Encouraging is the best way to describe the past year.

We saw the many years of research conducted by Dr. Daron Ferris, director of the MCG Gynecologic Cancer Prevention Center, result in Food and Drug Administration approval of the human papillomavirus vaccine, Gardasil. This is an encouraging new development that will help prevent the spread of HPV, for which there is no cure. HPV is a sexually transmitted disease that causes genital warts, abnormal Pap tests and cervical cancer.

We opened the five-story, 160,000-square-foot MCG Cancer Research Center in March. This glass and concrete building is the hub of focused, expanded and promising scientific initiatives. We are confident that this $54 million state-of-the-art facility will provide our physician-scientists and Ph.D. researchers with the environment and tools needed to produce the cancer breakthroughs of the future. Within two years, we expect to build a permanent treatment and clinical research facility.

Perhaps the most encouraging achievement this year was the recruitment of Dr. Kapil Bhalla to be director of the MCG Cancer Center, and the Cecil F. Whitaker, Jr., M.D. chair. Formerly, Dr. Bhalla was the scientific director of the Hematologic Malignancies Program at the H. Lee Moffitt Cancer Center & Research Institute in Tampa, Fla.

Dr. Bhalla is an internationally known investigator and clinician who will expand existing research programs in immunology and immunotherapy, developmental therapeutics and molecular profiling. He will create new programs in molecular biology and cancer prevention. His proven expertise will be a tremendous asset as we continue to develop a cancer program where exceptional clinical quality, academic excellence and innovative research combine to provide optimal care for patients.

In the following pages, you will learn about these and other achievements of the past year. You also will meet some of the faces behind the statistics. We hope you will find their stories inspiring, and that you will be as encouraged as we are by the significant progress we have made in preventing, diagnosing and treating cancer.

Sincerely,

Daniel W. Rahn, MD
President
Medical College of Georgia

Don Snell
President and CEO
MCG Health, Inc.

July 1, 2006
MCG’s clinical cancer care expanded significantly in 2006 with the addition of several new cancer specialists – Dr. Thomas A. Samuel, Dr. Teresa A. Coleman, Dr. Paul A. Bilodeau, Dr. Celalettin Ustun and Dr. Kavita Natarajan. They are key additions as we develop a well-rounded portfolio of procedures. The skills they bring are necessary for a comprehensive cancer center.

Dr. Samuel came to us from Temple University/Fox Chase Cancer Center in Philadelphia, where he was associate director of the Hematology/Oncology Fellowship Program. He specializes in breast and lung cancer.

Dr. Coleman is a graduate of the MCG School of Medicine. She previously worked at Phoebe Cancer Center in Albany, Ga., and the Comprehensive Cancer Center at Wake Forest University Baptist Medical Center. She returned to MCG to focus on prostate, bladder and kidney cancer.

Dr. Bilodeau was an internist in Augusta before completing a hematology/oncology fellowship at MCG and beginning a 16-year practice with Augusta Oncology Associates, P.C. He is medical director of the health system’s Cancer Center.

Dr. Ustun is an expert in leukemia, lymphoma, myeloma and transplantation. She joined us after completing a three-month fellowship at Fred Hutchinson Cancer Research Center in Seattle.

Dr. Natarajan specializes in bleeding and clotting disorders. Prior to beginning her fellowship training in hematology/oncology at MCG, she spent a year in the MCG Adult Sickle Cell Clinic. She is the director of the Hemophilia Program.

I am very proud to be a part of this multidisciplinary team. I am especially proud of the work we’ve done and the results we will yet achieve.

Sincerely,

Martha Terris, MD
Cancer Committee Chair
# Leadership

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Martha Terris, MD</td>
<td>Cancer Committee Chair*</td>
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<tr>
<td>Carole Ferrang</td>
<td>Quality Improvement Program Coordinator*</td>
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<tr>
<td>Christine Gourin, MD</td>
<td>Cancer Liaison/Community Outreach Coordinator*</td>
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<tr>
<td>Kathy Miles, NHA</td>
<td>Cancer Clinical Trials Subcommittee Chair</td>
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<tr>
<td>Miriam Williams, RHIA, CTR</td>
<td>Cancer Conference Program Coordinator*</td>
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<tr>
<td>Marilyn Yarmon, RHIA, CTR</td>
<td>Quality Control of Cancer Registry Data Coordinator*</td>
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# Members

