Name of Policy: Echo Image Enhancing Agent **Policy Number**: 3364-106-E10 **Approving Officer**: Chief Executive Officer-UTMC **Responsible Agent**: Director of Cardiovascular Services **Scope**: University of Toledo Medical Center	UTOLEDO HEALTH **Effective date:** 3/24/2025 **Original effective date**: 6/2002
Key words: Echo, Echocardiography, Agent, Enhancing, Quality	

☐	New policy proposal	☐	Minor/technical revision of existing policy
☐	Major revision of existing policy	x	Reaffirmation of existing policy

(A) Policy Statement

The ECHO Technologist will provide safe and effective care when using Lumason or Definity enhancing agent on a patient in a manner to ensure that quality care is given, and quality results are achieved.

(B) Purpose of Policy

Activated Lumason or Definity injectable suspension is indicated for use in patients with suboptimal echocardiograms to opacify the left ventricular chamber and to improve the delineation of the left ventricular endocardial borders. Activated Lumason or Definity can be used during Exercise Stress, Dobutamine Stress, Resting Echocardiograms and Trans esophageal Echocardiograms.

(C) Procedure

Criteria for IEA Usage

Basic criteria may include, but not limited to, the following:

1. Stress Echocardiogram-Lumason/Definity may be used if two or more of left ventricular wall segments are poorly visualized on the baseline views.

2. Transthoracic/Trans esophageal Echocardiograms-Lumason/Definity may be used if two or more left ventricular wall segments are poorly visualized or if apical views are suspicious for a thrombus. Definity may also be used to enhance Doppler signals. Lumason/Definity may also be used to assess for aortic dissection.

Contraindications

1. Do not administer UAE to patients with known or suspected hypersensitivity to Sulfur hexafluoride.

2. Contrast should not be administered by direct intra-arterial injection.

3. There are no adequate and well controlled studies of Lumason, in pregnant women. These agents should be used in pregnancy only if clearly needed as determined by the physician.

4. Do not administer Definity to patients with known or suspected hypersensitivity to Perflutren.

Warnings and Precautions
Adverse Reactions

1. Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during, or following perflutren containing microsphere administration. Most serious reactions occur within 30 minutes of administration.

2. Lipid-based UEA's (Definity and Lumason) are contraindicated in patients who have a history of prior hypersensitivity to these UEA's, PEG (macrogel), or to PEG-containing products such as certain bowel preps for colonoscopy or laxatives.

3. All nurses, physicians, and sonographers who routinely administer UEA's should be trained in the recognition of hypersensitivity reactions; cardiopulmonary resuscitation equipment must be readily available for use by trained personnel.

4. The most common adverse reactions (>0.5%) are headache, back/renal pain, flushing, nausea, chest pain, injection site reactions, and dizziness.

Protocol

If the criteria for Definity use are met as mentioned above, the following will be implemented:

1. The sonographer or physician will assess the need for an Image Enhancing Agent in compliance with the procedure.

2. The physician will oversee the order.

3. The RN, Nuclear Technologist or trained sonographer should be contacted to start the IV if needed.

4. Use bolus of Lumason or Definity.

5. The RN, physician or trained sonographer will inject the activated Lumason or Definity.

6. Remove IV and release patient if asymptomatic.

Approved by: /s/ _____ Todd Korzec, RN, BSN Director, Cardiovascular Services 1/31/2025 _____ Date /s/ _____ Samer J. Khouri MD Medical Director, Non-Invasive Cardiac Imaging 3/7/2025 _____ Date /s/ _____ Christine Stesney-Ridenour, FACHE Chief Operating Officer 3/24/2025 _____ Date *Review/Revision Completed by:* *Director, Cardiovascular Services*	**Policies Superseded by This Policy:** • *None* Initial effective date: 6/2002 Review/Revision Date: 5/04 6/05 7/07 10/07 1/09 8/25/2010 6/2013 3/2016 10/2019 03/2022 7/2023 3/24/25 Next review date: 3/24/2028