



CHRONIC KIDNEY DISEASE OUTCOMES
AND PRACTICE PATTERNS STUDY

Opportunities to improve care now for patients with advanced CKD

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on behalf of CKDopps and CKD-REIN Investigators

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CKDopps: Outline

- 1. Study overview**
2. Practice patterns
3. What patients tell us

CKD Outcomes and Practice Patterns Study (CKDopps)

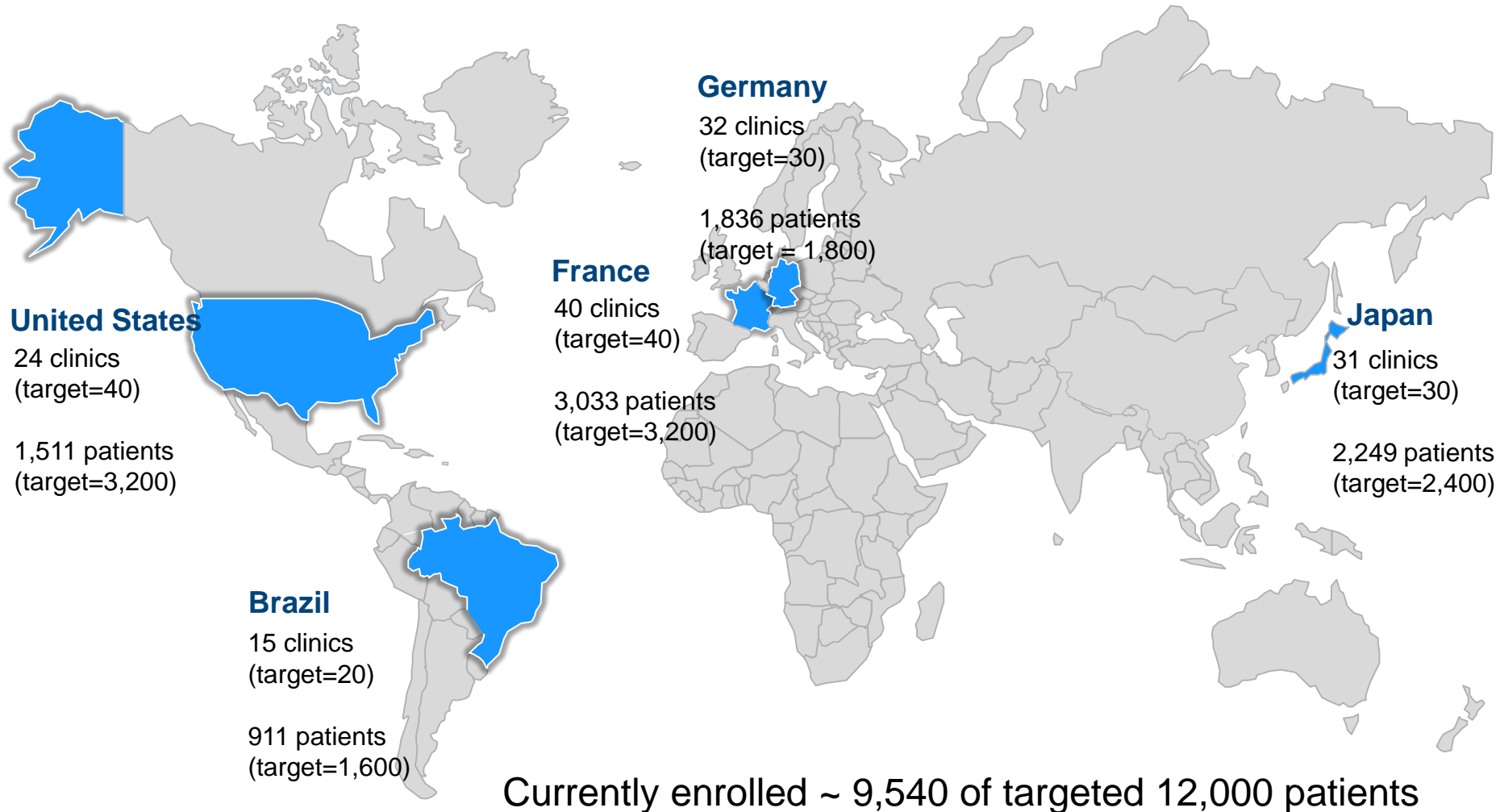
- International, prospective cohort study of CKD patients receiving nephrologist care (based on national samples of nephrology clinics)
- Identify nephrologist practices associated with better outcomes in advanced CKD patients and during kidney failure transition
- CKDopps initiative may have a lasting influence on CKD care, as DOPPS has had on HD care since its launch in 1996
- Public and industry funding

