

EVIDENCE BASED STATEMENT

DOMAIN **10**, Statement **4**

TOPIC: “**Lymphedema treatment protocol**”

SEARCH TERMS & SOURCES

(lymphedema[MeSH Terms]) AND (treatment[MeSH Terms])

INCLUSION CRITERIA

- Lower limb only
- Reviews
- Publication < 10 years, only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

223 (before) - 23 (after selection)

AGREEMENT BETWEEN THE 2 REVIEWERS before DOMAIN WORKING GROUP DISCUSSION & FINALIZATION

(N. of papers triggering disagreement in inclusion/No of papers from the initial search)

3/223

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Thompson B, Gaitatzis K, Janse de Jonge X, et al. Manual lymphatic drainage treatment for lymphedema: a systematic review of the literature. *J Cancer Surviv.* 2021 Apr;15(2):244-258.
2. O'Donnell TF Jr, Allison GM, Iafrati MD. A systematic review of guidelines for lymphedema and the need for contemporary intersocietal guidelines for the management of lymphedema. *J Vasc Surg Venous Lymphat Disord.* 2020 Jul;8(4):676-684
3. Douglass J, Mableson H, Martindale S, et al. Effect of an Enhanced Self-Care Protocol on Lymphedema Status among People Affected by Moderate to Severe Lower-Limb Lymphedema in Bangladesh, a Cluster Randomized Controlled Trial. *J Clin Med.* 2020 Jul 30;9(8):2444.
4. Damstra RJ, Halk AB; Dutch Working Group on Lymphedema. The Dutch lymphedema guidelines based on the International Classification of Functioning, Disability, and Health and the chronic care model. *J Vasc Surg Venous Lymphat Disord.* 2017 Sep;5(5):756-765.
5. van de Pas CB, Biemans AA, Boonen RS, et al. Validation of the Lymphoedema Quality-of-Life Questionnaire (LYMQOL) in Dutch Patients Diagnosed with Lymphoedema of the Lower Limbs. *Phlebology.* 2016 May;31(4):257-63

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IDENTIFIED REFERENCES

- 1: Lafuente H, Jaunarena I, Ansuategui E, et al. Cell therapy as a treatment of secondary lymphedema: a systematic review and meta-analysis. *Stem Cell Res Ther.* 2021 Nov 20;12(1):578.
- 2: Russo S, Walker JL, Carlson JW, et al. Standardization of lower extremity quantitative lymphedema measurements and associated patient-reported outcomes in gynecologic cancers. *Gynecol Oncol.* 2021 Feb;160(2):625-632.
- 3: Ramachandran S, Chew KY, Tan BK, Kuo YR. Current operative management and therapeutic algorithm of lymphedema in the lower extremities. *Asian J Surg.* 2021 Jan;44(1):46-53.
- 4: Thompson B, Gaitatzis K, Janse de Jonge X, et al. Manual lymphatic drainage treatment for lymphedema: a systematic review of the literature. *J Cancer Surviv.* 2021 Apr;15(2):244-258.
- 5: Schaverien MV, Coroneos CJ. Surgical Treatment of Lymphedema. *Plast Reconstr Surg.* 2019 Sep;144(3):738-758.
- 6: Müller M, Klingberg K, Wertli MM, et al. Manual lymphatic drainage and quality of life in patients with lymphoedema and mixed oedema: a systematic review of randomized controlled trials. *Qual Life Res.* 2018 Jun;27(6):1403-1414.
- 7: Co M, Ng J, Kwong A. Air Travel and Postoperative Lymphedema-A Systematic Review. *Clin Breast Cancer.* 2018 Feb;18(1):e151-e155.
- 8: Dayan JH, Ly CL, Kataru RP, et al. Lymphedema: Pathogenesis and Novel Therapies. *Annu Rev Med.* 2018 Jan 29;69:263-276.
- 9: Fife CE, Farrow W, Hebert AA, et al. Skin and Wound Care in Lymphedema Patients: A Taxonomy, Primer, and Literature Review. *Adv Skin Wound Care.* 2017 Jul;30(7):305-318.
- 10: Carl HM, Walia G, Bello R, et al. Systematic Review of the Surgical Treatment of Extremity Lymphedema. *J Reconstr Microsurg.* 2017 Jul;33(6):412-425.
- 11: Iwersen LF, Sperandio FF, Toriy AM, et al. Evidence- based practice in the management of lower limb lymphedema after gynecological cancer. *Physiother Theory Pract.* 2017 Jan;33(1):1-8.
- 12: Akgül A, Cirak M, Birinci T. Applications of Platelet-Rich Plasma in Lymphedema. *Lymphat Res Biol.* 2016 Dec;14(4):206-209.
- 13: Chang DW, Masia J, Garza R 3rd, et al. Lymphedema: Surgical and Medical Therapy. *Plast Reconstr Surg.* 2016 Sep;138(3 Suppl):209S-218S.
- 14: Yüksel A, Gürbüz O, Velioglu Y, et al. Management of lymphoedema. *Vasa.* 2016;45(4):283-91.
- 15: Brorson H. Liposuction in Lymphedema Treatment. *J Reconstr Microsurg.* 2016 Jan;32(1):56-65.
- 16: Finnane A, Janda M, Hayes SC. Review of the evidence of lymphedema treatment effect. *Am J Phys Med Rehabil.* 2015 Jun;94(6):483-98.
- 17: Chiu TW. Management of secondary lymphoedema. *Hong Kong Med J.* 2014 Dec;20(6):519-28.
- 18: Granzow JW, Soderberg JM, Kaji AH, Dauphine C. Review of current surgical treatments for lymphedema. *Ann Surg Oncol.* 2014 Apr;21(4):1195-201.
- 19: Chang CJ, Cormier JN. Lymphedema interventions: exercise, surgery, and compression devices. *Semin Oncol Nurs.* 2013 Feb;29(1):28-40.
- 20: Morris D, Jones D, Ryan H, Ryan CG. The clinical effects of Kinesio® Tex taping: A systematic review. *Physiother Theory Pract.* 2013 May;29(4):259-70.

