



Clinical Trials

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Effectiveness and efficiency of revision knee replacement

This research study aims to assess function before and after revision total knee replacement surgery. The purpose of this study is to measure progress after surgery so that the surgical methods used during revision total knee replacement can be scientifically evaluated.

Specifically, the objective of this study is to evaluate revision knee replacement surgery outcomes by comparing preoperative with 3 month, 6 month, 12 month and 24 month outcome instruments and monitoring surgeon preoperative, intraoperative and postoperative clinical and radiographic observations. Scientifically rigorous methods will insure that we can learn which revision techniques are the most successful for any given knee replacement revision surgical dilemma and provide a measuring stick for the reporting of all future total knee replacement revision outcome studies.

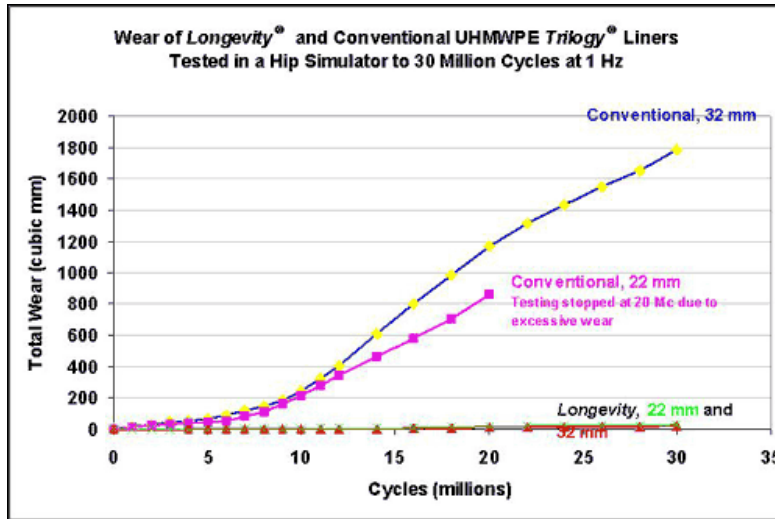
Participation in this study will not involve any experimental or additional procedures nor will there be any experimental devices implanted.

This study of 100 patients is being conducted at several teaching hospitals which include: Columbia University Medical Center, New York, NY; University of Iowa Hospitals, Iowa City, IA; Lahey Clinic, Burlington, MA; University of Minnesota, Minneapolis, MN; and Tulane University Hospital and Clinic, New Orleans, LA.

Hip replacement crosslinked polyethylene study

This study, in which Dr. William Macaulay is the Columbia site principal investigator, aims to gather information on the long-term effects of wear on different types of polyethylene (plastic) cup liners, a component of a total hip replacement.

The specific plastic liners being studied are the Longevity® Crosslinked Polyethylene (plastic) liner and the conventional polyethylene (plastic) liner. Both liners are FDA approved devices intended for use in the treatment of hip disease. The Longevity® polyethylene liner is made from a crosslinked plastic which gives it a different structure than the conventional plastic liner. We suspect that the crosslinked plastic may wear better in the long term based on preliminary laboratory data.



This study of 300 patients is being conducted at several hospitals including: Barnes-Jewish Hospital, St. Louis, MO; University of Michigan Hospital, Ann Arbor, MI; Maine Medical Center, Portland, ME; Pennsylvania Hospital, Philadelphia, PA; Scripps Clinic, La Jolla, CA; Latter Day Saints Hospital, Salt Lake City, UT; and Columbia University Medical Center, New York, NY. Columbia is the only site in the New York metropolitan area.

Prospective data collection

The Center collects prospective data for most hip replacement and knee replacement patients. The patient survey includes items from the SF-12, WOMAC, Knee Society Score and Harris Hip outcome instruments. Another survey includes items which can only be answered by your surgeon. These questionnaires will serve to improve surgical techniques and implants for future generations.

[Preoperative patient survey](#)

[Postoperative patient survey](#)



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Displaced femoral (neck fx) arthroplasty consortium for treatment and outcomes

This research study is a prospective randomized multicenter study comparing total hip arthroplasty (THA) to hemiarthroplasty in the treatment of Garden III and IV displaced femoral neck fractures. The comprehensive approach measures functional outcome in physically active, non-institutionalized hip fracture patients who are without concurrent hip disease at 6, 12, 18, and 24 months post-fracture. The primary outcomes are validated measures of functional status (SF-36, Western Ontario and McMaster University Osteoarthritis Index {WOMAC}, the Harris Hip Score and the Timed Up and Go Test). Although we anticipate that the functional outcomes at 6 months between the two groups will be similar, we expect to observe a significant divergence in functional status between the groups at two years.

