

Comparison of various strategies for colorectal cancer screening tests

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Colorectal carcinoma (CRC) is one of the most serious health problems worldwide. It is important to evaluate the health and economic impact of CRC screening strategies. Methods: A Markov model is using for strategy based on fecal occult blood test, capsule endoscopy, colonoscopy and no screening. The model is for population from 50 to 75 years of age. Results: Our model shows that the optimal timing for once-lifetime colonoscopy screening method is between 45 and 50 years of age and the twice-lifetime colonoscopy is the best screening strategies. This strategy is the most expensive of all supposed methods when we do not take into account for CRC treatment. But if for economic appraisal we suppose costs, which are connected with CRC treatment, then on the contrary, this strategy might be cheapest one as well. As far as the optimal timing for the twice-lifetime colonoscopy is concerned then it follows from our model that beginning of the second colonoscopy is at 59 years of age. Conclusion: The screening strategies probably save expenses on treatment of population and at the same time decreases mortality. The twice-lifetime colonoscopy is seemed to be the best strategy with respect to mortality and cost overall in case of subsequent treatment.

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