Cost analysis for somatic and germline SyBr Green PCR method screening for parathyroid gland; a cost analysis from Thailand

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The use of new molecular diagnostic technique for detection of parathyroid cancer is very interesting (1). The new molecular approach is expected to be the effective biomarker tool for using as tumor marker. In Thailand, the new diagnostic tool has just been introduced for a few years. In a recent report, Niramitmahapanya et al mentioned that “HRPT2 mutations by SyBr Green PCR sensitive technique to identify parathyroid cancers or atypical adenoma from benign parathyroid tissue (2).” Here, the authors performed a cost analysis on the available for somatic and germline SyBr Green PCR method screening for parathyroid gland; a cost analysis in Thailand. The cost is referred to the data from tertiary referencing center in Bangkok, Thailand. The utility is according to the previous report by Niramitmahapanya et al, on using for somatic and germline SyBr Green PCR method screening for parathyroid gland in the tertiary referencing center in Bangkok (Rajvithi hospital), Thailand (2). According to this study, the cost and utility of somatic and germline SyBr Green PCR method screening for parathyroid gland is shown in Table 1. According to the cost analysis, the cost utility for using the new technique is still high and might be a problem for future implementation of the technique in Thailand.

Table 1. The cost and utility of somatic and germline SyBr Green PCR method screening for parathyroid gland

<table>
<thead>
<tr>
<th></th>
<th>Somatic</th>
<th>Germline</th>
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<tbody>
<tr>
<td>Cost (USD)*</td>
<td>45.36</td>
<td>45.36</td>
</tr>
<tr>
<td>Utility (%) **</td>
<td>19.2</td>
<td>11.5</td>
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<tr>
<td>Cost per utility (USD)***</td>
<td>236.25</td>
<td>394.43</td>
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* The cost is referred to the data from tertiary referencing center in Bangkok, Thailand.
** The utility is according to the previous report by Niramitmahapanya et al (2). The utility is determined as detection rate by each technique.
***Cost per utility means cost per a diagnosis of parathyroid cancer.

Implication for health policy/practice/research/medical education
The cost and utility of somatic and germline SyBr Green PCR method screening for parathyroid gland is discussed in this paper. According to the cost analysis, the cost utility for using the new technique is still high and might be a problem for future implementation of the technique in Thailand.

Authors’ contribution
SY and VW wrote the manuscript equally.

Conflicts of interest
The authors declare no conflicting interest.

Ethical considerations
Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

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References