Here are 38 spine surgeons who are focusing on motion preservation. If you would like to recommend an addition to this list, please contact Laura at lmiller@beckershealthcare.com.

Jean-Jacques Abitbol, MD (California Spine Group, San Diego). Dr. Abitbol is a past president of the North American Spine Society and has worked in orthopedics for more than 25 years. He has contributed to the field of motion preservation through his work with the CerviCore Cervical Intervertebral Disc Replacement. He has a special interest in minimally invasive procedures and has testified before Congress as a patient advocate for healthcare issues. Dr. Abitbol has also served on the board of directors for the Cervical Spine Research Society and Federation of Spine Association. He has offices in three locations around San Diego. He earned his medical degree at the University of Ottawa in Canada and completed his orthopedic surgery residency at McGill University in Montreal. His additional training includes a spine fellowship at Mt. Sinai & Toronto General Hospital — University of Toronto in Canada.

Todd J. Albert, MD (Rothman Institute, Philadelphia). Dr. Albert is the president of The Rothman Institute and chairman of the department of orthopedics, co-director of reconstructive spinal surgery and the spine fellowship program at Thomas Jefferson University Hospitals. Dr. Albert has contributed to the field of motion preservation through his work with DISCOVER Artificial Cervical Disc. In addition to his clinical practice, Dr. Albert is a past president of the Cervical Spine Research Society and past chair of the International Meeting of Advanced Spinal Techniques for the Scoliois Research Society. He serves on the boards of several scholarly journals and is a member of the North American Spine Society. Dr. Albert earned his medical degree from the University of Virginia School of Medicine and completed his orthopedic surgery residency at Thomas Jefferson University Hospital. His additional training includes a fellowship in spinal surgery at Minnesota Spine Center.

Howard An, MD (Midwest Orthopaedics at Rush, Chicago). Dr. An is a spine surgeon with Midwest Orthopaedics at Rush in Chicago. He collaborated on an instructional guide for physicians performing motion preservation surgery, titled "Motion Preservation Surgery of the Spine." Dr. An serves as a professor of orthopedic surgery and director of the spine surgery division and spine fellowship program at Rush University Medical Center. His research interests are tissue engineering of the intervertebral disc and spinal biomechanics. He has published more than 140 articles, 80 chapters and 15 books on spinal surgery and instrumentation. Dr. An performs cervical spine surgery, scoliosis surgery, microsurgery and minimally invasive spinal surgery and spinal instrumentation. He received his medical degree from the Medical College of Ohio in Toledo, where he also completed an orthopedic surgery residency. He completed a spine surgery fellowship at Jefferson Medical College in Philadelphia.

Paul A. Anderson, MD (UW Health, Madison, Wis.). Dr. Anderson is on the faculty at the University of Wisconsin School of Medicine and Public Health. He has a professional interest in spinal trauma and complex cervical spine disorders, and his research has led to the development of an artificial cervical disc. He contributed to "Motion Preservation Surgery of the Spine" and has published several articles related to cervical disc arthroplasty. Dr. Anderson earned his medical degree at Wayne State University in Detroit, and completed his residency at Wayne State affiliated hospitals. His additional training includes a fellowship at Case Western Reserve in Cleveland.

