

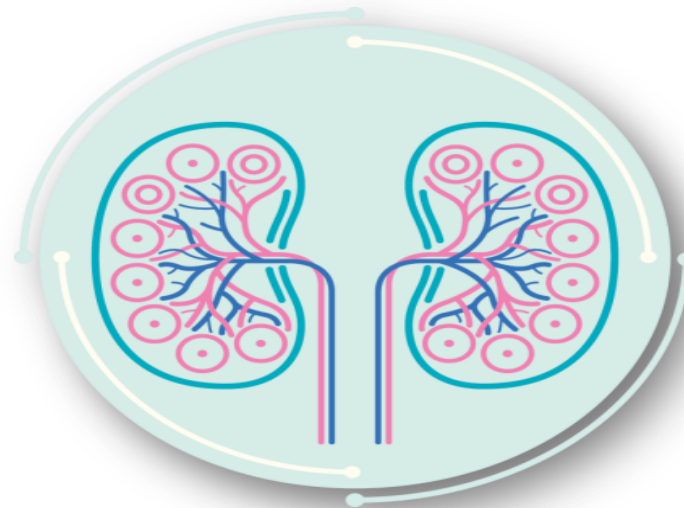


SPNP

Sociedade Portuguesa
de Nefrologia Pediátrica

Registo da Doença Renal Crónica Estadio 5 em Terapêutica Substitutiva da Função Renal

**Conceição Mota
(2019)**



Registo da DRC5 em TSFR 2019



SPNP

Sociedade Portuguesa
de Nefrologia Pediátrica

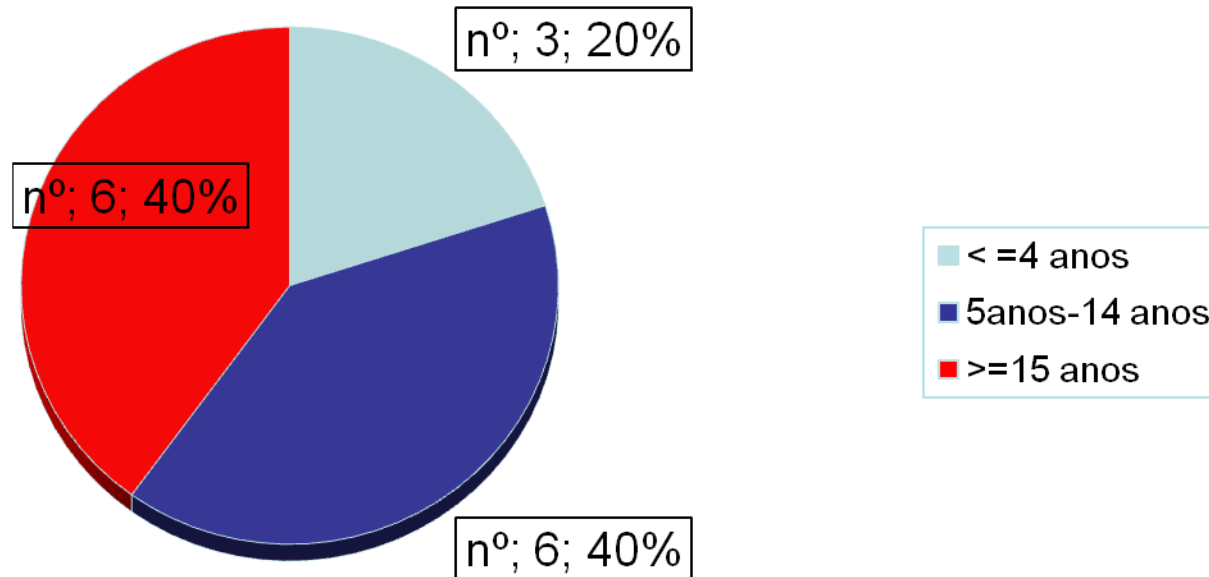
- **Fonte: Registo enviado anualmente para *European Society of Pediatric Nephrology (ESPN)*, com a contribuição das Unidades de Nefrologia Pediátrica Portuguesa.**
- Conceição Mota (C.H.Porto)
- Rosário Stone (H.S. Maria, Lisboa)
- Margarida Abranches (H. D.Estefânia, Lisboa)
- Clara Gomes (H. Pediátrico de Coimbra)

Doentes Incidentes em 2019 (1º TSFR)

15 doentes

Idade Média=11,4± 5,7anos

Género 9 M/6F;
12 caucasianos/3 negros



Doentes que iniciaram TSFR 2019

ANO 2019

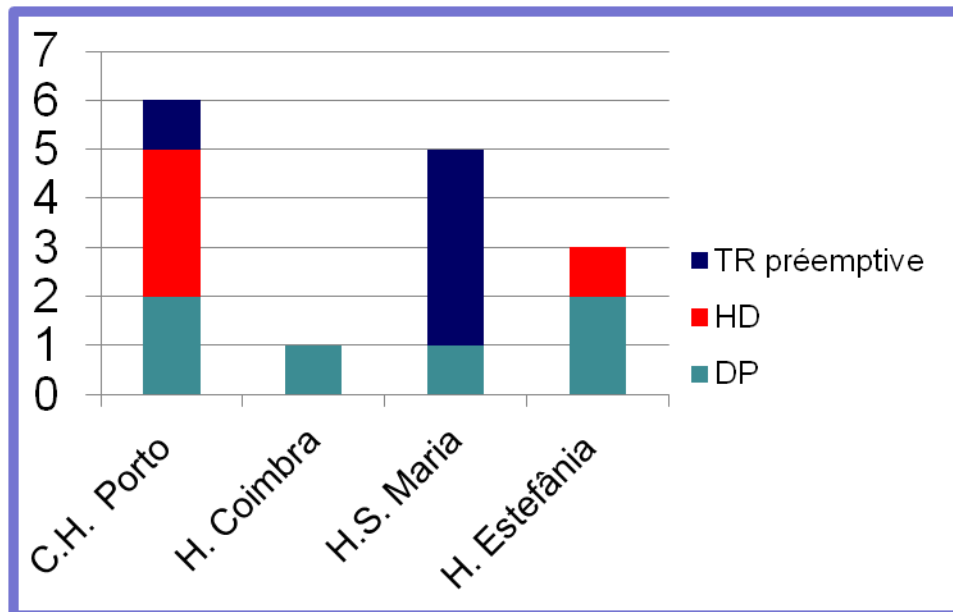
Tipo de TSFR (dia1)

