



Achievement of Renal Anemia KDIGO Targets by Two Different Strategies: A European Hemodialysis Multicenter Analysis

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Introduction

- Correction of anemia in hemodialysis is associated with improved quality of life, but does also entail major risks.
- Hemoglobin target levels can be achieved through more frequent intravenous (i.v.) iron use with less erythropoiesis-stimulating agent (ESA) or with less iron dosing but higher ESA.
- ESA therapy to correct anemia may result in a number of adverse clinical outcomes, most notably venous thromboembolic disease and vascular access thrombosis.
- The evidence base evaluating outcomes related to the use of i.v. iron is sparse and the effect on hard clinical outcomes, including death and major health events is uncertain.
- However, observational data suggest that i.v. iron may exacerbate oxidative stress, potentiate atherogenesis and cardiovascular toxicity, and increase the propensity to infections.

Objectives

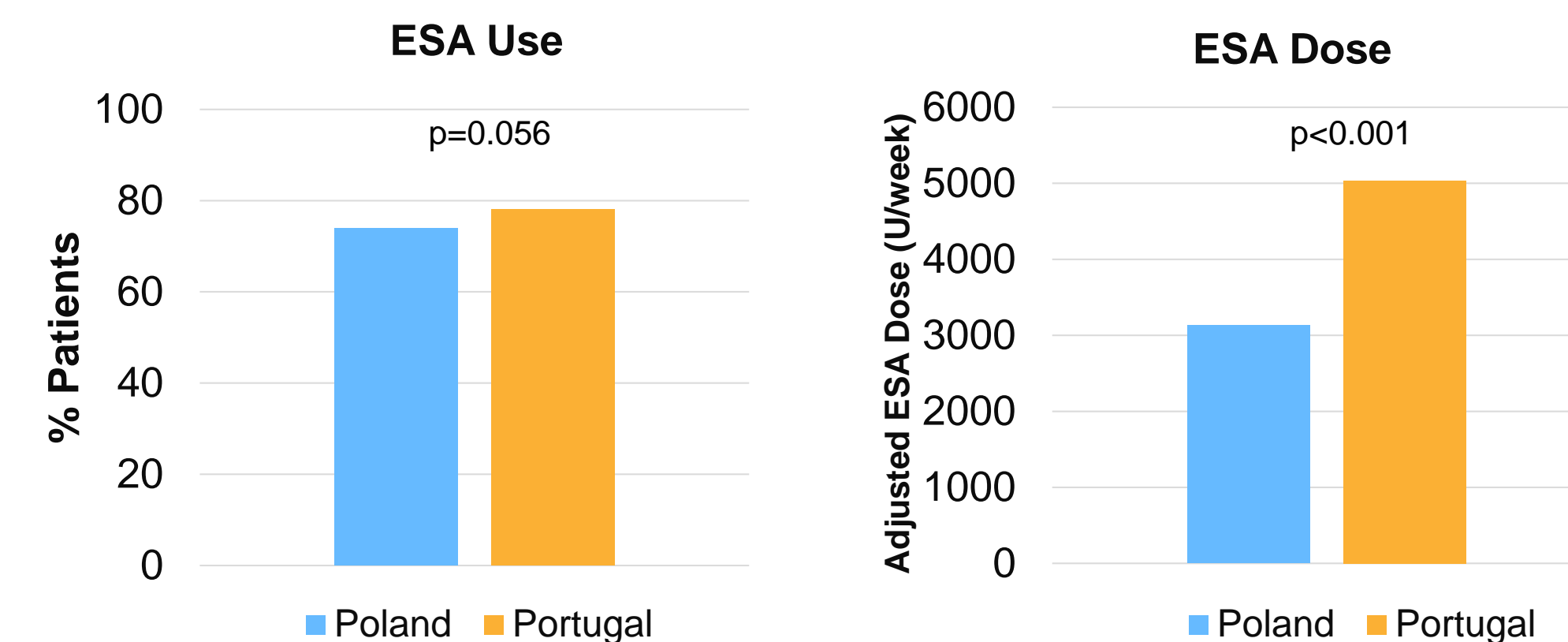
- We aimed to study the achievement of KDIGO anemia treatment targets in DaVita dialysis centers in Poland and Portugal.
- We studied differences in treatment practices in terms of the use of ESA and iron and analyzed laboratory values related to anemia.
- Differences may have clinical implications.

Methods

- We included 1,247 patients on maintenance hemodialysis from 5 DaVita centers in Portugal (n=730) and 8 DaVita centers in Poland (n=517) in an analysis of the achievement of KDIGO renal anemia targets.
- We also focused on treatment strategies, which by tradition differ significantly in the two countries.

