

# BWH/ BWFH/DFCI Guidelines for Assessment and Premedication of Imaging Contrast Agent Allergies:

## I. Classification of Imaging Contrast Agent Reactions:

<input type="checkbox"/> <b>Mild:</b> Signs and symptoms appear self-limited without evidence of progression, including:	
<p><b>Physiochemotoxic</b> ** Pre-treatment is not indicated</p> <p><input type="checkbox"/> Headache      <input type="checkbox"/> Dizziness      <input type="checkbox"/> Altered taste  <input type="checkbox"/> Anxiety      <input type="checkbox"/> Mild Hypertension  <input type="checkbox"/> Vasovagal Reaction that resolves spontaneously  <b>Limited:</b>  <input type="checkbox"/> Nausea      <input type="checkbox"/> Vomiting  <b>Transient:</b>  <input type="checkbox"/> Flushing      <input type="checkbox"/> Warmth      <input type="checkbox"/> Chills</p>	<p><b>Allergic</b> **Pre-treatment is indicated</p> <p><input type="checkbox"/> Sneezing      <input type="checkbox"/> Conjunctivitis      <input type="checkbox"/> Rhinorrhea  <input type="checkbox"/> Nasal congestion  <b>Limited:</b>  <input type="checkbox"/> Urticaria      <input type="checkbox"/> Pruritus      <input type="checkbox"/> "Scratchy" throat  <input type="checkbox"/> Itchy throat      <input type="checkbox"/> Cutaneous edema</p>
<b>Treatment:</b> Observation minimum 30 minutes to confirm resolution and/or lack of progression but usually no treatment. Patient reassurance is usually helpful. Treatment with an antihistamine may be instituted for mild symptomatic allergic-like cutaneous contrast reactions.	

<input type="checkbox"/> <b>Moderate:</b> Signs and symptoms are more pronounced. Moderate degree of clinically evident focal or systemic signs or symptoms, including:	
<p><b>Physiochemotoxic</b> ** Pre-treatment is not indicated</p> <p><input type="checkbox"/> Vasovagal reaction that requires and is responsive to treatment,  <input type="checkbox"/> Hypertensive urgency      <input type="checkbox"/> Isolated chest pain  <b>Protracted:</b>  <input type="checkbox"/> Nausea      <input type="checkbox"/> Vomiting</p>	<p><b>Allergic</b> **Pre-treatment is indicated</p> <p><b>Mild or no hypoxia associated with:</b>  <input type="checkbox"/> Bronchospasm /Wheezing  <b>No dyspnea associated with:</b>  <input type="checkbox"/> Facial edema      <input type="checkbox"/> Throat tightness  <input type="checkbox"/> Hoarseness  <b>Diffuse:</b>  <input type="checkbox"/> Urticaria      <input type="checkbox"/> Pruritus  <input type="checkbox"/> Erythema with stable vital signs</p>
<b>Treatment:</b> Clinical findings in moderate reactions frequently require prompt treatment. These situations require close, careful observation for possible progression to a life-threatening event.	

<input type="checkbox"/> <b>Severe:</b> Signs and symptoms are often life-threatening, including:	
<p><b>Physiochemotoxic</b> ** Pre-treatment is not indicated</p> <p><input type="checkbox"/> Vasovagal reactions resistant to treatment  <input type="checkbox"/> Convulsions/Seizures  <input type="checkbox"/> Clinically manifest arrhythmias  <input type="checkbox"/> Hypertensive Emergency  <input type="checkbox"/> Pulmonary edema</p>	<p><b>Allergic</b> **Pre-treatment is indicated</p> <p><input type="checkbox"/> Diffuse erythema with hypotension  <input type="checkbox"/> Anaphylactic shock  <input type="checkbox"/> Laryngeal edema with stridor and/or hypoxia  <input type="checkbox"/> Bronchospasm/wheezing with Significant hypoxia</p>
<b>Treatment:</b> Requires <i>prompt</i> recognition and aggressive treatment; manifestations and treatment frequently require hospitalization.	

