Summary of Recommendation Statements

Kidney International Supplements (2013) **3,** 263–265; doi:10.1038/kisup.2013.31

Chapter 1: Assessment of lipid status in adults with CKD

1.1: In adults with newly identified CKD (including those treated with chronic dialysis or kidney transplantation), we recommend evaluation with a lipid profile (total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides). (*1C*)

1.2: In adults with CKD (including those treated with chronic dialysis or kidney transplantation), follow-up measurement of lipid levels is not required for the majority of patients. (*Not Graded*)

Chapter 2: Pharmacological cholesterol-lowering treatment in adults

2.1.1: In adults aged $\geq$50 years with eGFR $<$ 60 ml/min/1.73 m^2 but not treated with chronic dialysis or kidney transplantation (GFR categories G3a-G5), we recommend treatment with a statin or statin/ezetimibe combination. (*1A*)

2.1.2: In adults aged $\geq$50 years with CKD and eGFR $\geq$ 60 ml/min/1.73 m^2 (GFR categories G1-G2) we recommend treatment with a statin. (*1B*)

2.2: In adults aged 18–49 years with CKD but not treated with chronic dialysis or kidney transplantation, we suggest statin treatment in people with one or more of the following (*2A*):

- **known coronary disease (myocardial infarction or coronary revascularization)**
- **diabetes mellitus**
- **prior ischemic stroke**
- **estimated 10-year incidence of coronary death or non-fatal myocardial infarction $>$10%**

2.3.1: In adults with dialysis-dependent CKD, we suggest that statins or statin/ezetimibe combination not be initiated. (*2A*)

2.3.2: In patients already receiving statins or statin/ezetimibe combination at the time of dialysis initiation, we suggest that these agents be continued. (*2C*)

2.4: In adult kidney transplant recipients, we suggest treatment with a statin. (*2B*)

Chapter 3: Assessment of lipid status in children with CKD

3.1: In children with newly identified CKD (including those treated with chronic dialysis or kidney transplantation), we recommend evaluation with a lipid profile (total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides). (*1C*)

3.2: In children with CKD (including those treated with chronic dialysis or kidney transplantation), we suggest annual follow-up measurement of fasting lipid levels. (*Not Graded*)

Chapter 4: Pharmacological cholesterol-lowering treatment in children

4.1: In children less than 18 years of age with CKD (including those treated with chronic dialysis or kidney transplantation), we suggest that statins or statin/ezetimibe combination not be initiated. (*2C*)

Chapter 5: Triglyceride-lowering treatment in adults

5.1: In adults with CKD (including those treated with chronic dialysis or kidney transplantation) and hypertriglyceridemia, we suggest that therapeutic lifestyle changes be advised. (*2D*)

Chapter 6: Triglyceride-lowering treatment in children

6.1: In children with CKD (including those treated with chronic dialysis or kidney transplantation) and hypertriglyceridemia, we suggest that therapeutic lifestyle changes be advised. (*2D*)

Quick summary of the KDIGO recommendations for lipid-lowering treatment in adults with CKD

(a) Rule out remediable causes of secondary dyslipidemia.
(b) Establish the indication of treatment (YES or NO) and select agent and dose.
(c) Treat according to a "fire-and-forget" strategy: do not measure LDL-C unless the results would alter management.

Upon first presentation to establish the diagnosis of CKD, the nephrologist will obtain a full lipid profile as part of routine care. In case of referral and to confirm the CKD diagnosis, a full lipid profile may already be available. Results of the lipid profile should be used together with other clinical data to rule out remediable causes of secondary dyslipidemia. If excluded, the nephrologist will establish whether statin treatment is indicated (YES or NO) based on underlying cardiovascular risk. If the level of risk suggests that statin treatment is indicated, she/he will select a dose of a statin (Table 4) that is available in her/his country and has been tested for safety in people with CKD.

Contemporary practice and other clinical practice guidelines emphasize the use of targets for LDL-C (e.g., 1.8 or 2.6 mmol/l [70 or 100 mg/dl]), which require repeated measurements of LDL-C and treatment escalation with higher doses of statin or initiation of combination lipid-lowering therapy ("treat-to-target" strategy) when the LDL-C target is not met. The KDIGO Work Group does not recommend the treat-to-target strategy because it has never been proven beneficial in any clinical trial. In addition, higher doses of statins have not been proven to be safe in the setting of CKD. Therefore, the Work Group recommends a "fire-and-forget" strategy for patients with CKD (see Rationale for Recommendation 1.2). Physicians may choose to perform follow-up measurement of lipid levels in patients for whom these measurements are judged to favorably influence adherence to treatment or other processes of care.