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<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Andy Anderson</td>
<td>American Cancer Society Volunteer</td>
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<tr>
<td>John Barrett, MD, Ph.D.</td>
<td>Radiation Oncology*</td>
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<tr>
<td>James Brown, MD</td>
<td>Urologic Oncology</td>
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<td>Kim Cheely, RN, BSN, OCN, MHSA</td>
<td>Patient Care Services*</td>
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<tr>
<td>Michelle Christiano, CIP, CCRC</td>
<td>Human Research Protection</td>
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<tr>
<td>Susan Cobb, RN</td>
<td>MB CCOP Administrator</td>
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<tr>
<td>Wendy Davis, Pharm.D.</td>
<td>Oncology Pharmacy</td>
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<td>Henry Ferguson, DMD</td>
<td>Oral Surgery</td>
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<td>James Fulcher, MD</td>
<td>Pathology</td>
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<td>Sharad Ghamande, MD</td>
<td>Gynecologic Oncology</td>
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<tr>
<td>Judith Giri, Ph.D.</td>
<td>Tumor Bank</td>
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<td>Kimberly Gray, CCRP</td>
<td>Pediatric Clinical Research Data Manager</td>
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<td>Anne Herdman, MD</td>
<td>Pathology</td>
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<td>Sandy Hobbs</td>
<td>Community Outreach</td>
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<td>Deborah Humphrey</td>
<td>Public Relations</td>
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<td>Melia Jarriel, RHIA, CTR, CHP</td>
<td>Health Information Management Services</td>
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<td>Anand Jillella, MD</td>
<td>Hematology-Oncology*</td>
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<td>Debbie Johnson</td>
<td>Utilization Management*</td>
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<td>Amy Johnston</td>
<td>American Cancer Society</td>
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<td>Scott Lind, MD</td>
<td>Surgical Oncology*</td>
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<td>Steven McKinnon, RN, OCN</td>
<td>Clinical Research Data Manager*</td>
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<td>Sharmila Mehta, MD</td>
<td>Hematology-Oncology</td>
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<td>Jeremy Miller, MD</td>
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<td>James Rawson, MD</td>
<td>Radiology*</td>
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<td>Joseph Ricci, Ph.D.</td>
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<td>Elizabeth Rohde, CCRC</td>
<td>Oncology Clinical Trials Office</td>
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<td>Carolyn Sanders, CTR</td>
<td>Registry Services</td>
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<td>David Terris, MD</td>
<td>Otolaryngology – Head and Neck Surgery</td>
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<td>Roger Vega, MD</td>
<td>Pediatric Oncology</td>
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<td>Alfredo Voloschin, MD</td>
<td>Neuro-Oncology</td>
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<tr>
<td>Sally Weinrich, Ph.D., RN, FAAN</td>
<td>Nursing</td>
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*Position required for accreditation by the American College of Surgeons Commission on Cancer
Cancer is the leading cause of death in Georgia and in the nation. As a result, it is one of our top priorities. We have assembled multidisciplinary research and clinical teams to concentrate on specific cancers. This has made us a magnet for cancers that are difficult to treat. However, our researchers and clinicians are up to the task.

**Smoking Prevention Program Targets Kids**

More than 80 percent of lung cancers are preventable with one simple act – not picking up that first cigarette. Project WIN (Working In unison to Prevent Substance Abuse), conducted by lead investigator Dr. Martha Tingen, a nurse researcher at the MCG Georgia Prevention Institute, is an evidence-based intervention program that combines intensive training for teachers and counselors with in-class exercises designed to prevent or stop children from using tobacco. In addition, an at-home component includes activities for parents and children to complete together. Parents and guardians who are smokers and want to quit are also provided pharmacological treatment and psychosocial support.

Third- through fifth-grade students at Carver Elementary in Wadley, Ga., underwent training to learn about the harsh effects of tobacco as well as alcohol and drug use. The ongoing study hopes to determine whether child-based tobacco-prevention school programs impact parents and their decision to promote non-smoking, and whether parents’ work at home impacts the success of school programs.

**MCG Walkers Light the Night**

Approximately 20 MCG employees participated in the October 15, 2005, Light the Night Walk sponsored by the Leukemia and Lymphoma Society, raising $4,000 for the event. MCG Health System served as a Bronze sponsor of the event.

**Health System “Thinks Pink”**

The health system commemorated National Breast Cancer Awareness Month by “thinking pink” during October 2005. Celebratory pink ribbons adorned the trees surrounding the hospitals and clinics. On Fridays, every employee was encouraged to wear pink, and Lunch and Learn educational sessions were held for the community.

**New Technology Fights Tumors With Precision**

The Georgia Radiation Therapy Center has acquired the latest generation of linear accelerator technology to target tumors with laser-like precision. MCG radiation oncologists can treat tiny tumors with pencil-tip-size radiation beams that conform to the exact shape of the tumor. Like a global positioning system for the body, the technology uploads treatment information that is individualized for each patient, delivering higher radiation doses to tumors while sparing surrounding organs and tissue.
Ted Alba: Waiting for a Better Treatment

Ted Alba, 55, wasn’t too surprised when he was diagnosed with prostate cancer, which is second only to skin cancer in prevalence among American men. His younger brother had been diagnosed and treated two years earlier.

Dr. James Brown, an MCG urologist, performed laparoscopic surgery to remove the tumor. “He warned me going in that, if need be, we would switch to a traditional surgery, but fortunately, we didn’t need to,” Mr. Alba said.

Laparoscopic surgery involves inserting slender instruments, a scope and other tools through dime-sized slits in the body. Surgeons watch their progress on a monitor, precluding the need for major incisions that prolong recovery and increase the risk of side effects. “I was up and walking about the next day,” said Mr. Alba. “It was amazing.”

His surgery was followed by radiation, then hormone deprivation therapy when the cancer persisted. The treatment, which shuts down the production of testosterone, is a lifesaver but ideally a stopgap measure, according to Mr. Alba’s oncologist, Dr. Teresa Coleman. Research is brisk in areas such as monoclonal antibody therapy, she said.

“I just want to get prostate cancer out of the way so I can go on with my life,” said Mr. Alba. “I only need about three more years before a better treatment comes along.”
Tamika Cook: Advocate for Breast Cancer Awareness

Tamika Cook was only 27 when she became one of almost 200 breast cancer patients MCG Health System has treated in the past three years.

