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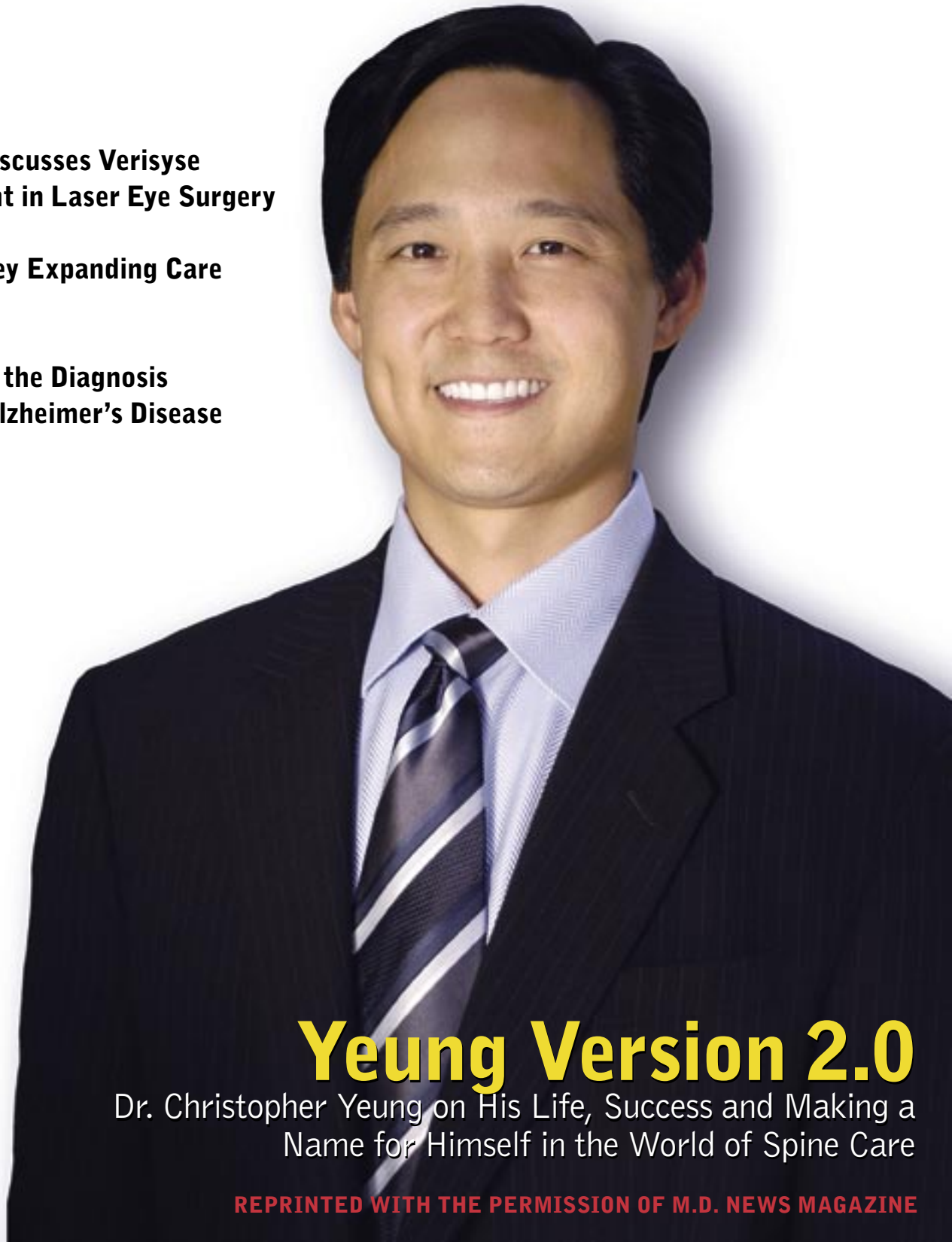
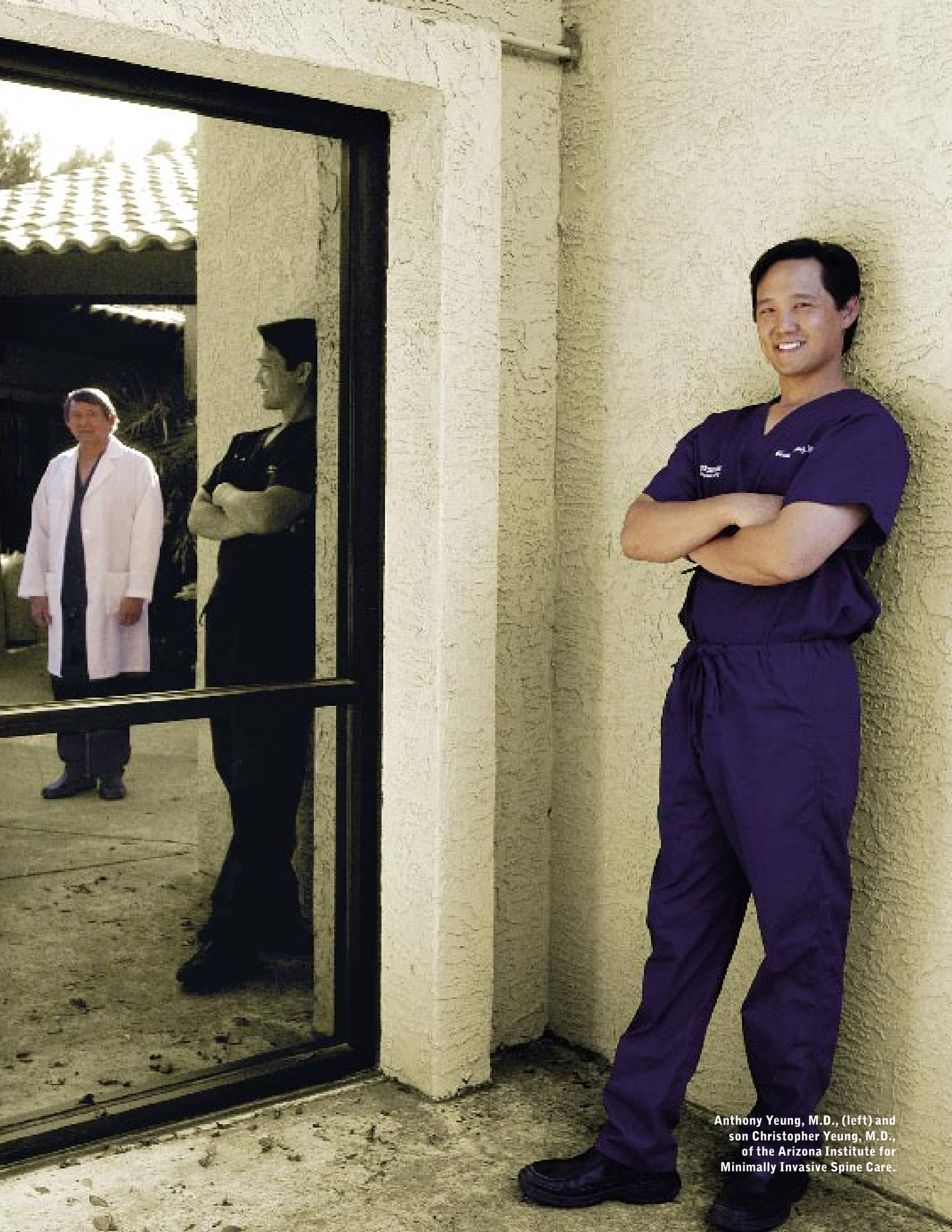


