

Appendix 1

A typical case of average-risk in colorectal cancer

BD is a 52-year-old Caucasian female, with height of 5'6" and weight of 128 lbs [30]. She presented to her family doctor with complaints of weakness and fatigue, and she indeed appeared to be pale, although she continued to work. Also, she recently experienced a sharp weight loss (more than 10 lbs.) over the last half year, whereas she did not take diet or exercise. She thought these physical problems were attributable to menopause, as her menstrual periods were irregular. She doesn't believe there is any serious problem, because she has never smoked and rarely drinks alcohol.

Results of regular health examinations for her were normal, including blood pressure (132/86 mm Hg), pulse (86 beats/min), respiratory rate (22 breaths/min), temperature (37°C), cardiac examination (normal), and mammogram (normal). She had no colon cancer screening experience before, either colonoscopy or sigmoidoscopy.

The family doctor also asked about her family history of diseases. BD's mother has Type 2 Diabetes for a long time; her father died of acute myocardial infarction; and her elder brother has hypertension. Based on all the information obtained so far, physician advised her to take a colon cancer screening, as the unexplained weight loss implicates she might have colorectal health problem, which could be colorectal cancer.

BD's case is very typical for male and female above 50 years. According to national comprehensive cancer network (NCCN) colon cancer guideline, she belongs to the most common "average risk" group for colon cancer [7]. She is above 50, with no history of adenoma or colorectal cancer, and inflammatory bowel disease, and no family history of colon cancer. People in this group should take regular colon cancer screening program every 5 years or 10 years, with accordance with detailed requirements in different countries.