Angiogenesis, thrombospondin-1 and cervical carcinogenesis

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摘要

Abstract

Angiogenesis, the growth of new vessels from existing vasculature, plays an essential role in tumor development. The process involves interaction among cancer cells, endothelial cells, and components of the extracellular matrix, and is regulated by the balance of angiogenesis activators and angiogenesis inhibitors. This review profiles some fundamental concepts of angiogenesis, the importance of angiogenesis in cervical neoplasm, and the role of thrombospondin-1 as an angiogenesis inhibitor in cervical carcinogenesis. The usefulness and limitations of microvessel density in evaluation of angiogenic status are also discussed. Recent research and evolving concepts have led to a paradigm shift in anticancer therapy, from conventional cancer-centered chemotherapy to angiogenic or “metronomic” chemotherapy and/or combined angiogenesis inhibitors. The epigenetic strategy, which views the tumor system as a whole, transcends the cancer gene-centered approach.