



PRODUCT NAME	: ROSUVASTATIN TABLETS	COUNTRY : US	LOCATION : Indrad / Dahej	Supersedes AW No.:
ITEM / PACK	: Outsert	NO. OF COLORS: 1	REMARK :	V. No. : 01
DESIGN STYLE	: Back Side	PANTONE SHADE NOS.:	SUBSTRATE : 40 g/m <sup>2</sup> Bible Paper	
CODE	: 8110792	█ Black	Activities Department	Name
DIMENSIONS (MM)	: 560 x 450		Prepared By	Pkg. Dev.
ART WORK SIZE	: S/S		Reviewed By	Pkg. Dev.
DATE	: 15-06-2026	Font Size 6 pt_Med. 10 pt	Reviewed By	Quality
			Approved By	Quality

**Note: Pharma code/ Bar code and adjacent text must be visible on folded leaflet.**  
**These details can be moved by printed to arrange pharma code/ Bar code and adjacent text visible on folded leaflet.**

<sup>1</sup>Single dose unless otherwise noted.

<sup>2</sup>Clinically significant (see *Dosage and Administration (2)* and *Warnings and Precautions (5)*).

<sup>3</sup>Mean ratio with 90% CI (with/without coadministered drug, e.g., 1= no change, 0.7 = 30% decrease, 11-11-fold increase in exposure)

**Table 9: Effect of Rosuvastatin Coadministration on Systemic Exposure to Other Drugs**

Rosuvastatin Dosage Regimen	Coadministered Drug		
	Mean Ratio (ratio with/without coadministered drug) No Effect=1.0	Change in <i>C<sub>max</sub></i>	
	<b>Name and Dosage</b>	<b>Change in AUC</b>	
		<b>Change in <i>C<sub>min</sub></i></b>	
40 mg QD for 10 days	Warfarin <sup>1</sup> 25 mg single dose	R-Warfarin 1.0 (1.0 to 1.1) <sup>2</sup> S-Warfarin 1.1 (1.0 to 1.1) <sup>2</sup>	R-Warfarin 1.0 (0.9 to 1.0) <sup>2</sup> S-Warfarin 1.0 (0.9 to 1.0) <sup>2</sup>
40 mg QD for 12 days	Digoxin 0.5 mg single dose	1.0 (0.9 to 1.2) <sup>2</sup>	1.0 (0.9 to 1.2) <sup>2</sup>
40 mg QD for 28 days	Oral Contraceptive (ethinyl estradiol 0.035 mg & norgestrel 0.180, 0.215 and 0.250 mg) QD for 21 Days	EE 1.3 (1.2 to 1.3) <sup>2</sup> NG 1.3 (1.2 to 1.3) <sup>2</sup> NG 1.3 (1.3 to 1.4) <sup>2</sup>	EE 1.3 (1.2 to 1.3) <sup>2</sup> NG 1.2 (1.1 to 1.3) <sup>2</sup>

EE = ethinyl estradiol, NG = norgestrel, QD= Once daily.

<sup>1</sup>Clinically significant pharmacodynamic effects (see *Drug Interactions (7.3)*).

<sup>2</sup>Mean ratio with 90% CI (with/without coadministered drug, e.g., 1= no change, 0.7=30% decrease, 11=11-fold increase in exposure)

## 12.5 Pharmacogenomics

Disposition of rosuvastatin involves OATP1B1 and other transporter proteins. Higher plasma concentrations of rosuvastatin have been reported in very small groups of patients (n=3 to 5) who have two reduced function alleles of the gene that encodes OATP1B1 (*SLCO1B1* S212 > C). The frequency of this genotype (i.e., *SLCO1B1* S21 C/C) is generally lower than 5% in most racial/ethnic groups. The impact of this polymorphism on efficacy and/or safety of rosuvastatin tablets have not been clearly established.

## 13 NONCLINICAL TOXICOLOGY

### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

#### Carcinogenesis

In a 104-week carcinogenicity study in rats at dose levels of 2, 20, 60, or 80 mg/kg/day by oral gavage, the incidence of uterine stromal polyps was significantly increased in females at 80 mg/kg/day at systemic exposure 20 times the human exposure at 40 mg/day based on AUC. Increased incidence of polyps was not seen at lower doses.

