

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, an 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 PANIC IN ULTRA	HIGH PANIC IN ULTRA	ACTION
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"> <li>• Malaria parasite</li> <li>• New acute leukaemia</li> <li>• Acute haemolysis inc MAHA, RBC fragmentation</li> <li>• Intracellular bacteria</li> </ul>

**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	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.  Please note that THIS DOES <b><u>NOT</u></b> INCLUDE RENAL TRANSPLANT PATIENTS
NOTE	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				PHONE REFER to Paths weekday		
		Δ0.3			Change of >0.3 within last 30 days			
ALT/AST		45			Patient is pregnant	PHONE - first time only		
		1000		1000	First time only <b>Paracetamol overdose</b>	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 <u>First time phone</u> 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 pharmacy)		
CREATININE (DO NOT Phone if KNOWN CHRONIC KIDNEY Disease)		>200			< 17 years old	Phone (comes to validation not T list)		
		>350			Not for CKD	Phone unless CKD		
		Δ50% within a week			Level <200 and after 9pm EMAIL Not for <u>CKD patients on dialysis (CAPD or HD)</u>	PHONE all delta check failures in validation.  <b>Exception when:</b> <ul style="list-style-type: none"><li>• Level &lt;200 Email only, no need to phone<ul style="list-style-type: none"><li>• Email only if creatinine in normal range and GFR ≥60. Phone if GFR &lt;60</li></ul></li><li>• <u>Phone creatinine increase if from renal transplant clinic.</u></li></ul>		
		>100			Patient is pregnant or <10 years old	PHONE		
CRP		>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 into 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.	<b>Do not phone. Email only:</b> FT4 <5 and TSH >50 or FT4 >50 and TSH <0.01 If no email, no action required. DO NOT EMAIL if there is an Attention Validator message.		
	<u>&lt;2.5</u>					If UNS refer to <a href="#">BIO-CON-F009</a> . Check date on specimen PHONE if spun within 3 hours		
GLUCOSE		≥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, Creatinine, K <ul style="list-style-type: none"> <li>PHONE if HCO3 is less than &lt;15</li> <li>Email if HCO3 is greater than &gt;15</li> </ul>		
		>35				Add HCO, Creatinine and K PHONE the glucose without waiting for other results.		
HCO <sub>3</sub>	15	40				PHONE first time only.		
HBA1C				>120		If known diabetic patient or commercial request, email is sufficient, do not add glucose. If no email, no action required. If first time >120 for age < 20, then add on glucose and follow the glucose criteria. NTH results first time >120 for age < 20, phone only, no need to follow the glucose criteria.		

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 days) or change of 100 (in 7 days)	PHONE				
LITHIUM		1.99		1.5	eGFR	<b>ADD CRE at 1.5 unless specimen taken within 8 hrs of dose.</b> PHONE $\geq$ 1.5 24/7 if eGFR is < 65 PHONE $\geq$ 1.99 regardless of eGFR result				
MAGNESIUM	0.3					<b>ADD K and CA</b> PHONE (first time only)				
PHENYTOIN				100		PHONE				
PHOSPHATE			0.3			PHONE first time only. If known low, Email, no need to phone.				
POTASSIUM	<2.5	$\geq$ 6.5			CKD $\geq$ 6.5 Pre dialysis $\geq$ 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				
		$\Delta$ 0.3				PHONE if previous K <2.5 or $>6.5$ and has deteriorated by more than 0.3.				
PROTEIN/CREATININE RATIO		30			Gestation $>26$ weeks	<b>1)</b> Phone 1 <sup>st</sup> time if $>26$ weeks gestation or if not stated. <b>2)</b> NO need to phone if phoned recently. <b>3)</b> After 22:30 – Email and phone next morning.				
SODIUM	125	155				<b>PHONE</b> - Anything 120 or below should be phoned regardless				
		$\Delta$ 3.0				<b>PHONE if</b> - Sodium <125 or >155 deteriorated by more than 3 since last measurement				

CRITICAL RESULTS and CONDITIONS								
TEST	When to phone				CONDITIONS	ACTIONS		
	24/7		Day					
	LOW	HIGH	LOW	HIGH				
TOTAL BILIRUBIN		>150			1 day old	PHONE first time only		
		>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><b><u>NOTE: Check Testsafe for recent elevation.</u></b></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		