Yeung Version 2.0

Dr. Christopher Yeung on His Life, Success and Making a Name for Himself in the World of Spine Care



Anthony Yeung, M.D., (left) and son Christopher Yeung, M.D., of the Arizona Institute for Minimally Invasive Spine Care.

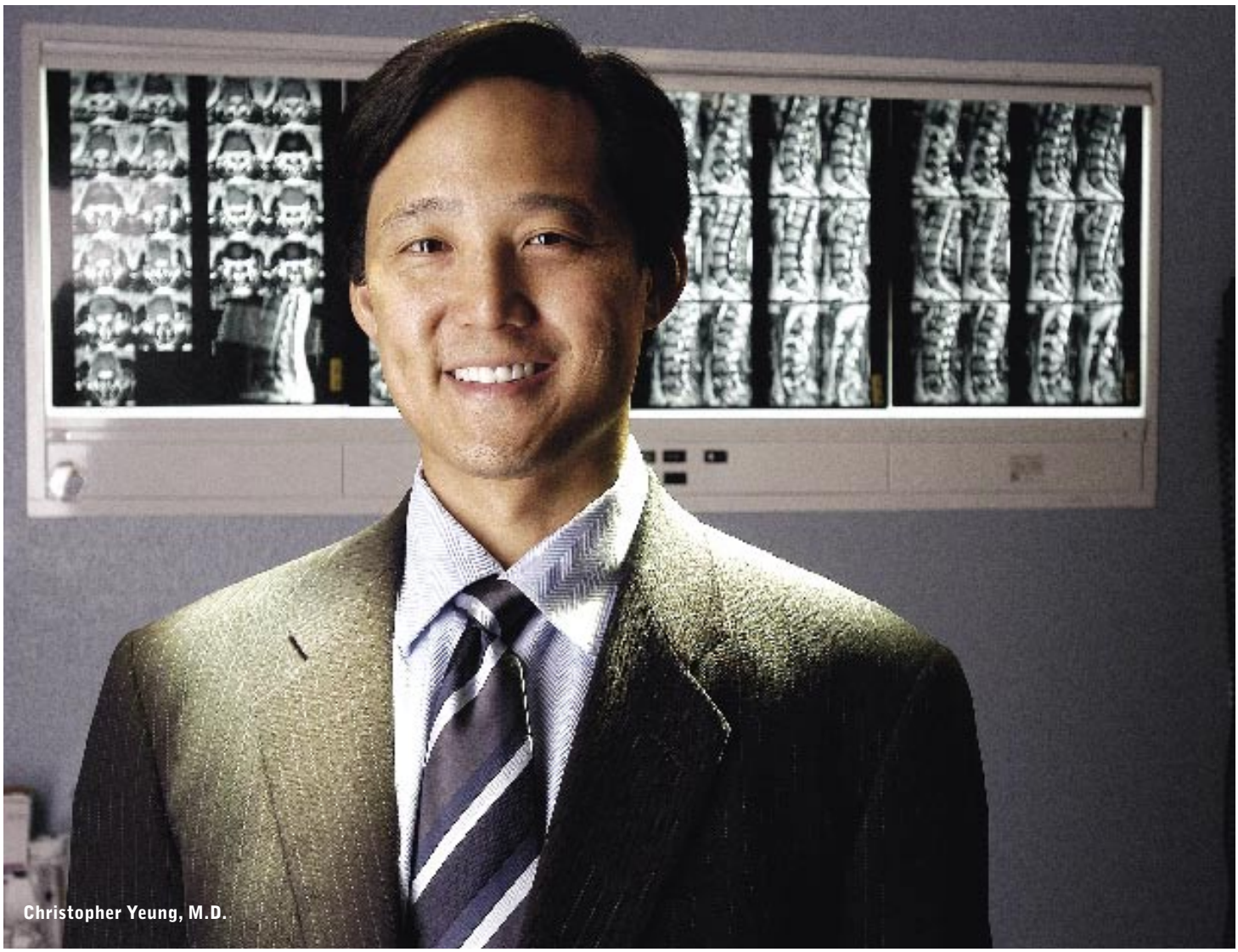
Yeung 2.0

Dr. Christopher Yeung on His Life, Success and Making a Name for Himself in the World of Spine Care