6 em DP

4 em HD

5 TR *préemptive*.

N=15



Doentes pediátricos que foram transplantados

2019

N=10 transplantes

- **Centro Hospitalar do Porto; n=4**
- **H. S. Maria, CH Lisboa Norte; n=6**

- Dador: Rim de dador cadáver n=7; dador vivo n=3
- TR *préemptive*. n= 5

Movimento -ano de 2019-

<i>IN</i>	
Novos doentes em RRT	15
Novos doentes (transferidos em RRT. Estrangeiro → Portugal	2

<i>OUT</i>	
Número de TR	10
Mortos	1
Recuperação da FR	0
Saída de registo → transferência “Adultos”	17

<i>Mudança de TSFR</i>	
TR → HD	-
HD → DP	1
DP → HD	2

Prevalência pontual de doentes com transplante renal
(enxerto funcionante) com seguimento em
Unidades de Nefrologia Pediátrica a 31/12/2019

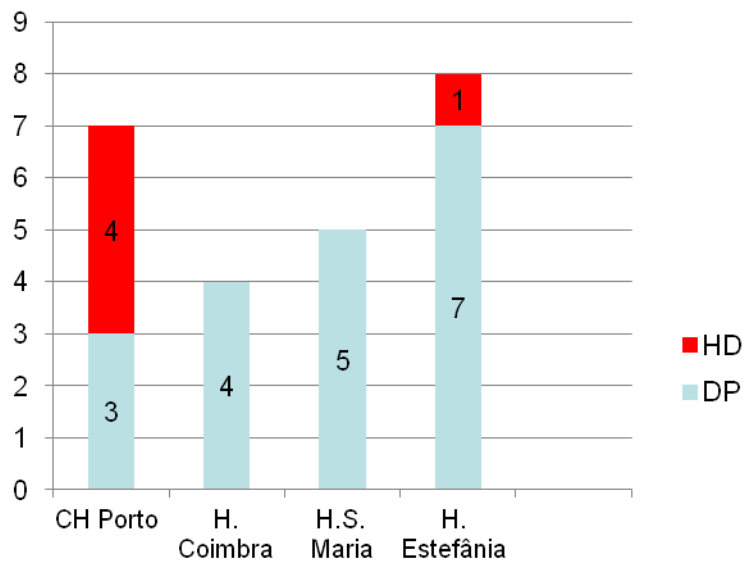
N=82

H S Maria-Lisboa	47
C Hospitalar Porto	27
H Pediátrico Coimbra	8

Prevalência pontual de doentes em diálise em ambiente pediátrico

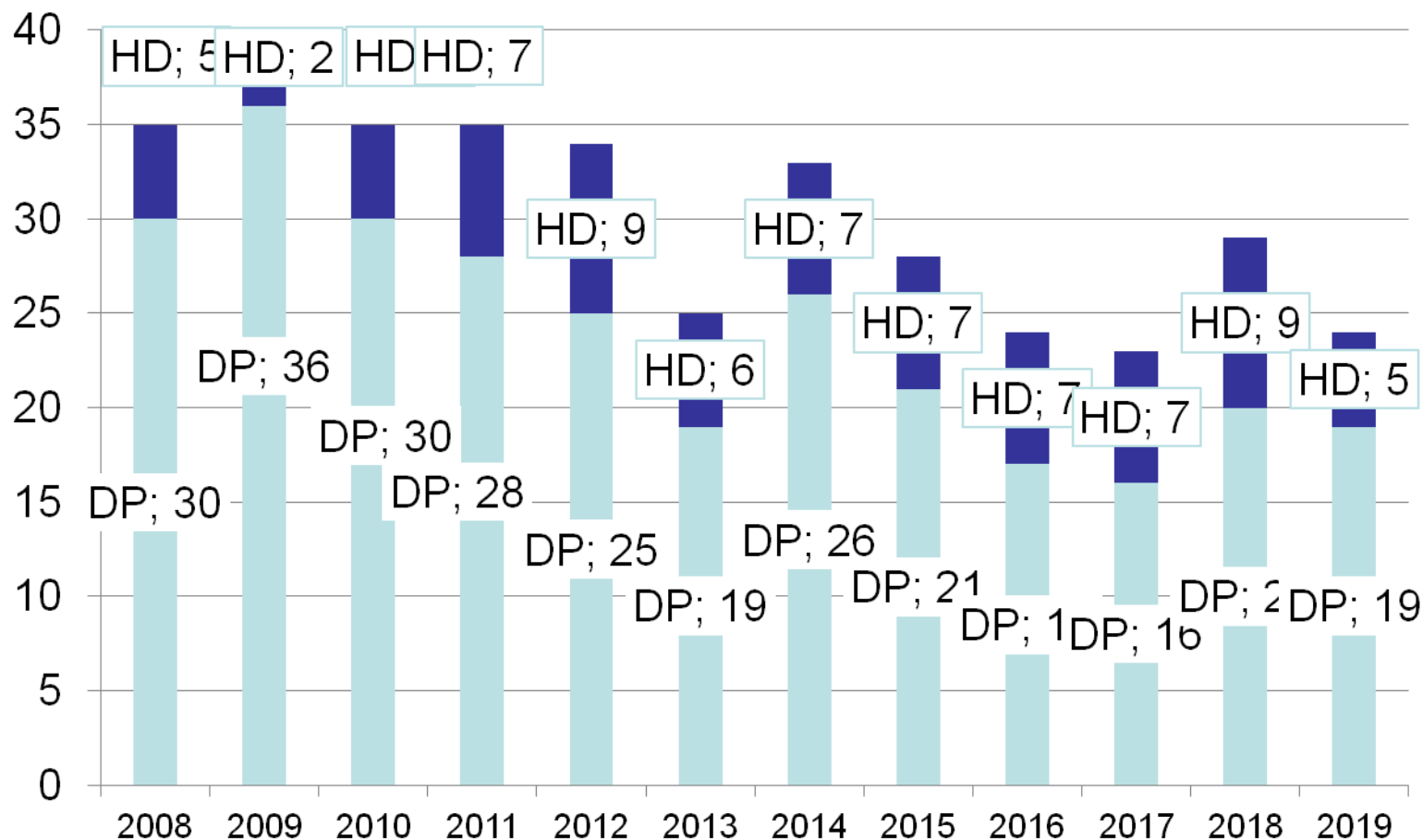
N=24

DP=19 (79,2%)
HD=5 (20,8%)



Evolução do registo

Prevalência pontual de doentes em diálise
a 31 de Dezembro



Evolução do registo

Ano	Novos doentes	Transplant e/ ano
2007	19	17
2008	16	18
2009	18	16
2010	17	17
2011	18	16
2012	24	17
2013	10	17
2014	17	7
2015	16	20
2016	11	15
2017	13	13
2018	14	6
2019	15	10