In a 107-week carcinogenicity study in mice given 10, 60, or 200 mg/kg/day by oral gavage, an increased incidence of hepatocellular adenoma/carcinoma was observed at 200 mg/kg/day at systemic exposures 20 times the human exposure at 40 mg/day based on AUC. An increased incidence of hepatocellular tumors was not seen at lower doses.

#### Mutagenesis

Rosuvastatin was not mutagenic or clastogenic with or without metabolic activation in the Ames test with *Salmonella typhimurium* and *Escherichia coli*, the mouse lymphoma assay, and the chromosomal aberration assay in Chinese hamster lung cells. Rosuvastatin was negative in the *in vivo* mouse micronucleus test.

#### Impairment of Fertility

In rat fertility studies with oral gavage doses of 5, 15, 50 mg/kg/day, males were treated for 9 weeks prior to and throughout mating and females were treated 2 weeks prior to mating and throughout mating until gestation day 7. No adverse effect on fertility was observed at 50 mg/kg/day systemic exposures up to 10 times the human exposure at 40 mg/day based on AUC. In testicles of dogs treated with rosuvastatin at 30 mg/kg/day for one month, spermatic giant cells were seen. Spermatic giant cells were observed in monkeys after 30-month treatment at 80 mg/kg/day in addition to vacuolization of seminiferous tubular epithelium. Exposures in the dog were 20 times and in the monkey 10 times the human exposure at 40 mg/day based on body surface area. Similar findings have been seen with other drugs in this class.

## 14 CLINICAL STUDIES

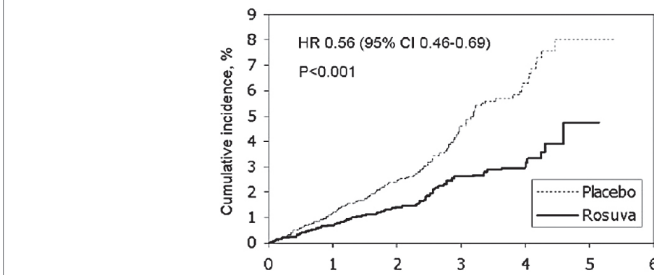
### Primary Prevention of CV Disease

In the Justification for the Use of Statins in Primary Prevention: An Intervention Trial Evaluating Rosuvastatin (JUPITER) study, the effect of rosuvastatin tablets on the occurrence of major CV disease events was assessed in 17,802 males (>50 years) and females (>60 years) who had no clinically evident CV disease. LDL-C levels <130 mg/dL, and hsCRP levels <2 mg/L. The study population had an estimated baseline coronary heart disease risk of 11.6% over 10 years based on the Framingham risk criteria and included a high percentage of patients with additional risk factors such as hypertension (58%), low HDL-C levels (23%), cigarette smoking (16%), or a family history of premature CHD (12%). Patients had a median baseline LDL-C of 188 mg/dL, and hsCRP of 4.3 mg/L. Patients were randomly assigned to placebo (n=8,901) or rosuvastatin tablets 20 mg once daily (n=8,901) and were followed for a mean duration of 2 years. The JUPITER study was stopped early by the Data Safety Monitoring Board due to meeting predefined stopping rules for efficacy in rosuvastatin treated subjects.

The primary end point was a composite end point consisting of the time-to-first occurrence of any of the following major CV events: CV death, nonfatal myocardial infarction, nonfatal stroke, hospitalization for unstable angina or a arterial revascularization procedure.

Rosuvastatin tablets significantly reduced the risk of major CV events (52 events in the placebo group vs. 142 events in the rosuvastatin group) with a statistically significant (p<0.001) relative risk reduction of 44% and absolute risk reduction of 1.2% (see Figure 1). The risk reduction for the primary end point was consistent across the following predefined subgroups: age, sex, race, smoking status, family history of premature CHD, body mass index, LDL-C, HDL-C, and hsCRP levels.

**Figure 1. Time to First Occurrence of Major CV Events in JUPITER**



The individual components of the primary end point are presented in Figure 3. Rosuvastatin tablets significantly reduced the risk of nonfatal myocardial infarction, nonfatal stroke, and arterial revascularization procedures. There were no significant treatment differences between the rosuvastatin tablets and placebo groups for death due to CV causes or hospitalizations for unstable angina.

Rosuvastatin tablets significantly reduced the risk of myocardial infarction (6 fatal events and 62 nonfatal events in placebo-treated subjects vs. 9 fatal events and 22 nonfatal events in rosuvastatin tablets-treated subjects) and the risk of stroke (6 fatal events and 58 nonfatal events in placebo-treated subjects vs. 3 fatal events and 30 nonfatal events in rosuvastatin tablets-treated subjects).

