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Laboratory Bulletin

Serum Creatinine – Method and Reference Range change for Pediatrics

Effective Date: February 25, 2020

Effective February 25, 2020, serum creatinine for all pediatric patients (< 19 yrs) will be measured using an enzymatic method, however we will continue to use the Jaffe method for individuals 19 years and older.

The enzymatic method is less prone to interferences and is more precise and accurate at the low creatinine concentrations usually found in children. Because of this method change, reference ranges for pediatrics at all Beaumont Laboratory sites will change to those shown below. In general, an enzymatic creatinine result will be slightly lower than if the sample was measured by the Jaffe method.

All pediatric creatinine results will be accompanied by the statement "tested by enzymatic creatinine".

NEW RANGES**

Age	FEMALE New range (mg/dL)	MALE New range (mg/dL)
0 – 14 days	0.32 – 0.92	0.32 – 0.92
15 days to < 2 yrs	0.10 – 0.36	0.10 – 0.36
2 to < 5 yrs	0.20 – 0.43	0.20 – 0.43
5 to < 12 yrs	0.31 – 0.61	0.31 – 0.61
12 to < 15 yrs	0.45 – 0.81	0.45 – 0.81
15 to < 19 yrs	0.49 – 0.84	0.62 – 1.08

OLD RANGES**

Age	FEMALE Old range (mg/dL)	MALE Old range (mg/dL)
0 – 14 days	0.42 – 1.05	0.42 – 1.05
15 days to < 1 yr	0.31 – 0.53	0.31 – 0.53
1 to < 4 yrs	0.39 – 0.55	0.39 – 0.55
4 to < 7 yrs	0.44 – 0.65	0.44 – 0.65
7 to < 12 yrs	0.52 – 0.69	0.52 – 0.69
12 to < 15 yrs	0.57 – 0.80	0.57 – 0.80
15 to <17 yrs	0.59 – 0.86	0.65 – 1.04
17 to < 19 yrs	0.60 – 0.88	0.69 – 1.10

** Both new and old ranges were taken from a large Canadian study (CALIPER study) that established reference ranges in normal children. Ranges were determined using Abbott Architect analyzers – these are used at all Beaumont Lab sites.

NOTE: Reference ranges for point of care devices have also been updated.

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