

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

CODY FLACK,
SARA ANN MAKENZIE,
MARIE KELLY, and
COURTNEY SHERWIN,

Plaintiffs,

v.

Case No. 18-CV-0309

WISCONSIN DEPARTMENT OF
HEALTH SERVICES and
LINDA SEEMEYER, in her official
capacity as Secretary of the Wisconsin
Department of Health Services,

Defendants.

DECLARATION OF MICHELLE OSTRANDER, Ph.D.

Michelle Ostrander, declares as follows under penalty of perjury,
pursuant to 28 U.S.C. § 1746:

1. This declaration is based upon my personal knowledge.
2. I am a Product Manager of Health Technology Assessments at Hayes, Inc. I have over 16 years of experience in the healthcare field, including in evidence evaluation, analysis, and synthesis; leadership and management; evidence-based healthcare policy and implementation; scientific/medical writing and editing; development and presentation of skills training and

professional education programs; and preclinical and secondary research. At Hayes, Inc., I lead a diverse team of scientists and have been responsible for authoring or editing over 250 health technology assessments (HTA) and comparative effectiveness research (CER) reviews since 2008. I have a Ph.D. in Neuroscience from the University of Michigan and spent five years as a postdoctoral fellow in the Department of Psychiatry at the University of Cincinnati.

3. In my role as Product Manager at Hayes, Inc., I am responsible for ensuring the quality, scientific integrity and methodological rigor as well as coordination of production and publication of 65 HTA and CER reviews every year, along with annual updates and custom research services for healthcare providers, payers, and policy makers in the commercial and government sector. I directly supervise a team of research analysts who assist me in that role.

4. My curriculum vitae is attached as Exhibit A to this declaration. That document contains the publications for which I am responsible over the past ten years.

5. Attached as Exhibit B to this declaration is a true and correct copy of the Hayes, Inc. report titled "Sex Reassignment Surgery for the Treatment of Gender Dysphoria," dated August 2018.

6. Attached as Exhibit C to this declaration is a true and correct copy of the Hayes, Inc. report titled "Sex Reassignment Surgery for the Treatment

of Gender Dysphoria,” dated May 15, 2014.

7. Attached as Exhibit D to this declaration is a true and correct copy of the Hayes, Inc. report titled “Ancillary Procedures and Services for the Treatment of Gender Dysphoria,” dated May 9, 2014.

8. Attached as Exhibit E to this declaration is a true and correct copy of the Hayes, Inc. annual review titled “Ancillary Procedures and Services for the Treatment of Gender Dysphoria,” dated April 6, 2018.

9. In my role as Product Manager, I worked with analysts in authoring and developing the August 2018 report and reviewed and approved the report prior to its publication. The two 2014 reports were authored and published using the same methodology as the August 2018 report.

10. The 2018 annual review used a different methodology. Hayes Annual Reviews are a yearly update search for key sections of Hayes reports. This review revolves around the evidence evaluation section and the regulation and guidance sections. The purpose of the Hayes Annual Reviews is to determine if active reports need updating, and to provide clients with the most recent and relevant best available evidence to facilitate their decision-making that requires their compliance with accreditation standards and state regulations, which involves an annual review of their coverage policies. Annual Reviews are based on a review of abstracts and do not provide an evidence evaluation.

11. The analyses and conclusions contained in the documents attached as Exhibits B, C, D, and E represent my professional opinion about the available scientific evidence regarding the efficacy and safety of the medical procedures and services addressed therein as of the dates of those documents.

12. I take no position on the medical necessity of any particular medical procedure or service for any particular patient, including the named plaintiffs in this case.

13. During the past four years, I have not provided any expert testimony.

14. Hayes, Inc. is being compensated on an hourly basis for all my time related to this case at a rate of \$250 per hour. My compensation is independent of the opinions expressed, testimony provided, or ultimate outcome of this case.

15. I may supplement these opinions and facts in response to information produced by the Plaintiff, in further response to the Plaintiffs' expert disclosures, and/or as new data within my field of expertise becomes available.

Dated: 2/15/2019

Signed: Michelle M Ostrander Ph.D

Michelle M. Ostrander, Ph.D.

Michelle M. Ostrander, PhD

www.linkedin.com/in/michelle-ostrander-phd

Over 16 years of experience in healthcare field, including evidence evaluation, analysis, and synthesis; leadership and management; evidence-based healthcare policy and implementation; scientific/medical writing and editing; development and presentation of skills training and professional education programs; and preclinical and secondary research. Leads a diverse team of scientists and has been responsible for authoring or editing over 250 health technology assessment (HTA) and comparative effectiveness research (CER) reviews since 2008. Five years of leadership and management experience at a health technology assessment and consulting firm, consisting of direct supervision of a team of medical analysts/writers as well as indirect influence and guidance of cross-divisional teams in a matrix environment.

Experienced health scientist with a strong background in research, systematic review methodology, and knowledge transfer. Proven ability to develop, grow and guide high-quality health technology assessment, comparative effectiveness research, and publication programs. Strong commitment to the use of scientific evidence as a basis for healthcare, and the promotion of research focused on the needs and preferences of patients and those who make decisions on their behalf. Well-versed on a wide range of therapeutic areas and healthcare technologies including medical devices, screening and diagnostic tests, surgical procedures, drugs and biologics, behavioral and mental health interventions, and patient safety and clinical care practices. Experience in academic and for-profit work environments and on-site and remote supervision. Strategic and goal-driven leader who maintains a productive climate and confidently motivates, mobilizes, and coaches employees to meet high-performance standards.

Core Knowledge & Skill Areas

Comparative Effectiveness Research	Translation of Research Findings into Recommendations for Decision Makers
Health Technology Assessment	Evidence-Based Recommendations for Private and Government-Based Health Care Systems
Evidence-Based Healthcare Policy and Implementation	Online Publishing/Web-Based Product Development
Secondary Research	Public Health Policy
Research Evidence Evaluation, Analysis, and Synthesis	Professional Education and Knowledge Transfer
Strategic Planning and Policy Development	Project Management
Organizational Leadership	Recruitment, Training, and Management of Professional Staff; Mentoring; Team Building
Health Systems Research	
Patient Centered Outcomes	
Visual Display of Quantitative Information	

Professional Experience

Hayes Inc., Lansdale, PA

January 2008 – present

Product Manager, Health Technology Assessments

April 2015 – present

Hayes clients include some of the nation's largest commercial and state health plan providers together representing more than 80% of covered lives nationwide. Responsible for ensuring quality, scientific integrity and methodological rigor as well as coordination of production and publication of 65 HTA and CER reviews every year, along with annual updates and custom research services for healthcare providers, payers, and policy makers in the commercial and government sector. Directly supervises distributed team of 7 research analysts; responsible for recruiting, training and management. Responsible for product development and client interaction in relation to the medical health technology assessment product line.

