

# One-third of knee replacements classified as inappropriate

June 30 2014

---

New research reports that more than one third of total knee replacements in the U.S. were classified as "inappropriate" using a patient classification system developed and validated in Spain. The study, published in *Arthritis & Rheumatology*, a journal of the American College of Rheumatology (ACR), highlights the need for consensus on patient selection criteria among U.S. medical professionals treating those with the potential need of knee replacement surgery.

The Agency for Healthcare Research and Quality reports more than 600,000 knee replacements are performed in the U.S. each year. In the past 15 years, the use of [total knee arthroplasty](#) has grown significantly, with studies showing an annual volume increase of 162% in Medicare-covered knee replacement surgeries between 1991 and 2010. Some experts believe the growth is due to use of an effective procedure, while others contend there is over-use of the surgery that relies on subjective criteria.

The present study led by Dr. Daniel Riddle from the Department of Physical Therapy at Virginia Commonwealth University in Richmond, examined the criteria used to determine the appropriateness of total knee arthroplasties. "To my knowledge, ours is the first U.S. study to compare validated appropriateness criteria with actual cases of [knee replacement surgery](#)," said Dr. Riddle.

A modified version of the appropriateness classification system developed by Escobar et al. along with the Western Ontario and

McMaster Universities Arthritis Index (WOMAC) Pain and Physical Function scales were used to assess participants enrolled in the Osteoarthritis Initiative—a prospective 5-year study funded in part by the National Institutes of Health (NIH). There were 175 subjects who underwent [total knee replacement](#) surgery, and were classified as appropriate, inconclusive, or inappropriate.

The mean age of [knee replacement](#) patients was 67 years and 60% of the group was female. Analyses show that 44% of surgeries were classified as appropriate, 22% as inconclusive, and 34% deemed inappropriate. The characteristics of patients undergoing surgery were varied.

"Our finding that one third of knee replacements were inappropriate was higher than expected and linked to variation in knee pain OA severity and functional loss. These data highlight the need to develop patient selection criteria in the U.S.," concludes Dr. Riddle.

In a related editorial, Dr. Jeffery Katz from the Orthopedic and Arthritis Center for Outcomes Research at Brigham and Women's Hospital in Boston, Mass., writes, "I agree with Riddle and colleagues, and with Escobar and colleagues, that we should be concerned about offering total knee replacements to subjects who endorse "none" or "mild" on all items of the WOMAC pain and function scales."

**More information:** "Using a Validated Algorithm to Judge the Appropriateness of Total Knee Arthroplasty in the United States: A Multi-Center Longitudinal Cohort Study." Daniel L. Riddle, William A. Jiranek and Curtis W. Hayes. *Arthritis & Rheumatology*; Published Online: June 30, 2014 ([DOI: 10.1002/art.38685](https://doi.org/10.1002/art.38685)).

"Appropriateness of Total Knee Replacement." Jeffrey N. Katz, *Arthritis & Rheumatology*; Published Online: June 30, 2014 ([DOI: 10.1002/art.38688](https://doi.org/10.1002/art.38688)).

Provided by Wiley

Citation: One-third of knee replacements classified as inappropriate (2014, June 30) retrieved 20 November 2023 from

<https://medicalxpress.com/news/2014-06-one-third-knee-inappropriate.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.