

DATE:	22 July 2024
TO:	North Zone: Grande Prairie Regional Health Center (GPRHC) All Healthcare Providers
FROM:	Clinical Biochemistry, Alberta Precision Laboratories (APL)
RE:	Referral of Fertility Tests (Luteinizing Hormone (LH), Follicle Stimulating Hormone (FSH), Prolactin, and Progesterone) to Edmonton Base Lab

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Key Message

- Effective 22July2024, fertility tests (*LH, FSH, Prolactin, and Progesterone*) currently performed at the Grande Prairie Regional Health Center Laboratory will be referred to the Edmonton Base Laboratory.

Why this is important

- This cost-effective change supports improved workflow in the GPRHC laboratory.

Background

- A provincial Regional Hospital Test Menu Standardization working group was formed to address test menu gaps and find efficiencies.
- Since fertility testing is a low volume test and has been determined by Obstetrics/Gynecology to not be required urgently, it will be referred out to the Edmonton Base Lab.

How this will impact you

- There will be no changes to test orders in Connect Care
- The minimum collection volume will be increased from 0.5 mL to 1.0 mL.
- There are differences in methods used for testing between Edmonton Base Lab and GPRHC lab:
 - Age-stratified reference intervals will change (see **Appendix I**).
 - Dehydroepiandrosterone (DHEA) supplementation in individuals may result in falsely elevated *Progesterone* levels.
- Anticipated turnaround time is 24-72 hours (previously within 24 hours)

Action Required

- Be aware of minimum collection volume, reference interval, and turnaround time changes to *LH, FSH, Prolactin, and Progesterone* for tests ordered from GPRHC.
- Be aware that DHEA supplementation may result in falsely elevated *Progesterone* levels.

Questions/Concerns

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Approved by

- Kareena Schnabl, Section Chief, Clinical Biochemistry, North Sector APL
- Matt Estey, Medical Lead, Clinical Biochemistry, Edmonton Base Lab
- Karim Khetani, Site Chief, Grande Prairie Regional Hospital
- Michael Mengel, Medical Director, North Sector, APL

Appendix I

Prolactin Reference Interval (RI)

GPRHC			Edmonton Base Lab		
Age	Sex	RI	Age	Sex	RI
Any age	F	4.0-25 ug/L	1 month and up	F	<25 ug/L
Any age	M	4.0-15.0 ug/L	1 month and up	M	<21 ug/L

Luteinizing Hormone Reference Interval

GPRHC			Edmonton Base Lab		
Age	Sex	RI	Age	Sex	RI
0 to ≤11 years	F	<7.0 IU/L	0 to < 10 years	F	<10 IU/L
≥11 years	F	Clinical correlation with puberty status suggested	≥10 years	F	Follicular/Luteal: <15.0 IU/L Midcycle: 30.0-100.0 IU/L Post Menopausal: 18.0-65.0 IU/L
0 to ≤11 years	M	<7.0 IU/L	0 to < 10 years	M	<10.0 IU/L
11 to 70 years	M	1.0 - 9.0 IU/L	≥10 years	M	<12.0 IU/L
≥70 years	M	3.0 - 35.0 IU/L			

Follicle Stimulating Hormone Reference Interval

GPRHC			Edmonton Base Lab		
Age	Sex	RI	Age	Sex	RI
0 to ≤2 years	F	<8.0 IU/L	0 to <10 years	F	<6.0 IU/L
2 to ≤6 years	F	<5.0 IU/L			
6 to ≤11 years	F	<4.0 IU/L			
≥11 years	F	Clinical correlation with puberty status suggested	≥10 years	F	Follicular/Luteal: <7.0 IU/L Midcycle: 4.0-15.0 IU/L Post Menopausal: 16.0-80.0 IU/L
0 to ≤11 years	M	<3.0 IU/L	Any age	M	<7.0 IU/L
11 to ≤13 years	M	<9.0 IU/L			
≥13 years	M	1.0 -18.0 IU/L			



Progesterone Reference Interval

GPRHC			Edmonton Base Lab		
Age	Sex	RI	Age	Sex	RI
0 to ≤12 years	F	<0.6 nmol/L	0 to ≤14 years	F	<1.4 nmol/L
≥12 years	F	Clinical correlation with puberty status suggested	≥14 years	F	Follicular/Luteal: <5.0 nmol/L
					Luteal: 15.0-90.0 nmol/L
					Post Menopausal: <3.0 nmol/L
Any age	M	<0.6 nmol/L	Any age	M	<3.0 nmol/L