Founded in 1863, Hospital for Special Surgery is regarded as the world’s leading center for musculoskeletal health. Top ranked in the Northeast for Orthopedics and Rheumatology for 19 consecutive years by U.S. News & World Report, HSS provides specialty care for individuals of all ages and all stages of orthopedic and rheumatologic disease.

Caring for Patients with Osteoarthritis:
Penny Hoff is one of some 27 million Americans affected by the most common form of arthritis. She is one of thousands of patients who has benefited from Hospital for Special Surgery’s care for this disease.
On the Cover:
For Penny Hoff, the decision for surgery came when she was just 44 years old. “People told me I was too young to be limping around, crippled by osteoarthritis in my hips,” says Ms. Hoff, a fitness director and yoga instructor. In 2005, Dr. Mark P. Figgie replaced her right hip and in 2008, he replaced her left hip. “Since then I have just been thriving, doing everything from spinning to barbell strengthening to yoga, and I have never felt better.”

Opposite Page:
On May 29, 2009, world-traveled writer/photographer Sonja Lowenfish journeyed to Western China only five months after Dr. Mathias P. Bostrom replaced each of her hips — both damaged by osteoarthritis — a month apart. She followed the Silk Road on camel, by train, and in rickety cars. “When I left the States, I left my walking stick behind,” says Ms. Lowenfish, 69, who makes her home in Florida.
At Hospital for Special Surgery, patients like Sonja Lowenfish travel from across the country and around the world for the Hospital’s wealth of expertise in diagnosing and treating osteoarthritis.
How often have you heard friends or relatives say, “oh, it’s just a little arthritis,” when referring to a knee that’s painful or if they are having trouble getting up from a chair. Their underlying message is that it’s not a big deal, it’s a natural progression of aging, and there’s nothing they can do about it anyway. But, in fact, there are things that one can do that may slow the progression of osteoarthritis (OA), alleviate the pain, maintain mobility, and improve quality of life.

The arthritis we are referring to is osteoarthritis, not to be confused with rheumatoid arthritis – a systemic, inflammatory disease in which multiple joint problems also take center stage, but involves the immune system as well and can affect various tissues and organs throughout the body. Osteoarthritis, on the other hand, is specific to individual joints and the deterioration of articular cartilage over time. As the cartilage breaks down, so does its ability to cushion the joint. As a result, the joint space between the bones of the joint begins to narrow, producing increasing symptoms of pain and stiffness until it is no longer “just a little arthritis.”

DRAWING ATTENTION TO OA  “Osteoarthritis is a public health burden particularly affecting baby boomers,” says Thomas P. Sculco, MD, Surgeon-in-Chief of Hospital for Special Surgery. “In recent years, as baby boomers have ‘come of age,’ OA has become the focus of national attention, with physicians, scientists, rehabilitation specialists, and educators pooling their resources and expertise to tackle this growing concern. At Special Surgery, our goal is not only to perform surgery when arthritis has greatly compromised quality of life, but to advance the non-surgical options for patients with OA earlier in the degenerative process. That is the real challenge – not only preventing OA from ever occurring, but when it is present, preventing its progression to a disabling condition. We need to determine how we can intercede in an earlier fashion to change the course of the disease.”

A TIMEFRAME FOR TREATMENT  But when does a person with OA do something about it? “One dilemma with osteoarthritis is that virtually everyone develops it to a certain degree,” notes JeMe Cioppa-Mosca, PT, MBA, Vice President of Rehabilitation Services at Special Surgery. “The question is ‘when is it time to take your symptoms to a doctor…to a physical therapist…to an orthopedic surgeon?’”
Neck/Cervical Spine
Deterioration of the disc and cartilage of the facet joints causes OA in the cervical spine.

Shoulder and Elbow
OA of the shoulder can develop after an injury such as a fracture or dislocation, or following a rotator cuff tear. OA of the elbow can occur as the result of trauma or degeneration of the cartilage in the joint.

Lower Back/Lumbar Spine
Low back pain from osteoarthritis or degenerative disc disease is characterized by a gradual onset of pain.

Thumb and Fingers
OA can develop in the joints, at the base of the fingers, where the thumb and wrist come together.

Hip
OA in the hip makes walking painful. Hip pain is often “referred” and experienced as knee pain.

Knee
OA can be brought on by a prior knee injury, such as a ligament or meniscal tear, repetitive strain on the knee, and obesity.

Foot and Ankle
OA in the foot and ankle may be accompanied by pain and stiffness, swelling, and difficulty walking.

“The patients who come to us for the treatment of OA are at varying stages of the disease,” says rheumatologist Susan M. Goodman, MD. “Some patients may have had osteoarthritis for years before their symptoms become seriously troubling. In general, weight-bearing joints such as the knee and the hip are very unforgiving relative to non-weight-bearing joints like the shoulder. What this means is that OA of the knee or the hip tends to reveal itself much sooner, with patients becoming symptomatic at an earlier stage in the degenerative process. By the time people develop symptoms referable to OA of the shoulder, the arthritis is likely to be much more advanced.”

“It’s a continuum,” adds Mark P. Figgie, MD, Chief of the Surgical Arthritis Service. “We offer different treatment options based not just on the degree of arthritis but also relative to the functional limitations the patients have. The decision on what is the best option for the patient depends on what he or she wants to do…and is willing to do. It’s a quality of life decision.”

In this issue of Horizon, we will introduce you to several individuals with osteoarthritis, the role it has played in their lives, and how they have overcome the unique medical challenges it has presented to each of them.
Caring for Patients with Osteoarthritis

They are parents and grandparents, photographers and skiers, working and retired. These are just a few of the patients treated at Hospital for Special Surgery for osteoarthritis – a disease so prevalent that we will all know someone who has had one or more of its symptoms.

Osteoarthritis is the principal cause of physical disability and functional impairment among adults and is, by far, the most common condition leading to end-stage joint destruction and the need for joint replacement. At Hospital for Special Surgery, osteoarthritis is often treated when it has already inflicted irreparable damage to the joints. With decades of experience providing care for hundreds of thousands of patients with OA, the Hospital has been at the forefront of developing both medical and surgical treatments for the disease. Our scientists and physicians, however, know that much more needs to be done, especially in the earliest stages of OA, when preventing its progression is of the utmost concern.

**CAN OA BE PREVENTED?** Post-traumatic osteoarthritis – arthritis that develops as the result of an earlier injury to the joint – may hold the key to understanding the causes of OA in the general population and provide insight to approaches for its prevention and/or progression to a more debilitating level.

“If you tear your anterior cruciate ligament (ACL) and lose your meniscus, you have a much higher rate of developing arthritis in that joint even if the knee has been stabilized,” says Thomas L. Wickiewicz, MD. “But the holy grail of ACL surgery is whether you can prevent degenerative arthritis from developing in patients who have had these types of injuries.

“It is becoming obvious that young injured athletes start developing arthritis right away even though it may take years for them to have symptoms or for us to see the actual damage on X-ray,” says Dr. Wickiewicz. “This begs the question – can you stop that process or can you reverse that process if it has started? Clearly we know that protecting the meniscus is of paramount importance and that stabilizing the knee before a meniscal tear occurs or repairing the torn meniscus to preserve its function are the immediate goals.”

Thomas P. Sculco, MD, Surgeon-in-Chief

“Central to the mission of HSS is the management of OA, both surgical and non-surgical, the pursuit of research that can advance care, and the delivery of education to share what we know and learn.”
By age 26, Stuart Schwadron had already spent years walking with a limp and in a lot of pain, the result of several sports-related injuries to the ligaments in his right knee. He was referred to Thomas L. Wickiewicz, MD, who not only reconstructed his ACL, but performed a meniscal transplant – an experimental procedure at the time. Today, at age 40, Stuart can still enjoy a pain-free walk with his wife, Stacey.
About five years ago, Jason Kaplan, then in his early forties, began having intermittent pain in his knees, which he learned was radiating from his hips. Because he was considered too young for a full hip replacement, he was referred to Dr. Friedrich Boettner for his expertise in hip resurfacing. In January 2009, Mr. Kaplan underwent the procedure on both hips. Six months later, he was back playing tennis and in full swing.
To further their understanding of OA, Dr. Wickiewicz and his colleagues are pursuing research on younger patients, where they may have the ability to change the natural history of arthritis, treat it, and maybe even find a cure.

