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.

TECHNOLOGY SUMMARY

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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


INVENTOR PROFILE

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