

# Clinical Policy: Radial Head Implant

Reference Number: CP.MP.148

Date of Last Revision: 05/22

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## Description

Radial head implant, or arthroplasty, was developed for the treatment of complex radial head fractures and severe arthritic conditions causing radial head joint destruction.

## Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® that radial head implants are **medically necessary** when meeting the following:
  - A. Has one of the following indications:
    1. Mason type III comminuted fractures of the radial head or a fracture is deemed irreparable intraoperatively;
    2. Radiographic evidence of radial head joint destruction, too far advanced to benefit from radial head excision and synovectomy, with demonstrated resistance or failure of conservative medical treatment;
  - B. Has none of the following contraindications:
    1. Untreated or unresolved elbow sepsis within the past 12 months;
    2. Previous fascial or other interpositional arthroplasty, or previous hinged arthroplasty with the use of a capitellocondylar implant;
    3. Excessive bone loss on either side of the joint or poorly functioning flexor or extensor mechanism.
- II. It is the policy of health plans affiliated with Centene Corporation that radial head implants are **not medically necessary** for any indications other than those specified above.

## Background

### *Radial Head Fractures*

Radial head and neck fractures are common and occur in about 30% of elbow fractures. The following modified Mason classification is frequently used to describe the fractures<sup>1,2</sup>:

- Mason Type I – nondisplaced fractures (displacement  $\leq 2$  mm);
- Mason Type II – displaced fractures  $> 2$  mm;
- Mason Type III – comminuted fractures in which bone is broken, splintered or crushed into a number of pieces. Treatment includes excision, operative fixation and replacement arthroplasty;
- Mason Type IV – radial head fracture with associated elbow fracture/dislocation.

Immediate orthopedic evaluation is necessary for any individual with an open fracture, neurovascular compromise, or fracture dislocation. Immediate reduction is critical in patients who present with a radial head or neck fracture with elbow dislocation. The longer the joint is allowed to remain dislocated, the more difficult the reduction, and the greater the risk of avascular necrosis.<sup>2-4</sup>

*Studies*

The peer-reviewed evidence for optimal management of Mason type III radial head fractures is unclear since there is difficulty performing randomized controlled trials due to the small number of these types of fractures. Type III comminuted fractures often do poorly with open reduction internal fixation, especially when there are more than three fragments. Additionally, there is a risk of posterior interosseous nerve injury with this procedure. Although many of the studies related to radial head implants are small, these types of prostheses are noted as an acceptable option in cases of Type III comminuted fractures. Many of these fractures will have a ligamentous injury between the radius and ulna shaft in the forearm, which are termed Essex-Lopresti injuries. Excision of a radial head fracture that has an associated Essex Lopresti injury will cause very significant shortening and wrist morbidity.<sup>5-8</sup>

The radial head implant is also beneficial in patients with rheumatoid arthritis with radiographic evidence of joint destruction that is too far advanced to benefit from radial head excision and synovectomy. In patients with rheumatoid arthritis, arthroplasty should be considered only after conservative medical treatment has failed, including, pharmacologic therapy consisting of combinations of salicylates, nonsteroidal anti-inflammatory drugs, disease modifying antirheumatic drugs, and/or glucocorticoids for 3-6 months.<sup>9</sup>

In summary, multicenter, long-term, evidence-based, peer-reviewed studies or clinical trials would be helpful to assess the benefits and/or problems associated with radial head implants.<sup>1</sup> Additional randomized control trials for the management of Mason type III fractures are needed to fully evaluate the benefits and long-term clinical outcomes of radial head implants.<sup>6</sup>

**Coding Implications**

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CPT®	Description
24366	Arthroplasty, radial head; with implant

HCPCS	Description
N/A	

**ICD-10-CM Diagnosis Codes that Support Coverage Criteria**

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ICD 10 CM Code	Description
M06.821	Other specified rheumatoid arthritis, right elbow
M06.822	Other specified rheumatoid arthritis, left elbow
S52.121 (A-S)	Displaced fracture of head of right radius
S52.122(A-S)	Displaced fracture of head of left radius

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy Adopted from Health Net Radial Head Implant	07/17	08/17
References reviewed and updated.	05/18	05/18
Reorganized without clinical impact: moved “history of previous elbow sepsis,” “Previous fascial or other interpositional arthroplasty...,” and “Excessive bone loss...” from the not medically necessary statement to contraindications section in I. Clarified that any of the previous arthroplasties alone are contraindications, and that extensive bone loss <b>or</b> poor flexion <b>or</b> extension mechanisms are contraindications.	10/18	
Added in I.A.1 “or fracture is considered irreparable intraoperatively” and in I.B.1 changed history of sepsis to untreated or unresolved sepsis in past 12 months. Specialty review.	05/19	05/19
References reviewed and updated.	05/20	05/20
References reviewed and updated. Replaced “member” with “member/enrollee” in all instances.	04/21	05/21
Annual Review. Changed “Review Date” in policy header to “Date of Last Revision,” and “Date” in the revision log header to “Revision Date.” Updated description and background with no impact on criteria. References reviewed and updated. Specialist reviewed.	05/22	05/22

**References**

1. Kodde IF, Kaas L, Flipsen M, van den Bekerom MP, Eygendaal D. Current concepts in the management of radial head fractures. *World J Orthop.* 2015;6(11):954-960. Published 2015 Dec 18. doi:10.5312/wjo.v6.i11.954
2. Slabaugh M. Radial head and neck fractures in adults. UpToDate. [www.uptodate.com](http://www.uptodate.com). Updated September 29, 2021. Accessed April 15, 2022.
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5. Marsh JP, Grewal R, Faber KJ, Drosdoweck DS, Athwal GS, King GJ. Radial Head Fractures Treated with Modular Metallic Radial Head Replacement: Outcomes at a Mean Follow-up of Eight Years. *J Bone Joint Surg Am.* 2016;98(7):527-535. doi:10.2106/JBJS.15.00128

6. Miller G, Humadi A, Unni R, Hau R. Surgical management of Mason type III radial head fractures. *Indian J Orthop.* 2013;47(4):323-332. doi:10.4103/0019-5413.114907
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8. Carità E, Donadelli A, Cugola L, Perazzini P. Radial head prosthesis: results overview. *Musculoskelet Surg.* 2017;101(Suppl 2):197-204. doi:10.1007/s12306-017-0492-x
9. Sanchez-Sotelo J. Elbow rheumatoid elbow: surgical treatment options. *Curr Rev Musculoskelet Med.* 2016;9(2):224-231. doi:10.1007/s12178-016-9328-9

### **Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

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## CLINICAL POLICY

### Radial Head Implant

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**Note: For Medicare members/enrollees**, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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