



Clinical Update

March 2004

## Drawing Attention to Concussion

University Hospital's Concussion Management Program is raising awareness about the easy-to-overlook perils of concussion, especially sports-related concussion.

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## Branching Out into Vascular Surgery

University Hospital's Department of Surgery establishes a Vascular Surgery Section and names as its chief Vivian Gahtan MD, a recent arrival from Yale New Haven Hospital.

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## Onward and Upward

SUNY Upstate President Gregory Eastwood MD details plans for University Hospital's \$100 million east wing expansion.

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# The Perils of Concussion

Pounding Home Critical Message Is Mission of Concussion Management Program



**W**hen University Hospital Psychologist Brian Rieger PhD reads the sports page, he's not just following his favorite teams. Dr. Rieger, director of University Hospital's Concussion Management Program, is gathering evidence that sports-related concussions merit more serious medical attention and public awareness.

Dr. Rieger has a stack of sports clippings, and a wealth of personal clinical experience, demonstrating that concussions – sports-related or not – can lead to months of miserable symptoms and serious, long-term brain damage. That's why Dr. Rieger is leading a University Hospital campaign to improve the evaluation, monitoring and management of concussion.

## Elusive Symptoms

The signs of a concussion – an injury in which the brain is shaken inside the skull – can be elusive, according to Dr. Rieger. Symptoms such as headache, confusion and memory loss often worsen in the first 24 hours after injury. Most people do recover from concussion, but this can take weeks or months. Up to 20 percent of cases will have symptoms that persist for a year or longer. Regardless of how long symptoms last, patients can be helped by early education and medical management.

If an injured athlete returns to play before the symptoms are fully apparent – or before the concussion has healed – the risk of severe, permanent damage dramatically increases. Compounding that risk is limited or incomplete knowledge about concussion among athletes, coaches, parents and even many medical professionals. That's why the Concussion Management Program is working to dispel the myths surrounding concussion. For instance, one common misconception is that only a blackout indicates serious risk (see page A4).

*Psychologist Brian Rieger PhD  
Director, University Hospital Concussion Management Program  
Director, Rehabilitation Psychology, University Hospital*



**Concussion:** mild traumatic brain injury that occurs when a blow or jolt to the head disrupts the normal functioning of the brain. It can also be caused by whiplash. Some people lose consciousness after concussion, but others are just dazed or confused.



Sample computerized test of cognitive function performed one day post-injury. After 14 days, the same patient's test showed normal (green) function.

### Topic du jour

Millions of Americans suffer a concussion every year, but only about 300,000 are sports-related. “Car accidents, falls and assaults cause far more concussions than sports,” Dr. Rieger concedes. “But sports injuries have much higher visibility. On professional football teams, for instance, this is the topic du jour. We’re taking advantage of this trend to help make our case about concussions.” Along these lines, Dr. Rieger and his colleagues are set to open the Central New York Sports Concussion Center at the Institute for Human Performance (IHP) in spring 2004.

University Hospital’s Concussion Management Program takes a multidisciplinary approach to concussion treatment and involves physicians, psychologists, a nurse case manager, and physical and occupational therapists as needed. “Without proper management, patients can be miserable for months,” Dr. Rieger explains. “Severe headaches, fatigue, loss of coordination and memory can be frightening if a patient doesn’t understand what’s going on or how long it takes to heal.”

### Sideline Debate

Sports-related concussions are especially perilous, because there is often pressure – from a variety of sources – to have the athlete return to the game. “Coaches and trainers aren’t always knowledgeable about the potential consequences. And in the heat of the game, players aren’t always forthcoming about symptoms. This is why we’re planning a major awareness campaign, aimed at coaches, trainers, school nurses, parents and players,” explains Dr. Rieger.

The Concussion Management Program already collaborates with Syracuse University and Onondaga Community College to proactively measure athletes’ cognitive function. According to Dr. Rieger, the computerized

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Above left: Occupational therapist Kim Nemi is therapy coordinator of Upstate's CNY Sports Concussion Center at the Institute for Human performance.



At right: Physical therapist Timothy Stayer and Brian Rieger PhD, director, test the balance master at the CNY Sports Concussion Center with the help of research assistant Sarah Mitchell.

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tests (funded by University Hospital's Department of Physical Medicine and Rehabilitation) provide a baseline for measuring recovery after a concussion. "When an injured athlete regains the original level of cognitive function, that's a green light for return to play," he explains. "These are the same kinds of tests used by the National Football League and other professional sports."