By Terri Trespicio

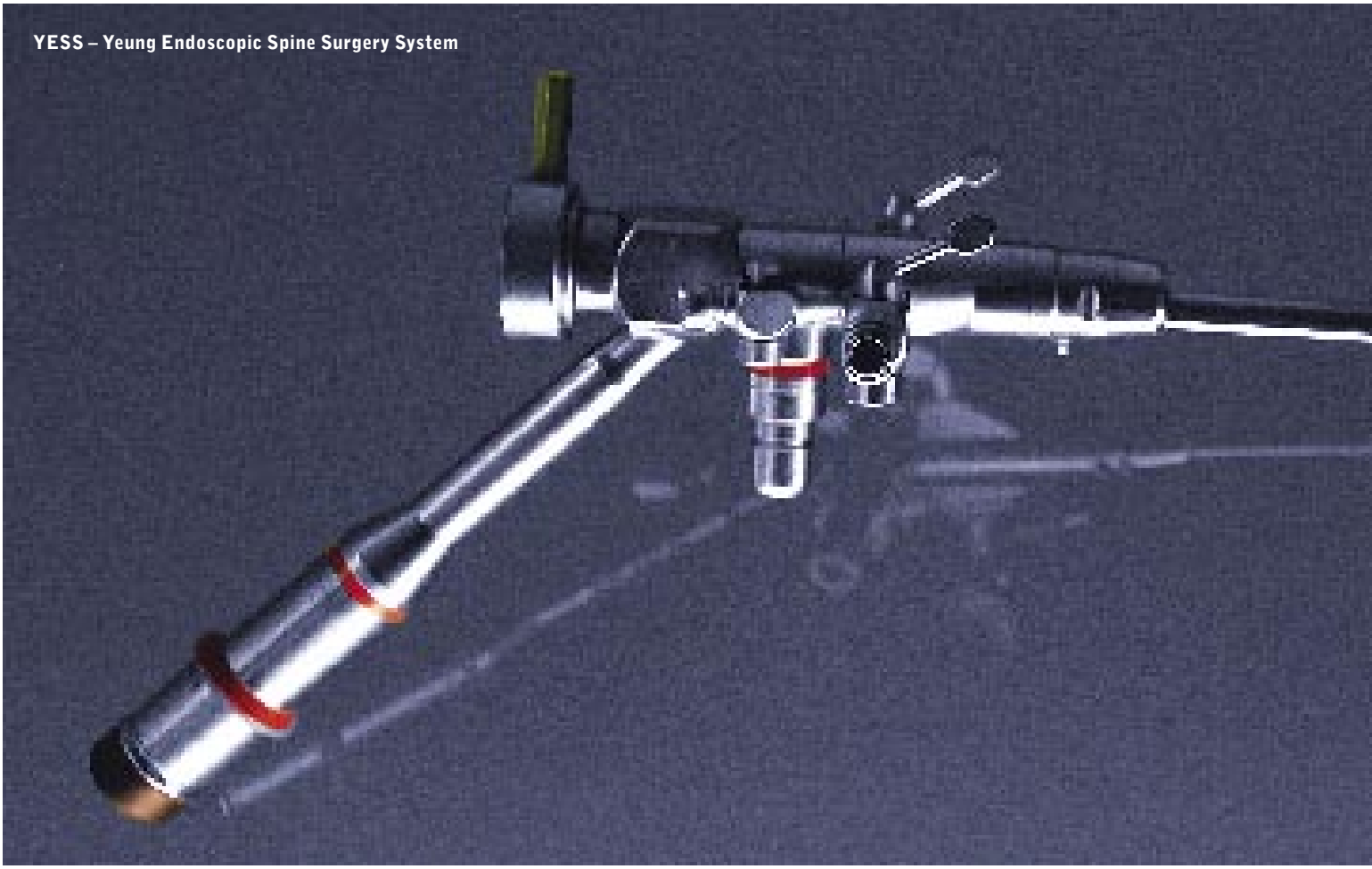
Ask Dr. Christopher Yeung if he's anything like his dad, and he'll say yes — except that he's the nice one. As the son of legendary orthopedic surgeon, Dr. Anthony Yeung, who developed the now-famous Yeung Endoscope Spinal Surgery (YESS) technique, Chris Yeung grew up in the shadow of a man of unwavering resolve — and a reputation to match. Dr. Anthony Yeung's genius and determination gained him a great deal of attention, but didn't always win him a lot of friends. "My father is a stereotypical surgeon: strong-willed, opinionated, even cocky. There are simply no shades of gray with him. You either like him or you don't," says Yeung. "Me, I get along with everyone."