**DETECTING THE EARLIEST SIGNS** With a goal to intervene early on in the development of OA, the Department of Radiology and Imaging, led by Helene Pavlov, MD, is playing a critical role in identifying when the most subtle arthritic changes begin to occur. “Imaging provides objective evidence of osteoarthritis,” says Dr. Pavlov. “The modalities are the same as they have been for years – X-ray, ultrasound, magnetic resonance (MR) imaging, CT scan – but the degree of sensitivity and specificity of the images and the expertise of interpretation keep improving.”

Conventional X-rays are still a starting point. At Special Surgery, says Dr. Pavlov, imaging of the feet, ankles, knees, and spine is performed while a patient is standing. “This maximizes the appearance of any malalignment,” explains Dr. Pavlov. “If we can isolate the source of the patients’ pain when they are walking or standing, then we can sometimes see subtle changes and joint space narrowing, especially of the knee, before they may be evident in an image obtained while the patient is lying down.”

In the past decade, the resolution of MR images has improved dramatically, providing detail that allows radiologists to pinpoint minute changes in cartilage that may predict early onset of osteoarthritis. Many of these developments have been led by Hollis G. Potter, MD, Chief of Magnetic Resonance Imaging.

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**MENISCAL TEAR AND REPAIR**

Tears of the meniscus – crescent shaped cartilage located between the femur and tibia – can be repaired with arthroscopy using sutures or biodegradable tacks with a goal to preserve as much of the meniscal structure as possible.

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**Peggy Crow, MD, Physician-in-Chief**

“Osteoarthritis is one of our highest clinical priorities. At HSS, experts in research, clinical care, and education all work together as innovators and academic leaders in OA.”
Imaging, who has continually updated musculoskeletal MR imaging protocols to facilitate identifying these changes as early as possible and to quantitatively evaluate the status of the cartilage. MR imaging provides objective evidence of whether the cartilage is improving, degenerating, or being sustained at the same level.

Today, ultrasound technology, led by Ronald Adler, PhD, MD, Chief of Ultrasound, is pushing the technology using ultrasound contrast agents to enable radiologists to evaluate early post-traumatic and surgical healing and to detect early changes in the synovium – the layer of tissue that lines the joints. “Both ultrasound and MR allow us to evaluate inflammation in the synovium before there are bony changes,” says Dr. Pavlov. “The quantitative imaging that’s now available in MR and in ultrasound is taking us deep into the molecular level of pathology to detect disease before it is clinically evident.”

**OA TREATMENT: THE CONSERVATIVE APPROACH** Symptoms of osteoarthritis develop gradually and commonly affect the fingers, base of the thumbs, neck, lower back, big toes, hips, and knees. Rheumatologists can help patients manage their OA medically – either with medication, exercise, and/or injections – and address their pain significantly.

“Some patients will go on for years before their symptoms become seriously troubling,” says rheumatologist Susan M. Goodman, MD. “Patients with hip OA usually tell us that they have pain in the groin area, and hip symptoms...
Winifred Davis had severe OA in her knees for more than 10 years before deciding to proceed with knee replacement at the age of 65. She managed until then with medications and exercises. When she was ready, she came to see Dr. Michael L. Parks, who replaced her left knee in March 2009, and her right knee in February 2010. Three weeks later, Mrs. Davis was trying out her second new knee on the steps to her home.
Mary Ann Oklesson’s osteoarthritis started in her hips, then moved to her hands, with the greatest pain in her basal thumb joint. It made holding anything very difficult for her and curtailed her activities in the gym. Ms. Oklesson, age 65, received injections of a hyaluronan substance in the joint, which provided complete relief. Carrying home her groceries or doing push-ups are no longer a problem.
tend to be dominated by loss of mobility. OA in the knee is typically aggravated by motion, and stairs are very hard to manage. When joint pain becomes quite advanced, patients are frequently awakened at night.”

“Arthritis at the base of the thumb is one of its most common locations and can be very disabling,” says Robert N. Hotchkiss, MD, Director of Research for the Hand and Upper Extremity Service. “The basal joint allows for the swiveling and pivoting motion of the thumb. Because the strength and motion of the thumb are required for nearly every activity – whether writing, opening a jar, or buttoning a shirt – pain from this condition may impede the most basic everyday tasks.”

“ Destruction of the basal joint begins before you feel the pain,” adds Lisa A. Mandl, MD, MPH. “ This is a joint that sees a lot of stress over the years. At times the joint can become square or bumpy. The pain wakes people up at night. Splints, oral medications like ibuprofen, topical ointments, and steroid injections can provide some relief. Surgery is also an option, but many patients don’t want to have surgery. If we had other treatments, their lives would improve dramatically.”

In 2004, with funding from the National Institutes of Health and the Arthritis Foundation, Dr. Mandl, Dr. Hotchkiss, and their colleagues launched a study to determine if injections of a hyaluronan substance, Synvisc®, could provide pain relief for basal joint OA as it already does for some patients with knee osteoarthritis. With promising preliminary results, the study has now expanded, enrolling patients who are randomly assigned to one of three interventions: the hyaluronan injection, a cortisone shot, or a local anesthetic.

“Treatments for the cause of OA are still in the early days,” says Dr. Goodman. “Whereas in rheumatoid arthritis we can now target inflammatory mediators that orchestrate the joint destruction, we’re not there yet with OA. We have only recently acknowledged that osteoarthritis is not simply a wear-and-tear disease. That’s a start, but until we better understand its cause, our treatment for OA is symptom driven.” The initial evaluation of a patient with OA includes a physical exam, in particular to look at the painful joints, and a discussion with the patient to find out what the level of function is currently and what he or she

Steven R. Goldring, MD, Chief Scientific Officer

“HSS provides a wonderful interactive environment in which dialogues between scientists and physicians are helping to define the major clinical problems associated with OA and how research can start to address them.”
would like it to become. OA is generally treated with exercise to strengthen the muscles supporting the knee and the hip, by modifying activities, and with pain medications. Patients are advised to lose weight and avoid high-impact sports. “While none of these interventions can restore cartilage, they can help you get more mileage out of what you’ve got,” says Dr. Goodman.

**WHEN IS SURGERY THE SOLUTION?** “Proceeding to joint replacement surgery is a very personal decision,” says Mark P. Figgie, MD, Chief of the Surgical Arthritis Service. “I have patients who have joint replacements when they can’t walk, they can’t sleep, and they are in terrible pain. Then I have other patients who decide to have surgery when they can’t play golf or tennis anymore.”

Patients who are still physically active and develop severe pain in their hips may be candidates for hip resurfacing, in which the ball and socket are replaced, but the femur bone is preserved and sculpted to accept a metal cap with a shorter stem. By retaining more bone in the femur, a patient can still have a total hip replacement should it become necessary at a later date. Hip resurfacing and total hip replacement have become more popular in younger patients with arthritis as these procedures allow them to return to certain activities like tennis and skiing.

“While hip resurfacing offers an option that lets patients return to those sports, if you do engage in high-impact sports, you could diminish the longevity of the implant,” advises Friedrich Boettner, MD. “For patients after total hip replacement, it is best to participate in lower impact sports like skiing, doubles tennis, hiking, or swimming. In some patients, hip arthroscopy can help to delay or avoid the onset of arthritis by addressing abnormalities, such as femoro-acetabular impingement (when the ball does not have full range of motion in the hip socket), a condition that can trigger labral tears and cartilage damage.”

Based on the degree of disability, there are different surgical options available. According to Dr. Figgie, some treatments are time and severity dependent. “Once you’ve developed arthritis to the point that it’s symptomatic and affecting your lifestyle, you may have lost the opportunity for some of the earlier treatment options,” he says.
"I was having a great deal of pain in my shoulder and none of the suggestions from doctors over the years led to any relief," says Ralph Cromartie. "I knew Hospital for Special Surgery was known for treating joint pain so I decided to go there." Mr. Cromartie saw Dr. Susan Goodman, who diagnosed arthritis in both his shoulder and his neck. "She recommended injections, and once she started them the pain was gone."
REACHING NEW HEIGHTS

Mark Baer, who has lived in Salt Lake City for most of the past 30 years, has been athletic all his life. His passion for sports is evident in the scores of marathons and triathlons he has completed over the years. But his hip paid the price when he was only in his forties. He developed severe pain in his left leg caused by a complete deterioration in his hip joint. He tried...
everything to manage it, but the arthritis progressed. "You can get along for a while," says Mr. Baer, "but then suddenly it gets terrible."

