



- Impacts cardiac diagnosis³
- Avoids additional diagnostic procedures³
- Alters patient management decisions³
- Reduces resource utilization and per-patient expense

INDICATIONS

Activated DEFINITY® (Perflutren Lipid Microsphere) 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 border.

DEFINITY® is indicated for use in patients in contrast-enhanced diagnostic ultrasound imaging to improve characterization of focal lesions of the liver and kidney.

CONTRAINDICATIONS

Activated DEFINITY® should not be administered to patients with known hypersensitivity to octafluoropropane or in patients with known cardiac shunts (seeWARNINGS).

Activated DEFINITY® should not be administered by direct intra-arterial injection (see WARNINGS).

IMPORTANT SAFETY INFORMATION

Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during or following perflutren-containing microsphere administration (see WARNING). The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions (see ADVERSE REACTION). In these patients, monitor vital signs, electrocardiography, and cutaneous oxygen saturation during and for at least 30 minutes after DEFINITY® administration. Always have cardiopulmonary resuscitation personnel and equipment readily available prior to DEFINITY® administration and monitor all patients for acute reactions.

Please see the full prescribing information for DEFENITY Vial for (Perflutren Lipid Microsphere) Injectable Suspension.

REFERENCES: 1. Becher H, Burns PN. Handbook of Contrast Echocardiography: Left Ventricular Function and Myocardial Perfusion. Heidelberg, NY: Springer-Verlag; 2000;2-44. 2. Kitzman DW, et al. Efficacy and Safety of the Novel Ultrasound Contrast Agent Perflutren (DEFINITY) in Patients with Suboptimal Baseline Left Ventricular Echocardiographic Images. Am J Cardiol. 2000;86:669-674. 3. Kurt M, et al. Impact on Contrast Echocardiography on Evaluation of Ventricular Function and Clinical Management in a Large Prospective Cohort. J. Am. Coll. Cardiol. 2009;53:802-810. 4. DEFINITY® (package insert). N. Billerica, MA: Lantheus Medical Imaging, Inc., 2017. 5. http://www.lantheus.com/assets/lantheus_vialmix_manual.pdf. Accessed February 17, 2017. 6. Sboros V, et al. Contrast Agent Stability: A Continuous B-Mode Imaging Approach. Ultrasound in Med. & Biology. 2001;27:1367-1377. 7. Data on file, Lantheus Medical Imaging, Inc.

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A single vial is sufficient to capture essential diagnostic information¹⁻³

DEFINITY® offers flexibility in dosing to meet patient and practice-specific needs4







Activate DEFINITY® with VIALMIX®

- Once activated, DEFINITY® appears as a milky white suspension
- If activated vial is not used within 5 minutes, resuspend with 10 seconds of hand agitation

VIALMIX® delivers consistency in the preparation of DEFINITY®4,5



DEFINITY® may be used for up to 12 hours after activation with VIALMIX®. If not used within 12 hours, vial may be returned to refrigeration and reactivated once with VIALMIX® within 24 hours. Reactivated DEFINITY® may be used for up to 12 hours. 4.7



It is important to vent the vial when withdrawing activated $\mathsf{DEFINITY}^{\circledcirc}$

Venting avoids negative pressure in the vial; allows for easier withdrawal to prevent microbubble disruption

- Vent vial with an additional needle by placing needle tip in the activated DEFINITY® vial
- Attach 18 or 20 gauge needle to syringe; place needle in the vial
- Invert vial and withdraw the activated DEFINITY® from the middle of the liquid -

Do not inject air into the vial

Dosing & Administration

Diluted Bolus4* Continuous Infusion⁴ Bolus⁴ Combine 1.3 mL Withdraw 10 µL/kg activated Combine 1.3 mL activated DEFINITY® with 8.7 mL of activated DEFINITY® with DFFINITY® 50 mL of preservativepreservative-free saline in • Administer slowly over 30 to 60 free saline a 10-cc syringe seconds • Gently hand-agitate • Gently squeeze • Follow with a 10 mL saline flush to evenly distribute IV bag to evenly • Subsequent injection as needed microbubbles distribute microbubbles Smaller, incremental dose amounts • Administer ~1 to 2 mL of 0.2 mL to 0.3 mL are better slowly with subsequent Initiate at 4 mL/ suited for current ultrasound system injections as needed minute; maximum 10 technology mL/minute Maximum allowable dose is Adjust flow rate 20 μL/kg for optimal image * Better suited for low MI enhancement nonlinear imaging



