SELF-STUDY PROGRAM TO BE PUBLISHED BY SNM

The first volume of a long-awaited self-assessment program designed to help physicians, scientists and technologists expand and refine their knowledge of selected topics in nuclear medicine will be published by the Society of Nuclear Medicine (SNM) sometime this summer. The program places special emphasis on developments that occurred within the last five years.

The first volume, entitled *Nuclear Medicine: Self-Study Program I*, covers gastrointestinal, skeletal and pulmonary nuclear medicine, as well as radiobiology and radiation protection. It is edited by Peter Kirchner, MD, professor of radiology and director of the nuclear medicine division at the University of Iowa Hospitals and Clinics, Iowa City, and Barry Siegel, MD, professor of radiology and medicine and director of the nuclear medicine division of the Mallinckrodt Institute of Radiology, St. Louis, Missouri. Twenty leading authorities contributed to the volume.

CME Credit

This effort goes considerably beyond the single-volume Nuclear Medicine Review Syllabus edited by Dr. Kirchner and published by the Society in 1980. Those who purchase the new program between the date of release sometime this summer and a predetermined cut-off date, probably five months after publication, will be able to take fullest advantage of its self-assessment component. Up to 40 hours of Category I Continuing Medical Education credit are available for proper completion of the program, according to Dr. Siegel.

Enrollees initially receive a book with the syllabus text accompanied by annotated references. At the end of each of the book's four sections, a multiple choice examination requiring about 100 to 130 responses is provided. "We make liberal use of case material and figures to try to reproduce the kind of judgments nuclear medicine folk have to make on a daily basis," Dr. Siegel said.

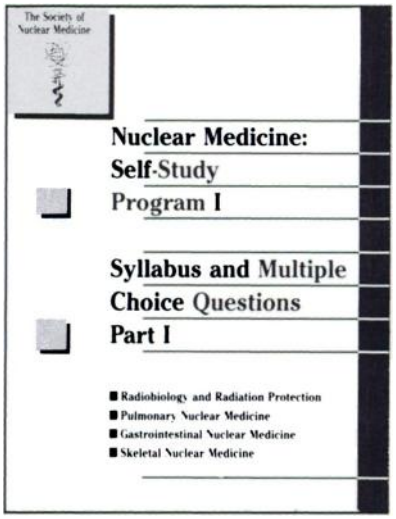
The completed exams will be mailed to an independent scoring company, Educational Assessment and Research Consultants, Inc., which will machine-score the tests and tabulate the results. Confidentiality will be maintained, Dr. Siegel pointed out, by assigning each enrollee an identification number. Individual scores will not be available to anyone in the Society.

Compared with Peers

Once the examination deadline passes, participants will receive another mailing showing how they fared compared with others who took the examination. Depending on the number and variety of persons who participate, Dr. Siegel said scores may be referenced to several different peer groups. For example, physicians' scores may be classified as to whether the physicians are residents, in private practice or in university settings, or whether they have a background in radiology or internal medicine. Enrollees also receive a second book containing the answers to individual questions, including an explanation as to why experts consider an answer correct to the exclusion of others, and a list of additional references.

Those who purchase the program after the examination deadline will receive all the mailings in a single package and will not be eligible for continuing education credit.

While the program is primarily intended for practicing nuclear medicine physicians, Dr. Siegel thinks residents in nuclear medicine training, or physicians preparing for the primary or recertification examinations of the American Board of Nuclear Medicine, and physicists, radiopharmacists, computer scientists, technologists and others who regularly work in nuclear medicine labs "will find the program of interest and use it as a convenient way to update their knowledge of nuclear medicine." He points out, however, that the program is not intended as a substitute for a more encyclopedic textbook or for keeping up with the scholarly writing in the field.



Program I is expected to be the first of a series of volumes that, when completed, will cover all the major topics in nuclear medicine. Program II will discuss instrumentation and the endocrine, cardiovascular, and genitourinary systems. More than half of the manuscript drafts for this volume have been received, Dr. Kirchner said, and he hopes for publication within the next year or so.

