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Correspondence

Reply to: "Bridging the treatment gap in patients at 'extreme' cardiovascular risk: Evidence from a lipid clinic"

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To the Editor,

We read with interest the letter by Barkas et al. [1] in which data are provided regarding their lipid-lowering therapy (LLT) experience in the recently proposed extreme cardiovascular disease (CVD) risk category of patients [2].

The authors reported that among 244 patients with CVD, ~50% had features of extreme CVD risk. This is in agreement with our findings regarding 1629 patients with stable coronary artery disease (CAD) [3]. The authors also found that 37% of the extreme CVD risk patients had low-density lipoprotein cholesterol (LDL-C) < 70 mg/dL and 16% achieved the more stringent goal of < 55 mg/dL. These proportions are higher than ours since we have reported that in the subgroup of extreme CVD risk on LLT, 20.3% had LDL-C < 70 mg/dL and only 5.3% < 55 mg/dL. However, we should mention that the two populations cannot be directly compared. First, the studied population by Barkas et al. comprised patients referred to the Lipid Clinic of a University Hospital. Therefore, there is a referral bias in the selection, since a certain number of these patients were probably complex cases, i.e. patients with genetic dyslipidaemias, intolerant to statins, etc. Second, these patients were attending the outpatient Lipid Clinic and therefore they had the optimal LLT by specialists in treating lipid disorders. In contrast, our population comprised consecutive patients attending the outpatient Cardiology Clinic of three large hospitals in Athens, most of them not regularly [4]; thus, the reported LLT was largely decided by their general physician. Therefore, our population reflects better the current clinical practice in the community and it is somehow expected to have less optimal LLT than those attending regularly the Lipid Clinic.

Barkas et al. reported that, among extreme CVD risk patients on high-intensity statin monotherapy, (n = 30) the rates of target attainment were 48% for LDL-C < 70 mg/dL and 19% for LDL-C < 55 mg/dL. Their analysis prompted us to estimate the proportion of extreme CVD risk patients who achieved the targets while on high-intensity LLT. High-intensity LLT was defined as any LLT expected to decrease LDL-C > 50% and comprised high-intensity statin monotherapy (20–40 mg rosuvastatin or 40–80 mg atorvastatin), combination of statin with ezetimibe and proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor alone or combined with statin. Of the extreme CVD risk patients on LLT (n = 779), 292 (37.5%) were on high-intensity LLT. In particular, 199 (68.2%) were on high-intensity statin monotherapy, 81 (27.7%) on combination of statin + ezetimibe and 12 (4.1%) on PCSK9 inhibitor ± statin. Fig. 1 shows the proportion of extreme CVD risk patients on high-intensity LLT that achieved the LDL-C targets in comparison with those that received any LLT. In particular, of those on high-intensity LLT, 37 patients (12.7%) had LDL-C < 55 mg/dL and 108 (37%) had LDL-C < 70 mg/dL.

In our population of CAD patients, in particular, in those at extreme CVD risk (n = 895), 87% were on LLT but less than half of them (~40%) were on high-intensity LLT. According to the current European Guidelines for the Management of Dyslipidaemias, all coronary patients should take high-intensity statin [5]. However, in clinical practice, there is a well-documented inertia of doctors to up-titrate statin doses due to fear for potential adverse effects [6]. In addition, if ideally all coronary patients were prescribed high-intensity statins, a number of them would not achieve the LDL-C targets. There are many potential contributing factors for this failure, such as patients' poor compliance to LLT, presence of genetic dyslipidaemias or suboptimal LDL-C reduction due to biological hypo-responsiveness associated with genetic polymorphisms in genes involved in statins' transport, uptake, and metabolism [7,8].

In conclusion, according to our data, more than half of all patients with stable CAD fall into the extreme CVD risk category and even when high-intensity statin is prescribed, few of them have LDL-C levels < 55 mg/dL. If this stringent LDL-C target is adopted by the pending European Guidelines, the therapeutic gap will widen. In order to bridge this gap, obstacles causing physicians' therapeutic inertia should be removed, statins should be up-titrated routinely and combination of statins with ezetimibe or PCSK9 inhibitors should be chosen, when necessary.

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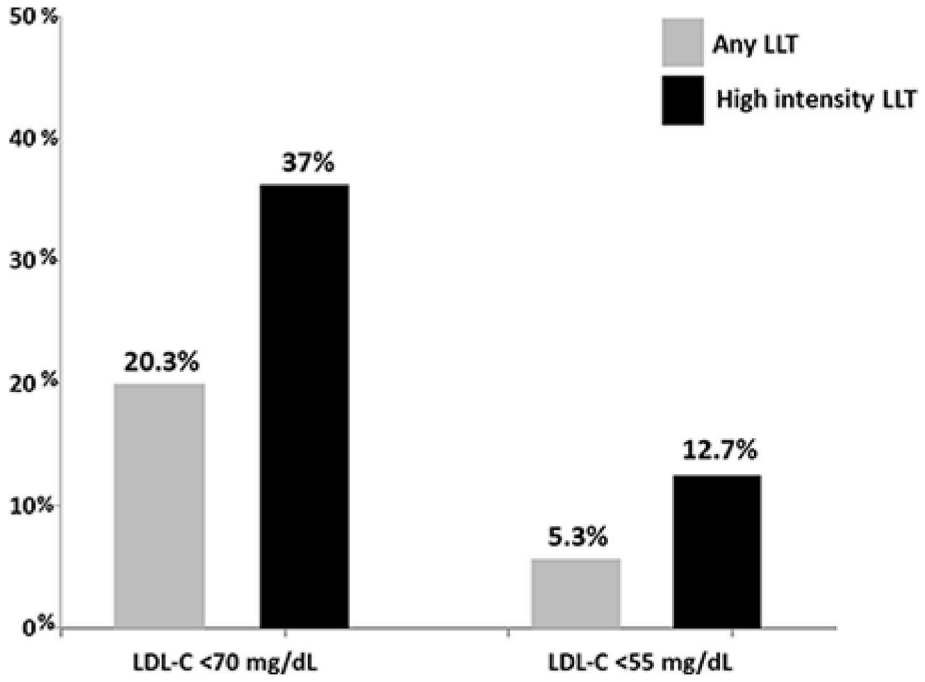

Fig. 1. Proportion of extreme cardiovascular disease risk patients achieving low-density lipoprotein cholesterol (LDL-C) levels < 70 mg/dL and < 55 mg/dL, either on any lipid-lowering therapy (LLT) [n = 779] or on high-intensity LLT (n = 292).

Conflict of interest

The authors declared they do not have anything to disclose regarding conflict of interest with respect to this manuscript.

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