Health ONE Sky Ridge Medical Center®

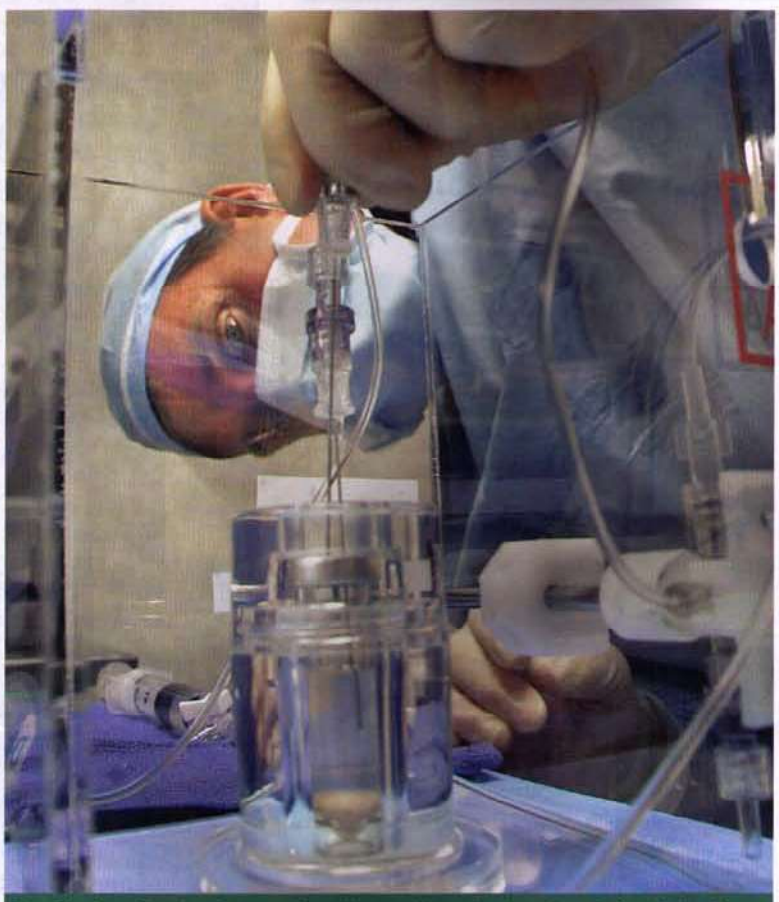
New Radiology Treatment Good News for Liver Cancer Patients

Cancer seems to have a way of deeply invading the lives of those stricken by the disease. And often, the treatments aren't much friendlier to patients. But some recent advances in cancer treatment are helping, including some effective, minimally invasive cancer procedures performed today at Sky Ridge Medical Center.

Charles Nutting, DO, FSIR, and Chief of Interventional Radiology at Sky Ridge, brought more with him than his medical books when he came to Sky Ridge three years ago. Dr. Nutting carried with him the experience of performing hundreds of minimally invasive cancer procedures on patients with cancer of the liver, kidney and lung. In fact, Dr. Nutting was the first physician in the U.S. to perform a specific minimally invasive procedure back in March 2002.

"Everyone wants things done quicker, smaller and with less recovery time. We can do everything through a tiny needle stick and most patients [95%] go home the same day. Patients can be told that they have several months to live, but with this procedure many are alive years later."

—Dr. Charles Nutting



Dr. Charles Nutting draws 40 million radioactive beads to inject into the patient's liver tumor.

Localized Radiation: A Less Invasive Cancer Treatment

This advanced procedure for inoperable liver cancer, known as radioembolization or selective internal radiation therapy (SIRT), involves injecting tiny radioactive beads smaller than the diameter of a human hair through a catheter from the groin into the liver artery supplying the tumor. Done in conjunction with imaging equipment, this technique allows for a higher, local dose of radiation to be used, without subjecting healthy tissue in the body to the radiation.

"About 70% of the patients I see with primary or metastatic liver cancer are candidates for this procedure," says Dr. Nutting. Many of these patients have colon cancer that has metastasized, or spread, to the liver, while the rest have breast, carcinoid, neuroendocrine or melanoma tumors, according to Dr. Nutting. He also notes that Sky Ridge performs this radioembolization procedure more than any other hospital in the U.S., which is good news for Sky Ridge patients being treated for liver cancer.

