Avacopan : point d’étape, retour sur la vraie vie

Jean-François Augusto (Angers), Alexandre Karras (Paris), Thomas Quéméneur (Valenciennes)

AVACOSTAR:
étude de vie réelle européenne

Table 1. Baseline patient demographics

Demographic	Avacopan cohort N=60	Non-avacopan cohort N=58
Age at consent (years)	63.3 (16.9)	65.4 (11.9)
Male, n (%)	30 (50.8)	36 (62.1)
Missing/unknown/not reported	1 (1.7)	0 (0.0)
Race,[a] n (%)		
White	51 (92.7)	53 (94.6)
Asian	2 (3.6)	2 (3.6)
Other	2 (3.6)	1 (1.8)
Missing/unknown/not reported	5 (8.3)	2 (3.4)
Body mass index (kg/m^2)	27.1 (5.2)	26.2 (4.6)

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Table 2. Baseline clinical characteristics

Characteristic	Avacopan cohort N=60	Non-avacopan cohort N=58
Duration of AAV since diagnosis (years)	2.9 (6.4)	1.6 (4.1)
Range	0–32	0–18
AAV phenotype,[a] n (%)		
MPA	26 (43.3)	31 (53.4)
GPA	34 (56.7)	27 (46.6)
AAV status, n (%)		
Newly diagnosed	43 (71.7)	47 (81.0)
Relapsed	17 (28.3)	11 (19.0)
Currently or ever ANCA positive,[a, b] n (%)	55 (98.2)	52 (91.2)
Currently or ever PR3 positive[c]	32 (58.2)	30 (62.5)
Currently or ever MPO positive[c]	28 (50.9)	30 (63.8)
Pattern of organ involvement measured by BVAS,[a, b, d] n (%)		
Renal	46 (76.7)	41 (70.7)
General	27 (45.0)	24 (41.4)
Chest	19 (31.7)	18 (31.0)
Ears, nose, and throat	18 (30.0)	12 (20.7)
Pulmonary nodule/mass	13 (21.7)	9 (15.5)
Mucous membranes/eyes	9 (15.0)	8 (13.8)
Cutaneous	8 (13.3)	6 (10.3)
Nervous system	8 (13.3)	6 (10.3)
Pauci-immune GN on biopsy	5 (8.3)	6 (10.3)
eGFR[e] (mL/min/1.73 m^2)	32.6 (27.4)	33.9 (27.1)
Missing eGFR, n	27	26
Patients with treatment exposure/concomitant AAV medication data available,[a, b] n (%)	44 (73.3)	44 (75.9)
Rituximab	29 (65.9)	25 (56.8)
Cyclophosphamide	18 (40.9)	19 (43.2)
Glucocorticoids	36 (81.8)	30 (68.2)
Plasma exchange	5 (11.4)	0

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Figure 3. Comorbidities with frequency >10% in either cohort[a]

Avacopan cohort N=60
Non-avacopan cohort N=58

Any past or present medical conditions

Avacopan	53 (89.8)
Non-avacopan	52 (91.2)

Hypertension

Avacopan	17 (28.8)
Non-avacopan	14 (24.6)

Type 2 diabetes mellitus

Avacopan	12 (20.3)
Non-avacopan	6 (10.5)

Essential hypertension

Avacopan	9 (15.3)
Non-avacopan	4 (7.0)

Osteoarthritis

Avacopan	7 (11.9)
Non-avacopan	9 (15.8)

Asthma

Avacopan	8 (13.6)
Non-avacopan	4 (7.0)

Chronic kidney disease

Avacopan	8 (13.6)
Non-avacopan	4 (7.0)

Hypothyroidism

Avacopan	8 (13.6)
Non-avacopan	5 (8.8)

Chronic obstructive pulmonary disease

Avacopan	7 (11.9)
Non-avacopan	2 (3.5)

Atrial fibrillation

Avacopan	7 (11.9)
Non-avacopan	7 (12.3)

Acute kidney injury

Avacopan	7 (11.9)
Non-avacopan	1 (1.8)

Anemia

Avacopan	7 (11.9)
Non-avacopan	5 (8.8)

[a]Calculated among patients in the full analysis set, by treatment group and with non-missing information. Comorbidities by preferred term by n (%).
A participant can have one or more preferred terms reported under a given System Organ Class.

