

# **The role of extracellular pH in regulating lymphatic endothelial cell junctional integrity and fluid permeability**

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**Background and Aim:** Breast cancer is one of the most common cancers in women and survival rates are high. A large group of patients experience lymphedema after breast cancer treatment. In conditions such as cancer pH in the vicinity of tumors can fall as much as one unit below normal. The aim of the present in vitro study is to investigate if a decrease in pH impairs the motility and increases the permeability of lymphatic endothelial cells (LECs).

**Material and Method:** The motility of LECs is being evaluated by wound scratch assay and ELM assay. The permeability is being evaluated by TEER measurements and a permeability assay using dextran and albumin. All experiments are carried out in media where the pH is respectively 6.8, 7.1 and 7.4.

**Results:** Preliminary results imply that a low pH inhibits the migration of LECs. In regards to permeability further results are awaiting.

**Discussion/Conclusion:**