Her health care team’s top priority was ensuring a full recovery, a goal routinely achieved. Breast cancer deaths have dropped 24 percent nationwide since 1990, thanks largely to better treatments and screenings.

“I never thought I needed to get a mammogram at my age,” said Ms. Cook. “It was pure chance that I located the lump while shaving. Now, I urge all college-age women to begin receiving regular mammograms and to do monthly self-checks. I knew breast cancer was out there, but it doesn’t mean as much until it touches you.”

She underwent a mastectomy the day before her 28th birthday. The surgery revealed that the cancer hadn’t spread. Thanks to her fast action when discovering the lump, she needed no further treatment and has been cancer-free ever since. “Looking back, it was the best birthday present I could have received,” said Ms. Cook.

As a member of the MCG Breast Cancer Support Group and a volunteer for several American Cancer Society fund-raisers, her goal now is to help pass along the gift to others. In 2003, Ms. Cook was named a local hero as part of the BMW of North America Inc. Ultimate Drive for the Susan G. Komen Breast Cancer Foundation.

“It is an unbelievable feeling,” she said, “to help spread the word.”

Non-Surgical Alternative to Cervical Precancer Under Study

Family medicine physician Dr. Daron Ferris, director of the MCG Gynecologic Cancer Prevention Center, is studying the efficacy of an immunotherapeutic agent in helping young women with precancerous changes of the cervix, or cervical dysplasia, avoid surgery. The study, which involves women 25 or younger with moderate to severe cervical dysplasia caused by exposure to human papillomavirus, is follow-up research to a study conducted three years ago in which an MCG team found that the immunotherapeutic agent was no more protective than a placebo in all except younger women.

Patients who have cervical dysplasia may undergo one of several surgical approaches to remove affected cells and adjacent tissue. Unfortunately, these approaches, which are 90 to 95 percent effective, can reduce fertility and increase chances of premature delivery. A non-surgical alternative would be a boon to women of childbearing age.

Golf Tourney Nets Funding for Cancer

The inaugural Greg Hodges Tournament donated more than $17,500 to the MCG Brain Cancer Support Group. Pictured, from left to right, are James “Cotton” Flynn, general manager of Acura of Augusta and the Stokes-Hodges Auto Mall; Jan Hodges Burch, co-owner of the Stokes–Hodges Auto Group; Shawn Vincent, former MCG Health, Inc. administrative director of Cancer Services; and MCG neuro-oncologist Dr. Alfredo Voloschin.
Early Bladder Cancer Linked to Marijuana Use

Smoking marijuana appears to be a risk factor for bladder cancer and may even contribute to younger people getting the disease. Bladder cancer is most common among people 60 and older. However, Dr. Martha Terris, a urologist at MCG and the Veterans Affairs Medical Center in Augusta, found that 85.5 percent of 52 men aged 44 to 60 with transitional cell bladder cancer had a history of smoking marijuana.

The study looked at marijuana as well as exposure to other carcinogens such as tobacco, radiation, Agent Orange, smoked or processed meats and synthetic dyes used in the textile industry. Bladder cancer patients and 104 men in the control group had similar rates of exposure to all the risk factors except marijuana. The study finds that smoking marijuana may be as bad or worse than cigarette smoking as a risk factor for bladder cancer.

The study involved VA hospitals in Augusta and Palo Alto, Calif.

Cancer Vaccine Reagent May Be Double-Edged Sword

Researchers across the United States are working furiously to develop vaccines to prevent and treat cancer. One reagent under study, CpG oligodeoxynucleotides, helps alert the body’s immune system to an invader. However, Dr. Andrew Mellor, immunologist and director of the MCG Immunotherapy Center, and his colleagues have found that the same reagent, ironically, may help some tumors survive by hiding from the immune system. The reagent can protect some tumors using one of the same mechanisms used by a developing fetus to avoid rejection by the mother’s immune system.

Viagra NASCAR on Display

Dr. James Foster, medical director of Employee Health, was among those who stopped by the Viagra racecar, driven by NASCAR driver Mark Martin. The car was on display September 14 and 15, 2005, to commemorate Prostate Cancer Awareness Week. Literature distributed at the event helped spread the message that all men need to have regular prostate health checks starting at age 50.

Protein Expression Is Promising for Head and Neck Cancer Detection

The blood of head and neck cancer patients appears to have a unique pattern of protein expression. One day, this pattern could serve as a screening test for the highly aggressive cancer that is often diagnosed too late, according to research conducted by Dr. Christine Gourin, otolaryngologist specializing in head and neck cancer and the study’s lead author. This protein fingerprint correctly classified study participants as cancer patients with a high degree of sensitivity (82 percent) and specificity (76 percent).

Effective screening tests are currently not available. Head and neck cancer is usually diagnosed after symptoms appear, and sometimes those symptoms are advanced. Belated diagnoses translate into dismal survival rates – less than 50 percent five years after diagnosis of stage III or IV tumors. The rare patient who is diagnosed early faces much better odds. For example, voice box cancer caught in stage I has about a 95 percent five-year survival rate.
**Herbal Therapies Studied as Palliatives**

Family medicine physician Dr. Daron Ferris, director of the MCG Gynecologic Cancer Prevention Center, is studying the efficacy of herbal supplements – specifically ginseng and valerian – in minimizing the common problems, such as fatigue and sleeplessness, that plague cancer patients.

Ginseng, a perennial found in North America and eastern Asia, is touted as a safe way to improve the body’s stress resistance. It is being tested for its potential to battle common fatigue found among cancer patients.

