Additional File 4: Definition of vitamin D related adverse events monitored in real-time through lab values from the clinical laboratory, and safety procedures for elevated lab values in the VITdAL-PICU Pilot Study

Adverse Event	Study Thresholds	Definition	Safety Procedures
Hypercalcemia	Ionized calcium level: >1.40 mmol/L >1.45 mmol/L for children <8 weeks of age	Persistent hypercalcemia for >24 hours in absence of calcium administration	Endocrinology consult, managed clinically as determined by Endocrinology
Hypercalciuria (calcium:creatinine ratio)	Age-based thresholds: <1 2.2 mol/mol 1-2 1.5 mol/mol 2-3 1.4 mol/mol 3-5 1.1 mol/mol 5-7 0.8 mol/mol 7-17 0.7 mol/mol	Hypercalciuria, as determined by a calcium:creatinine ratio above the study threshold in two sequential urine samples (excluding enrolment sample).	Nephrology consult, case reviewed to determine need for repeat urine sample, abdominal ultrasound and/or clinical management by Nephrology
Hypervitaminosis D	Plasma 25(OH)D concentration >200 nmol/L	Plasma 25(OH)D concentration >200 nmol/L in Day 7 sample	Endocrinology consult, managed clinically as determined by Endocrinology

From: McNally D, Amrein K, O'Hearn K, Fergusson D, Geier P, Henderson M, Khamessan A, Lawson ML, McIntyre L, Redpath S, Weiler HA, Menon K; Canadian Critical Care Trials Group. Study protocol for a phase II dose evaluation randomized controlled trial of cholecalciferol in critically ill children with vitamin D deficiency (VITdAL-PICU study). Pilot Feasibility Stud. 2017 Dec 8;3:70. doi: 10.1186/s40814-017-0214-z. PMID: 29234503; PMCID: PMC5721544.