

Medical Coverage Policy



Computer-Assisted Musculoskeletal Surgical Navigational Orthopedic Procedure

☐ Device/Equipment ☐ Drug ☐ Medical ☐ Surgery ☐ Test ☒ Other

Effective Date:	3/3/2009	Policy Last Updated:	3/19/2013
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☐ Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.

☒ Prospective review is not required.

Description:

Computer-assisted navigation (CAN) in orthopedic procedures describes the use of computer-enabled tracking systems to facilitate alignment in a variety of surgical procedures. These surgical procedures include fixation of fractures, ligament reconstruction, preparation of the bone for joint arthroplasty, and verification of the intended implant placement. The goal of CAN is to increase surgical accuracy and reduce the chance of malposition of implants.

CAN devices may be image based or non-image based. Image based devices use preoperative computed tomography (CT) scans and operative fluoroscopy to direct implant positioning. Newer non-image based devices use information obtained in the operating room, typically with infrared probes. CAN systems direct the positioning of the cutting blocks and placement of the prosthetic implants based on the digitized surface points and model of the bones in space. The accuracy of each step of the operation (cutting block placement, saw cut accuracy, seating of the implants) can be verified, thereby allowing adjustments to be made during surgery.

Given the low short-term revision rates associated with conventional procedures, and the inadequate power of available studies to detect change in function, studies assessing health outcomes using a larger number of subjects, with longer follow-up, are needed. The available scientific evidence at this time has not adequately demonstrated improved health outcomes associated with CAN.

Medical Criteria:

None

Policy:

Computer-assisted musculoskeletal surgical navigational orthopedic procedures are considered not medically necessary as there is insufficient evidence in published, peer-reviewed literature to support its efficacy.

Coverage:

Benefits may vary. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for applicable not medically necessary benefits/coverage.

Codes:

The following codes are not medically necessary:

20985, 0054T, 0055T

Also Known As:

CAN

Computer-assisted navigation

Published:

Provider Update, June 2013

Provider Update, May 2012

Provider Update, April 2011

Provider Update, May 2010

Provider Update, April 2009

References:

American Association of Hip and Knee Surgeons. Position Statement: Computer assisted orthopedic surgery (CAOS) for total hip and knee replacement. What patients should consider. Accessed on 2/4/10: <http://www.aahks.org/patients/resources/CAOSpositionstatement.pdf>.

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Department of Health & Human Services. Agency for Healthcare Research and Quality. Horizon Scan on Hip Replacement Surgery. December 22, 2006. Accessed on 2/4/10: <http://www.cms.hhs.gov/determinationprocess/downloads/id44TA.pdf>.

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Maak T, Bedi A, Raphael BS, Citak M, Suero E, Wickiewicz T, and Pearle AD. *Effect of Femoral Socket Position on Graft Impingement After Anterior Cruciate Ligament Reconstruction*. American Journal of Sports Medicine; 2011;39:1018-1023.

Wang J, Zhao C, Su Y, Zhou L, Hu L, Wang T, Wang M. *Computer-assisted navigation systems for insertion of cannulated screws in femoral neck fractures: a comparison of bi-planar robot navigation with optoelectronic navigation in a Synbone hip model trial*. Chinese Medical Association Journal; 2011;124(23):3906-3911.

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History:

3/19/13 Annual review

2/21/12 Annual review

2/15/11 Annual review

3/16/10 Annual review

3/3/09 New policy approved

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