Prevalence of cortisol co-secretion in patients with primary aldosteronism: role of metanephrine normalization in adrenal vein sampling

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Summary

Tables

Table S1. Clinical and biochemical characteristics of patients with symmetrical and asymmetrical cortisol secretion.

Variables	Symmetrical cortisol secretion (n=72)	Asymmetrical cortisol secretion (n=16)	
Age at screening (years)	49±9	52±8	0.222
Female sex, n (%)	23 (31.9)	6 (37.5)	0.669
Systolic BP (mmHg)	158±20	154±20	0.471
Diastolic BP (mmHg)	96±11	94±12	0.480
BMI (Kg/sqm)	27±4	27±3	0.969
Lowest Potassium (mEq/L)	3.5±0.6	3.5±0.7	0.902
Creatinine (mg/dL)	0.90±0.20	0.85±0.21	0.422
Diabetes, n (%)	6 (8.8)	-	0.218
PRA (ng/mL/h)	0.2 (0.10-0.42)	0.30 (0.17-0.51)	0.363
Renin (µU/mL)	1.60 (0.50-3.27)	3.45 (2.90-3.45)	0.193
Aldosterone (ng/dL)	33.2 (24.1-45.2)	38.7 (28.3-49.4)	0.347
Subtype diagnosis (%)			
Unilateral PA	38 (52.8)	12 (75.0)	
Bilateral PA	32 (44.4)	4 (25.0)	
Undetermined	2 (2.8)	-	

Values are mean ± SD, median (IQR), or absolute number (%).

BMI: body mass index; BP: blood pressure; PA: primary aldosteronism; PRA: plasma renin activity.

30 **Table S2.** Linear regression for A/M LI cut-off prediction

A/M LI	A/C LI
Intercept	-1.022
β Estimate (I.C.)	1.335 (1.254-1.417)
P-value	<0.001

31 β is expressed as median (IQR). A/M LI cut-off was calculated by the following equation:

32 A/M LI= -1.022 + (4*1.335) = 4.318.

33 A/C: aldosterone to cortisol lateralization index; A/M: aldosterone to metanephrine

34 lateralization index.

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36 **Figure S1.** Subtype diagnosis defined with A/C LI with or without cosyntropin stimulation.

