Chemistry Laboratory Reference Range Changes

Beginning **October 12, 2021** and continuing through **October 26, 2021,** BayCare Laboratories will implement new **Abbott Alinity Instrumentation** in the Chemistry Laboratories.

The effective dates for facilities are as follows:

- **October 12, 2021: Mease Countryside Hospital, Mease Dunedin Hospital, Morton Plant Hospital, Bardmoor Emergency Center**
- **October 19, 2021: South Florida Baptist, St. Joseph's Hospital, St. Joseph's North, St. Joseph's South**
- **October 26, 2021: Bartow Regional Medical Center, North Bay Hospital, St. Anthony's Hospital, Winter Haven Hospital**

The following orders have significantly changed reference ranges:

Analyte	Previous Reference Range	New Reference Range	Units of Measure
ATG (Anti-Thyroglobulin	0 – 60	0 – 4.11	U/mL
Anti-TPO (Anti Thyroid Peroxidase)	0 – 28	0 – 5.61	U/mL
Lipase	73 – 393	≤60	U/L

Other reference ranges changes:

Analyte	Previous Reference Range	New Reference Range	Units of Measure
ALPHA-FETOPROTEIN	0.0 – 8.0	0.9 – 8.8	ng/mL
ALKALINE PHOSPHATASE	**FEMALE:** Age: 0 - <15 days: 82 - 249 15 days to <1 years: 122 - 473 1 to <10 years: 142 - 336 10 to <13 years: 128 - 420 13 to <15 years: 56 - 255 15 to <17 years: 49 - 116 17 to 19 years: 43 - 86 >/= 19 years: 45 - 117 **MALE:** 0 to <15 days: 82 - 249 15 days to <1 years: 122 - 473 1 to <10 years: 142 - 336 10 to <13 years: 128 - 420 13 to <15 years: 115 - 471 15 to <17 years: 81 - 333 17 to <19 years: 53 - 149 >/= 19 years: 45 - 117	**FEMALE:** Age: 0 - <15 days: 90 - 273 15 days to <1 years: 134 - 518 1 to <10 years: 156 - 369 10 to <13 years: 141 - 460 13 to <15 years: 62 - 280 15 to <17 years: 54 - 128 17 to 19 years: 48 - 95 >/= 19 years: 40 - 150 **MALE:** 0 to <15 days: 90 - 273 15 days to <1 years: 134 - 518 1 to <10 years: 1 56 - 369 10 to <13 years: 141 - 460 13 to <15 years: 127 - 517 15 to <17 years: 89 - 365 17 to <19 years: 59 - 164 >/= 19 years: 40 -150	U/L
ALT	12 – 78	0 – 55	U/L
AMMONIA	11 – 32	18 – 72	µmol/L
AMYLASE	25 – 115	25 – 125	U/L
ASO	51 – 408	**0 – 5 Years:** 0 – 100 **>5 Years:** 166 – 250	IntUnit/mL
AST	7 – 37	5 – 34	U/L
BILIRUBIN, DIRECT	0.0 – 0.2	0.0 – 0.5	mg/dL
CA 15-3	1.0 – 35.0	0.0 – 31.3	U/mL
CORTISOL	**7am - 9am:** 5.3 - 22.5 **3pm - 5pm:** 3.4 - 16.8	**Before 10 a.m.:** 3.7 - 19.4 **After 5 p.m.:** 2.9 - 17.3	µg/dL

Analyte	Previous Reference Range	New Reference Range	Units of Measure
CREATINE KINASE (CK)	**Male:** 39 - 308 **Female:** 26 - 192	**Male:** 30 - 200 **Female:** 29 - 168	U/L
CRP	<0.30	≤0.50	mg/dL
ESTRADIOL	**Normal Menstruating Females:** Ovulating, Follicular: 21 - 251 Ovulating, MidCycle: 38 - 649 Ovulating, Luteal: 21 - 312 **Adult Females:** Untreated Postmenopausal: <28 Treated Postmenopausal: <144 **Males**: 11 - 44	**Normal Menstruating Females:** Follicular Phase: 21 - 251 Mid-Cycle Phase; 38 - 649 Luteal Phase: 21 - 312 Postmenopausal Females not on HRT: <10 - 28 Postmenopausal Females on HRT: <10 - 144 **Males**: 11 - 44	pg/mL
FERRITIN	8 – 388	**Males**: 21.8 - 274.7 **Females**: 4.6 - 204.0	ng/mL
FOLATE	3.1 – 17.5	7.0 – 31.4	ng/mL
FSH	**Females:** Follicular phase: 2.3 - 12.6 Peak: 5.2 - 17.5 Luteal phase: 1.7 - 9.5 Post menopausal Treated: 5.9 - 72.8 Post menopausal Untreated: 12.7 - 132.2 **Males**: 0.7 - 10.8	**Normally Menstruating Females** Follicular Phase: 3.0 - 8.1 Mid-Cycle Peak: 2.6 - 16.7 Luteal Phase: 1.4 - 5.5 Post-Menopausal Females: 26.7 - 133.4 **Males**: 1.0 - 12.0	mIU/mL
GGT	5 - 85	**Male**: 12 - 64 **Female**: 9- 36	U/L
HOMOCYSTEINE	3.2 - 10.7	**Male**: 0 - 16.2 **Female**: 0 -13.6	µmol/L
PHOSPHORUS, SERUM	2.5 - 4.9	2.3 - 4.7	mg/dL

