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The relationship of serum CEA and CA 19-9 levels to liver metastasis and pancreatic invasion  
in esophageal cancer

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 [Keywords](#)  
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**Abstract:** Aim: Previous studies have examined levels of CEA and CA 19-9 in esophageal cancer patients, but have not determined a significant relationship between CEA and CA 19-9 levels and liver metastasis and pancreatic invasion in patients with esophageal cancer. In this study, we compared the serum levels of CEA and CA 19-9 in patients with esophageal cancer with and without liver and pancreatic metastasis. Materials and methods: The serum levels of CEA and CA 19-9 were measured in clinic patients between January 2007 and January 2008, including 10 patients with liver metastasis (4) and pancreas invasion (6), and 40 patients with esophageal cancer without distant organ metastasis. Results: A significant relationship was found between CEA levels in patients with liver metastasis and pancreatic invasion ( $P = 0.008$  and  $P = 0.001$ , respectively). CA 19-9 levels were significantly higher in patients with pancreatic invasion compared to patients without pancreatic invasion ( $P = 0.001$ ). There was also a significant difference in CA 19-9 levels between the group with liver metastasis and the group with pancreatic invasion ( $P = 0.028$ ). Conclusion: It is important to measure serum CEA and CA 19-9 levels in all subjects with esophageal cancers in order to detect possible liver metastasis and pancreatic invasion.

**Key words:** Esophageal cancer, metastasis, tumor marker, CEA, CA 19-9

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