

Improvement of the efficiency of cervical and colorectal cancer screening using medico-economic models



TYPE
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Medico-economic studies
Finished and published

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UPDATE

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FRANCE • NATIONAL
Cancer screening

OBJECTIVE & RATIONALE

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The French national institute of cancer conducted medico-economic studies to compare the cost-effectiveness of various organized screening strategies to help decision-makers improving policies by implementing the most efficient strategies to ensure the participation rates in screening programs.

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KEY COMPONENTS / STEPS

- Set up a scientific steering committee, composed of representatives of national health agencies and experts, to advise on methodological choices, implementation and results of the evaluation.
- Determine strategies hypotheses to compare
- Collect all available literature and data (from literature, French experimentations, registers, etc.)
- Program consensual microsimulation models that replicate the natural history of cervical and colorectal cancer and which can compare screening strategies hypotheses and their consequences in term of expected results and cost on the French population characteristics and screening program.
- Analyze the cost-effectiveness and the cost-utility based on models' results.
- The French national institute of cancer was supported by a specialized service provider. A medico-economic study is a long process and takes about 2 years to produce a final report. The most important step is to correctly determine hypothesis and variables to include in the model.

KEY CONTEXTUAL FACTORS

- Colorectal cancer is the third most common cancer and the second most deadly in France. A nationwide colorectal screening program was set up in France from 2009. The participation rate in the program does not exceed 30%, even with the passage to the fecal immunochemical test.
- More than 3,000 cases of cervical cancer occur each year in France. Additionally, 40% of women aged 25 to 65 are not or not enough screening. That is why the French Cancer Plan (2014-2019) recommended to set up a national organized screening program for women not performing screening test.

MAIN IMPACTS / ADDED VALUE

- The medico-economic study on cervical screening was carried out before setting up the screening program. The study has confirmed the importance of implementing this program for women who do not spontaneously participate in screening. The program was generalized in 2018 based on the recommendations published in the report.
- No study had been carried out on the performance of the colorectal cancer screening program despite the low participation rates and the test change in 2015. This study made it possible to set up the online ordering of the screening kit and to experiment sending kits to the home.

LESSONS LEARNED

- Medico-economic studies using microsimulation models are useful for public decision-making.
- They were helpful to set up a new organized screening program for cervical cancer and to improve that for colorectal cancer.
- For colorectal cancer, the analyzes go even further in comparing of strategies for the high-risk population and in defining of personalized screening strategies according to the level of risk of people for colorectal cancer.

REFERENCES & DOCUMENTATION

- Medico-economic study of cervical screening Phase 1 and 2
- Towards the generalization of cervical cancer organized screening in France, BEH n°2-3, 2017
- Medico-economic study of colorectal screening
- Estimated impact of the current colorectal screening program in France, S.Barré & al, revue d'épidémiologie et de santé publique, 2020

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