Incidência de doentes com idade pediátrica em TSFR

(¹)*pmart*=per million of the age –related population) 1451624

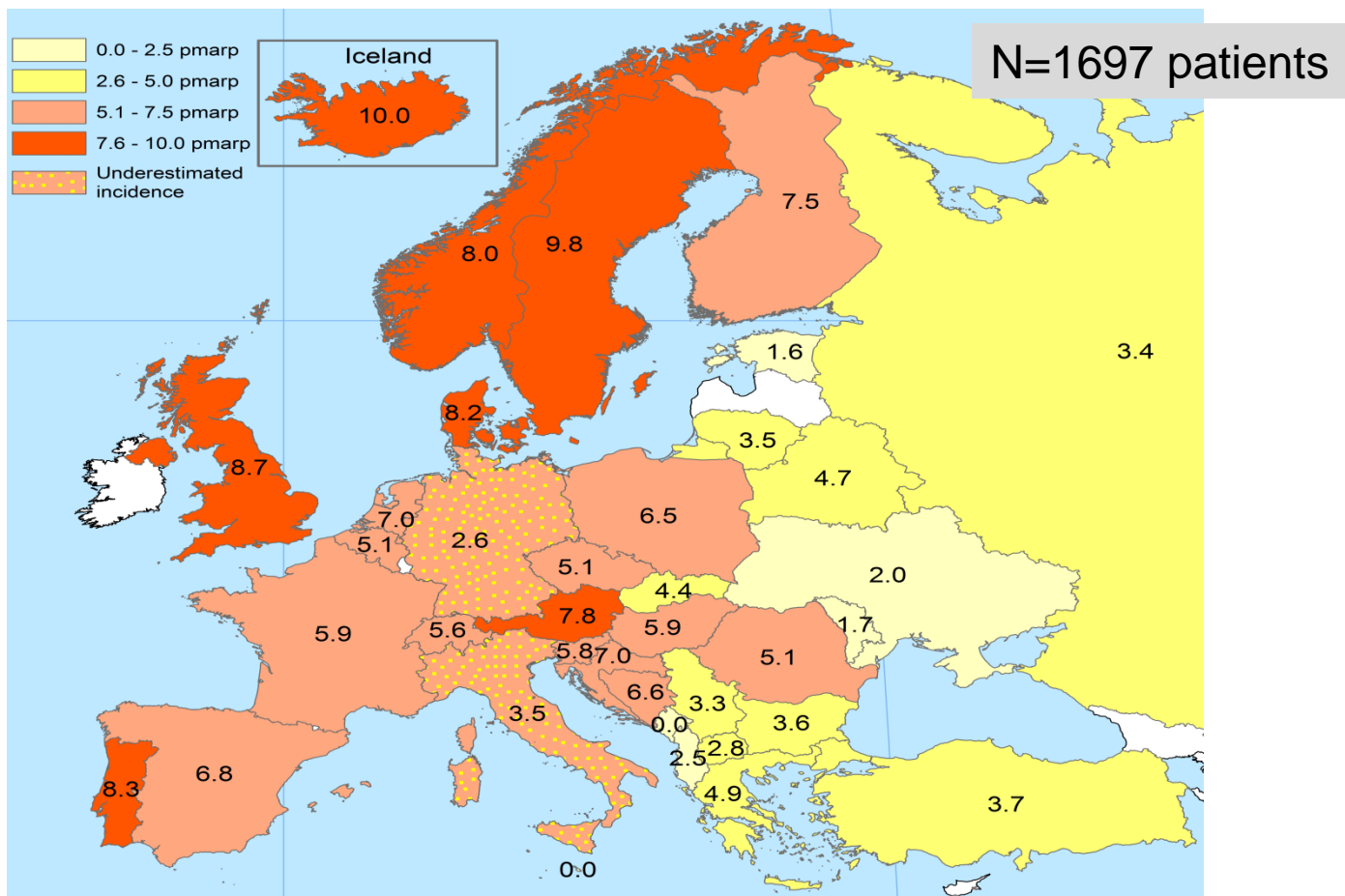
	Incidência (0-14 anos) <i>pmart</i> ⁽¹⁾ Portugal	Incidência (0-14 anos) <i>pmart</i> Europa	Incidência (0-18 anos) Nº Portugal
2007	9,1	6,5	
2008	7,3	6,3	16
2009	10,5	6,6	18
2010	5,0	5,6	17
2011	9,5	5,5	18
2012	12,2	6,1	24
2013	4,6	5,8	11
2014	8,6	6,4	17
2015	6,8	6,3	16
2016	4,8	5,5	11
2017	7,9	6,1	13
2018	5,5	ND	14
2019	6,2	ND	15

Two vertical arrows pointing downwards from 2011 to 2016, indicating a downward trend. A callout box shows 7,9 for Portugal and 6,1 for Europe in 2012.

Prevalência pontual de Doentes Pediátricos em TSFR

População 0'-14 a-1 451 624
População 0-18 a -3 084 001

Ano	Prevalencia (0-14 anos) Pmart Portugal	Prevalencia' (0-14 anos) pmart Europa	Prevalencia 0-18 anos (pmart Portugal)
31/12/2007	38,2	29,0	-
31/12/2008	40,9	30,0	-
31/12/2009	44,9	32,4	-
31/12/2010	45,4	32,0	-
31/12/2011	50,5	32,5	-
31/12/2012	59,6	33,4	91,1
31/12/2013	54,7	33,5	80,2
31/12/2014	57,1	34,4	84,9
31/12/2015	56,3	35,3	92,8
31/12/2016	50,3	35,6	102,1
31/12/2017	52,8	ND	105,5
31/12/2018	52,5	ND	98,1
31/12/2019	50,8	ND	101,1