Yeung credits his father's strong personality and character to the fact that he started from such a disadvantaged position. A Chinese immigrant escaping communism, he had to overcome poverty, a language barrier and new culture to create his own opportunities and work his way to the top. "I was able to reap the benefits of his struggle," says Yeung. "I went to Catholic prep school at Brophy, and the best colleges. I had a great education, and all the advantages



Christopher Yeung, M.D.

PHOTO BY KING LAWRENCE



YESS – Yeung Endoscopic Spine Surgery System

PHOTO BY KING LAWRENCE

on my side. I always had the tools to succeed; it was just up to me to use them."

With a solid education and comfortable upbringing — a stark contrast to the difficult struggle that honed his father's determination to a keen edge — Yeung Jr., was able to explore a wider range of interests. "I had the opportunity to enjoy life a little more," says Yeung. "I play golf, ski, fish, spend time with my kids. My dad has always lived and breathed his work. He didn't have the luxury to pursue a lot of hobbies. His claim to fame was always, 'Nobody can outwork me.' And he's right — no one can. He can still outwork me!" he laughs. "He even gives me a hard time about it now. He says, 'I'm working and you're playing golf!' He's a total workaholic. But I need to work hard and play hard."

> It's really rewarding to be able to work with my father. Sure we disagree at times—a lot of times. But we actually complement each other very well, and he's my biggest supporter.

Yet it was his father's passion for medicine that inspired Yeung from an early age. "I saw how much satisfaction he got from his work. We'd be out to dinner or something, and we'd run into his patients, and they were so grateful. They'd say, 'Thank you so much, Dr. Yeung!' and 'Look at me now!' That always made a big impression on me."

Was it a given that Dr. Yeung Jr., would follow in his father's footsteps? Yes and no. "My father wanted his kids to be physicians," he says. "While I was in high school, *L.A. Law* was a very popular show, and it kind of glamorized lawyers, so I thought maybe I'd do that," he recalls, laughing. "But my strengths were in science and biology, and by the time I graduated high school, I knew I would go into medicine." It wasn't until after he finished UC San Diego and went on to USC School of Medicine that he saw the appeal of orthopedics. "A person presents with an acute disability and you have the opportunity to fix them. You can make an immediate impact in their lives."

Though initially torn between sports medicine and spine surgery, he chose the latter, partly because of the rapidly advancing technology. I wanted to go into a specialty that would continue to challenge me as a surgeon, and as a person. I wanted to make an impact not only in my patients' lives, but also in the field. Spine surgery was still sort of underdeveloped, just coming out of the dark ages. It's a good place to become a leader and make your mark."