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TEXT FOR INCLUSION IN THE DOCUMENT

(300 words, not counting the references)

DOMAIN 10, Statement 4, TOPIC: "Lymphedema treatment protocol"

A recent authoritative review pointed out the lack of solid guidelines in lymphedema management, due to the lack of properly conducted studies.

[O'Donnell TF Jr, Allison GM, Iafrati MD. A systematic review of guidelines for lymphedema and the need for contemporary intersocietal guidelines for the management of lymphedema. J Vasc Surg Venous Lymphat Disord. 2020 Jul;8(4):676-684]

Enhanced self care protocols, including self-massage, deep breathing, proper hygiene, weight management, exercise and graduated compression demonstrated their pivotal importance in both primary and secondary lymphedema

[Douglass J, Mablesen H, Martindale S, et al. Effect of an Enhanced Self-Care Protocol on Lymphedema Status among People Affected by Moderate to Severe Lower-Limb Lymphedema in Bangladesh, a Cluster Randomized Controlled Trial. J Clin Med. 2020 Jul 30;9(8):2444].

Nevertheless, proper standardization is needed to make the outcome reproducible and therefore evidence-based. A typical example can be found in the Complex Decongestive Physiotherapy, whose quality is empirically globally recognized, but whose lack of standardization hampers strong recommendations in its support, particularly concerning the manual drainage.

[Thompson B, Gaitatzis K, Janse de Jonge X, et al. Manual lymphatic drainage treatment for lymphedema: a systematic review of the literature. J Cancer Surviv. 2021 Apr;15(2):244-258.]

A fundamental concept is the chronic nature of the disease, for which patient education on awareness, self-management and compliance is mandatory.

Based on the limb volume variation and the edema fluidity switch toward fibrosis, different compression and follow up protocols have to be applied.

The involvement of an interdisciplinary working group must include the physician specialized in lymphatic treatment, properly nursing staff, nutrition and exercise experts. The psychological component must not be underestimated, for which proper consulting is not to be forgotten.

Objective evaluation of the lower limb lymphedema impact on quality of life is feasible by the dedicated LymphQOL questionnaire.

Immediate surgical approach is universally discouraged as first line treatment and, whenever indicated, is not considered definitive for the resolution of the chronic lymphedema condition, which requires a permanent life-style adaptation.

***[Damstra RJ, Halk AB; Dutch Working Group on Lymphedema. The Dutch lymphedema guidelines based on the International Classification of Functioning, Disability, and Health and the chronic care model. J Vasc Surg Venous Lymphat Disord. 2017 Sep;5(5):756-765].**

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STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 10, Statement 4

“Lymphedema management includes conservative multi-specialty expert assessment, validated protocols of patients education, skin hygiene, compression, mechanical lymphatic drainage, specific physical exercises. Mesotherapy is not a validated option. No drug has been currently validated to increase lymphatic drainage, including diuretics”

4 SELECTED REFERENCES

1. O'Donnell TF Jr, Allison GM, Iafrati MD. A systematic review of guidelines for lymphedema and the need for contemporary intersocietal guidelines for the management of lymphedema. *J Vasc Surg Venous Lymphat Disord.* 2020 Jul;8(4):676-684
2. Douglass J, Mablesen H, Martindale S, et al. Effect of an Enhanced Self-Care Protocol on Lymphedema Status among People Affected by Moderate to Severe Lower-Limb Lymphedema in Bangladesh, a Cluster Randomized Controlled Trial. *J Clin Med.* 2020 Jul 30;9(8):2444
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identified LITERATURE BIAS

Lack of standardization in complex decongestive therapy report

SUGGESTED NEXT LINES OF RESEARCH

Publication of a globally recognized lymphedema management protocol best on grading system or at least on best practice