Background: Characteristics of primary solid tumors such as histological grade, tumor size, and regional lymph node status have been used for a long time as prognostic features to identify patients who need adjuvant therapy. Over several years, biologic and molecular tumor characterization has become an important aspect of cancer therapy. Angiogenesis directly affects growth and metastasis of solid tumors.

Objectives: The aim of this study was to assess the intratumoral microvessel density (MVD) and the inflammatory infiltrate in patients after surgery with or without previous radiotherapy. The prognostic values of angiogenesis and inflammatory infiltrate was explored in relationship to various clinicopathological characteristics.

Materials and Methods: Radical hysterectomy specimens from 60 cervical squamous carcinoma patients were immunohistochemically investigated for the expression of CD34, CD45, CD3, CD20. Slides were cut at 5 µm from formalin-fixed, paraffin-embedded blocks. Staining was done with monoclonal primary antibodies DAKO.

Results: MVD was semiquantitatively assessed in 55 subjects, the mean number of vessels identified in each tumor sample being significantly greater than the mean number identified (m = 42 ± 21 standard deviation [SD], p < 0.001). On the other hand, abundant inflammatory infiltrate accompanied angiogenesis, suggesting a cytokine support offered by inflammatory cells.

Conclusions: Vessel counts might help identify high-risk patients for whom adjuvant or combined modality treatments are appropriate. As biomolecular advances are made in anti-angiogenic therapy, an angiogenic panel that includes specific microvessel density information for individual patients might prove useful. Microvessel counts might be one of the most important clinical indicators for prognosis.