Scott L. Blumenthal, MD (Texas Back Institute, Plano). Dr. Blumenthal performed the first lumbar disc replacement in the United States and has a special interest in artificial disc replacement in his practice. He was the principle investigator for the SB III Charlie Artificial Disc and has researched simultaneous lumbar fusion and total disc replacement. In addition to his clinical practice, Dr. Blumenthal is a spine consultant to the Dallas Mavericks. He earned his medical degree from Northwestern University Medical School in Evanston, Ill., and completed his orthopedic surgery residency at the University of Texas Health Science Center in Dallas. His additional training includes a spinal trauma fellowship at Midwest Regional Spinal Cord Injury Care System at Northwestern Memorial Hospital in Chicago.
Andrew Cappuccino, MD (Buffalo Spine Surgery, Lockport, N.Y.). Dr. Cappuccino has been on the forefront of artificial disc research and technology for several years. He has engaged in research projects for the implantation of PCM Cervical Discs and SB Charite Disc prosthesis. He contributed to "Motion Preservation Surgery of the Spine" with information about cervical disc replacement revisions. In addition to his clinical practice, Dr. Cappuccino is the assistant team orthopedic surgeon for the Buffalo Bills and a fellow of the American Academy of Orthopaedic Surgeons. He is also a member of the International Society for the Advancement of Spine Surgery and North American Spine Society. Dr. Cappuccino earned his medical degree from State University of New York at Buffalo School of Medicine and completed a spine fellowship at Johns Hopkins University Scioticis and Spine Center with Paul McAfee, MD.

Allen Carl, MD (Albany Medical Center, Albany, N.Y.). Dr. Carl is a spine surgeon with Albany Medical Center and has a special interest in spinal disorders, spinal trauma, deformity and degenerative diseases. He has presented his expertise on an anatomic facet replacement system to "Motion Preservation Surgery of the Spine" and pioneered the X-stop procedure in his practice. Additional contributions to clinical and basic science research efforts have led to new and innovative ways to treat patients. Dr. Carl earned his medical degree at SUNY at Buffalo and completed his orthopedic surgery residency at New York University Medical Center and Bellevue Hospital Center in New York City. His additional training includes a fellowship in spine surgery at The Toronto Hospital in Canada.

Antonio E Castellvi, MD (Florida Orthopaedic Institute, Tampa). Dr. Castellvi has a special interest in deformity, degenerative conditions and motion preservation. He is the medical director of the Spine Biomechanics Lab at Foundation for Orthopaedic Research and Education and has led ongoing research into motion preservation for the lumbar spine, scoliosis bracing and bone graft substitutes. He has presented his findings on lumbar motion preservation at more than 50 conferences nationally and internationally, and participated in the study on the ACADIA Facial Re-implantation System. His present research includes a 360-degree lumbar arthroplasty. In addition to his practice, he is an affiliate member of the North American Spine Society. Dr. Castellvi earned his medical degree at the University of Zaragoza Medical School in Spain and completed his residency at the University of South Florida. His additional training includes a spine fellowship at the University of Rochester (N.Y.).

Domagoj Coric, MD (Carolina Neurosurgery & Spine Associates, Charlotte, N.C.). Dr. Coric has a special interest in artificial disc replacement, endoscopic disc surgery and spinal trauma. He has been chief of neurosurgery at Carolinas Medical Center and the president of the North Carolina Spine Society. He contributed information about NUBAC Intratral implant for "Motion Preservation Surgery of the Spine." In addition to his clinical practice, Dr. Coric is a member of North American Spine Society and the Joint Section on Disorders of the Spine & Peripheral Nerves of the AANS and CNS. Dr. Coric earned his medical degree from Wake Forest University School of Medicine and completed his residency at Wake Forest University Baptist Medical Center.

Reginald J. Davis, MD (Greater Baltimore Medical Center). Dr. Davis has been chief of neurosurgery at Greater Baltimore Medical Center. He was the first person in the United States to use the dynamic stabilization with the Dynesys Dynamic Stabilization System. He also has expertise with HydraFlex Nucleus Replacement. He is also group manager of his practice and has academic interests in motion segmental preservation and spine arthroplasty. Dr. Davis earned his medical degree at Johns Hopkins University in Baltimore and completed his residency at Johns Hopkins Hospital.

