1.0 POLICY

All the critical imaging results are informed to the treating consultant/Care provider at the earliest on phone followed by written report

2.0 PURPOSE

2.1 To have a defined time frame for critical tests information to care providers
2.2 To have monitoring system for the same to addresses the deviances
2.3 To take preventive and corrective action against preventable and correctable measures

3.0 DEFINITION

Critical test: A test results beyond the normal variation with a high probability of a significant increase in morbidity and/or mortality in the foreseeable future and requires rapid communication of results for determination of intervention

Read Back: The individual accepting the critical test result must record and then read back the critical test result, in its entirety, to the reporter at the time the result is given

4.0 ABBREVIATIONS

4.1 RIS:-Radiology information system

5.0 SCOPE: Imaging Services, OP Services, IP services & Emergency Services

6.0 RESPONSIBILITY:-Radiologist and technicians & staff concerned of Imaging Services

7.0 DISTRIBUTION: Radiology department, IP services, OP Services & Emergency Services

8.0 PROCESS DETAILS:

8.1 DESCRIPTION OF THE PROCESS:

8.2 .1 Communication Tools:

Electronic: Radiology Information System (RIS) / HMIS

Manual: Including the manual processing, hand delivery or pick up to/by the testing area, patient care area or physician / nurse / ward staff.

Verbal: verbal report in person or by telephone / intercom / mobile phone

Order of Notification:

- Ordering/Treating Physician, Staff nurse on duty, Medical Officer/technician

Normal / Non Critical Test Results Reporting and Documentation

Cardiopulmonary Services

Echo

The assigned medical personnel complete the Echo Report Form which is saved in the departmental filing system with a copy being sent to the patient record. The images are saved in the department equipment

Radiology

Results are reported in the HMIS via RIS / Manual. Both the image(s) and report are archived, when applicable

Cardiopulmonary Services:

1. When a critical result is identified, the staff member performing the test will key the result into the HIS / LIS and contact the ordering physician or their assistant within 30minutes of test readiness. The results are recorded in the department register; documentation includes, notifying staff member, the person who received the report along with their credentials, the time the report was received and acknowledgement of a "read back".
2. If the ordering physician or their assistant does not respond within 30 minutes of test readiness, the technical staff shift supervisor is notified.
3. The shift supervisor will follow the order of notification

Echo:

1. When a significant abnormality is identified, the Sonographer contacts the ordering physician / assistant within 30 minutes via phone / intercom / pager.
2. If the ordering physician or their assistant does not respond within 30 minutes, the Sonographer will follow the order of notification.
3. The ECHO report form is completed and saved in the departmental filing system with a copy being sent to the patient record. Included in the report is the person receiving the report and the date/time it was received. The images are saved in the departmental equipment.

Radiology

1. When the radiologist identifies a critical test result, a verbal report is given to the ordering physician immediately in person or by phone.
2. If the ordering physician is not available, the radiologist immediately contacts their assistant and a verbal report is given in person / phone / intercom / mobile phone.
3. If their assistant could not be reached, the radiologist will immediately follow the order of notification.

4. The result is reported in the HIS via RIS and includes the name and credential of the receiver of the critical test result. The image(s) and the report are archived, when applicable.

System Failures

Cardiopulmonary

With any applicable communication system failure, the staff member will give an in person verbal report of the critical test to the ordering physician or their assistant. Documentation will continue in the register as previously described.

Echo

With any applicable communication system failure, the Sonographer will give an in person verbal report of the significant abnormalities to the ordering physician or their assistant. The Sonographer will document the name and credentials of the person receiving the report with the method of reporting and time of delivery.

Radiology

With any applicable communication system failure, the radiologist will give an in-person verbal report to the ordering physician or their assistant.

8.1 ACTIVITY AND RESPONSIBILITY (TABULAR FORMAT)

Critical Test Results Reporting and Documentation

Sr. no	Procedural	Responsibility
1.	Radiology Technicians shall be vigilant about the films which shows abnormality	**Radiology Technicians on duty**
2.	In case any abnormal film is noticed, it has to be immediately informed to the radiologist. In case radiologist is not available, order of notification given above shall be followed directly by technician	**Radiology Technicians on duty**
3.	Radiologist identifies and confirms critical test result when reported to him.	**Radiologist on duty**
4.	A verbal report is given to the ordering physician immediately in person or by phone	**Radiologist on duty**
5.	If the ordering physician is not available, the radiologist immediately contacts the other team member. Assistant / and a verbal report is given in person / phone and then the medical officer / registrar shall be responsible to inform the same to the concerned consultant.	**Radiologist on duty**
6.	If the assistant could not be reached, the radiologist will immediately follow the order of notification.	**Radiologist on duty**
7.	Any delay in intimation of critical result shall be recorded in compliance register with reason of the delay	**Radiologist on duty**

8. 2 Critical Results policy – Radiology &Imageology

CRITICAL TESTS – RADIOLOGY & IMAGING SERVICES:

Critical tests are defined as tests or procedures that must be conducted and reported quickly to determine the course of care. Critical tests require rapid processing, performance and communication of results – **even if the results are within normal limits**

LIST OF CRITICAL TESTS – RADIOLOGY & IMAGING SERVICES

1. X-RAY
    a. Chest Single View – Indication to rule out Pneumothorax
    b. Chest Single View – Indication to see correct ET tube placement
2. USG
    a. Pelvic Sonogram – Indication to rule out ectopic pregnancy
    b. Scrotum & contents sonogram – Indication to rule out torsion
3. CT SCAN
    a. Brain CT – Indication to rule out Embolic and or Hemorrhagic Stroke
    b. Chest CT with contrast – Indication to rule out pulmonary embolism

4. MRI SCAN

    a. Spine MRI – Indication to rule out cord compression

CRITICAL RESULTS - POLICY

Critical Results differ from critical tests as they are results that indicate a possible life threatening situation and require immediate communication according to the hospital policy.

