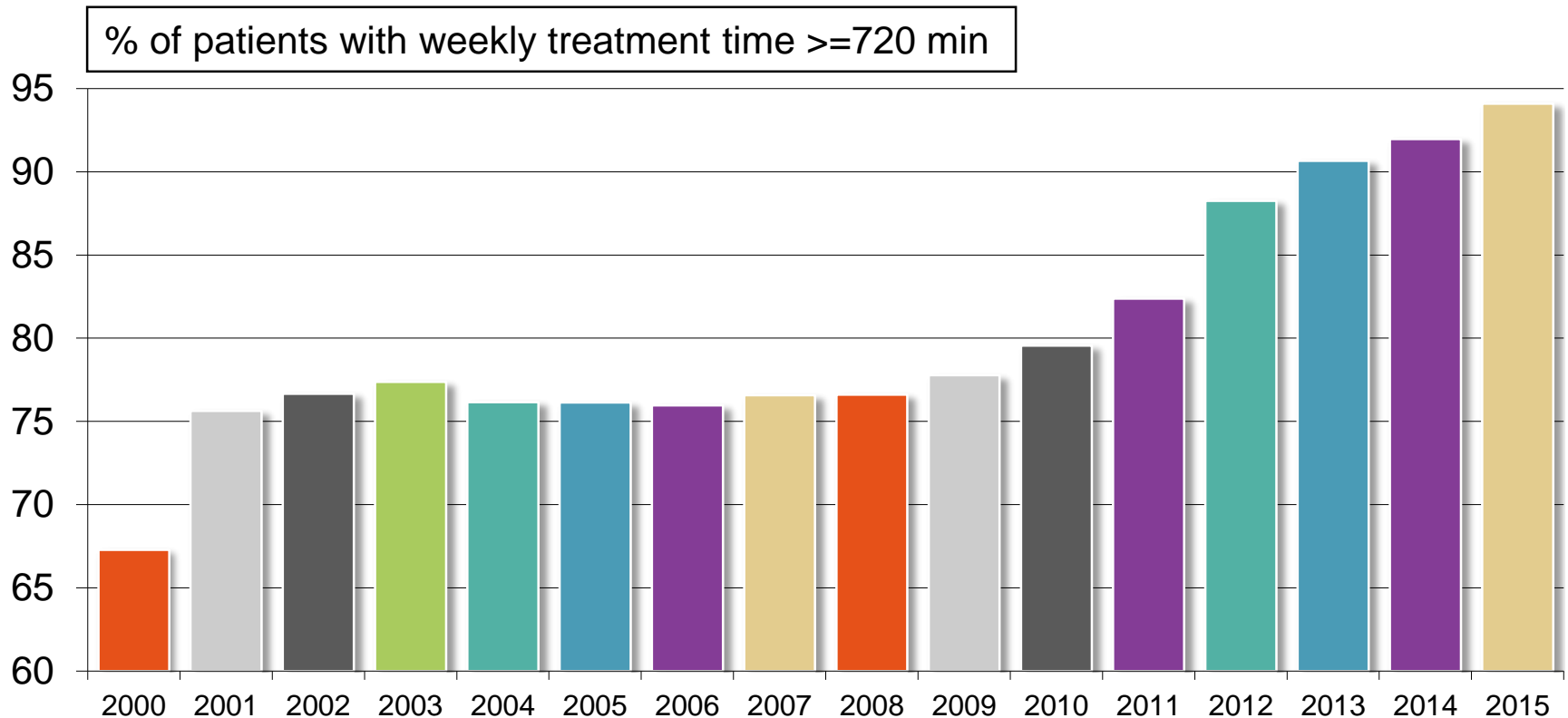


# Calcul du CPM score

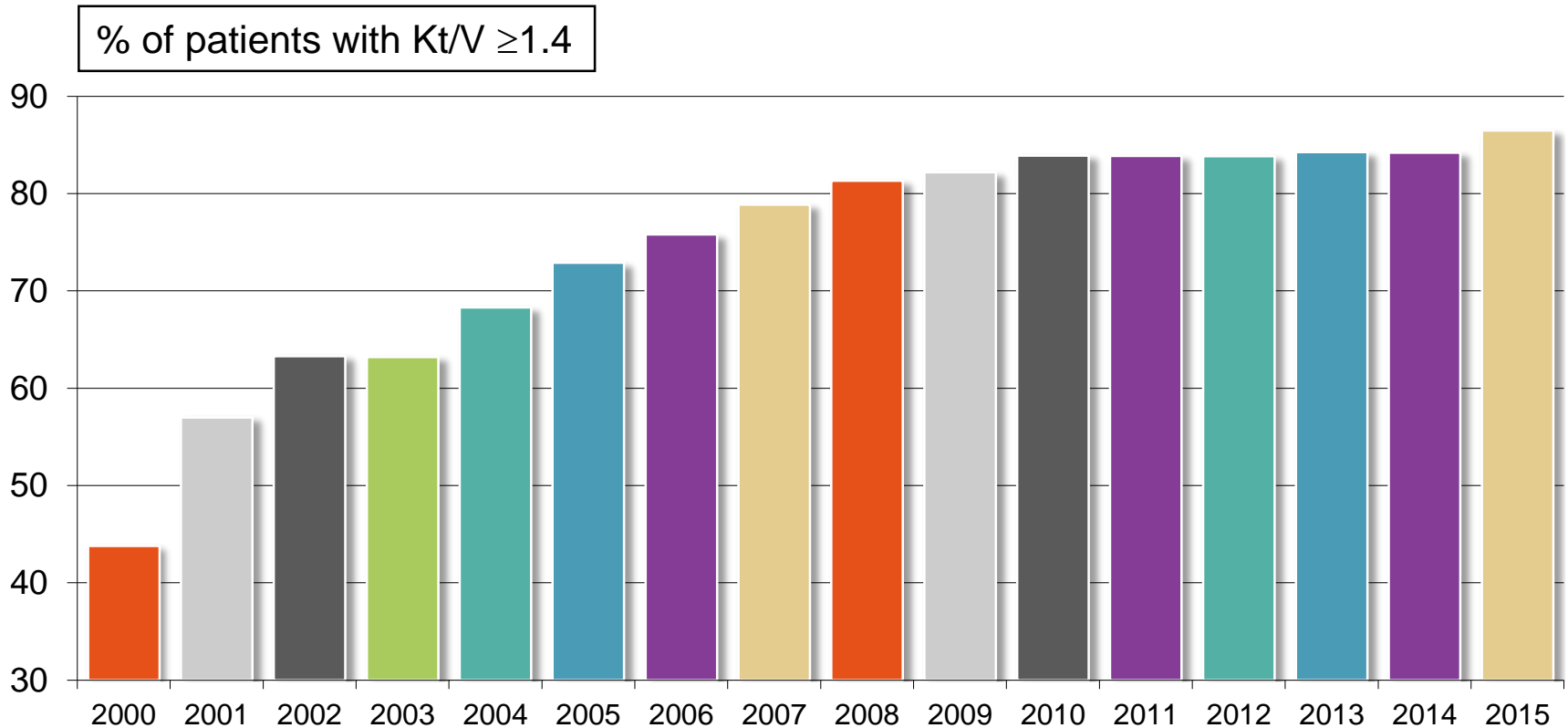
Quality Indicator	Quarter 1 (%)	Quarter 2 (%)	Quarter 3 (%)	Quarter 1 - 3
Kt/V $\geq 1.4$	88.0	88.0	88.3	264.3
Albumin $\geq 35$ g/L	92.5	93.9	94.5	280.9
Hemoglobin $\geq 10$ and $\leq 12$ g/dL	78.2	79.0	77.1	234.3
Ferritin $\geq 200$ and $\leq 800$ $\mu\text{g/L}$	79.7	80.6	74.0	234.3
Phosphorus $\geq 2.5$ and $\leq 5.5$ mg/dL	77.3	79.8	80.3	237.4
Ca x P $< 55$ $\text{mg}^2/\text{dL}^2$	88.7	89.5	89.9	268.1
iPTH $\geq 150$ and $\leq 600$ pg/mL	68.6	79.0	69.7	217.3
Predialysis MAP $< 105$ mmHg	90.6	89.8	87.3	267.7
IDBWG $< 4\%$ of dry weight	84.0	82.7	80.8	247.5
Weekly treatment time $\geq 720$ min	79.9	81.6	84.5	246.0
AV fistula prevalence	76.4	75.6	77.9	229.9
<b>CPM score</b>	<b>903.9</b>	<b>919.5</b>	<b>904.3</b>	<b>2727.7</b>



