(RR 0.58; 95% CI 0.41; 0.83; P=0.003). The number needed to treat to prevent one episode of postoperative AF is 20 patients. Significant heterogeneity was noted among the reported outcome, which was mainly driven by one trial. Upon examining trials that looked at the use of AF in patients undergoing CABG, statin was associated with 53% reduction in postoperative AF ((RR 0.47; 95% CI 0.34; 0.63; P<0.001). The number needed to treat to prevent one episode of postoperative AF is three patients. No evidence of heterogeneity was observed among the reported outcome.

Conclusions: In patient undergoing cardiac surgery, patient will likely benefit from preoperative statin therapy to prevention POAF.

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Trends in Treatment Patterns of First Statin and Ezetimibe Use in the United States from 2007-2012

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Lead Author's Financial Disclosures: Dr. Paoli is employed by Amgen Inc.

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Background/Synopsis: Ambiguity exists due to varying clinical treatment guidelines for managing cholesterol and new evidence regarding the clinical benefits of lipid-lowering therapy (LLT). Understanding current patterns of statin and ezetimibe use may lead to more optimal prescribing of these medications.

Objective/Purpose: To examine statin and ezetimibe treatment patterns in the U.S. from 2007 to 2013 and identify the frequency of treatment modifications among patients in different cardiovascular risk groups during the first 12 months of follow-up.

Methods: The Truven Health MarketScan Database was used to identify prescription claims from adults age 18 to 64 initiating a statin or ezetimibe from Jan. 1, 2007 to Dec. 31, 2012, with at least 12 months of data pre/post initiation. Mutually exclusive cohorts included primary prevention (low-risk and high-risk) and secondary prevention. A separate analysis was conducted among those with diabetes (could include anyone in the above cohorts). Starting statin dose intensity was defined as low, moderate, or high according to the 2013 ACC/AHA guideline and first treatment modifications were categorized as dose intensity category changes, augmentation (addition of second LLT to the regimen), switching (from one LLT to another), subtraction (from two initial LLTs to one), discontinuation (no LLT for ≥60 days), and re-initiation (re-start LLT after discontinuation).

Results: There were 1,361,275 patients who met the selection criteria (46.6% female, mean age 51.6 years [SD=8.2]). There were 72% low-risk primary prevention, 20.4% high-risk primary prevention, and 7.6% secondary prevention patients; 16.1% had diabetes. There were 94.7% of patients who initiated a statin alone, 1.8% initiated ezetimibe alone, and 3.5% initiated on a combination of a statin and ezetimibe. Across 2007 to 2012, more patients filled prescriptions for moderate intensity (73.5%) than low (18.3%) or high (8.2%) intensity statins. During follow-up, treatment patterns were similar across all risk cohorts (see Table 1).

Conclusions: During follow-up, most patients who initiated a statin and/or ezetimibe from 2007 to 2012 continued their original regimen or discontinued; very few patients changed treatment or dosage. Initial statin dose intensity appeared similar from 2007 to 2013. This real-world analysis suggests that high discontinuation rates are common, thus opportunities to improve adherence to evidence-based lipid management persist.

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Citrus Bergamot Improves Atherogenic Lipoprotein Particle Characteristics in Patients With Non-alcoholic Fatty Liver Disease and Metabolic Syndrome†

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Table 1 Statin Treatment Modifications by Risk Group

	All	Secondary prevention	High Risk Primary Prevention	Primary Prevention	Diabetes
No Modification	40.4%	40.6%	38.3%	41.0%	38.8%
Discontinue	43.6%	34.8%	43.6%	44.5%	42.7%
Reinitiation	39.7%	35.6%	44.1%	38.8%	44.3%
Switch	6.5%	10.3%	5.9%	6.2%	5.8%
Augmentation	4.3%	6.7%	6.7%	3.4%	7.2%
Dose Intensity Increase	3.6%	4.6%	3.7%	3.4%	3.7%
Dose Intensity Decrease	0.8%	1.9%	0.7%	0.7%	0.7%
Subtraction	0.8%	1.1%	1.1%	0.8%	1.1%

Lead Author's Financial Disclosures: None
Study Funding: None

Background/Synopsis: BPF, a concentrated extract of the bergamot citrus fruit endemic to Calabria, Italy has been shown to be a powerful anti-oxidant and lipid-lowering agent. A "natural statin" (HMG-CoA reductase activity) and an inhibitor of sterol absorption in the gut, it demonstrates significant lipid lowering in patients with dyslipidemia while addressing all the components of the metabolic syndrome. Patients with metabolic syndrome and NAFLD have a preponderance of atherogenic lipoprotein particles and are at elevated risk for atherosclerosis.

Objective/Purpose: To determine whether bergamot polyphenolic fraction (BPF), could significantly improve cholesterol levels and lipoprotein particle size, density, and number in patients with metabolic syndrome and NAFLD.

Methods: There were 107 patients who met the NCEP-ATP III criteria for metabolic syndrome and had ultrasonic evidence of severe NAFLD (hepato-renal index 2.5-3.5) and were admitted to the study. Before and after 120 days of BPF 650 mg twice/day, all patients had full lipid analysis and lipoprotein fractionation (NMR/Raman spectroscopy).

Results:

Measurement	pre-BPF		120 days of BPF
Total Cholesterol (mg/dL)	245 ± 8.3	182 ± 7.1	< 0.05
LDL-C (mg/mL)	162 ± 4.3	101 ± 1.8	< 0.05
HDL-C (mg/mL)	38 ± 3.8	49 ± 4	< 0.05
Triglycerides (mg/mL)	232 ± 5.1	160 ± 4.8	< 0.05
	Baseline		after BPF
Plasma lipoprotein plasma diameter, nm			
VLDL	55.3 ± 6,4		44.5 ± 5.2*
LDL	22.6 ± 1.7		18.0 ± 0.8*
HDL	7.5 ± 0.8		9.6 ± 0.9*
Plasma lipoprotein particles, nmol/L			
Total VLDL	83 ± 14		54 ± 12*
Large VLDL	4,2 ± 2		1.8 ± 1.3*
Medium VLDL	31 ± 9		14 ± 8*
Small VLDL	43 ± 9		38 ± 10
Total LDL-P	1477 ± 75		1293 ± 101*
IDL	77 ± 16		38 ± 10*
Large LDL	424 ± 87		653 ± 95*
Small LDL	986 ± 105		612 ± 98*
Plasma HDL, μmol/L			
Total HDL	30 ± 2		36 ± 3*
Large HDL	5 ± 3		15 ± 4*
Medium HDL	7 ± 4		7 ± 3
Small HDL	18 ± 5		14 ± 4 *

*BPF vs baseline values

Conclusions: In a group of 107 patients with confirmed NAFLD and metabolic syndrome, BPF given twice per day before meals significantly improved all standard measures of cholesterol concentration. Furthermore, all atherogenic particle characteristics (size, density and number) of LDL and HDL were markedly improved as well as remnant lipoproteins.

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Phase 1 Study of CAT-2054, an Oral Novel Modulator of SREBP

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Background/Synopsis: CAT-2054, an orally administered small molecule, is a novel inhibitor of the Sterol Response Element Binding Protein (SREBP) transcription factor system under development for hypercholesterolemia. In CAT-2054, eicosapentaenoic acid (EPA) and niacin are conjugated by a linker that can be cleaved by the intracellular enzyme fatty acid amide hydrolase (FAAH). The linker in CAT-2054 modulates the hydrolysis rate so that