Key Contributions and Accomplishments

- Provide scientific and editorial oversight of 65 HTA and CER reviews annually
- Direct workflow, production, and electronic publication of HTA and CER reviews
- Manage multiple, complex projects simultaneously while ensuring quality work and timely delivery
- In concert with Director of Evidence Solutions, develop and implement new methods for conducting large HTA and CER reviews
- Staff, manage, and supervise a diverse, multidisciplinary, distributed team of 9 medical writers and multiple contractors with advanced degrees
- Met all production goals and reduced or maintained cost of goods in 2016, 2017, and 2018 relative to historical performance
- Serves as key resource and support for project management and publication platform issues
- Responsible for topic selection and coordination across multiple product lines
- Identify opportunities for product development and innovation based on industry research, analytics, and client and market insights
- Actively engaged in promoting the use of scientific evidence as the foundation for healthcare policy, delivery, and decision-making
- Provide ongoing internal training and professional development of distributed medical analyst team

Associate Editor, Health Technology Assessments

November 2012 – April 2015

- Scientific and methodological review of HTA and CER reviews (30 annually)
- Author HTAs, CER reviews, and custom research projects on a wide range of therapeutic topics (2-4 annually)
- Develop internal support and training opportunities regarding HTA methodology

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- Assist with workflow and production of Directory products and custom reports

Key Contributions and Accomplishments

- Work with a multidisciplinary, cross-functional team to develop, test, and implement a new publication platform and workflow process
- Develop and deliver standard operating procedures and training plan to introduce the new software and workflow process to the team

Senior Medical Research Analyst
Medical Research Analyst

April 2011 – November 2012
January 2008 – April 2011

- Preparation and writing HTA reviews that critically evaluate emerging and/or controversial health care technology across a wide range of therapeutic areas (10-11 annually)
- Conducted systematic searches of medical literature databases (PubMed, EMBASE), evidence-based medicine databases (TRIP, SUMSearch, CRD), and regulatory databases (FDA)
- Critically analyzed and synthesized clinical research articles to determine strengths and limitations of study design, statistical analysis, and overall conclusions
- Evaluated overall strength of clinical evidence to make policy recommendations
- Preparation of custom work based on guidance from project managers and clients
- Assisted with design and testing of product line enhancements
- Creation and presentation of 5 accredited continuing education webinars for clients
- Developed and conducted training sessions for an internal professional development webinar series
- Identification and implementation of an open-source reference manager application that the company used in place of EndNote. Received the Great Expectations company award for this achievement

CME Outfitters, LLC, Rockville, MD
Medical Program Manager

September 2006 – December 2007

- CME writing and research in a variety of neuroscience and psychiatric therapeutic areas including sleep/wake medicine, bipolar disorder, depression, anxiety disorders, and schizophrenia
- Wrote scientific/medical content for monographs, case vignettes, company website (www.neuroscienceCME.com) and newsletter (*Clinical Compass*)
- Wrote needs assessments for educational initiatives and live medical meetings
- Editorial review of educational materials for style, grammar, and scientific accuracy
- Scientific accuracy review of slide decks for television, audioconferences, and live medical meetings
- Prepared scripts and post-test questions for television and audioconference activities, as well as for live medical meetings

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Department of Psychiatry, University of Cincinnati, Cincinnati, OH 11/2001–9/2006
Postdoctoral Fellow

- Wrote a nationally competitive postdoctoral research fellowship grant application that received 3 years of funding from the National Institute on Drug Abuse.
- Preclinical scientific research in the areas of stress neurobiology and neuroanatomy
- Wrote scientific manuscripts, abstracts, and posters to disseminate results of scientific research
- Edited grant submissions, scientific manuscripts, abstracts, and posters for sense, grammar, and style
- Conducted scientific peer review of manuscripts for several neuroscience journals
- Designed and implemented scientific research experiments to elucidate neuroanatomical circuitry involved in mediation of chronic stress responsivity
- Conducted and interpreted statistical analysis of scientific research data
- Established collaborative relationships with other laboratories to address research priorities
- Presented scientific data at a variety of national and international meetings
- Trained and supervised undergraduate and graduate students in laboratory procedures and protocols, experimental design, statistical analysis, poster and manuscript preparation

Education

- PhD, Neuroscience, University of Michigan, Ann Arbor, MI
- BS, Psychology, Ohio State University, Columbus, Ohio

Conference Presentations or Client Webinars

- Ostrander MM, Cochrane, G. Evidence-based Capital Planning Processes. ACE Summit and Reverse Expo, February 2018, Atlanta GA.
- Rogstad TL, Ostrander MM. Translating Clinical Research to Policy: Health Technology Assessments (HTAs) and Their Context. American Medical Writers Association, October 2014, Memphis TN.
- Ostrander MM. Decoding the Mysteries of Medical Device Regulation. May 2014.
- Rogstad TL, Ostrander MM. Assessing the Value of Medical Tests. May 2013.
- Ostrander MM. Alzheimer's Disease: When Neurobiology Drives Drug Development. May 2011.
- Ostrander MM. Shrinking Clinical Trials – What's Behind the Numbers? February 2011.
- Ostrander MM, Rihal A. Acupuncture for Pain Management: Using Western Evidence to Evaluate an Eastern Medicine. April 2010.
- Houtsmuller E, Ostrander MM. Emerging and Alternative Treatments for Mood and Anxiety Disorders: Do They Work? June 2008.
- Houtsmuller E, Ostrander MM. Controversies in Mental Health Diagnosis and Treatment: ADHD and Bipolar Disorder in Children. September 2008.