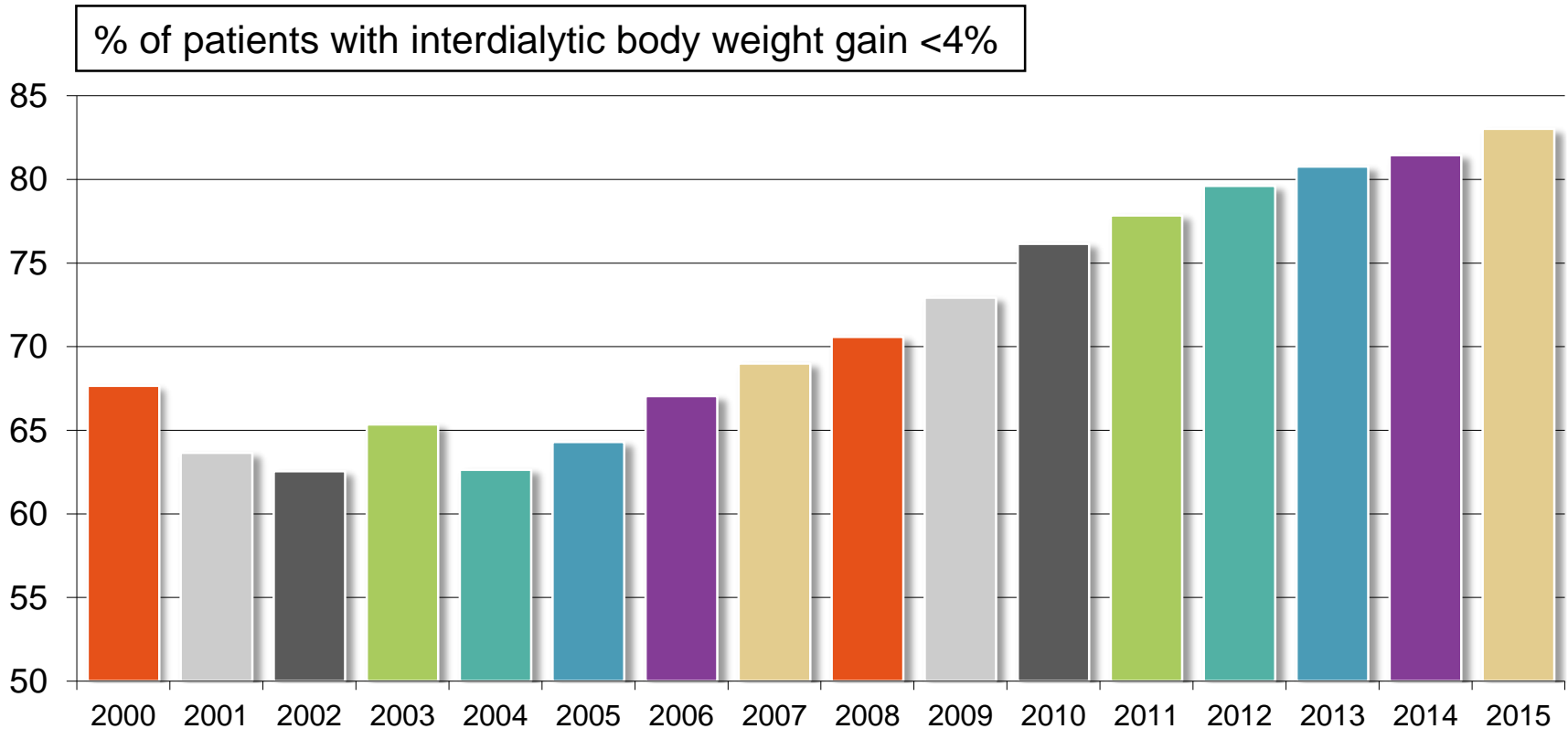
# Durée de traitement



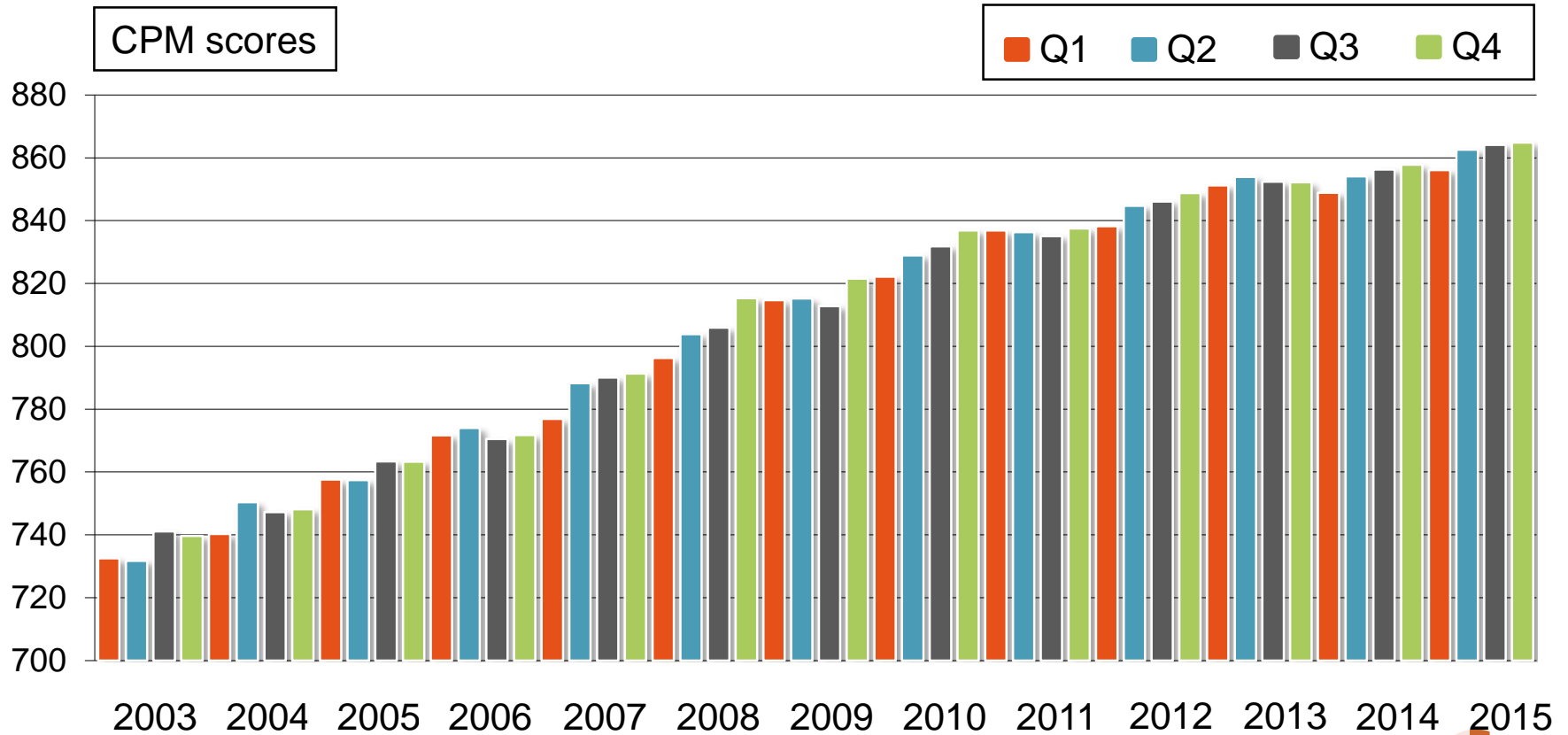
# Dose de dialyse



# Prise de poids interdialytique



# Augmentation progressive du CPM score

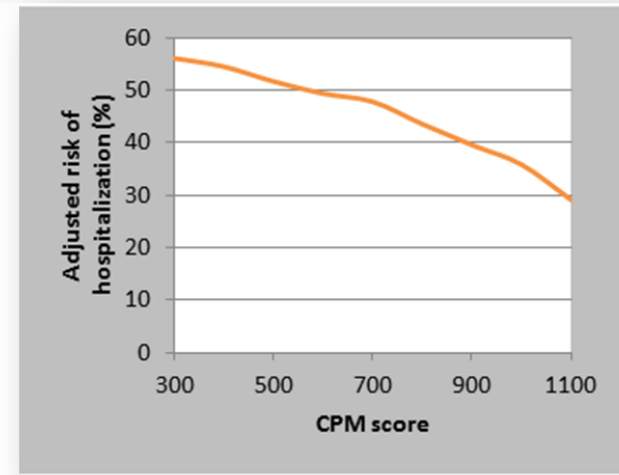
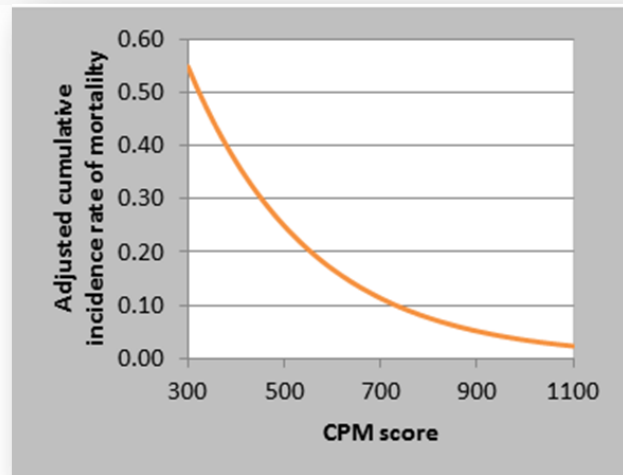




# Risque de mortalité et d'hospitalization selon le CPM score

FOR EVERY 100 POINTS INCREASE IN CPM SCORE, ALL-CAUSE MORTALITY RISK DECREASED BY 33%, WITH A 95% CI OF 31% TO 35% (P < 0.001)

