National Horizon Scanning Unit
Horizon scanning prioritising summary

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Photodynamic therapy: Improving survival and quality of life for patients with non-resectable cholangiocarcinoma

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PRIORITISING SUMMARY

REGISTER ID: 0000002

NAME OF TECHNOLOGY: PHOTODYNAMIC THERAPY

PURPOSE AND TARGET GROUP: IMPROVING SURVIVAL AND QUALITY OF LIFE FOR PATIENTS WITH NON-RESECTABLE CHOLANGIOCARCINOMA

STAGE OF DEVELOPMENT (IN AUSTRALIA):

☐ Yet to emerge
☐ Experimental
☐ Investigational
☑ Nearly established
☐ Established
☐ Established but changed indication or modification of technique
☐ Should be taken out of use

AUSTRALIAN THERAPEUTIC GOODS ADMINISTRATION APPROVAL

☐ Yes ARTG number
☐ No ☑ Not applicable

Although an ARTG number is not applicable to this technique, there would be a number of lasers registered on the TGA which would be used to perform this procedure.

INTERNATIONAL UTILISATION:

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>LEVEL OF USE</th>
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<tbody>
<tr>
<td>Trials Underway or Completed</td>
<td>Limited Use</td>
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IMPACT SUMMARY:

Photodynamic therapy (PDT) is a palliative strategy, which aims to increase the survival time and quality of life of patients with non-resectable cholangiocarcinoma. Cholangiocarcinoma is a rare cancer of the bile duct with a poor prognosis. Patients are administered a photosensitising agent (e.g., sodium porfimer or Photofrin) 48 hours prior to intraluminal photoactivation. A laser fibre is introduced endoscopically into the bile duct and power is supplied at the appropriate wavelength (630nm). A photochemical reaction takes place leading to cell death.

The AIHW reported 287 cases in Australia of unspecified cancer of the biliary tract in the year 2000. Current treatment for non-resectable cholangiocarcinoma consists of endoscopic or percutaneous drainage or biliary stenting, which does not increase survival but improves the quality of life.

Preliminary data are promising. The randomised controlled trial conducted by Ortner et al. (2003) reported a mean survival of 493 days in the PDT plus stenting group vs 98 days for stenting alone. PDT appears to reduce tumour growth, relieves jaundice and improves quality of life (physical and social functioning). Possible safety issues are phototoxicity after PDT. The estimated costs for PDT for cholangiocarcinoma would be small due to the small number of patients affected.

CONCLUSION:

There is limited Level II and Level IV evidence. However, given that it is an established technology in Australia, it is expected that PDT for non-resectable cholangiocarcinoma would diffuse rapidly into the Australian health system.

HEALTHPACT ACTION:

Therefore it is recommended that this technology be monitored.

SOURCES OF FURTHER INFORMATION:


**SEARCH CRITERIA TO BE USED:**

Bile Duct Neoplasms/drug therapy/metabolism/*radiography  
Bile Duct Neoplasms/*drug therapy/surgery  
*Bile Ducts, Intrahepatic  
Cholangiocarcinoma/drug therapy/metabolism/*radiography  
Cholangiocarcinoma/*drug therapy/surgery  
Cholangiopancreatography, Endoscopic Retrograde/adverse effects/*methods  
Lasers  
Photochemotherapy/*methods  
Quality of Life  
Radiography, Interventional/adverse effects/*methods  
Antineoplastic Agents/*therapeutic use