Patients and information

Design	Target \approx 12,000 CKD patients
Inclusion criteria	<ul style="list-style-type: none">• Adult patients (≥ 18 years)• All causes of CKD stage 3b to 5 (non dialysis, non-renal transplant)<ul style="list-style-type: none">- Stage 3-4 in France• 60-80 per clinic
Follow-up	<ul style="list-style-type: none">• 3 years (up to 5 years in France)• Before and after starting RRT
Extensive data collection (longitudinal)	<ul style="list-style-type: none">• Patient-level data (medical records & PRO)<ul style="list-style-type: none">- Routine lab data (vs requested in France)- No patient-questionnaire in Germany• Physician-, and clinic-level data
Outcomes	<ul style="list-style-type: none">• Mortality and morbidity• Progression and transition to kidney failure• Patient-reported outcomes and experience

More details in *Mariani et al. Am J Kidney Dis. 2016 Sep;68(3):402-13*

CKDopps participating countries



Baseline patient characteristics

	Brazil	France	Germany	US
Patients, N	912	3,033	1,836	1,560
Median age (years)	67	69	78	70
Women	47%	35%	42%	48%
Diabetes ^a	48%	41%	43%	57%
Mean eGFR, mL/min/1.73 m ²	25.8	32.9	27.9	25.8
CKD Cause				
Diabetes	32%	20%	29%	34%
Glomerular Disease	8%	17%	10%	7%
Hypertension	30%	21%	33%	32%
Other/Unknown	30%	42%	28%	27%

a. 5, 2, 2, 4 % of all patients in Brazil, France, Germany, US were type 1 diabetics

CKDopps Outcomes*

Country	N Pts	Follow-up Time, Median years	Dialysis Starts, % (n)	Deaths**, % (n)	Hospitalizations†, % (n)
Brazil	912	1.63	11% (97)	7% (66)	18% (162)
France	3,033	2.20	12% (361)	11% (321)	59% (1786)
Germany	1,836	2.60	25% (458)	24% (435)	-
United States	1,560	1.33	15% (231)	15% (235)	30% (461)
CKDopps Total	7,341	2.04	16% (1147)	14% (1057)	44% (2409)

* Japanese data not available yet (enrollment started in 2016)

