Evolent Clinical Guideline 7340 for Vascular Embolization or Occlusion

Guideline Number: Evolent_CG_7340	Applicable Codes	
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STATEMENT

General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Indications for determining medical necessity for vascular embolization or occlusion.

Clinical Reasoning

All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use (AUC) scores, when available, are diligently listed alongside the criteria.

This guideline first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient-centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. [1–5]

INDICATIONS [6]

- Occlusion of congenital or acquired aneurysms, pseudoaneurysms, vascular malformations, and other vascular abnormalities that could potentially cause adverse health effects
- Devascularization of benign or nonneoplastic tissues that affect patient health, including, but not limited to:
  - Hypersplenism
  - Chemotherapy-induced thrombocytopenia

- Uterine fibroids
- Refractory renovascular hypertension
- Proteinuria in end-stage kidney disease
- Varicocele
- Pelvic congestion syndrome
- Prostatic artery embolization
- Priapism
- Ectopic pregnancy

- Flow redistribution to protect normal tissue or facilitate other medical treatment(s)
- Management of endoleaks, including but not limited to:
  - Direct sac puncture or collateral vessel embolization for type-II endoleaks
  - Intraoperative aneurysm sac embolization during stent graft placement to minimize the need for future reintervention.
- Treatment of acute or recurrent hemorrhage, including, but not limited to:
  - Hemoptysis
  - Gastrointestinal bleeding
  - Traumatic events
  - Surgical, or treatment-induced bleeding
  - Hemorrhagic neoplasms
  - Hemarthrosis [7]
- All of these indications may also be applicable in the pediatric population

LIMITATION

Genicular artery embolization (GAE) is currently considered experimental and is **not covered** for the following indications [7,8]:

- Chronic knee pain due to osteoarthritis
- Degenerative joint disease without active bleeding
- Pain management in the absence of hemarthrosis
- Elective treatment intended to delay or avoid knee arthroplasty
- Prophylactic embolization for osteoarthritis-related synovitis

Plantar artery embolization is currently considered experimental for the treatment of plantar fasciitis and is not covered.

CODING AND STANDARDS

Codes

37241, 37242, 37243, 37244, M25.061, M25.062

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Definitions

Therapeutic embolization involves the placement of a device or substance to produce an intentional vessel occlusion; thereby inducing ischemia within a given tissue, redirecting bulk blood flow away from an area in which perfusion is undesirable, or preventing additional blood loss during a hemorrhagic event.

Genicular artery embolization (GAE): A catheter-based endovascular procedure involving selective embolization of genicular artery branches to control bleeding or abnormal synovial vascularity.

Hemarthrosis: Acute or recurrent bleeding into a joint space, confirmed clinically and/or radiographically.

Osteoarthritis: A chronic degenerative joint disease characterized by cartilage loss, osteophyte formation, and joint space narrowing

AUC Score

A reasonable diagnostic or therapeutic procedure can be defined as that for which the expected clinical benefits outweigh the associated risks, enhancing patient care and health outcomes in a cost-effective manner. [3]

- Appropriate Care - Median Score 7-9
- May be Appropriate Care - Median Score 4-6
- Rarely Appropriate Care - Median Score 1-3

Acronyms/Abbreviations

AUC: Appropriate use criteria

GAE: Genicular artery embolization

SUMMARY OF EVIDENCE

Society of Interventional Radiology Quality Improvement Standards for Percutaneous Transcatheter Embolization [6]

Study Design: The document is a comprehensive update to the quality improvement (QI) standards for percutaneous transcatheter embolization, first published in 2010. It includes a review of the current literature, including randomized controlled trials, meta-analyses, and observational studies, to provide up-to-date information on the effectiveness and safety of embolization procedures.

Target Population: The target population includes patients undergoing percutaneous transcatheter embolization for various disease entities. This includes both adult and pediatric patients, with specific considerations for pediatric procedures.

Key Factors: The indications for embolization have expanded to include newer procedures such as prostatic artery embolization for benign prostatic hyperplasia and left gastric artery embolization for obesity treatment. The document addresses QI standards for embolization in various arterial territories, including bronchial, celiac, mesenteric, renal, hypogastric, and prostatic arteries. The most important processes of care include patient selection, performing the procedure, monitoring the patient, and longitudinal management after the procedure. Outcome measures include indications, success rates, and complication rates, with assigned threshold levels. Complications are stratified based on outcomes, with major complications resulting in hospital admission or prolonged hospitalization, and minor complications requiring nominal therapy or short hospital stays. Special attention is given to the selection and navigation of catheters and wires in small vessels, fluid volume restrictions, and considerations for using liquid embolic agents in pediatric patients.

ANALYSIS OF EVIDENCE

The document provides a thorough analysis of the evidence supporting the use of percutaneous transcatheter embolization for various indications. While there is strong consensus on the effectiveness and indications for most procedures, there are areas where further research is needed to confirm preliminary findings and address differing conclusions. This analysis highlights the importance of ongoing research and quality improvement efforts to ensure the safe and effective use of embolization procedures in clinical practice. [6]

Shared Conclusions

- **Effectiveness of Embolization**: The document reiterates that percutaneous transcatheter embolization is an effective treatment for various vascular abnormalities, including hemorrhage control, tumor devascularization, and reducing operative blood

loss. This conclusion is supported by numerous randomized controlled trials, meta-analyses, and observational studies.

- **Indications for Embolization**: The indications for embolization are well-established and include the treatment of acute or recurrent hemorrhage, devascularization of benign tumors or malignancies, and occlusion of vascular abnormalities. These indications are consistent across various studies and clinical guidelines.
- **Technical and Clinical Success Rates**: The document provides detailed success rates for different embolization procedures, indicating high technical and clinical success rates for most indications. For example, the technical success rate for gastrointestinal bleeding embolization is reported to be 99.2%, with a clinical success rate of 82.1%.

POLICY HISTORY

Date	Summary
March 2026	• Added hemarthrosis as indication for vascular embolization • Added limitation section for genicular and plantar artery embolization • Added ICD-10-CM codes: M25.061 and M25.062
July 2025	• Added a Summary of Evidence and Analysis of Evidence
May 2025	• No substantial clinical content changes • Added in general information statement regarding guideline criteria development by reputable sources, standard of care, and best practices • Removed review request for medical necessity content

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

REFERENCES

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