COST-EFFECTIVENESS STUDY OF AN ASPIRIN CHEMOPREVENTION ASSOCIATED OR NOT WITH A COLONOSCOPIC SURVEILLANCE IN THE COLORECTAL CANCER
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OBJECTIVES: To compare the medical and economical impact of four strategies in the prevention of colorectal cancer (CRC) in France: (1) no treatment and no surveillance (reference strategy); (2) chemoprevention with 325 mg daily aspirin; (3) colonoscopic surveillance with a 3, 5 or 10-year periodicity; and (4) the combination of the two latter strategies. METHODS: A Markov decision model was built, following a fictive 50-year-old cohort during 30 years. Effectiveness was assessed by CRC incidence and life expectancy. Transition probabilities were defined after an extensive review of literature. Only direct costs were considered. The various strategies were compared calculating incremental cost-effectiveness ratios. Determinist and probabilistic sensitivity analyses were carried out. RESULTS: Given an effectiveness of chemoprevention of 25%, the most effective strategy was the association chemoprevention and colonoscopic surveillance. While 4248 CRC for 100,000 persons were expected in a population without treatment or surveillance, 3228 CRC could be avoided with this association, 2798 with a colonoscopic surveillance and 1339 with the chemoprevention only. The more effective the strategy was, the more expensive it was. Compared with the reference strategy, the incremental cost-effectiveness ratio of the chemoprevention was €3279 per life-year gained. Compared with chemoprevention, colonoscopic surveillance involved an incremental cost of €6611 per life-year gained. The addition of a chemoprevention by aspirin among a screened population would result in an incremental cost-effectiveness ratio of €22,000 per life-year saved. Moreover, in the 5000 Monte Carlo simulations, the combination strategy was dominated by colonoscopic surveillance in 16% of cases. CONCLUSIONS: The 3 strategies of prevention or screening has acceptable incremental cost-effectiveness ratios according to the international standards. Contrary to common opinion, primary prevention through colonoscopic surveillance is cost-effective. Moreover, chemoprevention by aspirin appears to be an efficient strategy when it is associated to a colonoscopic surveillance.

CAPECITABINE VS. BOLUS 5-FU/LV AS ADJUVANT THERAPY FOR PATIENTS WITH DUKES’ C COLON CANCER:
PHARMACOECONOMIC EVALUATION OF X-ACT TRIAL—DATA FROM CZECH PERSPECTIVE
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OBJECTIVES: Oral capecitabine is highly active drug with favourable safety in adjuvant and metastatic colorectal cancer. Adjuvant capecitabine is at least as effective as 5-fluorouracil/leucovorin (5-FU/LV), with significant superiority in relapse-free survival and a trend towards improved disease-free and overall survival. METHODS: We assessed the cost-effectiveness of adjuvant capecitabine from payer (health insurance companies in Czech Republic) and societal perspectives (including indirect costs). We used clinical trial data and published sources to estimate incremental direct and societal costs and gains in quality-adjusted life months (QALMs). Acquisition costs were higher for capecitabine (99,601 CZK) than 5-FU/LV (8586 CZK), but higher 5-FU/LV administration costs, cost of adverse events and hospitalisation costs resulted in comparable direct costs for capecitabine and 5-FU/LV. RESULTS: Administration costs were significantly higher for 5-FU/LV (by 59,500 CZK), as well as cost of therapy for adverse effects (by 11,467 CZK). Societal costs, including patient travel/time costs, were lower for capecitabine group vs 5-FU/LV (cost savings 19,307 CZK), with lifetime gain in QALMs of 9 months. Medical resource utilisation (direct costs) are slightly higher with capecitabine vs 5-FU/LV in Czech Republic (by 18,687). The use of a societal perspective to measure the time and travel costs associated with the treatments illustrates the advantage of oral over infusion treatment. Counting together (direct and indirect costs) capecitabine is slightly less costly alternative (by 624 CZK) in comparison with 5-FU/LV. Capecitabine is also projected to increase life expectancy vs 5-FU/LV. And from the point of view of incremental cost-utility analysis capecitabine vs. 5-FU/LV can be considered to be dominant (cost-saving and more-effective) therapy. CONCLUSIONS: This pharmaco-economic analysis supports the place of therapy of capecitabine vs. 5-FU/LV in the adjuvant treatment of colon cancer in Czech Republic.