"This is a highly targeted cancer therapy," says Dr. Nutting. "Everyone wants things done quicker, smaller and with less recovery time. We can do everything through a tiny needle stick, and most patients [95%] go home the same day. Patients can be told that they have several months to live, but with this procedure many are alive years later."

High Praise for Radioembolization

For Jola Stettler, learning 15 months ago that she had developed ocular melanoma, or melanoma of the eye, that had metastasized to her liver, was of course challenging news. But when an oncologist, and then second and third opinions, told the 37-year-old mother of three that there was nothing they could do for her and that she had three to six months to live, she and her husband decided to look further for answers. "My husband and I found information about this radioembolization treatment on the Web," says Jola. "That's how we were led to Dr. Nutting."

Prior to her first radioembolization procedure in February 2007, Jola had 18 tumors on her liver. Within three to four months after the procedure, all the smaller tumors were gone, leaving only four. Jola had another radioembolization procedure done this past November after the remaining tumors starting growing, and by January the tumors had shrunk considerably.

"I want people to know not to give up because you are told there's nothing that can be done," says Jola. "Dr. Nutting shined a light into the darkness for me. I would recommend Dr. Nutting to anyone, anywhere. To him, anything is possible. I wish more people knew about this procedure."

FAST FACTS: RADIOEMBOLIZATION

- A relatively new therapy used to treat both primary and metastatic liver tumors
- Similar to chemoembolization but with the use of radioactive microspheres, or tiny beads, to kill cancer cells
- Is a palliative (relieves symptoms), not a curative, treatment
- Benefits patients by extending their lives and improving their quality of life
- Is typically performed on an outpatient basis
- Elicits fewer side effects compared with standard cancer treatments

—Society of Interventional Radiology

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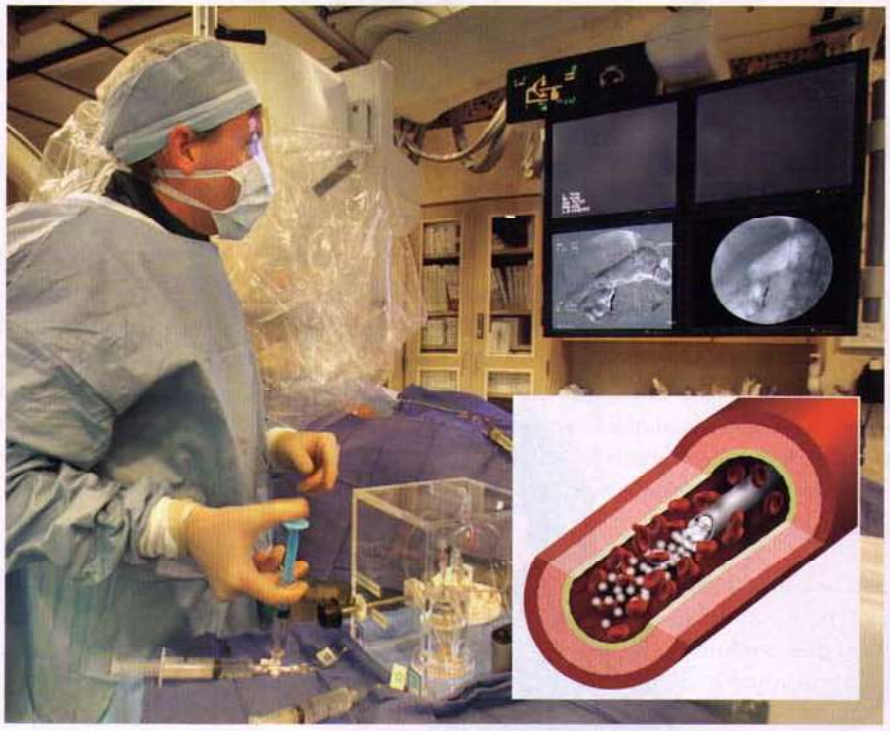
—Jola Stettler, patient

INTERVENTIONAL RADIOLOGY DEFINED

Interventional radiologists are uniquely skilled in using the vascular system to deliver targeted treatments via catheter throughout the body. In treating cancer patients, interventional radiologists can attack the cancer tumor from inside the body without medicating or affecting other parts of the body.