So Mr. Baer decided to come east to undergo a hip resurfacing procedure with Dr. Edwin P. Su. He’s back to telemark skiing and snowboarding, and now is able to participate in many other sports, including running. "I went from complete immobility to a complete recovery."
RIDING HIGH  A polo player and the owner of the International Riding Camp, Arno Mares, age 61, developed osteoarthritis in his left hip at the age of 57.

“I was limping a lot and the pain became so bad I could only get around in a golf cart and couldn’t ride my horses.” Mr. Mares came to HSS to see Dr. Friedrich Boettner for help. Dr. Boettner performed a hip resurfacing and, says Mr. Mares, “I am literally back in the saddle again.”
“For example,” Dr. Figgie continues, “if someone has early arthritis in one part of the knee but some cartilage still exists, the patient may be a candidate for an osteotomy in which the bones in the knee are realigned to relieve pressure. This option is usually considered for younger, active patients and allows them to live with their own joint for a longer period of time.

“If I have a patient with arthritis in the knee and the symptoms are mild, the pain may be well taken care of with anti-inflammatory and over-the-counter pain medications,” says Alejandro González Della Valle, MD. “Sometimes early stage arthritis is accompanied by other issues, such as a torn meniscus. If that’s the case, we tend to be more proactive and we offer patients cortisone shots with or without physical therapy. When arthritis is mild and the patient is hurting due to a severely torn meniscus, arthroscopic trimming of the tear can diminish some of the symptoms.

“If the symptoms are disabling, patients are likely to have arthritis in the three major compartments of the knee – the inner or medial compartment, outer or lateral compartment, and the anterior compartment between the knee cap and the thigh bone,” explains Dr. Della Valle. “We would then recommend a total knee replacement in which all three compartments are replaced with a prosthetic implant. Some patients will present with arthritis isolated to one compartment of the knee. In these cases, we may be able to replace only the affected compartment, leaving the remaining ligaments and cartilage intact.”

Brian C. Halpern, MD, Non-Surgical Sports Medicine

“The beauty of HSS is that it covers all components of the OA treatment spectrum – from evaluation, medical management, and physical therapy, to ultimately joint replacement surgery when necessary.”

HIP REPLACEMENT AND HIP RESURFACING

Hip replacement surgery involves removing the diseased bone and inserting a prosthetic joint that is composed of the stem, the ball, and the socket. In hip resurfacing, bone is removed around the femoral head, which is then reshaped to fit inside the implant. The socket is also resurfaced to accept the implant.
WHEN OA STRIKES THE SPINE  At Special Surgery, patients with spine OA receive a continuum of care from non-surgical management to spine surgery and disc replacement.

The Department of Physiatry provides non-operative care of patients with musculoskeletal and neurologic problems related to OA. “Once we localize the primary source of the pain,” says Gregory E. Lutz, MD, Physiatrist-in-Chief, “patients are provided with a staged approach to treatment starting with the least invasive method.”

The initial stage of treatment is usually oral medication and a medically supervised exercise program. Injection therapy, including epidural steroid injections, facet (joints of the spine) injections, or occasionally sacroiliac joint injections, may be recommended. “We may also consider minimally invasive procedures such as radiofrequency facet denervation or intradiscal electrothermal therapy. These procedures are performed percutaneously and use heat to denervate painful spinal structures,” says Dr. Lutz. “They can provide excellent pain relief for many years and do not limit future treatment choices with our surgeons if needed.”

“Osteoarthritis of the lumbar spine involves degenerative changes in the joints that result in the potential for compression of the nerves, instability, or deformity,” explains Frank P. Cammisa, MD, Chief of the Spine Service. “If the arthritis has caused a narrowing of the spinal canal, surgery is usually indicated. We can do a decompression procedure if only the nerves are affected. With instability, a deformity, or degenerative arthritis across multiple levels of the spine, fusion may be necessary. If degenerative changes are present only in the disc space, disc replacement may be helpful.”

“The most common reason we operate on the cervical spine is degeneration of the disc,” says Russel C. Huang, MD. “Cervical disc replacement is one of the more exciting, newer surgical approaches at HSS. Fusion is effective, but restricts motion in the spine. With disc replacement, we insert an implant that relieves pressure on the spinal cord and the compressed nerves while retaining some motion. Disc replacement is intended for individuals who have only one or two levels of disc involvement.”

Steven K. Magid, MD, Rheumatologist

“OA is a major source of difficulty for our patients and sooner or later it will affect most all of us. There are personal ramifications, as well as economic consequences for the country.”

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ALL THE RIGHT MOVES

A martial artist, Leslie Shallow suffered an injury during a training exercise about five years ago that left him with a herniated disc in his neck. “It was getting progressively worse so I had to take care of it,” says Mr. Shallow, who was referred by his primary physician to Dr. Russel C. Huang. The solution was a cervical disc replacement, and today, at 52 years old, Mr. Shallow, a third degree black belt, can again focus on his training.
BACK IN CIRCULATION

Maria Reguerio suffers with chronic pain in her hip and lumbar spine brought on by an unintentional movement. The pain started in her right leg nearly a decade ago, moving to her lower back. At HSS, she saw Dr. Gregory E. Lutz, Chief of Physiatry, who prescribed a series of epidural injections. “The injections helped me 100 percent,” says Ms. Reguerio. “Needless to say, I went to the best place for joints.”
PROMOTING SUCCESSFUL SURGERIES  Hospital for Special Surgery has in place a number of programs and resources to help the patient who is having surgery prepare for the procedure and ease recuperation. Jack Davis, RN, Manager of Patient Education Programs, oversees pre-op education for patients who are having spine and joint replacement surgeries. During classes, patients receive instruction from a nurse, a physical therapist, and a case manager who explain what they can expect during hospitalization, surgery, and recovery. Topics cover what medications they can take and safety measures while in the Hospital.

“We have a bed in the classroom to demonstrate how to use the call button to call the nurse before getting out of bed,” says Mr. Davis. “We emphasize that they shouldn’t be getting up by themselves to avoid falls. We talk to them about the signing of the surgical site by the physicians and also provide information that will help set their expectations, decrease some of their anxiety, and prepare them as best as we can for the procedure as well as the hospitalization.”

Cassandra Gathers, RN, ONC, Clinical Nurse III, serves as a clinical expert and mentor to nurses who care for surgery patients on the inpatient units. “Our role is to monitor patients as they recover from the procedure and help them along in their recovery – clinically and in terms of developing independence,” says Ms. Gathers. “Older patients can present a particular challenge since they usually have other medical conditions such as hypertension or coronary artery disease. These conditions can be pre-disposing factors to increased risk of post-operative complications. Our nurses are keenly attuned to this and provide care accordingly.”

THE VITAL ROLE OF REHABILITATION  The Hospital’s Joint Mobility Center, a component of the Virginia F. and William R. Salomon Rehabilitation Department, is designed to provide physical therapy specifically for patients with musculoskeletal problems resulting from arthritis of the shoulders, hips, knees, and spine, and provides rehabilitative care for individuals who have undergone total joint replacement surgery. “We see patients all along that continuum – from trying to prevent surgery and then helping people after surgery,” says Lisa Konstantellis MS, PT, a physical therapist and the Section

Cassandra Gathers, RN, ONC, CN III, Nursing

“Osteoarthritis isn’t just about the hip or the knee that’s worn from age. It’s about overall quality of life. That is what you need to consider when caring for patients with OA.”
Manager in the Joint Mobility Center. “Whether our patients are being treated conservatively or have just had joint replacement surgery, we help them to maximize their mobility. “For those in the early stages of OA who are very active, still working, and doing daily activities without too much trouble, we will design a program they can do at home addressing their specific needs such as flexibility or strengthening of particular muscles,” says Ms. Konstantellis. “We educate them on how to protect the joint, how to prevent pain, and comfortable positioning for sleep. We also see people who want to do some safe exercises to keep themselves in optimal shape before having surgery. Following joint replacement surgery, our goal is to provide patients with a therapeutic exercise program that facilitates the healing process and their return to independent functioning.”

