

Tumor progression

Tumor **progression** is the third and last phase in tumor development. This phase is characterized by increased growth speed and invasiveness of the tumor cells. As a result of the progression, phenotypical changes occur. Together with the progression, more and more aneuploidy occurs. This leads to expression in cells and nuclear polymorphism.

The **epithelial-Mesenchymal transition** (EMT) of the **Basement Membrane** (BM) allows **cells** of epithelial **phenotype** to transform into a **mesenchymal**-like (quasi-mesenchymal) phenotype and metastasize via the lymphovascular system through a metastatic cascade by intravasation and extravasation. This helps in the progression of carcinoma from the primary site to distant organs. **Collagen**, **laminin**, and **integrin** are the prime components of BM and help in tumor cell metastasis, which makes them ideal cancer drug targets. Further, recent studies have shown that collagen, laminin, and integrin can be used as a biomarker for metastatic cells. In a review, Banerjee et al. summarized the current knowledge of such therapeutics, which are either currently in preclinical or clinical stages and could be promising cancer therapeutics ¹⁾.

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Banerjee S, Lo WC, Majumder P, Roy D, Ghorai M, Shaikh NK, Kant N, Shekhawat MS, Gadekar VS, Ghosh S, Bursal E, Alrumaihi F, Dubey NK, Kumar S, Iqbal D, Alturaiki W, Upadhye VJ, Jha NK, Dey A, Gundamaraju R. Multiple **roles** for **basement membrane** proteins in **cancer progression** and EMT. Eur J Cell Biol. 2022 Mar 30;101(2):151220. doi: 10.1016/j.ejcb.2022.151220. Epub ahead of print. PMID: 35366585.

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