—Society of Interventional Radiology



Dr. Charles Nutting tracks a video monitor to ensure the radioactive beads reach the liver artery supplying the tumor. ▸

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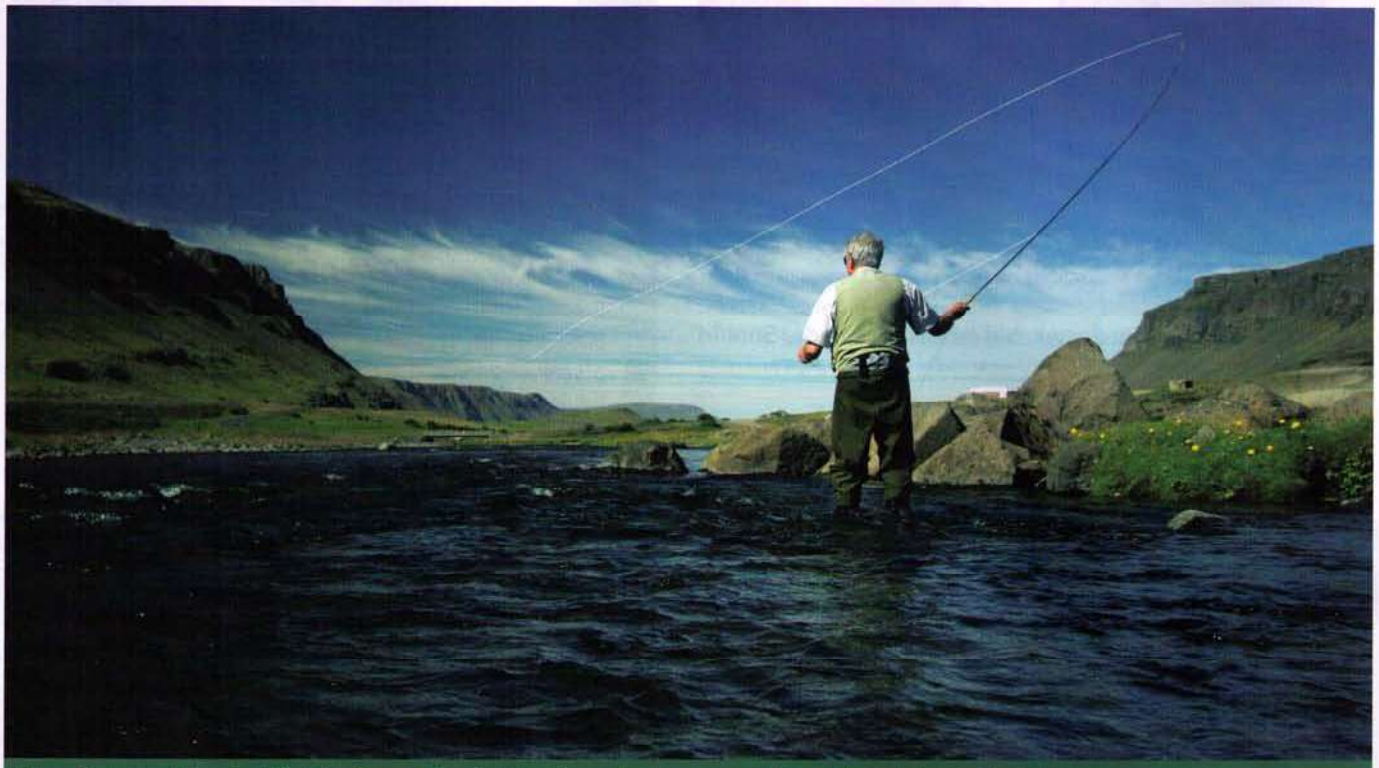
Innovative Sling Eliminates Incontinence after Prostate Surgery



Once the sling takes hold in the tissue after four to six weeks, men can get back to enjoying activities.

More than 200,000 new cases of prostate cancer are identified each year in the U.S., according to the Prostate Cancer Research Institute. Many of the men who elect to have their prostate gland removed will experience some degree of urine control loss, or incontinence, after surgery. "The prostate gland normally provides passive resistance for the urethra," says Dr. Ali Sarram, a urologist at Sky Ridge Medical Center. "So once the prostate is removed, approximately 10–15% of these men may end up having long-term, minimal [one to three pads per day] incontinence when they're active. It's an anatomical problem, so this condition doesn't respond to medical therapy."

