Introduction

Compared with the general population, patients with chronic kidney disease (CKD) have an acceptably high risk of premature death primarily as a result of cardiovascular disease (CVD)**.** Premature CVD including stroke, peripheral vascular disease, sudden death, coronary artery disease, and congestive heart failure, is a notorious problem in patients with CKD. also the presence of CVD is independently associated with kidney function decline, so the relationship between CKD and CVD is reciprocal or bidirectional, and this association leads to vicious circle contributing to premature death **(Stenvinkel P. et al., 2008)**.

At the moment there seems to be little hope insight for improvement because several large randomized controlled trials have consistently shown no survival benefit from multiple new treatment strategies, such as increase dialysis dose, intensified nutrition, homocysteine lowering therapy, normalization of hemoglobin with erythropoietin, lipid lowering statins, and treatment with angiotensin-converting enzyme inhibitors **(Zannad F. et al., 2006).**

A large number of population based studies have demonstrated that even slightly reduced renal function, as well as even minor levels of albuminuria, can predict CVD and mortality **(Vanholder R. et al., 2005)**. Further more, the cardiovascular risk is increased very early on in the evolution of CKD (at a GFR of about 75 ml/ min) and increases continuously with decrease renal function.

Traditional risk factors (age, life style, left ventricular hypertrophy, dyslipidemia, hypertension, and diabetes mellitus) predict cardiovascular mortality in patients with mild to moderate CKD, so called novel risk factors for CVD, such as inflammation, endothelial dysfunction, sympathetic over activation, protein energy wasting, oxidative stress, vascular calcification, and volume overload, are highly prevalent in these patients and seems to play a far more important role for vascular disease than in general population **(Fouque D. et al., 2008).**

A biomarker means a specific biological molecule found in blood, other body fluids or tissues which has aparticular molecular features that makes it useful for measuring the progress of disease or the effects of treatment.Recently demonstrated that the addition of multimarker scores including markers of inflammation and volume over load to conventional risk factors resulted only in small increase in the ability to grade risk in the general population **(Yilmaz M.I. et al., 2008).**