PREMEDICATION ASSESSMENT and PROTOCOL for INTRAVENIOUS CONTRAST ADMINISTRATION POLICY - CT

CMC Imaging Department Policy for assessing risk factors for adverse contrast reactions from iodinated nonionic low osmolality contrast agents for CT and protocol for contrast administration in setting of documented risk factors.

References: ACR, manual on contrast media, Version 10.2, 2016

- ***Anaphylaxis (an-a-fi-LAK-sis) is a serious, life-threatening allergic reaction. The most common anaphylactic reactions are to foods, insect stings, medications and latex. Anaphylaxis requires immediate medical treatment, including an injection of epinephrine and a trip to a hospital emergency room. If it isn't treated properly, anaphylaxis can be fatal. (ref. http://www.aaaai.org/conditions-and-treatments/allergies/anaphylaxis American Academy of Allergy, Asthma and Immunology website.***

A) PREMEDICATION ASSESSMENT

Risk Factor Classification and Protocol:

- Previous **Severe contrast reaction**. Signs and symptoms are often life-threatening and can result in permanent morbidity or death if not managed appropriately. ***Absolute contraindication to contrast administration.***

Severe reactions include:

Allergic-like	Physiologic
Diffuse edema, or facial edema with dyspnea	Vasovagal reaction resistant to treatment
Diffuse erythema with hypotension	Arrhythmia
Laryngeal edema with stridor and/or hypoxia	Convulsions, seizures
Wheezing / bronchospasm, significant hypoxia	Hypertensive emergency
Anaphylactic shock (hypotension + tachycardia)	

- Previous **Moderate contrast reaction.** Signs and symptoms commonly require medical management. Some of these reactions have the potential to become severe if not treated. ***Pretreatment indicated prior to contrast administration with CMC pre-medication protocol or refer to waiver*** *(Reference ACR Contrast Manual V10.2 pg 10).*

Moderate reactions include:

Allergic-like	Physiologic
Diffuse urticaria / pruritis	Protracted nausea / vomiting
Diffuse erythema, stable vital signs	Hypertensive urgency
Facial edema without dyspnea	Isolated chest pain
Throat tightness or hoarseness without dyspnea	Vasovagal reaction that requires and is responsive to treatment
Wheezing / bronchospasm, mild or no hypoxia	

- **No previous contrast reaction or previous Mild contrast reaction.** Signs and symptoms are self-limited without evidence of progression. ***Pretreatment not routinely indicated prior to contrast administration.***

  Mild reactions include:

Allergic-like	Physiologic
Limited urticaria / pruritis	Limited nausea / vomiting
Limited cutaneous edema	Transient flushing / warmth / chills
Limited "itchy" / "scratchy" throat	Headache / dizziness / anxiety / altered taste
Nasal congestion	Mild hypertension
Sneezing / conjunctivitis / rhinorrhea	Vasovagal reaction that resolves spontaneously

- In addition, **any previous anaphylactic reaction from any other drug or environmental stimuli that is well documented warrants *pretreatment prior to contrast administration with CMC pre-medication protocol* or refer to waiver.*** *(Reference ACR Contrast Manual V10.2 pg 10).*

- If history and documentation is insufficient to substantiate a true anaphylactic reaction to stimuli **other than contrast media** contrast may be administered following the institutions routine monitoring protocol without premedication.

While documented previous severe contrast reactions are an absolute contraindication to contrast administration, contrast may be administered in cases of previous moderate contrast reactions without routine pretreatment if the ordering provider deems it an emergent medical necessity with the potential benefit of the immediate contrast enhanced exam outweighing the risk of adverse contrast reaction. *(Reference ACR Contrast Manual V10.2 pg 10).*

  - *See Premedication Waiver*
  - If premedication is waived, CMC clinical resources must be arranged to prepare for possible severe reaction. The technologist, an RN; imaging, ED, UC, floor RN and/or Nursing Supervisor/House Supervisor will remain in the Imaging modality for the duration of the IV contrast injection plus 20 minutes post injection. If any symptoms appear, begin

to progress to severe, an ABC alert will be called (or 911 at the East and Cortland campuses).

