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BEYOND SKIN DEEP

In learning to treat the skin—the mirror of internal diseases—dermatology residents inject dermatologic care into a host of other specialties.

By Nelly Edmondson Gupta

In 1993, Bijan Safai, M.D., professor of dermatology, took over as chairman of the Department of Dermatology at New York Medical College in Valhalla. Several years later, he moved the residency program from Westchester to upper Manhattan's Metropolitan Hospital Center, a public hospital and College affiliate that treats many underserved patients. This move turned out to be a boon for both the residency program and the patient population it serves.

"I brought the residency to the patients," says Dr. Safai. By that he means that taking care of a more diverse, inner city population gives the future dermatologists under his tutelage an opportunity to treat the full spectrum of clinical diseases. The residents care for everything from acne to leprosy to *toxic epidermal necrolysis* (TEN), a potentially deadly skin disease that usually results from a drug reaction.

There are other benefits as well. "One of the great things about working at Metropolitan Hospital is that we see patients from varied ethnicities," says first-year resident Lavanya Krishnan, M.D., one of 10 residents currently enrolled in the College-sponsored program. Many skin diseases, she explains, present very distinctively in different types of skin. For example, rashes that appear on deeply pigmented skin tend to be more subtle or textured. If a doctor isn't well-versed in these skin differences, making an accurate diagnosis can be especially challenging.

Residents' learning touches on the entire spectrum of medical dermatology, including immunologic diseases of the skin, cutaneous lymphomas and sarcomas, drug eruptions, genetic syndromes affecting the skin, and dermatologic emergencies. They also learn how to perform laser surgery, Mohs micrographic surgery, blepharoplasty and skin cancer removal. In short, they learn it all. "We could write a textbook" with the

experiences she and the other residents gain from treating patients, says Jodi Langer, M.D., who serves as co-chief resident with William Rietkerk, M.D.

MANY CALLED, FEW CHOSEN

Considered among the nation's best, the New York Medical College dermatology residency program is very competitive. From more than 300 applicants, just three are chosen annually. To be selected, says Dr. Safai, a resident "must have an intelligent mind and be able to quickly retrieve and grasp a lot of information." She or he also must be a clear thinker, a good writer and an effective "people person." Finally, says Dr. Safai, residents must be able to learn independently *and* be good team players.

In fact, the competition for dermatology residency slots has become increasingly stiff nationwide. "When I took over, residents were mostly selected from the New York area," says Dr. Safai. "Now we get the best applicants from all over the country."

In addition to working with a wide variety of interesting patients, one of the best things about the NYMC program, say the residents, is the solid grounding in both clinical work and pathology. "One of the things that initially attracted me to NYMC was this clinical-pathologic correlation," says first-year resident James Highsmith, M.D. In other programs, he explains, residents may learn to read pathology slides, but not necessarily the slides they themselves have prepared from biopsies. "It's nice to see the clinical picture—your patients—and then review their biopsy slides under the microscope," says Dr. Highsmith. "It really helps you learn and remember."

TEACHER, TEACH THYSELF

Yet another draw for the NYMC program is the fact that all dermatology residents have plenty of opportunities to teach as well as learn. Each week the residents complete multiple academic duties, including journal reviews of medical and surgical dermatology, Kodachrome sessions (clinical slides used for diagnostic practice), pathology training and book review lectures. The residents take turns delivering lectures to their peers on topics in the main textbook. In order to answer questions and provide background and context, the designated lecturer must go beyond the text, thereby deepening his or her knowledge base.

The dermatology residents also teach medical students and give lectures to other departments. "Medical students have a limited exposure to dermatologic disease during med school, but many other specialties, such as internal medicine and pediatrics, need significant knowledge about the skin," explains Richard McCarrick, M.D., vice dean for graduate medical



Dermatology director and department chair Bijan Safai, M.D., above, says the highly competitive program at New York Medical College admits only three new residents per year. Residents Lavanya Krishnan, M.D., and William Rietkerk, M.D., prepare to treat a patient at Metropolitan Hospital Center.

education and affiliations. "So they rely on the dermatology residents to build their knowledge of skin diseases."