FOR EVERY 100 POINTS INCREASE IN CPM SCORE, THE RISK OF HOSPITALIZATIONS DECREASED BY 17%, WITH A 95% CI OF 15% TO 19% (P < 0.001)



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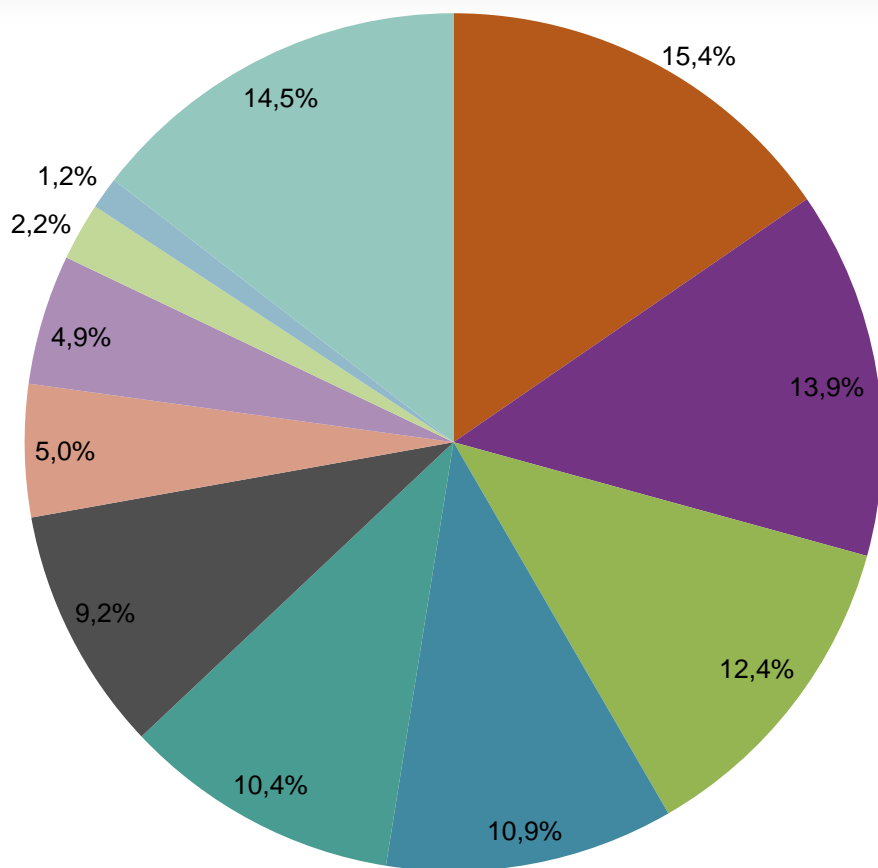
# Reporting des incidents et gestion des risques

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- Nous avons **45315 incidents** rapportés en 2015
- Soit 1.70 (1.51 en 2014) incidents par patient et par an
- Cela fait **1** incident pour 100 séances d'hémodialyse environ



# Top 10 incidents 2015



- A2-Dialyzer and/or blood lines changed due to clotting
- A14-Missed treatment - patient did not show up by own choice
- A4-Vascular access problems/complications, e.g. multiple cannulations, extended bleeding, insufficient blood flow rate
- A15-Shortened treatment - voluntarily interruption of treatment >15 minutes
- A0-Others
- D2-Major HD monitor malfunction requiring monitor change/discontinuation of treatment
- D1-Repeated/recurring minor HD monitor malfunction
- A1-Hypotension - medication/hypertonic saline/more than 300 ml of normal saline
- D0-Others
- C2-Damaged/defect blood lines
- Rest



