



Clinical Update January 2008

Steering Medical Students Toward Rural Practices

Andrea Manyon MD, chair of the Department of Family Medicine, is leading SUNY Upstate's efforts to address physician shortages in rural regions.

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Molecular Testing of Solid Tumors

By detecting genetic alterations in tumor cells, SUNY Upstate pathologists can now provide a more accurate diagnosis and prognosis – as well as more targeted therapeutic recommendations for brain, breast, lung and other cancers.

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Interrupting Esophageal Cancer

University Hospital is the region's first facility to offer a promising non-surgical treatment for Barrett's esophagus, a precursor to esophageal cancer.

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THE ACADEMIC DIFFERENCE

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Andrea Manyon MD, Family Medicine Chair: A Map for Addressing Rural Physician Shortages

As alarm about projected physician shortages spreads – especially in rural areas – Andrea Manyon MD, chair of family medicine at SUNY Upstate, is already implementing a regional strategy for addressing these shortages. In the conversation below, Dr. Manyon shares highlights of her department's plan – and insights into her personal passion for family medicine in general and rural medicine in particular.

Dr. Manyon, where do you begin to address this problem of physician coverage in less-populated areas?



Andrea Manyon MD

AM: One strategy is surprisingly simple: we look at the high school zip codes of our medical school applicants. It's no guarantee of where the student will practice, but history suggests that we often gravitate to where we were raised.

But the challenge is obviously much more complex. SUNY Upstate has also designed a Rural Medical Scholars Program (RMSP),

which builds on the strong foundation of our Rural Medical Education (RMED) Program. Established in 1989 by Dr. L. Thomas Wolff, a distinguished teaching professor in the Department of Family Medicine, RMED places medical graduates in extended clerkships with rural practitioners (see pg. A3).

Now our goal is to have 20 percent RMSP students in each class of 160 medical students.

SUNY Upstate, under the leadership of President David Smith MD, will offer new support to the program to allow the reinstatement of student stipends and support for rural preceptors. In fall 2008, we hope to have at least 10 percent of the class begin as Rural Medical Scholars. Our admissions committee has recently re-focused its screening to select qualified New York state students with strong interest in rural medicine.

How can rural communities help SUNY Upstate address these shortages?

AM: As we've witnessed in RMED, positive educational experiences play a powerful role in steering students toward rural practices. We are already partnering with regional hospitals and rural physicians, and we plan to steadily expand and strengthen this training network.

What inspires your personal passion for rural medicine?

AM: For eight years, I was fortunate to serve as a rural family physician in Gowanda, NY. Together with my partners, we made house calls, delivered babies and cared for multiple generations in the same family. In the course of a single morning, I might see an older gentleman with heart disease, a baby who'd been treated for seizures in the ER and a young woman with appendicitis. We dealt with every body system, both genders, all ages. I selected family medicine because I was unable to focus on just one body system. Family physicians are trained to manage complexity and the whole person.

I loved that every time I knocked on an exam room door, I could never fully predict what I might need to address.

What drew you to academic medicine?

AM: As much as I loved the variety of family medicine, I grew to love the variety of academic medicine. Academic medicine gives me the opportunity to teach, to create educational programs and to write. In 1992,

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SUNY UPSTATE MEDICAL UNIVERSITY & University Hospital

Syracuse, New York



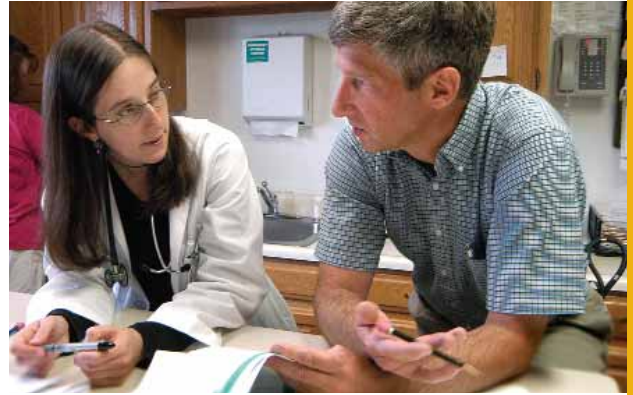
I was invited to join the Department of Family Medicine at the University at Buffalo, and I became increasingly involved in medical education. I served first as director of medical student education, then as residency program director. All of my research has been in medical education, and I have a particular interest in assuring that medical students develop strong communication skills.

What makes physician-patient communication so critical?

