FDA Grants Orphan Drug Designation for ^{68}Ga-DOTATOC

SNMMI announced on November 18 that the imaging agent ^{68}Ga-DOTATOC has been officially designated an orphan drug by the U.S. Food and Drug Administration (FDA). The orphan drug status is intended specifically for use of the tracer in management of neuroendocrine tumors (NETs). Stakeholders, including SNMMI, praised the orphan-drug designation because it could lead to potential fast-tracking of regulatory approval and wider access. Patients with neuroendocrine cancer will benefit from the addition of ^{68}Ga-DOTATOC to the armamentarium of clinical PET agents.

FDA Orphan Drug designation was provided under the U.S. Orphan Drug Act of 1983. In general, the designation is provided for management of relatively rare diseases that affect fewer than 200,000 people or for limited clinical applications. The new orphan drug status for ^{68}Ga-DOTATOC is a result of an August 2013 application sponsored by the SNMMI Clinical Trials Network (CTN), a focus group that facilitates adoption and utilization of molecular imaging radiopharmaceuticals.

"The next step in this process will be to meet with FDA officials to discuss the data needed for regulatory approval, factoring in the extensive literature on the safety and efficacy of this agent and the patients currently enrolled in an ongoing prospective trial," said Michael Graham, PhD, MD, cochair of the CTN. The CTN intends to remain active in the approval process as more research is initiated and more data are reported to the FDA.

The new status may contribute not only to potentially faster regulatory approval but to streamlined clinical trials. Additional funds for research and development may be made available by the FDA Office of Orphan Products Development. As a major prerequisite for funding, ^{68}Ga-DOTATOC efficacy must be compared with that of ^{111}I-pentetreotide (Octreoscan), currently approved for use in scintigraphy in patients with NETs. Full approval of ^{68}Ga-DOTATOC will also require more data on safety and effectiveness in clinical trials. Few prospective studies are currently underway. One current drug trial listed with the U.S. National Institutes of Health is a study sponsored by the University of Iowa (Iowa City), introduced last year, that focuses on ^{68}Ga-DOTATOC PET/CT for diagnosis, disease staging, and evaluation of treatment response in patients with somatostatin receptor–positive tumors. The study also seeks to compare ^{68}Ga-DOTATOC PET/CT imaging performance with that of ^{111}I-pentetreotide scintigraphy.

"I think I speak for all NET patients when I say this is a great first step toward approval of this agent in the United States," said Josh Mailman, chair of the SNMMI Patient Advocacy Advisory Board and president of NorCalCarciNET, a patient support network for those affected by neuroendocrine cancer. "^{68}Ga-labeled NET PET radiopharmaceuticals will reduce the time it takes to image a NET patient from 2 to 3 days to just a few hours. It has also been shown in early studies in the U.S. and those overseas to change treatment paths for a number of patients. Lastly the exposed dose of radiation is lower than the current standard of care."

^{68}Ga-DOTATOC, if fully FDA approved, would be used to determine somatostatin receptor status not only qualitatively, through visual interpretation, but semiquantitatively via PET parameters including standardized uptake value. The drug also could be used to select patients for appropriate octreotide therapies. Patients with metastatic NETs may gain access to more advanced treatments that aggressively target somatostatin receptor–positive tumors.

To the Newsline Editor

I read with great interest the commentary concerning administration of compounded sincalide authored by Norenberg et al. in the Newsline section of the November 2013 issue of *The Journal of Nuclear Medicine* (2013;54[11]:23N). I agree that caution is warranted now when deciding to have a therapeutic agent provided by a compounding pharmacy, but I think that with proper inquiries and review, the issues can be in the affirmative. It is also important to know of the credibility of drug manufacturers in light of issues such as drug diversion, adulteration, and even fraudulent data provided to the FDA (see, for example, issues with Ranbaxy Laboratories).

Some pharmacists have the responsibility to make compounded products and products for intravenous administration within institutions and hospitals, including, for example, total parenteral nutrition products, intravenous pain management, and antibiotics. I do not think that the "physician should seek documentation of strength, identity, and purity from the pharmacies" for such compounded agents, as the authors suggest. But I do agree that every pharmacy that compounds drugs such as sincalide should provide the proper documentation on potency, sterility, stability, pyrogenicity, beyond-use dating, and all other standard practice documentation as requested and required by the pharmacy and therapeutics committee for that pharmacy's institution.

In the early days of nuclear medicine, pharmacists who compounded radiopharmaceuticals were indeed responsible for some of the agents we use today, for example, ^{111}In-oxine for white blood cell labeling and ^{131}I-MIBG for neuroblastoma treatment. Many nuclear pharmacists safely compound ^{18}F-FDG on a daily basis.

The referenced commentary expressed a concern for potential sub- or superpotent sincalide dose administration. Based upon the USP 28 monograph dealing with sincalide, the potency range is 85%–125% of label, which seems fairly liberal and thus may not be of such concern.

I am of the belief that if a pharmacy complies with the Drug Quality and Security Act (HR 3204) and the recipient facility performs its work with due diligence, then the prescribing physician should have confidence in the safety and efficacious use of compounded products.

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Newsline editor's note: In additional correspondence, Dr. McHugh noted that his comments are from his perspective as a nuclear pharmacist with more than 35 years' experience in practice and education in the field. He has also been employed in the nuclear medicine industry and is currently president of Mid-America Isotopes, Inc.