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Etude de vie réelle US: caractéristiques des patients a l'initiation de l'avacopan

Methods

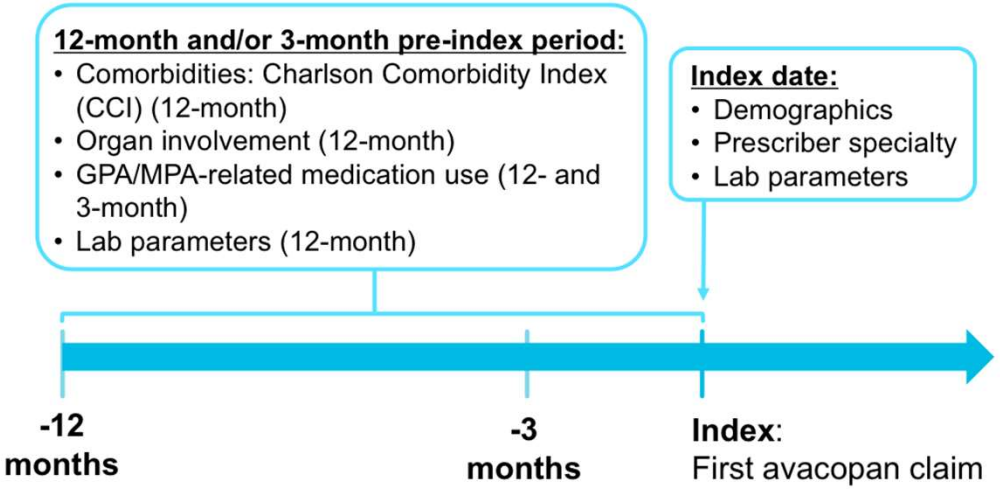
Design: Retrospective cohort study

Data sources: US–based IQVIA open-source medical claims and longitudinal prescription claims databases and Quest Laboratory Databas

Key inclusion criteria:

- ≥1 avacopan claim from October 7, 2021, to September 30, 2023
- Age ≥18 years
- ≥12 months of pre-index continuous data (assessed by proxy measure for continuous enrollment for open-source claims data[3])

Baseline assessments:



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Etude de vie réelle US: caractéristiques des patients a l'initiation de l'avacopan