HELPING PATIENTS TODAY AND IN THE FUTURE Osteoarthritis is the most common condition that brings patients seeking treatment to Hospital for Special Surgery each year. Here they find a multidisciplinary team of physicians and surgeons, nurses and rehabilitation therapists, working together to help return their mobility, decrease their pain, and improve their quality of life. With the experience gained from over 250,000 patient visits for musculoskeletal and autoimmune disorders annually and performing thousands of total joint replacements and other surgical procedures, HSS plays a leading role in furthering the field of osteoarthritis treatment. We remain committed to addressing this pervasive disease from multiple perspectives – investigating its cause, preventing its progression, and improving care for patients living with it today and for those who will face it in the future.”

Lisa Konstantellis, MS, PT, Rehabilitation Services
“The collaboration among orthopedists, rheumatologists, and physical therapists is critical in the treatment of osteoarthritis, enabling us to develop the most appropriate therapeutic approach for a particular patient.”

MENISCAL REPLACEMENT
HSS scientists are studying whether a synthetic material, hydrogel, can be used to replace a meniscus too damaged to be repaired. It is hoped that the synthetic meniscus will protect the cartilage much the same way as the native meniscus.
AS YOUNG AS YOU FEEL  

Alfred Berger is 96 years old, has lived in the same co-op for the past 45 years, still works full time managing investment portfolios and real estate, and has just celebrated his one-year anniversary of having his hip replaced by Dr. Thomas P. Sculco. "Friends of mine 30 years younger kept telling me 'don’t do it,'" says Mr. Berger. Mr. Berger decided differently. "I didn’t have one minute of pain after surgery. I think Dr. Sculco is a genius."
Standing, left to right: Steven R. Goldring, MD, Chief Scientific Officer; Louis A. Shapiro, President and CEO; Thomas P. Sculco, MD, Surgeon-in-Chief and Medical Director. Seated, left: Aldo Papone, Co-Chair, Board of Trustees; Dean R. O’Hare, Co-Chair, Board of Trustees.
2010 Leadership Report

By every measure, 2009 was an extraordinary year for Hospital for Special Surgery. The demand for our services continued to increase and more patients have come to us than ever before to regain their mobility. More than 24,000 patients (over a 7 percent increase from the prior year) had care that required surgical intervention, and tens of thousands more were treated non-operatively. We launched several new programs in our ongoing efforts to enhance the quality of care and service we provide to our patients. We celebrated the opening of new facilities and made excellent progress in the next phase of the Hospital’s expansion plan.

Our fundraising expectations were surpassed, enabling us to invest in critical research and community-based programs, as well as in our physical expansion. And we hired 67 full-time Registered Nurses to meet the needs of our ever-increasing number of patients. Our RN vacancy rate of 2.78 percent was significantly lower than the New York City RN vacancy rate of 9.3 percent and the national RN vacancy rate of 8.1 percent.

In 2009, we continued to be top ranked by U.S. News & World Report’s “America’s Best Hospitals” survey, and Consumer Reports rated HSS the best hospital in New York City, featuring the Hospital on its website to illustrate best practice.

ADVANCING PATIENT CARE AND SAFETY

In October 2009, Sorrel King gave the keynote address at the Hospital’s third annual Patient Safety Day, sharing with staff a very personal and powerful message. The Josie King Foundation, established by the King family, supports innovative safety programs that influence the way safe practice is incorporated into medical care.

In everything we do for patients, we strive to set the benchmarks in quality – developing, implementing, and refining programs at all levels – from clinical care to environmental safety. To this end, in 2009, we initiated Executive Leadership WalkRounds through which members of the Patient Safety Steering Committee and Senior Management regularly meet with clinical staff to discuss opportunities for improvement on the patient units and throughout the Hospital.

The Department of Nursing was instrumental in the development and implementation of a Rapid Response Team. Consisting of critical care nurses from the Post Anesthesia Care Unit and physician assistants, the Rapid Response Team can be called by a health care professional, a patient, or a family member whenever there is a concern that a patient might be in distress. The team provides immediate assessment and intervenes accordingly to prevent an escalation of the patient’s condition into a medical crisis. Piloted in January 2009 on the inpatient units, the Rapid Response Team is now a valuable resource in the Hospital’s outpatient clinics as well. During 2009, the Rapid Response Team responded to 91 calls on four inpatient units.

Over the past two years, the Department of Nursing has enhanced the delivery of inpatient nursing care by restructuring the units into smaller sections with 18 or 22 beds, rather than the original 40- or 42-bed units. Each section is assigned its own nursing team, which includes Registered Nurses, patient care associates, and registrars. This new model enables patients to interact with the same staff members during their hospitalization, fostering continuity of care and greater patient comfort. In redefining the Hospital’s delivery of care at the bedside, the Department of Nursing created a clinical career ladder that provides professional development for nurses and patient care associates involved in direct patient care. In addition, the Department initiated the “Night Shift Huddle,” in which all staff come together at the start of the shift to discuss each patient on the unit to identify who may need more attention that evening in order to direct services accordingly.

A critical component of our quality program is infection prevention and control. Special Surgery has one of the lowest, if not the lowest, infection rates for orthopedics in the world. In 2009, a report on infection rates from the New York State Department of Health singled out the Hospital as the only one of 171 in the state with a statistically lower rate of surgical site infection (0.1 percent) for hip replacement or revision surgery compared to the state-documented average (1.2 percent). Special Surgery performed nearly 3,700 hip
replacement or revision surgeries in 2009, the highest volume for hip surgeries of any hospital in the world. Reducing pulmonary embolus and deep vein thrombosis continues as a focus of the members of the Hospital’s improvement team and, with their efforts, the rates for these known complications of orthopedic surgery continued a marked decline in 2009.

In the fall, we launched an electronic occurrence reporting system that supports our quality and patient safety initiatives by identifying potential problems and opportunities for improvement. In addition, the Pharmacy has become fully integrated into the CliniCIS information technology system, facilitating prescription ordering and medication processing, and preventing errors in the administration of medications to patients.

**PROMOTING THE PATIENT CARE EXPERIENCE**

The delivery of outstanding patient care, the environment in which this care is provided, and the initiatives we have developed to improve patient service are reflected in the consistently high patient satisfaction scores the Hospital receives.

In 2009, Special Surgery achieved inpatient and ambulatory surgery patient satisfaction scores of 87.4 and 91.9 respectively – our highest scores to date – and we remained in the 99th percentile of Magnet hospitals when patients were asked their “likelihood to recommend” us. This means that for this measure no hospital in the national database has a higher score.

In 2009, the Hospital Quality Alliance also released its second Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores for hospitals nationwide. Hospital for Special Surgery again scored well above both the New York State and national averages in overall patient satisfaction and patient willingness to recommend the Hospital to others, and was the only Hospital in New York City to receive the 2009 Outstanding Patient Experience Award based on this assessment.

These surveys, combined with our internal evaluation systems, provide important benchmarks to continually assess our patients’ experiences and target areas for improvement. Among programs instituted in 2009 to enhance patient and family care is a new pager system for the first, fourth and ninth floor patient waiting areas. Pagers allow family members more freedom of movement while their loved one is in surgery and improve communication with medical and nursing staff in the Post Anesthesia Care Unit. Our patient and family atrium staff and volunteers also make regular “reassurance visits” to the waiting areas to keep families informed and more at ease.

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**Welcome to New Doctors**

Hospital for Special Surgery is able to sustain excellence in the delivery of care in orthopedics, rheumatology, and related specialties because of an exceptional medical staff. In 2009, we were pleased to welcome several outstanding physicians in their respective specialties:

- **David H. Kim, MD**  
  Anesthesiology

- **Rebecca Florsheim, MD**  
  Internal Medicine/Hospitalist

- **Andy O. Miller, MD**  
  Internal Medicine/Infectious Disease

- **Christine M. Yu, MD**  
  Internal Medicine/Hospitalist

- **Florence Yu, MD**  
  Internal Medicine/Hospitalist

- **Gregory S. DiFelice, MD**  
  Orthopedic Surgery

- **Alexander P. Hughes, MD**  
  Orthopedic Surgery
We established the Center for Hip Pain and Preservation, aimed at providing individuals experiencing hip pain with proper diagnosis and treatment options. Increasingly, our hip specialists are able to slow or reverse the progression of degenerative hip disease, get patients back to their chosen activities and, in some cases, delay or eliminate the need for more extensive surgeries.