In a post-hoc subgroup analysis of JUPITER subjects (rosuvastatin=725, placebo=580) with a hsCRP >2 mg/L and no other traditional risk factors (smoking, BP >140/90 or taking antihypertensives, low HDL-C) other than age, after adjustment for high HDL-C, there was no significant treatment benefit with rosuvastatin tablet treatment.

**Figure 2. Major CV Events by Treatment Group in JUPITER**

End point	Number of events		HR (95% CI)	P value	Hazard Ratio	I <sup>2</sup> —95%—
	Rosuva 20 mg (n=8901)	Placebo 20 mg (n=8901)				
Primary end point (MCE) <sup>1</sup>	142 (7.6)	232 (11.6)	0.56 (0.46, 0.69)	<0.001		
Cardiovascular death <sup>2</sup>	35 (1.9)	44 (2.6)	0.60 (0.31, 1.24)	0.315		
Nonfatal stroke	30 (1.6)	44 (3.1)	0.51 (0.33, 0.80)	0.003		
Nonfatal MI	22 (1.2)	62 (3.3)	0.35 (0.23, 0.56)	<0.001		
Hospitalized unstable angina	16 (0.8)	27 (1.5)	0.59 (0.32, 1.10)	0.093		
Arterial revascularization	71 (3.8)	131 (7.1)	0.54 (0.41, 0.72)	<0.001		

<sup>1</sup>fatal and/or 100-day events.

<sup>2</sup>Cardiovascular death included fatal MI, fatal stroke, sudden death, and other adjudicated causes of CV death.

At one year, rosuvastatin tablets increased HDL-C and reduced LDL-C, hsCRP, total cholesterol and serum triglyceride levels (p<0.001 for all versus placebo).

### Primary Hypercholesterolemia in Adults

Rosuvastatin tablet reduces Total-C, LDL-C, ApoB, non-HDL-C, and TG, and increases HDL-C. In adult patients with hypercholesterolemia and mixed dyslipidemia.

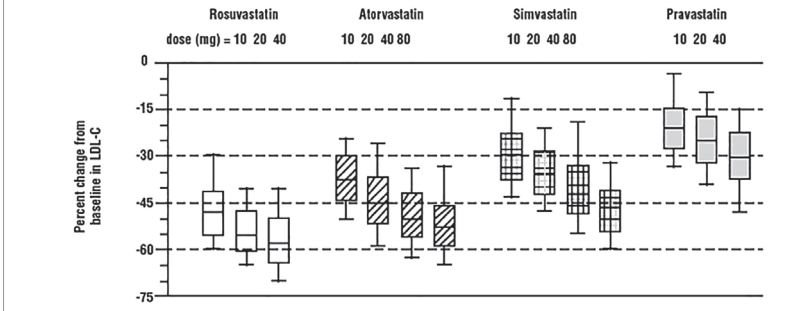
In a multicenter, double-blind, placebo-controlled study in patients with hypercholesterolemia, rosuvastatin tablet given as a single daily dose (5 to 40 mg) for 6 weeks significantly reduced Total-C, LDL-C, non-HDL-C, and ApoB, across the dose range (Table 10).

**Table 10: Lipid-Modifying Effect of Rosuvastatin Tablets in Adult Patients with Hypercholesterolemia (Adjusted Mean % Change from Baseline at Week 6)**

Dose	N	Total-C	LDL-C	non-HDL-C	TG	HDL-C
Placebo	13	-5	-7	-7	-3	-3
Rosuvastatin tablets 5 mg	17	-33	-45	-44	-38	-35
Rosuvastatin tablets 10 mg	17	-36	-52	-48	-42	-10
Rosuvastatin tablets 20 mg	17	-40	-55	-51	-46	-23
Rosuvastatin tablets 40 mg	18	-45	-63	-60	-54	-28

Rosuvastatin was compared with the statins (atorvastatin, simvastatin, and pravastatin) in a multicenter, open-label, dose-ranging study of 2,240 patients with hypercholesterolemia or mixed dyslipidemia. After randomization, patients were treated for 6 weeks with a single daily dose of either rosuvastatin, atorvastatin, simvastatin, or pravastatin (see Figure 3 and Table 11).