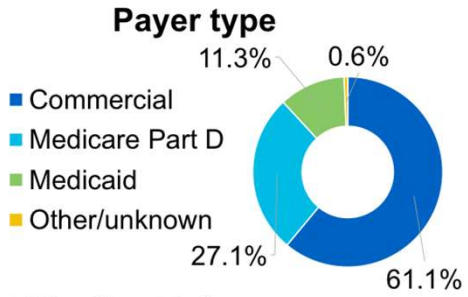
Results

Demographics and clinical characteristics

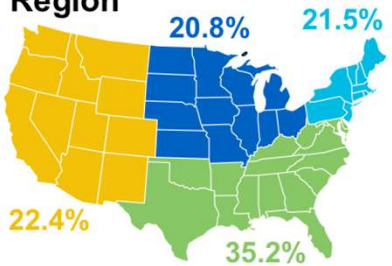
701 patients prescribed avacopan

Mean (SD) age: **55.8 (15.9)** years
60.6% female

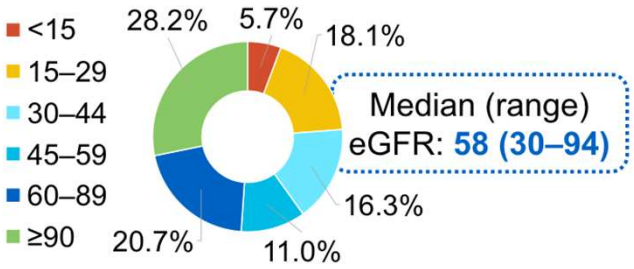
Payer type



Region

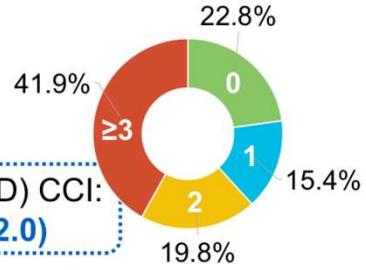


Estimated Glomerular Filtration Rate (eGFR), mL/min/1.73 m², n=227



Median (range) eGFR: **58 (30–94)**

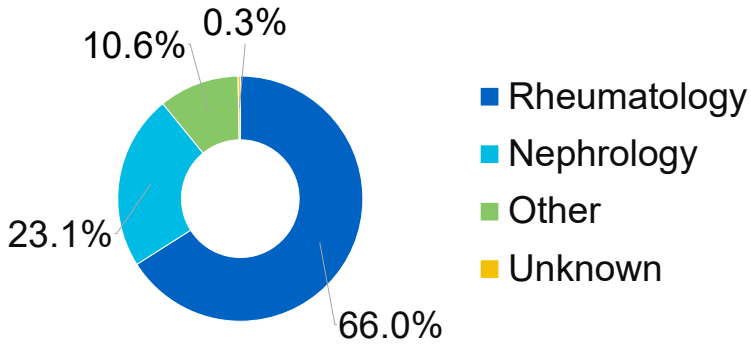
Charlson Comorbidity Index



Mean (SD) CCI: **2.4 (2.0)**

Higher CCI indicates higher comorbidity burden

Avacopan Prescriber Specialty



'Other' included miscellaneous specialty types (eg, internal medicine, nurse practitioner, physician assistant, pulmonologist, etc).

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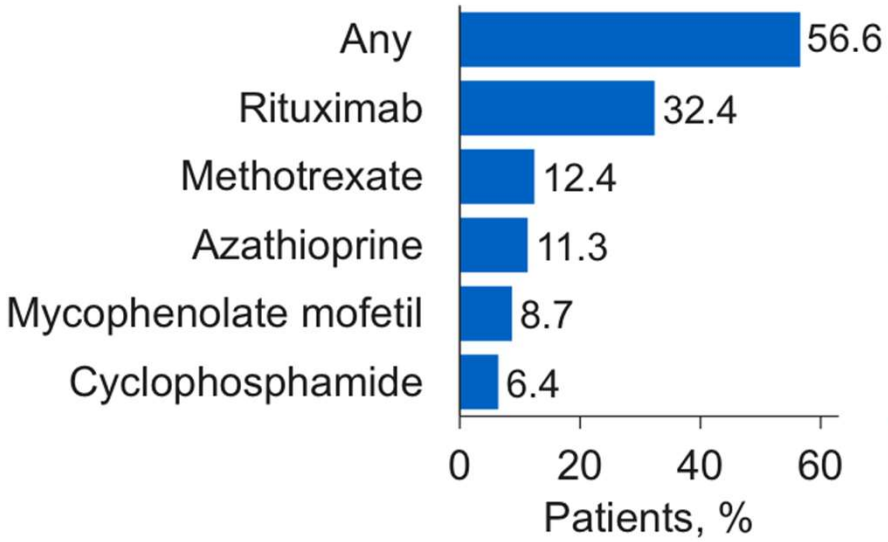
Etude de vie réelle US: caractéristiques des patients a l'initiation de l'avacopan

GPA/MPA-related medication use

Non-glucocorticoid immunosuppressive therapy



Assessed in the 12-month pre-index period

Glucocorticoid therapy, median (interquartile range)	
Duration of oral glucocorticoid use, days	102 (45, 210)
Cumulative oral prednisone-equivalent dose, 12-month pre-index, mg	2660 (900, 4905)
Total oral prednisone-equivalent dose per day, 12-month pre-index, mg	7 (3, 14)
Total oral prednisone-equivalent dose per day, 3-month pre-index, mg	8 (0, 23)

In the 12-month pre-index period:
92.3% received systemic glucocorticoids
94.0% received any immunosuppressive and/or systemic glucocorticoids