Until recently, the only procedure available to treat male incontinence was the artificial urinary sphincter. "It's a good procedure for significant incontinence, but it's major surgery to implant the device and may not be necessary in men with minimal incontinence. The majority of men who develop long-term incontinence after prostatectomies have minimal incontinence, and therefore may not be good candidates for an artificial sphincter," says Dr. Sarram. "Instead, we can perform what's called the male sling procedure and have most of these men back to their normal activities in a matter of weeks."

"If these men knew about this procedure, they would come in, get it done and it would change their lives. For the men we've performed it on, they're really happy with it."

–Dr. Ali Sarram

The Male Sling Procedure: Improving Quality of Life for Men

To improve urinary control, slings have been used for years in women, but they're a relatively new treatment for men. The earlier slings were anchored to the pelvis with small bone screws, but the newer slings are much improved. For men, a small incision is made between the scrotum and anus, and a thin strip of mesh is inserted under the urethra to provide support and prevent the leakage of urine when abdominal pressure increases or the man is relatively active.

"Today the procedure doesn't require any screws," says Dr. Sarram, "and the mesh sling adheres to the tissue after a short time. The pain and risk of bleeding or other problems is minimal. And it's permanent." According to Dr. Sarram, it's a simple procedure that takes about 30–45 minutes and is typically performed on an outpatient basis. Once the sling takes hold in the tissue after four to six weeks, men can go back to their normal activities, like golfing, skiing and running.

Incontinence after Prostate Surgery Often Misunderstood

Interestingly, many men facing prostate surgery don't even know how good their options are for treating potential long-term incontinence. "Unfortunately, there's a lot of misinformation out there, and many men think that if they have prostate surgery, they're most certainly going to develop incontinence, just as their fathers did with their surgeries," says Dr. Sarram. "We need to let men know about these advancements." Dr. Sarram notes three important factors surrounding incontinence following prostate surgery:

1. The chances of incontinence over the long term (at least 9–12 months) are small.
2. If there's incontinence in the long run, most of the time it's very minimal.
3. If the minimal incontinence is bothersome to men, there's a fix available—the male sling procedure.

Dr. Jonathan Seidlin, who has developed a successful program identifying and treating men who suffer from urinary incontinence, leads the male incontinence program at Advanced Urology. Though performed at Sky Ridge by Dr. Sarram and his partner, Dr. Seidlin, the male sling isn't widely used at this point. But with the frequency of prostate surgery, this highly successful procedure for combating male incontinence is encouraging and fortunately available.

"It's amazing," says Dr. Sarram. "Prostate surgery is very common, so if you assume that 10-15% of these men have long-term incontinence, there are a lot of men walking around who have some incontinence, who are socially embarrassed by it, and who limit their activities and lifestyle. If these men knew about this procedure, they would come in, get it done and it would change their lives. For the men we've performed it on, they're really happy with it."

"I'm Back to My Old Self"

That's certainly the case for Don Hicks, a 58-year-old facilities administrator and Sky Ridge's first patient to receive the male sling. After surgery in 2002 for prostate cancer, Don had moderate incontinence that was "embarrassing and very inconvenient," he says. "There were occasions in my job, like heavy lifting, that would cause incontinence. Plus, I'm a pretty active individual. We like to ski, hunt, fish and hike, and I love to work in my yard. After several years, it started to really wear on me. I decided that I was too young and too active to be bothered with this kind of problem."

"It's not embarrassing or inconvenient for me anymore, and psychologically that's huge. I was able to get back to my old self."

–Don Hicks, patient

Don first consulted a urologist who told him about the artificial urinary sphincter, which didn't strike Don as a good choice for several reasons, particularly how invasive the procedure was. That's when Don turned to Dr. Sarram. Already aware of the male sling procedure, Dr. Sarram decided to forge ahead and bring it to Sky Ridge. In May 2007, Dr. Sarram performed his first male sling procedure on Don, a self-described "happy guinea pig." "I was willing to try anything," says Don.

Following the normal recovery period of four to six weeks, and after doing the muscle-strengthening exercises recommended by Dr. Sarram, Don was able to return to his normal activities without worry. Well, almost. "At first, I was extremely nervous about not using the pads," says Don. "I even tested out the sling, drinking a lot of water. But it held up very, very well. It's not embarrassing or inconvenient for me anymore, and psychologically that's huge. I was able to get back to my old self."

