

Vascular endothelial growth factor

In contrast with the prevailing view that most tumors and metastases begin as avascular masses, evidence is presented here that a subset of tumors instead initially grows by [coopting](#) existing host vessels. This coopted host vasculature does not immediately undergo angiogenesis to support the tumor but instead regresses, leading to a secondarily avascular tumor and massive tumor cell loss. Ultimately, however, the remaining tumor is rescued by robust angiogenesis at the tumor margin. The expression patterns of the angiogenic antagonist angiopoietin-2 and of pro-angiogenic vascular endothelial growth factor (VEGF) suggest that these proteins may be critical regulators of this balance between vascular regression and growth ¹⁾

Vascular endothelial growth factor (VEGF) is a member of the VEGF/platelet-derived growth factor gene family. The binding to the [tyrosine kinase](#) VEGF receptor-2 stimulates tumor progression producing [angiogenesis](#), vascular permeability and mitogenesis ^{2) 3)}.

In [glioblastoma](#), tumor progression appears to be triggered by expression of VEGF, a regulator of blood vessel permeability.

Vascular endothelial growth factor (VEGF) is the major proangiogenic factor in many solid tumors. Vascular endothelial growth factor receptor (VEGFR) is expressed in abundance in pediatric patients with [medulloblastoma](#) and is associated with tumor metastases, poor prognosis, and proliferation.

[Bevacizumab](#) is a monoclonal antibody that inhibits angiogenesis by clearing circulating VEGF, resulting in a decline in the contrast-enhancing tumor, which does not always correlate with treatment response.

Malignant glioma treated with anti-vascular endothelial growth factor (VEGF) [bevacizumab](#) show progression patterns that vary with different mechanisms of resistance.

[Angiopoietin](#) is part of a family of [vascular endothelial growth factors](#) that play a role in embryonic and postnatal [angiogenesis](#).

Vascular endothelial growth factor A (VEGF-A)

[Vascular endothelial growth factor A.](#)

Vascular endothelial growth factor C

[Vascular endothelial growth factor C](#)

Vascular Endothelial Growth Factor in chronic subdural hematoma

see [Vascular Endothelial Growth Factor in chronic subdural hematoma](#)

1)

Holash J, Maisonpierre PC, Compton D, Boland P, Alexander CR, Zagzag D, Yancopoulos GD, Wiegand SJ. Vessel cooption, regression, and growth in tumors mediated by angiopoietins and VEGF. *Science*. 1999 Jun 18;284(5422):1994-8. PubMed PMID: 10373119.

2)

Sweet JA, Feinberg ML, Sherman JH. The role of avastin in the management of Glioblastoma recurrence. *Neurosurg Clin N Am*. 2012;23:331-41.

3)

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