Patients coming to HSS for surgery are benefiting from enhancements to the Hospital’s pre-surgical screening process that foster a seamless transition from the first time they meet with their surgeon until the day they arrive for surgery. Under the direction of the Department of Nursing, the restructuring of pre-surgical screening includes improving appointment scheduling for medical clearance, minimizing wait times, and consolidating the patient’s number of encounters with healthcare providers during the process.

In 2009, the Hospital established a Quality Research Center with an innovative structure for applying research methodologies to health care quality issues. Through this new initiative, new and existing research in areas that impact on quality of patient care and patient safety conducted by physicians, nurses, and several departments will be integrated to enable us to improve best practices to benefit our patients.

MEETING THE NEEDS OF OUR PATIENTS NOW AND IN THE FUTURE

Over the past decade, demand for Special Surgery’s services has risen dramatically, with over 30 percent increase in surgical volume in just the past three years. It is imperative to have ongoing expansion plans underway to ensure that we can continue to meet the needs of those who seek us out for their care, not only from our local regions but from across the country and around the world.

In August 2009, we began the final phase of our expansion and renovation project, which will add three floors atop the main Hospital building. The new 51,048-square-foot space will include additional beds, bringing total Hospital beds to 188, and four new inpatient operating rooms scheduled to come on line in 2011 and 2012. The new ninth floor will serve as home for an enlarged Hospital pharmacy and the Hospital’s pediatric rehabilitation department. Our new Children’s Pavilion is scheduled to open in 2012.

In addition, Special Surgery has purchased a building on 75th Street between York and First Avenues that will be developed to enhance our ambulatory services and will accommodate physician offices, minor procedure rooms, and an MRI suite.

ENHANCING EDUCATION AND ACADEMIC AFFAIRS

In July 2009, the Hospital welcomed eight orthopedic residents from prestigious medical schools across the country, and 70 physicians joined us for fellowships in orthopedic subspecialties, rheumatology, anesthesiology, physiatry, and musculoskeletal radiology. We are pleased to report that the Hospital’s first-time accreditation application for its musculoskeletal radiology fellowship program was approved.

The HSS Journal, launched in 2005, marked a new milestone in 2009 with its acceptance into PubMed indexing. The Hospital also received four-year accreditation by ACCME, enabling HSS to develop and accredit Continuing Medical Education programs.

The Hospital’s international education efforts continued to flourish in 2009 with the offering of a two-day educational program on *New Advances in Hip and Knee Reconstructive Surgery* for 125 orthopedic surgeons from Spain and a program on *Current Concepts in Sports Medicine* for 16 orthopedic surgeons from Greece, with support from the Stavros S. Niarchos Foundation. The Hospital
also hosted the inaugural annual scientific CME-accredited meeting of the International Society of Hip Arthroscopy, which attracted more than 250 leading surgeons from 30 countries.

HSS is at the forefront in the education and training of orthopedic residents. We have one of the few orthopedic residency programs in the country that dedicates the first hour of the morning as protected time for resident education. Finding a balance between teaching and time in the operating room and maintaining resident work hour requirements is a challenge facing all orthopedic residency programs today. Recognizing that these issues are universal, in 2008 HSS convened a national forum of program directors from highly regarded orthopedic residency programs to discuss common challenges. The recommendations that emerged from this productive meeting were published in the January 2010 issue of the Journal of Bone and Joint Surgery.

In February 2010, the Hospital’s nursing staff chartered the first hospital-based chapter of the National Association of Orthopaedic Nurses (NAON), which has a current membership of over 75 HSS nurses. The new chapter will facilitate nursing access to professional organization activities, including continuing education programs, study and preparation for orthopedic nursing certification examinations, and participation at national meetings.

**RAISING THE BAR IN RESEARCH**

A major focus of our research efforts is the development of disease registries that will drive improvements in patient outcomes. These registries advance research into the causes, genetics, and management of musculoskeletal diseases. In 2009, we provided the Research Division with $1 million of seed funding to establish and continue patient registries in a number of priority areas, including an ACL registry, a hip pain and preservation registry, and a total joint arthroplasty registry through the Center for Education and Research on Therapeutics (CERT). Since its inception in 2007, the total joint registry has enrolled over 20,800 patients. Under the direction of Timothy Wright, PhD, Director of Biomechanics and F.M. Kirby Chair in Orthopedic Biomechanics, a common structure is being developed for all of the Hospital’s patient registries.

Hospital for Special Surgery researchers were awarded more than $2.8 million in funding through the federal stimulus package, which provided a number of competitive funding opportunities for scientists through the National Institutes of Health (NIH). The Hospital received two Challenge Grants and secured funding for seven additional proposals. The Challenge Grants will support a study by Dr. Hollis Potter on the role of MRI in visualizing the repair and function of the meniscus and the work of Dr. Stephen Lyman in identifying risk factors for early revision arthroplasty.

We were pleased to welcome two noted senior scientists in 2009: Alessandra Pernis, MD, who brings special expertise in acquired immunity and in experimental and genetic models of rheumatoid arthritis and lupus, and F. Patrick Ross, PhD, an international leader in bone cell and molecular biology research.

**THE GENEROSITY OF FRIENDS**

Grateful patients, foundations, corporations, our trustees and medical staff, and many individuals enabled the Hospital to raise more than $18.7 million in 2009, surpassing our target goal of $16 million. We are extremely fortunate and profoundly grateful to have a circle of supporters that continues to grow both in number and generosity.

On June 22, 2009, more than 875 guests gathered at the Waldorf-Astoria for the Hospital’s 26th Annual Tribute Dinner, raising $1.85 million. The event paid tribute to David H. Koch, Executive Vice President and board
member of Koch Industries, Inc., and HSS Trustee, and John P. Lyden, MD, noted orthopedic trauma surgeon at HSS and former Chief of the Hospital's Orthopedic Trauma Service. Mr. Koch was honored for his philanthropic leadership and extraordinary commitment to health care and medical research. Dr. Lyden received the Hospital’s 2009 Lifetime Achievement Award in recognition of his dedication to caring for thousands of patients and to the education and surgical training of hundreds of residents and fellows. Trustee William R. Salomon, Honorary Chair of Citibank, served as Dinner Chair; Trustee Patricia G. Warner led our Dinner Committee; and Trustee Tiki Barber served as the evening’s toastmaster.

On November 13, 2009, the Hospital’s Autumn Benefit Committee, chaired by Cynthia D. Sculco, hosted A Night Under the Bridge at the historic Queensboro Bridge at Guastavino’s. More than 380 people attended the benefit, which raised more than $470,000 for the Hospital’s medical education program and its HSS Journal.

IN GRATITUDE RECOGNITION
For the past 34 years, Stephen A. Paget, MD, an internationally renowned rheumatologist, has been dedicated to Hospital for Special Surgery and the care of patients with rheumatic diseases. Since 1995, Dr. Paget has served as Physician-in-Chief and Chair of the Division of Rheumatology, overseeing patient care, research, and education. On April 1, 2010, Dr. Paget was named Physician-in-Chief Emeritus, taking on a new leadership role with responsibility for a wide range of educational and training endeavors. He is succeeded by Mary K. Crow, MD, Benjamin M. Rosen Chair in Immunology and Inflammation Research, an exceptional physician-scientist who has served as Associate Chief of the Division of Rheumatology and Director of Rheumatology Research at HSS [see article on page 30].

CONTINUING THE JOURNEY
Hospital for Special Surgery is a global leader in the fields of orthopedic, rheumatological, and autoimmune diseases. The Hospital’s commitment to research, which enables our clinicians and scientists to better understand and treat the myriad conditions that impact mobility and function; its establishment of an environment that furthers education and training in orthopedic surgery, rheumatology, and related specialties; and a mission to uphold the highest standards in patient care, safety, and service continue to empower us to excel.

We are indebted to the physicians and health professionals who have devoted their professional lives to HSS, the employees who are equally dedicated to ensuring our patients receive quality care in a safe environment, the volunteers who help make the Hospital experience for patients and families as comfortable and comforting as possible, and our Board of Trustees and Board of Advisors whose expertise and involvement in the Hospital are invaluable. In 2009, we were pleased to welcome our newest board members: Cynthia Foster Curry, Executive Managing Director, Cushman & Wakefield; Jonathan Sobel, Managing Member, DTF Holdings, LLC; and Robert K. Steel, former President and CEO of Wachovia, and newly elected advisors: Sanford B. Ehrenkranz, Melvin J. Glimcher, MD, Cynthia Golub, Lorna B. Goodman, Kathy Leventhal, Amanda Lister, Thomas Lister, Gene Washington, and Henry A. Wilmerding, Jr.