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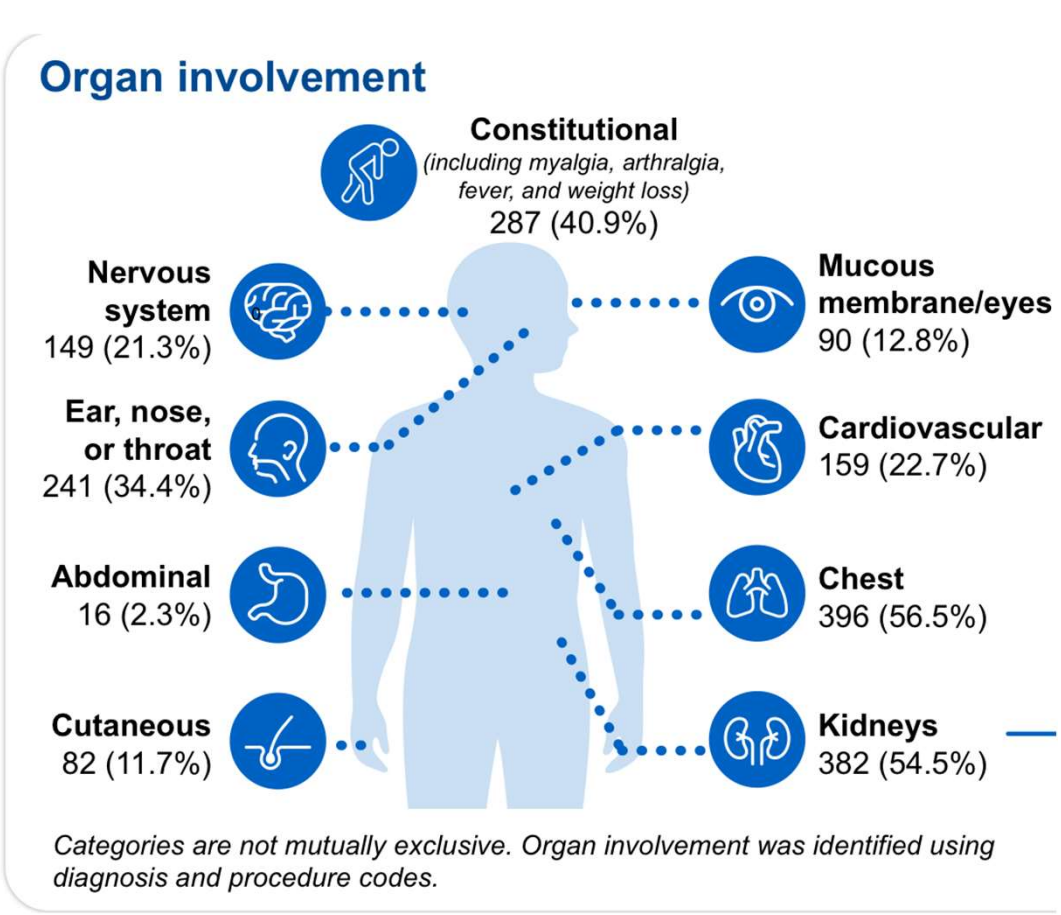
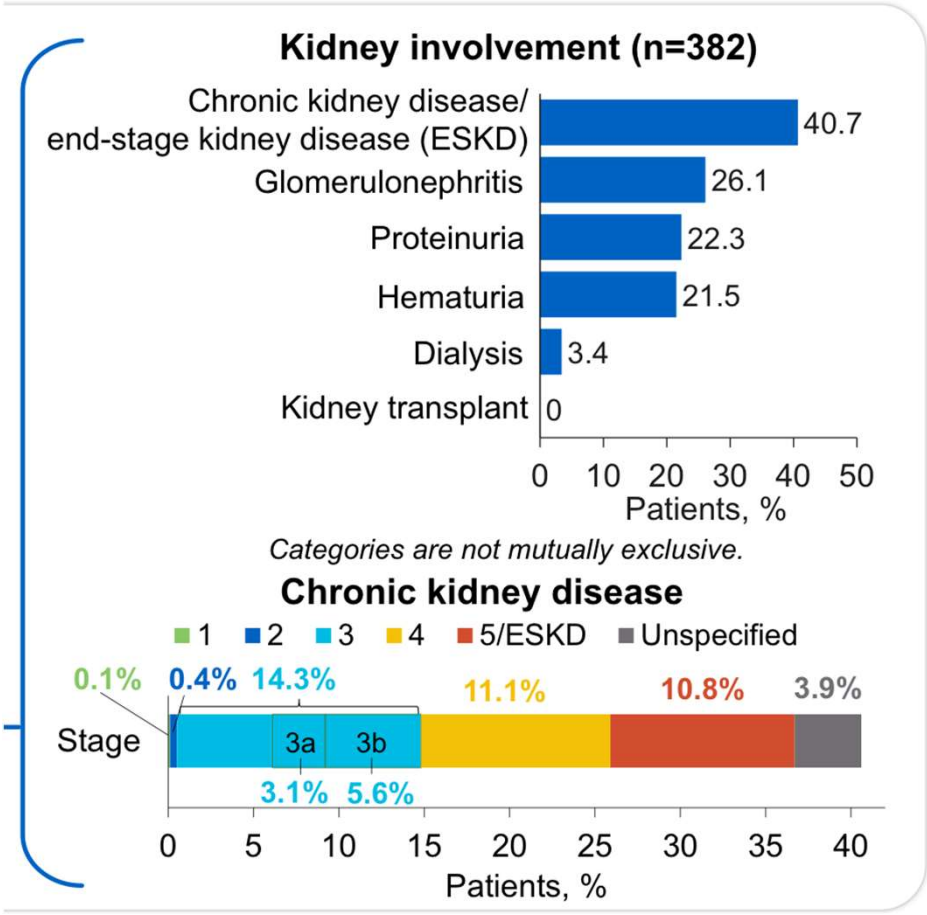
Etude de vie réelle US: caractéristiques des patients a l'initiation de l'avacopan