** Deaths captured during study follow-up (including up to 12 months after start of dialysis)

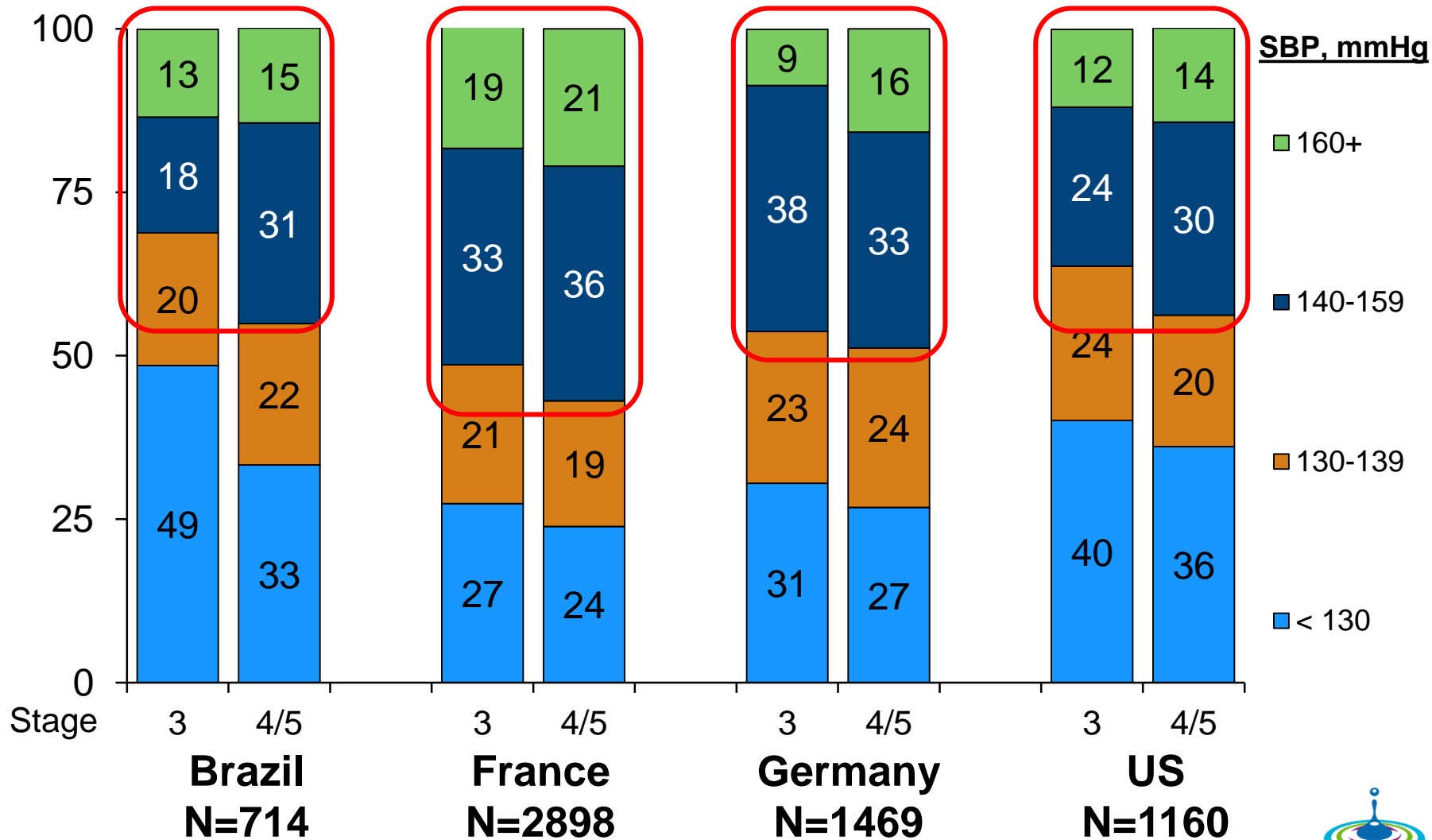
