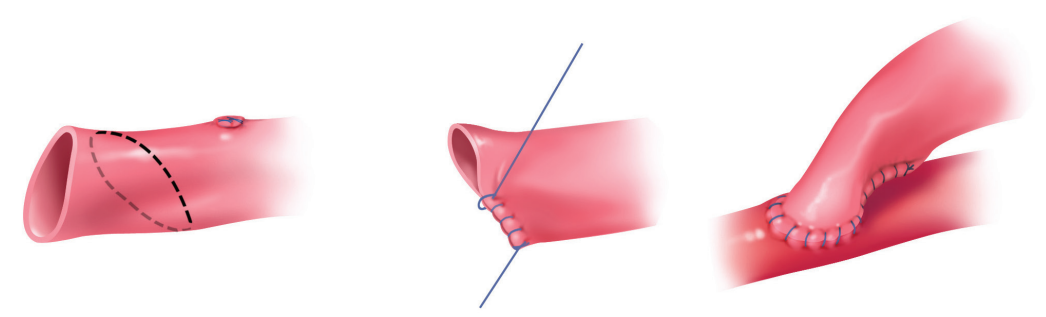


A CryoVein Femoral Vein Implant Technique

To minimize the risk of arterial steal, taper the arterial end of the CryoVein Femoral Vein using an angled cut of the allograft and oversewing the heel of the graft with 6-0 polypropylene suture to create a 4mm¹, 5mm⁴, or 6mm diameter.⁵



CryoVein	Size Range	Size Range	Catalogue #
Femoral Vein	Diameter: 6 mm - 15 mm	Length: 10 cm - 30+ cm	V060
Saphenous Vein	Diameter: 3 mm - 6 mm [†]	Length: 10 cm - 80+ cm [†]	V010

[†] Pressurized

CryoArtery	Size Range	Size Range	Catalogue #
Femoral Artery	Diameter: 4 mm - 5+ mm	Length: 10 cm - 30+ cm	R020

Learn more at: www.cryolife.com/vascular

For more information or to place an order call 1.877.894.9428

References:

1. Lin P, et al. Am J Surg 2002;184:31-6.
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8. Takamoto S, et al. Trans Proceed 1998;30:3917-19.
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11. Matsuura J, et al. Presented at the 10th Annual Winter Meeting of the Peripheral Vascular Surgery Society, Snowmass, CO. January 14, 2000.



Surgical technique is at the discretion of the surgeon. Variations in technique and practices will inevitably and appropriately occur when clinicians take into account the needs of the individual patients, available resources, and limitations unique to an institution or type of practice.

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MLENG0470.002 (10/2017)

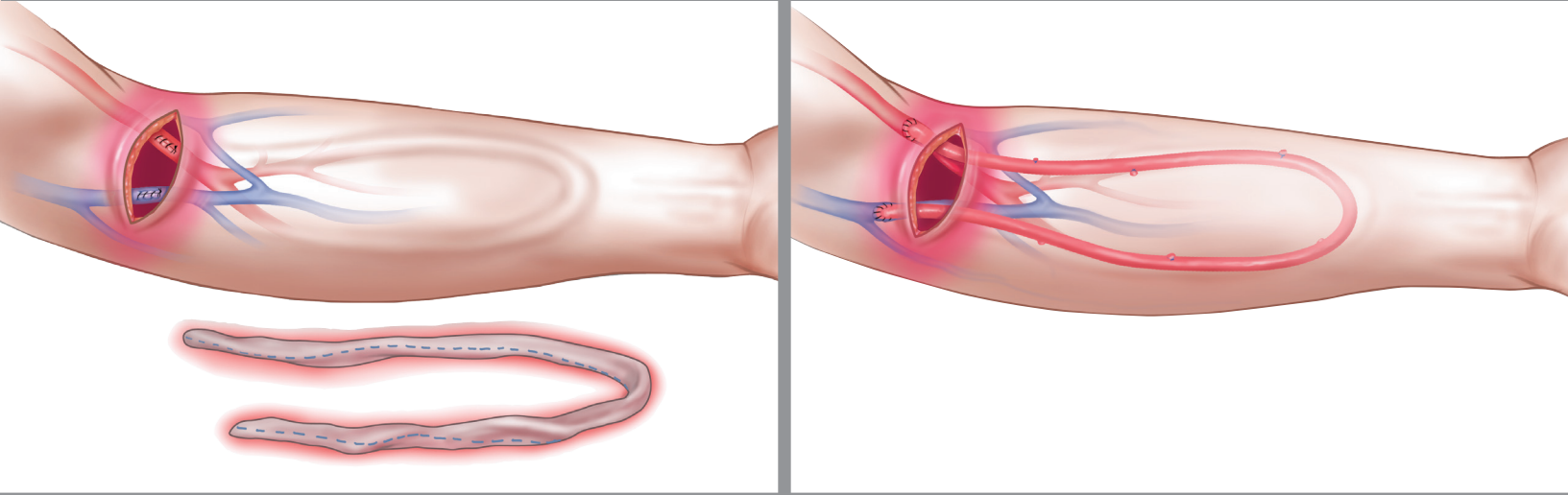
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CryoVein[®] | Vascular Allograft

