RAPID qPCR TEST FOR COLON CANCER

DIAGNOSTICS

Gene expression panel that differentiates between malignant and benign polyps for the diagnosis and treatment of colon cancer.

TECHNOLOGY TYPE
Biomarkers
Oncology
Colon Cancer

STAGE OF DEVELOPMENT
Gene expression panel validated with clinical samples by qPCR.

IP PROTECTION
Nationalized PCT Pending in the United States
Methods and Compositions for Predicting a Colon Cancer Subtype
US20190032147A1

LEARN MORE
Reference Number: U-5988

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TECHNOLOGY SUMMARY
Colon cancer is the second leading cause of cancer-related deaths in the United States, causing over 50,000 deaths each year. Sessile serrate colon adenoma/polyps (SSA/Ps) cause 20 to 30 percent of colon cancers. Routine screening colonoscopies help diagnose colon cancer by detecting polyps, but overlapping features make differentiating between malignant (SSA/P) and benign hyperplastic (HP) polyps difficult. In effect, patients falsely diagnosed with hyperplastic polyps fail to undergo necessary follow-on surveillance for colon cancer.

A newly derived panel of expressed genes distinguishes between SSA/Ps and HPs, and detects which polyps produce a higher risk of colon cancer. The seven gene panel includes twenty-eight markers associated with cancerous SSA/Ps, resulting in lower detection limits and higher sensitivity. The panel also acts as a more effective colon cancer screening method by identifying colon cancer inducing genes that were discovered via RNA-seq analysis. Improved polyp classification has immediate clinical and research significance, with the potential to become a gold standard diagnostic.

FEATURES AND BENEFITS
- Provides the first reliable molecular test that differentiates SSA/Ps from benign polyps.
- Improves diagnostic sensitivity and specificity to over 85 percent.
- Enables better therapeutic strategies and appropriate disease surveillance by accurately predicting cancer risk.

RECENT PUBLICATIONS
Kanth, P., Bronner, M.P., Boucher, K.M., Burt, R.W., Neklason, D.W., Hagedorn, C.H., Delker, D.A. (2016). Gene signature in sessile serrated polyps identifies colon cancer subtype. *Cancer Prevention Research (Philadelphia PA)*. 9(6): 456-65. doi: 10.1158/1940-6207.CAPR-15-0363.

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DATE UPDATED: 7/17/2019