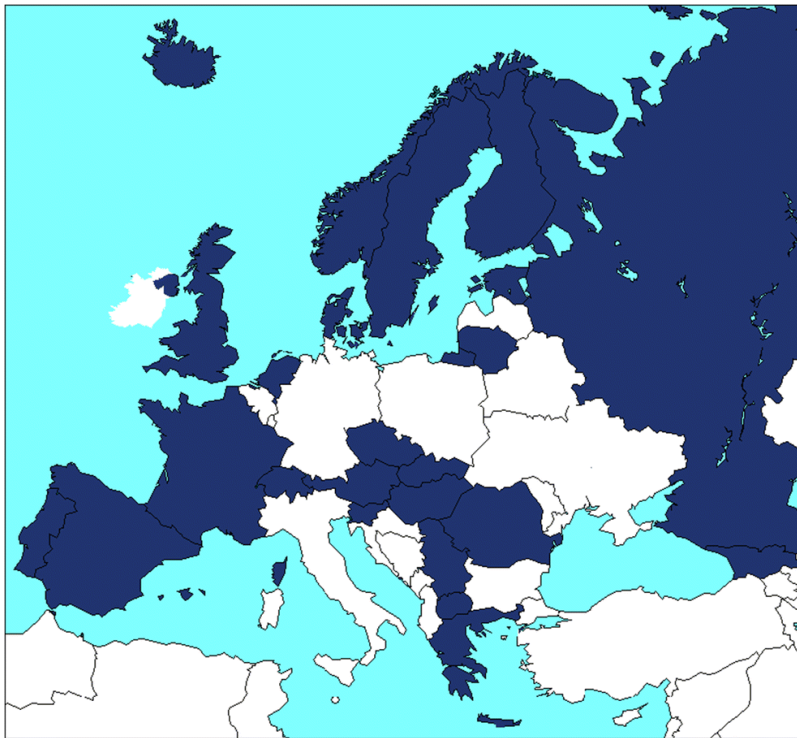
Demographics of paediatric renal replacement therapy in Europe: a report of the ESPN/ERA-EDTA registry.

Chesnaye N, Bonthuis M, Schaefer F, Groothoff JW, Verrina E, Heaf JG, Jankauskiene A, Lu-kosiene V, Molchanova EA, **Mota C**, Peco-Antic A, Ratsch IM, Bjerre A, Roussinov DL, Sukalo A, To-paloglu R, Van Hoeck K, Zagodzdon I, Jager KJ, Van Stralen KJ; *Pediatr Nephrol* 2014 (

Ten year trends in epidemiology and outcomes of pediatric kidney replacement therapy in Europe: data from the ESPN/ERA-EDTA Registry .

Methods: All children aged <15 years starting KRT 2007–2016 in 22 European countries, 4459 patients aged 0–14 years participating.

ESPN/ERA-EDTA Registry



Conclusions

We found a stable incidence and increasing prevalence of European children on KRT 2007–2016. Five-year patient survival was good and was unchanged over time

Bonthuis M et al. Pediatr Nephrol (2021).

Benchmarking Report

Preliminary Benchmarking Report

Funnel-plots allow us to objectively compare the performance of individual countries. For each clinical indicator, country estimates (y-axis) are plotted against the number of patients (x-axis). The control limits form a 'funnel' around the European average and reflect the precision of the estimate based on the number of patients in each country. Countries that fall outside these limits are doing either better or worse compared to the European average. Nevertheless, in countries with a small number of patients (<10), these limits may be imprecise. The plots are based on patient measurements collected since 2007 for patients aged 0-14 years. All country estimates are adjusted for the effect of age. Details on the methods used can be found in the appendix.

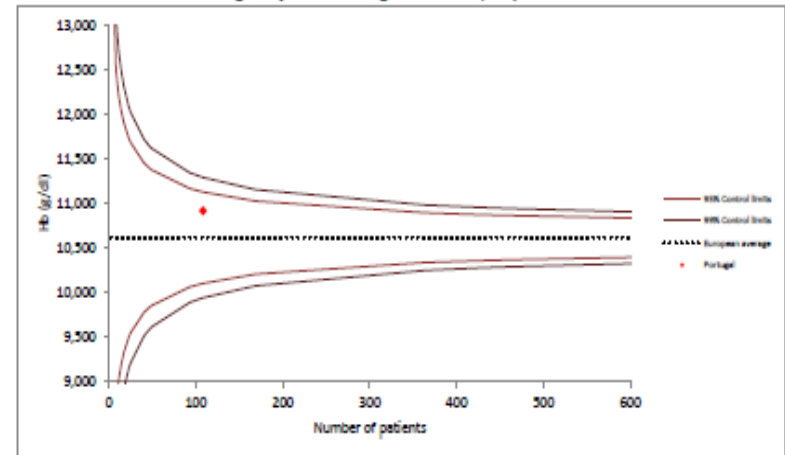
Dados fornecidos em Novembro de 2020 pelo
ESPN registry

Comparação de Portugal com a média de todos os 36 países europeus que contribuem para o registo da ESPN.
Dados obtidos desde 2007.

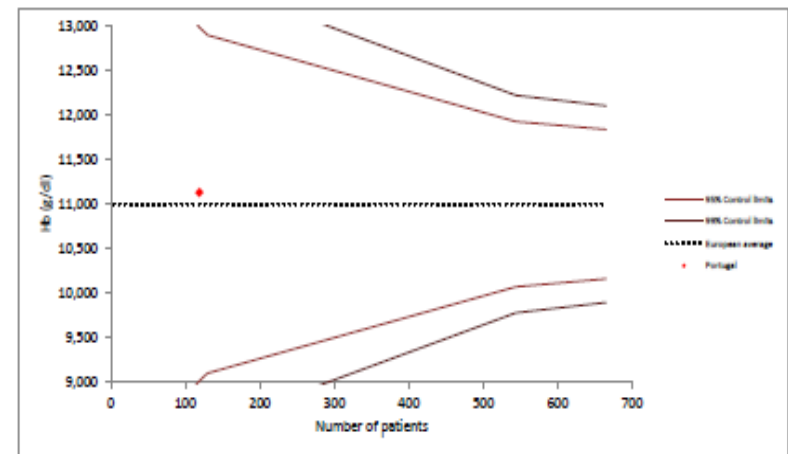
Benchmarking Report

Age-adjusted average Hb

Age-adjusted average Hb in dialysis patients



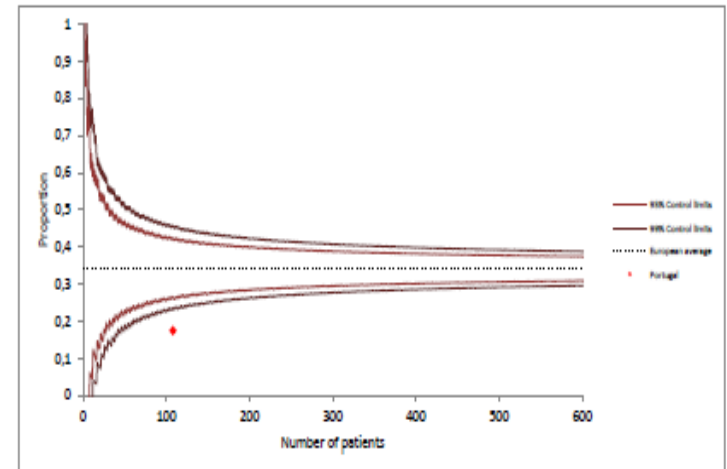
Age-adjusted average Hb in transplant patients