As we chart our course for the future, we not only celebrate our past success, but we also look for new opportunities to surpass our own expectations and those of our patients. For the past few years, we have pursued activities set forth by the 2008+ Strategic Plan that enabled us to make great progress toward achieving our mission and our vision. With Strategic Plan 2010+, we continue this journey with an engaged and committed workforce and support from our world-class clinical staff. Our goals remain constant: To elevate quality patient care, research, and education; to provide patients with the best possible experience; and to ensure financial strength to enable our continued growth.

Dean R. O’Hare
Co-Chair

Aldo Papone
Co-Chair

Louis A. Shapiro
President and CEO

Thomas P. Sculco, MD
Surgeon-in-Chief and Medical Director

Steven R. Goldring, MD
Chief Scientific Officer
P

hysician, clinician-scientist, educator, mentor, leader. For the past 34 years, Stephen A. Paget, MD, FACP, FACR, has left an indelible mark in advancing the field of musculoskeletal and autoimmune disorders at Hospital for Special Surgery. This year, the internationally recognized rheumatologist steps down as Physician-in-Chief and Chairman of the Division of Rheumatology and begins the next phase in his esteemed career to focus on educational, training, research, and international outreach projects.

“We want to express our gratitude for all that Steve Paget has done for HSS,” says Louis A. Shapiro, President and CEO. “His dedication to assuring the highest quality of care, educating new physicians, and defining the causes and cures of musculoskeletal and autoimmune disorders through research has become part of the very fabric of this institution.”

During the 15 years Dr. Paget served as Physician-in-Chief, the Division of Rheumatology realized significant achievements and growth. Today, the Division is the largest in the nation and the number of patients coming here for care has tripled. Under his guidance, the Division opened the Kirkland Center for Lupus Research and the Gosden Robinson Inflammatory Arthritis Center. Dr. Paget also led efforts to develop centers of excellence in scleroderma, myositis, and vasculitis; was instrumental in establishing HSS’ highly respected Musculoskeletal Perioperative Center, which serves over 12,000 orthopedic surgical patients a year; and establishing an infusion unit for patients with autoimmune disorders that has become a model for the country.

“For Dr. Paget, it is all about the patients and what will make their lives better,” says Thomas P. Sculco, MD, Surgeon-in-Chief.

“Steve Paget has had a real impact upon rheumatology education and research throughout the nation,” adds Steven R. Goldring, MD, Chief Scientific Officer and St. Giles Research Chair. “He has been able to integrate medicine with science and deliver on the promise of translational research to bring innovations from the laboratory to the bedside where they can improve lives.”

Dr. Paget is particularly proud of the Division’s Rheumatology Fellowship Program – one of the most sought after in the nation – which has fostered the development of academic, research, and clinical leaders in the field of rheumatology. “We’ve trained over 50 fellows, and nearly 90 percent have pursued academic medicine, including some real stars in immunology,” says Dr. Paget, who is also the Joseph P. Routh Professor of Medicine at Weill Cornell Medical College.

Recruiting outstanding clinical and research talent has also been a hallmark of Dr. Paget’s career. “I’m proud to have been able to help attract people who have really flourished here, people who have wanted to move the field forward,” he says.

“Steve is an outstanding clinician, administrator, and teacher, who has made immeasurable contributions to the Division of Rheumatology,” says Peggy Crow, MD. “In particular, his development of our rheumatology education programs is without peer. And on a personal note, Steve has been a major influence and mentor throughout my own career.”

Dr. Paget has made a lasting impression in the hearts and minds of staff and colleagues alike at HSS. That regard is mutual, says Dr. Paget. “My tenure as Physician-in-Chief and head of the Rheumatology Division has been a wonderful experience in large part because of the incredibly talented people with whom I’ve had the opportunity to work. HSS is a truly special institution, and I look forward to continue teaching new doctors and caring for patients, which, at the end of the day, has always been the greatest reward for me.”
Dr. Peggy Crow: Welcoming the New Physician-in-Chief

With the selection of Mary K. (Peggy) Crow, MD, as the new Physician-in-Chief and Chair of the Division of Rheumatology, Hospital for Special Surgery has named an internationally renowned scientist who not only brings a wealth of experience and expertise in autoimmune disorders, but also an association with HSS spanning more than 30 years.

“Dr. Crow’s prolific and profound scientific contributions to autoimmunity and rheumatology research and its translation to patients, coupled with her extraordinary leadership skills, make her uniquely qualified for this key position,” says Louis A. Shapiro, President and CEO.

Dr. Crow’s relationship with Special Surgery and its academic affiliates began in 1978, when she received her MD degree from Cornell University Medical College. She subsequently completed her internship and residency at New York Hospital-Cornell Medical Center, followed by a fellowship in rheumatology and immunology research at HSS and The Rockefeller University. Dr. Crow, a tenured Professor of Medicine at Weill Cornell Medical College, has served as a mentor and role model to medical students and young scientists alike. She has been Associate Chief, Division of Rheumatology and Director of Rheumatology Research since 2001.

“We are fortunate to have someone of the caliber of Dr. Crow on our staff who can step into this important role,” says Thomas P. Sculco, MD, Surgeon-in-Chief. “She is a distinguished and respected scientist whose work provides a model for bench to bedside research that will lead to great improvements in patient care.”

A leader in the study of autoimmune disease, Dr. Crow, Benjamin M. Rosen Chair in Immunology and Inflammation Research, has furthered the development of new therapies for lupus, rheumatoid arthritis, and scleroderma. In addition to her major focus on mechanisms of autoimmunity in lupus, she has recently extended her research to the role of inflammation in the development of osteoarthritis.

A past President of the American College of Rheumatology, Dr. Crow also served for the last two years as President of the prestigious Henry Kunkel Society, which fosters the development of clinical investigators focused on hypothesis-driven, patient-oriented research.

“I have been very fortunate to work with Dr. Crow for many years,” says Steven R. Goldring, MD, Chief Scientific Officer and St. Giles Research Chair. “Her strengths and abilities in the fields of academic medicine, education, patient care, and research are exceptional.”

Dr. Crow will remain Co-director of the Mary Kirkland Center for Lupus Research and Director of the Autoimmunity and Inflammation Research Program. “I believe there are many opportunities to further integrate research and patient care, and I look forward to working closely with my colleagues in both research and clinical practice in these endeavors,” says Dr. Crow.

Longtime friends and associates, Dr. Crow and Dr. Paget have made possible a seamless transition in leadership. “Steve has been an outstanding leader and a major force in the development of the careers of rheumatologists who practice here and those who have come to HSS to train,” says Dr. Crow. “I am honored to be given this opportunity at such an extraordinary academic institution, which has been so much a part of my life.”

“Peggy is the consummate physician-scientist and the model rheumatologist of today,” adds Dr. Paget. “I have tremendous respect for her as a person, a scientist, and a rheumatologist. She is a superb and brilliant choice to lead the Division of Rheumatology as it enters a new era.”
A Family Affair: Grateful Patients Herbert and Lorraine Podell Give Back to HSS

Herbert S. and Lorraine B. Podell know well the anxious moments experienced by family members awaiting news of a loved one following surgery. So it is only fitting that their generous pledge to Building on Success: The Campaign for the Future of HSS will go toward the naming of a warm and welcoming family waiting room when the Hospital’s new building expansion is completed in 2012.

Both Mr. and Mrs. Podell have themselves sought care and treatment at HSS at various times in recent years. A senior managing partner at Podell, Schwartz, Schechter & Banfield, LLP, Mr. Podell first came to Hospital for Special Surgery in 2001. Over time, he developed debilitating hip pain from osteoarthritis and was increasingly unable to enjoy his leisure activities, such as playing tennis and golf. “I knew I had to have surgery – the X-rays showed that the bones were worn out,” he says. “I chose HSS because of its fine reputation and excellent surgeons. The Hospital also has an outstanding record of infection control, which is very, very important. I felt if I needed any surgery, I would want to come here.”

In 2008, Mr. Podell underwent hip replacement surgery by Eduardo A. Salvati, MD. “My hip is doing just fine now, and the quality of my life has improved immensely,” he says. In grateful appreciation for the excellent care received at HSS, the Podells have also contributed to the Eduardo A. Salvati, MD, Chair in Hip Arthroplasty. This fund provides vital perpetual support to the Hospital’s joint replacement research, while honoring Dr. Salvati for his 40 years of service to Special Surgery – a career that has enriched the lives of thousands of patients, students, and colleagues, while advancing the course of hip surgery throughout the world.