Although relatively few patients are admitted to hospitals solely because of skin conditions, they may have skin problems in tandem with other disorders. For example, a psychiatric patient may be admitted in crisis, and a subsequent physical exam reveals a rash or severe lesions on his lower back. Having dermatology residents available for consult enables the psychiatric team to provide comprehensive care. "There is a tremendous benefit to having a derm residency in a hospital that goes far beyond treating patients who present with primary skin problems," says Dr. McCarrick. "Throughout the hospital, having derm residents and attendings is clinically and educationally very helpful."

The residents truly must learn to master the art of diagnosis in order to recognize underlying systemic conditions. In fact, the residents and their supervising attending physicians provide dermatologic consultation for all inpatient services and ambulatory care programs. They have to know the basics of internal medicine, pediatrics, neurology, surgery and psychiatry to be able to competently integrate dermatologic care into all of these fields.

IT'S NATIONAL AND PERSONAL

Indeed, dermatology has been getting more respect from all quarters lately, and is now *the* most competitive specialty. In recent years, many American medical school graduates have

been migrating away from primary care and general surgery. As a recent article in *The New York Times* noted, dermatology—like plastic surgery and otolaryngology—provides relatively controllable hours, autonomy, and improved quality of life, and has the added benefit of being the kind of doctor patients actually like and want to visit.

Second-year resident Kathryn Russell, M.D., says that while she was growing up in Sarasota, Fla., her dermatologist "was the only doctor I enjoyed going to." Every year, her mother took fair-skinned, redheaded Kathryn to a dermatologist for a full-body skin exam; the Russells have a family history of skin cancer and Kathryn is at increased risk. Instead of dreading these medical visits, she actually looked forward to learning about her skin, hair and nails during her examinations. Dermatology "is a very fulfilling field because patients really appreciate you," she says. "You treat them, and they look better—and feel better about themselves."

HAVING SKIN IN THE GAME

"There's a whole list of reasons to go into dermatology," says second-year resident Robert Lott, M.D. He points out that research in the field of cutaneous immunology and molecular biology of skin is moving at a rapid pace. "As a result, we are developing a better understanding of the immunologic and molecular pathogenesis of skin disease leading to optimized diagnosis, management and treatment of patients," he says.

These new developments are helping researchers create "designer drugs" for the treatment of skin-related autoimmune diseases, like psoriasis. "Many systems collide in the skin," notes co-chief resident Langer. "The skin is a mirror of internal diseases, with sequelae from immunologic, neurologic, infectious, endocrine and neoplastic processes." This "collision" is evident in many systemic diseases, such as lupus, some cancers, hypercholesterolemia and liver disease, which often show up first on the skin. In other words, adds Dr. Langer, "The research we're doing on skin may have greater applications beyond the skin."

Each year, every NYMC dermatology resident must undertake an intensive research project. This year, they are studying a broad array of topics, including polymorphisms of non-melanoma skin cancers, skin stem cells, which can be

used for growing hair and curing some of the blistering diseases of childhood, and skin manifestations of graft vs. host disease, a serious condition that can develop after bone marrow transplantation.

"Dermatology is a rapidly evolving field, and cutting-edge in terms of new technology," adds Dr. McCarrick. "Dermatologists are in great demand, and there's a shortage in many parts of the country."

Drs. McCarrick and Safai believe this group of residents will become experts and leaders in the field. Every year, says Dr. Safai, he continues to be pleasantly surprised. "Our dermatology residents are committed and diligent, and they are here to learn. They study hard, help each other and work well as a team." ■

Residents gather weekly for peer-teaching sessions. Clockwise from the presenter, Pantea Hashemi, M.D., are Jodi Langer, M.D.; David Weinstein, M.D.; Jennifer Leininger, M.D.; Lavanya Krishnan, M.D.; Robert Lott, M.D.; William Rietkerk, M.D.; Jennifer Vickers, M.D.; Kathryn Russell, M.D.; and Bijan Safai, M.D., professor and chairman. Not pictured is resident James Highsmith, M.D.



A REAL HONOR

In February, Dr. Safai was elected president of the Physician Affiliate Group of New York (PAGNY), made up of more than 2,500 physicians and health care professionals who provide services to the half dozen hospitals that comprise the New York City Health and Hospitals Corporation (HHC), the largest public health system in the U.S. "It is quite an honor for me to be trusted by my colleagues and elected as president of such an important organization," Dr. Safai says.