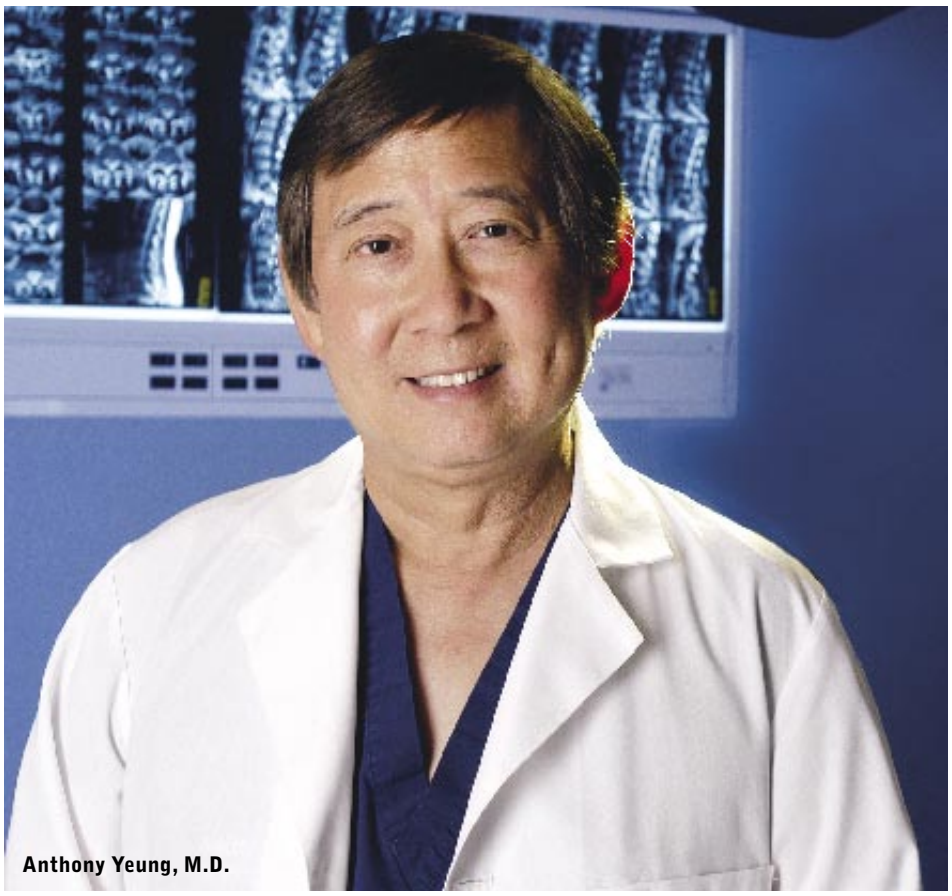
And that he has. A fellowship-trained orthopedic spine surgeon and member of the Phi Beta Kappa, Phi Kappa Phi and Alpha Omega Alpha Honor Society, Yeung completed his residency at UC Irvine Medical Center, and as a spine fellow at USC Center for Orthopedic Spine Surgery, and then at the Los Angeles Spine Surgery Institute. While at this stage in his career, his father chooses to focus solely on the endoscopic lumbar therapy that made him famous, Yeung Jr. is the total spine care physician. "At our Institute, we have a Physical Therapy Department and Outpatient Surgery Center, so we can treat our patients from nonoperative care to

surgery, all under one roof. I have a special interest in minimally invasive techniques, but I really do it all, including both cervical and lumbar spine surgery. I can perform the epidural

I see myself as the new and improved version of my dad.

lumbar injections, minimally invasive surgery and traditional open spine surgeries."

A national speaker on the YESS technique and other minimally invasive surgeries, an academic appointment as a voluntary clinical instructor at UC San Diego and a member of the board of directors for Maricopa County Medical Society (once again following in his father's footsteps), Yeung is also involved in leading-edge clinical research in the field of spinal surgery. In conjunction with the Arizona Institute for Minimally Invasive Surgery, Yeung was selected to take part in the Flexicore Intervertebral Disc Study, a randomized, controlled study that compared



Anthony Yeung, M.D.

PHOTO BY KING LAWRENCE

PHOTO BY KING LAWRENCE

the effectiveness of the Flexicore artificial disc with that of spinal fusion surgery. Yeung was also the first to perform a Charité artificial disc (the first FDA-approved artificial disc) at Scottsdale Healthcare Shea Hospital. "Everyone is looking for an alternative to spinal fusion, which is not only a major surgery, but also limits range of motion and can lead to adjacent level spinal degeneration."

