

A critical result is defined as a result which could be life threatening. Critical results are phoned to the requesting doctor/requestor as soon as they become available.

- If the requestor cannot be contacted, an attempt is made to contact other doctors at the same practice to notify them of the result.
- For hospital based requests, the relevant registrar is phoned.
- If Awanui Labs' staff are unable to make contact a Awanui Labs pathologist is alerted.
- Actions taken depend on the patient's history.
- If clinically indicated the pathologist contacts the patient.
- If unable to contact the patient, the ambulance service or police will be contacted.
- All actions taken by staff are recorded in patient record tracking notes.

HAEMATOLOGY CRITICAL RESULTS

TEST	LOW	HIGH	ACTION
	PANIC IN ULTRA	PANIC IN ULTRA	
Haemoglobin	<70	>200	Note: large drop in Hb must be phoned. – close to normal previous to below 80
	<60**	-	**Microcytic anaemia
Neutrophils	<0.5	>20	
Platelets	<30	>1500	
Pancytopenia	If unexplained		Check specimen for clots and follow above protocol
INR	>5.0	-	Phoned by call centre
Fibrinogen	≤1.0	-	Phoned by Haem coag staff and refer to Haematologist
Blood Film			<ul style="list-style-type: none"> • Malaria parasite • New acute leukaemia • Acute haemolysis inc MAHA, RBC fragmentation • Intracellular bacteria

Reference Panic limits based on NorthQAG guidelines

BIOCHEMISTRY CRITICAL RESULTS

DEFINITIONS

PHONE DAY COLUMNS	Applies Monday to Friday 9am – 4pm. Outside these hours record on Morning Phone Log and phone the next day.
PHONE 24/7 COLUMNS	Applies Monday to Sunday ALL HOURS
KNOWN CHRONIC KIDNEY DISEASE PATIENT NOTE	Indicators include (but are not limited to) referrer from renal, nephrology or dialysis service. Clinical details on form suggest renal disease. Previously high creatinine results. Check TestSafe for any recent elevation with any critical test.

PHONING

Before phoning always check Patient Tracking for possible instructions. If phoning and emailing a critical result, always report the added tests. If phoning is left for the next day phone BEFORE 10am.

CRITICAL RESULTS and CONDITIONS (0715 – 10pm)

TEST	When to phone				CONDITIONS	ACTIONS
	24/7		Day			
	LOW	HIGH	LOW	HIGH		
Adjusted CALCIUM	1.75	3.2			Change of >0.3 within last 30 days	PHONE REFER to Paths weekday
		Δ0.3				
ALT/AST		45			Patient is pregnant	PHONE - first time only
		1000		1000	First time only Paracetamol overdose	PHONE
CARBAMAZEPINE				75		PHONE
CK		4999		1999		ADD CRE and K at 4999 PHONE >4999 if not previously known up to 11pm first time only. After 11pm, leave for the next day to phone. EMAIL if result 1999 – 4999, (first time only).

CRITICAL RESULTS and CONDITIONS						
TEST	When to phone				CONDITIONS	ACTIONS
	24/7		Day			
	LOW	HIGH	LOW	HIGH		
CORTISOL			50		Path approval First time phone if test done early morning. Do not phone if on steroids.	Check and correct registration (if DEX) REFER to paths during the day if not sure for COR to be upgraded. Phoning is not required for requests from Oncology clinic or patients on hydrocortisone, dexamethasone, prednisone (Testsafe)
CREATININE (DO NOT Phone if KNOWN CHRONIC KIDNEY Disease)		>200			< 17 years old	Phone (comes to validation not J list)
		>350			Not for CKD	Phone unless CKD
		Δ50% within a week			Level <200 and after 9pm EMAIL Not for CKD patients on dialysis (CAPD or HD)	PHONE all delta check failures in validation. Exception when: <ul style="list-style-type: none"> Level <200 AND after 9pm - Email immediately AND PHONE next morning Email only if creatinine in normal range and GFR ≥60. Phone if GFR <60 <ul style="list-style-type: none"> Phone creatinine increase if from
CRP		>100			Patient is pregnant or <10 years old	PHONE
		>200			If >200 (first time) or an "increase of 100 and >200"	PHONE but after 11pm email and leave for the next day.
		Δ100 and <200			Within the last 7 days	EMAIL