Publication of the first volume took

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about five years and has been delayed, in part, by the sheer complexity of the task, according to Dr. Kirchner. "Writing in the terse review style of MKSAP (Medical Knowledge Self-Assessment Program), which is what we've modeled this after, is a considerable challenge to those who are accustomed to writing longer and less comprehensive reviews," he said. "A great deal of editing has been necessary and that has slowed down the process." Coming up with good questions has also been challenging. "The format of the questions and the level of difficulty is meant to approximate that of the board exams, but writing questions that are sufficiently rigorous to meet these demands is not easy."

The expansion of the earlier syllabus into this multicomponent educational program was directed by the Publications Committee of the SNM in 1984. Planning was fostered by C. Douglas Maynard, MD, who chaired the committee at the time, and was further supported by subsequent chairs B. Leonard Holman, MD, and Richard L. Witcofski, PhD.

Dr. Maynard is pleased with the work of Drs. Siegel and Kirchner and of the many contributors who made the project possible. "This is something all practicing nuclear medicine professionals would want to have, and I think it's a fantastic thing for the Society to do," he said. "It is something that desperately needs to be done well, and it's one of those things the SNM can do well because it has access to all the experts in the field."

[*Nuclear Medicine: Self-Study Program I* is priced at $90 for SNM members, $115 for non-members, and $75 for residents and technologists. For more information or to order a copy, contact the Society of Nuclear Medicine, Department 588J, 136 Madison Avenue, New York, NY 10016-6760, (212) 889-0717. Information can also be obtained at the SNM publications booth during the Annual Meeting, June 14–17, 1988, at the Moscone Convention Center in San Francisco, California.] ■

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ficant modifications by the user. Dr. Gemignani said there's a saying in computer science, albeit an overstatement but nonetheless revealing, that every time you correct one bug in a program you introduce another. When physicians or physicists alter program features, the result could be software that malfunctions in unexpected ways. "The FDA doesn't accommodate that," Mr. Basile pointed out. At some point, recertification may be advisable, but at what point?

Perhaps, Dr. Gemignani noted, the small risk of software malfunction in medical devices is worth taking, in the same way that society accepts the risk of airplane crashes in exchange for the convenience of air travel. The FDA shouldn't allow poorly designed software any more than it allows unsafe pharmaceuticals, he said, but regulations should be directed toward requiring manufacturers to test for the most common problems under reasonable conditions. The agency could license software separately for each individual combination of computer hardware and operating system and require the use of the available debugging devices, but beyond that, he said, "I think you've got to let it fly—either that or don't use it at all."

Currently the FDA is evaluating the positive and negative comments that have been received on the proposed policy, Mr. Hamilton said. Dr. Murray added that the agency is considering fitting the level of scrutiny of the software to the level of hazard posed to the patient by a malfunction.

The FDA is also grappling with questions about competent human intervention. For example, if a computer that transmits images over the telephone must compress the data before transmittal, making the received image less detailed than the original, then is the physician on the other end of the line competent to intervene if something goes awry? What kind of data does he or she need to make such a judgment? Or if an expert system provides a list of probable diagnoses, does it also provide enough data for competent human intervention if the computer is wrong? If output can be intelligently interpreted by an expert, then the validity of the interpretation is a scientific issue, not a regulatory one, said Harold Schoolman, MD, deputy director for research and education at the National Library of Medicine, Bethesda, Maryland, which provides support for medical computing. "If the output is accepted on faith, then the argument for regulation becomes much stronger, indeed compelling" when patient health is at stake, he added.

The FDA has accepted NEMA and the Washington-based Health Industry Manufacturers Association (HIMA)'s offer to contribute to the process of constructing a policy that best meets the goals of all parties involved. These and other industry groups have begun meeting to come to a consensus, and will be seeking the FDA's input as they work to develop a workable suggestion. FDA officials emphasize that they are not insensitive to industry's concerns, but that they feel a strong obligation to fulfill their congressional mandate. As Mr. Hamilton put it: "Our mission is to protect the public."

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