More recently, an injured shoulder brought Mr. Podell to seek care with Russell F. Warren, MD. Mrs. Podell, who is an owner of New York Dog, a pet clothing and accessories design and manufacturing firm, has been a patient of Andrew D. Pearle, MD, and Frank A. Cordasco, MD.

In addition to supporting HSS, the Podells’ philanthropy extends to a number of other organizations and programs. Through their family foundation, they have donated pre-Columbian art to Syracuse University and sponsored a student fellowship at the Furman Center for Real Estate and Public Policy at New York University School of Law, where Mr. Podell received his law degree.

“We have been very pleased with Hospital for Special Surgery and the treatment we’ve received there,” adds Mr. Podell, “and we plan to continue to assist the Hospital in its important work in helping other patients.”
2009 Report

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Trudi Frank: An Unexpected and Generous Act of Philanthropy 52
In 2009, Hospital for Special Surgery and Affiliated Companies (the “Hospital”) achieved strong operating results, with operating income of $25.4 million. Over the last decade, the Hospital’s solid financial foundation and successful fundraising efforts have provided the resources for investments in personnel and capital infrastructure that advance our strategic goals – including accommodating the growing demand for both surgical and non-surgical services, maintaining and improving quality of care, and conducting cutting edge research.

Despite a severe economic downturn in 2009, the Hospital’s surgical volume grew by 7 percent and outpatient visits for non-surgical services grew by 9 percent. Over the past five years, surgical volume has grown at an average annual rate of 8 percent. We are anticipating that demand will continue to grow locally, nationally, and internationally due to increasing awareness and recognition of the Hospital’s reputation and its outstanding outcomes. In addition, the projected aging of the population could increase the need for care in orthopedics, rheumatology, and related disciplines.

In recent years, to accommodate current and future growth, the Hospital has undergone a facility expansion that has added inpatient beds, operating rooms, and physician offices, as well as expanded our radiology and other support space. These expansion efforts continue in order to keep pace with expected growth. In August 2009, we began construction of three additional floors atop the main Hospital building. Scheduled to be completed in 2011, the new floors will provide the Hospital with additional inpatient beds and related support space and enable the construction of a new Pediatric Pavilion to open in 2012. In January 2010, we purchased a 30,000-square-foot medical office building five blocks from the main Hospital building, which will be renovated to house physician offices, radiology services, and procedure rooms. Additional operating rooms, which are critically needed, will also be constructed and become operational during 2011 and 2012. Significant financial resources have also been invested over the past few years in expanding and upgrading our information technology infrastructure and systems, and we remain committed to incorporating technology that will enhance our ability to deliver care in a safe and efficient manner.

We have been highly successful in recruiting, retaining, and developing talented and dedicated physicians, nurses, and other professional staff needed to maintain our level of excellence and accommodate volume growth. During 2009, we added 132 full-time equivalent positions, predominantly physicians, nurses, and other direct patient care personnel. Our current employee turnover rate for regular full-time and part-time employees is approximately 8 percent, which is below the industry standard of approximately 10 percent. This success in employee recruitment and retention, which is a major contributing factor to our quality of care and strong financial performance, is attributable to many factors, including the Hospital’s reputation, strategic focus on measuring and improving employee engagement, and training and staff development programs.

The Hospital’s Research Division is an internationally recognized leader in the study of musculoskeletal disorders. Research remains a priority and is critical to maintaining and enhancing our status as a premier institution in orthopedics, rheumatology, and related disciplines. During 2009, the Hospital expended $30.4 million on a wide variety of research initiatives and programs, including the recruitment of two world-renowned scientists and investment in our growing patient registry program. In addition, the Hospital received more than $2.8 million in highly competitive stimulus grants through the American Recovery and Reinvestment Act.

The Hospital continues to operate in an environment with many challenges and uncertainties, including national healthcare reform, New York State healthcare budget reductions, complex and costly regulatory requirements, the high cost of labor, real estate, and construction in the New York City metropolitan area, and a still recovering economy. With a stellar reputation and ever strengthening market position, a history of achieving positive operating margins and successful fundraising, a forward thinking strategic plan and prudent investments, and an organization-wide emphasis on efficiently managing financial resources, the Hospital is well-positioned to respond to these challenges. We look forward to continuing to uphold our mission of providing the highest quality musculoskeletal care and patient service, educating future physicians in our specialties, and pursuing pacesetting research that will further the fields of orthopedics and rheumatology.

Stacey L. Malakoff
Executive Vice President and
Chief Financial Officer
Financial Information

**STATEMENT OF INCOME**

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<tr>
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<th>2009</th>
<th>2008</th>
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<tr>
<td><strong>Hospital for Special Surgery</strong></td>
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<tr>
<td>Total Revenue</td>
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<td><strong>Operating Income for Hospital for Special Surgery and Affiliated Companies</strong></td>
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**STATEMENT OF FINANCIAL POSITION**

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<td>Long Term</td>
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<td>307,671</td>
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<td>Other Non-Current Assets</td>
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<td><strong>Total Assets</strong></td>
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<td>$683,880</td>
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<td><strong>Liabilities and Net Assets</strong></td>
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<td><strong>Total Liabilities and Net Assets</strong></td>
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<td>$683,880</td>
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1. Includes activities relating to Hospital for Special Surgery and its affiliates (Hospital for Special Surgery Fund, Inc., HSS Properties Corporation, HSS Horizons, Inc., HSS Ventures, Inc., and Medical Indemnity Assurance Company, Ltd.).
2. Complete audited Financial Statements of both Hospital for Special Surgery and affiliates are available upon request from the HSS Development Department at 212.606.1196.
3. Excludes $14.9 and $18.0 million of restricted philanthropic contributions in 2009 and 2008, respectively.
4. For purposes of comparison, certain reclassifications have been made to the 2008 column to conform with the 2009 presentation. Such reclassifications had no effect on changes in net assets.
5. Excludes changes in unrealized gains and losses on investments.
6. Includes $1.2 million and $1.1 million of transactions between affiliates that are eliminated in consolidation in 2009 and 2008, respectively.
7. Excludes $42.0 million and $35.5 million of transactions between affiliates that are eliminated in consolidation in 2009 and 2008, respectively.
8. Hospital for Special Surgery is the beneficiary in perpetuity of income from an outside trust. The fair values of investments in the trust are not included above and were $31.6 million and $26.7 million at December 31, 2009 and 2008, respectively.
2009 Philanthropic Highlights – HSS Surpasses Goal by Nearly $3 Million

SUPPORT FROM OUR DONORS
Hospital for Special Surgery raised nearly $19 million in 2009, surpassing our $16 million goal by 18 percent. This extraordinary success was made possible by the generosity of thousands of individuals, foundations, and corporations who chose to make HSS part of their philanthropic plans.

Individual donors continued to provide the foundation for our success as an institution; along with bequests, they accounted for 72 percent of the funds raised in 2009. More than 5,700 donors contributed to Special Surgery, an increase of 9 percent over 2008. Three gifts of $1 million or more were received, including: $1.83 million from Rheuminations, Inc. to benefit the Mary Kirkland Center for Lupus Research; $1 million from the Ranawat family to name the Chitranjan S. Ranawat, MD Lecture Hall; and a $1 million anonymous gift.

BUILDING ON SUCCESS: THE CAMPAIGN FOR THE FUTURE OF HSS
Building on Success: The Campaign for the Future of HSS moved ahead rapidly in 2009. The total raised for the Campaign surpassed $109 million, including over $4 million for capital expansion and nearly $6 million for research. These funds are dedicated to the expansion of our clinical facilities and the development of a robust clinical research program, helping us advance evidence-based medicine in orthopedics, rheumatology, and related diseases to meet the needs of the increasing number of patients who come to Special Surgery seeking help. At the brink of completion of this historic campaign, all at HSS would like to extend profound thanks to the thousands of generous supporters who share our vision for the future of the Hospital and have helped to make it a reality.

ANNUAL FUND
The Annual Fund had a record year in 2009, raising more than $1.9 million for unrestricted support, an increase of 27 percent over 2008. This continues an upward trend in giving that has endured over the past five years. Online giving to www.hss.edu increased by 105 percent in 2009.

