

## **SUPPLEMENTARY MATERIAL**

Title: Mineralocorticoid receptor antagonist use in diabetic kidney disease: a clinical practice document by the European Renal Best Practice (ERBP) body of the European Renal Association (ERA).

**Authors:** Pantelis Sarafidis,<sup>1</sup> Fotini Iatridi,<sup>1</sup> Charles Ferro,<sup>2</sup> Maria-Eleni Alexandrou,<sup>1</sup> Beatriz Fernandez-Fernandez,<sup>3</sup> Mehmet Kanbay,<sup>4</sup> Francesca Mallamaci,<sup>5</sup> Ionut Nistor,<sup>6</sup> Patrick Rossignol,<sup>7-8</sup> Christoph Wanner,<sup>9</sup> Mario Cozzolino,<sup>10</sup> Alberto Ortiz<sup>3</sup> on behalf of the ERBP board

**Affiliations:** 1) Department of Nephrology, Hippokration Hospital, Aristotle University of Thessaloniki, Greece; 2) Department of Nephrology University Hospitals Birmingham and Institute of Cardiovascular Sciences University of Birmingham, Birmingham, UK; 3) Department of Nephrology and Hypertension, IIS-Fundación Jiménez Díaz UAM, Madrid, Spain; 4) Department of Medicine, Division of Nephrology, Koc University School of Medicine, Istanbul, Turkey; 5) CNR-IFC, Clinical Epidemiology and Pathophysiology of Hypertension and Renal Diseases, Ospedali Riuniti, 89124 Reggio Calabria, Italy; 6) Nephrology Department, University of Medicine and Pharmacy „Grigore T.Popa”, Iași, Romania; 7) Université de Lorraine, INSERM CIC-P 1433, CHRU de Nancy, INSERM U1116, F-CRIN INI-CRCT (Cardiovascular and Renal Clinical Trialists), Nancy, France; 8) Department of Medical specialties and nephrology-hemodialysis, Princess Grace Hospital, Monaco, and Centre d’Hémodialyse Privé de Monaco, Monaco; 9) Division of Nephrology, University Hospital Würzburg, Germany; 10) Renal Division, ASST Santi Paolo e Carlo, Department of Health Sciences, University of Milan, Milan, Italy

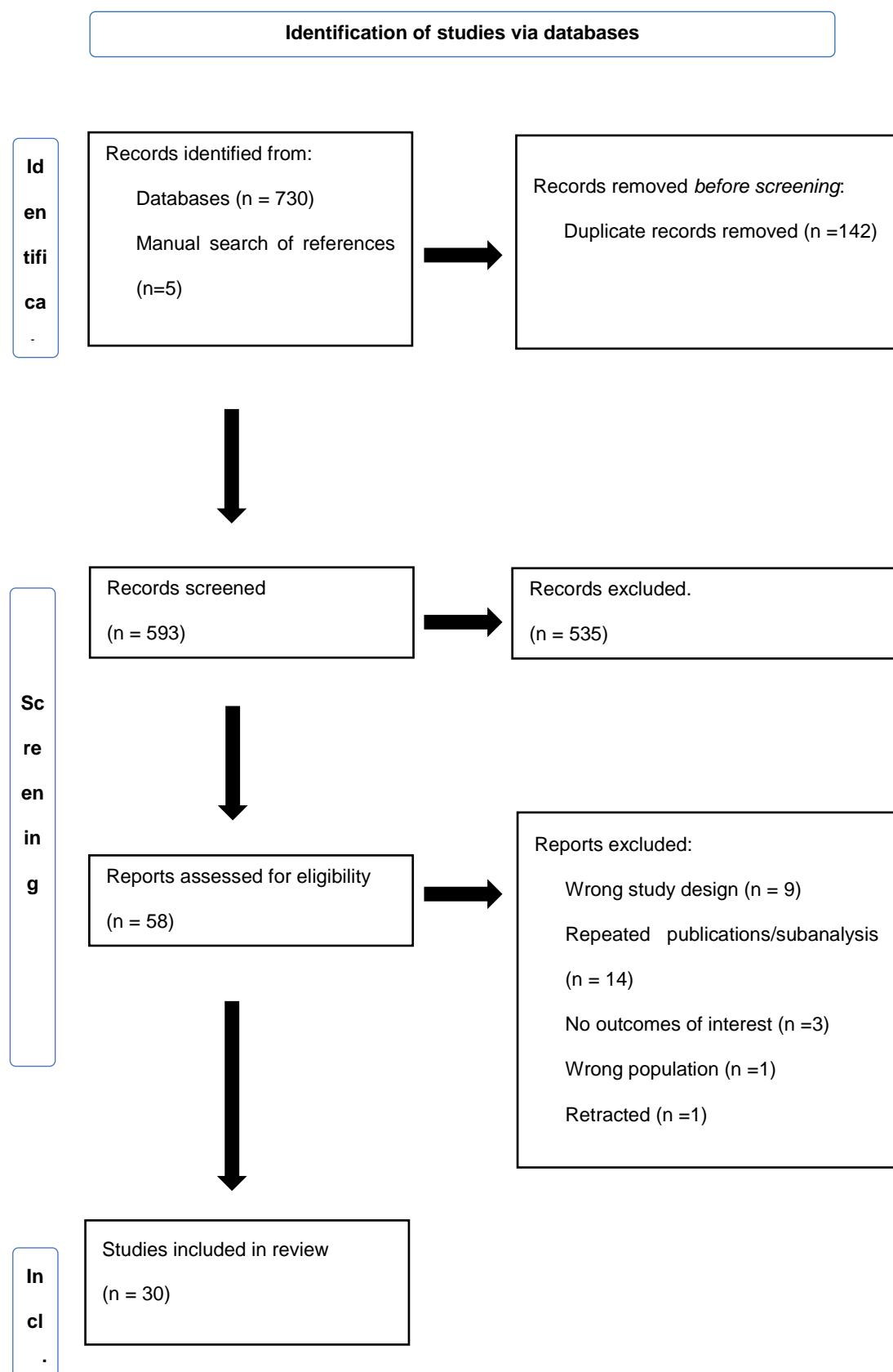
**Supplementary Table 1. Search strategy (Medline via Pubmed)**