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Awards and Honors

- Hayes Great Expectations Award, 2009
- National Institute of Drug Abuse, Postdoctoral National Research Service Award (F32 DA016466), University of Cincinnati, 2003–2006
- National Institute of Drug Abuse, Predoctoral National Research Service Award (F31 DA005905), University of Michigan, 1998–2001
- Graduated summa cum laude and with Honors in the Liberal Arts
- Phi Beta Kappa

Hayes Publications as Author

Publication Title	Year	Publication Type
Amniotic Membrane Transplantation (AMT) for Corneal Reconstruction	2015	Medical Technology Directory
Amniotic Membrane Transplantation (AMT) for Conjunctival Reconstruction and Glaucoma Surgery	2015	Medical Technology Directory
Applied Behavior Analysis-Based Interventions for Autism Spectrum Disorder	2014	Medical Technology Directory
Dynamic Magnetic Resonance Imaging for Pelvic Floor Disorders	2014	Medical Technology Directory
Serological Assays for the Diagnosis and Management of Inflammatory Bowel Disease: Ulcerative Colitis	2013	Medical Technology Directory
Serological Assays for the Diagnosis and Management of Inflammatory Bowel Disease: Crohn's Disease	2013	Medical Technology Directory
Pulsed Dye Laser Therapy for Cutaneous Vascular Lesions	2012	Medical Technology Directory
Intravenous Immunoglobulin for Chronic Inflammatory Demyelinating Polyneuropathy	2012	Medical Technology Directory
Home Sleep Studies for Diagnosis of Obstructive Sleep Apnea Syndrome in Patients Younger Than 18 Years of Age	2012	Medical Technology Directory
Remote Cognitive-Behavioral Therapy for Bulimia Nervosa	2012	Medical Technology Directory
Vision Therapy for Dyslexia and Other Reading and Learning Disabilities	2012	Medical Technology Directory
Lee Silverman Voice Treatment for Speech and Voice Problems in Parkinson's Disease	2012	Medical Technology Directory
Whole Breast Irradiation for Breast Cancer Using Three-Dimensional Conformal Radiation Therapy or Intensity-Modulated Radiation Therapy	2012	Medical Technology Directory
Conformal and Intensity-Modulated Radiation Therapy for Breast Cancer	2012	Medical Technology Directory
Intravenous Immunoglobulin for the Treatment of Myasthenia Gravis	2012	Medical Technology Directory
Topical Antiseptic Products for Preoperative Skin Preparation	2012	Medical Technology Directory
Minimally Invasive Coronary Artery Bypass Graft Surgeries for Coronary Revascularization	2011	Medical Technology Directory
Vision Therapy for Accommodative and Vergence Dysfunction	2011	Medical Technology Directory
Selective Estrogen Receptor Modulators (SERMs) for Chemoprevention of Breast Cancer	2011	Medical Technology Directory
Endoscopic Ultrasound (EUS) for Diagnosis of Pancreatic Tumors	2011	Medical Technology Directory
Endoscopic Ultrasound-Guided Fine Needle Aspiration Biopsy (EUS-FNA) for Diagnosis of Pancreatic Cancer	2011	Medical Technology Directory
Endoscopic Ultrasound (EUS) for Locoregional Staging of Pancreatic Tumors	2011	Medical Technology Directory
Cognitive Rehabilitation for Traumatic Brain Injury (TBI)	2011	Medical Technology Directory
Nerve Blocks for the Treatment of Chronic Nonmalignant Pain	2011	Medical Technology Directory
Long-Term Antibiotic Therapy for Chronic Lyme Disease	2010	Medical Technology Directory
Mandibular Advancement Devices for Sleep Apnea	2010	Medical Technology Directory
Transcutaneous Electrical Nerve Stimulation for Acute Pain	2010	Medical Technology Directory
Transcutaneous Electrical Nerve Stimulation for Postoperative and Procedural Pain	2010	Medical Technology Directory
Laser Therapy for Benign Prostatic Hyperplasia	2010	Medical Technology Directory
High-Dose Immunosuppressive Therapy With or Without Hematopoietic Transplantation for the Treatment of Multiple Sclerosis	2010	Medical Technology Directory
Acupuncture for Treatment of Neck and Shoulder Pain	2010	Medical Technology Directory
Acupuncture for Treatment of Low Back Pain	2010	Medical Technology Directory
Transcutaneous Electrical Nerve Stimulation for Chronic Pain	2010	Medical Technology Directory

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High-Dose Immunosuppressive Therapy With or Without Hematopoietic Transplantation for the Treatment of Rheumatic and Mixed Autoimmune Diseases	2009	Medical Technology Directory
Nonpharmacological Treatments for Attention-Deficit/Hyperactivity Disorder (ADHD): Neurofeedback	2009	Medical Technology Directory
Nonpharmacological Treatments for Attention-Deficit/Hyperactivity Disorder (ADHD) in Children: Behavior Therapy	2009	Medical Technology Directory
Chromoendoscopy for Colonoscopy	2009	Medical Technology Directory
Acamprosate for Alcoholism	2009	Medical Technology Directory
Acupuncture for the Treatment of Arthritis and Fibromyalgia	2009	Medical Technology Directory
Acupuncture for Treatment of Postoperative Pain	2009	Medical Technology Directory
Acupuncture for the Treatment of Headache	2009	Medical Technology Directory
Nonstimulant Medications for Attention-Deficit/Hyperactivity Disorder (ADHD) in Children: Antihypertensives	2008	Medical Technology Directory
Nonstimulant Medications for Attention-Deficit/Hyperactivity Disorder (ADHD) in Children: Antidepressants	2008	Medical Technology Directory
Nonstimulant Medications for Attention-Deficit/Hyperactivity Disorder (ADHD) in Adults: Antidepressants and Antihypertensives	2008	Medical Technology Directory
Nonstimulant Medications for Attention-Deficit/Hyperactivity Disorder (ADHD) in Adults: Atomoxetine	2008	Medical Technology Directory
Nonstimulant Medications for Attention-Deficit/Hyperactivity Disorder (ADHD) in Children: Atomoxetine	2008	Medical Technology Directory
Topiramate for Treatment of Alcohol Addiction	2008	Medical Technology Directory

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Hayes Publications as Scientific Editor

