

U.S. company strikes deal with Poland for isotope used in medical tests

February 17 2010, By Thomas H. Maugh II

As U.S. physicians face an impending crisis caused by lack of a crucial isotope used in many diagnostic procedures, a U.S. company said Wednesday that it had reached an agreement with the Polish nuclear energy agency to obtain the isotope from a reactor in that country.

Covidien, a St. Louis company that processes a radioisotope produced by reactors into a form that can be used in the medical tests, said that Poland's Institute of Atomic Energy will provide enough molybdenum-99 from the agency's Maria Research [Reactor](#) to meet the needs of about 1 million patients annually.

That is not nearly enough of the isotope to replace the shortage resulting from the shutdown of the two primary reactors that produce the element, but experts said it is enough to allow radiologists to keep performing some tests rather than shutting down.

"This is only a short-term fix to a long-term problem," said Robert W. Atcher, who heads a task force of SNM, formerly the Society of Nuclear Medicine, looking at ways to alleviate the shortage.

Molybdenum-99 is a short-lived radioisotope that breaks down into technetium-99m (the m stands for metastable) -- the form that is used in medical tests. With a half-life of only six hours, the isotope allows physicians to examine blood flow and bones and identify tumors before quickly disappearing from the body, thereby minimizing radiation dose.

When supplies of technetium-99m are adequate, about 55,000 Americans every day and tens of thousands in the rest of the world undergo such tests. But the isotope is produced primarily in five reactors around the world, all of them over the age of 45 and none in the United States.

Canada's National Research Universal reactor in Chalk River has been shut down since last May because of tritium leaks and other problems and is not expected to reopen before April. A second major reactor, in Petten, the Netherlands, will close Friday for four to six months of scheduled maintenance. The two reactors account for about two-thirds of the technetium-99m used in the United States.

Because the radioisotope decays so fast, it cannot be stockpiled. As a consequence, technicians are scheduling tests at all hours of the day and night whenever they receive a supply. Many are also resorting to older, less efficient tests that have seen only limited use in the last 20 years.

Covidien said a test run was conducted last week at the Maria reactor -- named after Polish nuclear physicist Maria Sklodowsky Curie -- and the product is now being processed into technetium-99m at one of Covidien's European facilities. The company said it should begin distributing technetium-99m to European customers within 30 days.

But some complications remain. Among other things, the U.S. Food and Drug Administration must also test the finished product before it can be used in this country.

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