CRITICAL RESULTS and CONDITIONS						
TEST	When to phone				CONDITIONS	ACTIONS
	24/7		Day			
	LOW	HIGH	LOW	HIGH		
DIGOXIN		2.5			2.5 – 3.0 (K, MG and Ca results taken in to consideration)	ADD K, MG and CA unless specimen taken within 8 hrs of dose. PHONE Dig 2.5 – 3.0, if K or Ca or Mg are abnormal
		>3.0				PHONE
FT4			<5	>50	TSH is taken into account before being actioned.	Email only: FT4 <5 and TSH >50 or FT4 >50 and TSH <0.01 If no email number, no action required. DO NOT EMAIL if there is an Attention Validator message.
GLUCOSE	≤2.5					If UNS refer to BIO-CON-F009 . Check date on specimen PHONE if spun within 3 hours
		≥15			If glucose >15 and age < 17yrs and not previously diagnosed as a diabetic	Phone if not known diabetic
		≥25			HCO3 taken into consideration	Add HCO, Crea, K • PHONE if HCO3 is less than <15 • Email if HCO3 is greater than >15
		>35				Add HCO, Crea and K PHONE the glucose without waiting for other results.
HCO ₃	15	40				PHONE first time only.
HBA1C		>120				Ensure it is first time, then add on glucose and follow the glucose criteria. If known diabetic patient, or commercial request, email is sufficient, do not add glucose. If no email, no action required.

CRITICAL RESULTS and CONDITIONS						
TEST	When to phone				CONDITIONS	ACTIONS
	24/7		Day			
	LOW	HIGH	LOW	HIGH		
IRON		70			Age <17 or >17 years	PHONE <17 years EMAIL >17 years
LIPASE		>250			>250 first time (in 7	PHONE
LITHIUM		1.99		1.5	eGFR	ADD CRE at 1.5 unless specimen taken within 8 hrs of dose. PHONE ≥ 1.5 24/7 if eGFR is < 65 PHONE ≥ 1.99 regardless of eGFR result
MAGNESIUM	0.3					ADD K and CA PHONE (first time only)
PHENYTOIN				100		PHONE
PHOSPHATE			0.3			PHONE
POTASSIUM	<2.5	≥6.5			CKD ≥ 6.5 Pre dialysis ≥7.0 (requestor: Diaverum Toto Ora Dialysis Clinic)	Note-Criteria of >7.0 applies to pre-dialysis clinic only, NOT home dialysis, peritoneal dialysis, haemodialysis where >6.5 applies
		Δ0.3				PHONE if previous K <2.5 or >6.5 and has deteriorated by more than 0.3.
PROTEIN/CREATININE RATIO		30			Gestation >13 weeks	Check form PHONE if >13 weeks gestation or if not stated
SODIUM	125	155				PHONE
		Δ3.0				PHONE if previous sodium <125 or >155 has deteriorated by more than 3

CRITICAL RESULTS and CONDITIONS						
TEST	When to phone				CONDITIONS	ACTIONS
	24/7		Day			
	LOW	HIGH	LOW	HIGH		
TOTAL BILIRUBIN		>150			1 day old	PHONE
		>200			2 day old	
		>250			3 day old	
		>300			≥4 day old	
Direct Bilirubin (NBI)				>25	Age <1 year old and TBIL >60	PHONE Note: if after 530 pm, DBIL can be phoned the following day.
Troponin T		≥15				<p>PHONE first time raised. PHONE when clinical details suggest acute situation, for example, chest pain and shortness of breath. PHONE when the requestor wants us to phone the result regardless as per the registration form.</p> <p>If history of cardiomyopathy, that is being monitored, do not phone.</p> <p>If in doubt always, contact the pathologist.</p> <p><u>NOTE: Check Testsafe for recent elevation.</u></p>
TRIGLYCERIDE				50		First time phone only. Second time, email and if no email, no action required.
UREA				40	Not CKD	DO NOT PHONE IF CHRONIC KIDNEY DISEASE PATIENT
VALPROATE				800		EMAIL
				999		PHONE