† Inpatient hospitalization

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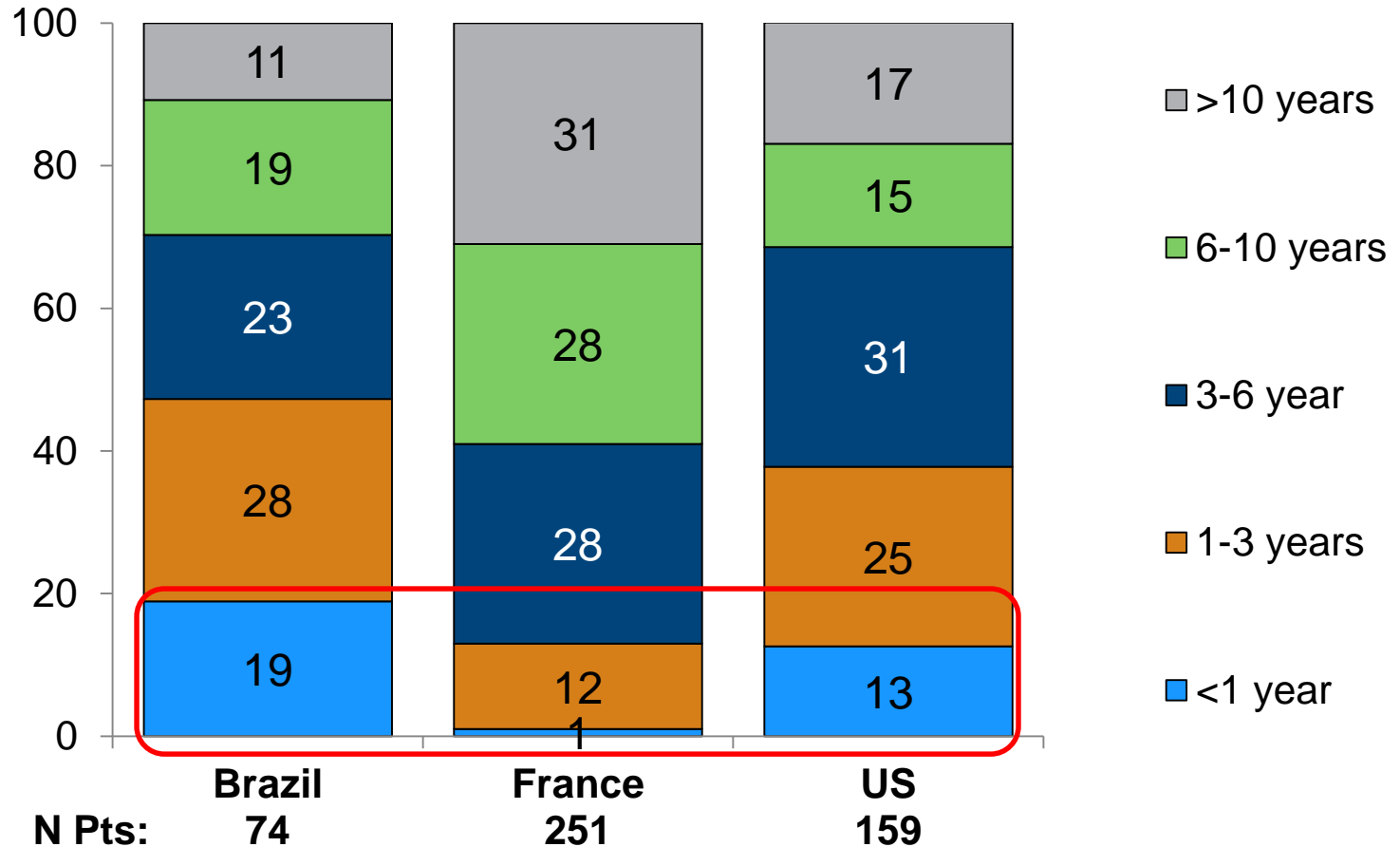
Systolic blood pressure, by CKD stage