Publication Title	Year	Publication Type
Comparative Effectiveness Review of Prostatic Artery Embolization (PAE) for Treatment of Benign Prostatic Hyperplasia (BPH)	2019	Medical Technology Directory
Transcutaneous Electrical Nerve Stimulation for Knee Osteoarthritis	2019	Medical Technology Directory
Comparative Effectiveness Review of Human Acellular Dermal Matrix for Breast Reconstruction	2019	Medical Technology Directory
Comparative Effectiveness Review of Bariatric Surgeries for Treatment of Obesity in Adolescents	2018	Medical Technology Directory
Ultrasound-Guided Percutaneous Carpal Tunnel Release for Treatment of Carpal Tunnel Syndrome	2019	Medical Technology Directory
Conventional Corneal Collagen Cross-Linking for Treatment of LASIK-Related Ectasia	2018	Medical Technology Directory
Spinal Cord Stimulation for Relief of Neuropathic Pain	2018	Medical Technology Directory
Multiplex Molecular Panels for Diagnosis of Gastrointestinal Infection	2018	Medical Technology Directory
Comparative Effectiveness Review of Antimicrobial Central Line Dressings for the Prevention of Central Line-Associated Bloodstream Infections	2018	Medical Technology Directory
Measurement of Corneal Hysteresis for the Diagnosis and Management of Glaucoma	2018	Medical Technology Directory
Comparative Effectiveness Review of Endoscopic Surgery for Carpal Tunnel Release: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Patellofemoral Arthroplasty for Isolated Osteoarthritis of the Knee	2018	Medical Technology Directory
Pneumatic Compression for Prevention of Deep Vein Thrombosis Following Knee Arthroplasty	2018	Medical Technology Directory
Electronic Monitoring Versus Direct Observation of Hand Hygiene Compliance in Healthcare Settings	2018	Medical Technology Directory
Inhaled Nitric Oxide for the Treatment of Respiratory Failure in Preterm Newborns	2018	Medical Technology Directory
Comparative Effectiveness Review of Percutaneous Tibial Nerve Stimulation for the Treatment of Symptomatic Non-Neurogenic Overactive Bladder Syndrome	2018	Medical Technology Directory
Hypoglossal Nerve Stimulation for the Treatment of Obstructive Sleep Apnea	2018	Medical Technology Directory
Gastric Electrical Stimulation for Gastroparesis	2018	Medical Technology Directory
Scalp Cooling Devices for the Prevention of Chemotherapy-Induced Alopecia: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Transcatheter Aortic Valve Implantation (TAVI) and Surgical Aortic Valve Replacement (SAVR) for Aortic Stenosis in Lower Risk Patients	2018	Medical Technology Directory
Percutaneous Epidural Adhesiolysis for Chronic Low Back Pain	2018	Medical Technology Directory
Transcutaneous Electrical Nerve Stimulation for Chronic Low Back Pain	2018	Medical Technology Directory
Comparative Effectiveness Review of Mandibular Advancement Devices for Sleep Apnea: A Review of Reviews	2018	Medical Technology Directory
Acupuncture for the Prevention or Treatment of Nausea and Vomiting: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Recombinant Human Bone Morphogenetic Protein (rhBMP) for Use in Spinal Fusion	2018	Medical Technology Directory
Comparative Effectiveness Review of Acupuncture for the Treatment of Episodic and Chronic Tension-Type Headache and Episodic Migraine: A Review of Reviews	2018	Medical Technology Directory

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Comparative Effectiveness Review of Transanal Hemorrhoidal Dearterialization Versus Alternative Hemorrhoidal Treatments	2018	Medical Technology Directory
Acupuncture for Treatment of Fibromyalgia	2018	Medical Technology Directory
Acupuncture for Treatment of Neck and Shoulder Pain	2018	Medical Technology Directory
Percutaneous Mechanical Thrombectomy and Ultrasound-Assisted Thrombolysis for Deep Vein Thrombosis	2018	Medical Technology Directory
Comparative Effectiveness Review of Bupivacaine Liposome Injectable Suspension for Relief of Postoperative Pain Following Total Knee Arthroplasty: A Review of Reviews	2018	Medical Technology Directory
Sex Reassignment Surgery for the Treatment of Gender Dysphoria	2018	Medical Technology Directory
Fetal Surgery for Myelomeningocele	2018	Medical Technology Directory
Fetal Surgery for Congenital Diaphragmatic Hernia	2018	Medical Technology Directory
Comparative Effectiveness Review of Stem Cell Therapy for Joint Pain	2018	Medical Technology Directory
Comparative Effectiveness Review of Acupuncture for the Treatment of Chronic Lower Back Pain: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Acupuncture for the Treatment of Substance Use Disorders: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Bupivacaine Liposome Injectable Suspension for Relief of Postoperative Pain Following Total Hip or Shoulder Arthroplasty	2018	Medical Technology Directory
Percutaneous Mechanical Thrombectomy and Ultrasound-Assisted Thrombolysis for Pulmonary Embolism	2018	Medical Technology Directory
Comparative Effectiveness Review of Platelet-Rich Plasma for Rotator Cuff Repairs, Tendinopathies, and Related Conditions: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Transcatheter Closure of Patent Foramen Ovale for Prevention of Recurrent Cryptogenic Stroke	2018	Medical Technology Directory
Acupuncture for Treatment of Postoperative Pain: A Review of Reviews	2018	Medical Technology Directory
Recombinant Human Growth Hormone Treatment in Adults with Prader-Willi Syndrome	2018	Medical Technology Directory
Continuous Passive Motion Devices for Shoulder Indications	2018	Medical Technology Directory
Mechanical Stretching Devices for the Treatment of Joint Contractures of the Extremities	2018	Medical Technology Directory
Comparative Effectiveness Review of Laparoscopic Surgery for Gastroesophageal Reflux Disease Refractory to Medical Therapy	2018	Medical Technology Directory
Comparative Effectiveness Review of Single-Incision Laparoscopic Surgery (SILS) for Cholecystectomy: A Review of Reviews	2018	Medical Technology Directory
Intra-articular Facet Joint Injections for the Treatment of Chronic Nonmalignant Spinal Pain of Facet Joint Origin	2018	Medical Technology Directory
Comparative Effectiveness Review of Percutaneous Mitral Valve Repair	2018	Medical Technology Directory
Comparative Effectiveness Review of Single-Incision Laparoscopic Surgery (SILS) for Colorectal Procedures: A Review of Reviews	2018	Medical Technology Directory
AmniSure ROM Test for Detection of Fetal Membrane Rupture	2018	Medical Technology Directory
Comparative Effectiveness Review of Biologic Mesh for Hernia Repair: A Review of Reviews	2018	Medical Technology Directory
Continuous Passive Motion for Knee Indications: A Review of Reviews	2018	Medical Technology Directory
Comparative Effectiveness Review of Irradiated Allografts for Primary Anterior Cruciate Ligament Reconstruction	2018	Medical Technology Directory
Comparative Effectiveness Review of Platelet-Rich Plasma for Treatment of Conditions of the Achilles Tendon and Plantar Fascia	2018	Medical Technology Directory
Comparative Effectiveness Review of Intensive Cardiac Rehabilitation Programs for Coronary Artery Disease	2018	Medical Technology Directory
Comparative Effectiveness of Corneal Cross-Linking for Treatment of Keratoconus	2018	Medical Technology Directory

