

Computer Assisted Navigation, Surgical 233

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Coverage Policy	Surgical 233
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Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details*.

Purpose:

This policy addresses the medical necessity of Computer Assisted Navigation.

Description & Definitions:

Computer-assisted navigation (CAN) is the use of computer enabled tracking systems to facilitate alignment in a variety of surgical procedures. The goal of CAN is to increase surgical accuracy. 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. Non-image-based devices use probes and signaling transducers to transmit signals from anatomic positions to a dedicated computer. Computer-assisted navigation involves three steps: data acquisition, registration, and

tracking. The data can be acquired from fluoroscopy, computed tomography (CT) scans or magnetic resonance imaging (MRI) scans, or imageless systems. Registration is relating the images to the anatomical position of the surgical area using "fiducial markers". Tracking is the feedback from the

measurement devices regarding the orientation and relative position of tools to bone anatomy.

Criteria:

Computer assisted navigation is considered medically necessary for **1 or more** of the following:

- When used in conjunction with most intracerebral procedures, excluding routine shunt procedures.
- When used for the **1 or more** of the following extracranial head and neck procedures:
 - Revision endoscopic sinus surgery
 - Frontal or sphenoid sinus surgery when there is documented loss of or altered anatomic and marks, congenital deformities or severe trauma
 - Significantly distorted sinus anatomy of developmental, postoperative or traumatic origin
 - Extensive sino-nasal polyposis of sufficient severity to create a need for the precision localization and navigation assistance

- Pathology involving the frontal, posterior ethmoid or sphenoid sinuses
- Disease abutting the skull base, orbit, optic nerve or carotid artery
- Lateral skull base surgery where navigational planning and assistance is required
- CSF rhinorrhea or conditions where there is a skull base defect
- Transsphenoidal surgery
- Benign and malignant sino-nasal neoplasms of sufficient size or high-risk location

Computer Assisted Navigation is considered not medically necessary for any use other than those indicated in clinical criteria, to include but not limited to:

- Computer-assisted surgical navigation for musculoskeletal procedures is not medically necessary due to lack of proven clinical utility.
- Computer-assisted surgical navigation for spinal procedures is not medically necessary due to lack of proven clinical utility.

Coding:

Medically necessary with criteria:

Coding	Description
61781	Stereotactic computer-assisted (navigational) procedure; cranial, intradural (list separately in addition to code for primary procedure)
61782	Stereotactic computer-assisted (navigational) procedure; cranial, extradural (list separately in addition to code for primary procedure)
61783	Stereotactic computer-assisted (navigational) procedure; spinal (list separately in addition to code for primary procedure)
0054T	Computer-assisted musculoskeletal surgical navigational orthopedic procedure, with image guidance based on fluoroscopic images (list separately in addition to code for primary procedure)
0055T	Computer-assisted musculoskeletal surgical navigational orthopedic procedure, with image guidance based on CT/MRI images (list separately in addition to code for primary procedure)
20985	Computer-assisted surgical navigational procedure for musculoskeletal procedures, image-less (list separately in addition to code for primary procedure)

Considered Not Medically Necessary:

Coding	Description
	None

U.S. Food and Drug Administration (FDA) - approved only products only.

Document History:

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- 2023: October

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Effective Date:

- January 2024

References:

Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

(2023). Retrieved Jul 28, 2023, from Carelon Medical Benefits Management:
https://guidelines.carelonmedicalbenefitsmanagement.com/?s=computer+assisted&et_pb_searchform_submit=et_search_process&et_pb_search_cat=11%2C1%2C96&et_pb_include_posts=yes

(2023). Retrieved Oct 2023, from MCG 27th Edition: <https://careweb.careguidelines.com/ed27/index.html>

(2023). Retrieved Oct 2, 2023, from American Academy of Orthopaedic Surgeons (AAOS):
<https://www.aaos.org/search/?Section=AAOS%20Now&s=Relevancy&q=Computer-assisted>

(2023). Retrieved Oct 2, 2023, from Centers for Medicare and Medicaid Services: <https://www.cms.gov/medicare-coverage-database/search-results.aspx?keyword=Computer+assisted+navigation&keywordType=starts&areald=s53&docType=NCA,CAL,NC D,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all>

Comparative Effectiveness Review Of Image-Based Computer-Aided Navigation For Total Knee Arthroplasty. (2022, Mar 15). Retrieved Jul 27, 2023, from Hayes, Inc: <https://evidence.hayesinc.com/report/dir.image2414>

Computer navigation surgery. (2023). Retrieved Oct 2, 2023, from UpToDate:
https://www.uptodate.com/contents/search?search=Computer%20navigation%20surgery&sp=0&searchType=PLAIN_TEXT&source=USER_INPUT&searchOffset=1&autoComplete=false&language=en&max=10&index=&autoCompleteTerm=

Computer-Assisted Surgical Systems. (2022, June 21). Retrieved Oct 2, 2023, from FDA:
<https://www.fda.gov/medical-devices/surgery-devices/computer-assisted-surgical-systems>

Procedure Fee Files & CPT Codes. (2023). Retrieved Oct 2023, from Department of Medical Assistance Services:
<https://www.dmas.virginia.gov/for-providers/rates-and-rate-setting/procedure-fee-files-cpt-codes/> &
<https://www.dmas.virginia.gov/for-providers/cardinal-care-transition/>

Special Notes: *

This medical policy expresses Sentara Health Plan's determination of medical necessity of services, and they are based upon a review of currently available clinical information. Medical policies are not a substitute for clinical judgment or for any prior authorization requirements of the health plan. These policies are not an explanation of benefits.

Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

Keywords:

Computer-Assisted Surgical Systems, CAN, Surgical navigation systems, computed tomography computer-aided navigation (CT-CAN), Stereotactic computer-assisted (navigational) procedure, Robotically-assisted surgical (RAS) devices, RAS, Computer-Aided Navigation, Computer-assisted tumor surgery (CATS)