

## Metabolic Syndrome and Colorectal Neoplasm

### —Implication on Screening and Treatment

#### Metabolic syndrome and gastrointestinal problems

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Metabolic syndrome has become a major public health challenge worldwide. In addition to its huge impact on cardiovascular diseases, some components of metabolic syndrome have been identified as risk factors for certain gastrointestinal diseases<sup>1,2</sup>. We organized the 「MAGIC」 study (Metabolic syndrome in Association with Gastro-Intestinal Conditions) and aimed to understand the relationship between metabolic disorders and alimentary aberrant conditions including colorectal neoplasm.

#### **Metabolic syndrome and colorectal adenoma**

Colon adenoma is a well-established pre-malignant lesion of colorectal cancer. Subjects with metabolic syndrome have increased risk of developing colorectal adenoma, which is dose-dependent with the numbers of metabolic syndrome components<sup>2,3</sup>. Patients with colorectal adenomatous polyps have their specific metabolic profiles. Abdominal obesity is the component of the highest predictive value. Subjects with metabolic syndrome may warrant screening colonoscopy for preventing colorectal adenoma, especially when abdominal obesity or more than three components of metabolic syndrome exist.

#### **Colorectal cancer screening in individuals with multiple metabolic disorders**

Most colorectal cancers develop via the well-known adenoma–carcinoma sequence. Therefore, mortality and morbidity of colorectal cancer (CRC) can be reduced by detecting neoplasms at the precancerous or early stages through adequate screening for the average-risk population. According to a community-based multiple screening model proposed in Taiwan, using immunochemical fecal occult blood test (iFOBT) for CRC screening is cost effective when compared with the absence of screening. Simulation results suggest that annual mass screening for CRC using iFOBT could lead to a 23% mortality reduction. Importantly, annual iFOBT within a multiple disease screening program could lead to a 13% greater mortality reduction due to inclusion of screening for chronic diseases which are risk factors for CRC, such as type 2 diabetes and hypertension<sup>4,5</sup>.

## **Treatment**

Though epidemiologic evidence suggests metabolic syndrome is associated positively with colorectal neoplasm, whether control of metabolic syndrome can offer benefits in reducing CRC mortality remained unclear.

## **Reference:**

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