Analyte	Previous Reference Range	New Reference Range	Units of Measure
MYOGLOBIN	**Female:** 13 - 71 **Male:** 16 - 116	**Female:** 0 - 154.9 **Male:** 0 - 106.0	ng/mL
PROGESTERONE	**Normal Menstruating Females:** Follicular phase: 0.210 - 1.70 Luteal phase: 2.25 - 24.2 Mid-luteal: 8.76 - 21.6 Post menopausal: <0.200 - 0.901 **Pregnant Females:** First Trimester: 11.4 - 41.0 Second Trimester: 13.8 - 156 Third Trimester: 51.4 - >200 **Males:** <0.200 - 1.97	**Normal Menstruating Females:** Follicular Phase : < 0.1 - 0.3 Luteal Phase: 1.2 - 15.9 Postmenopausal Females: < 0.1 - 0.2 **Pregnant Females:** First Trimester: 2.8 - 147.3 Second Trimester: 22.5 - 95.3 Third Trimester: 27.9 - 242.5 **Males:** < 0.1 - 0.2	ng/mL
PROLACTIN	**Females:** Non-pregnant: 2.2 - 30.3 Pregnant: 8.1 - 347.6 Post-menopausal: 0.7 - 31.5 **Males:** 2.5 - 17.4	**Females:** 5.18 - 26.53 **Males:** 3.46 - 19.40	ng/mL
RHEUMATOID FACTOR	<15	<30	U/mL
VITAMIN B12	193 – 986	213 – 816	pg/mL
Please note the C3 and C4 Complement now have sex and age specific ranges.			
C3 COMPLEMENT	90 – 180	**1 to 14 years:** (Male 80- 170) (Female 82 -173) **>14 to 80 years:** (Male 82 - 185) (Female 83 - 193)	mg/dL
C4 COMPLEMENT	10 – 40	**1 to 14 years:** (Male 14 - 44) (Female 13 -46) **>14 to 80 years:** (Male 15 - 53) (Female 15 - 57)	mg/dL

Troponin Instrument and Reference Range Changes

Beginning **October 12, 2021** and continuing through **October 26, 2021,** BayCare Laboratories will implement new **Abbott Alinity Instrumentation** in the Chemistry Laboratories.

The effective dates for facilities are as follows:

- **October 12, 2021: MCH, MDH, MPH, Bardmoor EC**
- **October 19, 2021: SFB, SJH, SJN, SJS**
- **October 26, 2021: BRMC, NBH, SAH, WHH**

As a result of the change of vendor from Siemens (current reference range 0-0.045 ng/mL) to Abbott, there are **new reference ranges for Troponin-I** for the hospitals below:

Hospital Impacted	New Reference Range
St. Joseph's Main Hospital St. Joseph's South Hospital Morton Plant Hospital Mease Countryside Hospital St. Anthony's Hospital Morton Plant-North Bay Hospital	0 – 0.028 ng/mL (Cutoff for Critical value is 1.000 ng/mL) Performed on the Abbott Architect Analyzer.
St. Joseph's North Hospital South Florida Baptist Hospital Mease Dunedin Hospital Bartow Regional Medical Center Bardmoor Emergency Department	0 – 0.065 ng/mL (Cutoff for Critical value is 1.000 ng/mL) Performed on the Abbott iSTAT Analyzer.

Notes:

- No changes to the reference range of Troponin-T performed at Winter Haven Hospital Laboratory
- No changes to the reference range of POC Troponin performed in ED STAT Laboratories