**Conflicts of Interest: None**

**SVS – AVF Clinical Practice Guidelines**

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  - Union Internationale de Phlébologie
  - American College of Phlebology

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- Comprise storage strength of evidence and quality of evidence for each guideline
- Commissioned for systematic review: surgery/endovascular and compression

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Venous Ulcer - Definition

- Target audience: specialists who treat vascular disease and/or wounds.

- Methodology
  - Subcommittee Structure
  - Clinical Evaluation
  - Wound Care
  - Compression
  - Surgery
  - Acute
  - Primary Prevention
  - Evidence Review
  - Recommendations
  - GRADE – strength of recommendation / level of evidence

**BEST PRACTICE**

Recommendation deemed necessary to provide a comprehensive guideline that encompasses all the details needed for providing care for patients with venous ulcers

- When there are no comparable alternatives to a recommendation, or evidence is lacking
- Case series supplemented by the best opinion of a panel of experts

**Guideline 1.1: Venous Leg Ulcer**

**Definition** - We suggest use of a standard definition of venous ulcer as an open skin lesion of the leg or foot that occurs in an area affected by venous hypertension.

**BEST PRACTICE**
Guideline 4.1: DNA repair. We suggest applying topical DNA repair agents to wounds with DNA damage.

Guideline 4.2: Debridement. We recommend that venous leg ulcers receive thorough debridement at their initial evaluation to remove obvious necrotic tissue, excessive bacterial burden, and cellular barriers of dead and necrotic cells. [GRADE -2; LEVEL OF EVIDENCE -C]

Guideline 4.3: Antimicrobial dressings. We suggest the use of antimicrobial dressings to prevent and manage infection. [GRADE -2; LEVEL OF EVIDENCE -C]

Guideline 4.4: Biologic debridement. We suggest using allogeneic porcine small intestinal submucosal tissue as a biological debridement option. [GRADE 2; LEVEL OF EVIDENCE – B]

Guideline 4.5: Enzymatic debridement. We suggest using enzymatic debridement as an alternative to surgical debridement. [GRADE -2; LEVEL OF EVIDENCE -B]

Guideline 4.6: Ultrasonic debridement. We suggest against the routine use of ultrasonic debridement. [GRADE -2; LEVEL OF EVIDENCE -B]

Guideline 4.7: Hydrosurgical debridement. We suggest against the routine use of hydrosurgical debridement. [GRADE -2; LEVEL OF EVIDENCE -B]

Guideline 4.8: Tissue matrices, human tissues or other skin substitutes. We suggest the use of cultured allogeneic bilayer skin replacements for venous leg ulcer debridement. In selected cases, regional block or general anesthesia may be required. [GRADE -1; LEVEL OF EVIDENCE -B]

Guideline 4.9: Surgical debridement. We recommend that surgical debridement be performed for venous leg ulcers with slough, non-viable tissue or eschar. [GRADE -1; LEVEL OF EVIDENCE -B]

Guideline 4.10: Wound colonization and biofilms. We suggest against systemic antimicrobial therapy without clinical evidence of infection. [GRADE -2; LEVEL OF EVIDENCE -C]

Guideline 4.11: Treatment of wound infection. We suggest that venous leg ulcers with >1x10^6 CFU/g of tissue have an infection and require antimicrobial therapy. [GRADE -2; LEVEL OF EVIDENCE -C]

Guideline 4.12: Indications for adjuvant therapies. We recommend adjuvant wound therapy options for venous leg ulcers that fail to demonstrate improvement after a minimum of 4-6 weeks of standard wound therapy. [GRADE -2; LEVEL OF EVIDENCE -B]

Guideline 4.13: Cellular therapy. We suggest the use of cultured allageneic bilayer skin replacements with both epidermal and dermal layers to decrease the chances for healing patients to have recurrence of ulcers. [GRADE -1; LEVEL OF EVIDENCE – C]
• **Guideline 6.1 Superficial Venous Reflux and Active Venous Leg Ulcer – Ulcer Healing** - In a patient with a healed (C5) or active (C6) venous leg ulcer, we suggest ablation of the incompetent veins in addition to standard compressive therapy to increase venous leg ulcer healing rate. \[GRADE -1; LEVEL OF EVIDENCE -C\]

