**Enhancing Lymphatic Regeneration with Aligned Nanofibrillar Collagen Scaffolds**

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The mainstay of treatment of lymphedema for decades has been conservative therapy in the form of external compression of the affected extremities, physical therapy, massage for manual drainage, and skin hygiene. These treatments require dedication and strict compliance from the patient and are often inadequate to control the progression of disease. Current surgical procedures which aim to restore lymphatic drainage to the affected limbs have showed incomplete and variable outcome. To address the current deficit of sustainable lymphedema treatment, we investigated lymphatic regeneration guided by thread-like aligned nanofibrillar collagen scaffolds (BioBridge), which facilitate cell attachment, alignment, and migration. Studies in the animal model and in human subjects showed a synergistic effect of nanofibrillar collagen scaffold as an adjunct modality to enhance lymph drainage and lymphangiogenesis. Both animal and human subjects were able to normalize limb volume and had formation of new functional lymph vessels. A summary of the basic and clinical data is presented.