Don says Dr. Sarram was instrumental in getting his life back to normal. "To his credit, Dr. Sarram is a concerned doctor who is always looking for new procedures that will enhance a person's life after the kind of traumatic surgery I had. So hat's off to Dr. Sarram that he did what was necessary to help me."

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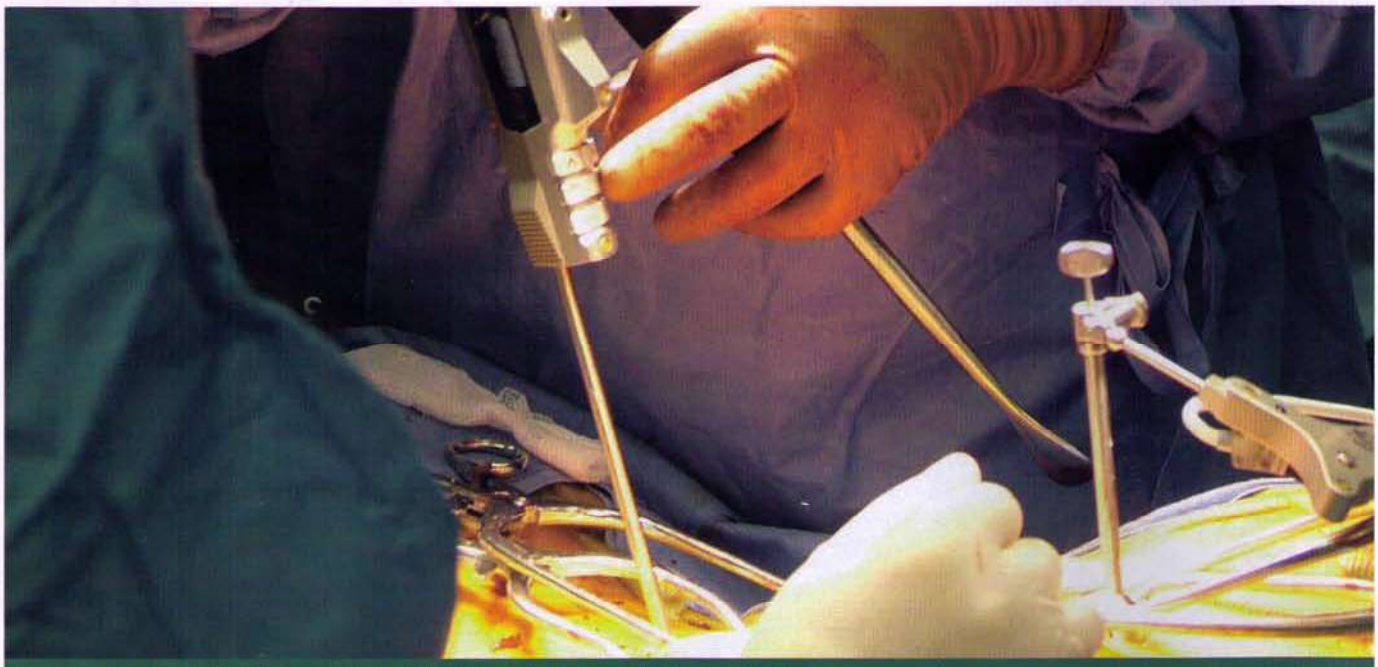
Spinal Navigation & 3-D Imaging: Giving Doctors and Patients the Whole Picture



Pedicle Feeler uses infrared mapping of a patient's anatomy for real time visualization.

Those of us who've sat in a movie theater wearing cardboard glasses to view a 3-D motion picture on a big screen would probably all agree it's a pretty cool technology. And when it comes to 3-D imaging for spinal navigation to assist with delicate, complex spinal surgeries, both physicians and patients likely would agree that this technology makes a pretty nice splash in the operating room, too.

For years now, navigational systems like the Stryker Navigation System at Sky Ridge Medical Center have been assisting surgeons in performing many types of surgeries, such as sinus procedures, joint replacement surgeries and brain surgery. Improving on the fluoroscope, which provides a two-dimensional view during a surgical procedure, the Stryker Navigation System gives doctors a comprehensive, continuous 3-D picture of the precise surgical site in the patient.

