

NOVEL URINARY PROTEIN BIOMARKER PANEL FOR EARLY DETECTION OF COLORECTAL CANCER

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Poster

Colorectal

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A case-control study established a urinary protein biomarker panel combining DPEP1 and TFF1 that detected stage 0-III colorectal cancer with 94.3% sensitivity and 63.4% specificity.

KEY POINTS

- The biomarker panel was developed using iTRAQ-LC-MS discovery (n=32), ELISA training (n=220), and independent ELISA validation (n=111) across 373 age- and sex-matched participants including 175 stage 0-III CRC patients and 299 healthy controls.
- Among 78 urinary proteins with aberrant expression identified, DPEP1 and TFF1 were the top two biomarkers; their combination achieved an AUC of 0.870 for stage 0-III CRC diagnosis.
- The panel detected stage 0-I CRC with an AUC of 0.852, 93.8% sensitivity, and 61.6% specificity.
- The authors conclude this urinary biomarker panel offers a completely non-invasive method for early CRC detection, addressing limitations of current screening tools such as fecal immunochemical tests.
- This work is relevant to researchers and clinicians interested in non-invasive biomarkers for colorectal cancer screening.

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