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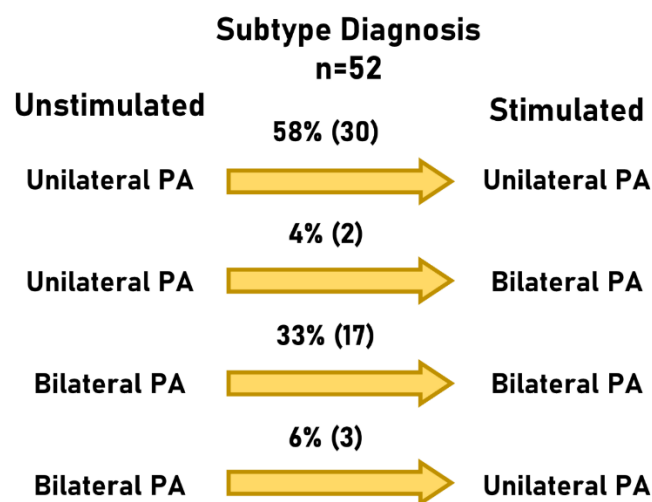
38 The figure shows the changes in subtype diagnosis defined with and without cosyntropin
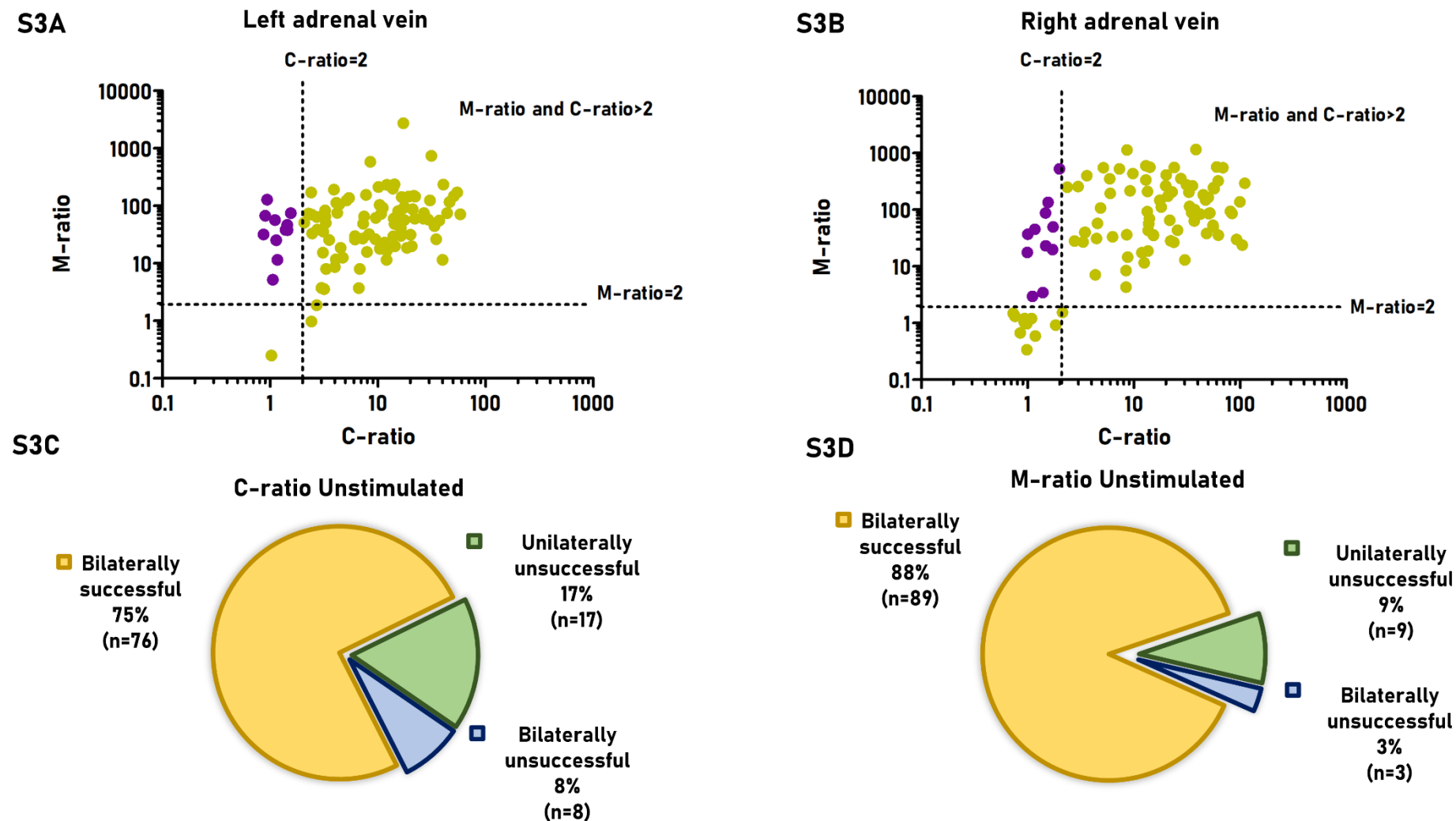
39 stimulation.

40 A/C LI, (Aldosterone/Cortisol)$_{\text{dominant adrenal vein}}$/(Aldosterone/Cortisol)$_{\text{non dominant adrenal vein}}$; CR,

