

DATE:	16 March 2026
TO:	All Healthcare Providers
FROM:	Clinical Biochemistry, Alberta Precision Laboratories (APL)
RE:	Reporting Changes to Tests Involving Aldosterone and Renin

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Key Message

- Effective Tuesday March 24, the University of Alberta Hospital (UAH) will transition to the DiaSorin Liaison instrument for testing of “Aldosterone, plasma”, “Aldosterone, Urine, 24 hour”, “Renin, plasma”, “Aldosterone/Renin Ratio Panel (ARR)”, and order sets that involve these tests.
- UAH reporting and interpretation will change to match those already in use at the Immunochemistry Laboratory at the Calgary Diagnostic and Scientific Centre (DSC) (**Appendix 1, Table 1**).
- New pediatric reference intervals for “Aldosterone, plasma” and “Renin, plasma” will be implemented at both UAH and the Calgary Immunochemistry Laboratory (**Appendix 1, Table 2**).

Background

- Transition to the DiaSorin Liaison replaces the aging IDS iSYS instrument at UAH and aligns with the Calgary Immunochemistry Laboratory to support provincial standardization.
- The DiaSorin Liaison immunoassay instrument produces different numerical values than the IDS iSYS; results are not directly comparable.
- The Calgary Immunochemistry Laboratory has used the DiaSorin Liaison since 2014; the ARR cutoff used on this instrument is supported by a previous local study (*Leung A et al. Hypertension. 2017*).
- Pediatric reference intervals are based on data from the CALIPER study (*Miller JJ et al, Clin Biochem. 2023*).

Action Required

- Review the new reference intervals and interpretive comments associated with the transition to the DiaSorin Liaison instrument at UAH (**Appendix 1, Table 1**).
- Be aware that the renin measuring units at UAH will change from ng/L to mIU/L and are not equivalent.
- For patients monitored over time, establish a new baseline when transitioning from IDS iSYS to DiaSorin Liaison testing due to differences between methods.
- Be aware of the new pediatric reference intervals at both UAH and the Calgary Immunochemistry Laboratory (DSC) (**Appendix 1, Table 2**).
- There are no changes to ordering, specimen processing, or specimen routing.

Questions/Concerns

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Appendix 1.

Table 1. Reference intervals and interpretive comments adopted by UAH with transition to the DiaSorin Liaison instrument. Note: Renin measuring units will change from ng/L to mIU/L.

Test	Reference Interval and interpretive comment (≥18 years)
Aldosterone, plasma	Reference intervals in healthy adults with normal salt intake: 70-1090 pmol/L Upright at least 30 minutes 50-645 pmol/L Supine at least 30 minutes
Aldosterone, urine, 24 hour	Reference interval in healthy adults on a normal salt diet, without hypertension, and non-suppressed renin: 3-78 nmol/day
Renin, plasma	Reference intervals in healthy adults with normal salt intake: 4.4-46.0 mIU/L Upright at least 30 minutes 2.8-40.0 mIU/L Supine at least 30 minutes
ARR Panel	An aldosterone (pmol/L)/renin concentration (mIU/L) ratio >60 may be indicative of primary aldosteronism if drawn in the absence of confounding drugs
Order sets involving Aldosterone and/or Renin: -Selective Adrenal Sampling -Renal Vein Sampling -Lasix	No reference intervals.

Table 2. New pediatric reference intervals and interpretive comments at UAH and the Calgary Immunochemistry Laboratory on the DiaSorin Liaison instrument.

Test	Reference Interval and interpretive comment
Aldosterone, plasma	<u>Ages 0 to <3 years</u> Reference interval in healthy children with normal salt intake: 83-3134 pmol/L <u>Ages 3 to <18 years</u> Reference interval in healthy children and adolescents with normal salt intake: 144-677 pmol/L
Aldosterone, urine, 24 hour	Pediatric reference intervals have not been established. Reference interval in healthy adults on a normal salt diet, without hypertension, and non-suppressed renin: 3-78 nmol/day
Renin, plasma	<u>Ages 0 to <3 years:</u> Reference interval in healthy children with normal salt intake: 7.7-171.5 mIU/L <u>Ages 3 to <18 years</u> Reference interval in healthy children and adolescents with normal salt intake: 9.4-93.0 mIU/L
ARR Panel	ARR will not calculate. Insufficient clinical evidence to support the use of the Aldosterone to Renin Ratio in pediatric patients.