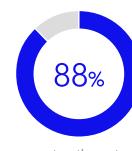
Ellipsys[™] Vascular Access System

Less invasive, long lasting

Only the Ellipsys™ Vascular Access System offers the most minimally invasive option for arteriovenous fistula (AVF) creation,^{1,2} with the most clinical data and real-world experience in its class.^{†1-21}

Proven performance

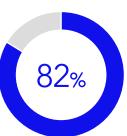
The Ellipsys system is the only one of its kind with 5-year U.S. clinical trial data^{1,20} demonstrating three critical metrics.



maturation rate at 90 days1



functional patency at five years²⁰

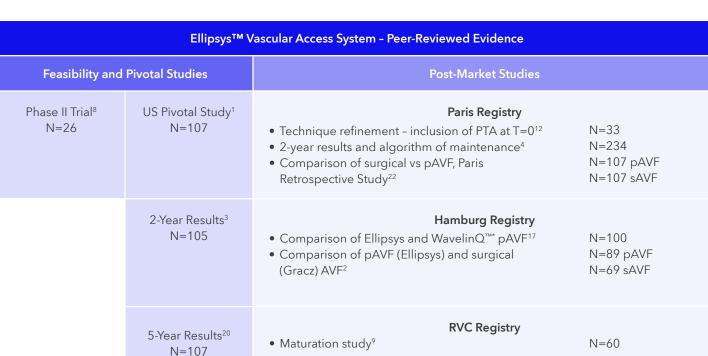


cumulative patency at five years²⁰



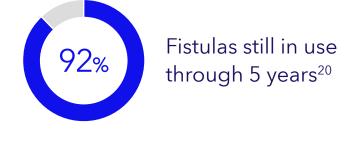
Candidate patients may include up to 65% of the general ESKD population. 1,2,6,9,17,21

Robust outcomes published on >500 study participants



Long-term results

The Ellipsys system is clinically proven to improve longevity^{4,5,20} and reduce the risk of complications.^{4,20}





per year for five years,²⁰ significantly less than the KDOQI goal of three interventions per year.²³

Syndrome, hematoma, infection, and need for vessel superficialization or other maturation assistance procedures. **CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician.

Risks may include: total/partial occlusion or stenosis of the anastomosis, failure to achieve fistula maturation, Steal

The Ellipsys vascular access system offers the most minimally

Conclusion

increase longevity^{4,5,20} and reduce the risk of complications^{4,20} – all while improving acceptance among ESKD patients.³ References

invasive approach to AVF creation, 1,2 one that is proven to



†Device class is endovascular arteriovenous fistula.

¹ Hull JE, et al. The pivotal multicenter trial of ultrasound-guided percutaneous arteriovenous fistula creation for hemodialysis access. *J Vasc Interv Radiol*. Feb 2018; 29(2):149-158.e5. ² Shahverdyan R, et al. Comparison of Ellipsys percutaneous and proximal forearm gracz-type surgical arteriovenous fistulas. *Am J Kidney Dis*. Oct 2021; 78(4):520-529.

³ Beathard GA, et al. Two-year cumulative patency of endovascular arteriovenous fistula. J Vasc Access. May 2020; 21(3):350-356. ⁴ Mallios A, et al. Mid-term results of percutaneous arteriovenous fistula creation with the Ellipsys vascular access system, technical recommendations and an algorithm for maintenance. *J Vasc Surg*. Dec 2020; 72(6):2097-2106.

Franco G, et al. Ultrasound evaluation of percutaneously created arteriovenous fistulae between radial artery and perforating vein at the elbow. J Vasc Access. Sept 2020; 21(5):694-700.

Franco G, et al. Feasibility for arteriovenous fistula creation with Ellipsys. J Vasc Access. Sept 2020; 21(5):701-704. 7 Hebibi H, et al. Clinical hemodialysis experience with percutaneous arteriovenous fistulas created using the Ellipsys vascular access system. Hemodial Int. Apr 2019;

⁸ Hull JE, et al. Thermal resistance anastomosis device for the percutaneous creation of arteriovenous fistulae for hemodialysis. J Vasc Interv Radiol. Mar 2017; 28:308-387. 9 Hull JE, et al. Maturation for hemodialysis in the Ellipsys endoAVF post-market registry. J Vasc Interv Radiol. Sept 2020; 31(9):1373-1381. 10 Mallios A, et al. Early cannulation of percutaneously created arteriovenous hemodialysis fistulae. J Vasc Access. Nov 2020; 21(6):997-1002.

¹¹ Mallios A, et al. Percutaneous creation of proximal radio-radial arteriovenous hemodialysis fistula before secondary brachial vein elevation. *J Vasc Access.* Mar 2021; 22(2):238-242.

