Epi proColon® 2.0 CE is a blood test for colorectal cancer screening.

About Epi proColon 2.0 CE ................................................................. 2
Screening Recommendations .......................................................... 3
What You Should Know About Epi proColon 2.0 CE
and the SEPT9 DNA Biomarker ......................................................... 4
Patient Testing with Epi proColon 2.0 CE ........................................... 5
Clinical Performance & Adherence Overview ................................. 6
Understanding Epi proColon 2.0 CE Results .................................... 7
References ....................................................................................... 8

epigenomics Detecting Cancer In Blood.
About Epi proColon 2.0 CE

The Epi proColon 2.0 CE test is a qualitative in vitro diagnostic test for the detection of methylated SEPT9 DNA in EDTA plasma derived from patients whole blood specimens. Methylation of the target DNA sequence in the promoter region of the SEPT9_v2 transcript has been associated with the occurrence of colorectal cancer (CRC). The test uses a real-time polymerase chain reaction (PCR) with a fluorescent hydrolysis probe for the methylation specific detection of the SEPT9 DNA target.

The Epi proColon 2.0 CE test is indicated to screen adults of either sex, 50 years or older, defined as average risk for CRC. Patients with a positive Epi proColon 2.0 CE test result should be referred for diagnostic colonoscopy. The Epi proColon 2.0 CE test results should be used in combination with physician’s assessment and individual risk factors in guiding patient management.

The Epi proColon 2.0 CE test is not intended for patients defined as having elevated risk for developing CRC based on previous history of colorectal polyps, CRC or related cancers, inflammatory bowel disease (IBD), chronic ulcerative colitis (CUC), Crohn’s disease, familial adenomatous polyposis (FAP). People at higher risk also include those with a family history of CRC.

The Epi proColon 2.0 CE test has not been evaluated in patients who have been diagnosed with a relevant familial (hereditary) cancer syndrome, such as non-polyposis colorectal cancer (HNPCC or Lynch Syndrome), Peutz-Jeghers Syndrome, MYH-Associated Polyposis (MAP), Gardner’s syndrome, Turcot’s (or Crail’s) syndrome, Cowden’s syndrome, Juvenile Polyposis, Cronkhite-Canada syndrome, Neurofibromatosis, or Familial Hyperplastic Polyposis, or in patients with anorectal bleeding, hematochezia, or with known iron deficiency anemia.
Screening Recommendations

The European guidelines for quality assurance in colorectal cancer (CRC) screening and diagnosis recommend colorectal cancer screening for women and men beginning at the age of 50. There are a number of screening tests to choose from including colonoscopy and stool blood tests.

Epi proColon 2.0 CE test provides an additional option to consider for colorectal cancer screening for your patients who have a history of not completing screening by colonoscopy and stool tests.
What You Should Know About Epi proColon® 2.0 CE and the SEPT9 DNA Biomarker

Epi proColon 2.0 CE is a molecular test that detects methylated SEPT9 DNA in blood.¹,²

DNA methylation of the SEPT9 gene is increased in colorectal cancer.¹–³

Methylated SEPT9 DNA can be found in tumor DNA that has been shed into the bloodstream from proximal and distal colon and rectal sites, making it a differential blood biomarker for the early detection of colorectal cancer.¹–³
Patient Testing with Epi proColon® 2.0 CE

Your patient’s blood sample may be drawn in your office laboratory as part of their routine health check.

About Getting Tested
The test does not require pretest dietary or medication restrictions before blood is drawn.

Within a few days, you will receive your patient’s test result.

Share the Epi proColon 2.0 CE test result with your patient, and together, decide if there is any additional follow-up necessary.

Patients with positive Epi proColon 2.0 CE test results should be referred for diagnostic colonoscopy.

About the Benefits
Epi proColon 2.0 CE is a blood test choice for your patient. A blood test is a routine and patient-accepted method of testing.

Epi proColon 2.0 CE detects methylated SEPT9 DNA that is associated with colorectal cancer.1-3

When found early, CRC is usually curable.4

Choice and preference are key factors that influence patient behavior.4-6

Important Considerations
Patients without a diagnosed CRC but with documented chronic conditions, comorbidity or on medications were tested to determine potential effects on Epi proColon 2.0 CE results. No significant impacts were detected.1

Positive results have been observed in patients with chronic gastritis, esophagitis and non-rheumatoid arthritis, and lung, breast and prostate cancers.1

Positive test results have been found in pregnant women.7

Test results should be interpreted by a healthcare professional.
Clinical Performance\(^1\)

From an average-risk screening population, prospectively collected clinical samples from 149 patients with no evidence of disease (NED) were enrolled to evaluate the clinical performance of Epi proColon 2.0 CE. Additionally, in a case-control design, 197 clinical samples from 99 colonoscopy-verified negative NED patients and 98 histologically-confirmed colorectal carcinoma patients (all CRC stages) were collected and evaluated.