Valerian, a flowering perennial from Eurasia widely used as a sedative, is being studied for its potential to help cancer patients sleep. Thirty to 50 percent of cancer patients have trouble sleeping, a common side effect of chemotherapy.

**MCG Participates in Relay for Life**

MCG teams were among the 2,000 supporters who raised $300,000 for cancer research, education, advocacy and patient services at the American Cancer Society’s 2006 Relay for Life. MCG Health, Inc. was the event’s Diamond Sponsor.

**Sunscreen Distributed**

Oncologist Dr. Scott Lind and his son Jason helped distribute 500 packets of sunscreen, compliments of Schering-Plough HealthCare Products, to those attending RiverBlast 2005, a daylong 4th of July celebration held in downtown Augusta. Volunteer physicians from oncology and dermatology also handed out skin cancer prevention literature.

**Oral Cancer Screenings Held**

MCG provided free oral cancer screenings to commemorate Oral, Head and Neck Cancer Awareness Week. The death rate associated with this cancer – roughly one person an hour – is particularly high due to the cancer routinely being discovered late in its development. The screenings, to help detect oral cancer in its earliest stages, were part of a nationwide effort sponsored by the Yul Brynner Head and Neck Cancer Foundation.

**Brain Tumors Addressed at Free Seminar**

Dr. Alfredo Voloschin, director of the MCG Neuro-Oncology Program, the only such service in the CSRA, hosted approximately 30 participants at a free seminar, “Cancer and the Brain: Awareness of Early Symptoms and Treatment Options,” on March 25, 2006.

The symptoms of brain tumors mirror those of many other diseases such as Alzheimer’s, stroke or other neurological disorders. Those other diseases come to mind more readily than a diagnosis of a brain tumor, especially brain cancer, Dr. Volochin said. “Brain cancer is a difficult diagnosis. Patients and families need to arm themselves with information about its symptoms and the latest treatment options.”
High-Risk Black Men Are Less Likely to Get Prostate Cancer Screening

Dr. Sally Weinrich, a nursing professor and Georgia Cancer Coalition Distinguished Cancer Scholar, and Dr. Martin Weinrich, a biostatistician, found that African American men with a higher-than-average risk of prostate cancer due to their positive family histories are less likely to have ever had a prostate screening than black men without a family history and white men in general.

Only 25 percent of black men during the peak ages of 60 to 69 are screened using the prostate specific antigen test and 36 percent get annual digital rectal exams, compared to 80 percent of white males in the same age category who get PSA tests and 68 percent who get physical exams. Just under half of all high-risk African American males get PSA tests and 38 percent get physical exams.

Prior research demonstrates that black men have a 50 percent higher incidence of prostate cancer and more than double the mortality rate of white men. This new research suggests that a glaring health disparity needs to be addressed.

Seminar Helps Those With Thyroid Disease

Approximately 130 CSRA residents attended a free seminar, “Thyroid Diseases: From the Routine to the Cutting Edge,” on April 13, 2006, to learn more about the symptoms and treatments of thyroid disorders, including cancer.

The seminar was conducted by Dr. Edward Chin, Director of the MCG Thyroid Center, and Dr. David Terris, Surgical Director of the MCG Thyroid Center.

Daniel Wager: Living Life to the Fullest

His grandfather died from leukemia in 1975, but health food store manager Daniel Wager never gave blood cancer any thought. “I was just too busy living life,” said the 37-year-old mountain biker, golfer and exercise enthusiast. That is, until he was diagnosed with Stage II Hodgkin’s lymphoma.

Mr. Wager had lost 20 pounds, and had night sweats and a cough that persisted several weeks. “I was completely shocked when I learned of the diagnosis. I always had bronchitis during cold-and-flu season each year, so when Dr. Meyer Schwartz, an MCG Family Medicine physician, sent me for an X-ray and a CT scan, I thought, ‘Maybe they’re looking for pneumonia.’ When I got the diagnosis, I had to tell myself not to completely freak out without having a full understanding of what was going on.”

Dr. Schwartz immediately provided that understanding.

“He was really on his toes and quickly called in oncologist Dr. Samuel Chan,” Mr. Wager said. “Within four to five days of diagnosis, I was undergoing my first round of chemo. I couldn’t have asked for a better oncologist.”

When Mr. Wager finished chemotherapy, he underwent radiation treatment. “Dr. Chris Sheils [radiation oncologist at the Georgia Radiation Therapy Center] is really a great guy. Between Dr. Chan, Dr. Schwartz and Dr. Sheils, I feel that I’m in great hands all the way through my care. My doctors are really there for me. I can’t say thank you enough,” Mr. Wager said. “Now, I just want to get back to living life.”
Brain Tumor Board  
Meeting Frequency: Weekly  
Physician Contact: Alfredo Voloschin, MD  
Administrative Contact: Dana Redmond

Gynecology Tumor Board Conference  
Meeting Frequency: Weekly  
Physician Contact: Sharad Ghamande, MD  
Administrative Contact: Luvenia Kelley

Head and Neck Tumor Board  
Meeting Frequency: Weekly  
Physician Contact: Christine Gourin, MD  
Administrative Contact: Ingenue Willis

Hematology/Pathology Conference  
Meeting Frequency: Weekly  
Physician Contact: Kavita Natarajan, MD  
Administrative Contact: Carol Connelly

