CONGRESUL CONSACRAT ANIVERSĂRII A 75-A DE LA FONDAREA USMF „NICOLAE TESTEMIȚANU”
20 23 octombrie 2020

TUMOR LYMPHANGIOGENESIS IN BREAST CANCER: MYTH OR FACT

Author: ***Nagalisov Tatiana***

Affiliation: *Faculty of Medicine No.1, Department of histology, cytology and embryology, SUMPh „Nicolae Testemitanu”, Chisinau, Republic of Moldova.*

Introduction

Breast carcinoma is one of the most common causes of death among women, and metastasis is the leading cause of mortality in these patients. Despite all efforts, the factors that support metastasis are not completely elucidated. Most of women with advanced breast cancer have regional nodal metastases and more than 30% develop distant metastases. Data about lymphangiogenesis in the tumor stroma are scattered.

Purpose

To study and synthesize bibliographic data in order to determine the molecular factors involved in the process of lymphangiogenesis of breast carcinoma.

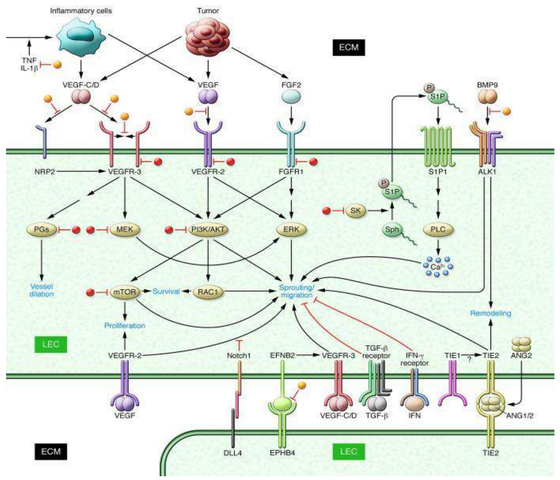

Figure 1. Growth factor and cytokine signaling pathways in lymphangiogenesis.

(Wei Zheng,Aleksanteri Aspelund,Kari Alitalo Lymphangiogenic factors, mechanisms, and applications,2014,878–887)

Material and methods

The study is based on the analysis of bibliographic sources published in scientific databases in the country and abroad.

Results

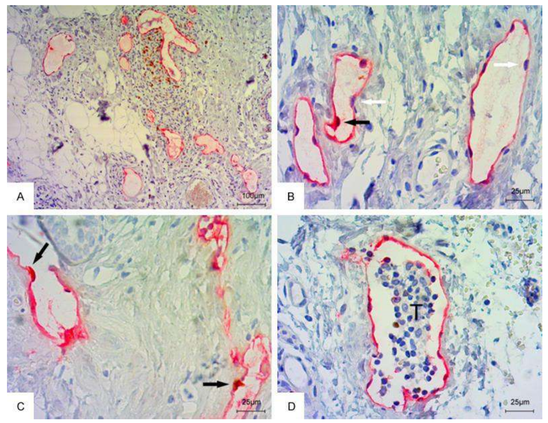

Figure 2. Immunohistochemical double staining for D2-40 and Ki-67 of lymphatic vessels and lymphatic endothelial cells.
(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4637653/)

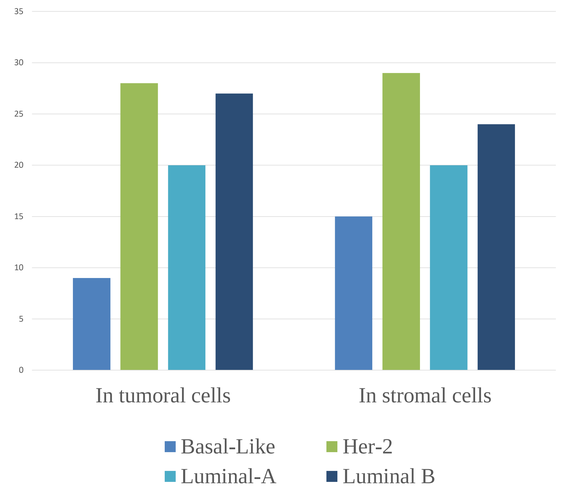

Figure 3. VEGF-C expression in tumor and stromal cells

Lymphovascular invasion was detected in hematoxylin-eosin stained sections in 13,8-16% of cases of breast cancer and 28,5% by immunohistochemistry with markers for Podoplanin.

Conclusions

VEGF-C, VEGFR-3, D2-40 and Prox-1 are lymphangiogenic markers expressed in the stroma of breast carcinomas. These data provide evidence for tumor lymphangiogenesis and emphasize their diagnostic importance.

Keywords

Lymphangiogenesis, breast cancer.