Clayton L. Dean, MD (The Maryland Spine Center, Baltimore). Dr. Dean performs spinal arthroplasty at The Orthopedic Specialty Hospital at Mercy. He was previously assistant professor in the department of orthopedic surgery at Emory University School of Medicine in Atlanta. His expertise includes motion preservation, minimally invasive spine surgery and cervical spine surgery. In addition to his clinical practice, Dr. Dean has authored 10 peer-reviewed scientific articles and has received recognition from the Cervical Spine Research Society and Scoliosis Research Society. Dr. Dean earned his medical degree at Jefferson Medical College of Thomas Jefferson University in Philadelphia and completed his orthopedic surgery residency at Case Western Reserve University School of Medicine in Cleveland. His additional training includes a fellowship at The Emory Orthopaedic and Spine Center at Emory University in Atlanta.

Rick B. Delamarter, MD (Cedars-Sinai Spine Center, Los Angeles). Dr. Delamarter is a board-certified orthopedic surgeon who focuses on motion preservation surgery. He is the vice chair of spine services at the department of surgery and co-medical director of the Cedars-Sinai Spine Center in Los Angeles. In addition to motion preservation techniques, Dr. Delamarter also works with artificial disc replacements and non-fusion surgery. He is a leading researcher for spinal cord injuries, the use of growth factors for fusion and the use of stem cells to repair degenerative disc disease. Dr. Delamarter received his medical degree from the University of Oregon Health Science Center in Portland and completed his surgical internship and orthopedic residency at the University of California Los Angeles Medical Center. He also completed a spine fellowship at Case Western Reserve University in Cleveland and received training at the Acute Spinal Cord Injury Unit at Cleveland Veteran's Hospital.

Harel Deutsch, MD (Rush University Medical Center, Chicago). Dr. Deutsch is involved in research on motion preservation technology and artificial disc technology. He also has a special interest in failed previous spine surgery and failed back syndrome. Dr. Deutsch is the co-director of the Rush Spine and Back Center in Chicago, and his subspecialty is spine surgery. He performs complex spinal procedures and spine tumor surgery. His research, including on the etiology of chronic back pain, has been published in many peer-reviewed journals and book chapters. Dr. Deutsch received his medical degree from the University of Miami School of Medicine in Florida. He completed an internship and surgery residency in neurosurgery at Mount Sinai Hospital in New York. He completed a spine surgery fellowship at Emory University Hospital in Atlanta.

Charles C. Edwards II, MD (The Maryland Spine Center, Baltimore). Dr. Edwards is the medical director of the Spine Clinic at The Orthopedic Specialty Hospital at Mercy. He performs spinal arthroplasty and has a special interest
Thomas Errico, MD (NYU Langone Medical Center, New York City). Dr. Errico is the chief of spine service and chief of the division of spine surgery at NYU Hospital for Joint Diseases. He has expertise with the FlexiCore Intervertebral Disc and holds more than 100 United States patents in the field of innovative spinal instrumentation. Dr. Errico has served as president of the North American Spine Society and International Society for the Advancement of Spine Surgery. His research has earned him recognition from professional organizations such as the Scoliosis Research Society. Dr. Errico earned his medical degree at New Jersey Medical School and completed his orthopedics residency at NYU Medical Center. His additional training includes a spine fellowship at Toronto General Hospital.

Jeffrey S. Fischgrund, MD (William Beaumont Hospital, Royal Oak, Mich.). Dr. Fischgrund has a special interest in cervical disc replacements and has served as a lead researcher on past motion preservation projects. He contributed his expertise on the CerviCore Cervical Intervertebral Disc Replacement to "Motion preservation Surgery of the Spine" and instructs residents and spine fellows at William Beaumont Hospital. Dr. Fischgrund is a member of the American Academy of Orthopaedic Surgeons and Michigan Orthopaedic Society. He earned his medical degree from George Washington University School of Medicine and completed his orthopedic surgery residency at the University of Maryland Medical Center in Baltimore. His additional training includes a spine fellowship at William Beaumont Hospital.

