

## NLA-SAP (Edition 4) Supplementary Pre-Reading

### Module 1: The Science of Lipidology: Lipid Metabolism, Pathogenesis of Atherosclerosis and Genetic Disorders

#### Required Pre-Reading:

1. Rosenson RS, Brewer HB Jr, Ansell B, et al. Translation of high-density lipoprotein function into clinical practice: current prospects and future challenges. *Circulation*. 2013;128(11):1256-67.
2. Birner-Gruenberger R, Schittmayer M, Holzer M, Marsche G. Understanding high-density lipoprotein function in disease: recent advances in proteomics unravel the complexity of its composition and biology. *Prog Lipid Res*. 2014;56:36-46.
3. Rosenson RS, Brewer HB Jr, Davidson WS, et al. Cholesterol efflux and atheroprotection: advancing the concept of reverse cholesterol transport. *Circulation*. 2012;125(15):1905-19.
4. Calkin AC, Tontonoz P. Transcriptional integration of metabolism by the nuclear sterol-activated receptors LXR and FXR. *Nat Rev Mol Cell Biol*. 2012;13(4):213-24.
5. Giugliano RP, Sabatine MS. Are PCSK9 Inhibitors the Next Breakthrough in the Cardiovascular Field? *J Am Coll Cardiol*. 2015;65(24):2638-51.
6. Nordestgaard BG, Chapman MJ, Ray K, et al. Lipoprotein(a) as a cardiovascular risk factor: current status. *Eur Heart J*. 2010;31(23):2844-53.
7. Welty FK. Hypobetalipoproteinemia and abetalipoproteinemia. *Curr Opin Lipidol*. 2014;25(3):161-8.
8. Jacobson TA, Ito MK, Maki KC, et al. National lipid association recommendations for patient-centered management of dyslipidemia: part 1--full report. *J Clin Lipidol*. 2015;9(2):129-69.
9. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol*. 2015;9(6 Suppl):S1-122.
10. Bays HE, Jones PH, Orringer CE, Brown WV, Jacobson TA. National Lipid Association Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol*. 2016;10(1 Suppl):S1-43.

#### Suggested Pre-Reading:

1. Kwiterovich PO. Lipid, apolipoprotein and lipoprotein metabolism: implications for the diagnosis and treatment of dyslipidemia. In: Kwiterovich PO Jr. ed. *The Johns Hopkins Textbook of Dyslipidemia*. Philadelphia, PA. Lippincott, Williams and Wilkins;2010:1-22.
2. Fazio S, Linton MF. Regulation and clearance of apolipoprotein B-containing lipoproteins. In: Ballantyne CB ed. *Clinical Lipidology: A Companion to Braunwald's Heart Disease*. Philadelphia, PA. Elsevier;2009:11-25.
3. Rosenson RS. Lipoprotein classification, metabolism, and role in atherosclerosis. UpToDate Web site. <http://www.uptodate.com/contents/lipoprotein-classification-metabolism-and-role-in-atherosclerosis>. Accessed August 17, 2016.
4. Rosenson RS, de Ferranti SD, Durrington P. Inherited disorders of LDL-cholesterol metabolism. UpToDate Web site. <http://www.uptodate.com/contents/inherited-disorders-of-ldl-cholesterol-metabolism>. Accessed August 17, 2016.
5. Brunzell, JD. Genetic dyslipidemia. In: Ballantyne CB ed. *Clinical Lipidology: A Companion to Braunwald's Heart Disease*. Philadelphia, PA. Elsevier; 2010:71-84.
6. Raal FJ, Santos RD. Homozygous familial hypercholesterolemia: current perspectives on diagnosis and treatment. *Atherosclerosis*. 2012;223(2):262-8.
7. Khera AV, Won HH, Pelsos GM, et al. Diagnostic Yield and Clinical Utility of Sequencing Familial Hypercholesterolemia Genes in Patients With Severe Hypercholesterolemia. *J Am Coll Cardiol*. 2016;67(22):2578-89.