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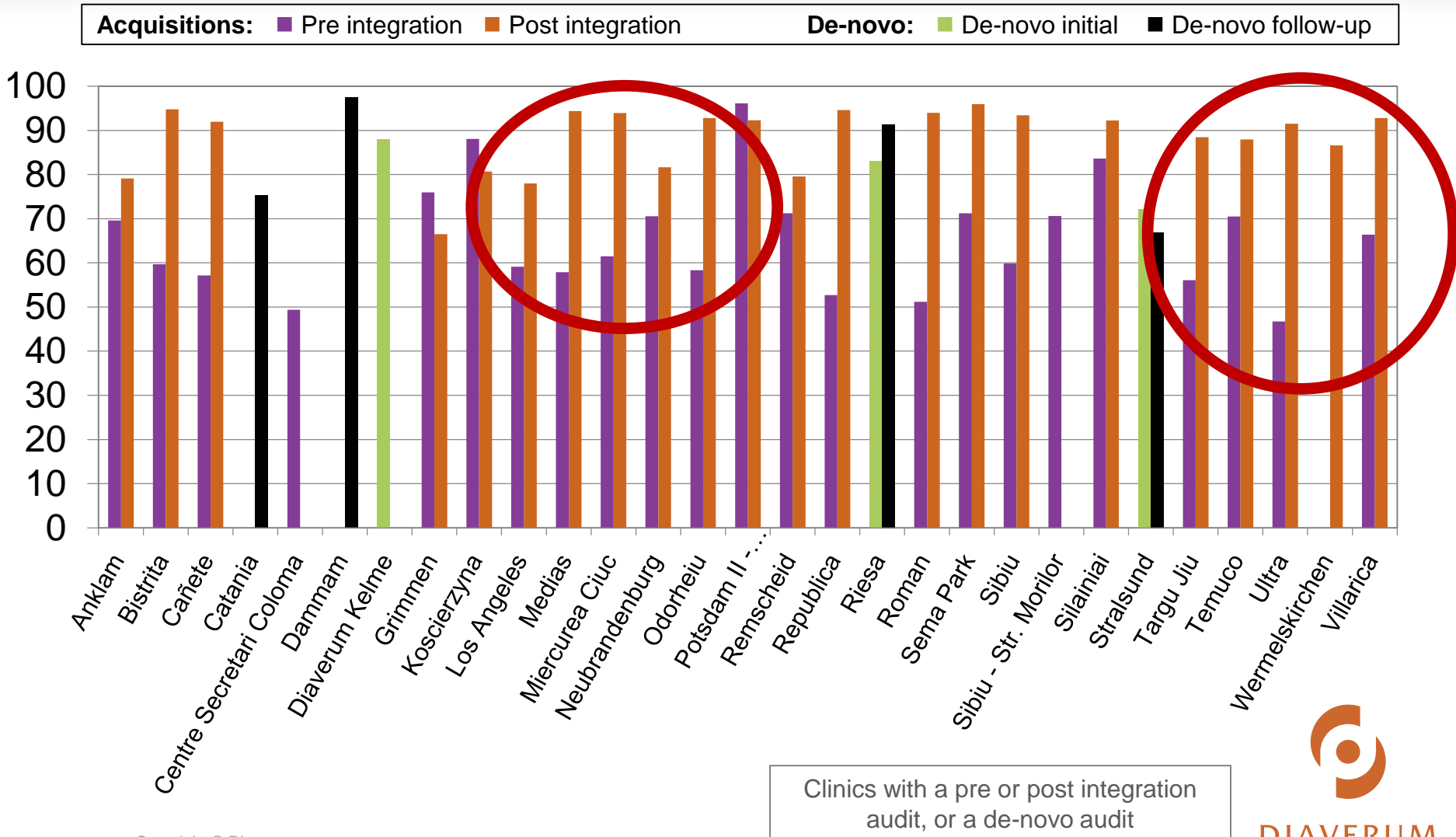
# Audit clinique annuel

1. Uniforms
2. Use of PPE
3. Hand hygiene
4. Set up and priming
5. Patient assessment
6. Prescription
7. Medications and anticoagulation
8. AV access needling
9. CVC care
10. Connection process
11. Blood flow optimization
12. Documentation and monitoring
13. Rinse back
14. Post dialysis care
15. Sharps disposal
16. Waste disposal
17. Hygiene and maintenance of dialysis fluid pathway
18. External decontamination of dialysis monitor
19. Cleaning of dialysis station and area
20. Food provision during dialysis
21. HBV/HCV
22. Reuse
23. Emergency equipment/preparedness
24. Supplies and storage
25. Clinic environment
26. Water treatment
27. Quality and regulatory
28. Peritoneal dialysis



# Audit de pratiques cliniques

## Exemple:



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# Revue trimestrielle qualité

## Quarter meetings



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### Réunion pluri-professionnelle par centre

- Bilan du précédent plan d'action
- Analyse des indicateurs du trimestre
- Nouveau plan d'action

# Revue trimestrielle qualité

## Quarter meetings

Diaverum France	Type de document <b>Politique</b>	Page <b>1 sur 2</b>
Titre du document <b>Revue Trimestrielle Qualité (QM)</b>	N° du document <b>216</b>	N° de version <b>04</b>
Rédigé par S Schön, J Hegbrant, R Persson, D del Castillo, M Guerra; 2013-05-06	Date de mise en application <b>01/09/2013</b>	
Validation du Directeur Médical DIAVERUM France : P Stroumza 	Validation du Directeur Général DIAVERUM France : H Gourguillon 	
Application Tout Centre de Dialyse Diaverum		

### Objet :

- Réaliser un suivi systématique, objectif et exhaustif des indicateurs permettant d'évaluer la qualité des soins de chaque centre de dialyse.
- Identifier les axes d'amélioration et définir les plans d'actions à mettre en place.
- S'assurer que les Revues Trimestrielles (Quarter Meeting : QM) sont réalisées selon le format standardisé.