### High School Outreach

The next frontier for University Hospital's Concussion Management Program is to offer local high schools similar education and testing services.

Dr. Rieger, whose research focus is on the impact of concussions in the classroom, collects data on athletes' post-concussion cognitive function. He is seeking funding to conduct a major study in that area, utilizing the IHP's world-class functional magnetic resonance imaging (fMRI) equipment.

"So many people at University Hospital are on board with our concussion work – neurosurgeons, trauma surgeons,

## MYTHS ABOUT Concussion

- If you weren't knocked out, you didn't suffer a concussion
- Everyone gets better in two weeks
- Once the headache goes away, everything will be fine
- If there's no visible injury, everything will be fine
- Concussion is a minor brain injury with no long-term effects
- You should play through the pain, so get back in the game

neurologists, emergency department personnel, physical therapists, researchers and more," reports Dr. Rieger. "This program is a rare resource, and we're fortunate to have an entire academic medical center behind us."

### International Issue

Dr. Rieger is pleased to see growing awareness of concussions, especially in the medical community. The first concussion-focused international conference was held in 2001 in Vienna. "It recommended that any athlete who appears to have suffered a concussion should be automatically removed from play for at least 24 hours," reports Dr. Rieger. "It's too difficult, at that point, to determine if they'll be OK. At the high school level, there is absolutely no excuse not to take the athlete out."

"When in doubt, sit them out," Dr. Rieger concludes. "That's the catch-phrase right now for good concussion management in sports, and the Concussion Management Program will be glad to take responsibility for the decision."



# New Vascular Surgery Chief

The Department of Surgery at University Hospital has established a Vascular Surgery Section and named Vivian Gahtan MD, recently appointed professor of surgery, as chief of the new section.

Dr. Gahtan comes to University Hospital from the Yale New Haven Hospital, where she was an attending surgeon, and the VA Connecticut Health Care System, where she was chief of peripheral vascular surgery.

Dr. Gahtan is certified by the American Board of Surgery with special qualification in vascular surgery. Among the conditions she treats are carotid artery disease, aortic aneurysm disease, lower extremity arterial insufficiency, chronic venous insufficiency and varicose veins. She offers both open and, in collaboration with the interventional radiologists, endovascular approaches to many procedures. Dr. Gahtan also provides dialysis access placement.

Dr. Gahtan earned her medical degree at George Washington University and completed a five year residency in general surgery, plus a two-year fellowship in vascular surgery at the University of South Florida. She also served for three years as an assistant professor of surgery at MCP-Hahnemann School of Medicine in Philadelphia.

Dr. Gahtan was attracted to vascular surgery by the intricacy of the surgical procedures and the long-term nature of the patient relationships. "In contrast to a trauma surgeon, a vascular surgeon often follows a

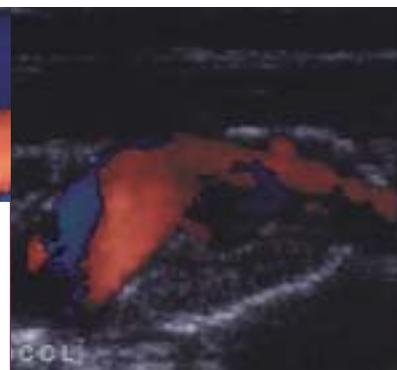
patient for life," she explains. "I also like the fact that most of what we do as vascular surgeons is palliative – we lessen the burden of aging, prolong the patient's function and improve the quality of life."

Dr. Gahtan was attracted to University Hospital by its potential for building a strong vascular surgery program and by its sophisticated resources, such as its accredited Vascular Lab, the Institute for Human Performance and hyperbaric oxygen chambers. "With the Joslin Diabetes Center here at University Hospital, I also see potential for building a limb salvage program," she says.

In Syracuse, Dr. Gahtan continues her affiliation with the VA Healthcare Network, her clinical research into functional outcomes after vascular reconstruction, and her basic research studying vascular smooth muscle cell migration and smooth muscle cell-extracellular matrix interactions.

To date, she has published close to 100 journal articles, book chapters and abstracts.

One of Dr. Gahtan's first tasks, when she arrived in Syracuse in January, was to hire a full-time nurse practitioner, DeAnna Holtman. "I see her position as very important on many levels – especially patient education, discharge planning, and physician relationships," explains Dr. Gahtan. "Helping the patient make a smooth transition back to the referring physician is a very important piece of our vascular surgery program."



