

3: Lancet. 2004 Apr 17;363(9417):1283-5.

Methylation changes in faecal DNA: a marker for colorectal cancer screening?

Muller HM, Oberwalder M, Fiegl H, Morandell M, Goebel G, Zitt M, Muhlthaler M, Ofner D, Margreiter R, Widschwendter M.

Department of General and Transplant Surgery, Medical University Innsbruck, A-6020 Innsbruck, Austria.

DNA methylation is a common molecular alteration in colorectal cancer cells. We report an assessment of faecal DNA from patients with colorectal cancer and controls to determine the feasibility, sensitivity, and specificity of this approach. By use of MethyLight analysis of faecal DNA from three independent sets of patients, we identified SFRP2 methylation as a sensitive single DNA-based marker for identification of colorectal cancer in stool samples (sensitivity 90% [CI 56-100] and specificity 77% [46-95] in the training set [n=23]; sensitivity 77% [46-95] and specificity 77% [46-95] in an independent test set [n=26]). Whether a combination of genetic and epigenetic markers will identify colorectal cancer at an early stage remains to be shown.