

**Title** Photodynamic Therapy For Cancer Treatment – An Update

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**Reference** Technology Review Report – 014/2013, online:  
[http://www.moh.gov.my/index.php/database\\_stores/store\\_view\\_page/30/220](http://www.moh.gov.my/index.php/database_stores/store_view_page/30/220)

#### **Aim**

To assess the effectiveness, safety and cost-effectiveness of photodynamic therapy especially Next Generation Photodynamic Therapy (NGPDT) for the treatment of cancer.

#### **Conclusions and results**

There was no retrievable scientific evidence on the effectiveness, safety and cost effectiveness on the Next Generation Photodynamic Therapy (NGPDT).

However, the retrieved evidence showed that there was limited, adequately powered RCT's on PDT. From the above review it was found that:

- There was insufficient evidence on the use of PDT in oesophageal cancer, lung cancer, brain cancer and cancers of the head and neck. Hence, further research into the role of PDT in these areas is needed.
- PDT has the potential and may be effective in the treatment of actinic keratosis (AK), nodular basal cell carcinoma (BCC) and possibly for treating Barrett's oesophagus.
- For cholangiocarcinoma, PDT may improve survival when compared with stenting alone.
- For advanced and/or recurrent tongue base carcinoma, treatment was well tolerated by patients and has potential in shrinking tumour and controlling further progression. Evidence suggests that 5-ALA-PDT and/or mTHPC-PDT may offer an effective alternative treatment for oral potentially malignant disorders.
- A wide variety of photosensitisers were used and, overall, no serious adverse effects were linked to PDT. However caution should be taken on signs for Brugada syndrome and buried neoplasms after PDT.

The effectiveness of PDT and NGPDT in relation to other treatments is not yet apparent. High quality trials are warranted for PDT and NGPDT to establish their effectiveness and safety.

#### **Recommendations (if any)**

Based on the above review, NGPDT is not recommended to be used until scientific evidence is available while PDT is recommended for research purposes. High quality trials are warranted for PDT and NGPDT to establish their effectiveness and safety.

#### **Methods**

Literatures were searched through electronic databases specifically PubMed/Medline, Cochrane, OVID, INAHTA and also in general databases. Google was used to search as additional web-based information. In addition websites for existing HTA agency, society websites and cross-referencing of the articles retrieved were also carried out accordingly to the topic. A critical appraisal of the retrieved papers was performed and the evidence level was graded according to the US/Canadian Preventive Services Task Force.

#### **Further research/reviews required**

Clinical research may provide more conclusive evidence on the effectiveness for its use.

#### **Written by**

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