

Analysis of the impact of lesion localization practices on the breast cancer care pathway

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## **Introduction**

The Quebec health network currently mainly uses harpoons for the location of non-palpable lesions for breast cancer surgery. In addition to being uncomfortable for patients, these harpoons must be placed on the day of surgery. This is why centers with a high throughput of operations for breast pathologies have turned to radioactive beads that can be put up to 1 week in advance. Given the strict regulations surrounding the management of radioactivity, a solution with magnetic beads or radar location is now increasingly used. However, these technologies are more expensive than the harpoon.

An analysis of the financial impact of this technology on the current care pathway of breast cancer patients undergoing a partial mastectomy aims to demonstrate the economic benefits of introducing this process in Quebec.

## **Methods**

The CHU de Québec – Université Laval analyzed the care pathway of more than 800 patients who underwent a partial mastectomy in the 2021-2022 fiscal year. The data used are those of the cost per care pathway and services (CPSS) which contains the details of all the consumption of services and the related costs, including the services of patients who had to be operated on again (re-excision).

The methodology consists of quantifying avoidable services delivered or efficiency gains based on internationally accepted evidence and comparing potential savings with the additional costs of deliveries.

## **Results**

Here are two examples of savings or efficiency gains.

\* The use of technology would reduce the rate of re-excision after a first operation. This rate is around 15%. [MP1]  
[NL(2)]

\* The locator can be deployed at any time prior to surgery. Radiological and surgical procedures no longer need to be scheduled on the same day, making it easier to plan both the imaging and the operating room [MP3][NL(4)] The services that would no longer be required and the efficiencies outweigh the additional cost of supplies.

## **Discussion/Conclusions**

The development of new health technologies creates pressure on health spending. In the current difficult budgetary context, the impact of the introduction of these technologies must be analysed both from the point of view of added value for the patient and the economic impact. The use of detailed cost information such as the CPSS in Quebec is essential to make the right choices, which are required for the survival of the public health care system.

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