## Module 2: Evidence-based Medicine and Statistics: ASCVD Risk Assessment and Risk Indicators and Subclinical Atherosclerosis Detection

### Required Pre-Reading:

1. Davidson MH, Ballantyne CM, Jacobson TA, et al. Clinical utility of inflammatory markers and advanced lipoprotein testing: advice from an expert panel of lipid specialists. *J Clin Lipidol*. 2011;5(5):338-67.
2. Goff DC, Lloyd-Jones DM, Bennett G, et al. 2013 ACC/AHA guideline on the assessment of cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014;129(25 Suppl 2):S49-73.
3. Writing Committee, Lloyd-Jones DM, Morris PB, et al. 2016 ACC Expert Consensus Decision Pathway on the Role of Non-Statins Therapies for LDL-Cholesterol Lowering in the Management of Atherosclerotic Cardiovascular Disease Risk: A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. *J Am Coll Cardiol*. 2016;68(1):92-125.
4. Mora S, Buring JE, Ridker PM, et al. Discordance of low-density lipoprotein (LDL) cholesterol with alternative LDL related measures and future coronary events. *Circulation*. 2014;129(5):553-61.
5. Alberti KG, Eckel RH, Grundy SM, et al. Harmonizing the metabolic syndrome: a joint interim statement of the International Diabetes Federation Task Force on Epidemiology and Prevention; National Heart, Lung, and Blood Institute; American Heart Association; World Heart Federation; International Atherosclerosis Society; and International Association for the Study of Obesity. *Circulation*. 2009;120(16):1640-5.
6. Look AHEAD Research Group, Wing RR, Bolin P, et al. Cardiovascular effects of intensive lifestyle intervention in type 2 diabetes. *N Engl J Med*. 2013;369(2):145-154.
7. American Diabetes Association. Standards of Medical Care in Diabetes –2016. *Diabetes Care*. 2016;39 Suppl 1:S1-S109.
8. Martin SS, Blaha MJ, Elshazly MB, et al. Friedewald-estimated versus directly measured low-density lipoprotein cholesterol and treatment implications. *J Am Coll Cardiol*. 2013; 62(8):732–739.
9. McClelland RL, Jorgensen NW, Budoff M, et al. 10-Year Coronary Heart Disease Risk Prediction Using Coronary Artery Calcium and Traditional Risk Factors: Derivation in the MESA (Multi-Ethnic Study of Atherosclerosis) With Validation in the HNR (Heinz Nixdorf Recall) Study and the DHS (Dallas Heart Study). *J Am Coll Cardiol*. 2015;66(15):1643-53.
10. Jacobson TA, Ito MK, Maki KC, et al. National lipid association recommendations for patient-centered management of dyslipidemia: part 1--full report. *J Clin Lipidol*. 2015;9(2):129-69.
11. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol*. 2015;9(6 Suppl):S1-122.
12. Bays HE, Jones PH, Orringer CE, Brown WV, Jacobson TA. National Lipid Association Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol*. 2016;10(1 Suppl):S1-43.

### Suggested Pre-Reading:

1. Blaha MJ, Cainzos-Achirica M, Greenland P, et al. Role of Coronary Artery Calcium Score of Zero and Other Negative Risk Markers for Cardiovascular Disease: The Multi-Ethnic Study of Atherosclerosis (MESA). *Circulation*. 2016;133(9):849-58.
2. Laupacis A, Sackett DL, Roberts RS. An assessment of clinically useful measures of the consequences of treatment. *N Engl J Med*. 1988;318(26):1728-33
3. Howlett BM, Rogo EJ, Shelton TG. *Evidence-Based Practice for Health Professionals*. Burlington, MA: Jones & Bartlett Learning; 2014.
4. Glantz S. *Primer of Biostatistics*. 7th ed. New York, NY: McGraw-Hill Education; 2011.