% of patients



Timing of first nephrology visit before starting dialysis

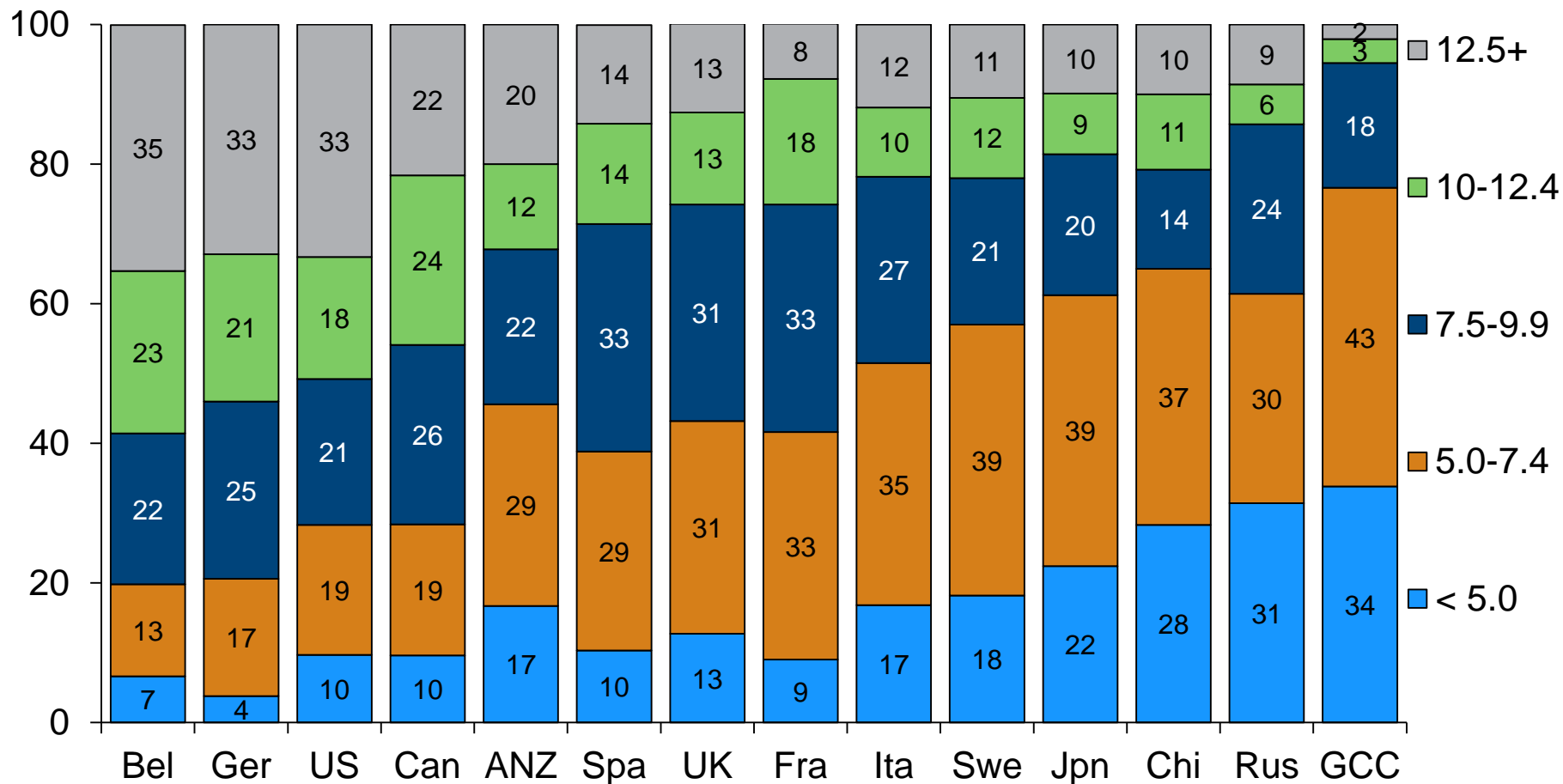
% of patients



KDIGO 2012: Timely referral for RRT planning in patients with progressive CKD with a 1-year ESKD risk of at least 10-20% (as determined by validated risk prediction tool)

eGFR at dialysis initiation (DOPPS)*

% of patients



N Pts:	227	346	526	218	90	319	197	89	202	286	446	120	70	145
Mean:	11.7	11.2	10.9	10	9.1	8.9	8.5	8.4	8.3	7.8	7.7	7.3	7.1	6.2

