

 Lakeridge Health	Contrast Echocardiography – Medical Directive	
	Manual: Medical Directives & Delegated Controlled Acts	Original Date: 17SEP2024
	Section: Diagnostic Imaging	Version Date: 17SEP2024
	Document Owner: Diagnostic Imaging	Next Review Date: 17SEP2026
	Approved by: Pharmacy and Therapeutics Committee, Medical Advisory Committee	
	Cross Reference to:	
<p>A printed copy of this document may not reflect the current, electronic version on Lakeridge Health's Intranet, 'OASIS.' Any copies of this document appearing in paper form should ALWAYS be checked against the electronic version prior to use. Contact policies@lh.ca for version history.</p>		

Authorizing Prescriber(s)

Cardiologists working at Lakeridge Health (LH).

Authorized to Whom

All Cardiac Diagnostic Medical Sonographers (DMS) – who are employees of Lakeridge Health who have the knowledge, skill and judgement to order contrast ultrasound enhancing agents (UEAs) during a patient’s Transthoracic Echocardiography (TTE) Scan.

Patient Description/Population

Contrast echocardiography is recommended for patients with suspected or established cardiovascular disease to improve visualization of endocardial border delineation, which assists in the accurate assessment of the left ventricular structure and function.

Order and/or Procedure

Contrast DEFINITY Ultrasound enhancing agent (UEA).

Indications to the Implementation of the Directive

UEAs are to be utilized in the echocardiography examination when baseline image quality is deemed to be suboptimal:

- Inability to visualize greater than or equal to 2 contiguous Left Ventricular (LV) segments for the accurate assessment of LV ejection fraction (LVEF) and regional wall motion assessment
- Should be considered irrespective of image quality when clinical management depends on accurate measurements of LVEF such as monitoring of patients treated with cardiotoxic drugs and when implantation of implantable cardioverter defibrillator (ICD) or cardiac resynchronization therapy (CRT) devices are considered
- To assess for the presence of intracardiac mass or thrombus (especially in anterior myocardial infarction)
- To assess for the presence of apical or mid-cavity hypertrophic cardiomyopathy

This material has been prepared solely for the use at Lakeridge Health. Lakeridge Health accepts no responsibility for use of this material by any person or organization not associated with Lakeridge Health. No part of this document may be reproduced in any form for publication without the permission of Lakeridge Health.

- To assess for the presence of ventricular non-compaction
- To assess for the presence of structural complications of myocardial infarction (i.e. ventricular aneurysm, pseudo aneurysm, myocardial rupture)
- For accurate detection of regional wall motion abnormality for the diagnosis of coronary artery disease in stress echocardiography
- To assess doppler flow evaluations with UEA if spectral signals to quantify velocities and pressure gradients were inadequate (at rest and stress images)

Contraindications to the Implementation of the Directive

- Patient or Substitute Decision Maker (SDM) withdraws or refuses diagnostic investigation
- Known hypersensitivity to contrast agent
- patients with right to left atrial shunts or bi-directional atrial shunts

Consent

Consent must be obtained by the Cardiac Diagnostic Medical Sonographers (DMS) Medical Radiation Technologist prior to implementing this medical Directive.

Documentation Requirements

The DMS will enter the contrast agent under the order mode of 'per medical directive', the name of the DMS will be entered as the ordering provider and the name of the Cardiologist will be entered as the authorizing provider.

Review/Evaluation Process

The medical directive will be reviewed every two years as directed by the Diagnostic Imaging Program.

This table must **not** be used independently apart from the Medical Directive

Order Table Form

Order	Indication	Contraindication	Notes (Optional)
Contrast DEFINITY Ultrasound enhancing agent (UEA) of 0.3-0.5 ml, via peripheral IV	<ul style="list-style-type: none"> • Baseline image quality is deemed suboptimal by the DMS • Inability to visualize ≥ 2 contiguous LV segments for the accurate assessment of LV ejection fraction and regional wall motion assessment • Should be considered irrespective of image quality when clinical management depends on accurate measurements of LVEF such as monitoring of patients treated with cardiotoxic drugs and when implantation of ICD or CRT devices are considered • To assess for the presence of intracardiac mass or thrombus (especially in anterior MI) 		

	<ul style="list-style-type: none">• To assess for the presence of apical or mid-cavity hypertrophic cardiomyopathy• To assess for the presence of ventricular non-compaction• To assess for the presence of structural complications of myocardial infarction (i.e. ventricular aneurysm, pseudo aneurysm, myocardial rupture)• For accurate detection of regional wall motion abnormality for the diagnosis of coronary artery disease in stress echocardiography• To assess doppler flow evaluations with UAE if spectral signals to quantify velocities and pressure gradients were inadequate (at rest and stress images)		
--	---	--	--