

COST-EFFECTIVENESS ANALYSIS OF AN ACE-INHIBITOR FOR DELAYING
PROGRESSION OF DIABETIC NEPHROPATHY IN NIDDM PATIENTS WITH
MICROALBUMINURIA



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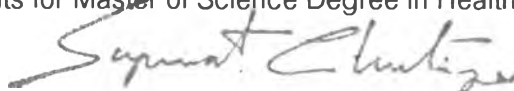
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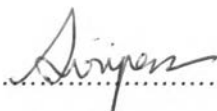
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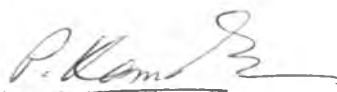
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The purpose of this study was to assess the cost-effectiveness of administering an ACE-Inhibitor in NIDDM patients with microalbuminuria to delay progression of diabetic nephropathy. Markov models were used to determine lifetime medical costs and life expectancy in both conventional (without ACE-Inhibitors) and treatment groups using DATA TreeAGE software. Probability data were mainly derived from the study done by Ravid and colleagues. Medical costs including price and hemodialysis cost were based on medium government drug price, wholesale drug price, and hemodialysis cost from a previous study in Thailand. The main outcome measured was the incremental cost-effectiveness ratio, defined as changes in costs divided by the change in life expectancy. The incremental cost-effectiveness ratios of ACE-Inhibitor therapy were cost savings 37,776.74 baht and 29,169.72 baht using medium drug price and wholesale drug price respectively. This study showed that an ACE-Inhibitor has a favorable cost-effectiveness ratio for delaying progression of diabetic nephropathy in NIDDM patients. In addition, it is recommended that long-term studies on the effects of ACE-Inhibitors in Thai population should be conducted. However, ACE-Inhibitors can be considered as part of the preventive treatment program to reduce costly renal complication from diabetes.

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ABBREVIATIONS

| | |
|----------------|--|
| ACE-Inhibitors | Angiotensin Converting Enzyme Inhibitors |
| CAD | Coronary Artery Disease |
| CEA | Cost-Effectiveness Analysis |
| CI | Cumulative Incidence |
| CVD | Cardiovascular Disease |
| DM | Diabetes Mellitus |
| DN | Diabetic Nephropathy |
| ESRD | End-Stage Renal Disease |
| IDDM | Insulin-dependent Diabetes Mellitus |
| Macro | Macroalbuminuria |
| Micro | Microalbuminuria |
| NIDDM | Non Insulin-Dependent Diabetes Mellitus |
| QALYs | Quality-Adjusted Life Years |
| QOL | Quality of Life |
| RCT | Randomized Controlled Trial |
| TP | Transition Probability |