Letter to the Editor

Contribution of Endothelial Cells of Hematopoietic Origin to Blood Vessel Formation

To the Editor:

Crosby et al.1 noted in their report that the recruitment of bone marrow–derived endothelial progenitor cells to newly forming blood vessels might have been hitherto overlooked. Postulated already a century ago,2 there is now ample evidence for a close association between blood progenitor cells and angiogenesis3 and the existence of a hemangioblastic progenitor capable of generating blood cells as well as endothelial cells.4–6 Also, the integration of bone marrow–derived endothelial cells or their progenitors into sites of neangiogenesis is well-known.7–9 Their view that bone marrow–derived endothelial cells or their progenitors from the bone marrow,9 and the delivery of VEGF to subjects may be deleterious.12,13 Hypoxia can also launch mobilization of endothelial precursor cells from the bone marrow, as hematopoietic cytokines (granulocyte/macrophage colony-stimulating factor) can do.14 Malignant tumor growth results in hypoxia within the neoplastic tissue, potentially mobilizing bone marrow–derived endothelial cells as well in a paracrine fashion, thus contributing to the sprouting of new tumor vessels. Moreover, cytokines accelerating hematopoietic recovery after myelotoxic chemotherapy might also promote the growth of tumor vessels by recruiting endothelial cells from the bone marrow, an issue that deserves critical evaluation.

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