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AVACOPAN: études de vraie vie

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Année	2025	2024	2024	2024	2024	2021	2021
n	21	29	92	39	31	8	166
PAM/GPA	18/3	18/10	ND	ND	ND	ND	ND
MPO/PR3/0/GBM	18/2/1/0	21/ND/ND/ND	66/25/1/0	15/22/0/2	29/1/1/0	4/4/0/0	94/72
Age	77	56	59	64	72	46	61,2
Atteinte rénale	15 (71,4%)	24 (79,3%)	71 (77%)	33 (85%)	30 (91%)	5 (62,5%)	134 (80,7%)
DFGe	43	28	32.9	37	24	ND	44,6
<15 ml/mn/1,73 m²	1	ND	21 (23%)	15 (38,4%)	ND	ND	1
RTX/CYC/RTX-CYC/autres	16/0/3	2/14/12	44/2/43/2	24/15/0	27/2/2/0	0/0/8	107/59/0
Avacopan							
Délai d'instauration	12 j	48 j	3,6 s	ND	0	7,7 s	ND
Sevrage prednisone	10 (47,6%) (M12)	18 (60%)	64 (72%)	non	oui	5 (62,5%)	109 (65,7%)
Dose cumulée M6	0,9	2,18 g à M?	ND	ND	0,7	ND	2,3
Dose cumulée M12	1		2,21	3	ND	ND	2,6
Cytolyse	8 (38,1%)	0	4 (4,3%)	2 (5,1%)	1 (3,2%)	ND	9 (5,4%)
Arrêt/ei	9 (42,9%)	2 (6,9%)	18 (20%)	8 (21%)	2 (6,4%)	0	10 (6%)
Rémission							
M6	20 (95,2%)	27 (89,2%)	61 (90%)	28/32 (87,5%)	17 (89,5%)	8 (100%)	120 (72,3%)*
Trt d'entretien	19 (90,4%)	27 (96%)	65 (71%)	27 (69%)	31 (100%)	4 (50%)	0
M12	19 (90,5%)	13 (100%)	32 (84%)	21/23 (91%)	ND	7 (87,5%)	109 (65,7%)*

