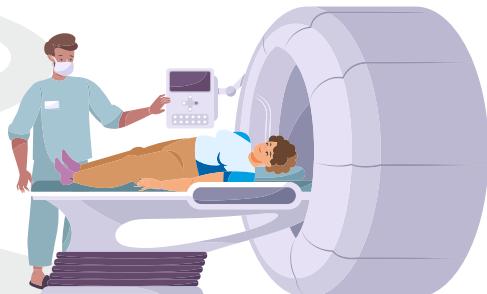




# Comprehensive Guide for Patient Screening to Mitigate Adverse Drug Reaction (ADR) Risks Associated with Iodinated Contrast Media (ICM)



Navigating to a Rich  
Patient Experience



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# A Comprehensive Guide for Patient Screening

Welcome to the all-encompassing manual on screening patients for CT contrast media administration. This booklet aims to assist you, the practitioner, in comprehending the screening process, ensuring patient safety and efficiently preparing patients for their CT scans. Your role is vital in delivering excellent care and achieving precise imaging outcomes.

## Why Patient Screening is important?

- Patient screening before CT contrast administration is essential to ensure patient safety and optimize diagnostic outcomes.
- It helps identify those at risk of allergic reactions, nephrotoxicity and adverse interactions with medications like metformin.
- Screening also considers renal function, hydration status and other medical conditions that could complicate contrast use.
- This proactive approach reduces the risk and enhances the efficacy of the imaging procedure.



# Evaluating Patient History to Assess Reaction Risk

- Understanding a patient's history of reactions to contrast media or severe allergies is crucial for their safety.
- Patients with previous adverse reactions are at higher risk for complications during the scan.
- Identifying these risks early allows for alternative strategies, ensuring a safe imaging process.
- For effective screening, the first thing to evaluate is the patient's medical history.



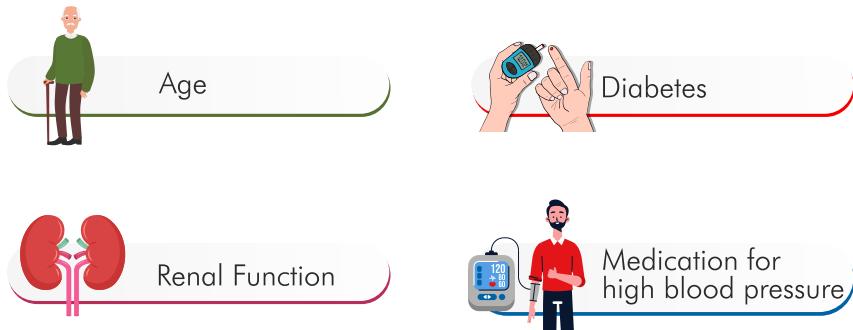
## Screening Questions



# Understanding Medical Risk Factors

Understanding the vulnerabilities and specific risk factors is very important for the safe performance of the study. By comprehending these medical factors, healthcare providers can tailor the imaging protocol to meet individual patient needs, implement appropriate preventive measures and ensure optimal safety throughout the imaging process.

## Important risk factors are



## Significance of Risk Factors

Diabetes, especially with renal impairment, predisposes patients to contrast-induced nephrotoxicity. Medications like angiotensin-converting enzyme inhibitors (ACE inhibitors), angiotensin II receptor blockers (ARBs) and diuretics can further affect renal function and electrolyte balance. IOCM can exacerbate these effects, increasing the risk of CIN or AKI, making it crucial to identify these risk factors.



## Understand the following from the Patients

- ➊ Is the age above 60?
- ➋ Is he/she on diabetic medication?
- ➌ Is he/she a renal patient?
- ➍ Has he/she undergone any kidney transplantation?



## After knowing the above, proceed to IV administration of contrast

- ➔ If the patient is below 60 years old and answers NO to questions 2-4, proceed with IV contrast.
- ➔ If the patient is above 60 years old or answers YES to any of these questions, assess renal function before proceeding with the administration of IV contrast.

Among the array of considerations, one particular aspect warrants careful attention - the use of metformin-containing medications. Metformin is prescribed for type 2 diabetes to reduce liver glucose production and enhance the body's sensitivity to insulin. In patients experiencing renal failure (whether acute or chronic), the clearance of metformin from the kidneys is reduced, increasing the risk of lactic acidosis.

Metformin itself does not increase the risk of contrast-induced acute kidney injury (CI-AKI). However, patients who experience AKI while using metformin may have an increased susceptibility to developing lactic acidosis.

The decision to conduct closely spaced contrast-enhanced studies is based on clinical judgment and varies depending on the patient's risk level. Patients at higher risk (such as those with Stage IV or Stage V chronic kidney disease, or those experiencing acute kidney injury) are approached with more caution compared to the general population.



Patients who do not show signs of acute kidney injury (AKI) and have an estimated glomerular filtration rate (eGFR) of  $30 \text{ mL/ min}/1.73\text{m}^2$  or higher do not need to discontinue metformin before or after receiving intravenous iodinated contrast media.

For patients taking metformin who experience acute kidney injury or severe chronic kidney disease, the medication should be paused at or before the procedure. It should be held off for 48 hours afterward and resumed only after confirming normal renal function through re-evaluation.

To mitigate the risk associated with Metformin, confirm whether the patient is using any Metformin-containing medication or not.

**Thank  
You**  
for reading

We appreciate your dedication to patient care and wish you continued success in enhancing the safety and quality of your imaging procedures



**Source:**

ACR. ACR Manual on Contrast Media. 2023.

Bailey CJ, et al. Metformin. 1996.

Van Berlo-van de Laar IRF, et al. Identifying patients with metformin associated lactic acidosis in the emergency department. 2020.

Davenport MS, et al. Use of Intravenous Iodinated Contrast Media in Patients with Kidney Disease: Consensus Statements from the American College of Radiology and the National Kidney Foundation. 2020.

# Vivhexol 350

## R<sup>x</sup> Iohexol Injection USP 350 mg I/mL

Non-ionic contrast medium in sterile aqueous solution, Solution for injection