Rolando Garcia, Jr., MD (Orthopedic Care Center). Dr. Garcia is a member of the International Society for the Advancement of Spine Surgery. He has participated in several studies about total disc replacement surgery, including the FDA Charlie trial and a comparison of the clinical outcomes for lumbar artificial disc replacement and fusion procedures. In addition to his journal articles, he has authored a book chapter on the history of the artificial disc and shared his expertise on the Activ-L Artificial Disc and dynamic pedicle screw stabilization with nucleus replacement for "Motion Preservation Surgery of the Spine." Dr. Garcia earned his medical degree at Tulane University School of Medicine in New Orleans, where he also completed his residency in orthopedic surgery. His additional training includes a fellowship in spine surgery at North Carolina Spine Center.

Federico P. Girardi, MD (Hospital for Special Surgery, New York City). Dr. Girardi is an associate professor of orthopedic surgery and director of spine service research at the Hospital for Special Surgery in New York City. He specializes in motion preservation surgery, as well as complex degenerative and metabolic disorders of the spine, deformities, scoliosis and kyphosis, fractures and tumors. He research has focused on minimally invasive surgery, clinical outcomes of surgical procedures and imaging modalities of the spine. Dr. Girardi is currently investigation tissue regeneration, disc replacement and non-fusion technologies, imaging of the spine, clinical outcomes, minimally invasive surgery and image-guided stereotactic surgery. He received his medical degree from Universidad Nacional de Rosario in Argentina. He completed a residency in orthopedic surgery and traumatology at the Hospital de Clinicas at Buenos Aires University in Argentina. Dr. Girardi completed a fellowship in spine and scoliosis surgery at the HSS. He's a member of many organizations, including the American Medical Association, Scoliosis Association, North American Spine Society and International Society for the Advancement of Spine Surgery.

Jeffrey A. Goldstein, MD (NYU Langone Medical Center Hospital for Joint Diseases, New York City). Dr. Goldstein is the director of the spinal service and associate director of the spine fellowship at New York University Hospital for Joint Diseases. He has been recognized internationally for his work on artificial disc replacements and is a co-author in the pivotal studies for the FDA trials on single-level cervical and lumbar disc replacements as well as two-level ProDisc artificial disc replacements. His work has received the Leon Wiltse award for best overall paper at the International Society for the Advancement of Spine Surgery. In addition to his clinical practice, Dr. Goldstein is on the editorial board for The Spine Journal and a member of the North American Spine Society, Cervical Spine Research Society and Scoliosis Research Society. Dr. Goldstein earned his medical degree at Downstate Medical Center in Brooklyn and completed his orthopedic surgery training at Case Western Reserve University in Cleveland. His additional training includes a fellowship in spine surgery at the Maryland Spine Fellowship in Baltimore.

Matthew Gornet, MD (The Orthopedic Center of St. Louis). Dr. Gornet has expertise with the Maverick Total Disc Replacement procedure and a leader in dynamic stabilization, disc replacement and other non-fusion technology. In addition to his clinical practice, Dr. Gornet is a member of the International Society for the Advancement of Spine Surgery, North American Spine Society and American Academy of Orthopaedic Surgeons. Dr. Gornet earned his medical degree at Johns Hopkins University School of Medicine and completed his orthopedic surgery residency at Johns Hopkins Hospital. His additional training includes a spine surgery fellowship at Johns Hopkins.

Richard D. Guyer, MD (Texas Back Institute, Plano). Dr. Guyer was a leader in the clinical trials for the Charlite artificial disc and performed the third procedure in the country using the device. He is currently a co-director of the Center for Disc Replacement at Texas Back Institute, along with Scott Blumenthal, MD, and Jack Zigler, MD. Dr. Guyer's additional leadership experience includes director of the Texas Back Institute Spine Fellowship Program and founder and chairman of the board of the Texas Back Institute Research Foundation. He contributed his expertise on the socioeconomic impact of motion preservation technology to "Motion Preservation Surgery of the Spine." During his career, Dr. Guyer has traveled internationally to teach surgical technique and lecture on the results of lumbar and cervical artificial disc replacement. Dr. Guyer earned his medical degree at the University of Pennsylvania School of Medicine in Philadelphia, where he also completed his residency. His additional training includes spine fellowships at Case Western Reserve University in Cleveland and under Leon Wiltse, MD, in Long Beach, Calif.

