

Ellipsys™ Vascular Access System Percutaneous Arteriovenous Fistula Creation CPT® Coding Tips

An overview of coding guidance for creation of an arteriovenous fistula performed using Medtronic's Ellipsys™ vascular access system and associated procedures.

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In 2023, Centers for Medicare & Medicaid Services created two new codes, 36836 and 36837, to describe the percutaneous creation of an arteriovenous fistula (pAVF) graft in the upper extremity for hemodialysis access. By definition, the code choice depends on the number of arterial and venous access sites used to perform the pAVF procedure.¹ The Ellipsys™ vascular access system (Medtronic) uses a single site to access both the artery and the vein, and thus 36836 is reported.

36836 Percutaneous arteriovenous fistula creation, upper extremity, single access of both the peripheral artery and peripheral vein, including fistula maturation procedures (eg, transluminal balloon angioplasty, coil embolization), when performed, including all vascular access, imaging guidance and radiologic supervision and interpretation

What are the procedure requirements to report CPT® code 36836 for AVF creation?

Use of code 36836 requires three elements²:

1. The AVF must be created percutaneously rather than via an open approach.

2. It must be in the arm.
3. All work in the artery and vein must be performed through a *single* vascular access.

What are the typical features of a procedure to create a single-access pAVF?

In a single vascular access, a needle punctures the vein, and the same needle is advanced into an adjacent artery. A specialized catheter follows the needle and approximates the vein and artery, bringing them together and creating a connection between them. The catheter then delivers energy to the opening, creating and sealing the permanent anastomosis.^{3,4}

Typically, this is between the radial vein and the radial artery in the forearm.

There are other devices that percutaneously create an AVF; however, these involve, for example, a vein puncture and a separate artery puncture, with a separate catheter in each. Code 36836 is not assigned for this type of procedure.

Does pAVF creation code 36836 bundle in other CPT® codes when performed during the same procedural encounter?

pAVF code 36836 is inclusive of multiple other services that may not be coded or reported separately when performed during the same encounter:

- Fistula maturation procedures such as transluminal balloon angioplasty (37246, 37248) and coil embolization other than for hemorrhage (37241, 37242, 75894, 75898)^{2,5}
- Vascular access (36005, 36140, 36215, 36216, 36217, 36218, 36245, 36246, 36247)^{2,5}
- Imaging guidance, radiologic supervision and interpretation, and angiography and venography of extremities (75710, 75716, 75820, 75822)^{2,5}
- Dilation of the anastomosis and penetrating vein immediately after fistula creation^{3,4}

- Ultrasound guidance (76937, 77001)³⁻⁵
- In addition, code 36836 should not be reported in conjunction with codes for the following services:
 - Other pAVF creation procedures (36837)⁵
 - Dialysis circuit procedures (36901, 36902, 36903, 36904, 36905, 36906, 36907, 36908, 36909)⁵
 - Intravascular stenting (37236, 37238)⁵
 - Intravascular ultrasound (37252)⁵

Can you bill for future fistula maturation procedures performed at a subsequent encounter after the pAVF creation procedure?

Code 36836 has a zero-day global period, and so procedures performed the day after the pAVF creation procedure or later can generally be billed separately.

However, for percutaneous transluminal angioplasty (PTA) to be billed as part of later pAVF maturation procedures, the following criteria must be met:

- In general, PTA of a nonstenotic vein (ie, < 50% stenosis) should not be coded as an angioplasty.
- However, professional societies differentiate when treating a nonmaturing AVF, indicating that physicians could appropriately document stenosis of a nonmaturing fistula if the vein is smaller than would normally be expected for that stage.⁶
- When stenosis is not documented, 36902 is not recommended. If desired, code 37799 may be used instead for ballooning the fistula, as use of the unlisted code alerts payers to review.
- When stenosis is documented, the appropriate CPT® code depends on where the angioplasty was performed:
 - 36902: Peripheral dialysis segment angioplasty, when the AVF is not maturing because of perianastomotic stenosis (ie, at the arterial anastomosis and nearby portions of the inflow artery and dialysis vein)

- +36907: Central dialysis segment angioplasty, when the AVF is not maturing because of subclavian vein stenosis
- 37246: Upper extremity arterial angioplasty plus a catheterization code, when the AVF is not maturing because of stenosis in the inflow artery beyond the area of the arterial anastomosis (ie, further up in the inflow artery)⁷ ■

1. Krol K. Coding Updates for 2023. *Endovasc Today*. 2023;22:87-92. <https://evtoday.com/articles/2023-jan/coding-updates-for-2023>
2. American Medical Association. CPT Professional 2024. Amer Medical Assn; 2024: prefatory notes to 36836.
3. American Medical Association. CPT Assistant. October 2022.
4. American Medical Association. CPT Assistant. March 2023.
5. American Medical Association. CPT Professional 2024. Amer Medical Assn; 2024: parenthetical notes to 36836.
6. American Society of Diagnostic and Interventional Nephrology and Renal Physicians Association. Coding of Procedures in Interventional Nephrology 2018. Chapter 2.1.2 and 2.1.2.1. https://cdn.ymaws.com/www.renaldmd.org/resource/resmgr/coding_and_documentation_tools/coding_of_procedures_in_inte.pdf
7. Krol K. New 2017 CPT codes for dialysis access maintenance and intervention. Case 14. *Endovasc Today*. 2017;16:74-81. <https://evtoday.com/articles/2017-june/new-2017-cpt-codes-for-dialysis-access-maintenance-and-intervention>

Disclosures

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Ellipsys vascular access system

Indications

The Ellipsys™ system is indicated for the creation of a proximal radial artery to perforating vein anastomosis via a retrograde venous access approach in patients with a minimum vessel diameter of 2.0 mm and less than 1.5 mm of separation between the artery and vein at the fistula creation site who have chronic kidney disease requiring dialysis.

Contraindications

The Ellipsys™ system is contraindicated for use in patients with target vessels that are <2 mm in diameter. The Ellipsys™ System is contraindicated for use in patients who have a distance between the target artery and vein > 1.5 mm.

Potential Adverse Events

Potential complications that may be associated with creation and maintenance of an arteriovenous fistula include, but may not be limited to, the following:

- Total occlusion, partial occlusion or stenosis of the anastomosis or adjacent outflow vein
- Stenosis of the central AVF outflow requiring treatment per the treatment center's standard of care

- Failure to achieve fistula maturation
- Incomplete vessel ligation when using embolization coil to direct flow
- Steal Syndrome
- Hematoma
- Infection or other complications
- Need for vessel superficialization or other maturation assistance procedures.

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a physician.

Important Information: Indications, contraindications, warnings, and instructions for use can be found in the product labelling supplied with each device.

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