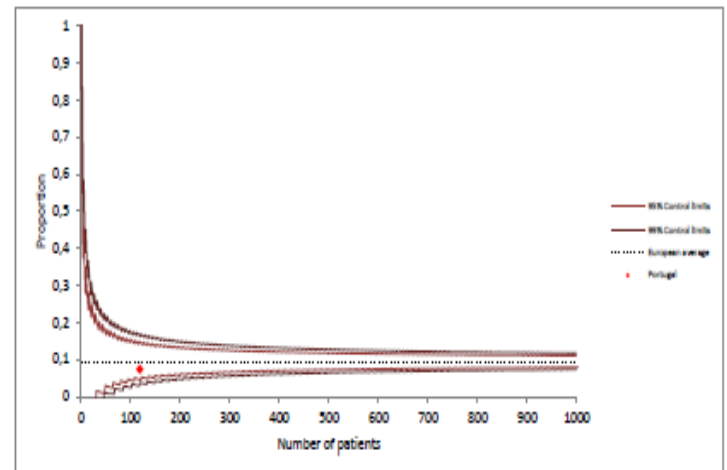
Benchmarking Report

Age-adjusted proportion of anemia of anemia

Age-adjusted proportion of anemia (Hb < 10 g/l) in dialysis patients

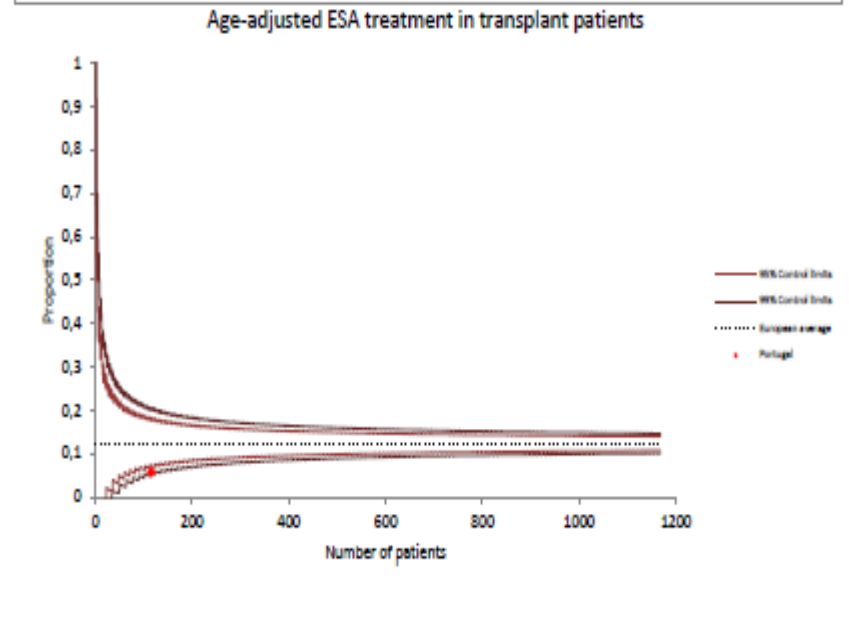
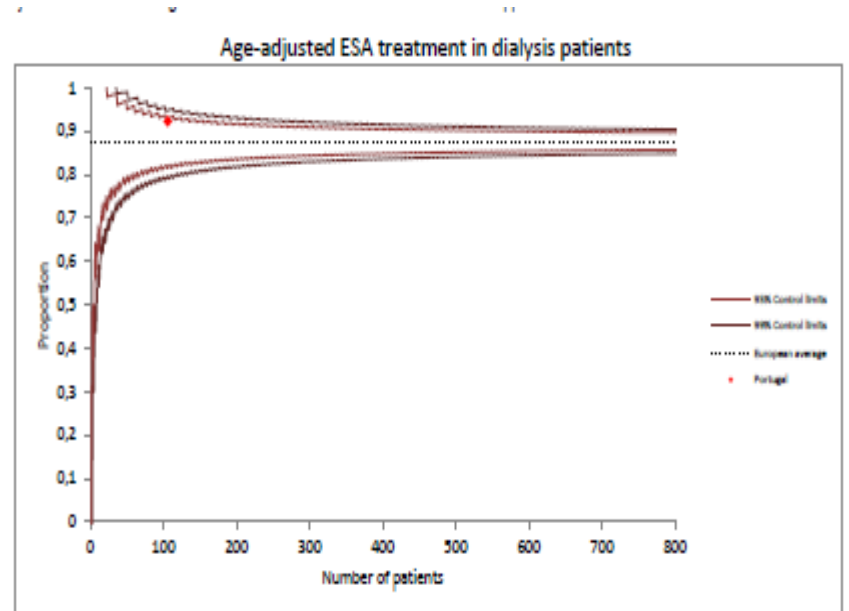