AVACOPAN: caractéristiques des populations

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Année	2025	2024	2024	2024	2024	2021	2021
n	21	29	92	39	31	8	166
PAM/GPA	18/3	18/10	ND	ND	ND	ND	ND
MPO/PR3/0/GBM	18/2/1/0	21/ND/ND/ND	66/25/1/0	15/22/0/2	29/1/1/0	4/4/0/0	94/72
Age	77	56	59	64	72	46	61,2
Atteinte rénale	15 (71,4%)	24 (79,3%)	71 (77%)	33 (85%)	30 (91%)	5 (62,5%)	134 (80,7%)
DFGe	43	28	32.9	37	24	ND	44,6
<15 ml/mn/1,73 m²	1	ND	21 (23%)	15 (38,4%)	ND	ND	1
RTX/CYC/RTX-CYC/autres	16/0/3/0	2/14/12/O	44/2/43/2	24/15/0/0	27/2/2/0	0/0/8	107/59/0

220 patients

MPO ANCA 69,5%

Atteinte rénale 80,9%

RTX 65%; RTX+CYC (27,3%)

Confirmer ADVOCATE: la rémission avec moins de corticoïdes

Délai d'instauration de l'avacopan: 0 à 48 j

Rémission M6: 89 à 100%

Rémission M12: 84 à 100% - TRT d'entretien: 69 à 100%

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Avacopan							
Délai d'instauration	12 j	48 j	3,6 s	ND	0	7,7 s	ND
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Dose cumulée M6	0,9	2,18 g à M?	ND	ND	0,7	ND	2,3
Dose cumulée M12	1		2,21	3	ND	ND	2,6
Rémission							
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M12	19 (90,5%)	13 (100%)	32 (84%)	21/23 (91%)	ND	7 (87,5%)	109 (65,7%)*

Confirmer ADVOCATE: sécurité

Hépatite cytolytique: 3 à 38%

Arrêt de l'avacopan pour ei: 6,4 à 42%

Avacopan

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Cytolyse	8 (38,1%)	0	4 (4,3%)	2 (5,1%)	1 (3,2%)	ND	9 (5,4%)
Arrêt/ei	9 (42,9%)	2 (6,9%)	18 (20%)	8 (21%)	2 (6,4%)	0	10 (6%)

AVACOPAN: études de vraie vie: la récupération rénale?

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Année	2025	2024	2024	2024	2024	2021	2021
n	21	29	92	39	31	8	166
PAM/GPA	18/3	18/10	ND	ND	ND	ND	ND
MPO/PR3/0/GBM	18/2/1/0	21/ND/ND/ND	66/25/1/0	15/22/0/2	29/1/1/0	4/4/0/0	94/72
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Avacopan							
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AVACOPAN: études de vraie vie: la récupération rénale?

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Age	77	56	58	64	72	46	61,3
Cytolyse	8 (38,1%)	0	4 (4,3%)	2 (5,1%)	1 (3,2%)	ND	9 (5,4%)
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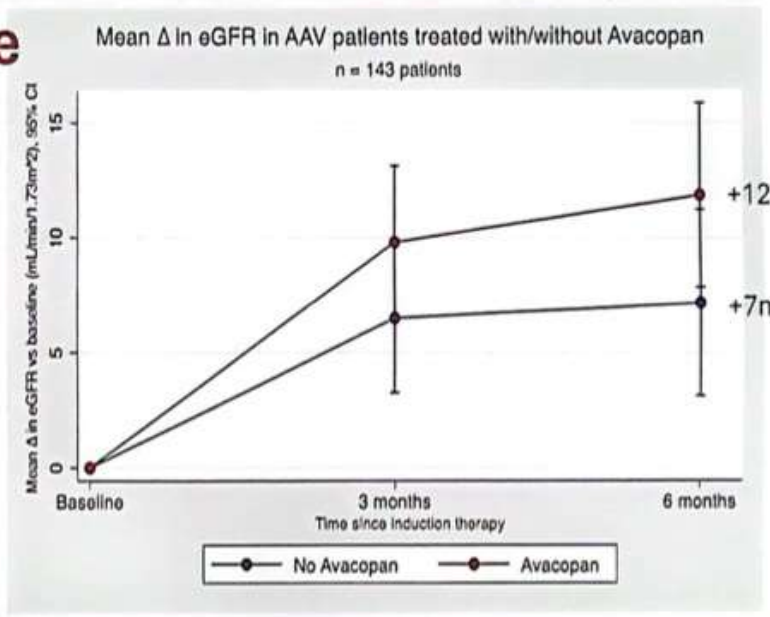
AUCUN GROUPE CONTROLE

AVACOPAN: études de vraie vie: la récupération rénale?