## Module 3: Contemporary Management of Dyslipidemia: Lipid Guidelines

### Required Pre-Reading:

1. Stone NJ, Robinson JG, Lichtenstein AH, et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2014;63(25 Pt B):2889-934.
2. Writing Committee, Lloyd-Jones DM, Morris PB, et al. 2016 ACC Expert Consensus Decision Pathway on the Role of Non-Statins Therapies for LDL-Cholesterol Lowering in the Management of Atherosclerotic Cardiovascular Disease Risk: A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. *J Am Coll Cardiol*. 2016;68(1):92-125.
3. Rosenson RS, Baker SK, Jacobson TA, Kopecky SL, Parker BA. An assessment by the Statin Muscle Safety Task Force: 2014 update. *J Clin Lipidol*. 2014;8(Suppl 3):S58-S71.
4. Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2014;63(25 Pt B):2960-84.
5. Jensen MD, Ryan DH, Apovian CM, et al. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2014;63(25 Pt B):2985-3023.
6. Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents: National Heart, Lung, and Blood Institute. Expert panel on integrated guidelines for cardiovascular health and risk reduction in children and adolescents: summary report. *Pediatrics*. 2011;128 Suppl 5:S213-56.
7. Garber AJ, Abrahamson MJ, Barzilay JI, et al. Consensus statement by the American Association of Clinical Endocrinologists and American College of Endocrinology on the comprehensive type 2 diabetes management algorithm - 2016 executive summary. *Endocr Pract*. 2016;22(1):84-113.
8. Piepoli MF, Hoes AW, Agewall S, et al. 2016 European Guidelines on cardiovascular disease prevention in clinical practice: The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts): Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR). *Eur Heart J*. 2016; pii: ehw106. [Epub ahead of print]
9. Expert Dyslipidemia Panel of the International Atherosclerosis Society Panel members. An International Atherosclerosis Society Position Paper: global recommendations for the management of dyslipidemia--full report. *J Clin Lipidol*. 2014;8(1):29-60.
10. Jacobson TA, Ito MK, Maki KC, et al. National lipid association recommendations for patient-centered management of dyslipidemia: part 1--full report. *J Clin Lipidol*. 2015;9(2):129-69.
11. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol*. 2015;9(6 Suppl):S1-122.
12. Bays HE, Jones PH, Orringer CE, Brown WV, Jacobson TA. National Lipid Association Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol*. 2016;10(1 Suppl):S1-43.

### Suggested Pre-Reading:

1. Feinstein MJ, Achenbach CJ, Stone NJ, Lloyd-Jones DM. A systematic review of the usefulness of statin therapy in HIV-infected patients. *Am J Cardiol*. 2015;115(12):1760-6.
2. Wanner C, Tonelli M, Kidney Disease: Improving Global Outcomes Lipid Guideline Development Work Group Members. KDIGO Clinical Practice Guideline for Lipid Management in CKD: summary of recommendation statements and clinical approach to the patient. *Kidney Int*. 2014;85(6):1303-9.

## Module 4: Contemporary Management of Dyslipidemia: Lifestyle Therapy

### Required Pre-Reading:

1. Appel LJ, Sacks FM, Carey VJ, et al. Effects of protein, monounsaturated fat, and carbohydrate intake on blood pressure and serum lipids: results of the OmniHeart randomized trial. *JAMA*. 2005;294(19):2455-64.
2. U.S. Department of Health and Human Services. *Your Guide to Lowering Your Cholesterol With TLC*. Bethesda, MD: U.S. Department of Health and Human Services; 2005. NIH Publication No. 06-5235.
3. Gardner CD, Kiazand A, Alhassan S, et al. Comparison of the Atkins, Zone, Ornish, and LEARN diets for change in weight and related risk factors among overweight premenopausal women: the A TO Z Weight Loss Study: a randomized trial. *JAMA*. 2007;297(9):969-77.
4. Manheimer EW, van Zuuren EJ, Fedorowicz Z, Pijl H. Paleolithic nutrition for metabolic syndrome: systematic review and meta-analysis. *Am J Clin Nutr*. 2015;102(4):922-32.
5. Estruch R, Ros E, Salas-Salvadó J, et al. Primary prevention of cardiovascular disease with a Mediterranean diet. *N Engl J Med*. 2013;368(14):1279-90.
6. Bays HE, Toth PP, Kris-Etherton PM, et al. Obesity, adiposity, and dyslipidemia: a consensus statement from the National Lipid Association. *J Clin Lipidol*. 2013;7(4):304-83.
7. De Souza RJ, Mente A, Maroleanu A, et al. Intake of saturated and trans unsaturated fatty acids and risk of all cause mortality, cardiovascular disease, and type 2 diabetes: systematic review and meta-analysis of observational studies. *BMJ*. 2015;351:h3978.
8. Hooper L, Martin N, Abdelhamid A, Davey Smith G. Reduction in saturated fat intake for cardiovascular disease. *Cochrane Database Syst Rev*. 2015;(6):CD011737.
9. Li Y, Hruby A, Bernstein AM, et al. Saturated Fats Compared With Unsaturated Fats and Sources of Carbohydrates in Relation to Risk of Coronary Heart Disease: A Prospective Cohort Study. *J Am Coll Cardiol*. 2015;66(14):1538-48.
10. Aune D, Keum N, Giovannucci E, et al. Whole grain consumption and risk of cardiovascular disease, cancer, and all cause and cause specific mortality: systematic review and dose-response meta-analysis of prospective studies. *BMJ*. 2016;353:i2716.
11. Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2014;63(25 Pt B):2960-84.
12. U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans – 2015*. Available at: <http://health.gov/dietaryguidelines/2015/guidelines/>. Accessed June 23, 2016.
13. Fletcher GF, Ades PA, Kligfield P, et al. Exercise standards for testing and training: a scientific statement from the American Heart Association. *Circulation*. 2013;128(8):873-934.
14. Kraus WE, Houmard JA, Duscha BD, et al. Effects of the amount and intensity of exercise on plasma lipoproteins. *N Engl J Med*. 2002;347(19):1483-92.
15. Thompson PD, Parker B. Statins, exercise, and exercise testing. *J Am Coll Cardiol*. 2013;62(8):715-6.
16. Bays HE, Jones PH, Jacobson TA, et al. Lipids and bariatric procedures part 1 of 2: Scientific statement from the National Lipid Association, American Society for Metabolic and Bariatric Surgery, and Obesity Medicine Association: FULL REPORT. *J Clin Lipidol*. 2016;10(1):33-57.
17. Rhodes KS, Weintraub M, Marchlewicz EH, Rubenfire M, Brook RD. Medical nutrition therapy is the essential cornerstone for effective treatment of "refractory" severe hypertriglyceridemia regardless of pharmaceutical treatment: Evidence from a Lipid Management Program. *J Clin Lipidol*. 2015;9(4):559-67.
18. Jacobson TA, Ito MK, Maki KC, et al. National lipid association recommendations for patient-centered management of dyslipidemia: part 1--full report. *J Clin Lipidol*. 2015;9(2):129-69.
19. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol*. 2015;9(6 Suppl):S1-122.