Age-adjusted proportion of anemia (Hb < 10 g/l) in transplant patients



Benchmarking Report

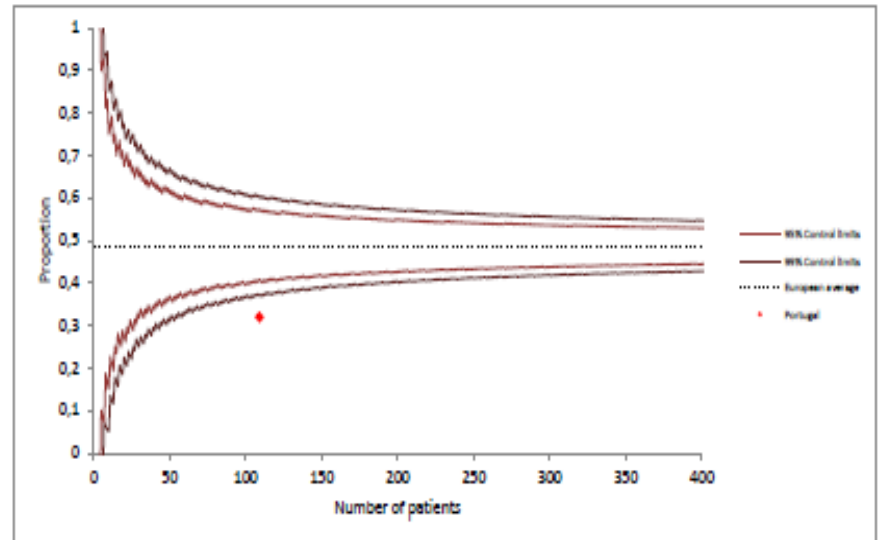
Age-adjusted ESA treatment



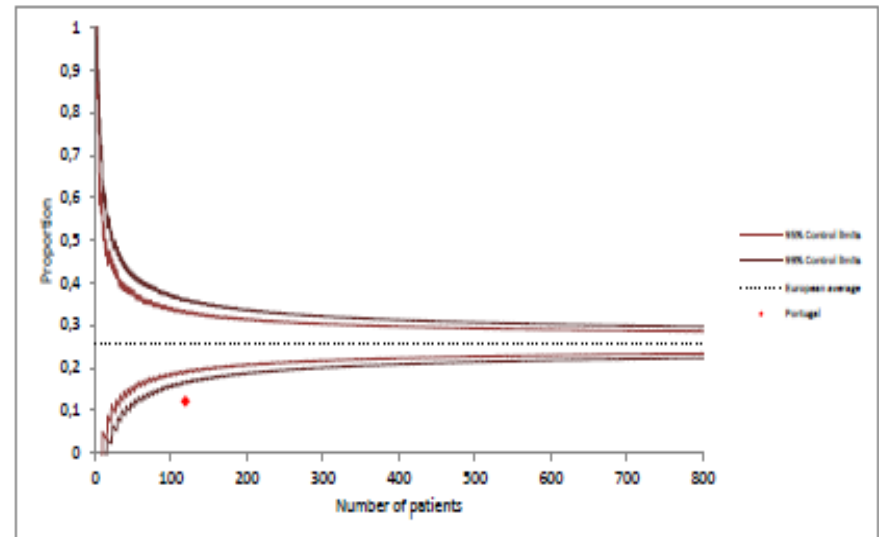
Benchmarking Report

Age-adjusted proportion of patients with hypertension (systolic or diastolic blood pressure Z-score > 1,64)

Age-adjusted proportion of dialysis patients with hypertension (systolic or diastolic pressure Z-score > 1.64)



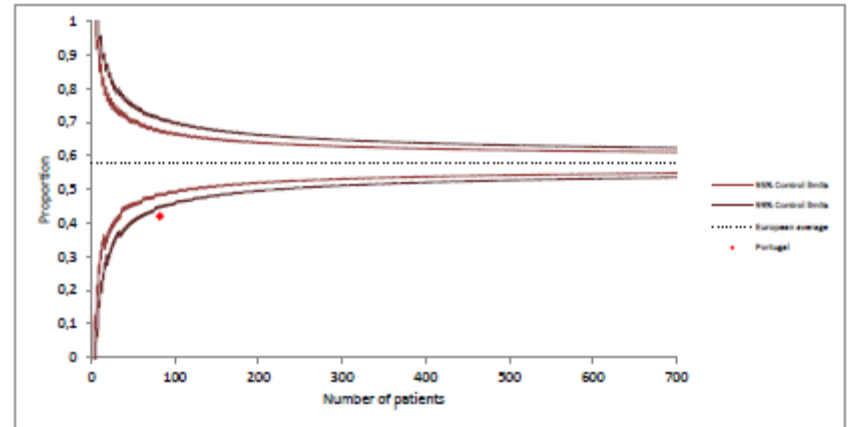
Age-adjusted proportion of transplant patients with hypertension (systolic or diastolic pressure Z-score > 1.64)



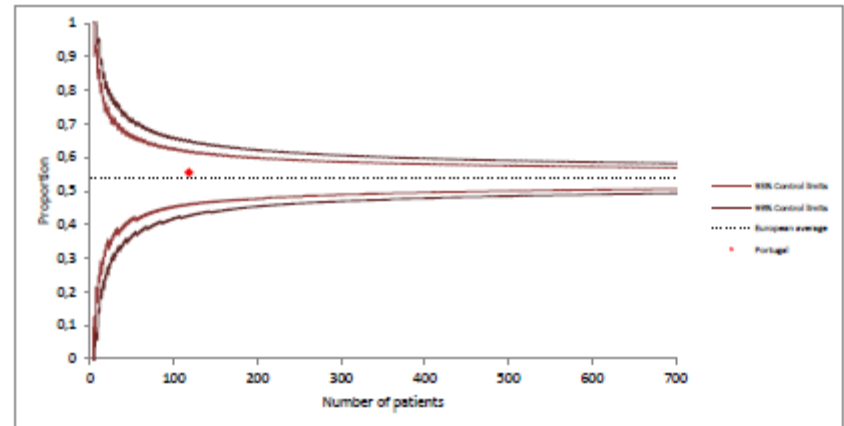
Benchmarking Report

Age-adjusted patients treated with antihypertensives

Age-adjusted proportion of dialysis patients treated with antihypertensives



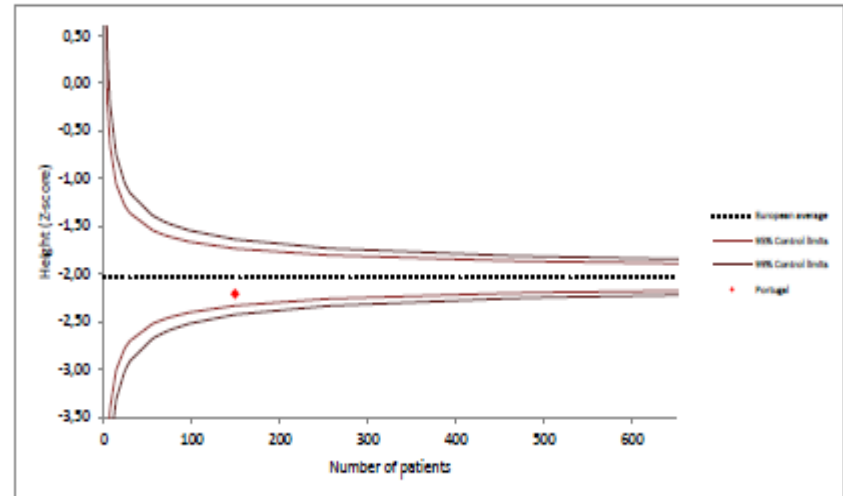
Age-adjusted proportion of transplant patients treated with antihypertensives