Paving the Way with Spinal Navigation

At Sky Ridge, Dr. William Choi is leveraging navigation technology in spinal surgery. In fact, Dr. Choi, Chief of Neurosurgery and Director of the Spinal Navigation Center of Excellence at Sky Ridge, uses this technology in approximately 60% of his surgeries. In fact, Dr. Choi is one of the leading surgeons in the U.S. doing image-guided spine surgery, which he's been performing for eight years now, and he lectures and teaches nationally and internationally on the procedure. This state-of-the art system allows surgeons like Dr. Choi to perform highly complex surgeries with greater safety, speed and accuracy.

During spinal fusion surgery, for example, most surgeons depend on 2-D images, their understanding of anatomy, and their existing knowledge of the patient to decide where to insert the pedicle screws to fuse two vertebrae in the lumbar spine. Not so when using the Stryker Navigation System. "The navigation system brings 3-D images into the operating room enabling the surgeon to be more precise," says Dr. Choi.

According to Dr. Choi, "the navigation system is used almost universally around the world for brain surgery like complex brain tumor resections. But spinal navigation isn't as widely used yet. For one thing, there's a steep learning

POTENTIAL NAVIGATION SYSTEM BENEFITS

- Smaller incisions so less invasive
- Greater physician accuracy during surgery
- Reduced surgery time
- Less risk to patients
- Quicker recovery after spinal surgery

curve to using the system for spinal procedures, so surgeons have to invest a good deal of time for training. Still, I think that spinal navigation is on the verge of a huge breakthrough."

"The navigation system brings 3-D images into the operating room enabling the surgeon to be more precise."

—Dr. William Choi

Dr. Choi notes that Sky Ridge is turning to this highly effective navigation system to assist with some of its more complex spine surgeries, such as spinal tumor resections, herniated disc surgeries and spinal fusions. And whatever the procedure and regardless of how complex, patients themselves can benefit from the insight provided by the navigation system. "Patients can go into their surgeries with a much better picture of what's going on with their pathology and exactly where the problem lies," says Dr. Choi. Doctors benefit prior to surgery as well. "Surgeons can actually pinpoint where they need to go even before they make the incision," says Dr. Choi.

How the Navigation System Works

The Stryker Navigation System sits near the operating table in the operating room. Prior to surgery, patients undergo a series of CT scans. Once the images are downloaded into the navigation system, surgeons can then perform surgeries based on a true, 3-D anatomical picture of the patient. Surgeons insert a Stryker probing instrument through a small incision in the patient, and then the probe transmits signals back to the system.

The system software integrates the patient's CT scan with data from the digital camera probe, and then displays a real-time view on-screen of exactly where the instruments are positioned—throughout the procedure. In this way, surgeons can reach the surgical site with greater speed and accuracy, and with less damage to surrounding tissue. This greatly reduces risk to patients.

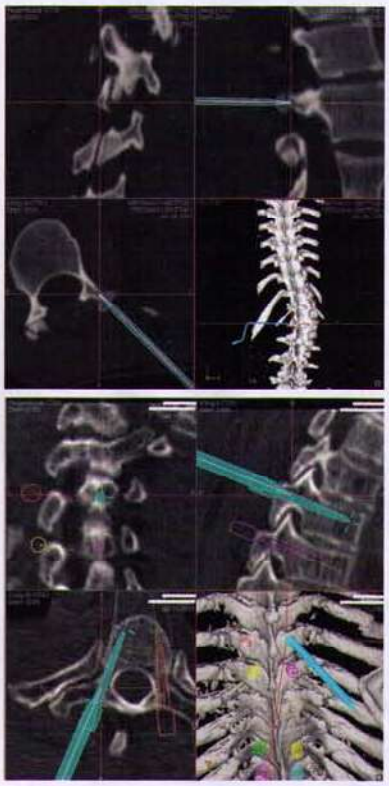
The system is especially helpful for surgeries proven unsuccessful in the past, since normal anatomical landmarks can be highly irregular due to the former procedures or pathologies. The system can also help surgeons navigate in hard-to-reach areas.