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### II. Guide for Planned Administration of IODINATED Contrast Agents:

Previous Reaction to Allergens other than Iodinated Contrast		
Mild	Moderate	Severe
None	None	None

Previous Reaction to Iodinated Contrast WITHOUT premedication		
Mild	Moderate	Severe
Pre-medicate Consider referral to Allergy and Immunology Service	No Iodinated Contrast until review by Allergy & Immunology Service	Iodinated Contrast is typically withheld**

\*\*A patient with a well-documented history of a severe reaction to an iodinated contrast agent (oral or intravenous) should not receive the same agent (oral or IV). If in the opinion of the referring physician, the potential benefits outweigh the potential risks, consultation with an allergist and supervising radiologist should be sought. The specific indications and reason(s) for exception should be documented in the medical record prior to contrast administration.

Breakthrough Reaction to Iodinated Contrast WITH premedication		
Mild	Moderate	Severe
No Iodinated Contrast until review by Allergy & Immunology Service	No Iodinated Contrast until review by Allergy & Immunology Service	Iodinated Contrast is typically withheld**

\*\*A patient with a well-documented history of a severe reaction to an iodinated contrast agent (oral or intravenous) should not receive the same agent (oral or IV). If in the opinion of the referring physician, the potential benefits outweigh the potential risks, consultation with an allergist and supervising radiologist should be sought. The specific indications and reason(s) for exception should be documented in the medical record prior to contrast administration.

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### III. Guide For Planned Administration of GADOLINIUM Contrast Agents:

Previous Reaction to <b>Allergens</b> other than Gadolinium		
<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
None	None	None

Previous Reaction to <b>Gadolinium Based Contrast WITHOUT</b> premedication		
<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
Change Agent	Change Agent Pre-Medicate	No GBCM until reviewed by Allergy & Immunology Service

Breakthrough Reaction to <b>Gadolinium Based Contrast WITH</b> premedication		
<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
No GBCM Contrast until review by Allergy & Immunology Service	No GBCM Contrast until review by Allergy & Immunology Service	No GBCM until reviewed by Allergy & Immunology Service

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## IV. Accepted Elective Pre-medication Regimens:

<b>I. Two Dose Protocol (Preferred)</b>
<ul style="list-style-type: none"><li>• 50mg Prednisone PO 13, 7 and 1 hour(s) before contrast administration.</li><li>• And 10 mg Cetirizine* (Zyrtec) PO 1 hour before contrast administration. or 50 mg Diphenhydramine (Benadryl) IV within 1 hour of contrast administration</li></ul>
*Cetirizine is considered non-sedating, Diphenhydramine is considered sedating.



<b>II. Three Dose Protocol (Not able to tolerate Greenberger, i.e. diabetes, steroid intolerance, prior success with Modified Lasser, etc.)</b>
<ul style="list-style-type: none"><li>• 40mg Prednisone PO 12, 2 hour(s) before the injection.</li><li>• And 10 mg Cetirizine* (Zyrtec) PO 1 hour before contrast administration. or 50 mg Diphenhydramine (Benadryl) IV within 1 hour of contrast administration.</li></ul>
*Cetirizine is considered non-sedating, Diphenhydramine is considered sedating.



## V. Accepted Emergency Pre-medication Regimen:

<b>“Emergency” Protocol (Preferred)</b>
<ul style="list-style-type: none"><li>• 200 mg Hydrocortisone sodium succinate (Solu-Cortef) 200 mg IV every 4 hours until contrast study required</li><li>• 50 mg Diphenhydramine (Benadryl) IV within 1 hour of contrast administration.</li></ul>



Note: IV steroids have not been shown to be effective when administered less than 4 to 6 hours prior to contrast injection.

A patient with a well-documented history of a severe reaction to an iodinated contrast agent (oral or intravenous) should not receive the same contrast (oral or IV). In an EMERGENCY SITUATION, contrast may be administered if in the opinion of the referring clinician and supervising radiologist the potential benefits outweigh the potential risks. In these instances, specific indications and reason(s) for exception should be documented in report.

## VI. Medical Judgment:

As with all guidelines, these guidelines have been developed by an assembly of current data and expert medical opinion. They are intended to inform a reasonable course of action given the typical medical practice. These guidelines are not absolute, nor are they all encompassing, especially in the context of the wide range of medical practice at this institution. Assistance from members of the Contrast Agent Safety Committee should be sought if any help is needed in determining an appropriate course of action.