*Vivian Gahtan MD,  
Professor of  
Surgery, SUNY  
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University  
Hospital*



## Two of a Kind

Although she only recently arrived at SUNY Upstate Medical University, Dr. Vivian Gahtan has a long history with our surgical trailblazer, Dr. Patricia Numann. Dr. Gahtan currently serves as president of the Association of Women Surgeons, a highly regarded national group established by Dr. Numann in 1981. "I have worked with Dr. Numann for years," explains Dr. Gahtan. "Last year, I called her with a question about the group. The next day, I received a recruiting call from Dr. Numann's colleague, Surgery Chair Dr. Paul Cunningham. That's how it all began."



# GROWTH & Development

**I**t feels good to be in growth mode again. Here at SUNY Upstate, we're moving full steam ahead with the vertical expansion of University Hospital's east wing. Our plans call for a five-floor addition that will be crowned by the CNY Children's Hospital.

Expansion of the east wing has been anticipated since the building was added in the mid 1990s. But those of us who understand the workings of an academic medical center appreciate that delayed gratification comes with the territory.

The all-important Certificate of Need has been approved, and the architect who will work with us to design the addition over the next year has been selected. Because the new construction will be on top of the existing structure, no significant site preparation will be required. Thus, progress should be visible about one year from now, aiming toward an occupancy date of December 2007.

The total cost of constructing the east wing expansion will be nearly \$100 million, which is part of a bond authorization from the State of New York. Of that total, University Hospital - pleased to place our resources behind something that has

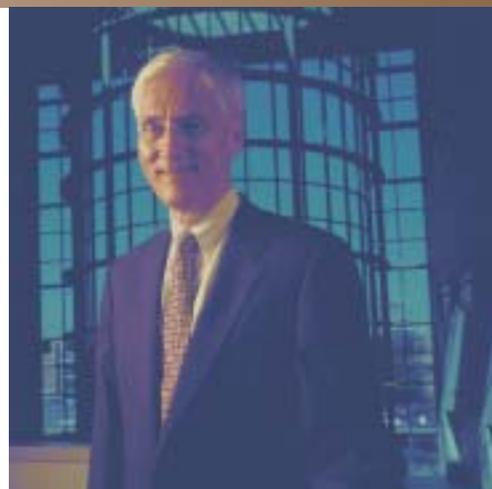
been on the collective agenda of our community for decades - will use \$35 million to construct the CNY Children's Hospital, which will occupy the top two floors of the east wing expansion.

In addition, we have engaged in a community campaign to raise \$15 million for equipment, programmatic costs and other features that will make the Children's Hospital a special place for children and their families.

Under the dynamic leadership of Pediatric Chair Dr. Thomas Welch, Children's Hospital Campaign Chair Mary Ann Shaw, Vice President for Development Eileen Pezzi, and the Upstate Foundation Board led by Don Denton, the necessary forces are aligned, including a cohesive vision, a collaborative spirit and the essential financial support.

Already, our community has embraced the CNY Children's Hospital like no other cause in my memory. I must say I am very gratified, but not surprised, by this response. This is a strong and cohesive community, with a generous heart and solid values.

The Children's Hospital may be the centerpiece, but the east wing expansion will feature three other institu-



