



*System Radiology Service Line*  
**NORTHERN WESTCHESTER HOSPITAL**

<b>POLICY/GUIDELINE TITLE:</b> Premedication for Contrast Allergy	<b>SYSTEM POLICY AND PROCEDURE MANUAL</b>
<b>POLICY #:</b> Rad.2.005	<b>CATEGORY SECTION:</b> Medication Management in Radiology
<b>System Approval Date:</b> 8/10/2021	<b>Effective Date:</b> 4/17/15
<b>Site Implementation Date:</b> 10/08/2021	<b>Last Reviewed/Approved:</b> 12/6/18
<b>Prepared by:</b> Radiology Service Line PICG Policy Subcommittee	<b>Notations:</b> N/A

**GENERAL STATEMENT OF PURPOSE**

Allergic-like reactions to contrast agents are uncommon but not rare events. Patients who have had a prior allergic-like reaction to intravenous contrast who are scheduled to receive the same contrast media should be premedicated. When the exact agent that produced the previous reaction is known, a different contrast agent of the same contrast media should be utilized when possible.

**POLICY**

It is the policy of the Imaging Service Line that all patients scheduled for procedures requiring the administration of intravenous contrast must be screened for a history of an allergic-like reaction to the same contrast media. If there is a history of a prior allergic-like reaction to the same contrast media, the patient must be premedicated with corticosteroids and possibly antihistamines before receiving the intravenous contrast. When the exact agent that produced the previous reaction is known, a different contrast agent of the same contrast media (e.g., one iodinated medium for another) will be utilized when possible.

Patients with a history of a severe allergic-like reaction to the same contrast media must be imaged in an inpatient facility with the appropriate (adult/pediatric) emergency code team available.

**SCOPE**

This policy applies to all Northwell Health employees, as well as medical staff, volunteers, students, trainees, physician office staff, contractors, trustees and other persons performing work for or at Northwell Health; faculty and students of the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell or the Hofstra Northwell School of Nursing and Physician Assistant Studies conducting research on behalf of the Zucker School of Medicine on or at any Northwell Health facility.

## **DEFINITIONS**

Contrast Media - Refers to the type of contrast utilized - gadolinium vs. iodinated contrast

### Severe Allergic Reactions:

- Diffuse edema or facial edema with dyspnea
- Diffuse erythema with hypotension
- Laryngeal edema with stridor and/or hypoxia
- Wheezing / bronchospasm, significant hypoxia
- Anaphylactic shock (hypotension and tachycardia)

### Moderate Allergic Reactions:

- Diffuse urticaria / pruritus
- Diffuse erythema, stable vital signs
- Facial edema without dyspnea
- Throat tightness or hoarseness without dyspnea
- Wheezing / bronchospasm, mild or no hypoxia

### Mild Allergic Reactions:

- Limited urticaria/pruritus
- Limited cutaneous edema
- Limited itchy/scratchy throat
- Nasal congestion
- Sneezing/conjunctivitis/rhinorrhea

## **PROCEDURE/GUIDELINES**

Refer to Attachments for recommendations on the administration of intravenous contrast.

## **REFERENCES to REGULATIONS and/or OTHER RELATED POLICIES**

N/A

## **CLINICAL REFERENCES /PROFESSIONAL SOCIETY GUIDELINES**

- American College of Radiology Manual on Contrast Media - (2021)  
[https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast\\_Media](https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast_Media)
- Management of hypersensitivity reactions to iodinated contrast media K. Brockow  
Allergy European Journal of Allergy and Clinical Immunology Volume 60, Issue 2, pages  
150-158 February 2005  
<http://onlinelibrary.wiley.com/doi/10.1111/j.1398-9995.2005.00745.x/full>

## **ATTACHMENTS**

Attachment A: Recommended Premedication Protocol for Adults and Children

Attachment B: Guidelines

## **FORMS**

VDPI02 - Iodinated Intravenous Contrast Information Sheet

VD059 - Gadolinium Intravenous Contrast Screening Form  
HS080 - Eovist and Other Group I & III Agents Form for Staff

<b><u>APPROVAL:</u></b>	
Northwell Health Policy Committee	7/29/2021
System PICG/Clinical Operations Committee	8/10/2021

Standardized Versioning History:

Approvals: \* =Northwell Health Policy Committee; \*\* = PICG/Clinical Operations Committee; ✖ = Provisional; ✦ = Expedited  
4/17/15

11/29/18\*; 12/6/18\*\*

### Recommended Premedication Protocol for Adults

Methylprednisolone sodium succinate 32 mg PO - Two doses administered 12 hours and 2 hours prior to contrast administration

Diphenhydramine 50 mg IV, IM or PO 1 hour may be added prior to contrast administration as well

**or**

Prednisone 50 mg PO - Three doses administered at 13 hours, 7 hours and 1 hour prior to contrast administration

Diphenhydramine 50 mg IV, IM or PO 1 hour prior to contrast administration

For inpatients and emergency department patients for whom a longer premedication protocol will adversely delay care decisions, and for outpatients who have not been premedicated and whose examination cannot be easily re-scheduled, the following premedication protocol can be utilized:

Methylprednisolone sodium succinate 40 mg IV or hydrocortisone sodium succinate 200 mg IV 5 hours prior to contrast administration

Diphenhydramine 50 mg IV 1 hour before contrast administration

In emergent or urgent situations which preclude the above full premedication protocols, the following protocol may be substituted:

Methylprednisolone sodium succinate 40 mg IV or hydrocortisone sodium succinate 200 mg IV as soon as the decision is made to do the study, and every 4 hours thereafter, until the procedure is completed

Diphenhydramine 50 mg IV 1 hour before contrast administration

Premedication regimen less than 4 to 5 hours of duration (oral or IV) have not been shown to be effective. However, this remains an option in emergent situations when the timing of imaging is critical and there are no alternatives.

