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Transcatheter PDA Closure: Weighing Risks and Benefits

Internet Enduring Material
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Content was originally presented as part of NEO: The Conference for Neonatology on February 26, 2026.

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Time to Complete

The estimated time for completion of this Internet Enduring Material is 50 minutes.

Target Audience

This presentation is intended for physicians, advanced practice providers, and other clinicians practicing within the Neonatology specialty.

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Disclosure of Relevant Financial Relationships

Patrick McNamara, MB, BCh, faculty for this educational activity, has the following relevant financial relationships with ineligible companies to disclose: Consulting Fee-Aspect Imaging. *FDA Disclosure(s):* none reported.
Timothy Biela, MD, Nicole Brenson and Jaya Sariga, NNP-BC, planners of this educational activity, have no relevant financial relationships with ineligible companies to disclose.

Commercial Support

There is no commercial support for this enduring educational activity. *Please note: the content of this activity was originally presented at NEO: The Conference for Neonatology on February 26, 2026, which was supported in part, through a medical education grant from Mead Johnson Nutrition.*

Overview

This educational activity addresses a significant practice gap in the management of hemodynamically significant patent ductus arteriosus (hsPDA) in extremely preterm infants. Despite over 60 randomized clinical trials of medical PDA treatment, clinicians continue to face uncertainty regarding patient selection, timing of intervention, and the assessment of hemodynamic significance. This activity is designed to enhance learners' ability to identify the target population most likely to benefit from transcatheter PDA closure and to critically appraise existing trial evidence in the context of physiologic assessment using targeted neonatal echocardiography (TnECHO).

Additionally, this activity examines the acute outcomes and procedural risks of transcatheter PDA closure, including the incidence and predictors of post-ligation cardiac syndrome (PLCS), a clinically significant complication characterized by oxygenation failure, systolic hypotension, and cardiovascular instability occurring 8–12 hours after definitive closure. Participants will review emerging multicenter data from the NCDR IMPACT Registry, explore the biologic rationale for prophylactic milrinone therapy, and gain familiarity with the design of the MIDAS Trial. Upon completion, learners should be able to integrate hemodynamic principles into clinical decision-making around PDA closure and apply evidence-based strategies for perioperative management in the NICU setting.

Objectives

At the conclusion of this activity, the participant will be able to:

- Identify patients where interventional PDA closure may benefit.
- Discuss a physiology-based approach to care of neonates after interventional PDA closure.

ACGME/ABMS Competencies

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement

IOM Competencies

- Provide Patient-Centered Care

Participation and Credit

Participants are expected to review all content in the video, access reference materials as needed for additional self-directed learning, take and score 75% or greater correct on the post-test, and complete the evaluation in order to earn *AMA PRA Category 1 Credit(s)*™, or nursing contact hour(s).

There are no fees for participating in or receiving credit for this online educational activity. For information on the applicability and acceptance of credit for this activity, please consult your professional licensing board.

Contact

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