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Comparative Effectiveness Review of Percutaneous Left Appendage Closure to Reduce Stroke Risk in Patients with Atrial Fibrillation	2018	Medical Technology Directory
SpyGlass Direct Visualization System (Boston Scientific) for Diagnosis and Treatment of Biliopancreatic Disease	2018	Medical Technology Directory
Comparative Effectiveness Review of Laser and Light Therapies for Rosacea	2018	Medical Technology Directory
Vectra DA Test (Crescendo Bioscience Inc.) for Management of Patients with Rheumatoid Arthritis	2018	Medical Technology Directory
Medial Branch Nerve Block Injections for the Treatment of Chronic Nonmalignant Spinal Pain of Facet Joint Origin	2018	Medical Technology Directory
Comparative Effectiveness Review of Platelet-Rich Plasma for Tendinopathies or Ligament Injuries of the Knee	2017	Medical Technology Directory
Comparative Effectiveness Review of Total Ankle Replacement: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness Review of Antimicrobial Versus Conventional Sutures	2017	Medical Technology Directory
Impact of Preoperative Supervised Weight Loss Programs on Bariatric Surgery Outcomes	2017	Medical Technology Directory
Comparative Effectiveness Review of Minimally Invasive Total Hip Arthroplasty	2017	Medical Technology Directory
Comparative Effectiveness Review of Platelet-Rich Plasma for Treatment of Lateral Epicondylitis: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness Review of Endoscopic Therapy for Gastroesophageal Reflux Disease	2017	Medical Technology Directory
Transcranial Direct Current Stimulation for Depression	2017	Medical Technology Directory
Ketamine as Primary Therapy for Treatment-Resistant Unipolar Depression or Posttraumatic Stress Disorder	2017	Medical Technology Directory
Topical Oxygen Therapy for Chronic Wound Healing	2017	Medical Technology Directory
Comparative Effectiveness of Skin Substitutes for Chronic Venous Leg Ulcers in Adults: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness of Skin Substitutes for Chronic Foot Ulcers in Adults with Diabetes Mellitus: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness Review of Platelet-Rich Plasma for Knee Osteoarthritis: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness of Bioresorbable Vascular Scaffold Stents Versus Other Drug-Eluting Stents for the Treatment of Coronary Artery Disease	2017	Medical Technology Directory
Ketamine as an Adjunct to Electroconvulsive Therapy for Treatment-Resistant Depression	2017	Medical Technology Directory
Comparative Effectiveness Review of Hyaluronic Acid for Knee Osteoarthritis: A Review of Reviews	2017	Medical Technology Directory
Digital Breast Tomosynthesis for Breast Cancer Diagnosis and Screening	2017	Medical Technology Directory
Zepatier (Grazoprevir and Elbasvir) for Chronic Hepatitis C Infection	2017	Medical Technology Directory
Magnetic Resonance Imaging–Guided In-Bore Biopsy for Prostate Cancer	2017	Medical Technology Directory
Hyperbaric Oxygen Therapy for Diabetes-Related Foot Ulcers: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness Review of Multilevel Artificial Disc Replacement for Cervical Degenerative Disc Disease	2017	Medical Technology Directory
Cognitive Rehabilitation Therapy for Traumatic Brain Injury (TBI)	2017	Medical Technology Directory
Positron Emission Tomography-Computed Tomography (PET-CT) for Detection of Primary Site in Neuroendocrine Tumors of Unknown Origin	2017	Medical Technology Directory
Transcatheter Closure of Prosthetic Aortic or Mitral Paravalvular Leaks	2017	Medical Technology Directory