My philosophy is to offer the least invasive treatment option while maintaining effectiveness.

Contributions like this led one of the two leading manufacturers of artificial disc nucleus replacement technology to take note of Yeung. When Replication Medical asked Yeung Sr., to serve on the advisory committee for developing and improving their hydrogel technology for nucleus replacement using the Yeung endoscope, their biggest competitor, Disc Dynamics, snapped up Yeung Jr., to do the same for them as they developed their competing product, a balloon that gets inserted into the disc and fills with liquid polyurethane to cushion the adjacent vertebral bones in the spine. Both father and son have proven themselves to be the leaders in nucleus replacement, and are contributing to this technology of the future—albeit with some healthy competition between father and son as they serve on the boards of competing companies. Given the centrality of the Yeung endoscope in both equations, however, it's a win-win all around.

WHAT IS SED/YESS?

Pioneered and developed by Dr. Anthony Yeung, Selective Endoscopic Discectomy (SED), also known as the YESS technique, is a visualized endoscopic method used to treat herniated, protruded, extruded or degenerative discs. The Yeung endoscope allows the surgeon to visualize and selectively remove portions of a herniated nucleus contributing to back and leg pain. The sleek design of the scope, with its minimal 2.7 mm operating channel, uses a "keyhole" incision to access the damaged disc, dilating rather than cutting muscle and tissue, resulting in less tissue destruction, no need for general anesthesia, and quicker recovery time and rehabilitation. Thermal annuloplasty is used as an adjunctive procedure to ablate or depopulate sensitized nerve endings in the annulus, the outer portion of the disc, and to shrink and tighten stretched or torn collagen fibers there. The incision is only a quarter-inch on the back to the side of the spine. The patient, though given mild sedation and local anesthesia, is awake throughout, so that he or she can tell when a nerve is stimulated, or when pressure is removed, which is critical, because it helps the surgeon gain a better understanding of the pain generators, whether it be the joints, bones, ligaments, tissue, inflammatory tissue or nerve roots.

What makes this combination procedure so unique is the fact that, unlike fluoroscopically guided percutaneous procedures, which are done "blind," SED is a visualized endoscopic method, designed to let the surgeon see the patho-anatomy of the disc, as well as the spinal

canal and adjacent nerves, and thus can be used to treat pain caused by contained or noncontained (extruded) disc herniations. It can also be a viable solution for those whose discogenic pain is nonresponsive to nonoperative treatment.

THE GOLDEN AGE OF SPINE SURGERY

According to Yeung, it's only recently that spinal care began to emerge from the dark ages. "It used to be that with back pain, there was a huge gap in treatment," he says. "You did nothing until the pain was so debilitating that you were a candidate for fusion, which is essentially a salvage technique. Our growing understanding of the pain generators of the spine and the innervation of the discs is all leading to revolutionary treatments in spinal care — a new algorithm, with different and alternative steps before you get to fusion."

> When you operate on someone's back, you inherit them for life.

So while back surgery used to be an all-or-nothing venture, now patients have more options available to them. "Traditionally, if you had leg pain [sciatica], you'd have major surgery to remove the structure that's pressing on your nerve," says Yeung. "But now we can go through with small tubes and incisions, limiting any iatrogenic damage to the surrounding muscle and soft tissue. Motion preservation procedures, such as artificial disc replacement and posterior dynamic stabilization, can help remove the source of pain while allowing flexibility and movement, thus limiting the adjacent level problems associated with fusion. Nucleus replacement, in which the center of the disc is filled with a substance like a hydrogel to take the pressure off the annulus, will also be available in the near future."