**Figure 3. Percent LDL-C Change by Dose of Rosuvastatin, Atorvastatin, Simvastatin, and Pravastatin at Week 6 in Adult Patients with Hypercholesterolemia or Mixed Dyslipidemia**



Box plots are a representation of the 25th, 50th, and 75th percentile values, with whiskers representing the 10th and 90th percentile values. Mean baseline LDL-C: 189 mg/dL.

**Table 11: Percent Change in LDL-C by Dose of Rosuvastatin, Atorvastatin, Simvastatin, and Pravastatin from Baseline to Week 6 (LS Mean)<sup>1</sup> in Adult Patients with Hypercholesterolemia or Mixed Dyslipidemia (Sample Sizes Ranging from 156–167 Patients Per Group)**

Treatment	Treatment Daily Dose			
	10 mg	20 mg	40 mg	80 mg
Rosuvastatin	-46 <sup>2</sup>	-52 <sup>2</sup>	-55 <sup>2</sup>	---
Atorvastatin	-37	-43	-48	-51
Simvastatin	-28	-35	-39	-46
Pravastatin	-20	-24	-30	---

<sup>1</sup>Corresponding standard errors are approximately 1.00.

<sup>2</sup>Rosuvastatin tablets 10 mg reduced LDL-C significantly more than atorvastatin 10 mg; pravastatin 10 mg, 20 mg, and 40 mg; simvastatin 10 mg, 20 mg, and 40 mg (p<0.002).

<sup>3</sup>Rosuvastatin tablets 20 mg reduced LDL-C significantly more than atorvastatin 20 mg and 40 mg; pravastatin 20 mg and 40 mg; simvastatin 20 mg, 40 mg, and 80 mg (p<0.002).

<sup>4</sup>Rosuvastatin tablets 40 mg reduced LDL-C significantly more than atorvastatin 40 mg; pravastatin 40 mg; simvastatin 40 mg, and 80 mg (p<0.002).

### Slowing of the Progression of Atherosclerosis

In the *Measuring Effects on Intima Media Thickness: an Evaluation Of Rosuvastatin 40 mg (METEOR)* study, the effect of therapy with rosuvastatin tablets on carotid atherosclerosis was assessed by B-mode ultrasonography in patients with elevated LDL-C, at low risk (Framingham risk <10% over ten years) for symptomatic coronary artery disease and with subclinical atherosclerosis as evidenced by carotid intima-medial thickness (cIMT). In this double-blind, placebo-controlled clinical study 984 adult patients were randomized (of whom 876 were analyzed) in a 5:2 ratio to rosuvastatin tablets 40 mg (median age 59 ± 14 years) or placebo (median age 59 ± 14 years) for 6 weeks. The annualized rate of change per patient from baseline to two years in mean maximum cIMT of 12 measured segments. The estimated difference in the rate of change in the maximum cIMT analyzed over all 12 carotid artery sites between patients treated with rosuvastatin tablets and placebo-treated patients was -0.145 mm/year (95% CI -0.0196, -0.0095, p<0.0001). The annualized rate of change from baseline for the placebo group was +0.0131 mm/year (p<0.0001). The annualized rate of change from baseline for the group treated with rosuvastatin tablets was -0.0014 mm/year (p=0.32).

At an individual patient level in the group treated with rosuvastatin tablets, 52.1% of patients demonstrated an absence of disease progression (defined as a negative annualized rate of change), compared to 37.7% of patients in the placebo group.

#### HeFH in Adults

In a study of adult patients with HeFH (baseline mean LDL of 201 mg/dL), patients were randomized to rosuvastatin 20 mg or atorvastatin 20 mg. The dose was increased at 4-week intervals. Significant LDL-C reductions from baseline were seen at each dose in both treatment groups (see Table 12).