Interdisciplinary Thoracic Tumor Board  
Meeting Frequency: Weekly  
Physician Contacts: Lawrence Freant, MD, and Vijay Patel, MD  
Administrative Contact: Laurie LaChance

Multidisciplinary Cancer Conference  
Meeting Frequency: Weekly  
Physician Contacts: D. Scott Lind, MD, and Thomas Wang, MD, Ph.D.  
Administrative Contact: Miriam Williams, RHIA, CTR

Pediatric Multidisciplinary Cancer Conference  
Meeting Frequency: Monthly  
Physician Contact: Roger Vega, MD  
Administrative Contact: Pat Walling

Urologic Oncology Conference  
Meeting Frequency: Monthly  
Physician Contacts: Martha Terris, MD, and James Brown, MD  
Administrative Contact: Miriam Williams, RHIA, CTR

1p LOH and Malignant Glioma  
Chemosensitivity  
John K. Park, MD, Ph.D.  
Investigator, National Institute of Neurological Disorders and Stroke  
National Institutes of Health  
Bethesda, Md.

Modeling the Tumor Microenvironment in the Intestinal Cancer-Predisposed MIN Mouse  
Franklin Berger, Ph.D.  
Director, The Center for Colon Cancer Research  
Professor, Biological Sciences  
University of South Carolina  
Columbia, S.C.

Management of the Neck in Differentiated Thyroid Cancer  
Randal S. Weber, MD, FACS  
Professor and Chairman, Department of Head and Neck Surgery  
M.D. Anderson Cancer Center  
Houston, Texas

Targeting Tryptophan Catabolism for Cancer Immunotherapy  
David Munn, MD  
Professor, Cellular Biology and Anatomy  
Medical College of Georgia  
Augusta, Ga.

Genetic Analysis of Ets-1 and Ets-2 Action in Development and Cancer  
Michael Ostrowski, Ph.D.  
Professor, Department of Molecular Genetics  
Ohio State University  
Columbus, Ohio

Genome Rearrangements in Mammalian Genome Evolution and Human Cancer Development  
Shaying Zhao, Ph.D.  
Assistant Investigator  
The Institute for Genomic Research  
Rockville, Md.

The Regulation of Anoikis: A New Role for cGMP-Dependent Protein Kinase in Cancer  
Darren Browning, Ph.D.  
Assistant Professor, Biochemistry and Molecular Biology  
Medical College of Georgia  
Augusta, Ga.

Bcl-2 and Hormonal Therapy for ER-Positive Breast Cancer  
Thomas Gaddy  
Graduate Student, Cellular Biology and Anatomy  
Medical College of Georgia  
Augusta, Ga.

Cancer: A Case in Point – From Initial Diagnosis Through Surgery, Pathologic Diagnosis, Radiation, Chemotherapy and Further Care  
John T. Barrett, MD, James H. Craft, MD, Richard B. Hessler, MD, Andre M. Kallab, MD, and Thomas N. Wang, MD, Ph.D.  
Medical College of Georgia  
Augusta, Ga.

Regulation, Substrate Specifically and Tumor Suppressing Function of Protein Tyrosine Phosphatase SHP-1  
Wayne Zhou, Ph.D.  
Associate Professor, College of Basic Sciences  
Louisiana State University  
Baton Rouge, La.

Multiple Myeloma  
Paul Dainer, MD  
Associate Professor, Medicine  
Medical College of Georgia  
Augusta, Ga.

Evaluation and Treatment of Ovarian Cancer: What is the Evidence?  
Snehal M. Bhoola, MD  
Assistant Professor, Gynecologic Oncology  
Attending Gynecologic Surgeon  
Memorial Health University Hospital  
Savannah, Ga.
Role of C/EBP Genes in Normal Mammary Gland Development and Breast Tumor Cells: A Matter of Life or Death
Esta Sterneck, Ph.D.
Head, Molecular Mechanisms in Development Group
Center for Cancer Research
National Cancer Institute
Frederick, Md.

Absence of SPARC Augments Peritoneal Ovarian Carcinomatosis
Neveen Said, MD, Ph.D.
Postdoctoral Fellow, Vascular Biology Center
Medical College of Georgia
Augusta, Ga.

Mouse Models of Inflammatory Bowel Disease-Associated Intestinal Cancer
Fong-Fong Chu, Ph.D.
Assistant Professor, Medical Oncology and Therapeutics Research
Beckman Research Institute of the City of Hope
Duarte, Calif.

Improving the Efficacy of Hormonal Therapy in MCF-7 Breast Cancer Cells Grown in the Presence of IGF-I by Targeting Cell Survival Pathways
April Welborn
Graduate Student, Cellular Biology and Anatomy
Medical College of Georgia
Augusta, Ga.

Role of ICSBP in Fas-Mediated Apoptosis and Tumor Development
Kebin Liu, Ph.D.
Research Fellow, Laboratory of Tumor Immunology and Biology
National Cancer Institute
Bethesda, Md.

The Breast-Ovarian Cancer Linkage
Sharad Ghamande, MD
Associate Professor, Obstetrics and Gynecology
Section of Gynecologic Oncology
Medical College of Georgia
Augusta, Ga.

Breast Tumor Exosomes Promote Tumor Growth by Immune Suppression of NK Cells
Huang-Ge Zhang, MD, Ph.D.
Assistant Professor, Department of Medicine
Division of Clinical Immunology and Rheumatology
The University of Alabama at Birmingham
Birmingham, Ala.