• **Guideline 6.2 Superficial Venous Reflux and Active Venous Leg Ulcer – Prevent Recurrence** - In a patient with a healed (C5) or active (C6) venous leg ulcer, we recommend ablation of the incompetent veins in addition to standard compressive therapy and concurrent compression therapy to aid in ulcer healing and prevent recurrence. \[GRADE -1; LEVEL OF EVIDENCE -B\]

• **Guideline 6.3 Superficial Venous Reflux and Healed Venous Leg Ulcer** - In a patient with a healed venous leg ulcer, we suggest ablation of the incompetent veins in addition to standard compressive therapy to increase venous leg ulcer healing rate. \[GRADE -1; LEVEL OF EVIDENCE -C\]

• **Guideline 6.4 Superficial Venous Reflux with Skin Changes at Risk for Venous Leg Ulcer** - In a patient with isolated superficial incompetent veins that have axial reflux directed to the bed of the ulcer, we suggest ablation of the incompetent veins in addition to standard compressive therapy to prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.5 Combined Superficial / Perforator Venous Reflux With or Without Deep Venous Reflux and Active Venous Leg Ulcer** - In a patient with a venous leg ulcer (C6) and incompetent superficial veins, we suggest ablation of both the incompetent superficial veins and isolated pathologic perforator veins (outward flow of >500 msec duration, with a diameter of ≥3.5mm) located beneath or associated with the ulcer.\[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.6 Combined Superficial / Perforator Venous Reflux With or Without Deep Venous Reflux and Healed Venous Leg Ulcer** - In a patient with a healed venous leg ulcer (C5) and incompetent superficial veins, we recommend ablation of the incompetent veins in addition to standard compression therapy to aid in ulcer healing and prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.7 Pathologic Perforator Venous Reflux in the Absence of Superficial Venous Disease** - In a patient with isolated pathologic perforator veins, we recommend ablation of the venous segments (if present) with diameter of ≥3.5mm located beneath or associated with the ulcer (C6), oractive ulcer (C5). Regardless of the status of the deep veins, we recommend ablation of the “pathologic” perforating veins in addition to standard compression therapy to aid in ulcer healing and to prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.8 Perforator Venous Reflux and Active Venous Leg Ulcer** - In a patient with active venous leg ulcer (C6) and incompetent superficial and perforator veins directed to the ulcer bed, we suggest ablation of the incompetent veins in addition to standard compressive therapy. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.9 Proximal Chronic Total Venous Occlusion / Severe Stenosis with Skin Changes at Risk** - In a patient with isolated pathologic perforator veins, we recommend ablation of the venous segments (if present) with diameter of ≥3.5mm located beneath or associated with the ulcer (C6), oractive ulcer (C5). Regardless of the status of the deep veins, we recommend ablation of the “pathologic” perforating veins in addition to standard compression therapy to aid in ulcer healing and prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.10 Proximal Chronic Total Venous Occlusion / Severe Stenosis with Skin Changes at Risk** - In a patient with isolated pathologic perforator veins, we recommend ablation of the venous segments (if present) with diameter of ≥3.5mm located beneath or associated with the ulcer (C6), oractive ulcer (C5). Regardless of the status of the deep veins, we recommend ablation of the “pathologic” perforating veins in addition to standard compression therapy to aid in ulcer healing and prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]

• **Guideline 6.11 Proximal Chronic Total Venous Occlusion / Severe Stenosis with Skin Changes at Risk** - In a patient with isolated pathologic perforator veins, we recommend ablation of the venous segments (if present) with diameter of ≥3.5mm located beneath or associated with the ulcer (C6), oractive ulcer (C5). Regardless of the status of the deep veins, we recommend ablation of the “pathologic” perforating veins in addition to standard compression therapy to aid in ulcer healing and prevent recurrence. \[GRADE -2; LEVEL OF EVIDENCE -C\]