However, many critics question these advances in spinal care, claiming that rather than serve a preventative function and create viable alternatives for patients, they merely create more lucrative opportunities for doctors to perform surgeries on patients who don't need them. Yeung disagrees. "It's not my goal to get everyone into surgery. These procedures can correct a problem and slow the degenerative cascade in the right candidate, and can greatly improve the quality of a person's life. Even if the patient eventually requires a fusion, but you have delayed that need for a few years, you are doing the patient a great service by protecting the adjacent spinal levels during those years." In the end, the majority of people who come to Dr. Yeung see improvement with a program of lumbar stabilization (core strengthening) physical therapy for balance and coordination to help enable the muscles to shield the spine, and temporary use of pain medications to reduce acute inflammation.

PHOTO BY KING LAWRENCE

Candidates for Selective Endoscopic Discectomy (SED)

Indications

- Almost any disc herniation, especially:
  - — Foraminal HNPs;
  - — Extraforaminal HNPs;
  - — Upper lumbar HNPs;
  - — Recurrent HNPs;
  - — Foraminal stenosis;
  - — Discitis;
  - — Discogenic pain from annular tears.

Contraindications

- Severely migrated sequestered HNPs;
- Boney anatomy limiting access (that is, L5-S1 level with a high narrow pelvis).

HNP = herniated nucleus pulposus.

THE MANY SHADES OF 'MINIMALLY INVASIVE'

The term "minimally invasive" can mean many things — not all of which are, in fact, true to form, relegating them to little more than a marketing catch phrase. "Since minimally invasive is the new thing, many doctors will use it to describe what they do — even if that means making a five-inch incision where they used to make a six-inch one," says Yeung. And while procedures such as SED, YESS and microscopic discectomy are considered minimally invasive in the truest sense of the word (tiny incisions, less muscle cutting, faster recovery times, less pain and medicine usage), more traditional procedures can be done in a minimally invasive way, as well with different muscle splitting approaches.

Yeung has a particular interest in minimally invasive spinal surgery; however, he stresses that this is not the way to go for all patients. In order to provide the best in quality care, you go with what works best

PHOTO BY KING LAWRENCE.

for the patient, he says, even if it is traditional back surgery. "You have to take care of the pathology adequately. That's the main goal," he says. "You don't just make the smaller incision. If minimally invasive can't address the pathology, it's not the right option. My philosophy is to offer the least invasive treatment option while maintaining effectiveness."

VISUALIZING THE FUTURE OF SPINAL CARE

Yeung sees himself on the crest of the wave in spinal research — and rightfully so. Involved in several ongoing FDA studies — four in 2005 alone — Yeung is learning and performing techniques before they're available to the public, making him the go-to guy for all things spinal.

> Motion preservation procedures such as artificial disc replacement and posterior dynamic stabilization can help remove the source of pain while allowing flexibility and movement, thus limiting the adjacent level problems associated with fusion.

But even more exciting than what he's doing now is what the future holds for spinal care. "The holy grail is biologics," he says. "This means going beyond using metal and plastic to patch up the spine, to using an injection to stimulate the tissue to regrow or rehydrate itself. That's what's being worked on right now."

In the meantime, the father-son team has their work cut out for them, especially as they are the leaders in performing the YESS technique in Arizona, and are two of only the dozen or so physicians in the country who are trained to do it. Like his father, Yeung Jr., travels extensively to educate and train physicians at courses sponsored by the North American Spine Society, and tends to his rapidly growing practice. "When you operate on someone's back, you inherit him for life — and all his friends too," he laughs.

But what's perhaps most rewarding for Yeung is the time he gets to spend with his dad — far more now than at any other point in his life. "It's really great to be able to work with him. Sure we disagree at times — a lot of times. But we actually complement each other very well, and he's my biggest supporter. I admire the fact that he'll put everything on the line for his patients, which is why he has such a loyal following. In some ways, I see myself as the new and improved version of my dad."

Dr. Christopher Yeung can be reached at Arizona Institute for Minimally Invasive Spine Care. Visit the Web site at **www.sciatica.com** *or call (602) 944-2900.*

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