Ovarian Cancer
Michael Macfee, MD
Section Chief, Obstetrics and Gynecology
Section of Gynecologic Oncology
Medical College of Georgia
Augusta, Ga.

Regulation of Ovarian Cancer Metastasis by Matricellular Protein SPARC: Work in Progress
Kourosh Motamed, Ph.D.
Assistant Professor, Vascular Biology Center
Medical College of Georgia
Augusta, Ga.

Aging and Cancer: Are Telomeres and Telomerase the Connection?
Jerry W. Shay, Ph.D.
Professor and Vice Chairman, Department of Cell Biology
Associate Director, Simmons Comprehensive Cancer Center
University of Texas Southwestern Medical Center
Dallas, Texas

Nasopharyngeal Cancer and the Role of Nasopharyngectomy
Willard E. Fee, Jr., MD, FACS
Professor, Division of Otolaryngology
Stanford University Medical Center
Palo Alto, Calif.

Role of Apical Membrane Transporters in Colorectal Cancer
Naren Gupta
Ph.D. Candidate, Department of Biochemistry and Molecular Biology
Medical College of Georgia
Augusta, Ga.

Recent Advances in Ovarian Cancer
Sharad Ghamande, MD
Associate Professor, Obstetrics and Gynecology
Section of Gynecologic Oncology
Medical College of Georgia
Augusta, Ga.

Chemotherapy Induced Nausea and Vomiting: Present Challenges and Evolving Practices
Kristi Lenz, Pharm.D.
Associate Professor and Oncology Clinical Specialist, Department of Pharmacy and Clinical Sciences
Medical University of South Carolina
Charleston, S.C.

Biological and Surgical Aspects of Tumors Associated With Long-Term Epilepsy
Johannes Schramm, MD
Professor and Chairman
Rheinische Friedrich Wilhelms Universitat
Bonn, Germany

The Role of Caspases in Hormonally Induced Breast Cancer Cell Death
Patricia Schoenlein, Ph.D.
Associate Professor, Cellular Biology and Anatomy
Medical College of Georgia
Augusta, Ga.

Dying Dangerously: Apoptosis, Necrosis and Cancer
Michael T. Lotze, MD
Professor of Surgery
University of Pittsburgh Medical School
Pittsburgh, Pa.

Early Initiation of Shaving and Sexual Activity as Risk Factors for Prostate Cancer
Brian E. Matthews, PA-C
M.S. Candidate, School of Graduate Studies
Department of Physician Assistant
Medical College of Georgia
Augusta, Ga.

Pharmacology & Toxicology: Anti-Tumor Functions of cGMP-Dependent Protein Kinase
Darren Browning, Ph.D.
Assistant Professor, Biochemistry and Molecular Biology
Medical College of Georgia
Augusta, Ga.
### Distribution by Site/Stage: 2005 Analysis

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<th>Site of Cancer</th>
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† Includes primary sites that do not have an AJCC staging scheme
* Excludes in-situ cervical carcinoma
**Geographic Distribution of Patients: 2005 Analysis**

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**Georgia**

- Bacon .............. 1
- Baldwin ............ 9
- Banks .............. 1
- Bartow ............. 1
- Ben Hill ........... 2
- Bibb ................ 3
- Bleckley ........... 2
- Brantley .......... 1
- Bulloch ........... 5
- Candler .......... 22
- Chatham .......... 3
- Clarke .......... 6
- Clayton .......... 1
- Clinch .......... 1
- Cobb .......... 1
- Coffee .......... 6
- Colquitt .......... 1
- Columbia ....... 85
- Cook ........ 1
- Decatur .......... 1
- DeKalb .......... 1
- Dodge .......... 5
- Elbert .......... 4
- Emanuel .......... 13
- Glascock .......... 2
- Glynn .......... 1
- Greene .......... 11
- Gwinnett .......... 1
- Habersham .......... 1
- Hall ........ 2
- Hancock .......... 6
- Houston .......... 4
- Irwin .......... 1
- Jackson .......... 2
- Jeff Davis .......... 3
- Jefferson .......... 20
- Jenkins .......... 4
- Johnson .......... 3
- Lanier .......... 1
- Laurens .......... 8
- Lee .......... 1
- Lincoln .......... 15
- Lowndes .......... 2
- Madison .......... 5
- McDuffie .......... 26
- McIntosh .......... 1
- Montgomery .......... 2
- Oconee .......... 2
- Oglethorpe .......... 1
- Peach .......... 1
- Putnam .......... 1
- Richmond .......... 231
- Screven .......... 4
- Seminole .......... 1
- Stephens .......... 1
- Taliaferro .......... 1
- Tattnall .......... 1
- Taylor .......... 1
- Telfair .......... 1
- Thomas .......... 1
- Tift .......... 2
- Toombs .......... 7
- Ware .......... 4
- Warren .......... 11
- Washington .......... 11
- Wilkes .......... 12
- Wilkinson .......... 1

**South Carolina**

- Aiken ........ 105
- Allendale .......... 3
- Anderson .......... 1
- Bamberg .......... 1
- Barnwell .......... 6
- Beaufort .......... 2
- Charleston .......... 1
- Dorchester .......... 1
- Edgefield .......... 9
- Fairfield .......... 1
- Greenwood .......... 4
- Hampton .......... 1
- Lexington .......... 3
- McCormick .......... 6
- Oconee .......... 1
- Richland .......... 2
- Saluda .......... 3

**Other Locations**

- Florida .......... 3
- Pennsylvania .......... 1
- Tennessee .......... 1
- Virginia .......... 1
- West Virginia .......... 1
- Germany .......... 1

*Patients with multiple cancers were counted once.*
In the United States, approximately 36,160 new cases of renal cell carcinoma were diagnosed in 2005, accounting for approximately 3 percent of all adult malignancies. In addition, more than 12,660 individuals died of their disease, making renal cell cancer the sixth leading cause of cancer death. Unfortunately, kidney cancer is characterized by a lack of early signs and patients frequently present late in the course of their disease with diverse clinical presentations and manifestations.

