

Lymphovascular invasion (Core)

Lymphovascular invasion refers to the presence of melanoma cells within the lumina of blood vessels (termed vascular invasion) or lymphatics (termed lymphatic invasion), or both. Lymphovascular invasion is identified by the demonstration of melanoma cells within the lumina of blood vessels or lymphatics, or both.

Lymphovascular invasion is recorded as present or absent. It is an uncommon finding in the excision specimens of primary cutaneous melanoma, but is generally regarded as a marker of poor prognosis.^{1,2,3,4} There is a possible role for immunohistochemistry to highlight the presence of vascular invasion in selected cases.^{3,5} At times it may be difficult to distinguish whether invasive tumour is present within a lymphatic channel or represents a microsatellite. In this instance, the use of immunohistochemistry for a specific lymphatic marker such as D2-40 may assist in distinction. Invasion of tumour into the wall of a blood vessel but without tumour within the lumen of the blood vessel, should not be recorded as lymphovascular invasion.

References

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- 2 Kashani-Sabet M, Sagebiel RW, Ferreira CM, Nosrati M and Miller 3rd JR (2001). Vascular involvement in the prognosis of primary cutaneous melanoma. *Archives of Dermatology* 137(9):1169–1173.
- 3 Yun SJ, Gimotty PA and Hwang WT et al (2011). High lymphatic vessel density and lymphatic invasion underlie the adverse prognostic effect of radial growth phase regression in melanoma. *Am J Surg Pathol Case Rev* 35:235-242.
- 4 Xu X, Chen L and Guerry D et al (2012). Lymphatic invasion is independently prognostic of metastasis in primary cutaneous melanoma. *Clin Cancer Res* 18:229-237.
- 5 Petersson F, Diwan AH and Ivan D et al (2009). Immunohistochemical detection of lymphovascular invasion with D2-40 in melanoma correlates with sentinel lymph node status, metastasis and survival. *J Cutan Pathol*. 36:1157-1163.