Results

- In dialysis centers in Poland the use and dose of i.v. iron is 35% higher than in Portugal (p<0.001).

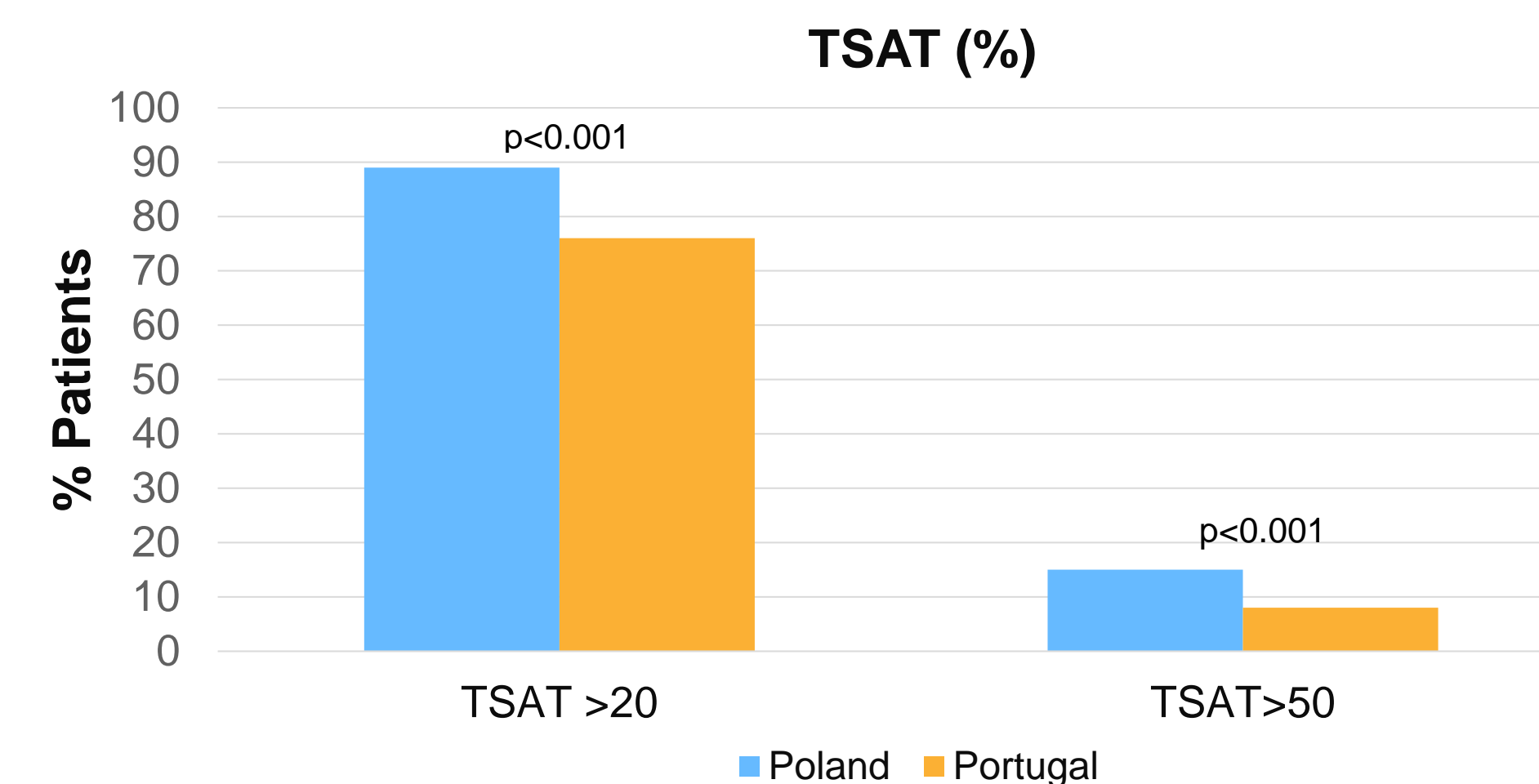
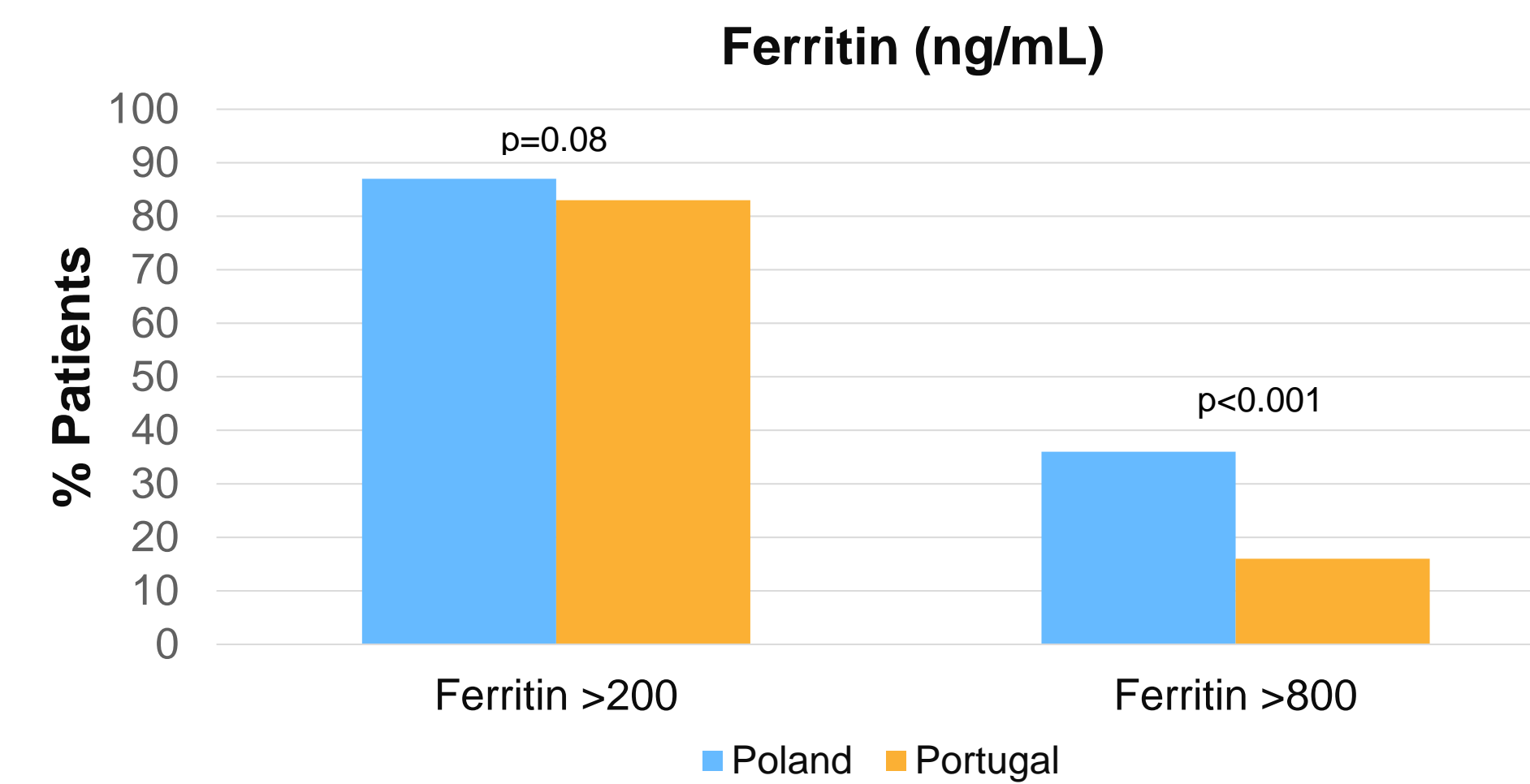
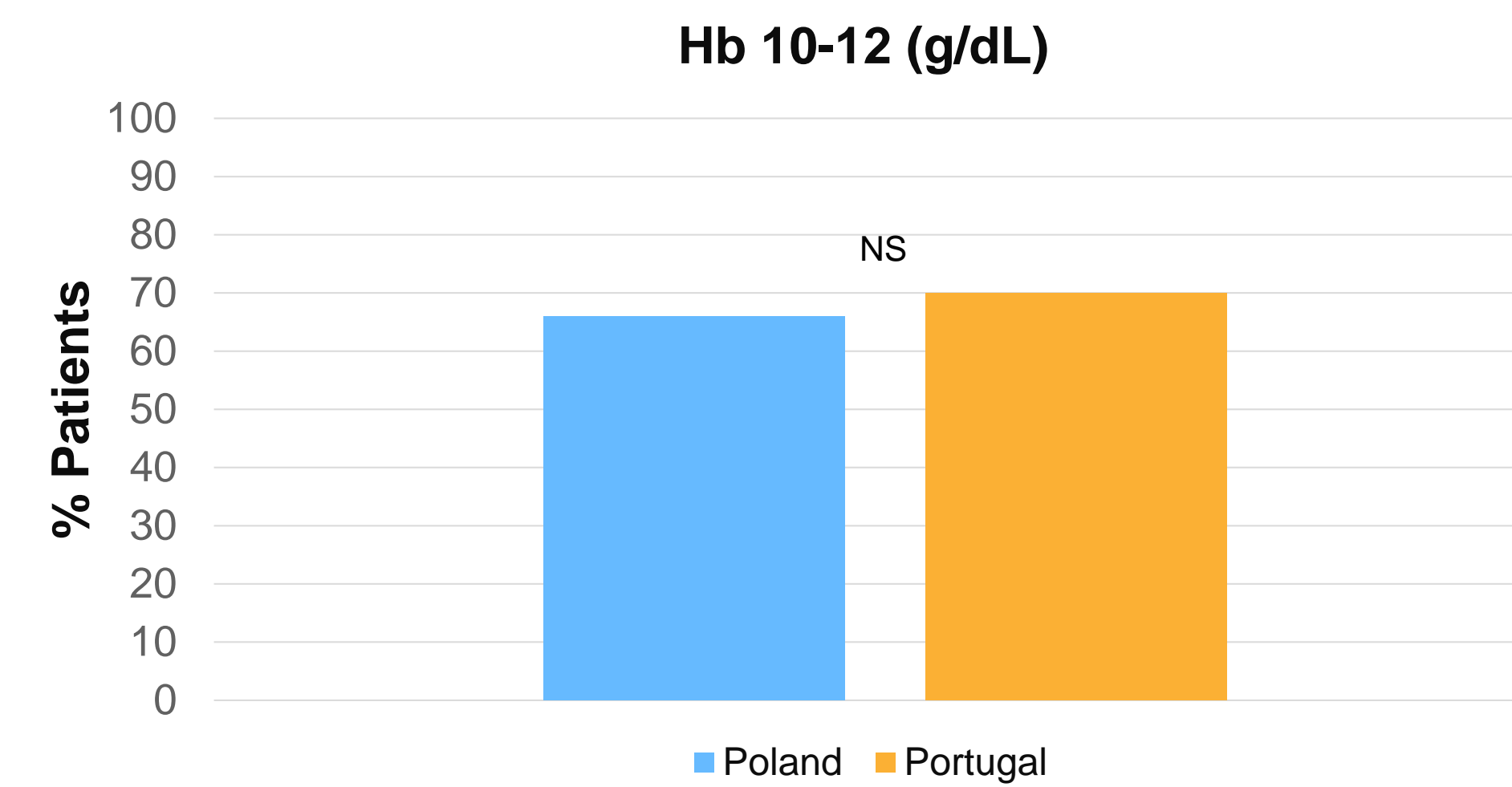