**Table 12: LDL-C Percent Change from Baseline**

		Rosuvastatin (n=435) LS Mean (95% CI)	Atorvastatin (n=187) LS Mean (95% CI)
Week 6	20 mg	-47% (-49%, -46%)	-38% (-40%, -36%)
Week 12	40 mg	-55% (-57%, -54%)	-47% (-49%, -45%)
Week 18	80 mg	NA	-52% (-54%, -50%)

<sup>1</sup>LS Means are least square means adjusted for baseline LDL-C

#### HeFH in Pediatric Patients

In a double-blind, randomized, multicenter, placebo-controlled, 12-week study, 176 (97 male and 79 female) pediatric patients with HeFH were randomized to rosuvastatin 5 mg, 10 mg or 20 mg or placebo daily. Patients ranged in age from 10 to 17 years (median age 10 ± 14 years) with approximately 30% of the patients 10 to 13 years and approximately 17%, 18%, 40%, and 25% at Tanner stages II, III, IV, and V, respectively. Females were at least 1-year postmenarche. Mean LDL-C at baseline was 283 mg/dL (range of 129 to 399). The 12-week double-blind phase was followed by a 40-week open-label dose-titration phase, where all patients (n=173) received 5 mg, 10 mg or 20 mg rosuvastatin daily.

Rosuvastatin significantly reduced LDL-C (primary end point), total cholesterol and ApoB levels at each dose compared to placebo. Results are shown in Table 13 below.

**Table 13: Lipid-Modifying Effects of Rosuvastatin Tablets in Pediatric Patients 10 to 17 years of Age with HeFH (Least-Squares Mean Percent Change from Baseline To Week 12)**

Dose (mg)	N	LDL-C	HDL-C	Total-C	TG <sup>1</sup>	ApoB
Placebo	46	-1%	+7%	0%	-7%	-2%
5	42	-38%	+4%	-30%	-13%	-32%
10	44	-45%	+11%	-34%	-15%	-38%
20	44	-50%	+9%	-39%	16%	-41%

<sup>1</sup>Median percent change

<sup>2</sup>Difference from placebo not statistically significant

Rosuvastatin was also studied in a two-year open-label, uncontrolled, titration-to-goal trial that included 175 pediatric patients with HeFH who were 8 to 17 years old (79 males and 96 females). All patients had a documented genetic defect in the LDL receptor or ApoB. Approximately 89% were White, 7% were Asian, 1% were Black or African American, and fewer than 1% were Hispanic or Latino ethnicity. Mean LDL-C at baseline was 236 mg/dL. Fifty-eight (33%) patients were prepubertal at baseline. The starting rosuvastatin dosage for all pediatric patients was 5 mg once daily. Pediatric patients aged 8 to less than 10 years (n=41 as baseline) could titrate to a maximum dosage of 10 mg once daily, and pediatric patients aged 10 to 17 years could titrate to a maximum dosage of 20 mg once daily.

The reductions in LDL-C from baseline were generally consistent across age groups within the trial as well as with previous experience in both adult and pediatric controlled trials.

#### HeFH in Adult and Pediatric Patients

In an open-label, forced-titration study, HoFH patients (n=40, 8 to 63 years) were evaluated for their response to rosuvastatin tablets 20 to 40 mg titrated at 4-6-week intervals. In the overall population, the mean LDL-C reduction from baseline was 22%. About one-third of the patients benefited from increasing their dose from 20 mg to 40 mg with further LDL-C lowering of greater than 6%. In the 27 patients with at least a 15% reduction in LDL-C, the mean LDL-C reduction was 30% (median 28% reduction). Among 13 patients with an LDL-C reduction of <15%, 3 had no change or an increase in LDL-C. Reductions in LDL-C of 15% or greater were observed in 3 of 5 patients with known receptor negative status.

#### HeFH in Pediatric Patients

Rosuvastatin was studied in a randomized, double-blind, placebo-controlled, multicenter, cross-over study in 14 pediatric patients with HoFH. The study included a 4-week dietary lead-in phase during which patients received rosuvastatin tablets 10 mg daily. A cross-over phase that included two 6-week treatment periods with either rosuvastatin tablets 20 mg or placebo in random order, followed by a 12-week open-label phase during which all patients received rosuvastatin tablets 20 mg. Patients ranged in age from 7 to 15 years of age (median 11 years), 50% were male, 71% were White, 21% were Asian, 7% were Black or African American, and no patients were of Hispanic or Latino ethnicity. Fifty percent were on apheresis therapy and 57% were taking ezetimibe. Patients who entered the study on apheresis therapy or ezetimibe continued the treatment throughout the entire study. Mean LDL-C at baseline was 416 mg/dL (range 152 to 716 mg/dL). A total of 13 patients completed both treatment periods of the randomized cross-over phase; one patient withdrew consent due to inability to have blood drawn during the cross-over phase.

Rosuvastatin tablets 20 mg significantly reduced LDL-C, total cholesterol, ApoB, and non-HDL-C compared to placebo (see Table 14).

