

Creatinine Guidelines (with values for eGFR)

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Creatinine Guidelines

	Creatinine	eGFR
Contrast	< or = 2.4	> or = 30
No Contrast	>2.4	<30

Creatinine Testing Guidelines for CT Patients

Purpose

The purpose of this document is to provide the CT Technologists a clear guideline for when creatinine testing is required. The following is intended to serve as a guideline for performing diagnostic studies that require contrast medium. Each case is unique and there will be times when the benefit of information gained from contrast administration will supersede the potential risk of reaction or renal toxicity. The following guidelines may not apply in these cases or in life-threatening emergencies. If contrast media administration is required for a life-threatening diagnosis, then it should not be withheld based on kidney function.

A current creatinine level must be available for all inpatients and for outpatients and ED patients who meet the listed criteria prior to administration of intravenous contrast (Who must have a creatinine level prior to IV contrast?). "Current" is defined as within one month for outpatients/ED patients and within one week for inpatients. Please also reference a complete list of the recommended indications for measurement of serum creatinine (Who must have a creatinine level prior to IV contrast?).

Patients with an elevated creatinine should receive intravenous contrast only if absolutely necessary. The above table provides a guideline for the use of contrast by type relative to the patients creatinine (mg/dL) or eGFR (%).

Scope

This SOP is for ED, outpatients, inpatients requiring contrast-enhanced Computed Tomography (CT) examinations.

Prerequisites

All inpatients require a current (within one week) creatinine level or estimated glomerular filtration rate (eGFR) prior to an IV contrast-enhanced CT.

Outpatients and ED patients being scheduled for a CT with IV contrast will not require a serum creatinine unless they meet one of the following criteria:

Personal history of renal disease, including:

- Known chronic kidney disease (CKD)
- Remote history of AKI
- Dialysis
- Kidney surgery
- Kidney transplant
- Kidney ablation
- Albuminuria

History of diabetes mellitus (optional)

Metformin or metformin-containing drug combinations

Responsibilities

A current creatinine level must be available for all inpatients and for outpatients and ED patients who meet recommended indications for measurement of serum creatinine prior to administration of intravenous contrast. "Current" is defined as within one month for outpatients/ED patients and within one week for inpatients. Please reference a complete list of the recommended indications for measurement of serum creatinine

Procedure

Verifying Creatinine Status

- Upon receiving an order for a CT exam requiring IV contrast, the CT technologist must verify appropriate creatinine level prior to administering contrast media.

Trauma Patients

- For an acutely traumatized patient for whom there is insufficient time to obtain a creatinine level, it is understood that the benefit of making an emergent diagnosis of a life-threatening injury outweighs the risk of contrast nephrotoxicity.

References

Reference: ACR Manual on Contrast Media, 2021

OUT OF DATE....Creatinine Orders for Patients Undergoing CT Examinations – Adult/Pediatric – Ambulatory/ED. Delegation Protocol Number 35. <https://uconnect.wisc.edu/clinical/cckm-tools/content/delegationpractice-protocols/ambulatory-delegation-protocols/name-97397-en.cckm>

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This page was last edited on 17 March 2022, at 16:13.