Guanylyl Cyclase C Messenger RNA is a Biomarker for Recurrent Stage II Colorectal Cancer

Reviewers: Li Liu, MD

Précis: In this study, expression of guanylyl cyclase C mRNA appeared to be strongly associated with the presence of colorectal cancer micrometastases that could not be detected by standard histopathologic examination.

Introduction
The decision to administer adjuvant chemotherapy to patients with colorectal cancer is primarily based on tumor staging. Lymph node involvement is a critical component of the staging system. Various methods have been utilized in addition to conventional microscopic exam to increase the sensitivity and specificity of identifying tumor cells in the lymph nodes. Dr. Cagir and his colleagues form Thomas Jefferson University Medical Center examined the expression of guanylyl cyclase C messenger RNA (mRNA) in lymph nodes of patients with node-negative colorectal cancer.

Method
mRNA in lymph nodes from 21 patients with node-negative colorectal cancer who had undergone surgery were analyzed using reverse transcriptase polymerase chain reaction (RT-PCR). Of these, 11 patients had no evidence of disease for 6 or more years after surgery, and 10 developed metastases within 3 years after surgery.

Results
- Expression of guanylyl cyclase C mRNA was found in all patients with recurrent disease but not in those without recurrent disease.
- Carcinoembryonic antigen (CEA) mRNA was found in only one of the 10 patients with recurrent disease.

Discussion
Expression of guanylyl cyclase C mRNA appeared to be strongly associated with the presence of colorectal cancer micrometastases that could not be detected by standard histopathologic examination. This study may help physicians to identify the subgroup of patients with colorectal cancer who may benefit from early administration of adjuvant chemotherapy.

OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.