

**Mo-99 2016 TOPICAL MEETING ON
MOLYBDENUM-99 TECHNOLOGICAL DEVELOPMENT**

**SEPTEMBER 11-14, 2016
THE RITZ-CARLTON
ST. LOUIS, MISSOURI**

**Cardinal Health Nuclear Pharmacy Services Perspectives on the
Reliable Supply of Molybdenum-99**

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ABSTRACT

Molybdenum-99 is the parent of the most commonly used radioisotope in nuclear medicine: technetium-99m. In the United States, technetium-99m is used in millions of nuclear medicine imaging procedures each year. Tc-99m has a short half-life, approximately six hours, and must be distributed daily to imaging facilities on a just-in-time basis. Because of this, disruptions to molybdenum-99 production can lead to a cascading effect throughout the supply chain, ending at a patient awaiting an important medical imaging procedure.

Much molybdenum-99 production occurs in reactors that use highly enriched uranium (HEU). The American Medical Isotopes Production Act of 2012 directed the Department of Energy “to evaluate and support projects for the production in the United States, without the use of highly enriched uranium, of significant quantities of molybdenum-99 for medical uses.” Navigating the transition from HEU to non-HEU sources of molybdenum-99 without impacting patient care is a careful balance to maintain.