

## **ONLINE SUPPLEMENT**

### **ABNORMAL ALDOSTERONE PHYSIOLOGY AND CARDIO-METABOLIC RISK FACTORS**

**AUTHORS:** Anand Vaidya\*<sup>1,2</sup>, Patricia C. Underwood\*<sup>1,2</sup>, Paul N. Hopkins<sup>3</sup>, Xavier Jeunemaitre<sup>4</sup>, Claudio Ferri<sup>5</sup>, Gordon H. Williams<sup>1,2</sup>, Gail K. Adler<sup>1,2</sup>.

**AFFILIATIONS:** \*A.V. and P.C.U. contributed equally to this manuscript; <sup>1</sup>Division of Endocrinology, Diabetes, and Hypertension, <sup>2</sup>Department of Medicine, Brigham and Women's Hospital and Harvard Medical School; <sup>3</sup>Cardiovascular Genetics, Department of Internal Medicine, University of Utah School of Medicine; <sup>4</sup>Centre d'Investigation Clinique Inserm/AP, Departement de Genetique, Hospital European Georges Pompidou, Paris, France; <sup>5</sup>University of L'Aquila - Department MeSVA - San Salvatore Hospital - L'Aquila 67100 – Italy.

**SHORT TITLE:** Aldosterone Physiology and Cardio-Metabolic Risk

**CORRESPONDING AUTHOR:** Anand Vaidya MD MMSc, Brigham and Women's Hospital. Division of Endocrinology, Diabetes, and Hypertension. 221 Longwood Ave, RFB, Boston, MA, 02115. Tel: 617-525-8285, Fax: 617-732-5764. Email: [avaidya1@partners.org](mailto:avaidya1@partners.org)

**TABLES:** 2 **FIGURES:** 0; **REFS:** 6

**SUPPLEMENTARY TABLES:**

**Table S1: Conventional measures of aldosterone.** The table lists methods to assess aldosterone, the expected physiologic response, and its interpretation. Measures that were utilized in this study are indicated the last column.

<b>Measure of Aldosterone</b>	<b>Abbreviation</b>	<b>Expected Physiologic Response</b>	<b>Interpretation</b>	<b>Measured in this Study</b>
Random serum aldosterone	Serum aldosterone	<b>variable</b>	Prone to intra- and inter-individual variation induced by diet, posture, circadian rhythms, and stress. <sup>1,2</sup>	No
Random 24 hour urine aldosterone	Urinary aldosterone	<b>variable</b>	Prone to intra- and inter-individual variation induced by diet, posture, and stress <sup>1</sup>	No
Serum or urine aldosterone measures with subject in balance on a fixed liberal sodium diet	Serum aldosterone on LIB diet	↓↓↓	•Maximal suppression of aldosterone, with simultaneous suppression of ANGII and PRA <sup>1,3,4</sup>	Yes
	Urinary aldosterone on LIB diet		•Lack of suppression may indicate autonomous aldosterone production	
Serum or urine aldosterone measures with subject in balance on a fixed restrictive sodium diet	Serum aldosterone on RES diet	↑↑	• Stimulated aldosterone, with simultaneous stimulation of ANGII and PRA <sup>1</sup>	Yes
	Urinary aldosterone on RES diet		• A blunted aldosterone stimulation may indicate abnormal adrenal responsiveness <sup>5</sup>	
Serum aldosterone following an infusion of angiotensin II on	ANGII stimulated serum aldosterone on RES diet	↑↑↑	• Stimulation of aldosterone, with a simultaneous suppression of endogenous PRA and ANGII, allows for	Yes

restrictive  
sodium diet

“uncoupling” of RAAS  
components<sup>6</sup>

- Blunted stimulation  
may indicate abnormal  
adrenal responsiveness<sup>6</sup>
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**Table S2: Sensitivity and Specificity of Aldosterone Measurements and Risk for Cardio-Metabolic Disease.** The sensitivity and specificity for detecting zero versus any one component of the MetS, and the sensitivity and specificity for detecting zero versus any combination of MetS components.

<b>Zero versus any 1 MetS component</b>		
Aldosterone Measurements	Sensitivity	Specificity
LIB Aldo Serum	0.79	0.27
RES Aldo Serum	0.65	0.21
SASSI	0.86	0.29
LIB Aldo Urine	0.78	0.27
RES Aldo Urine	0.62	0.18
SAUSSI	0.83	0.29

  

<b>Zero versus All (1, 2, 3, or 4 MetS components)</b>		
Aldosterone Measurements	Sensitivity	Specificity
LIB Aldo Serum	0.94	0.28
RES Aldo Serum	0.62	0.23
SASSI	0.91	0.28
LIB Aldo Urine	0.86	0.27
RES Aldo Urine	0.43	0.21
SAUSSI	0.95	0.28

### **ONLINE SUPPLEMENT REFERENCES:**

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