These results may arise from a diagnostic procedure – whether the diagnostic procedure is carried out as a routine or emergency basis. Appropriate use of critical values improves patient outcome by ensuring that they are brought to **the immediate attention of the physician and/ or the patient care area responsible for the patient with in 30 mins**

RADIOLOGY DEPARTMENT - CRITICAL RESULTS -ultrasound		
PROCEDURE	**CRITICAL FINDINGS**	**RESPONSE**
ULTRASOUND	In case of RTA – Any solid organ lacerations / injury / Peritoneal free fluid	* Call
	Appendicitis	
	Pregnancy – Intrauterine Death (IUD), Ectopic and Ruptured ectopic	
	Ovarian Torsion	
	Scrotum – Torsion of Testis	
	Deep Vein Thrombosis / Arterial Critical Stenosis	
	Intestinal obstruction	
	Post Renal TX - absent Vascularity / large pesinepheric	
	Hydro Uretronephrosis with Acute Pain	

CT SCAN – CRITICAL RESULTS

CT /MRI	Brain Bleed / Skull Fracture	110* Call
	Acute Infarct with mass effect and midline shift	
	Injury to any organ	
	Injury to brain with contusion, midline shift, any space occupying lesions/tumors	
	Acute Stroke Cases / CSVT	
	Emphysematous pyelonephritis	
PLAIN RADIOGRAPHY	Fractures – Ribs, extremities, vertebra, skull, pelvis	110* Call
	Pneumothorox/pnemopesitoneum/Pneumo mediastinum	
	Massive pleural effusion,flialchest,Tube/wire displacement	
	Intestinal obstruction,Hollow viscous perforation	
	Air shadows in KUB region	
POST CONTRAST STUDIES	Extra vasation of contrast on cystogram/urethrogram on RGU/MCVG	110* Call
	Xlon-Visualisation of kidney on IVP	
* Call immediately to the referring Consultant, or the Duty Medical Officers or the Nurse-in-charge.		

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

1. Hyperacute infarct < 6 hours
2. Intracranial Hemorrhage (includes intraparenchymal hemorrhage SAH, IVH, SDH and EDH) and with significant mass effect
3. Foreign body in airway
4. Massive Pneumothorax / Hemothorax
5. Intra abdominal hemorrhage with or without significant organ injury
6. Vascular Injury/Occlusion
7. Significant pericardial fluid following trauma
8. Spinal mal-alignment / Fracture
9. Aortic Dissection / Pulmonary embolism
10. Injury to vital structures

USG SCAN – CRITICAL RESULTS

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

1. Ectopic pregnancy
2. Ovarian torsion
3. Torsion testes
4. Acute appendicitis
5. Acute Trauma – Free fluid in abdomen/ pleural cavity/ pericardium
6. Intussusceptions
7. Large liver abscess – impending rupture

X-RAY – CRITICAL RESULTS

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

1. Intussusceptions
2. Perforation
3. Leak of Contrast
4. Aspiration
5. Foreign body
6. Pneumothorax

COLOR DOPPLER – CRITICAL RESULTS

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

1. Acute DVT
2. Arterial Thrombosis
3. Torsion Testis
4. Transplant kidney – rejection vascular abnormality
5. Aneurysm – more than 4 cm

POST BIOPSY – CRITICAL RESULTS

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

Note: If the following findings are found during the examination/procedure – the findings have to be informed immediately to the referring Doctor over telephone for urgent management

1. Pneumothorax
2. Bleeding
3. Severe pain

CATHLB – CRITICAL RESULTS

IN CASE OF FOLLOWING FINDINGS WHICH INDICATE CRITICAL STATE THE REFERRING CONSULTANT TO BE INFORMED IMMEDIATELY

1.Triple Vessel disease

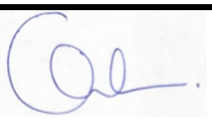
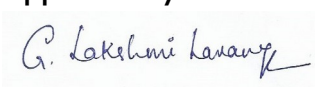
2. Major blocks

3. Left Main Coronary artery block

Note: In case of breakdown of any Imaging services, the patients are shifted to other diagnostic center as detailed in MOU with each center.

Document Revision History

DOCUMENT REVISION HISTORY		
Version	**Date of issue**	**Reason for Revision**
Original version - 1		
Revised version - 2		
Revised version - 3		
Revised version - 4		
Revised version - 5		

Prepared by: 	Verified By 	Approved by: 
Dr.Alekhya .R	**Dr. Gowtham Krishna**	**Mrs.G.Lakshmi Lavanya**
Radiologist	Medical director	**Chief executive Officer**