Radio-guided Occult Lesion Localisation using Iodine-125 Seeds (ROLLIS)

Initiative Type

Technology

Status

Close

Added

26 June 2018

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21 July 2021

URL

https://clinicalexcellence.qld.gov.au/improvement-exchange/radio-guided-occult-lesion-localisation-using-iodine-125-seeds-rollis

Summary

ROLLIS is a technique where a small seed containing a very low dose of radioactive tracer (Iodine-125) is placed into the breast lesion by the radiologist. The surgeon uses a hand held probe

in theatre to accurately localise the lesion, plan the most appropriate incision and then remove the lesion together with a margin of surrounding normal tissue. Previously, hookwires where used to localize the lesion. The ROLLIS technique can be applied to all lesions, malignant or benign, which are impalpable and therefore require preoperative localization. In October 2017, the Gold Coast unit hosted the first training workshop for national and international participants.

Key dates

Sep 2014

Nov 2017

Implementation sites

Robina Hospital and Gold Coast University Hospital

Key Contacts

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Aim

Provides an opportunity to pilot and evaluate new technologies within 'real world' clinical settings in the Queensland context.

Benefits

Benefits of ROLLIS include:

- Patients reported superior comfort and acceptability of ROLLIS over the comparator.
- Patients with ROLLIS can have their surgery scheduled first for the day – no delays, greater management of other medical conditions (e.g. diabetes), or services (e.g. interpreters).
- ROLLIS enables improved efficiency and flow in radiology and in the operating theatre allowing more procedures to be performed with the same staffing.

Background

This technology was funded through the New Technology Funding and Evaluation Program (NTFEP). The NTFEP funds the introduction and evaluation of new technologies that:

- Are safe and effective
- Provide better health outcomes
- Provide value for money
- Provide greater access to care.

The evaluation findings will inform recommendations regarding the future use and/or investment of the technology within Queensland.

Evaluation and Results

- Radiologists and surgeons find the ROLLIS technique similar to hookwire, but Pathologists need to learn new skills and the learning curve is longer.
- No patient experienced a significant adverse event. This was achieved with the support of ROLLIS team in WA and learning from their experience.
- ROLLIS is suitable as the preferred localisation method and for diffusion beyond the Gold Coast Hospital and Health Service.

Lessons Learnt

- Time is required to gain radiation licensing for the use of the I-125 seed.
- Introduction of ROLLIS changes workflows in multiple departments and requires multidisciplinary support.
- Pathologists must learn new skills and the learning curve is correspondingly longer.
- ROLLIS can be implemented at low cost because it uses existing equipment.
- The ongoing costs are largely substituted rather than additional (cost of ROLLIS instead of cost of hookwire).

Resources

Technology evaluation summary

Evaluation report

PDF saved 13/03/2025