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Adoptive Immunotherapy using Genetically Modified Lymphocytes for Lymphoproliferative Disorders or Hematological Malignancies	2017	Medical Technology Directory
The Clinical Utility of Lumbar Discography for Assessing Low Back Pain: Impact on Patient Management and Health Outcomes	2017	Medical Technology Directory
Comparative Effectiveness Review of Robotically Assisted Hysterectomy	2017	Medical Technology Directory
Comparative Effectiveness Review of Topical Antiseptic Products for Antisepsis Prior to Vascular or Epidural Catheter Insertion	2017	Medical Technology Directory
Comparative Effectiveness Review of Single-Level Artificial Disc Replacement for Cervical Degenerative Disc Disease	2017	Medical Technology Directory
Comparative Effectiveness Review of Paravertebral Block for Prevention of Chronic Pain After Breast Surgery	2017	Medical Technology Directory
Comparative Effectiveness of Roux-en-Y Gastric Bypass and Sleeve Gastrectomy for Treatment of Type II Diabetes: A Review of Reviews	2017	Medical Technology Directory
Comparative Effectiveness Review of Cryoablation for Primary Treatment of Localized Prostate Cancer	2017	Medical Technology Directory
Comparative Effectiveness Review of Cryoablation for Salvage Treatment of Recurrent Prostate Cancer Following Radiotherapy	2017	Medical Technology Directory
Comparative Effectiveness Review of First-Generation Autologous Chondrocyte Implantation of the Knee	2017	Medical Technology Directory
Comparative Effectiveness Review of Second- and Third-Generation Autologous Chondrocyte Implantation of the Knee	2017	Medical Technology Directory
Fecal Calprotectin Assay for Monitoring Disease Activity in Crohn Disease	2017	Medical Technology Directory
Comparative Effectiveness of Fiberoptic Phototherapy for Hyperbilirubinemia in Term Infants	2017	Medical Technology Directory
Fecal Calprotectin Assay for Monitoring Postoperative Recurrence of Crohn Disease	2017	Medical Technology Directory
Hydrogen Breath Tests for Diagnosis of Small Intestinal Bacterial Overgrowth in Functional Bowel Disorders	2017	Medical Technology Directory
Laparoscopic Electromechanical Morcellation of Uterine Fibroids During Myomectomy or Hysterectomy	2017	Medical Technology Directory
Positron Emission Tomography (PET) for Alzheimer Disease	2017	Medical Technology Directory
Radiofrequency Ablation for Sacroiliac Joint Denervation for Chronic Low Back Pain	2017	Medical Technology Directory
Comparative Effectiveness Review of Dry Needling for Indications Other than Neck or Trapezius Muscle Pain in Adults	2017	Medical Technology Directory
Hydrogen Breath Test in Patients with Functional Bowel Disorders and Suspected Carbohydrate Malabsorption	2017	Medical Technology Directory
Roux-en-Y Gastric Bypass for Treatment of Type II Diabetes: A Review of Reviews	2017	Medical Technology Directory
Surgical Treatment for Lymphedema: A Review of Reviews	2017	Medical Technology Directory
Arthroscopic Hip Surgery for Femoroacetabular Impingement	2017	Medical Technology Directory
Comparative Effectiveness Review of Mosaicplasty for Treatment of Articular Cartilage Injuries	2017	Medical Technology Directory
Intravenous Lidocaine Infusion for Neuropathic Pain: A Review of Reviews	2017	Medical Technology Directory
Antibiotic-Impregnated Bone Cement for Total Hip Arthroplasty and Other Orthopedic Indications	2017	Medical Technology Directory
Comparative Effectiveness Review of Dry Needling for Mechanical Neck and/or Trapezius Muscle Pain in Adults	2017	Medical Technology Directory
Flow Diverter Devices for Intracranial Aneurysms: A Review of Reviews	2017	Medical Technology Directory
High-Intensity Focused Ultrasound for Salvage Therapy of Recurrent Prostate Cancer	2017	Medical Technology Directory
Capsule Endoscopy for the Diagnosis of Small Bowel Crohn's Disease	2017	Medical Technology Directory

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Occupational Therapy for Attention-Deficit/Hyperactivity Disorder (ADHD)	2017	Medical Technology Directory
Percutaneous Kyphoplasty for Osteoporotic Vertebral Compression Fractures	2017	Medical Technology Directory
Antibiotic-Impregnated Bone Cement for Knee Arthroplasty	2017	Medical Technology Directory
Coronary Artery Calcium Scoring for Risk Assessment and Stratification of Coronary Artery Disease in Asymptomatic Adults	2017	Medical Technology Directory
Proton Beam Therapy for Non-Small Cell Lung Cancer	2017	Medical Technology Directory
Comparative Effectiveness of Sugammadex Versus Neostigmine for Reversal of Neuromuscular Blockade Following Surgery in Adult Patients	2016	Medical Technology Directory
Intravenous Immunoglobulin for the Treatment of Myasthenia Gravis	2016	Medical Technology Directory
Accelerated Partial Breast Irradiation for Breast Cancer Using Brachytherapy	2016	Medical Technology Directory
High-Frequency Chest Wall Compression for Cystic Fibrosis	2016	Medical Technology Directory
Negative Pressure Wound Therapy for Chronic Wounds: Home Use	2016	Medical Technology Directory
Brachytherapy as an Adjunct to Other Types of Radiation Therapy for Breast Cancer	2016	Medical Technology Directory
Comparative Effectiveness of Percutaneous Vertebroplasty Versus Sham, Conservative Treatment, or Kyphoplasty for Osteoporotic Vertebral Compression Fractures	2016	Medical Technology Directory
Comparative Effectiveness Review of High-Frequency Left Repetitive Transcranial Magnetic Stimulation Versus Other Neurostimulation Approaches to Treatment-Resistant Depression	2016	Medical Technology Directory
Radiofrequency Ablation for Facet Joint Denervation for Chronic Low Back Pain	2016	Medical Technology Directory
Radial Extracorporeal Shock Wave Therapy for Chronic Plantar Fasciitis	2016	Medical Technology Directory
High-Frequency Left Repetitive Transcranial Magnetic Stimulation for Treatment-Resistant Major Depressive Disorder	2016	Medical Technology Directory
Percutaneous Radiofrequency Ablation for Cervical and Thoracic Spinal Indications	2016	Medical Technology Directory
Accelerated Partial Breast Irradiation for Breast Cancer Using Conformal and Intensity-Modulated Radiation Therapy	2016	Medical Technology Directory
Sofosbuvir-Velpatasvir for Chronic HCV Infection	2016	Medical Technology Directory
Focused Extracorporeal Shock Wave Therapy for Chronic Plantar Fasciitis	2016	Medical Technology Directory
Nitric Oxide Breath Analysis for the Diagnosis of Asthma	2016	Medical Technology Directory
Hyperbaric Oxygen Therapy for Sudden Sensorineural Hearing Loss	2016	Medical Technology Directory
Nitric Oxide Breath Analysis for the Management of Asthma	2016	Medical Technology Directory
Comparative Effectiveness of Bivalirudin Versus Heparin Monotherapy for Percutaneous Coronary Intervention (PCI)	2016	Medical Technology Directory
Minimally Invasive Transforaminal Lumbar Interbody Fusion (MITLIF) Versus Open Transforaminal Lumbar Interbody Fusion (OTLIF) for Treatment of Lumbar Disc Disease: A Review of Reviews	2016	Medical Technology Directory
Noninvasive Electrical Bone Growth Stimulators for Spinal Fusion or Foot and Ankle Indications	2016	Medical Technology Directory
Balloon Sinuplasty for Treatment of Chronic Rhinosinusitis	2016	Medical Technology Directory
Ultrasound-Guided High-Intensity Focused Ultrasound for Primary Treatment of Localized Prostate Cancer	2016	Medical Technology Directory
Patient-Specific Instruments for Total Knee Arthroplasty: A Review of Reviews	2016	Medical Technology Directory
Minimally Invasive Surgical (MIS) Procedures for Treatment of Atrial Fibrillation	2016	Medical Technology Directory
Indwelling Pleural Catheters for the Management of Malignant Pleural Effusions	2016	Medical Technology Directory