12 Mallios A, et al. Early results of percutaneous arteriovenous fistula creation with the Ellipsys Vascular Access System. J Vasc Surg. Oct 2018; 68(4):1150-1156. ¹³ Mallios A, et al. Creating percutaneous arteriovenous fistulas at the wrist. J Vasc Access. Mar 2021; 22(2):299-303.

15 Dawoud D, et al. Recent advances in arteriovenous access creation for hemodialysis: New horizons in dialysis vascular access. Adv Chronic Kidney Dis. May 2020;

¹⁶ Jones RG, et al. A review of the current status of percutaneous endovascular arteriovenous fistula creation for haemodialysis access. *Cardiovasc Intervent Radiol.* Jan 2019; 42(1):1-9.

¹⁸ Wee IJY, et al. A systematic review, meta-analysis, and meta-regression of the efficacy and safety of endovascular arteriovenous fistula creation. *J Vasc Surg*. Mar 2020; 71:309-317.e.5. 19 Wasse H, et al. Patient selection, education and cannulation of percutaneous arteriovenous fistulae: An ASDIN White Paper. J Vasc Access. Nov 2020; 21(6):810-817. ²⁰ Hull JE, et al. Long-term results from the pivotal multicenter trial of ultrasound-guided percutaneous arteriovenous fistula creation for hemodialysis access. *J Vasc Interv Radiol*. Published online June 2, 2022.

¹⁷ Shahverdyan R, et al. Comparison of outcomes of percutaneous arteriovenous fistulae creation by Ellipsys and WavelinQ devices. J Vasc Interv Radiol. Sept 2020;

²¹ Popli K, et al. Anatomic suitability for commercially available percutaneous arteriovenous fistula creation systems. J Vasc Surg. Mar 2021; 73(3):999-1004. ²² Harika G, et al. Comparison of surgical versus percutaneously created arteriovenous hemodialysis fistulas. J Vasc Surg. Jul 2021; 74(1):209-16.

²³ Lok CE, et al. KDOQI clinical practice guideline for vascular access: 2019 update. Am J Kidney Dis. Apr 2020; 75(4):S1-64. **Brief Statement**

Contraindications

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

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

- The Ellipsys[™] system has only been studied for the creation of an AV fistula using the proximal radial artery and the adjacent perforating vein. It has not been studied in subjects who are candidates for surgical fistula creation at other locations, including sites distal to this local • The Ellipsys™ system is not intended to treat patients with significant vascular disease or calcification in the target vessels. • The Ellipsys™ system has only been studied in subjects who had a patent palmar arch and no evidence of ulnar artery insufficiency.
- The EllipsysTM Catheter has been designed to be used with the 6 F Terumo Glidesheath Slender^{TM*}. If using a different sheath, verify the catheter can be advanced through the sheath without resistance prior to use. Use ultrasound imaging to ensure proper placement of the catheter tip in the artery before retracting the sheath, since once the distal tip of the catheter has been
 advanced into the artery, it cannot be easily removed without creation of the anastomosis. If the distal tip is advanced into the artery at an improper location, comp
 the procedure and remove the catheter as indicated in the directions for use. It is recommended that a follow-up evaluation of the patient is performed using
 appropriate clinical standards of care for surgical fistulae to determine if any clinically significant flow develops that require further clinical action.
- This product is sterilized by ethylene oxide gas.

- Additional procedures are expected to be required to increase and direct blood flow into the AVF target outflow vein and to maintain patency of the AVF. Care should
 be taken to proactively plan for any fistula maturation procedures when using the device.
- In the Ellipsys™ study, 99% of subjects required balloon dilatation (PTA) to increase flow to the optimal access vessel and 62% of subjects required embolization coil
 placement in competing veins to direct blood flow to the optimal access vessel. Prior to the procedure, care should be taken to assess the optimal access vessel for
 maturation, the additional procedures that may be required to successfully achieve maturation, and appropriate patient follow-up. Please refer to the "Arteriovenous
 Fistula (AVF) Maturation" section of the labeling for guidance about fistula flow, embolization coil placement, and other procedures to assist fistula maturation and • The EllipsysTM System is intended to only be used by physicians trained in ultrasound guided percutaneous endovascular interventional techniques using appropriate clinical standards for care for fistula maintenance and maturation including balloon dilatation and coil embolization.
- Precautions to prevent or reduce acute or longer-term clotting potential should be considered. Physician experience and discretion will determine the appropriate
 anticoagulant/antiplatelet therapy for each patient using appropriate clinical standards of care.

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
- Hematoma
- Infection or other complications

Use only with the Ellipsys™ Power Controller, Model No. AMI-1001.

• 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 labeling supplied with each device.

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