Surgery is the primary treatment for renal cell carcinoma, which is relatively resistant to radiation and chemotherapy. Renal cell carcinoma can evoke an immune response and therefore various immunotherapeutic strategies have been used to enhance the antitumor response. Five to 10 percent of patients with metastatic disease will have a complete response to cytokine immunotherapy and an additional 15 percent of patients will have a partial response to this treatment.

Our Cancer Registry Database contains 64 stage I, 15 stage II, 27 stage III and 23 stage IV renal cell carcinoma patients treated initially between January 2001 and December 31, 2005. For stage I, the five-year survival rate is 88 percent. For stage II, the five-year survival rate is 100 percent. For stage III, the rate is 68 percent. For stage IV, the rate is 8 percent. The stage II and stage III survival rates are significantly greater than the national average, but this improved survival rate probably reflects the relatively small number of patients who have returned to us for five-year follow-up.

In 2005, 25 patients underwent treatment for renal cell carcinoma at MCG Health System. Fifty-six percent of these patients were male and 44 percent were female. Seventy-seven percent were Caucasian and 23 percent African American. The age at diagnosis ranged between 35 to 89 (52 percent), with 13 patients 60 years or older. Fourteen (56 percent) were stage I, four (16 percent) were stage III, six (24 percent) were stage IV, with one unclassified.
In 2005, the majority of patients were treated with surgical resection alone (20 patients, 80 percent). One patient underwent surgery followed by radiation therapy, and one patient had surgery followed by chemotherapy. Another patient was treated with a combination of surgery, chemotherapy and immunotherapy. A single patient was treated palliatively with radiation therapy.

Minimally invasive laparoscopic approaches have largely replaced open procedures for the management of all patients, with the exception of those patients with advanced disease. Standard and hand-assisted laparoscopic nephrectomy and partial nephrectomy were initiated at MCG Health System in April 2002. In August of 2005, laparoscopic renal cryoablation was initiated.

There is also hope that we will be able to improve survival for patients with widespread disease. In December of 2005, the U.S. Food and Drug Administration granted approval for Sorafenib (Nexavar), a small molecule Raf kinase and VEGF multi-receptor kinase inhibitor for the treatment of patients with advance renal cell carcinoma. A month later Sunitinib (Sutent) received FDA approval. Sunitinib inhibits the tyrosine kinase receptors for VEGFR 1-3 and PDGFR aβ. Other multi-kinase inhibitors as well as chemotherapeutic regimens are currently being investigated for the treatment of renal cell carcinoma nationwide. Thus the future looks bright for additional systemic treatment of renal cell carcinoma to augment or replace the current standard biologic therapies.

James A. Brown, M.D., F.A.C.S.
Associate Professor
Chief of Urologic Oncology
Georgia Cancer Coalition
Distinguished Clinician and Scholar
Medical College of Georgia
Cancer Registry and Statistical Summary

The Cancer Registry collects data about each cancer patient diagnosed or treated at our facilities. Established in 1985, the Cancer Registry now contains more than 16,000 cases. Cancer data is submitted monthly to the Georgia Comprehensive Cancer Registry and annually to the National Cancer Data Base. In both of these larger databases, our data are pooled with that of other participating facilities. The resulting statistics illustrate statewide and nationwide trends in cancer incidence, and help clinicians and researchers evaluate the efficacy of different types of treatment.

A Registry Services Administrator, a Registry Services Specialist II and a Follow-Up Specialist staff the Cancer Registry. In 2005, the registrars collected demographic, tumor, staging and treatment data on more than 800 patients. Seven hundred and seventy-eight were diagnosed or received first-course treatment at MCG Health System, and the others were treated here for recurrence or progression of their cancer. The registry staff follows more than 5,800 patients annually to obtain disease status information. The registrars also coordinate the weekly Multidisciplinary Cancer Conferences and the quarterly Cancer Committee Meetings, help prepare for the triennial American College of Surgeons Commission on Cancer accreditation survey, contribute to the annual Cancer Report, and report data to clinicians and administrators.

According to the American Cancer Society, an estimated 1,372,910 new cancer cases were diagnosed in the United States in 2005. Cases diagnosed in Georgia accounted for an estimated 35,650 cases, with MCG Health System reporting 2.2 percent of Georgia’s estimated cases.

Breast, bronchus/lung and prostate were the three cancers most frequently diagnosed and treated at MCG Health System. This agrees with the leading cancer sites predicted for the United States. In the nation, the gender distribution for all cancers was estimated to be almost equal, with 51.7 percent of cancers occurring in males and 48.3 percent occurring in females. MCG’s gender distribution nearly matches these estimates: 410 (52.2 percent) of the cancers diagnosed or treated were in male patients and 368 (47.3 percent) were in female patients.