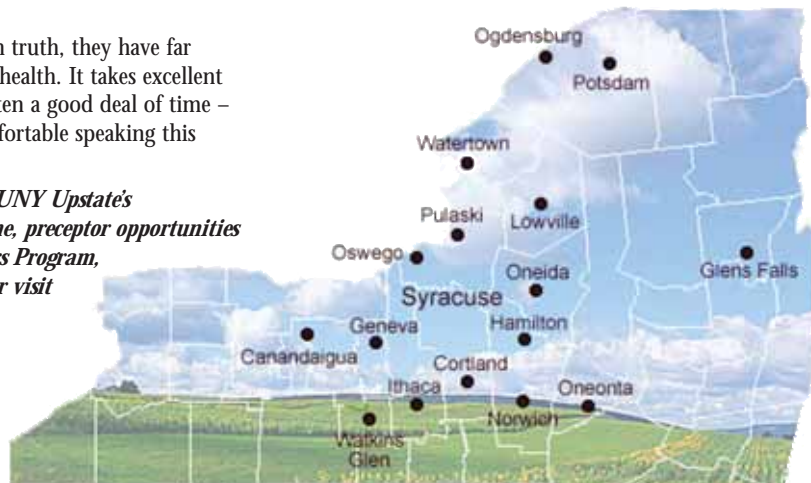
AM: Good communication is the basis of any relationship, but physicians with good communication skills? They can help persuade patients to understand and hopefully change unhealthy behaviors. I think one of the great frustrations we face as physicians is the patient's misconception that we can write a prescription to cure every health problem.

We can guide patients – but, in truth, they have far more influence over their own health. It takes excellent communication skills – and often a good deal of time – for a physician to become comfortable speaking this truth to patients.

For more information about SUNY Upstate's Department of Family Medicine, preceptor opportunities and the Rural Medical Scholars Program, please contact 315.464.7010 or visit www.upstate.edu/fined/rmed/overview.php



Preceptor Dr. John Wight discusses a patient with SUNY Upstate RMED student Amy Sucheski. After completing their residencies, several RMED students have returned to join Dr. Wight's practice.



RMED Communities

Preceptor Dr. Corliss Varnum of Oswego (back to camera) talks with SUNY Upstate RMED student Michael Greene.



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Molecular Testing of Solid Tumors

SUNY Upstate pathologists recruited from Johns Hopkins and St. Jude's

Molecular testing on solid tumors is now available through the Special Procedures Laboratory in SUNY Upstate Medical University's Department of Pathology.

The SUNY Upstate Laboratory is the only New York state facility approved to offer molecular testing for various solid tumors, including brain tumors, breast tumors, lung cancers, pediatric tumors and soft-tissue tumors.

Major Investment

The new service represents a major investment and recruiting effort by SUNY Upstate's Department of Pathology.

To direct the molecular testing program, SUNY Upstate recruited two nationally recognized pathologists from high-profile cancer centers: Dr. Shengle Zhang, from Johns Hopkins, and Dr. Christine Fuller, from St. Jude's Children's Research Hospital (see pg. A5).

Major Advance

Molecular testing represents a major diagnostic – and prognostic – advance. “Under a microscope, a lot of tumors look similar,” explains Dr. Zhang, medical director of the new laboratory. “Molecular testing allows

us to detect genetic alterations within cells as specific markers for diagnosis and prognosis and for predicting response to tumor therapy.”

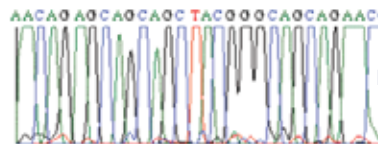
“With this information, we can make a more accurate diagnosis and prognosis,” notes Dr. Fuller. “Often, we can also predict the most beneficial therapy, including targeted molecular therapies.

“This is very significant – our ability to predict patient response to therapy,” she stresses.

“Because molecular testing generates so much information, our reports are very comprehensive,” Dr. Fuller continues. “We go far beyond the one-line diagnosis and provide a lot of detail, with pictures. Our physicians are also available to discuss findings, because these are very complicated cases.”