Jason M. Highsmith, MD (Trident Health System, Charleston, S.C.). Dr. Highsmith was a principle investigator for the Medtronic Prestige-ST cervical disc and currently serves as an investigator of the Globus Medical Secure-C Disc and holds more than 100 United States patents in the field of innovative spinal instrumentation. Dr. Errico has served as president of the North American Spine Society and International Society for the Advancement of Spine Surgery. His research has earned him recognition from professional organizations such as the Scoliosis Research Society. Dr. Errico earned his medical degree at New Jersey Medical School and completed his orthopedics residency at NYU Medical Center. His additional training includes a spine fellowship at Toronto General Hospital.
artificial disc for an FDA trial. He was among the first physicians in the country trained in the X-Stop interspinous process for treating lumbar stenosis. Dr. Highsmith is in private practice in Charleston and serves as the medical and technology advisor to Spine Universe. In his clinical practice, Dr. Highsmith focuses on neurosurgery, back and neck pain and motion preservation. Dr. Highsmith earned his medical degree at the Medical College of Virginia and completed a fellowship in complex spine surgery at Emory University in Atlanta. His additional experience includes a medical mission trip to Belize where he assisted a native neurosurgeon in caring for adolescent patients with hydrocephalus and spina bifida.

Stephen H. Hochschuler, MD (Texas Back Institute, Plano). Dr. Hochschuler is co-founder of Texas Back Institute and former president of the International Society for the Advancement of Spine Surgery. He has been involved in motion preservation research with artificial discs and contributed his expertise on the future of motion preservation with "Motion Preservation Surgery of the Spine." He founded the spine division at Veterans Administration in Dallas and served as a clinical instructor at the University of Texas Southwestern Medical School. He is a founding member of the American Board of Spinal Surgery and chairman of the Texas Back Institute Holdings Corporation. Dr. Hochschuler earned his medical degree at Harvard Medical School in Boston and completed his orthopedic residency at the University of Texas Southwestern School in Dallas. He also spent time in the United States Air Force.

J. Patrick Johnson, MD (Cedars-Sinai Medical Center, Los Angeles). Dr. Johnson is a principle investigator for the Bryan Cervical Disc Prosthesis clinical trial. He previously served as the director of the Cedars-Sinai Institute for Spinal Disorders, where he established the combined neurosurgery and orthopedic fellowship program. Now, he serves as a neurosurgeon within the Cedars-Sinai Spine Center. His research interests include biologic stem cell repair of spinal cord injuries, and he has published several articles in professional journals. During his career, Dr. Johnson has served as director of the California Association of Neurosurgeons and is a member of the North American Spine Society. Dr. Johnson earned his medical degree from the Oregon Health Sciences University in Portland and completed his neurosurgical residency at the University of California in Los Angeles. His additional training includes a fellowship in spine surgery at the University of Tennessee in Nashville and a fellowship at the National Hospital for Neurology and Neurosurgery in London, England.

Michael G. Kaiser, MD (Neurosurgeons of New Jersey, Ridgewood). Dr. Kaiser is the associate director of the Spine Center at the Neurosurgeons of New Jersey and an associate professor of clinical neurology surgery at Columbia University's neurosurgical department. His research interests include the development of motion preservation technology, evidence-based treatment algorithms, clinical outcomes analysis and computer simulation of the cervical spine. Dr. Kaiser's clinical interests include artificial cervical disc replacement, minimally invasive spine surgery, dynamic spinal fusion, spine and spinal cord tumors and degenerative disc disease. He serves on the executive committee of the American Association of Neurological Surgery's Joint Section of Spine and Peripheral Nerve. He received his medical degree from Yale University School of Medicine. He completed a residency at Columbia University Neurosurgical Institute of New York and a neurological spine fellowship at The Emory Clinic in Atlanta.