This study of 300 patients is being conducted at several hospitals which include: Columbia University Medical Center, New York, NY, The North Shore Medical Center, Lynnfield, MA; Lahey

Clinic, Burlington, MA; University of Pennsylvania, Philadelphia, PA; University of California at San Francisco, San Francisco, CA; University of Nebraska Medical Center, Omaha, NE; Baylor College of Medicine, Houston, TX; Lakewood Orthopaedic Surgeons, Tacoma, WA; Tri-County Orthopaedic & Sports Medicine, Morristown, NJ; Sinai Hospital of Baltimore, Baltimore, MD.

Functional outcomes in cardiovascular patients undergoing surgical hip fracture repair

This randomized clinical trial aims to determine whether a more aggressive transfusion strategy maintaining postoperative hemoglobin at 10 g/dL or higher is associated with improved function and a decreased risk of adverse postoperative events.

The study population includes 2600 patients aged 50 or older with a history of cardiovascular disease who are undergoing surgical repair of a fractured hip. Patients are eligible for the study if their Hgb level drops below 10 g/dL within the first three postoperative days and will be randomized to either 1) receive enough red blood cells to maintain their Hg level at or above 10g/dL or, 2) receive a red blood cell transfusion only in the presence of symptoms from anemia or if their Hgb is below 8 g/dL (transfusion is permitted, but not mandatory). Patients are contacted by telephone at 30 days and 60 days after surgery to determine vital status, ability to walk, and location of residence.

The results of this study will provide critical evidence to guide peri-operative transfusion status.

This study of 2600 patients is being conducted at several hospitals which include:

US sites:

Orlando Regional Medical Center - Orlando, Florida; University of Indiana - Indianapolis, Indiana; Mercy Medical Center - Des Moines, Iowa; Hospital for Special Surgery - New York, New York; University of Maryland - Baltimore, Maryland; Mary Immaculate Hospital - Queens, New York; Mayo Clinic - Rochester, Minnesota; Emory Hospital - Atlanta, Georgia; Wayne Memorial Hospital - North Carolina; Toms River Community Medical Center - Toms River, New Jersey; Botsford General Hospital - Farmington Hills, Minnesota; Hartford Hospital - Hartford, Connecticut; Robert Wood Johnson Medical School - New Brunswick, New Jersey; Mason City Clinic - Mason City, Iowa; Miriam Hospital - Rhode Island; DeKalb Medical Center - Decatur, Georgia; Jersey Shore Medical Center - Neptune, New Jersey; Johns Hopkins Bayview - Baltimore, Maryland; Lehigh Valley Hospital - Allentown, Pennsylvania; Columbia University Medical Center - New York, New York

Canadian sites:

University of Western Ontario - London, Ontario; Queens University - Kingston, Ontario; Rockyview General Hospital - Calgary, Alberta; Capital Health Research - Halifax, NS; Hospital Notre-Dame - Montreal, Quebec; St Michael's Hospital - Toronto, Ontario; Ottawa General Hospital - Ottawa, Ontario; Montreal University Hospital - Montreal, Quebec; Royal Columbian Hospital - New Westminster, British Columbia; Sunnybrook & Women's College - Toronto, Ontario; Royal Alexandra - Edmonton, Alberta

Continuous perineural infusion study

For patients undergoing a total knee replacement, pain is a major concern. Our goal is to provide patients with the best form of postoperative pain control. This research study is a double-blind, prospective, randomized trial to assess an infusion system, which has been shown to have superior pain control with other operations. Our current study examines the effectiveness of this infusion device at relieving pain after a TKR. Pain, nausea, and satisfaction are evaluated via the Visual Analog Scale (VAS) pre- and post-operatively. Functional outcomes are assessed via the Western Ontario and McMaster University Osteoarthritis Index (WOMAC) and the Knee Society Score (KSS), pre- and post-operatively.

All patients in the study receive the standard of care for pain control, in addition to the infusion device. We hope that through the trial, we can determine if this infusion device will provide better postoperative pain relief and improve patient satisfaction following a TKR.