B) PREMEDICATION PROTOCOL

Elective Premedication

Two frequently used regimens are:

1. Prednisone – 50 mg by mouth at 13 hours, 7 hours, and 1 hour before contrast media injection, plus Diphenhydramine (Benadryl®) – 50 mg intravenously, intramuscularly, or by mouth 1 hour before contrast medium [12]. or

2. Methylprednisolone (Medrol®) – 32 mg by mouth 12 hours and 2 hours before contrast media injection. An anti-histamine (as in option 1) can also be added to this regimen injection [34]. If the patient is unable to take oral medication, 200 mg of hydrocortisone intravenously may be substituted for oral prednisone in the Greenberger protocol [35].

Emergency Premedication (In Decreasing Order of Desirability)

- **IV steroids have not been shown to be effective when administered less than 4-6 hours prior to contrast injection.**
- If one of the following **emergency premedication treatments is completed,** CMC clinical resources must be arranged to prepare for possible severe reaction. The CT technologist, Imaging RN and Nursing Supervisor/House Supervisor will remain in the Imaging department until the patient has had the IV contrast injection. If any symptoms appear, begin to progress to severe, an ABC alert will be called.

1. Methylprednisolone sodium succinate (Solu-Medrol®) 40 mg or hydrocortisone sodium succinate (Solu-Cortef®) 200 mg intravenously every 4 hours (q4h) until contrast study required plus diphenhydramine 50 mg IV 1 hour prior to contrast injection [35].

2. Dexamethasone sodium sulfate (Decadron®) 7.5 mg or betamethasone 6.0 mg intravenously q4h until contrast study must be done in patient with known allergy to methylpred-nisolone, aspirin, or non-steroidal anti-inflammatory drugs, especially if asthmatic. Also diphenhydramine 50 mg IV 1 hour prior to contrast injection.

3. Omit steroids entirely and give diphenhydramine 50 mg IV.

PATIENTS PRESENTING WITH A PRE-EXISTING RASH

Patients presenting to the Imaging department for a contrasted exam with a pre-existing rash must be evaluated by an RN. Any changes of the rash after IV contrast administration should be documented by an RN.

Documentation in the patient chart of site and severity of rash pre and post contrast injection will be completed by the RN. Depending on the severity the patient may need to be evaluated by the Radiologist or Emergency Medical Provider (EMO).

11/2016 updated

Patient Sticker

Cayuga MEDICAL CENTER
A Member of Cayuga Health System

Premedication Waiver to Proceed with Contrast injection

- ***Anaphylaxis (an-a-fi-LAK-sis) is a serious, life-threatening allergic reaction. The most common anaphylactic reactions are to foods, insect stings, medications and latex. Anaphylaxis requires immediate medical treatment, including an injection of epinephrine and a trip to a hospital emergency room. If it isn't treated properly, anaphylaxis can be fatal. (ref. http://www.aaaai.org/conditions-and-treatments/allergies/anaphylaxis American Academy of Allergy, Asthma and Immunology website.***

☐ I have reviewed the CMC Imaging Department Policy for assessing risk factors for adverse contrast reactions from iodinated nonionic low osmolality contrast agents for CT. I have weighed the risks and benefits of administering the contrast agent to the patient without premedication and have decided the administration of the contrast agent is necessary in order to obtain diagnostic imaging information that will materially affect and expedite necessary patient care and treatment.

Ordering Provider Signature: _____Date/Time: _____

☐ The above information has been explained to me. The ordering physician has determined that the benefits of proceeding with the procedure outweigh the risks of administering the contrast agent without premedication and I understand the potential risks and benefits of proceeding without premedication. I agree to waive the recommended pretreatment.

Patient Signature: _____Date / Time: _____

Representative / Relationship: _____Date / Time: _____

Explanation by / Witness: _____Date / Time: _____