

Inclusion Criteria Case Group	Exclusion Criteria Case Group
Patients with diagnosed clinically secondary lymphedema by 2 or more lymphedema specialized physicians	Patient with chronic inflammatory diseases
Patients with therapeutic failure after at least 6 months of conservative treatment including compression garments and manual lymphatic drainage	Patients with history if chronic infections
Patients with preoperative confirmation of a lymphatic dysfunction by ICG lymphography and/or lymphatic MRI	Patients with acute infections like cellulitis
Signed consent to donate tissue samples for the study as well as epidemiological data and images	Lymphedema patients with abnormal preoperative laboratory test (including C-reactive protein)
Patients undergoing lymphovenous anastomoses or vascularized lymph node transfer	Patients not meeting the inclusion criteria
Angiography and Venous Duplex Sonography excluding concomitant chronic venous insufficiency or peripheral artery disease on the affected extremity	Patients with regular intake of NSAIDs
	Patients with chemotherapy or radiotherapy in the last year

Inclusion Criteria Control Group	Exclusion Criteria Control Group
Patients that required a free flap	Patient with chronic inflammatory diseases
Patients with planned free flap, with skin included in the flap design, from a healthy donor site	Patients with history if chronic infections
Signed consent to donate tissue samples for the study as well as epidemiological data and images	Patients with acute infections like cellulitis
Angiography and Venous Duplex	Patients with abnormal preoperative laboratory test (including C-reactive protein)
Angiography and Venous Duplex Sonography excluding concomitant chronic venous insufficiency or peripheral artery disease on the donor extremity	Patients not meeting the inclusion criteria
	Patients with regular intake of NSAIDs
	Cancer therapy in the last 3 years