I-124 PET/CT for Thyroid Cancer

**Initiative Type** Technology
**Status** Deliver
**Added** 01 February 2018
**Last updated** 15 March 2018


**Summary**

For thyroid cancer, surgical resection is the most common treatment. Following surgery, radioactive iodine (RAI) therapy with iodine-131 (I-131) is usually given for advanced cancers. Patients currently receive a standardised ‘blind’ empiric dose of I-131 based upon clinicopathologic risk stratification. Iodine-124 (I-124) is a new form of RAI that can be accurately imaged and provide high resolution three-dimensional images of remaining disease distribution. I-124 positron emission tomography (PET) assessment can guide a personalised calculation of the optimal amount of I-131 that can be safely administered to deliver a lethal dose of radiation to residual tumour.

**Key dates**  Sep 2017 Sep 2019

**Implementation sites** Royal Brisbane and Women’s Hospital

**Partnerships** Healthcare Improvement Unit

**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**

The potential benefits of this technology includes:

- 1-124 therapy will provide high-resolution imaging for improved disease investigation and staging.
- There will be a reduction in unnecessary hospital admissions where I-131 is likely to be ineffective.
- I-124 treatment should be well tolerated by patients, and most should be comfortable during the investigation.
- I-131 treatment will only be delivered to patients where demonstrated to be of benefit.
- Personalised dosimetry will calculate the correct I-131 dose for treatment, for improved disease control.
- Anticipated cost savings will allow for reinvestment into other treatment services.

**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**

Key findings will be published at the end of the evaluation period.
Resources

Technology evaluation summary

PDF saved 10/06/2019