

<b>DATE:</b>	4 December 2023
<b>TO:</b>	North, Edmonton, and Central Zones (sites that refer to University of Alberta Hospital in Edmonton): All Physicians, Nurses, and Laboratory Staff
<b>FROM:</b>	Clinical Biochemistry, Alberta Precision Laboratories (APL)
<b>RE:</b>	<b>Temporary referral of 17-Hydroxyprogesterone and Androstenedione testing to Calgary</b>

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### Key Message

- **Effective immediately**, 17-Hydroxyprogesterone (17OHP) and Androstenedione serum testing at the University of Alberta Hospital (UAH) Special Chemistry Laboratory will be temporarily sent out to the Diagnostic and Scientific Centre (DSC) Immunochemistry Laboratory in Calgary.

### Background

- The instrument used for 17OHP and androstenedione has reached end of life and is now inoperable.
- Temporary rerouting of specimens to Calgary will provide service continuity while APL works toward implementing a new instrument.
- The DSC assay for 17OHP employs liquid chromatography mass spectrometry (LCMS) while Androstenedione is performed by chemiluminescent immunoassay on the Siemens Immulite.

### How this will impact you

- The Calgary LCMS and Siemens Immulite methods differs from the UAH radioimmunoassay method, therefore, results are not interchangeable and are reported with different reference intervals and/or comments (Appendix Table 1 and 2).
- Testing at DSC is performed weekly in batches.
- Turnaround time (TAT) from sample collection to reporting for routine orders will be 1-2 weeks.
- TAT for STAT 17OHP orders will be delayed due to routing to Calgary.
- Tube type requirement for 17OHP will change from gold top serum separator tubes (SST) to red top serum, while Androstenedione tube type will remain as SST.

### Action Required

- Rebaselining is recommended for 17OHP and Androstenedione in patients that require serial measurements due to lack of results interchangeability and use of different reference intervals between methods (Appendix Table 1 and 2).
- Expected TAT times will be 1-2 weeks. STAT 17OHP requests should be discussed with the Clinical Biochemist prior to sending a specimen due to delayed TAT.
- Tube type for 17OHP will change to red top serum.
- Reports will continue to be available in Connect Care and Netcare.

### Questions/Concerns

- Dr. Josh Raizman, Clinical Biochemist, APL, [josh.raizman@aplabs.ca](mailto:josh.raizman@aplabs.ca), 780-718-2402
- Dr. Dennis Orton, Clinical Biochemist, APL, [dennis.orton@aplabs.ca](mailto:dennis.orton@aplabs.ca), 403-770-3219



**Approved by**

- Dr. Kareena Schnabl, Section Chief, Clinical Biochemistry, APL
- Dr. Allison Venner, Associate Section Chief, Clinical Biochemistry, APL
- Dr. Michael Mengel, Medical Director, North Sector, APL

**Appendix**

Table 1. 17OHP reference intervals reported from the LCMS method in Calgary

Gender	Age		nmol/L
Female and Male	Less than 15 days		Increased in premature infants. After 3 days of age, greater than 50 requires immediate review by an Endocrinologist.
	15 days to 1 year		Less than 3.4
	1 year to 8 years		Less than 1.0
Female	8 years to 18 years	Prepubertal	Less than 1.0
		Follicular	Less than 2.4
		Luteal	Less than 8.6
	18 years or greater	Follicular	Less than 2.4
		Luteal	Less than 8.6
		Post-Menopausal	Less than 1.5
	Unknown	Prepubertal	Less than 1.0
		Follicular	Less than 2.4
		Luteal	Less than 8.6
		Post-Menopausal	Less than 1.5
Male	8 years to 18 years	Prepubertal	Less than 1.0
		Adult	Less than 6.0
	18 years or greater	Less than 6.0	
	Unknown	Prepubertal	Less than 1.0
		Adult	Less than 6.0



Table 2. Androstenedione reference intervals reported for the Siemens Immulite method in Calgary

Age	Gender	nmol/L
16 years and greater	Male	2.1-10.8
	Female	1.0-11.5

Note: no reference intervals are available for pediatric ages.

*Effective September 1, 2023, APL has become the sole provider of all public lab services in Alberta. As a result, community lab services formally provided by DynaLIFE Medical Labs will become the responsibility of Alberta Precision Labs (APL). This change impacts all zones.*