ΔeGFR change



Multilevel mixed effects linear modelling of Avacopan on Δ in eGFR	eGFR, mL/min/1.73m^2 (95% CI)	p-value
Model 1: fixed effect of avacopan and study month, random effects at individual level	2.66 (-0.6, 5.93)	0.11
Model 2: as above + age, sex, baseline eGFR as random effects at individual level	1.99 (-1.15, 5.13)	0.213
Model 3: as above + interaction term between avacopan and study month **(ΔeGFR)**	-2.68 (-8.18, 2.81)	0.339
Model 3: coeffecient for interaction term between avacopan and study month **(coefficient of interaction term, ΔeGFR slope)**	2.34 (0.08, 4.59)	0.042

Francis L, ANCA Workshop, 2024

AVACOPAN: études de vraie vie: DFGe<15

	Tagami	Draibe	Zonozi	Zimmermann	Gabilan	Van Leeuwen	ADVOCATE
Année	2025	2024	2024	2024	2024	2021	2021
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PAM/GPA	18/3	18/10	ND	ND	ND	ND	ND
MPO/PR3/0/GBM	18/2/1/0	21/ND/ND/ND	66/25/1/0	15/22/0/2	29/1/1/0	4/4/0/0	94/72
Age	77	56	59	64	72	46	61,2
Atteinte rénale	15 (71,4%)	24 (79,3%)	71 (77%)	33 (85%)	30 (91%)	5 (62,5%)	134 (80,7%)
DFGe	43	28	32.9	37	24	ND	44,6
<15 ml/mn/1,73 m²	1	ND	21 (23%)	15 (38,4%)	ND	ND	1
RTX/CYC/RTX-CYC/autres	16/0/3	2/14/12	44/2/43/2	24/15/0	27/2/2/0	0/0/8	107/59/0
Avacopan							
Délai d'instauration	12 j	48 j	3,6 s	ND	0	7,7 s	ND
Sevrage prednisone	10 (47,6%) (M12)	18 (60%)	64 (72%)	non	oui	5 (62,5%)	109 (65,7%)
Dose cumulée M6	0,9	2,18 g à M?	ND	ND	0,7	ND	2,3
Dose cumulée M12	1		2,21	3	ND	ND	2,6
Cytolyse	8 (38,1%)	0	4 (4,3%)	2 (5,1%)	1 (3,2%)	ND	9 (5,4%)
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M12	19 (90,5%)	13 (100%)	32 (84%)	21/23 (91%)	ND	7 (87,5%)	109 (65,7%)*

AVACOPAN: études de vraie vie: DFGe<15

Subgroup eGFR < 15 ml/min	At diagnosis	mo 1	mo 3	mo 6	mo 12
	n = 15[h]	*n* = 15[h]	*n* = 15[h]	*n* = 12[h]	*n* = 9[h]
eGFR (ml/min)	8 (8)	22 (16)	30 (25)	33 (31)	35 (38)

Zimmermann J, Kidney Int Rep 2024

DFGe	<15	>15	p
n	21	77	
EP	9 (43%)	-	<0.01
délai avacopan	47j	21j	0.02
IRCT	6 (30%)	0	<0.01
delta DFGe M6	19.4	5	0.06
delta DFGe M12	25.1	9.4	NS