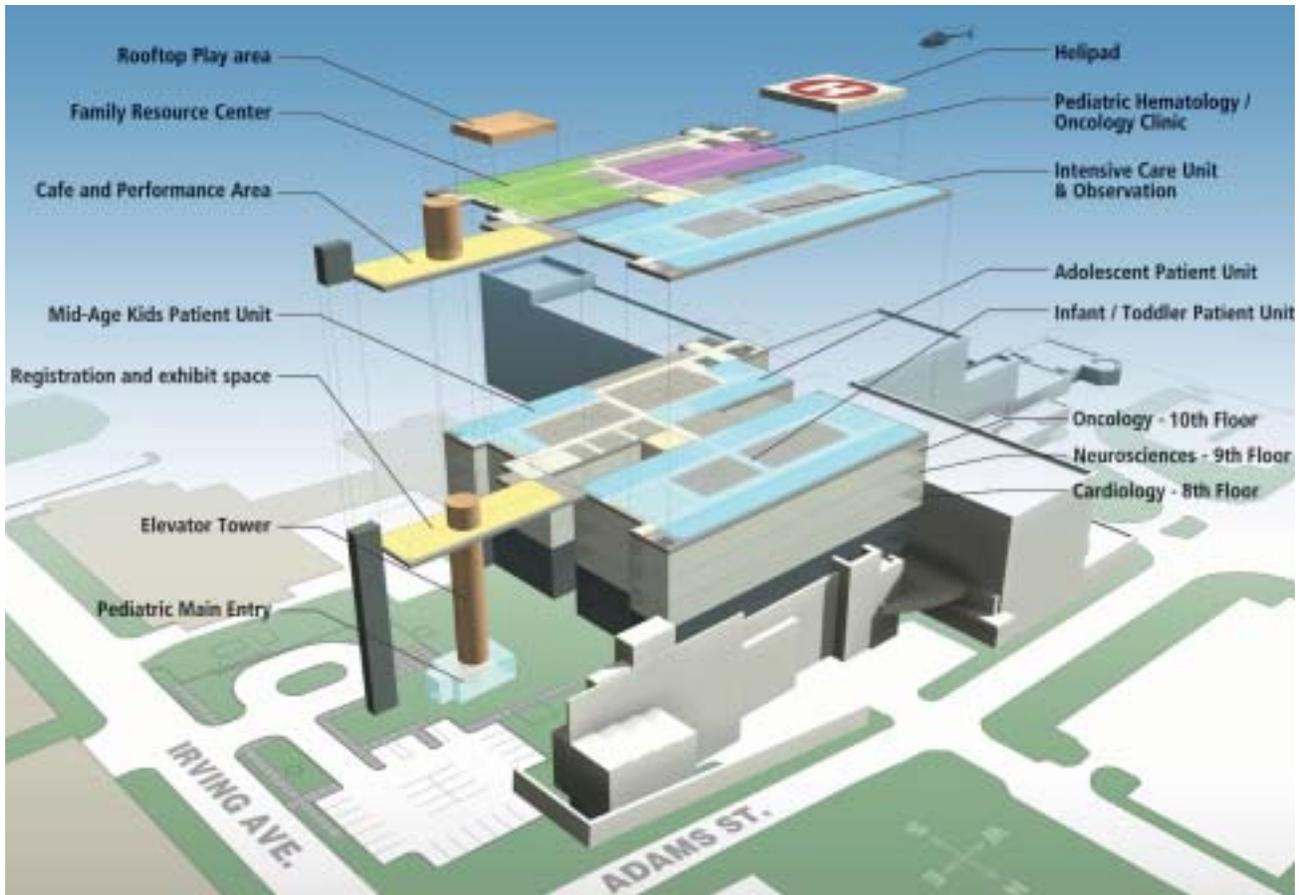
*Gregory L. Eastwood MD  
President, SUNY Upstate Medical University*

tional priorities in the remaining additional floors: neuroscience, oncology and cardiovascular.

Neuroscience, for example, has had a long historical identity with Upstate in both research and clinical services. In the 1990s - widely considered "the decade of the brain" - we added the Gamma Knife and other new approaches to brain and spine surgery, and we reinforced the institutional commitment to neuroscience by changing the name of the Department of Physiology to the Department of Neuroscience and Physiology.

# SUNY UPSTATE MEDICAL UNIVERSITY & University Hospital

Syracuse, New York



Conceptual building plan. Karlsberger Architects, Columbus, Ohio.

Our increasingly multidisciplinary program in cancer care has also made dramatic strides forward, exemplified by its recent accreditation from the American College of Surgeons' Commission on Cancer. This badge of honor is awarded to only one in four hospitals nationwide. An entire floor of the east wing expansion will be dedicated to cancer care, allowing us to concentrate advanced cancer services within one place – much like the rationale behind the CNY Children's Hospital.

SUNY Upstate's world-class Institute for Cardiovascular Research has inspired us to dedicate additional clinical resources, including one floor of the east wing expansion, to cardiac

care. The ranking of heart disease as the leading cause of death in our nation is added rationale for focusing more resources in this area.

No small part of the east wing expansion will be its addition of private, family-friendly rooms for our patients. Our original University Hospital building, designed in the late 1950s and opened in 1965, is nearly a half century out of date.

A final note on our plans for the new and improved east wing. The expansion is less than 50-feet from Crouse Hospital. The expansion is designed to be Crouse-friendly in its physical location and in its clinical programs – pediatrics, cancer, neurosciences

and cardiovascular disorders. My vision is that some day Crouse Hospital and University Hospital will be one thriving academic medical center, serving the needs of the Central New York region and recognized across the nation for its clinical, education and research programs.

So here's to a new year and a new era for SUNY Upstate Medical University, University Hospital and Central New York health care. Our ongoing quest for excellence is something which unites us all.

–Gregory L. Eastwood MD,  
President,  
SUNY Upstate Medical University