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Electrical Bone Growth Stimulation, Invasive	2016	Medical Technology Directory
Comparative Effectiveness Review of the Influence of Stem Cell Source on Allogeneic Stem Cell Transplant Effectiveness for Treatment of Chronic Myelogenous Leukemia	2016	Medical Technology Directory
Noninvasive Electrical Bone Growth Stimulators for Acute, Delayed Union, and Nonunion Fractures	2016	Medical Technology Directory
Comparative Effectiveness of Cryoablation and Radiofrequency Ablation for Atrial Fibrillation	2016	Medical Technology Directory
Proton Beam Therapy for Prostate Cancer	2016	Medical Technology Directory
Comparative Effectiveness Review of Influence of Pretransplant Treatment and Conditioning Strategies on Allogeneic Stem Cell Transplant Effectiveness for Treatment of Chronic Myelogenous Leukemia	2016	Medical Technology Directory
Bronchial Thermoplasty for Treatment of Asthma	2016	Medical Technology Directory
Optical Coherence Tomography (OCT) for Plaque Characterization and Stent Implantation	2016	Medical Technology Directory
Comparative Effectiveness Review of Everolimus- and Zotarolimus-Eluting Stents for Coronary Artery Disease	2016	Medical Technology Directory
Panniculectomy for Treatment of Symptomatic Panniculi	2016	Medical Technology Directory
Comparative Effectiveness of Allogeneic Hematopoietic Stem Cell Transplant Versus Drug-Based Strategies for Treatment of Chronic Myelogenous Leukemia	2016	Medical Technology Directory
Laparoscopic and Open Surgical Repairs for Treatment of Athletic Groin Pain	2016	Medical Technology Directory
Comparative Effectiveness Review of Biolimus-Eluting Stents Versus Bare-Metal Stents and Second-Generation Drug-Eluting Stents	2016	Medical Technology Directory
Comparative Effectiveness of Fiberoptic Phototherapy for Hyperbilirubinemia in Preterm Infants	2016	Medical Technology Directory
Multimodality Intraoperative Monitoring (MIOM) During Cervical Spinal Surgery	2016	Medical Technology Directory
Implantable Cardiac Loop Recorders for Diagnosis and Management of Syncope in Adults	2016	Medical Technology Directory
Novocure (Tumor Treating Fields)	2016	Medical Technology Directory
Allogeneic Hematopoietic Stem Cell Transplantation for Sickle Cell Disease in Children	2016	Medical Technology Directory
Multimodal Intraoperative Monitoring (MIOM) During Surgery for Scoliosis and Spinal Deformities	2016	Medical Technology Directory
MRI-TRUS Fusion-Guided Biopsy for the Diagnosis of Prostate Cancer	2015	Medical Technology Directory
Primary Endovascular Mechanical Thrombectomy for Treatment of Acute Ischemic Stroke	2015	Medical Technology Directory
Metal-on-Metal Hip Resurfacing Arthroplasty Versus Total Hip Replacement for Osteoarthritis	2015	Medical Technology Directory
Sonohysterography for Assessment of Abnormal Uterine Bleeding	2015	Medical Technology Directory
Second-Wave Direct-Acting Antivirals for Hepatitis C: Simeprevir	2015	Medical Technology Directory
Second-Wave Direct-Acting Antivirals for Hepatitis C: Ledipasvir-Sofosbuvir	2015	Medical Technology Directory
PCSK9 Inhibitors for Cholesterol Reduction: Evolocumab	2015	Medical Technology Directory
Ultrasound Bone Growth Stimulation	2015	Medical Technology Directory
Second-Wave Direct-Acting Antivirals for Hepatitis C: Sofosbuvir	2015	Medical Technology Directory
Continuous Glucose Monitoring Systems	2015	Medical Technology Directory
Lumbar Total Disc Replacement for Degenerative Disc Disease	2015	Medical Technology Directory
Intensity Modulated Radiation Therapy (IMRT) for Anal or Rectal Cancer	2015	Medical Technology Directory

