[S100 protein positive sustentacular cells in pulmonary carcinoids and thoracic paragangliomas: differential diagnostic and prognostic evaluation].

Paragangliomas have a classical histomorphology comprising a so-called "Zellballen" or nesting pattern with surrounding S100 protein positive sustentacular cells (SC) which form a meshwork with a wire-fence appearance. In adrenal and extra-adrenal paragangliomas the prevalence of SC is inversely associated with the patients' outcome. In order to get more insight into the prevalence as well as the prognostic and differential diagnostic value of this cell population in pulmonary carcinoids, we investigated a panel of 26 tumorlets, 147 typical and atypical pulmonary carcinoids and ten thoracic paragangliomas immunohistochemically. We were able to demonstrate that S100 protein positive cells are similarly distributed in both thoracic paragangliomas and pulmonary carcinoids. Hence, the presence and distribution of these cells does not appear to represent a reliable criterion in differential diagnosis. Moreover, all pulmonary carcinoid patients with a worse outcome had low numbers of or no S100 protein positive cells in their tissue specimens. Thus, the prevalence of these cells may potentially aid in prognostic assessment of pulmonary carcinoids, especially in biopsies.