

## Supplementary methods

### Definition and assessment for diabetic complications

All patients who were diagnosed with diabetes have been followed-up for diabetes progression at the diabetes mellitus clinic every 3 months and were undergone screening for the presence of complications. Diabetic retinopathy was defined and diagnosed according to The International Council of Ophthalmology guidelines: the presence of microaneurysms, hemorrhages, intraretinal microvascular abnormalities, venous beading, hard exudates, cotton-wool spots, and retinal neovascularization. Screening for retinopathy was performed specifically at the eye clinic by an ophthalmologist who also examined the results of fundus photography. Diagnosis of diabetic neuropathy was by clinical neurological examination and electromyography according to the recent criteria [33,34]. The frequency of neuropathy in our study subjects was 35 per 960 diabetic cases (3.6%), somewhat lower than those reported in the Western countries (6% to 51%). However, they were all confirmed cases being undergone regular intervention. Besides, the prevalence of neuropathy in Thai subjects with type 2 diabetes mellitus (T2DM) has also been reported in two nationwide cross-sectional studies, as 2.7% (1,808 per 65,904 T2DM patients) [35] and 3.1% (951 per 30,423) [36]. The Kidney Disease Improving Global Outcomes (KDIGO) guideline was generally used for diagnosis and evaluation for the intervention of kidney diseases of either diabetic or non-diabetic causes. For the diabetic patient, the definition of diabetic nephropathy was usually based on persistent albuminuria (albumin/creatinine ratio  $>3$  mg/mmol for more than 3 months) and a decline in estimated glomerular filtration rate (less than 60 mL/min/1.73 m<sup>2</sup>). The investigation for electrolyte abnormalities was also included to evaluate the renal function. The presence of hematuria was used along with renal histopathology to rule out non-diabetic kidney disease, such as glomerulonephritis. Structural abnormalities (by imaging) may also be used to monitor the progression and severity of kidney disease. Cardiovascular disease was defined as one or a combination of the pathological states: ischemic heart disease, congestive heart failure, and ischemic cerebral stroke. Clinical appearances of cardiovascular disease were confirmed by relevant biochemical analysis, coronary angiography, electrocardiogram, echocardiogram, and vascular diagnostic criteria.