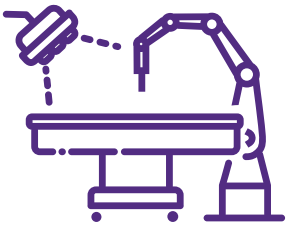
RENAL AML EMBOLIZATION:

A minimally invasive strategy to treat large (>4 cm) renal angiomyolipomas

THE CHALLENGE

10.7-21.4% Incidence of postoperative complications in historical/contemporary nephron-sparing surgeries[1]

128 mL Mean blood loss resulting from robotic-assisted partial nephrectomy surgery[2]



15.5% - 23% of robotic and open partial-nephrectomy patients require transfusion[2,3]

Larger tumor diameter and **greater tumor depth** were associated with bleeding/transfusion[2]

Where Renal Artery Embolization Fits

Clinical literature supports selective arterial embolization as particularly useful for patients in whom hemorrhage prevention/control is the primary objective and preservation of renal parenchyma is important.[4,5]

Renal AML Embolization

- Significantly reduced tumor size without serious adverse events and loss of renal function[3]
- Is a safe and efficacious treatment and the preferred minimally invasive treatment of AML[3]

Ideal candidates for renal AML embolization include:

- **Acute or recent AML hemorrhage —** the clearest indication.[4]
- **Symptomatic AML with bleeding risk** (pain, hematuria, prior hemorrhage).[3]
- **Large AML with high-risk vascular anatomy,** particularly aneurysms/markedly vascular lesions, when intervention is warranted.[6]
- **Patients with bilateral, multifocal, or TSC-associated AMLs,** where preservation of functioning renal parenchyma is especially important.[6]
- **Patients who are poor surgical candidates** or in whom partial nephrectomy would require extensive renal resection.
- **Selected large AMLs (>4 cm)** when treatment is indicated—but size alone should not automatically trigger embolization.

The highest complication rate of renal AML embolization is post-embolization syndrome (pain, fever, nausea), but serious complications are comparatively uncommon.

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urvascular.com
Phone: (908) 874-9236
Fax: (908) 874-9237
16 Mountain Blvd. Warren, NJ 07059

1. Raouf M Seyam et al. The Risks of Renal Angiomyolipoma: Reviewing the Evidence. J Kidney Cancer VHL. 2017 Oct 16;4(4):13–25. doi: 10.15586/jkcvhl.2017.97
2. Ming-Chien Chen et al. Predicting Bleeding Related Events in Robotic-Assisted Partial Nephrectomy for Angiomyolipoma: Simplifying Risk Assessment with Tumor Diameter and Depth, A Retrospective Study. Ther Clin Risk Manag. 2024 Dec 21;20:883–892. doi: 10.2147/TCRM.S472180
3. Guram Nozadze et al. Selective arterial embolization of renal angiomyolipomas: A 10-year experience. BJUI Compass. 2021 Aug 31;3(1):86–92. doi: 10.1002/bco2.107
4. C Dabbeche et al. Role of embolization in renal angiomyolipomas. J Radiol. 2006 Dec;87(12 Pt 1):1859-67. doi: 10.1016/s0221-0363(06)74166-x.
5. Chi Kwok Chan et al. The efficacy, safety and durability of selective renal arterial embolization in treating symptomatic and asymptomatic renal andiomyolipoma. Urology. 2011 Mar;77(3):642-8. doi: 10.1016/j.urology.2010.08.040. Epub 2010 Dec 4.
6. Jacob Ramon et al. Renal angiomyolipoma: long-term results following selective arterial embolization. Eur Urol. 2009 May;55(5):1155-61. doi: 10.1016/j.eururo.2008.04.025. Epub 2008 Apr 18.