

TUMOUR MARKERS IN COLON CANCER: FB-2004

Description

Markers for the diagnosis and prognosis of colon cancer based on the methylation of a set of genes, through stool samples.

Indications

Diagnosis and prognosis of colon cancer.

Format and technique

The format is a PCR microarray with 5 genes and the technique is a DNA chip.
The kit will be used in stool samples.

Current situation

The good preliminary results were confirmed in an observational study, with the goal to evaluate the sensitivity and specificity of a diagnostic kit for the study of the methylation of the identified promoters, in comparison with the procedures of detection of FOBT using the patient's clinical history as a reference.

A validation study has been done with a population of 82 patients with the following results: Sensitivity of the kit in the diagnosis of carcinomas is 62% and of adenomas is 41%. The specificity of the kit is 100% for adenomas and for carcinomas.

Publications

1. Azuara D, Rodriguez-Moranta F, de Oca J, Sanjuan X, Guardiola J, Lobaton T, Wang A, Boadas J, Piqueras M, Monfort D, Galter S, Esteller M, Moreno V, Capellá. **"Novel Methylation Panel for the Early Detection of Neoplasia in High-risk Ulcerative Colitis and Crohn's Colitis Patients"**. G. Inflamm Bowel Dis. 2013 Jan; 19(1):165-173.
2. Fernandez AF, Assenov Y, Martin-Subero JI, Balint B, Siebert R, Taniguchi H, Yamamoto H, Hidalgo M, Tan AC, Galm O, Ferrer I, Sanchez-Cespedes M, Villanueva A, Carmona J, Sanchez-Mut JV, Berdasco M, Moreno V, Capella G, Monk D, Ballestar E, Ropero S, Martinez R, Sanchez-Carbayo M, Prosper F, Agirre X, Fraga MF, Graña O, Perez-Jurado L, Mora J, Puig S, Prat J, Badimon L, Puca AA, Meltzer SJ, Lengauer T, Bridgewater J, Bock C, Esteller M. **"A DNA methylation fingerprint of 1628 human samples"**. Genome Res. 2012 Feb; 22(2):407-19.
3. Azuara D, Rodriguez-Moranta F, de Oca J, Soriano-Izquierdo A, Mora J, Guardiola J, Biondo S, Blanco I, Peinado MA, Moreno V, Esteller M, Capellá G. **"Novel methylation panel for the early detection of colorectal tumors in stool DNA"**. Clin Colorectal Cancer. 2010 Jul; 9(3):168-76.
4. Baek YH, Chang E, Kim YJ, Kim BK, Sohn JH, Park DI. **"Stool methylation-specific polymerase chain reaction assay for the detection of colorectal neoplasia in Korean patients"**. Dis Colon Rectum. 2009 Aug; 52(8):1452-9; discussion 1459-63.

Intellectual Property

- Spanish Patent GRANTED: 200803127 (Concession date: 21st July 2011).
- USA Patent GRANTED: 12/264,024 (Concession date: 8th November 2011).
- European Patent pending: 20110499 (Priority date: 3rd August 2008).