Armen Khachatryan, MD (Center of Orthopedic and Rehabilitation Excellence, West Jordan, Utah). Dr. Khachatryan has been a clinical investigator for several FDA trials, including the trial for the Prestige artificial cervical disc replacement procedure. He was among the first spine surgeons in Utah to implant artificial discs in both the cervical and lumbar spine. During his career, Dr. Khachatryan has had a professional interest in minimally invasive surgery, motion preservation and non-fusion technology. He is a member of the North American Spine Society. Dr. Khachatryan earned his medical degree at Yale University School of Medicine in New Haven, Conn., and completed his orthopedic surgery residency at the University of Utah in Salt Lake City. His additional training includes a spine surgery fellowship at the University of Utah and Shriner's Hospital for Children in Salt Lake City.

Larry T. Khoo, MD (Spine Clinic of Los Angeles). Dr. Khoo has served as the co-director of the UCLA Comprehensive Spine Center and has a special interest in minimally invasive spinal procedures. His research has also focused on motion preservation and he contributed his expertise on the TranS1 Percutaneous Nucleus Replacement and Total Posterior Facet Replacement and Dynamic Motion Segment Stabilization System for "Motion Preservation Surgery of the Spine." In addition to his clinical practice, he is a member of the Society for Minimally Invasive Spine Surgery, International Society for the Advancement of Spine surgery and North American Spine Society. He earned his medical degree from Yale Medical School in New Haven, Conn., and completed his residency in neurological surgery at the University of Southern California. His additional training includes a fellowship at Rush Presbyterian St. Luke's Medical Center in Chicago.

James D. Kang, MD (University of Pittsburgh Medical Center). Dr. Kang is the vice chairman of the department of orthopedic surgery and director of the Ferguson Laboratory for Spine Research at the McGowan Institute for Regenerative Medicine, a program of the University of Pittsburgh and UPMC. He also holds the UPMC endowed chair in orthopedic spine surgery. He has a special interest in the biochemistry of disc degeneration, gene therapy and the biomechanics of the spine. Dr. Kang contributed his expertise on gene therapy for intervertebral disc repair and regeneration for "Motion Preservation Surgery of the Spine." During his career, Dr. Kang has authored around 300 publications and is a member of the North American Spine Society. Dr. Kang earned his medical degree at the University of Oklahoma and completed his residency at the University of Pittsburgh. His additional training includes a spine surgery fellowship at Case Western Reserve University School of Medicine in Cleveland.

Scott Leary, MD (Alvarado Hospital Medical Center, San Diego). Dr. Leary participated in the first clinical trial for the Charite artificial disc, and he will be serving as the principal investigator for the upcoming FDA clinical trial for the next-generation lumbar artificial disc replacement. In his practice, Dr. Leary has a professional interest in minimally invasive spine surgery, endoscopic spine surgery, artificial disc replacement and complex spinal reconstruction. During his career Dr. Leary has published several articles in peer-review journals on spine surgery topics and maintains a focus on research and innovation. Dr. Leary earned his medical degree at Washington University in St. Louis and completed his residency in neurosurgery at Los Angeles County — University of Southern California Medical Center in
Los Angeles. His additional training includes a fellowship in stereotactic radiosurgery under Michael Apuzzo, MD, and a complex spine surgery fellowship under John Regan, MD, in Los Angeles.

Paul C. McAfee, MD (St. Josephs Hospital, Towson, Md.), Dr. McAfee is the director of the Scoliosis and Spine Center at St. Josephs Hospital. He specializes in spine surgery, including spinal deformities and neurologic deficits, and collaborated on an instructional guide for physicians performing motion preservation surgery, titled "Motion Preservation Surgery of the Spine." He has performed more than 200 motion preservation procedures in 10 countries.