CryoArtery[®] | Vascular Allograft

AV Access Infections



The Ideal Grafts for:

- Patients with infected synthetic AV access grafts
- Patients at risk of an AV access infection
- Patients with a limited number of AV access sites

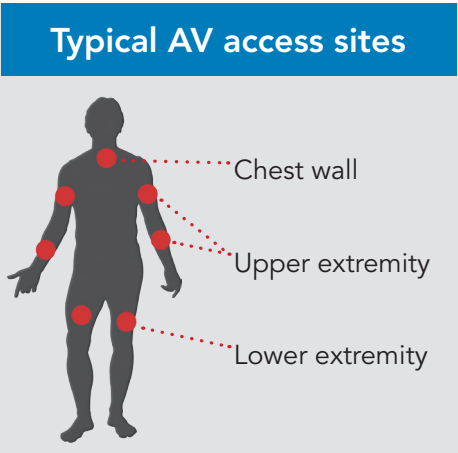


CryoLife[®]
Life Restoring Technologies[®]

For Patients with a Limited Number of AV Access Sites

The Challenge: Patients are at risk of losing viable AV access sites to infection.^{1,2}

The Solutions: CryoVein and CryoArtery



Key Benefits

- Excellent resistance to infection¹⁻⁴
- Easy to suture
- Outstanding durability^{1,3,5}
- Access is possible 10 to 14 days after implantation^{4,5}
- Stenosis of the venous outflow tract reported to be less extensive compared to synthetic grafts²
- Acknowledgement by the National Kidney Foundation for treating infected hemodialysis AVG's

Allografts for AV Access: Cumulative Patency

Allograft Types	Author	Patients	1 Year Cumulative Patency	2 Year Cumulative Patency
CryoVein Femoral Vein	Lin et al. ¹	38	68%	-
CryoVein Femoral Vein	Matsuura et al. ⁴	44	75%	-
CryoVein Femoral Vein	Matsuura et al. ⁵	43	68%	63%
CryoVein Femoral Vein	CryoLife Multicenter ⁶	148	80%	72%
Cryopreserved Saphenous Vein*	Baraldi et al. ⁷	16	90%	-
Cryopreserved Femoral Artery*	Takamoto et al. ⁸	5	100%	80%

*Non-CryoLife processed

Allografts for Treating AV Graft Infections: Re-Infection Rates

CryoVein Femoral Vein	Patients Treated for AV Graft Infection	Re-Infection Rates	Follow Up Period
Lin et al. ¹	36	0%	1 Year
Matsuura et al. ⁴	38	0%	1 Year
Matsuura et al. ⁵	43	2.3%	2 Years
CryoLife Multicenter ⁶	52	3%	2 Years

Excellent Treatment for Infected AV Grafts

The Challenges:

- Up to 35% of AV grafts become infected⁹
- Up to 25% of patients die with central venous catheters for dialysis within 1 year¹⁰



The Solutions: CryoVein and CryoArtery

CryoVein and CryoArtery may be placed directly into an infected field to allow healing and revascularization in a single procedure, saving potential future AV access sites.^{1,2,4-6}

Allograft Method

Single procedure: save the site^{1,2}

1. Remove infected AV graft and implant allograft in the same infected site, saving potential future AV access sites
2. Insert a temporary dialysis catheter and IV antibiotic therapy
3. Access is possible within 10 to 14 days^{4,5}

Graft Excision Method

Multiple procedures: lose the site^{1,2}

1. Remove infected AV graft
2. Insert a temporary dialysis catheter and IV antibiotic therapy
3. After the infection is cleared, perform another operation with a new AV graft in a different location, diminishing potential sites for future AV access
4. Access graft at surgeon's discretion

VS

Cost Comparison: CryoVein Femoral Vein vs. Graft Excision¹¹

Treatment Methods	Patients	Average Hospital Stay (p=0.001)	Overall Hospital Cost
CryoVein Femoral Vein	20	2.3 days	\$13,843 ± \$6,007
Graft Excision	13	8.1 days	\$22,136 ± \$12,665

Conclusion: "Cryopreserved femoral vein is a cost-effective means of treating infected AV grafts."¹¹