### Recommended Premedication Protocol for Children (weight < 50kg)

Prednisone 0.7mg/kg (not to exceed 50mg) PO 13 hours, 7 hours and 1 hour prior to contrast administration

Diphenhydramine 1.25 mg/kg IV/PO (not to exceed 50mg) within 1 hour prior to contrast administration

In emergent or urgent situations which preclude the above full premedication protocols, the following protocol may be substituted:

Hydrocortisone 1mg/kg (not to exceed 200mg) IV 4 hours prior to contrast administration

Diphenhydramine 1.25 mg/kg IV/PO (not to exceed 50mg) within 1 hour prior to contrast administration.

Guidelines

Patients receiving intravenous contrast are to be given the departmental intravenous contrast information sheet pertaining to the type of contrast media they are scheduled to receive. A history of an allergic-like reaction to the same contrast media should be obtained. Find out what type of reaction the patient experienced. Sometimes patients confuse other symptoms (e.g., feeling of warmth, nausea, metallic taste in mouth) associated with an injection of contrast with an actual reaction. Try to ascertain what contrast agent was previously given. The information sheet should be incorporated in the radiology record.

Routine premedication or avoidance of contrast medium for other indications, such as allergic reactions to other substances (including shellfish or a different contrast media), asthma, seasonal allergies, or multiple drug and food allergies is not recommended.

If there is a history of an allergic-like reaction to the same contrast media, another type of diagnostic examination that does not utilize the same contrast media should be considered.

If the same contrast media is going to be given, the above premedication regimens are recommended. If the exact agent that triggered the previous allergic-like reaction is known, then another contrast agent of the same media should be utilized when possible. Before administering the intravenous contrast, the nurse or technologist should verify that the appropriate premedication regimen was followed by the patient. This will be confirmed directly with the patient if possible. If the patient cannot communicate, this information should be verified either with a family member or with the patient's practitioner. This should be documented on the contrast information sheet.

If there is a history of a severe allergic reaction to the same contrast media, then a radiologist should discuss the risks vs. benefits with a provider as well as alternative imaging options. If the decision is made to proceed, then contrast should be administered in a hospital setting with a code and rapid response team available. In addition to the technologist, another clinical team member should be present to assist with monitoring the patient.

When a patient is premedicated, do not remove the IV line from the patient until the examination is completed, and it is confirmed that the patient is not experiencing any reaction to the contrast injection.

If iodine based oral contrast is requested for a patient with a history of an iodine allergy, and bowel perforation is not a concern, a barium-based solution should be utilized. If bowel perforation is in the differential diagnosis, gadolinium-based contrast can be utilized, and a low-dose CT scan can be performed.



## Gadolinium Intravenous Contrast Screening Form

Have you ever had an MRI or MRA/MRV with contrast injected into a vein? .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b><u>If Yes</u>, have you had any of the following as a result of the contrast administration?</b>		
Hives .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Facial swelling .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Shortness of breath/wheezing .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Throat tightness or hoarseness .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Sudden drop in blood pressure .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Fainting or collapse .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other: _____		
Has your physician prescribed any pre-medication for you to take in preparation for this exam? .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, please list these medications:		
_____		
_____		
_____		
Are you on dialysis? .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, next dialysis treatment date: _____		

**\*\*For Staff Use Only\*\***  
 Medication Guide given   
 For Eovist and other Group I & III agents, see additional form

\_\_\_\_\_  
 Patient/Agent/Relative/Guardian or Provider (Signature) Date / Time

\_\_\_\_\_  
 Print Name Relationship if other than patient

\_\_\_\_\_  
 Reviewed by: RN/Technologist/MD/PA/NP (Signature) Date / Time

\_\_\_\_\_  
 Print Reviewer Name

A "Time Out" has been performed verifying that this patient has been ordered to receive intravenous contrast

\_\_\_\_\_  
 Northwell Personnel performing injection (Signature) Date / Time

\_\_\_\_\_  
 Print Name

## EOVIST and Other Group I & III Agents Form for Staff

**\*\*For Staff Use Only\*\***

Confirm Eovist Medication Guide Given

Use for EOVISt and Group I & III agents only:

CIRCLE

Does the patient have one kidney or kidney disease?  
(kidney cancer, surgery or transplant)

Yes

No

Has the patient been diagnosed with diabetes or do they  
take medication to control blood sugar levels?

Yes

No

Does the patient take medication to control blood pressure?

Yes

No

Creatinine Level: \_\_\_\_\_  
Normal Value: (0.5-1.3mg/dL)

Date of Level: \_\_\_\_\_

eGFR: \_\_\_\_\_

\_\_\_\_\_  
Reviewed by: RN/Technologist/MD/PA/NP (Signature)

\_\_\_\_\_  
Date / Time

\_\_\_\_\_  
(Print Name)