5/9 patients dialyse dépendant récupèrent

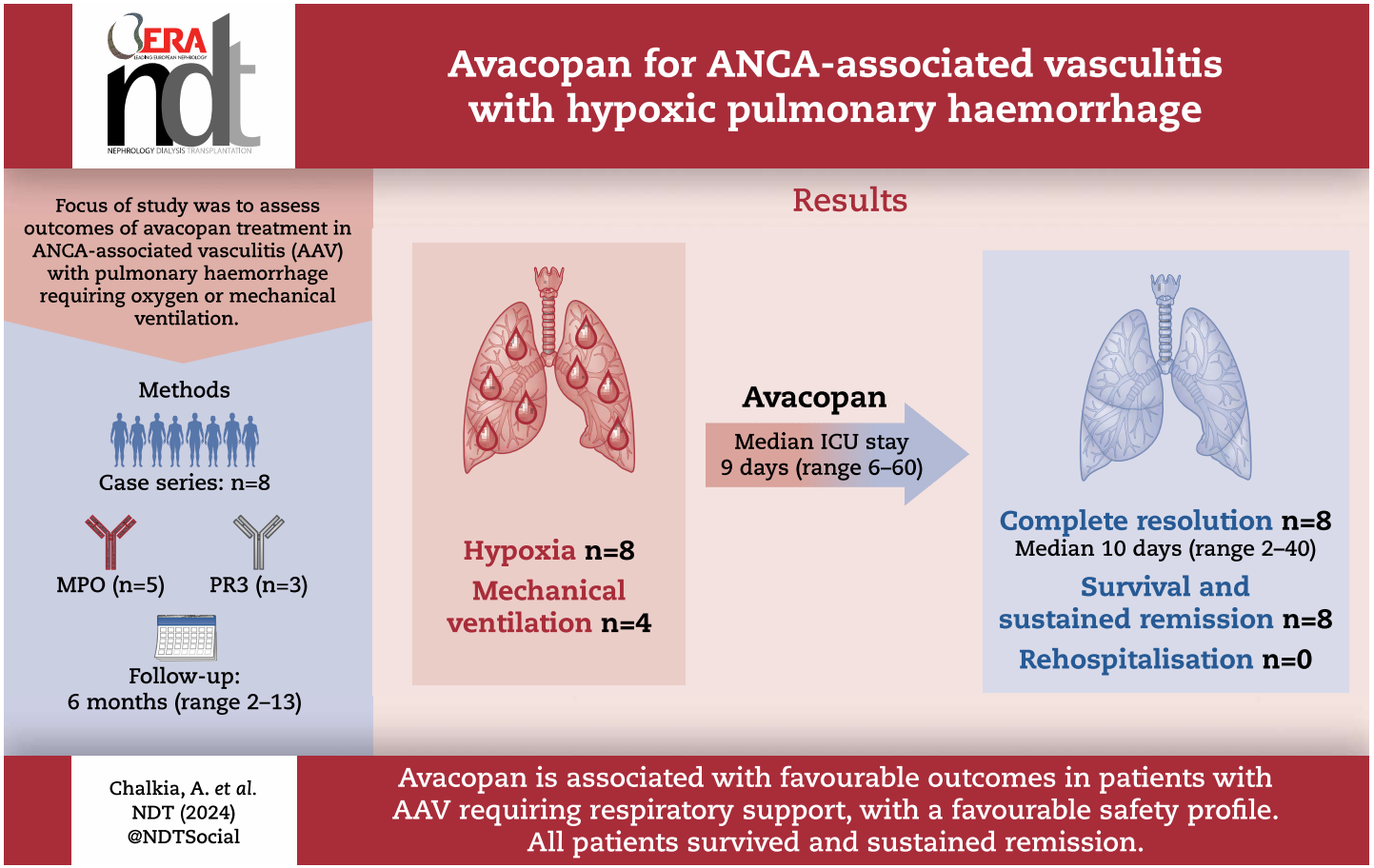
Zonozi R, Kidney Int Rep 2024

AVACOPAN: études de vraie vie: délai avacopan

délai avacopan	<30j	>30j	p
n	55	37	
BVAS	8.3	4.4	<0.01
EP	7%	24%	0.05
PRED M12	1.6	2.7	0.03

Zonozi R, Kidney Int Rep 2024

AVACOPAN: études de vraie vie: hémorragie alvéolaire



Chalkia A, Nephrol Dial Transplant 2024

AVACOPAN: études de vraie vie

Effectifs faibles

Pas de groupe contrôle

Traitements immunosupresseurs hétérogènes

AVACOPAN: études de vraie vie

Pas de nouvelle alerte de sécurité/ei

Pas d’alerte sur les taux de rémission

Quelques données sur des patients « graves »

AVAC-EUR Dr O Teng