

2023 ESH Guidelines for the management of arterial hypertension



ESH GUIDELINES OFFICIALLY RECOMMEND:

Renal Denervation as therapy option to treat hypertension!



The Task Force for the management of arterial hypertension of the European Society of Hypertension (ESH) endorsed by the European Renal Association (ERA) and the International Society of Hypertension (ISH) recently published their guidelines and declared renal denervation (RDN) as third therapy option to treat hypertension.



1 Lifestyle Changes



2 Medications

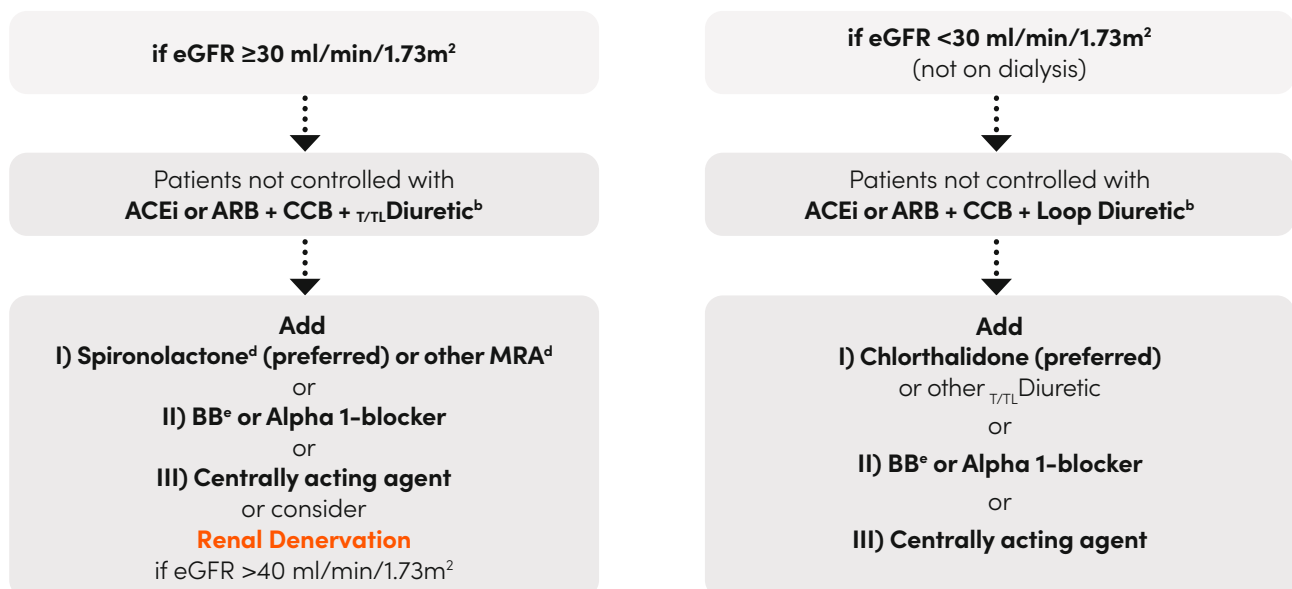


3 Paradise™ Ultrasound uRDN treatment

Highlights from the ESH Guidelines:¹

- European society has formally recommended RDN (class II)
- Resistant and uncontrolled hypertension
 - Uncontrolled HTN despite combination drug therapy or where drugs are poorly tolerated
 - Resistant HTN despite the concurrent use of 3 antihypertensive drugs
- Guidelines state the same level of evidence for renal denervation and spironolactone

Blood Pressure lowering therapy in true resistant hypertension^a



BP-lowering strategy in true resistant hypertension according to renal function. (a) When SBP is ≥ 140 mmHg or DBP is ≥ 90 mmHg provided that: maximum recommended and tolerated doses of a three-drug combination comprising a RAS blocker (either an ACEi or an ARB), a CCB and a T/TL Diuretic were used, adequate BP control has been confirmed by ABPM or by HBPM if ABPM is not feasible, various causes of pseudo-resistant hypertension (especially poor medication adherence) and secondary hypertension have been excluded (see Section 12). (b) Use of Diuretics: Use T/TL Diuretic if eGFR >45 ml/min/1.73 m². Consider transition to Loop Diuretic if eGFR is between 30 to 45 ml/min/1.73 m². Use loop Diuretic if eGFR <30 ml/min/1.73 m². (c) MRA contraindicated. (d) Caution if eGFR <45 ml/min/1.73 m² or serum potassium >4.5 mmol/l. (e)

Recommendations and statements for the use of renal denervation ¹	CoR*	LoE**
RDN can be considered as a treatment option in patients who have uncontrolled Blood Pressure (BP) despite the use of antihypertensive drug combination therapy, or if drug treatment elicits serious side effects and poor quality of life. ***	II	B
RDN can be considered as an additional treatment option in patients with resistant hypertension ***	II	B
Selection of patients to whom RDN is offered should be done in a shared decision-making process after objective and complete patient's information.	I	C
Renal denervation should only be performed in experienced specialized centers to guarantee appropriate selection of eligible patients and completeness of the denervation procedure.	I	C

*CoR = Class of Recommendation **LoE = Level of Evidence ***eGFR >40 ml/min/1.73m²

Global consensus on patient selection for RDN

Patient Selection	ESH 2023 ¹	ESC 2023 ²	NL 2022 ³	SCAI/NKF 2021 ⁴	Spain 2021 ⁵	Italy 2020 ⁶
Controlled hypertension						
Uncontrolled hypertension*	●			●	●	●
Resistant hypertension	●	●	●	●	●	●
Intolerant to drugs	●	●	●	●	●	●
Non-adherent to drugs		●		●	●	●
High CV risk / severe EOD		●		●	●	●

*less than 3 medication ● fully supported

Learn more about

The Paradise™ Ultrasound Renal Denervation System

[Recormedical.eu](https://www.recormedical.eu)



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Source:

- Mancia et al. Journal of Hypertension 2023, 41:1874–2017 2. Barbato E, et al. European Heart Journal (2023) 00, 1–18, 3, Zeijen, et al. Neth Heart J (2022) 31, pages3–11 (2023),
- Kandzari et al. Catheter Cardiovasc Interv. 2021 Sep;98(3):416–426., 5. Rodriguez et al. REC Interv Cardiol. 2022;4:39–4614.,
- Bruno et al. High Blood Press Cardiovasc Prev 2020 Apr;27(2):109–117.