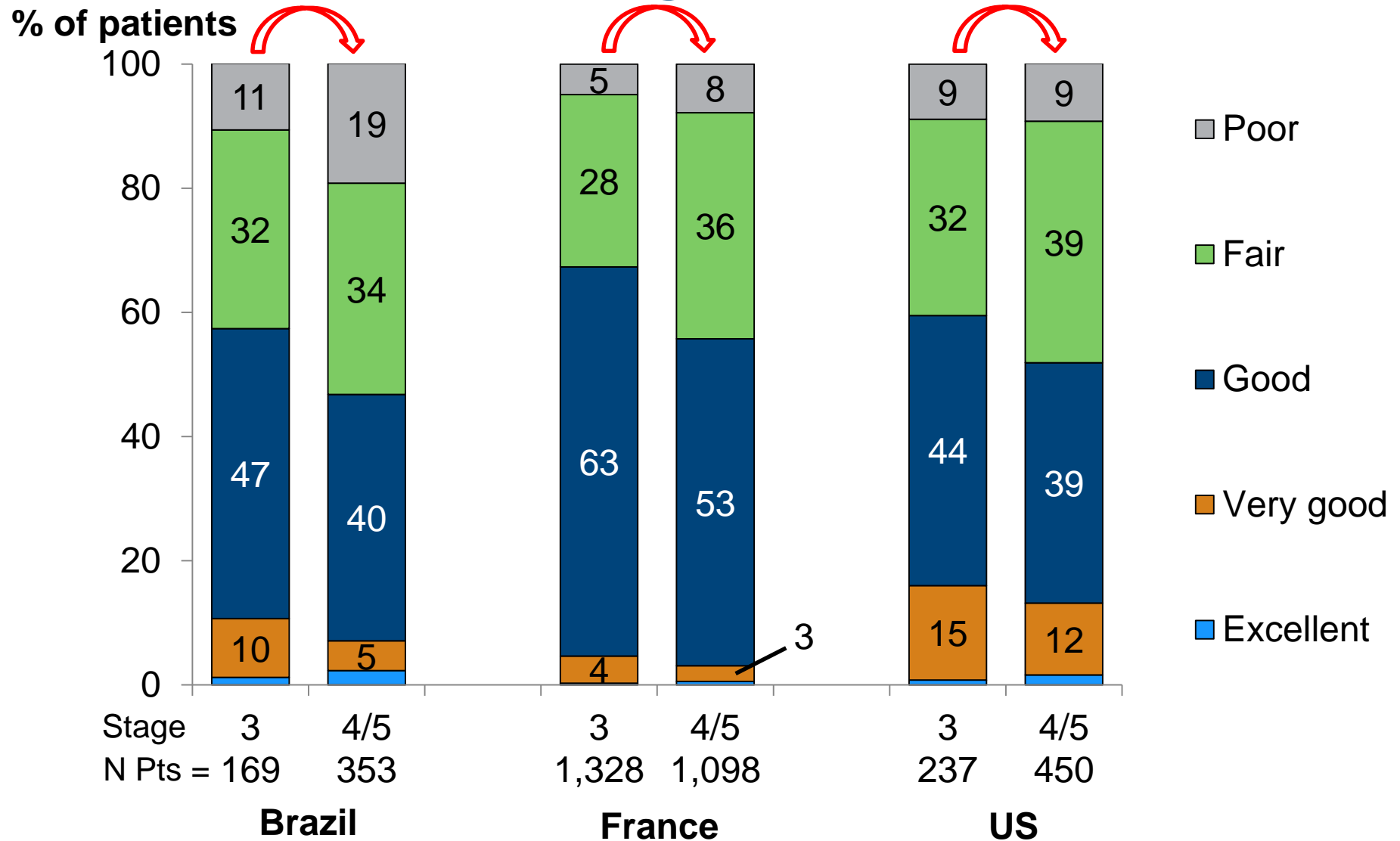
* 2009-2014

Adapted from Bieber et al. ASN abstract (2013)

CKDopps: Outline

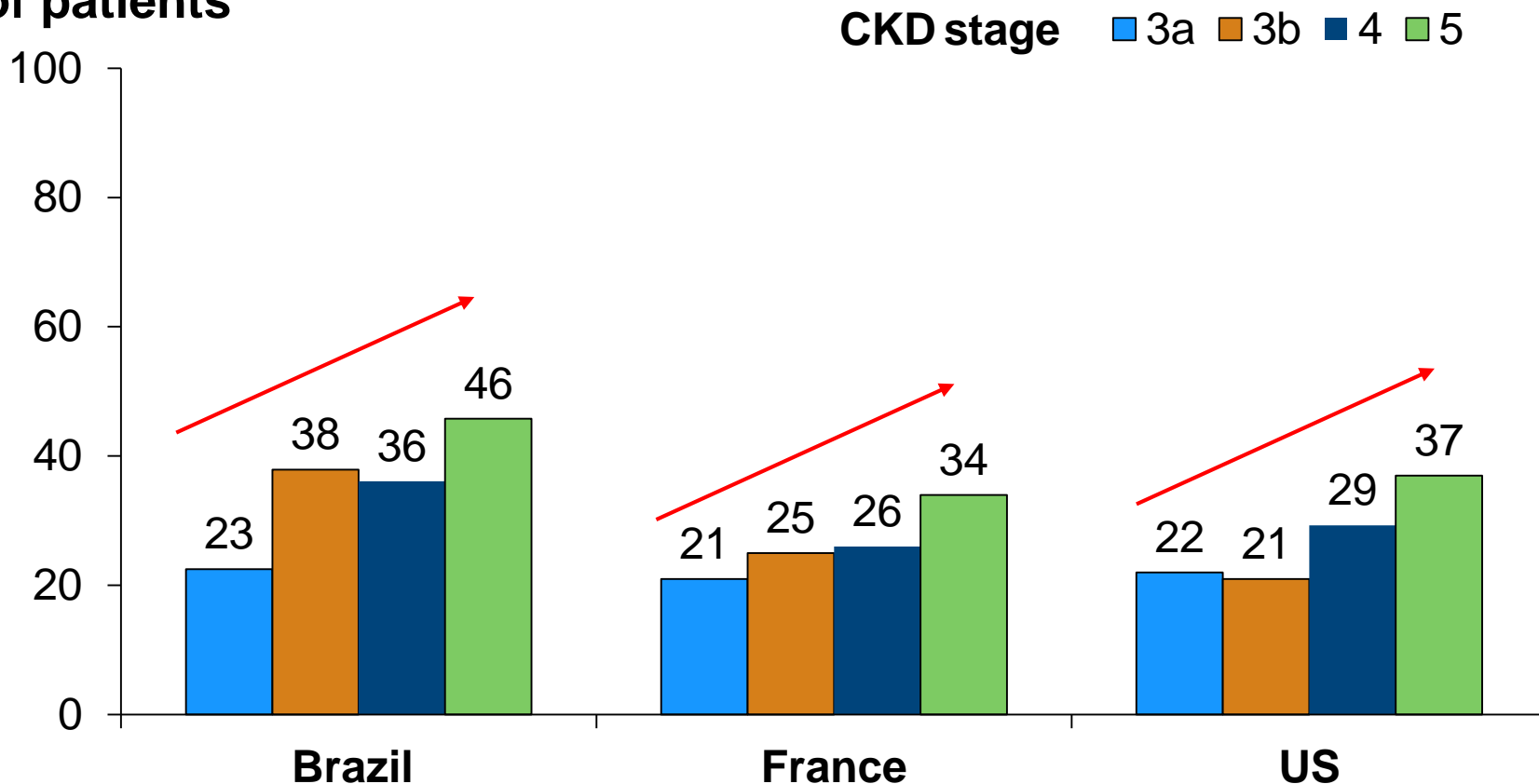
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Patients' general health