<table>
<thead>
<tr>
<th></th>
<th>Screening Cohort</th>
<th>Case-Control Cohort</th>
<th>CRC Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Results</td>
<td>149</td>
<td>99</td>
<td>98</td>
</tr>
<tr>
<td>Epi proColon 2.0 CE</td>
<td>1</td>
<td>3</td>
<td>79</td>
</tr>
<tr>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epi proColon 2.0 CE</td>
<td>148</td>
<td>96</td>
<td>19</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity</td>
<td>99,3(^{%}) (95,0% CI, 96,3–100,0)</td>
<td>96,9(^{%}) (95,0% CI, 91,5–99,0)</td>
<td>N/A</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>N/A</td>
<td>N/A</td>
<td>80,6(^{%}) (95,0% CI, 71,7–87,2)</td>
</tr>
<tr>
<td>NPV(^*)</td>
<td>99,9(^{%})</td>
<td>99,9(^{%})</td>
<td>N/A</td>
</tr>
<tr>
<td>PPV(^*)</td>
<td>28,9(^{%})</td>
<td>11,9(^{%})</td>
<td>N/A</td>
</tr>
</tbody>
</table>

NPV and PPV were calculated with a presumed prevalence of 0,5\(^{\%}\) for CRC in the average-risk population.

PPV (Positive Predictive Value) = percent probability that a person with a positive test result has CRC

NPV (Negative Predictive Value) = percent probability that a person with a negative test result does not have CRC

Adherence\(^4\)

In a CRC screening adherence study, 172 people eligible for CRC screening were enrolled and advised to undergo screening by colonoscopy. People unwilling to be screened by colonoscopy were subsequently offered non-invasive blood and stool test options for screening. Of the 109 (63\(^{\%}\)) people refusing screening colonoscopy, 90 (83\(^{\%}\)) chose the blood test and 16 (15\(^{\%}\)), the stool test. This study highlights the importance of offering a non-invasive blood test alternative to increase the acceptance of CRC screening in non-adherent patients, Figure 1.
Understanding Epi proColon 2.0 CE Results

A **POSITIVE BLOOD TEST RESULT** indicates that methylated SEPT9 DNA has been detected in the plasma sample tested. Methylated SEPT9 DNA has been associated with the occurrence of colorectal cancer. Because the Epi proColon 2.0 CE test is not a confirmatory test for the presence of colorectal cancer, patients with positive Epi proColon 2.0 CE test results should be referred for diagnostic colonoscopy. See Important Considerations on page 5.

A **NEGATIVE BLOOD TEST RESULT** indicates the absence of methylated SEPT9 DNA in the plasma sample tested. Because a negative test result is not confirmatory for the absence of colorectal cancer, persons should be advised to continue participating in colorectal cancer screening.
Find Out More

To learn more about Epi proColon 2.0 CE, please visit epiprocolon.com/en/
medical-professionals where you will find answers to commonly asked questions.
Please contact us in any of the other following ways:

Email Support@epigenomics.com
On-line epiprocolon.com
Phone +49 30 24345 222

REFERENCES

1 Epi proColon 2.0 CE Instructions for Use (IFU 0009) and Epigenomics data on file.
2 deVos T et al. Circulating methylated SEPT9 DNA in plasma is a biomarker for colorectal cancer.
3 Lofton-Day C et al. DNA methylation biomarkers for blood-based colorectal cancer screening.
5 Inadomi J et al. Adherence to colorectal cancer screening, a randomized clinical trial of competing
7 Warren J et al. Septin 9 methylated DNA is a sensitive and specific blood test for colorectal cancer.
8 Adler A et al. Improving compliance to colorectal cancer screening using blood and stool based tests in
   patients refusing screening colonoscopy in Germany. BMC Gastroenterol. 2014, 14:183.

Epi proColon® is a registered trademark of Epigenomics AG, in Europe, USA and/or other selected countries.
All other trademarks, brands, and names contained herein are the property of their respective owners.

MKT0049 Rev3 ©2019 Epigenomics AG, Germany