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ASO AUTHOR REFLECTIONS

ASO Author Reflections: CXCR7 and CXCL12 Expression as Biomarker in Patients with Esophageal Adenocarcinoma

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PAST

Chemokines are mediators of chronic inflammation and play a key role in the initiation and/or progression of cancers,[1] including esophageal cancer (EC).[2] EC has two major histological subtypes, squamous cell carcinoma (ESCC) and adenocarcinoma (EAC). Studies of chemokines and receptors in EC were mainly performed on ESCC, and there are few reports on EAC.[3]

PRESENT

CXC chemokine, CXCL12, and its receptors, CXCR4 and CXCR7, are involved in angiogenesis, proliferation, and metastasis in tumorigenesis and are often reported as biomarkers in various cancers. Goto et al.[4] investigated the relationship of expression of CXCL12 and its receptors on prognosis of patients with EAC. This study examined 55 patients with EAC who underwent esophagectomy. Tissue microarray immunohistochemistry was used to evaluate the expressions of CXCL12, CXCR4, and CXCR7. Interestingly, high expression of CXCR7 (not CXCL12's primary receptor CXCR4) was significantly associated with lymphatic invasion and higher number of lymph node metastases. Patients with high CXCR7 expression was associated with worse overall and disease-free survival. High expression of both CXCR7 and CXCL12 was an independent prognostic factor for overall and disease-free survival on multivariate analysis.

FUTURE

CXCR7 was demonstrated as a promising biomarker in EAC, and high expression of CXCR7 and its ligand, CXCL12, may have even bigger impact on prognosis of EAC. Further study of other chemokines and receptors as potential biomarkers for EAC should be done. Comparative studies between ESCC and EAC may reveal the similarities and differences in these two types of EC, improve our understanding in tumorigenesis of EC, and provide diagnostic biomarkers and therapeutic targets.

DISCLOSURE The authors declare that they have no conflicts of interest.

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