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# Publications

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## **BMJ Open Nutrition and dietary intake and their association with mortality and hospitalisation in adults with chronic kidney disease treated with haemodialysis: protocol for DIET-HD, a prospective multinational cohort study**

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Suetonia C Palmer,<sup>1</sup> Marinella Ruospo,<sup>2,3</sup> Katrina L Campbell,<sup>4</sup>  
Vanessa Garcia Larsen,<sup>5</sup> Valeria Saglimbene,<sup>2</sup> Patrizia Natale,<sup>2</sup> Letizia Gargano,<sup>2</sup>  
Jonathan C Craig,<sup>6</sup> David W Johnson,<sup>7</sup> Marcello Tonelli,<sup>8</sup> John Knight,<sup>9</sup>  
Anna Bednarek-Skublewska,<sup>2,10</sup> Eduardo Celia,<sup>2</sup> Domingo del Castillo,<sup>2</sup>  
Jan Dulawa,<sup>2,11</sup> Tefvik Ecdar,<sup>2</sup> Elisabeth Fabricius,<sup>2</sup> João Miguel Frazão,<sup>2,12</sup>  
Ruben Gelfman,<sup>2</sup> Susanne Hildegard Hoischen,<sup>2</sup> Staffan Schön,<sup>2</sup> Paul Stroumza,<sup>2</sup>

# Publications

Introduction Review

## Interventions for treating sexual dysfunction in patients with chronic kidney disease

Marcelina Vecchia<sup>1</sup>, Suskar D. Narasimhan<sup>2</sup>, David W. Johnson<sup>3</sup>, Fabrice Perrigot<sup>4</sup>, Marcella Ruzicica<sup>5</sup>, Giancarlo Lucinuzzi<sup>6</sup>, Giuseppe Laccaione<sup>7</sup>, Alessandra Fagnola<sup>8</sup>, Valeria Saglimbeni<sup>9</sup>, Marialetta Ruzicica<sup>10</sup>, Miriam Di Stefano<sup>11</sup>, Giorgio Gentile<sup>12</sup>, Martina Torricelli<sup>13</sup>, Paolo Pizzocchini<sup>14</sup>, Juan Min Farnart<sup>15</sup>, Aneta Bechara<sup>16</sup>, John Cutler<sup>17</sup>, MD, PhD<sup>18</sup>, Giovanni Sorbelli<sup>19</sup>, MD<sup>20</sup>, Jorge Chavarro<sup>21</sup>, MD, PhD<sup>22</sup>, Giovanni F. Stronob<sup>23</sup>, MD, PhD, MSc, MRCP<sup>24</sup>

**From:** <sup>1</sup>Unit of Nephrology and Endocrinology, University of Turin, Turin, Italy; <sup>2</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>3</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>4</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>5</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>6</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>7</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>8</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>9</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>10</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>11</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>12</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>13</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>14</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>15</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>16</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>17</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>18</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>19</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>20</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>21</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>22</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>23</sup>Section of Nephrology, University of Turin, Turin, Italy; <sup>24</sup>Section of Nephrology, University of Turin, Turin, Italy

**Abstract:** Sexual dysfunction is an under-recognized problem in kidney disease (CKD). The prevalence, correlates, and predictors of this issue have been evaluated comprehensively. **Study Design:** Systematic review and meta-analysis. **Setting & Population:** Reports included among studies on chronic kidney disease, patients with CKD not treated for dialysis, and patients with CKD treated for dialysis. **Selection Criteria for Studies:** Observational studies conducted including a study of group without CKD. **Outcome:** Types of study population. **Outcome:** Sexual dysfunction in men and women with CKD was associated with cardiovascular morbidity, mortality, and quality of life. **Conclusion:** Sexual dysfunction in men and women with CKD was associated with cardiovascular morbidity, mortality, and quality of life. **Keywords:** Sexual dysfunction, chronic kidney disease, cardiovascular morbidity, mortality, quality of life.

Background

Sexual dysfunction is a common problem in patients with chronic kidney disease (CKD). The prevalence, correlates, and predictors of this issue have been evaluated comprehensively.