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Negative Pressure Wound Therapy (NPWT) in the Adjunct Treatment of Skin Grafts	2015	Medical Technology Directory
Single Chamber and Dual Chamber Pacemakers	2015	Medical Technology Directory
Total Artificial Heart, Temporary or Permanent, Biventricular Mechanical Circulatory Support Device	2015	Medical Technology Directory
Synthetic Tissue for Dural Repair	2015	Medical Technology Directory
Blood Glucose Monitoring Systems for Point-of-Care Use in Critically Ill, Hospitalized Adults	2015	Medical Technology Directory
Comparative Effectiveness of Bivalirudin Versus Heparin plus Glycoprotein (GP) IIb/IIIa Inhibitor Agents (GPIs) for Percutaneous Coronary Intervention (PCI)	2015	Medical Technology Directory
Silver Wound Dressings for Treatment of Venous Ulcers of the Lower Extremity	2015	Medical Technology Directory
Radioactive Yttrium-90 Microspheres for Treatment of Secondary Liver Cancer	2015	Medical Technology Directory
Bioelectrical Impedance (Bioimpedance) Analysis for Assessment of Lymphedema	2015	Medical Technology Directory
Silver-Coated Urinary Catheters for Prevention of Urinary Tract Infections	2015	Medical Technology Directory
Stereotactic Radiosurgery for Trigeminal Neuralgia and Movement Disorders	2015	Medical Technology Directory
Bronchoscopic Lung Volume Reduction for Chronic Obstructive Pulmonary Disease	2015	Medical Technology Directory
Triple Direct-Acting Antiviral (DAA) Regimen for Hepatitis C Virus (HCV) (Paritaprevir/Ritonavir, Ombitasvir, and Dasabuvir)	2015	Medical Technology Directory
Virtual Bronchoscopic Navigation for Evaluation of Peripheral Pulmonary Lesions	2014	Medical Technology Directory
Preoperative Physical Therapy for Severe Osteoarthritis of the Knee	2014	Medical Technology Directory
Extracorporeal Membrane Oxygenation for Respiratory Failure (Children and Adults)	2014	Medical Technology Directory
Minimally Invasive Thoracotomy for Mitral Valve Replacement	2014	Medical Technology Directory
High-Resolution Anoscopy for the Evaluation of Anal Lesions	2014	Medical Technology Directory
Radioactive Yttrium-90 Microspheres for Treatment of Primary Unresectable Liver Cancer as a Bridge to Transplantation or Surgery	2014	Medical Technology Directory
Radioactive Yttrium-90 Microspheres for Treatment of Primary Unresectable Liver Cancer	2014	Medical Technology Directory
Intravenous Iron for the Treatment of Iron Deficiency with or Without Anemia in Patients with Chronic Heart Failure	2014	Medical Technology Directory
Combined Positron Emission Tomography-Computed Tomography (PET-CT) for Evaluating Esophageal Cancer	2014	Medical Technology Directory
Preoperative Physical Therapy for Severe Osteoarthritis of the Hip	2014	Medical Technology Directory
Cranial Orthotic Devices for the Treatment of Positional Cranial Deformity	2014	Medical Technology Directory
Total Hip Replacement with Hard on Hard Prostheses	2014	Medical Technology Directory
Quantitative Sensory Testing for the Diagnosis of Lower Extremity Peripheral Neuropathy	2014	Medical Technology Directory
Percutaneous Cryoablation for the Treatment of Renal Masses	2014	Medical Technology Directory
Craniosacral Therapy	2014	Medical Technology Directory
Percutaneous Disc Decompression for Cervical Disc Herniation	2014	Medical Technology Directory
Intrathecal Opioids for Chronic Noncancer Pain	2014	Medical Technology Directory
Transcranial Magnetic Stimulation (TMS) to Enhance Pharmacotherapy for Depression	2014	Medical Technology Directory
Intravenous Immunoglobulin for Rheumatic Diseases	2014	Medical Technology Directory

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Positron Emission Tomography (PET) for Metastatic Melanoma	2014	Medical Technology Directory
Intravenous Vitamin C for the Treatment of Cancer	2014	Medical Technology Directory
Umbilical Cord Blood Stem Cell Transplantation for Hematological and Lymphoid Malignancies in Adults	2013	Medical Technology Directory
Umbilical Cord Blood Stem Cell Transplantation for Hematological Cancers and Nonmalignant Disorders in Children	2013	Medical Technology Directory
Autologous Stem Cell Transplantation (ASCT) for Metastatic Primitive Neuroectodermal Tumor (PNET)	2013	Medical Technology Directory
Bilevel Positive Airway Pressure for the Treatment of Obstructive Sleep Apnea in Adults	2013	Medical Technology Directory
Photodynamic Therapy for Head and Neck Cancer	2013	Medical Technology Directory
Video Electroencephalogram (VEEG) for Diagnosis and Management of Epilepsy in Adults	2013	Medical Technology Directory
Photoscreening for the Detection of Amblyopia Risk Factors in Children	2013	Medical Technology Directory
Endovascular Repair of Isolated Iliac Artery Aneurysms	2013	Medical Technology Directory
Vagus Nerve Stimulation for Depression	2013	Medical Technology Directory
Cognitive-Behavioral Therapy for the Prevention of Posttraumatic Stress Disorder in Adults	2013	Medical Technology Directory
Epidural Steroid Injections for Cervical Radiculopathy	2013	Medical Technology Directory
Nanoparticle Albumin-Bound Paclitaxel for Non-Small Cell Lung Cancer	2013	Medical Technology Directory
Intermittent Pneumatic Compression for Peripheral Arterial Disease	2013	Medical Technology Directory
Neuroform Microdelivery Stent System for Intracranial Aneurysms	2013	Medical Technology Directory
Nanoparticle Albumin-Bound Paclitaxel for Breast Cancer	2013	Medical Technology Directory
Fractional Flow Reserve Testing for Guiding Percutaneous Coronary Interventions (PCIs)	2013	Medical Technology Directory
Capsule Endoscopy of the Small Bowel for Obscure Gastrointestinal Bleeding	2013	Medical Technology Directory
Bioidentical Hormone Replacement Therapy for Menopausal Symptoms	2013	Medical Technology Directory
Ultrafiltration in Congestive Heart Failure	2013	Medical Technology Directory
Autologous Stem Cell Transplantation for Crohn's Disease	2013	Medical Technology Directory
Labiaplasty for Labia Minora Hypertrophy	2013	Medical Technology Directory
Laparoscopic CO2 Laser Ablation for Endometriosis	2013	Medical Technology Directory
Transradial, Transbrachial, and Transulnar Approaches for Coronary Angiography and Intervention	2013	Medical Technology Directory
Positron Emission Tomography (PET) and Combined Positron Emission Tomography-Computed Tomography (PET-CT) for the Posttreatment Management of Cancer of the Head and Neck	2013	Medical Technology Directory
Intravenous Immunoglobulin for Pulmonary Diseases	2012	Medical Technology Directory
Transarterial Chemoembolization Plus Radiofrequency Ablation for Liver Cancer	2012	Medical Technology Directory
Hexaminolevulinate (Cysview®, Hexvix®) for Bladder Cancer Detection	2012	Medical Technology Directory
Skin Autofluorescence to Aid in Assessment or Prediction of Diabetes-Related Complications	2012	Medical Technology Directory
Pharmacokinetically Guided Dose Adjustment of 5-fluorouracil (5-FU)	2012	Medical Technology Directory
Sialoendoscopy for Salivary Gland Stones	2012	Medical Technology Directory
In Utero Fetal Surgery for Congenital Diaphragmatic Hernia	2012	Medical Technology Directory

Selected Publications/Abstracts from Postdoctoral and Graduate Training

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Declaration of Ostrander

Exhibit B

Declaration of Ostrander

Exhibit C

Declaration of Ostrander

Exhibit D

Declaration of Ostrander

Exhibit E