

Fig. 1: Angiogenesis in (A) superficial and (B) muscle-invasive transitional cell carcinoma of the bladder is, in general, illustrative of the process of tumour neovascularization in other cancers. The multiple, sequential and interrelated steps by which angiogenesis is hypothesized to occur involve angiogenic stimuli or lack of endogenous angiogenic inhibitors, or both; the inciting by endothelial cells within venules of local proteolysis to degrade the basement membrane; the protrusion of endothelial cells through the wall of the venule; degradation of the interstitial matrix; continuing movement of endothelial cells toward the angiogenic stimulus; formation by endothelial cells of capillary sprouts that form a lumen; proliferation within sprouts; joining of tips of sprouts; blood flow; and formation of new basement membrane and incorporation of microvascular pericytes. TCC = transitional cell carcinoma, BM = basement membrane.

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