41 contralateral ratio; PA, primary aldosteronism.
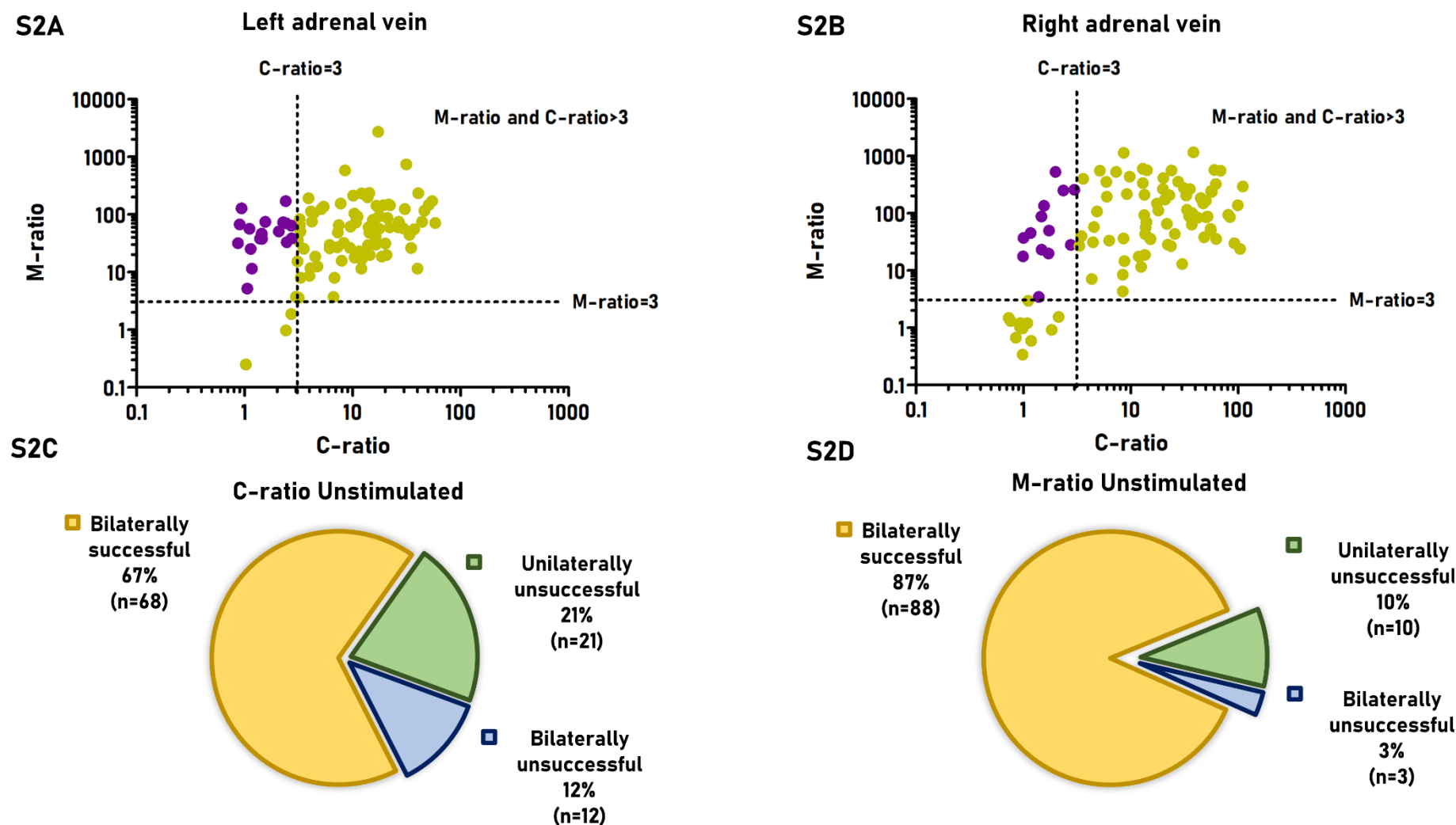
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43   **Figure S2.** Selectivity of unstimulated AVS defined with C-ratio≥3 or M-ratio≥3.

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The scatterplots show SI defined with C-ratio or M-ratio of unstimulated AVS (n=101) in the left adrenal vein (**A**) or right adrenal vein (**B**). Yellow dots indicate adrenal samplings that were defined selective or unselective with both methods (C-ratio and M-ratio). Purple dots indicate adrenal samplings that were defined selective with M-ratio and unselective with C-ratio. The pie charts show the proportion of successful, unilaterally unsuccessful and bilaterally unsuccessful procedures considering C-ratio≥3 (**C**) and M-ratio≥3 (**D**) as selectivity index.

AVS: adrenal venous sampling; C-ratio: Cortisol$_{adrenal\ vein}$/Cortisol$_{peripheral\ vein}$; M-ratio: Metanephrine$_{adrenal\ vein}$/Metanephrine$_{peripheral\ vein}$; SI: selectivity index.

Figure S3. Selectivity of unstimulated AVS defined with C-ratio≥2 or M-ratio≥2.

