

Patient Summary

Should *UGT1A1* Genotyping be Used to Predict Response to Irinotecan Chemotherapy in Patients with Metastatic Colorectal Cancer?

Recommendations from the EGAPP™ Working Group

The independent Evaluation of Genomic Applications in Practice and Prevention (EGAPP™) Working Group (www.egappreviews.org/workingrp.htm) reviewed the scientific evidence to see whether *UGT1A1* genetic testing is valid and useful for predicting individual patient response to irinotecan chemotherapy for metastatic colorectal cancer. This brief summary can help the general public understand what the EGAPP™ Working Group concluded in their 2009 recommendation statement, and where to find more information.

Disclaimer: Our office does not offer medical advice to individuals. If you have specific concerns about your health, please discuss them with your doctor.

Who do the recommendations apply to?

People with colon cancer that has spread (metastatic), who are to receive treatment with the chemotherapy drug irinotecan.

What is the proposed use for the genetic test?

To find out how the person's body will use the medication (irinotecan) - whether they might need a higher or lower dose, or if they have a greater chance of severe side effects.

What does the genetic test look for?

The test looks for specific changes in a gene (*UGT1A1*) that produces a protein involved in the body's break down (metabolism) of irinotecan to its inactive form.

Who developed this recommendation?

The EGAPP™ Working Group is made up of scientists and health care experts who review available research and evidence to make recommendations about the use of genetic tests. This independent panel includes representatives from clinical practice, public health, laboratory practice, genomics, epidemiology, economics, ethics, policy, and health technology assessment.

Did EGAPP™ recommend using *UGT1A1* genotyping to predict response to irinotecan chemotherapy in patients with metastatic colorectal cancer?

- **NO:** The EGAPP™ Working Group did not find enough evidence to indicate that *UGT1A1* genotyping should be used routinely for cases of metastatic colon cancer that are to be treated with irinotecan. They also did not conclude that it should never be used. The available evidence did not prove that this test leads to a better outcome for the patient.
 - The Working Group did find evidence that the test can accurately identify the common changes in the *UGT1A1* gene, and that certain changes are linked to severe side effects or differences in how well the drug works.
 - The Working Group did mention that the test be of benefit for *some* patients, if the doctor ordering the test has a good understanding of the potential benefits and harms, and patient preferences are considered.

Other Information

How do I find out more about this type of genetic testing?

You should talk to your oncologist or other healthcare provider if you have questions about *UGT1A1* genotyping.

The Web sites below provide additional information on colorectal cancer and irinotecan chemotherapy treatment.

- Colorectal (Colon) Cancer, Centers for Disease Control and Prevention (<http://www.cdc.gov/cancer/colorectal/>)
- Colon and Rectal Cancer, National Cancer Institute (<http://www.cancer.gov/cancertopics/types/colon-and-rectal>)
- Learn About Colon and Rectum Cancer, American Cancer Society (http://www.cancer.org/docroot/LRN/LRN_0.asp?dt=10)