Dr. McAfee participates in the Spine Training Program at Johns Hopkins and Union Memorial Hospitals and has a traveling fellowship to teach spine surgeons around the world. He has a five-year National Institutes of Health grant to study spine instrumentation and fusion operations. He was among the first surgeons in the nation to perform endoscopic spine surgery, cervical disc replacement and anterior endoscopic spinal instrumentation. Dr. McAfee received his medical degree from the State University of New York at Syracuse. He completed his surgery training at the University of Virginia. He completed a fellowship in spine surgery. He is also a member of the committee on spine for the American Academy of Orthopaedic Surgeons.

Justin D. Paquette, MD (Paquette Spine Institute, Beverly Hills, Calif.), Dr. Paquette is an orthopedic spine surgeon with a special interest in motion preservation technology. He serves as a traveling instructor for advanced surgical techniques, including motion preservation technology, and has been a national speaker for research and surgical techniques in major cities around the world. His expertise is in spinal disorders, minimally invasive and neuronavigation-assisted spine surgery, adult and pediatric spinal deformity, scoliosis, artificial discs, endoscopic spinal surgery, spinal tumor management, spine trauma and complex spine reconstruction. Dr. Paquette received his medical degree from Albany Medical College in New York. He completed an internship in general surgery at Beth Israel Deaconess Medical Center at Harvard University and a neurosurgery residency at Harvard and Tufts New England Medical Center in Boston. He also completed a comprehensive spine surgery fellowship at Cedars Sinai Medical Center in Los Angeles.

Pablo Pazmino, MD (Spine Cal, Santa Monica, Calif.), Dr. Pazmino is the principle investigator for the Discover Cervical Disc Arthroplasty from DePuy, which is only one of three artificial disc replacement studies he has participated in during his career. He is the founder of The Spinecal Institute and is a member of several professional societies, including the North American Spine Society, American Academy of Orthopaedic Surgeons and Spine Arthroplasty Society. In addition to his clinical work, Dr. Pazmino has authored two books and has been involved with the organization of a medical mission trip to Ecuador. Dr. Pazmino earned his medical degree from the University of Michigan in Ann Arbor and completed his orthopedic surgery residency at the Detroit Medical Center. His additional training includes the AO Spinal Surgical Fellowship, which he completed in Brazil, and a second combined orthopedic-neurosurgical spine fellowship program completed in Beverly Hills, Calif.

Kenneth A. Pettine, MD (Rocky Mountain Associates, Loveland, Colo.), Dr. Pettine is co-investigator and co-designer of the Maverick Artificial Disc, a disc replacement device for the neck and back. He is a co-founder of Rocky Mountain Associates and a surgeon at Loveland (Colo.) Surgery Center. During his career, Dr. Pettine has been chief investigator for eight FDA studies involving non-fusion spine technology. He is a distinguished speaker at national and international symposiums and the author of nearly 20 research publications. He received his medical degree from the University of Michigan in Ann Arbor and completed his orthopedic surgery residency at the Detroit Medical Center. He completed his residency and his master's degree in orthopedic surgery at the Mayo Clinic in Rochester, Minn., and completed a fellowship at the Institute for Low Back Care in Minneapolis.

Thomas F. Roush, MD (Roush Spine, Lake Worth, Fla.), Dr. Roush is a spine surgeon with Roush Spine in Florida and the co-author of a 2009 book "Motion Preservation Surgery of the Spine: Advanced Techniques and Controversies," along with other research publications. He performs many procedures, including decompression, cervical disc surgery, degenerative disc surgery, fracture repair, kyphoplasty, minimally invasive surgery, spinal fusion, total disc replacement and more. Dr. Roush received his medical degree from the University of Cincinnati College of Medicine. He completed an orthopedic surgery residency at Duke University Medical Center in Durham, N.C., and fellowships in spine surgery and spinal arthroplasty at Texas Back Institute in Plano. He's a member of the North American Spine Society, South Carolina Spine Society, American Academy of Orthopaedic Surgeons, American Medical Society and more.