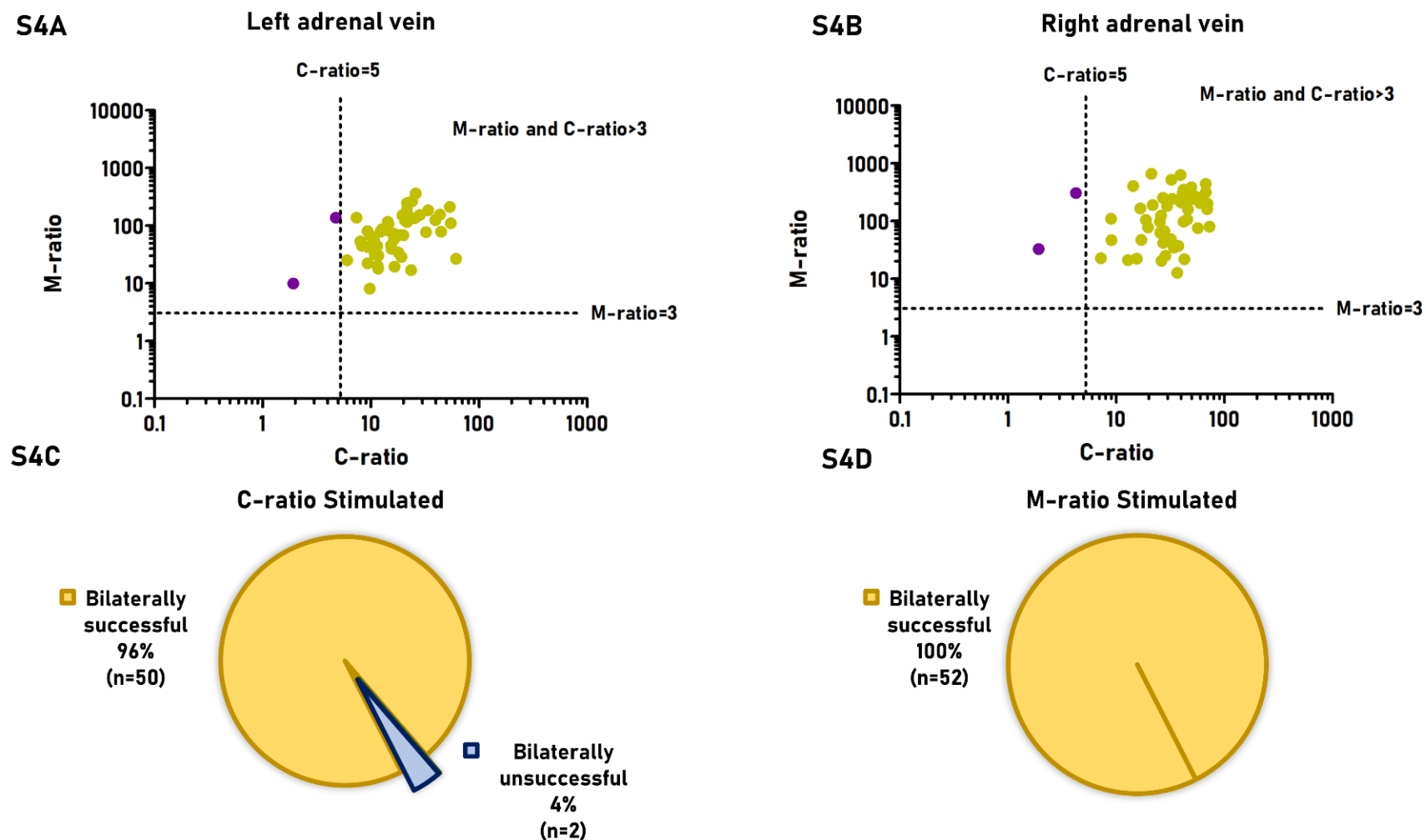The scatterplots show SI defined with C-ratio or M-ratio of unstimulated AVS (n=101) in the left adrenal vein (**A**) or right adrenal vein (**B**). Yellow dots indicate adrenal samplings that were defined selective or unselective with both methods (C-ratio and M-ratio). Purple dots indicate adrenal samplings that were defined selective with M-ratio and unselective with C-ratio. The pie charts show the proportion of successful, unilaterally unsuccessful and bilaterally unsuccessful procedures considering C-ratio≥2 (**C**) and M-ratio≥2 (**D**) as selectivity index.

AVS: adrenal venous sampling; C-ratio: Cortisol$_{adrenal\ vein}$/Cortisol$_{peripheral\ vein}$; M-ratio: Metanephrine$_{adrenal\ vein}$/Metanephrine$_{peripheral\ vein}$; SI: selectivity index.

Figure S4. Selectivity of cosyntropin stimulated AVS defined with C-ratio≥5 or M-ratio≥3.

The scatterplots show SI defined with C-ratio or M-ratio of unstimulated AVS (n=52) in the left adrenal vein (**A**) or right adrenal vein (**B**). Yellow dots indicate adrenal samplings that were defined selective or unselective with both methods (C-ratio and M-ratio). Purple dots indicate adrenal samplings that were defined selective with M-ratio and unselective with C-ratio. The pie charts show the proportion of successful, unilaterally unsuccessful and bilaterally unsuccessful procedures considering C-ratio≥5 (**C**) and M-ratio≥2 (**D**) as selectivity index.

AVS: adrenal venous sampling; C-ratio: Cortisol$_{adrenal\ vein}$/Cortisol$_{peripheral\ vein}$; M-ratio: Metanephrine$_{adrenal\ vein}$/Metanephrine$_{peripheral\ vein}$; SI: selectivity index.