Patients reporting to have seen a dietician at least once during the past year

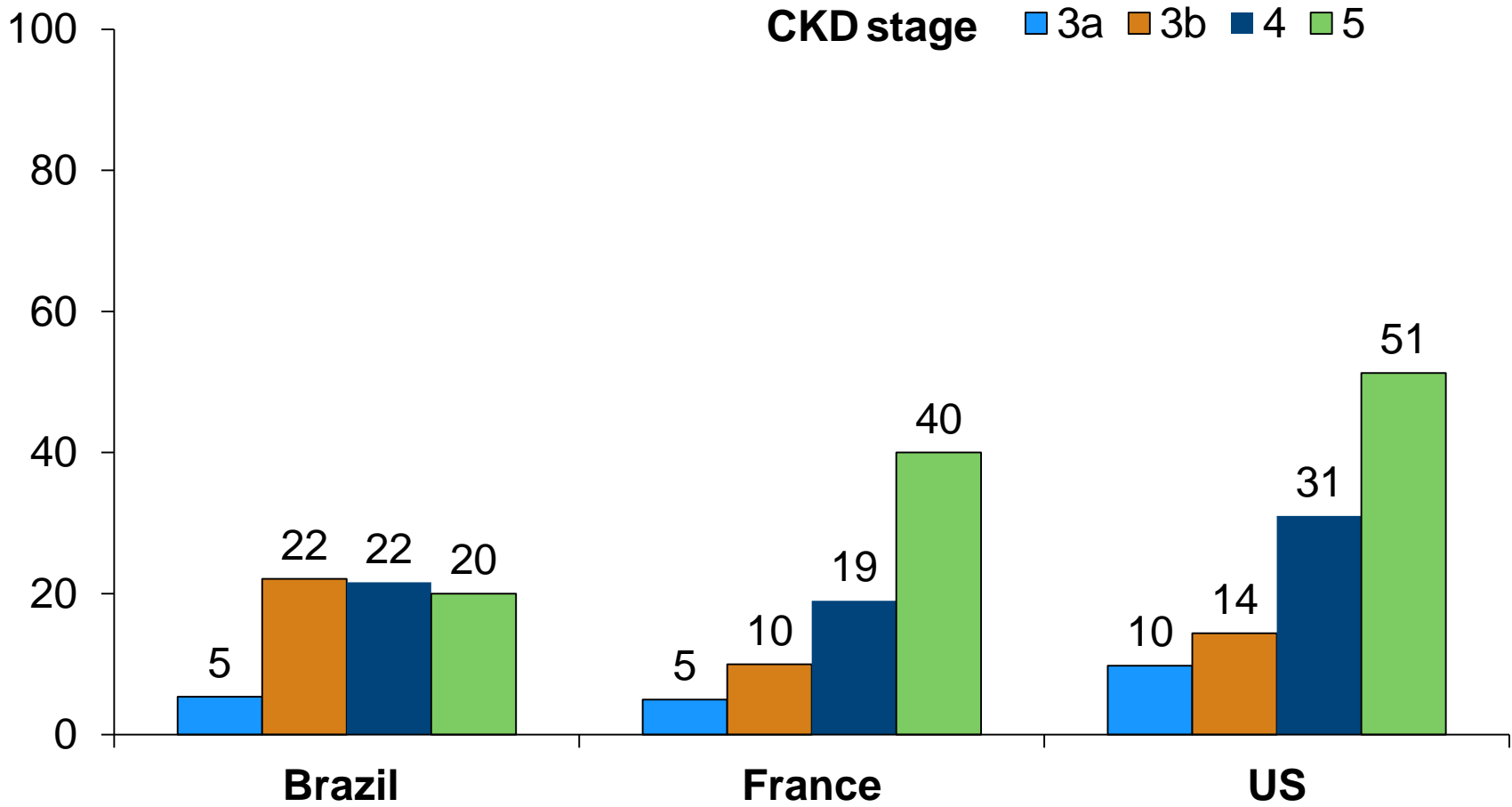
% of patients



KDIGO 2012: Provide expert dietary advice and information in the context of an education program, ... on salt, phosphate, potassium, and protein intake (1B)

Percentage of patients who reported receiving education sessions* about treatment options for kidney failure