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## ARTICLE IN PRESS

### Prevalence and Correlates of Self-Reported Sexual Dysfunction in CKD: A Meta-analysis of Observational Studies

Suskar D. Narasimhan, MD, MPH<sup>1,2</sup>, Marcelina Vecchia<sup>1</sup>, David W. Johnson, MD, PhD<sup>3</sup>, Valeria Saglimbeni, MD, PhD<sup>4</sup>, Fabrice Perrigot, MD<sup>5</sup>, Giuseppe Laccaione, MD<sup>6</sup>, Alessandra Fagnola, MD<sup>7</sup>, Marcella Ruzicica, MD<sup>8</sup>, Miriam Di Stefano, MD<sup>9</sup>, Giorgio Gentile, MD<sup>10</sup>, Martina Torricelli, MD<sup>11</sup>, Paolo Pizzocchini, MD<sup>12</sup>, Juan Min Farnart, MD<sup>13</sup>, Aneta Bechara, MD, PhD<sup>14</sup>, John Cutler, MD, PhD<sup>15</sup>, Giovanni Sorbelli, MD<sup>16</sup>, Jorge Chavarro, MD, PhD<sup>17</sup>, Giovanni F. Stronob<sup>18</sup>, MD, PhD, MSc, MRCP<sup>19</sup>

## Article

### Sexual Dysfunction in Women with ESRD Requiring Hemodialysis

Giuseppe F. Stronob, MD, PhD, MSc, MRCP, for the Collaborative Depression and Sexual Dysfunction (CDS) in Hemodialysis Working Group<sup>1</sup>

Background

Background and objectives: To evaluate the prevalence and correlates of sexual dysfunction in women with end-stage renal disease (ESRD) requiring hemodialysis.

**Design, setting, participants, and follow-up:** A total of 102 women with ESRD undergoing hemodialysis were included in a multicenter, cross-sectional study conducted in 10 tertiary care centers in Italy. Data were collected between 2010 and 2012.

**Measurements and main results:** The prevalence of self-reported sexual dysfunction was 50.0% (95% CI, 43.0–57.0%). The prevalence of sexual dysfunction was significantly higher in women with CKD compared with women without CKD (OR, 2.1; 95% CI, 1.5–2.9).

**Conclusions:** The prevalence of self-reported sexual dysfunction was 50.0% in women with ESRD requiring hemodialysis. The prevalence of sexual dysfunction was significantly higher in women with CKD compared with women without CKD.

### Treatment Options for Sexual Dysfunction in Patients with Chronic Kidney Disease: A Systematic Review of Randomized Controlled Trials

Marcella Ruzicica<sup>1</sup>, Suskar D. Narasimhan<sup>2</sup>, David W. Johnson<sup>3</sup>, Giuseppe Laccaione<sup>4</sup>, Fabrice Perrigot<sup>5</sup>, Marcella Ruzicica<sup>6</sup>, Valeria Saglimbeni<sup>7</sup>, Marcella Ruzicica<sup>8</sup>, Miriam Di Stefano<sup>9</sup>, Giorgio Gentile<sup>10</sup>, Martina Torricelli<sup>11</sup>, Paolo Pizzocchini<sup>12</sup>, Juan Min Farnart<sup>13</sup>, Aneta Bechara<sup>14</sup>, John Cutler<sup>15</sup>, MD, PhD<sup>16</sup>, Giovanni Sorbelli<sup>17</sup>, MD<sup>18</sup>, Jorge Chavarro<sup>19</sup>, MD, PhD, MSc, MRCP<sup>20</sup>

NDT Advance Access published December 28, 2011

Original Article

Background

### Prevalence and correlates of erectile dysfunction in men on chronic haemodialysis: a multinational cross-sectional study

Collaborative Depression and Sexual Dysfunction (CDS) in Hemodialysis Working Group<sup>1</sup>

Giuseppe F. Stronob, MD, PhD, MSc, MRCP, for the Collaborative Depression and Sexual Dysfunction (CDS) in Hemodialysis Working Group<sup>1</sup>

Abstract

Background: Sexual dysfunction is an under-recognized problem in kidney disease (CKD). The prevalence, correlates, and predictors of this issue have been evaluated comprehensively.

**Study Design:** Systematic review and meta-analysis.

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NDT  
Nephrology Dialysis Transplantation

Volume 25, Issue 12, December 2011  
Pages 1735–1741

Sexual dysfunction in men on chronic haemodialysis: a multinational cross-sectional study

Giuseppe F. Stronob, MD, PhD, MSc, MRCP, for the Collaborative Depression and Sexual Dysfunction (CDS) in Hemodialysis Working Group<sup>1</sup>

Abstract

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# Conclusion

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- Mesurer pour s'améliorer et être plus efficient (le meilleur soin au moindre coût)
- Le risque: soigner des chiffres et oublier de regarder le patient alors qu'il doit être au centre de notre système.





*Merci pour votre  
attention*