**Table 14: Lipid-Modifying Effects of Rosuvastatin in Pediatric Patients 7 to 15 years of Age with HoFH After 6 Weeks**

	Placebo (N=13)	Rosuvastatin Tablets 20 mg (N=13)	Percent difference (95% CI)
LDL-C (mg/dL)	481	396	-22.3% (-33.5, -9.1) <sup>1</sup>
Total-C (mg/dL)	539	448	-20.1% (-29.7, -9.1) <sup>2</sup>
Non-HDL-C (mg/dL)	505	412	-22.9% (-33.7, -10.3) <sup>2</sup>
ApoB (mg/dL)	268	235	-17.1% (-29.2, -2.9) <sup>2</sup>

<sup>1</sup>% Difference estimates are based on transformations of the estimated mean difference in log LDL measurements between rosuvastatin tablets and placebo using a mixed model adjusted for study period

<sup>2</sup>p<0.005, <sup>3</sup>p<0.002, <sup>4</sup>p<0.024

### Primary Dysbetalipoproteinemia in Adults

In a randomized, multicenter, double-blind cross-over study, 32 adult patients (27 with c2/c2 and 4 with apo E mutation [Arg145Glu]) with primary dysbetalipoproteinemia entered a 6-week dietary lead-in period on the NCEP Therapeutic Lifestyle Change (TLC) diet. Following dietary lead-in, patients were randomized to a sequence of treatments for 6 weeks each: rosuvastatin 10 mg followed by rosuvastatin 20 mg or rosuvastatin 20 mg followed by atorvastatin 10 mg. Rosuvastatin tablets reduced non-HDL-C (primary end point) and circulating remnant lipoprotein levels. Results are shown in the table below.

**Table 15: Lipid-Modifying Effects of Rosuvastatin Tablets 10 mg and 20 mg in Adult Patients with Primary Dysbetalipoproteinemia (Type III hyperlipoproteinemia) After Six Weeks by Median Percent Change (95% CI) from Baseline (N=32)**

	Median at Baseline (mg/dL)	Median percent change from baseline (95% CI) Rosuvastatin tablets 10 mg	Median percent change from baseline (95% CI) Rosuvastatin tablets 20 mg
Total-C	342.5	-43.3 (-46.9, -39.7)	-47.6 (-51.6, -42.8)
Triglycerides	503.5	-40.1 (-44.9, -33.6)	-43.0 (-52.5, -33.1)
Non-HDL-C	294.5	-42.2 (-46.7, -45.6)	-56.4 (-61.4, -48.5)
VLDL-C + IDL-C	209.5	-46.8 (-53.7, -39.4)	-56.2 (-67.7, -43.7)
LDL-C	112.5	-54.4 (-59.1, -47.3)	-57.3 (-59.4, -52.1)
HDL-C	35.5	10.2 (1.9, 12.3)	11.2 (8.3, 20.5)
RPL-C	82.0	-56.4 (-67.1, -49.0)	-64.9 (-74.0, -56.6)
Apo-E	16.0	-42.9 (-46.3, -33.3)	-42.5 (-41.1, -35.6)

#### Hypertriglyceridemia in Adults

In a double-blind, placebo-controlled study in adult patients with baseline TG levels from 273 to 817 mg/dL, rosuvastatin tablets given as a single daily dose (5 to 40 mg) over 6 weeks significantly reduced serum TG levels (see Table 16).

**Table 16: Lipid-Modifying Effect of Rosuvastatin Tablets in Adult Patients with Primary Hypertriglyceridemia After Six Weeks by Median (Min, Max) Percent Change from Baseline to Week 6**

Dose	Placebo (n=26)	Rosuvastatin tablets 5 mg (n=29)	Rosuvastatin tablets 10 mg (n=27)	Rosuvastatin tablets 20 mg (n=29)
Triglycerides	1 (40, 72)	-21 (-58, 38)	-37 (-65, 5)	-37 (-72, 11)
Non-HDL-C	2 (13, 19)	-29 (-43, -6)	-49 (-59, 20)	-43 (-74, 12)
Total-C	1 (-13, 17)	-24 (-40, -4)	-40 (-51, -14)	-34 (-61, -11)
LDL-C	5 (-30, 52)	-28 (-71, 2)	-45 (-59, 7)	-31 (-66, 34)
HDL-C	3 (-25, 18)			