% of patients

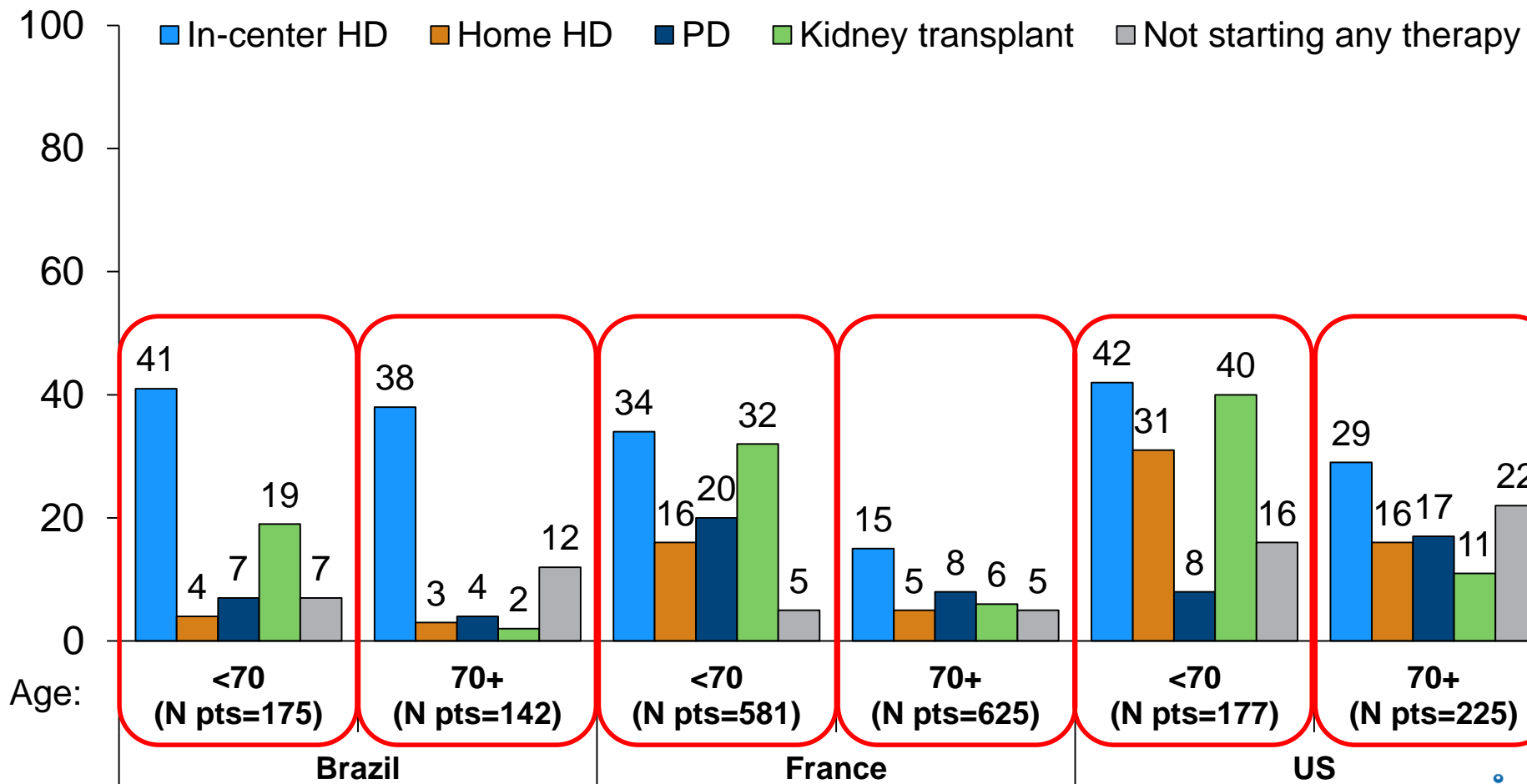


* Either one-on-one or a classroom education sessions

“Which treatment options for kidney failure has your doctor discussed with you?”

Among patients with eGFR<30

% of patients



CKDopps: Take-Home Messages

Early data show:

- Important variations identified across countries

About practice patterns:

- Study is ongoing, but high number of outcomes have already been recorded
- Uncontrolled SBP > 140 mm Hg remains high
- Late nephrologist referral is most common in Brazil

What patients tell us:

- A certain burden of kidney disease for patients
- Many don't regularly see a dietician or receive advice regarding treatment options for kidney failure (recall bias?)

CKDopps: Special Thanks

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