20. Bays HE, Jones PH, Orringer CE, Brown WV, Jacobson TA. National Lipid Association Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol.* 2016;10(1 Suppl):S1-43.

#### **Suggested Pre-Reading:**

1. Mansoor N, Vinknes KJ, Veierød MB, Retterstøl K. Effects of low-carbohydrate diets v. low-fat diets on body weight and cardiovascular risk factors: a meta-analysis of randomised controlled trials. *Br J Nutr.* 2016;115(3):466-79.
2. Dinu M, Abbate R, Gensini GF, Casini A, Sofi F. Vegetarian, vegan diets and multiple health outcomes: a systematic review with meta-analysis of observational studies. *Crit Rev Food Sci Nutr.* 2016.
3. Del Gobbo LC, Falk MC, Feldman R, Lewis K., Mozaffarian D. Effects of tree nuts on blood lipids, apolipoproteins, and blood pressure: systematic review, meta-analysis, and dose-response of 61 controlled intervention trials. *Am J Clin Nutr.* 2015;102(6):1347-56.
4. Anderson JW, Bush HM. Soy protein effects on serum lipoproteins: a quality assessment and meta-analysis of randomized, controlled studies. *J Am Coll Nutr.* 2011;30(2):79-91.
5. Pescatello LS, ed. *ACSM's Guidelines for Exercise Testing and Prescription.* 9th ed. Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins Health; 2013.
6. La Forge R. Exercise, Physical Activity and Dyslipidemia. In: Bryant C, ed. American Council on Exercise Medical Exercise Specialist Manual. San Diego CA; 2015.