	Age	Vintage	BMI	Kt/V	TT
Mean	years	months	kg/m ²		min
Poland	67	53	27	1.6	737
Portugal	69	66	25	2.0	724
P	**	***	***	***	***

	Hb	TSAT	Ferritin	Alb	Ca	P	iPTH	CVC	AVF
Mean	g/dL	%	ng/mL	g/L	mg/dL	mg/dL	pg/mL	%	%
Poland	11	35	757	41	8.7	4.7	565	19	76
Portugal	11	29	498	40	8.9	4.1	561	15	77
P	NS	***	***	NS	***	***	NS	***	NS

Comparisons were made using t-test:
* indicates p≤0.05; ** indicates p≤0.01; *** indicates p≤0.001

List of abbreviations: Alb, albumin; AVF, arteriovenous fistula; BMI, body mass index; Ca, calcium; CVC, central venous catheter; ESA, erythropoiesis-stimulating agent; iPTH, intact parathyroid hormone; i.v., intravenous; NS, not significant; Phos, phosphorus; TSAT, transferrin saturation; TT, treatment time.



Summary and Conclusions

- The KDIGO hemodialysis anemia target was achieved in patients treated in dialysis centers in both Poland and Portugal.
- The two countries used different treatment strategies in terms of ESA use and doses of i.v. iron.
- The dialysis centers in Poland used significantly higher doses of iron and significantly lower doses of ESA per week to reach treatment targets compared to clinics in Portugal.
- The proportion of patients with high ferritin (>800 ng/mL) and TSAT >20% and >50 % was significantly higher in patients treated at facilities in Poland compared to those in Portugal.
- Future analyses will evaluate the relationship between the differing treatment strategies in Poland and Portugal and long-term risks of cardiovascular hospitalizations, all-cause hospitalizations, and mortality.

References

KDIGO Guidelines: <http://kdigo.org/home/guidelines/anemia-in-ckd/>

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American Society of Nephrology Kidney Week, November 15-20, 2016; Chicago, IL