For more information about SUNY Upstate's molecular diagnostics capabilities, as well as instructions for sample submission, please visit:

www.upstate.edu/uH/pathology/services/molecular.php

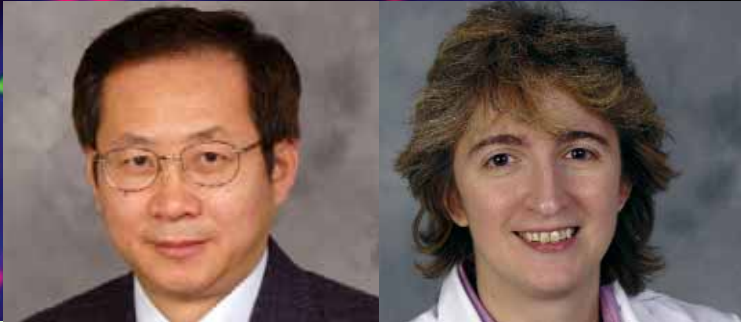


Ewing Sarcoma
RT-PCR

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Molecular Diagnostic Faculty

Shengle Zhang MD, assistant professor of pathology, is medical director of SUNY Upstate's Special Procedures Laboratory. He is board-certified in anatomic and clinical pathology and has completed a fellowship in surgical pathology at Roswell Park Cancer Center in Buffalo and another fellowship in molecular diagnostics at Johns Hopkins Institutions in Baltimore. His research focus is molecular oncology, and he has published more than 40 articles and abstracts.

Christine Fuller MD, associate professor and associate director of the Special Procedures Laboratory, is board-certified in anatomic and clinical pathology and neuropathology. A 1995 graduate of the SUNY Upstate College of Medicine, she completed her residency in anatomic and clinical pathology at Upstate, as well as a fellowship in surgical pathology and neuropathology at Washington University School of Medicine. Dr. Fuller previously served as medical director of the FISH Laboratory at St. Jude's Children's Research Hospital in Memphis, TN.

Her research focus is the molecular pathology of central nervous system tumors, and she has published more than 40 abstracts, 53 manuscripts and several review articles.

Molecular Testing Menu

- PCR
- FISH
- RT-PCR
- CISH

for adult and pediatric solid tumors including brain tumors, breast tumors, lung cancers and soft-tissue tumors.

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University Hospital offers the region's first **Non-surgical treatment of Barrett's Esophagus**

University Hospital is the only hospital in the region to offer the most advanced, non-surgical treatment proven in clinical trials to cure Barrett's esophagus, a precursor to a type of esophageal cancer. Rates of esophageal cancer have been rising rapidly in the United States.

According to University Hospital gastroenterologist Ronald Szykowski MD, who brought the technique to the region, the standard of care for other precancerous conditions, such as polyps, is to remove the suspected lesion. Yet, he says, the current standard of care for Barrett's esophagus is to watch and wait, surveying patients on a periodic basis.

"This new FDA-approved treatment allows us to simultaneously prevent cancer and reduce anxiety for patients who have to live with a premalignant condition," said Dr. Szykowski.

The treatment uses HALO, an endoscope-mounted ablation system by BARRX Medical Inc. The system has two components: an ablative energy generator and an

ablation catheter featuring a small electrode that can be mounted on the end of an endoscope. It was approved by the Food and Drug Administration in 2006 and became commercially available in the United States last January.

Using standard endoscopic skills, the physician directs the ablation catheter to the diseased area of the sedated patient's esophagus. The HALO energy generator is then activated to deliver a rapid (less than one second) burst of ablative energy, or controlled heat, that removes less than a one-millimeter layer of the diseased esophagus. The removal of tissue is tightly controlled so as to avoid injury to the normal, healthy underlying tissues. To date, the system has been safely evaluated in more than 5,000 patients.

"The 20-minute procedure is well tolerated by patients," said Dr. Szykowski, who added that patients can return to normal activity following the procedure. "Following ablation with the HALO System, the diseased tissue in most patients is replaced by new healthy tissue within three to four weeks."

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Illustration courtesy of Mark Colella and BARRX Medical Inc.

In clinical studies, after 30 months, more than 90 percent of participants were Barrett's-free after one to two treatment sessions. After more than two and a half years of treatment, 98.4 percent of patients with Barrett's had no residual Barrett's esophagus tissue.

Barrett's esophagus, a precancerous condition, results from chronic exposure of the esophagus to the gastric contents of the stomach caused by gastroesophageal reflux disease, commonly known as GERD. With prolonged acid exposure, normal cells can undergo a genetic change and transform into taller columnar cells. These Barrett's cells are vulnerable to further changes that can lead to esophageal adenocarcinoma, the most rapidly rising cancer in the United States, affecting about 3-million adults.

Above: The BARRX Medical HALO System provides uniform and controlled therapy at a consistent depth, which can remove Barrett's esophagus and allow the regrowth of normal cells.

Inset: Ronald Szyjowski MD