The ACS predicted 59,580 new invasive melanomas would be diagnosed in the United States in 2005, accounting for 4.3 percent of all cancers. At MCG, there were 19 invasive and 8 in situ melanomas. The gender distribution mirrored that of the ACS (56.4 percent male, 43.6 percent female) with 15 (55.5 percent) occurring in males and 12 (44.4 percent) occurring in females. For five patients, this represented their second melanoma diagnosis. The ACS includes a prior melanoma among the risk factors for developing melanoma, along with a family history of melanoma and the presence of moles on the skin.
About 76 percent of cancers are diagnosed at age 55 and older, according to the ACS. At MCG, 484 patients ages 55 and older were diagnosed or treated during 2005. This accounts for 62.2 percent of cancers treated at MCG in 2005.

In 2005, 79.3 percent of MCG’s cancer patients came from Georgia, 19.7 percent from South Carolina, and 1 percent from other states and countries.

For more information about the activities of the Cancer Registry, please call 706-721-1768.

Reference: Cancer Facts and Figures: 2005, American Cancer Society
Analytic Case
Cancer case initially diagnosed and/or treated at MCG Health System.

Nonanalytic Case
A patient initially diagnosed and treated elsewhere who is receiving subsequent care at MCG Health System.

Reference Date
The date after which all eligible cancer cases must be included in the MCG Cancer Registry database. This date is January 1, 1985.

Tumor Grade
A method to describe a tumor’s resemblance to the normal tissue from which it arose.

*Grade 1* – Well-differentiated
*Grade 2* – Moderately differentiated
*Grade 3* – Poorly differentiated
*Grade 4* – Undifferentiated, anaplastic

Neoplasm
Abnormal growth, such as a tumor.

Summary Stage
*In situ* – A neoplasm that fulfills all the microscopic criteria for malignancy except invasion.

*Localized* – A neoplasm confined to the site of origin.

*Regional* – A neoplasm that has spread by direct extension to immediately adjacent organs or tissue, and may have metastasized to regional lymph nodes or organs, appearing to have spread no further.

*Distant* – A neoplasm that has spread beyond immediate adjacent organs or tissues by direct extension, and may have developed a secondary or metastatic tumor.

*Unknown* – A neoplasm whose stage cannot be determined from the medical record or from a medical authority.

TNM Stage
A staging system developed by the American Joint Committee on Cancer that takes into account the tumor (T) size and/or depth of invasion, lymph node (N) involvement and distant metastases (M). For each applicable site, a combination of T, N and M elements gives a classification of stage I, II, III, IV or unknown. A higher stage usually suggests a less favorable prognosis.

References: American Cancer Society, National Cancer Institute, National Cancer Data Base and American Joint Committee on Cancer
On the Web
MCGHealth.org/cancer

For Patients
For more information on our comprehensive cancer program or to schedule an appointment, call 706-721-CARE (2273) or 800-736-CARE (2273).
For more information on cancer prevention clinical trials, call Eileen Dickman, Ph.D., at 706-721-2269 or Darleen Gibson, RN, at 706-721-4335, or visit www.mcg.edu/news/newsbriefs/studies.html.
For more information on the MCG Breast Cancer Support Group, call 706-721-4726, the Gynecologic Cancer Support Group, call 706-721-8978 and the Brain Tumor Support Group, call 706-721-0193.

For Physicians
Specially trained health referral specialists answer calls 24/7 to connect you directly with the MCG physician you request or the on-call physician.

MCG Physicians Direct (800-733-1828)
You can:
• Reach MCG physicians’ offices to arrange appointments.
• Consult with faculty physicians.
• Follow up on patient status.
• Access clinical studies and receive research updates.
• Access other MCG professional programs and services, including continuing medical education and the medical library.

MCG Transfer Direct
Emergency Communications Center (877-561-5600)
Our experienced paramedics will:
• Arrange emergency patient transfers.
• Arrange helicopter transport.
• Stay on the line while you speak with an attending physician or specialist.
• Handle your request for the Pediatric Transport Team.
Based in Augusta, Ga., MCG Health System is a world-class health care network, offering the most comprehensive primary and specialty care in the region. MCG Health System provides skilled, compassionate care to its patients, conducts leading-edge clinical research, and fosters medical education and training of tomorrow’s health care practitioners.

MCG Health System’s facilities include the 478-bed MCG Medical Center, the Ambulatory Care Center with more than 80 outpatient clinics in one convenient setting, the Specialized Care Center housing a 13-county regional trauma center and the 154-bed Children’s Medical Center. The health system also includes a variety of dedicated centers and units, such as the off-site Sports Medicine Center.

In addition to providing care in the Augusta area to patients from Georgia, the Southeast and beyond, MCG Health System physicians travel to more than 90 satellite clinics, illustrating our commitment to care for people across the state and region.

MCG Health System is part of a thriving academic medical center that also includes the following entities:

- Medical College of Georgia – the health sciences university of the state of Georgia, composed of the schools of Allied Health, Dentistry, Graduate Studies, Medicine and Nursing.
- MCG Health, Inc. – a not-for-profit corporation that manages the clinical operations of the MCG Medical Center, the Children’s Medical Center and associated health system facilities.
- Faculty group practice plans, including the Physicians Practice Group, the Dental Practice Group, the Allied Health Practice Group and the School of Nursing Faculty Practice Group.