The Sky Ridge Spinal Navigation Center of Excellence

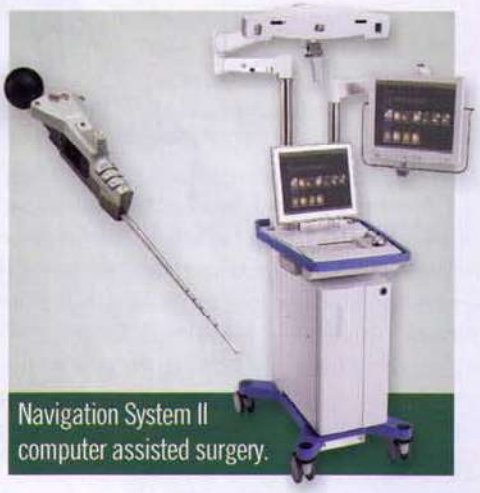
Spinal navigation and other leading-edge technologies are the cornerstones of the new Spinal Navigation Center of Excellence at Sky Ridge. This program aims to bring advances in computer hardware and software technologies, robotics, endoscopic technologies, and other developments into the medical and surgical arena at Sky Ridge and beyond. With the assistance of engineers in various fields, the plan is to further develop these technologies for advanced surgical application. "That's what the Center of Excellence is all about," says Dr. Choi. "These advances are very important to the patient because they minimize surgical approaches and increase patient safety."

Only a few Denver-area surgeons are performing spinal navigation surgery, all taught by Dr. Choi. But with physicians from around the world inquiring about the advanced spinal navigation procedures being performed at Sky Ridge, the Center of Excellence plans to offer related training in the near future.

3-D IMAGES OF PATIENT'S ANATOMY AND CAMERA GUIDED INSTRUMENTS.



The Navigation system's camera helps surgeons guide their instruments for precise screw placement.



Navigation System II computer assisted surgery.

Connecting Family and Friends during Hospitalization

No matter the nature of one's medical treatment at Sky Ridge Medical Center, one thing is certain. Family and friends near and far want to be kept in the loop about the hospital stay. And just as important, the patient wants an easy way to share information and to manage how—and how often—others communicate with him or her.

That's where CarePages can help. Offered by Sky Ridge, CarePages and Baby CarePages are free, easy-to-use, confidential Web pages that keep family and friends connected before, during, and after a loved one's stay. Taking just a few minutes to create, CarePages help families:

- Share news and photos.
- Communicate preferences to visitors, such as desired visiting hours.
- List important contact information.
- Direct people to a message board where all can share their comments.
- Receive emotional support during a time of need.
- Document, via a requested book, all communications and photos posted to the page

Marlena and Joseff Diedrich "can't speak highly enough about CarePages." The family created a CarePage last August when Marlena was unexpectedly hospitalized while carrying twins. The prognosis for their one daughter, Grace, wasn't good. "We knew what we were faced with," says Marlena. "We needed time to grieve the loss of our daughter, so we didn't want anyone contacting us or visiting for a while. But we still needed a lot of support."

And when their daughter Elle was born in September, Marlena and Joseff posted the wonderful news along with her photos to CarePages. They have also used their CarePage to communicate information about their nonprofit foundation (www.actsofgracefoundation.com) to honor their daughter Grace. "To this day, we still receive messages of support through CarePages," says Marlena.

Skylight: Personalizing the Patient Experience at Sky Ridge

Whether recuperating from an illness or injury, or celebrating the arrival of a new family member, hospitals like Sky Ridge Medical Center are creating memorable experiences for patients and their loved ones. The first hospital in Colorado to offer the Skylight interactive patient system, Sky Ridge implemented the system to personalize their patients' stays. Through the Skylight service, the hospital can deliver customized health and discharge information, automate a variety of patient requests, provide Hollywood movies and online games for a nominal fee, and help fulfill spiritual and religious needs.

The system works much like the television found in a business hotel room. The patient uses a handheld remote to access Skylight through the hospital room's TV. From the on-screen menu, the patient can choose to watch TV shows or movies, learn about Sky Ridge services, view educational videos specific to his or her condition, and more. The system is especially useful as a component of Sky Ridge food services. Many patients, for example, diabetics and cardiac patients, have therapeutic diet restrictions. Through Skylight, they can preview the menu provided especially for them. And for new challenges, like newly diagnosed diabetics, patients and their family members can access relevant information, such as how to perform an insulin injection.

Other features will be added in the coming months. Patients and guests will soon be able to order their own meals, just like room service. And with a commitment to creating a experience that is "Beyond Your Expectations," Sky Ridge will conduct real-time, on-screen satisfaction surveys, so the hospital staff can make any important changes while the patient is still in the hospital.

SKYLIGHT HEALTHCARE SYSTEMS
Satisfaction Delivered.