No.	Query
#1	Diabetic Nephropathies[MeSH Terms]
#2	"diabetic nephropathy"
#3	"diabetic kidney disease*"
#4	"Diabetic Glomerulosclerosis"
#5	Proteinuria[MeSH Terms]
#6	UACR or UPCR or albuminuria
#7	"albumin to creatinine ratio" or "protein to creatinine ratio"
#8	Mineralocorticoid Receptor Antagonists[MeSH Terms]
#9	"aldosterone antagonist*"
#10	"aldosterone receptor antagonist*"
#11	mineralocorticoid receptor blocker
#12	mineralocorticoid antagonist*
#13	"MRA"
#14	mineralocorticoid receptor antagonist*
#15	canrenone[MeSH Terms]
#16	canrenone
#17	apararenone
#18	esaxerenone
#19	Eplerenone[MeSH Terms]
#20	Eplerenone
#21	finerenone
#22	Spiرونolactone[MeSH Terms]
#23	Spiرونolactone
#24	AZD-9977
#25	SC-9420
#26	SC-70303
#27	SC-9376
#28	CS-3150
#29	MT-3995
#30	BAY 94-8862
#31	KBP-5074
#32	BI690517
#33	(randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab] NOT (animals [mh] NOT humans [mh]))

**Supplementary Table 2. Search strategy (CENTRAL/Cohrane)**

No.	Query
#1	MeSH descriptor: [Diabetic Nephropathies] explode all trees
#2	"diabetic nephropathy"
#3	"diabetic kidney disease*"'
#4	"Diabetic Glomerulosclerosis"
#5	MeSH descriptor: [Proteinuria] explode all trees
#6	UACR or UPCR or albuminuria
#7	"albumin to creatinine ratio" or "protein to creatinine ratio"
#8	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7
#9	MeSH descriptor: [Mineralocorticoid Receptor Antagonists] explode all trees
#10	"aldosterone antagonist*"'
#11	"aldosterone receptor antagonist*"'
#12	mineralocorticoid receptor blocker
#13	mineralocorticoid antagonist*
#14	"MRA"
#15	mineralocorticoid receptor antagonist*
#16	MeSH descriptor: [Canrenone] explode all trees
#17	canrenone:ti,ab,kw
#18	apararenone:ti,ab,kw
#19	esaxerenone:ti,ab,kw
#20	MeSH descriptor: [Eplerenone] explode all trees
#21	Eplerenone:ti,ab,kw
#22	finerenone:ti,ab,kw
#23	Spironolactone:ti,ab,kw
#24	MeSH descriptor: [Spironolactone] explode all trees
#25	AZD-9977
#26	SC-9420
#27	SC-70303
#28	SC-9376
#29	CS-3150
#30	MT-3995
#31	BAY-948862
#32	KBP-5074
#33	BI690517
#34	#9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33
#35	#8 AND #34

**Supplementary Figure 1. PRISMA flow- diagram of study selection process**





**Supplementary Figure 2. Risk of bias assessment for randomized, parallel group trials**

	D1	D2	D3	D4	D5	Overall	
Bakris 2015	+	+	+	+	+	+	
Bakris 2020	+	+	+	+	+	+	
Brandt Jacobsen 2020	!	+	!	+	+	!	
Chen 2018	+	+	+	+	+	+	
Chrysostomou 2006	!	+	+	+	+	!	
Derosa 2018	+	+	-	+	+	-	
Epstein 2006	!	+	+	+	!	!	
Esteghamati 2013	!	-	-	-	+	-	
Fogari 2014	!	-	-	+	+	-	
Hase 2013	!	-	-	-	+	-	
Ito 2019	+	+	+	+	+	+	
Ito 2021	+	+	+	+	+	+	
Katayama 2017	+	+	+	+	+	+	
Kato 2015	+	!	+	+	+	!	
Mehdi 2009	+	+	!	+	+	!	
Mocadem 2020	+	-	!	+	+	-	
Momeni 2015	!	+	!	+	+	!	
Oxlund 2013	+	+	+	+	+	+	
Pitt 2021	+	+	+	+	+	+	
Tofte 2020	+	+	-	+	+	-	
Van der Meiracker 2006	+	+	-	+	+	-	
Wada 2021	+	+	!	+	+	!	
Ziae 2013	!	-	-	+	+	-	

D1 Randomisation process  
D2 Deviations from the intended interventions  
D3 Missing outcome data  
D4 Measurement of the outcome  
D5 Selection of the reported result

### Supplementary Figure 3. Risk of bias assessment for crossover trials

	<u>D1</u>	<u>DS</u>	<u>D2</u>	<u>D3</u>	<u>D4</u>	<u>D5</u>	<u>Overall</u>
Nielsen 2012	+	+	+	+	+	+	+
Rossing 2005	!	+	+	+	+	+	!
Schjoedt 2005	+	+	+	-	+	+	-
Schjoedt 2006	+	+	+	+	+	+	+
Saklayen 2008	+	+	+	-	+	+	-

D1 Randomisation process  
 DS Bias arising from period and carryover effects  
 D2 Deviations from the intended interventions  
 D3 Missing outcome data  
 D4 Measurement of the outcome  
 D5 Selection of the reported result