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Letter to the Editor

sMICA and its emerging role as a prognostic and diagnostic indicator in systemic malignancies besides hepatocellular carcinoma

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I read the recent article by Li *et al.*[1] with great interest. Intriguingly, emerging evidence suggests that soluble major histocompatibility complex class I–related chain A (sMICA) may be an important diagnostic and prognostic marker in a number of systemic malignancies besides hepatocellular carcinoma.

For instance, higher sMICA levels are seen in oral squamous cell carcinomas of high TNM stages[2]. Thus, sMICA can be used as a diagnostic and prognostic indicator of advanced stage and especially lymph node metastasis in oral carcinomas. Tamaki *et al.*[3] have shown that patients with oral carcinomas with high sMICA levels (⩾50 ng/L) have lower overall survival rates than do patients with low sMICA levels (<50 ng/L). sMICA may also be used as a diagnostic biomarker in pancreatic ductal adenocarcinomas. When used in conjunction with serum uric acid and sMICB, sMICA provides additional information on the prognosis of pancreatic ductal adenocarcinoma[4]. sMICA also exhibits higher specificity and sensitivity when compared with CA19-9, a known marker for pancreatic ductal adenocarcinomas. Indeed, Chung *et al.*[4] reported a sensitivity of 76.5% and a specificity of 91.2% for sMICA, while a sensitivity of 73.5% and a specificity of 90.9% for CA19-9. Moreover, sMICA levels were found to be closely related to distant metastasis of pancreatic cancer. Collectively, the three markers sMICA, sMICB, and CA19-9 provide more information than did CA19-9 alone.

In colorectal cancer, sMICA levels alter in the advanced stages. These elevated levels may prove to be a highly sensitive marker for advanced stage colorectal cancer[5]. A close relationship exists between the TNM stage and sMICA levels in breast cancers; as with other cancers described here, breast cancers of advanced TNM stage exhibit higher sMICA levels. sMICA contributes to immunological escape of mammary neoplasms by impairing immune surveillance mediated by natural killer cells[6]. At the same time, it attenuates natural killer group 2, member D (NKG2D) expression. A simultaneous attenuation effect is seen in interferon-gamma secretion.

Poorly differentiated and late-stage osteosarcomas demonstrate higher sMICA levels, making sMICA an excellent prognostic and diagnostic indicator of advanced stages in osteosarcomas[7]. sMICA is also a highly accurate independent prognostic indicator in multiple myelomas. Poor progression-free survival rates are seen in multiple myelomas with sMICA levels greater than 305 pg/mL[8].

The above examples clearly illustrate the diagnostic and prognostic significance of sMICA in systemic cancers and the need for further studies to establish similar plausible relationships in other systemic malignancies.

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