 Gowriharan Thaiyananthan, MD (BASIC Spine, Orange, Calif.), Dr. Thaiyananthan is the founder and head neurosurgeon and spine surgeon at BASIC Spine in California, and he uses motion preservation technologies to maintain normal function and motion of the spine, including artificial disc replacement. He is a pioneer of new surgical techniques, such as using stem cells and minimally invasive surgery to treat back pain, degenerative disc disease, herniated disc disease, spinal stenosis and scoliosis. He also uses minimally invasive treatments, such as interspinous spacers, spinal cord stimulators, endoscopic spinal surgery, lumbar decompression and stem cell therapy. He received his medical degree from the University of California San Francisco and completed his general surgery internship and neurosurgery residency at Yale New Haven Hospital. Dr. Thaiyananthan completed a minimally invasive and complex spine surgery fellowship at the Cedars Sinai Medical Center's Institute for Spinal Disorders.

Allan T. Villavicencio, MD (Boulder Neurosurgical Associates, Boulder, Colo.), Dr. Villavicencio is the principle investigator in several clinical trials for spine devices, including the Wallis System from Zimmer and Maverick artificial disc from Medtronic. He is a senior practicing partner at Boulder Neurosurgical Associates and has a professional interest in complex spinal reconstruction surgery. In addition to his clinical practice, Dr. Villavicencio is the director of research head development for BNA, director of neurosurgery at Boulder (Colo.) Community and Longmont United Hospitals and the director of surgery at The Minimally Invasive Spine Institute in Colorado, which he founded. Dr. Villavicencio is also the founder and program chairman for a regional neurosurgical symposium. During his career, he has presented at several national meetings and is a member of the North American Spine Society and American Association of Neurological Surgeons, among others. Dr. Villavicencio earned his medical degree at Harvard Medical School in Boston and completed his neurosurgical residency at Duke University Medical Center in Durham, N.C. He
also completed an orthopedic spine surgery fellowship at Cedars-Sinai Medical Center in Los Angeles.

James Yue, MD (Yale University, New Haven, Conn.). Dr. Yue is the co-director of the Yale Spine Surgery Center at Yale University’s department of orthopedic surgery in New Haven, Conn. He is also the director of the Center for Motion Preserving Spine Surgery and Studies. He collaborated on an instructional guide for physicians performing motion preservation surgery, titled "Motion Preservation Surgery of the Spine," and one of his main research interests is replacement and motion sparing technology. He also researches cervical and lumbar disc replacement and non-fusion technology. Dr. Yue treats spinal fractures, spinal stenosis, disc herniations, spine tumors, scoliosis and cervical disc replacements. He received his medical degree from Northwestern University Medical School in Evanston, Ill., and completed a residency in orthopedic surgery at University Hospitals of Cleveland. He completed an orthopedic and spine trauma fellowship at RA Cowley Shock Trauma Hospital in Baltimore and a fellowship in spinal surgery at Queen's Medical Center in Honolulu, Hawaii.

Jack Zigler, MD (Texas Back Institute, Plano). Dr. Zigler is a spine surgeon with Texas Back Institute. During his career, Dr. Zigler has been president of the American Spinal Injury Association and Federation of Spine Associations. He has led committees with the Cervical Spine Research Society and North American Spine Society. Dr. Zigler has also been a representative on the Council of Musculoskeletal Specialty Societies and a spinal injury consultant to the Los Angeles Olympic Committee. In addition to his clinical work, Dr. Zigler has been the associate editor for the Spine Arthroplasty Society Journal and on the editorial board for the Journal of Spinal Disorders & Techniques. Dr. Zigler earned his medical degree at SUNY Upstate Medical Center in Syracuse and completed his residency in orthopedic surgery at Case Western Reserve School of Medicine in New York City. His additional training includes a fellowship in spine surgery at Case Western Reserve University in Cleveland.