The Annual Gala is traditionally the largest source of critical unrestricted support for the Hospital and remained so in 2009. With the help of our dedicated dinner committee, led by Patricia G. Warner, the Gala netted more than $1.5 million in a recessionary economy, exceeding the net proceeds from 2008.

CULTIVATING SUPPORT
The Autumn Benefit, led by committee chair Cynthia Sculco, raised more than $400,000 for medical education, while a new Young Professionals event raised nearly $25,000. The third annual Big Apple Circus Benefit, featuring HSS’ first silent auction, raised nearly $165,000 for pediatric care and research, a 170 percent increase since its debut. The Pediatric Council, chaired by HSS Trustees Lara Lerner and Susan W. Rose, held its inaugural meeting, raising awareness of the Children’s Pavilion and engaging dedicated and enthusiastic volunteers in support of this project, scheduled for completion in 2012.
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Fellows in Research
Ira W. DeCamp Fellow in Bone and Mineral Research, received the Alfred Starr Research Chair, was a Speaker and Session Chair at the “Bone and Joint Decade Global Network Conference” in Washington, DC.

Mary Goldring, PhD,
Ira W. DeCamp Fellow in Musculoskeletal Genetics, has been elected fourth Vice President of the Orthopaedic Research Society. Dr. Goldring received the Clark Honors College Alumni Achievement Award at the University of Oregon, Eugene, Commencement Ceremony.

Steven R. Goldring, MD, the St. Giles Research Chair, was a Speaker and Session Chair at the "Bone and Joint Decade Global Network Conference" in Washington, DC.

Jo A. Hannafin, MD, received the 2009 Orthopaedic Research Society Women’s Leadership Forum Award.

Laura Robbins, DSW, received the Charles B. Harding Award for Distinguished Service from the Arthritis Foundation at its national meeting in Atlanta. The Harding Award is the Arthritis Foundation’s highest nationwide volunteer honor, recognizing a volunteer who has provided leadership and direction to the Foundation.

Steven R. Goldring, MD, the St. Giles Research Chair, was a Speaker and Session Chair at the "Bone and Joint Decade Global Network Conference" in Washington, DC.

Jo A. Hannafin, MD, received the 2009 Orthopaedic Research Society Women’s Leadership Forum Award.

Laura Robbins, DSW, received the Charles B. Harding Award for Distinguished Service from the Arthritis Foundation at its national meeting in Atlanta. The Harding Award is the Arthritis Foundation’s highest nationwide volunteer honor, recognizing a volunteer who has provided leadership and direction to the Foundation.

Jane E. Salmon, MD, the Collette Kean Research Chair, participated in the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) Roundtable on Arthritis and Rheumatic Diseases. The meeting’s goal was to elicit input and guidance from the scientific community about areas of research for NIAMS to highlight in the Institute’s new FY 2010-2014 Long-Range Plan.

Members of the Hospital’s Research Division are routinely recognized for their achievements with awards and election to national and international leadership positions. Following are a few of the individuals who have recently been honored.

Adelle L. Boskey, PhD, Starr Chair in Mineralized Tissue Research, received the Alfred R. Shands, Jr. Award from the Orthopaedic Research Society and the American Orthopaedic Association for her life-long contributions to orthopaedic research. Dr. Boskey was elected to the American Institute for Medical and Biological Engineering’s (AIMBE) College of Fellows for her contributions to medical and biological engineering, and named to the editorial advisory board of the journals Bone and Journal of Bone and Mineral Research.

Mary Goldring, PhD,
Ira W. DeCamp Fellow in Musculoskeletal Genetics, has been elected fourth Vice President of the Orthopaedic Research Society. Dr. Goldring received the Clark Honors College Alumni Achievement Award at the University of Oregon, Eugene, Commencement Ceremony.
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Trudi Frank: An Unexpected and Generous Act of Philanthropy

Grateful Patient Supports HSS Through Significant Bequest

Hospital for Special Surgery gave Trudi Frank an extra 15 years of going to the gym, traveling, and pursuing her active and artistic lifestyle. In return, the world-renowned watercolorist left the Hospital a significant gift in her Will.

Ms. Frank’s life was not easy. She and her family fled Germany shortly after Kristallnacht, the beginning of the Holocaust, in 1938. They arrived in America with virtually nothing but their freedom, staying with relatives in Los Angeles. When the young Trudi, then Trudi Gerset, showed artistic talent, an aunt paid for an art education at the Chouinard Art Institute and UCLA. A career as a fashion designer followed, and then a move to painting. In fact, Ms. Frank’s work has been exhibited at shows and galleries throughout North America, South America, and Europe.

Ms. Frank led a full and dynamic life that included both the visual and performing arts. However, she was becoming increasingly disabled by severe osteoarthritis in both of her hips. “Every day she worked out in the gym and then painted,” recalled Barbara Kolsun, a friend for many years. “Worked out and painted, that is, until hip pain made the painting difficult and the gym visits impossible.”

In 1992, Ms. Frank underwent a bilateral hip replacement performed by Thomas L. Wickiewicz, MD. The procedure transformed her life, and she credited Dr. Wickiewicz for enabling her to resume her vibrant life. She continued to participate in “Artist in Residence” programs around the world, teach art to the local community, and to exhibit her art. She painted every day and participated in some 60 solo and group art exhibitions throughout her lifetime. In 2007, at the age of 81, Ms. Frank passed away in Positano, Italy, where she was featured in an exhibition.

Fifteen years after she first came to Hospital for Special Surgery, Ms. Frank still remembered the place that restored her quality of life. With the naming of the Hospital in her Will, Ms. Frank bequeathed a portion of her estate to benefit arthritis research at HSS. Ms. Frank’s generosity and foresight has provided $650,000 to date for research at the Hospital.

“This gift will provide valuable funding that will stimulate new arthritis-related research,” explains Steven R. Goldring, MD, Chief Scientific Officer and St. Giles Research Chair, “and will assist in the recruitment of new scientists for our investigations in bone, ligament, and cartilage repair.”

Ms. Frank’s gift is supporting the Hospital’s arthritis research and the ACL Registry, which has been created with the ultimate goal of refining ACL (anterior cruciate ligament) surgery and improving patient outcomes.

Having devoted much of his career to ACL research and reconstruction, Dr. Wickiewicz says that research is the perfect beneficiary of Ms. Frank’s contribution. “In the same way that hip replacement surgery allowed Trudi to enjoy an active lifestyle for many years, we hope that improving ACL surgery will allow more patients to regain their mobility and enjoy equally long and active lives,” he says. “I believe this will be a fitting tribute to Trudi’s memory.”

Over the past decade, bequests have made a significant contribution to the overall growth of Hospital for Special Surgery. Charitable bequests are one of many planned giving opportunities that individuals can use to support the future of Special Surgery.

If you would like more information on planned giving opportunities, please contact Rachel Cameau, Associate Director, Planned Giving, at 212.774.7252

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Remove and Keep:
A Guide to Services for Osteoarthritis

On the Cover:
For Penny Hoff, the decision for surgery came when she was just 44 years old. “People told me I was too young to be limping around, crippled by osteoarthritis in my hips,” says Ms. Hoff, a fitness director and yoga instructor. In 2005, Dr. Mark P. Figgie replaced her right hip and in 2008, he replaced her left hip. “Since then I have just been thriving, doing everything from spinning to barbell strengthen to yoga, and I have never felt better.”

Opposite Page:
On May 29, 2009, world-traveled writer/photographer Sonja Lowenfish journeyed to Western China only five months after Dr. Mathias P. Bostrom replaced each of her hips – both damaged by osteoarthritis – a month apart. She followed the Silk Road on camel, by train, and in rickety cars. “When I left the States, I left my walking stick behind,” says Ms. Lowenfish, 69, who makes her home in Florida.
Founded in 1863, Hospital for Special Surgery is regarded as the world’s leading center for musculoskeletal health. Top ranked in the Northeast for Orthopedics and Rheumatology for 19 consecutive years by *U.S. News & World Report*, HSS provides specialty care for individuals of all ages and all stages of orthopedic and rheumatologic disease.

Caring for Patients with Osteoarthritis: Penny Hoff is one of some 27 million Americans affected by the most common form of arthritis. She is one of thousands of patients who has benefited from Hospital for Special Surgery’s care for this disease.