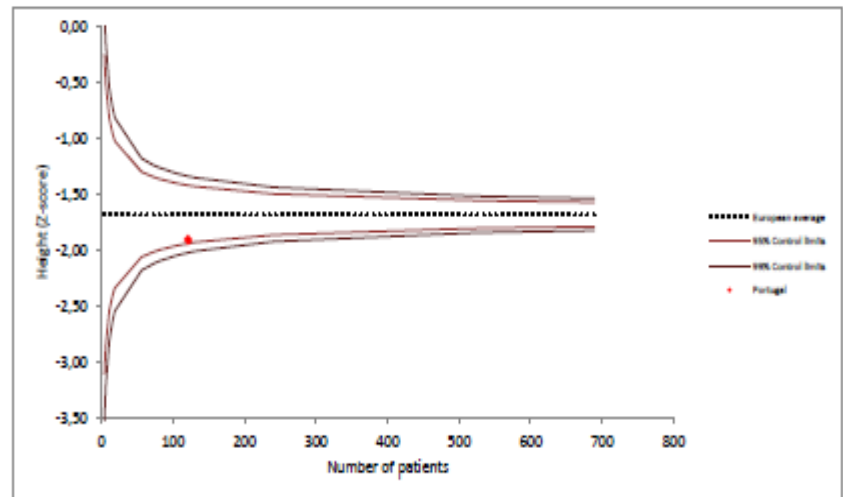
Benchmarking Report

Age-adjusted average height Z-score

Age-adjusted average height Z-score for dialysis patients



Age-adjusted average height Z-score for transplant patients

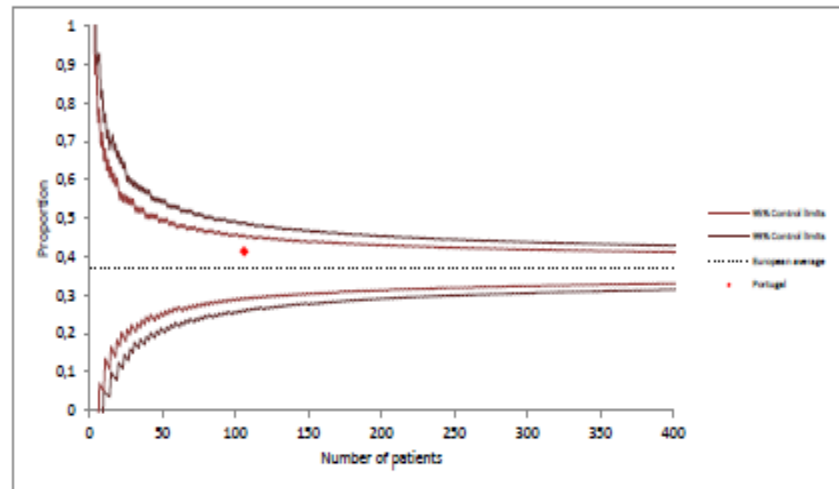


Height SDS was calculated according recent national or European growth charts (Bonthuis et al. Use of National and International growth charts for studying height in European children: development of up-to-date European height-for-age charts. *PLoS ONE* 2012; 7(1): e42506)

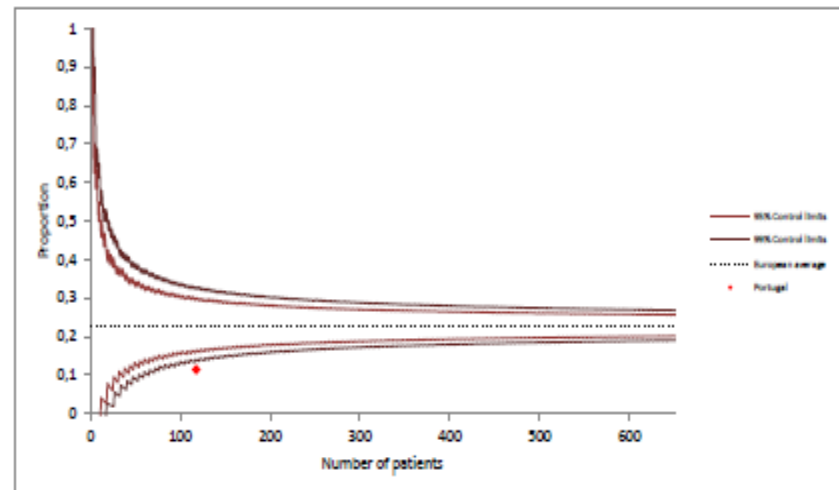
Benchmarking Report

Hypercholesterolemia

Age-adjusted proportion of dialysis patients with hypercholesterolemia (>200 mg/dl)



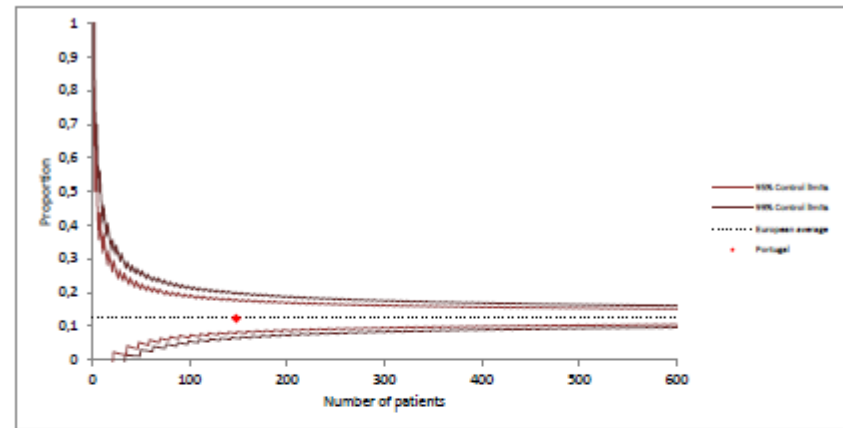
Age-adjusted proportion of transplant patients with hypercholesterolemia (>200 mg/dl)



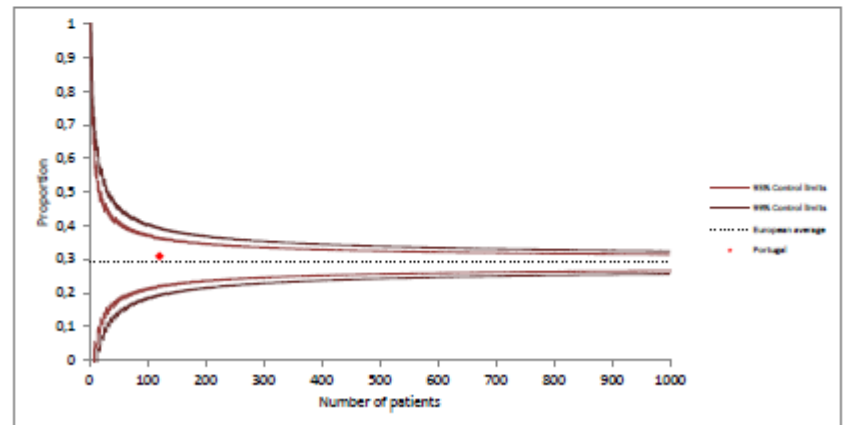
Benchmarking Report

Age-adjusted proportion of patients with overweight

Age-adjusted proportion of dialysis patients with overweight (BMI*)



Age-adjusted proportion of transplant patients with overweight (BMI*)



* For children <2 years, overweight was defined as Z-score > 2 based on WHO growth standards. For older patients, BMI was expressed according to height-age and categorized according to cut-offs defined by the International Obesity Taskforce

Publicações da ESPN/ERA-EDTA

(coautoria nefrologistas pediátricos portugueses)

1. [Determinants of eGFR at start of renal replacement therapy in paediatric patients.](#) Tizard EJ, Jager KJ, Schaefer F, Vondrak K, Groothoff JW, Podracká L, Holmberg C, Jankauskiené A, Lewis MA, van Damme-Lombaerts R, **Mota C**, Niaudet P, Novljan G, Peco-Antic A, Sahpazova E, Toots U, Verrina E. . *Nephrol Dial Transplant*. 2010 Oct;25(10):3325-32.
2. [Underweight, overweight and obesity in paediatric dialysis and renal transplant patients.](#) Bonthuis M, van Stralen KJ, Verrina E, Groothoff JW, Alonso Melgar A, Edefonti A, Fischbach M, **Mendes P**, Molchanova EA, Paripović D, Peco-Antic A, Printza N, Rees L, Rubik J, Stefanidis CJ, Sinha MD, Zagozdzon I, Jager KJ, Schaefer F; *NDT* 2013; 0:1-10
3. [Demographics of paediatric renal replacement therapy in Europe: a report of the ESPN/ERA-EDTA registry.](#) Chesnaye N, Bonthuis M, Schaefer F, Groothoff JW, Verrina E, Heaf JG, Jankauskiene A, Lukosiene V, Molchanova EA, **Mota C**, Peco-Antić A, Ratsch IM, Bjerre A, Roussinov DL, Sukalo A, Topaloglu R, Van Hoeck K, Zagozdzon I, Jager KJ, Van Stralen KJ; on behalf of the ESPN/ERA-EDTA registry. *Pediatr Nephrol*. 2014 Jul 21.
4. [Adult height in patients with advanced CKD requiring renal replacement therapy during childhood.](#) Harambat J, Bonthuis M, van Stralen KJ, Ariceta G, Battelino N, Bjerre A, Jahnukainen T, Leroy V, Reusz G, **Sandes AR**, Sinha MD, Groothoff JW, Combe C, Jager KJ, Verrina E, Schaefer F; ESPN/ERA-EDTA Registry. *Clin J Am Soc Nephrol*. 2014 Jan;9(1):92-9.

Publicações da ESPN/ERA-EDTA (coautoria de nefrologistas portugueses)

4. **Mineral metabolism in European children living with a renal transplant: a European society for paediatric nephrology/european renal association-European dialysis and transplant association registry study.**

[Bonthuis M¹](#), [Busutti M¹](#), [van Stralen KJ²](#), [Jager KJ¹](#), [Baiko S¹](#), [Bakkaloğlu S¹](#), [Battelino N¹](#), [Gaydarova M¹](#), [Gianoglio B¹](#), [Parvex P¹](#), [Gomes C¹](#), [Heaf JG¹](#), [Podracka L¹](#), [Kuzmanovska D¹](#), [Molchanova MS¹](#), [Pankratenko TE¹](#), [Papachristou F¹](#), [Reusz G¹](#), [Sanahuja MJ¹](#), [Shroff R¹](#), [Groothoff JW¹](#), [Schaefer F¹](#), [Verrina E.](#) *Clin J Am Soc Nephrol.* 2015 May 7;10(5):767-75. doi: 10.2215/CJN.06200614.

5. **Considerable variations in growth hormone policy and prescription in paediatric end-stage renal disease across European countries-a report from the ESPN/ERA-EDTA registry.**

[van Huis M¹](#), [Bonthuis M²](#), [Sahpazova E³](#), [Mencarelli F⁴](#), [Spasojević B⁵](#), [Reusz G⁶](#), [Caldas-Afonso A⁷](#), [Bjerre A⁸](#), [Baiko S⁹](#), [Vondrak K¹⁰](#), [Molchanova EA¹¹](#), [Kolvek G¹²](#), [Zaikova N¹³](#), [Böhm M¹⁴](#), [Ariceta G¹⁵](#), [Jager KJ²](#), [Schaefer F¹⁶](#), [van Stralen KJ²](#), [Groothoff JW¹](#). *Nephrol Dial Transplant.* 2015 Apr 28. pii: gfv105.

6. **Infants requiring maintenance dialysis: outcomes hemodialysis and peritoneal dialysis.** Vidal E, van Stralen KJ, Chesnaye NC, Bonthuis M, Holmberg C, Zurowska A, Trivelli A, [Eduardo Esteves Da Silva J](#), Herthelius M, Adams B, Bjerre A, Jankauskiene A, Miteva P, Emirova K, Bayazit AK, Mache JC, Sánchez-Moreno A, Harambat J, Groothoff JW, Jager KJ, van Stralen KJ, Bonthuis M, Groothoff JW, Harambat J, Schaefer F, Verrina E. *Am J Kidney Dis.* 2017 May;69(5):617-625.

Publicações da ESPN/ERA-EDTA (coautoria de nefrologistas portugueses)

7. **Mortality risk disparities in children receiving renal replacement therapy for the treatment of end-stage renal disease across Europe. An ESPN/ERA-EDTA Registry analysis.** Chesnaye NC, Schaefer F, Bonthuis M, Holman R, Baiko S, Baskin E, Bjerre A, Cloarec S, Cornelissen EAM, Espinosa L, Heaf JG, **Stone R**, Shtiza D, Zagozdzon I, Harambat J, Jager KJ, Groothoff JW, van Stralen KJ. **Lancet.** 2017May; 389(10084) :2128-2137.

8. **Growth patterns after kidney transplantation in European children over the past 25 years: An ESPN/ERA-EDTA Registry study..** Bonthuis M, Groothoff JW, Ariceta G, Baiko S, Battelino N, Bjerre A, Cransberg K, Kolvek G, Maxwell H, Miteva P, Molchanova MS, Neuhaus TJ, Pape L, Reusz G, Rousset-Rouviere C, Sandes AR, Topaloglu R, van Dyck M, Ylinen E, Zagozdzon I, Jager KJ, Harambat J. *Transplantation* 2020; 104(1):137-144.