### **Module 5: Contemporary Management of Dyslipidemia: Pharmacologic Therapy**

#### **Required Pre-Reading:**

1. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol.* 2015;9(6 Suppl):S1-122.
2. Writing Committee, Lloyd-Jones DM, Morris PB, et al. 2016 ACC Expert Consensus Decision Pathway on the Role of Non-Statins Therapies for LDL-Cholesterol Lowering in the Management of Atherosclerotic Cardiovascular Disease Risk: A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. *J Am Coll Cardiol.* 2016;68(1):92-125.
3. Stone NJ, Robinson JG, Lichtenstein AH, et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation.* 2014;129:S1-45.
4. Collins R, Reith C, Emberson J, et al. Interpretation of the evidence for the efficacy and safety of statin therapy. *Lancet.* 2016;pii: S0140-6736(16)31357-5.
5. Wiggins BS, Saseen JJ, Page RL, et al. on behalf of the American Heart Association Clinical Pharmacology Committee of the Council on Clinical Cardiology; Council on Hypertension; Council on Quality of Care and Outcomes Research; and Council on Functional Genomics and Translational Biology. Recommendations for management of clinically significant drug-drug interactions with statins and select agents used in patients with cardiovascular disease: a scientific statement from the American Heart Association. *Circulation.* 2016;134.
6. Rosenson RS, Baker SK, Jacobson TA, Kopecky SL, Parker BA, The National Lipid Association's Muscle Safety Expert Panel. An assessment by the Statin Muscle Safety Task Force: 2014 update. *J Clin Lipidol.* 2014;8(3 Suppl):S58-71.
7. Kellick KA, Bottorff M, Toth PP, The National Lipid Association's Safety Task F. A clinician's guide to statin drug-drug interactions. *J Clin Lipidol.* 2014;8(3 Suppl):S30-46.
8. Cholesterol Treatment Trialists' (CTT) Collaboration, Baigent C, Blackwell L, et al. Efficacy and Safety of more intensive lowering of LDL cholesterol: a meta-analysis of data from 170,000 participants in 26 randomised trials. *Lancet.* 2010;376(9753):1670-81.
9. Cannon CP, Blazing MA, Giugliano RP, et al. Ezetimibe Added to Statin Therapy after Acute Coronary Syndromes. *N Engl J Med.* 2015;372(25):2387-97.
10. SEARCH Collaborative Group, Link E, Parish S, et al. SLCO1B1 variants and statin-induced myopathy--a genomewide study. *N Engl J Med.* 2008;359(8):789-99.

11. Maki KC, Ridker PM, Brown WV, Grundy SM, Sattar N. An Assessment by the Statin Diabetes Task Force: 2014 Update. *J Clin Lipidol.* 2014;8(3 Suppl):S17-29.
12. Rojas-Fernandez CH, Goldstein LB, Levey AI, Taylor BA, Bittner V, The National Lipid Association's Safety Task Force. An assessment by the Statin Cognitive Safety Task Force: 2014 update. *J Clin Lipidol.* 2014;8(3 Suppl):S5-16.
13. Bays H, Cohen DE, Chalasani N, Harrison SA, The National Lipid Association's Statin Safety Task Force. An assessment by the Statin Liver Safety Task Force: 2014 update. *J Clin Lipidol.* 2014;8(3 Suppl):S47-57.
14. Thompson PD, Panza G, Zaleski A, Taylor B. Statin-Associated Side Effects. *J Am Coll Cardiol.* 2016;67(20):2395-410.
15. Stein EA, Dufour R, Gagne C, et al. Apolipoprotein B synthesis inhibition with mipomersen in heterozygous familial hypercholesterolemia: results of a randomized, double-blind, placebo-controlled trial to assess efficacy and safety as add-on therapy in patients with coronary artery disease. *Circulation.* 2012;126(19):2283-92.
16. Jensen MD, Ryan DH, Apovian CM et al. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. *Circulation.* 2014; 129(25 suppl 2):S102-38.
17. Jacobson TA, Ito MK, Maki KC, et al. National lipid association recommendations for patient-centered management of dyslipidemia: part 1--full report. *J Clin Lipidol.* 2015;9(2):129-69.
18. Jacobson TA, Maki KC, Orringer CE, et al. National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 2. *J Clin Lipidol.* 2015;9(6 Suppl):S1-122.
19. Bays HE, Jones PH, Orringer CE, Brown WV, Jacobson TA. National Lipid Association Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol.* 2016;10(1 Suppl):S1-43.

#### **Suggested Pre-Reading:**

1. Davidson MH, Armani A, McKenney JM, Jacobson TA. Safety considerations with fibrate therapy. *Am J Cardiol.* 2007;99(6A):3C-18C.
2. Wanner C, Tonelli M, Kidney Disease: Improving Global Outcomes Lipid Guideline Development Work Group Members. KDIGO Clinical Practice Guideline for Lipid Management in CKD: summary of recommendation statements and clinical approach to the patient. *Kidney Int.* 2014;85(6):1303-9.
3. Artgenstein AW, Opal SM. Proprotein convertases in health and disease. *N Engl J Med.* 2011;365(26):2507-18.
4. Cuchel M, Meagher EA, du Toit Theron H, et al. Efficacy and safety of a microsomal triglyceride transfer protein inhibitor in patients with homozygous familial hypercholesterolemia: a single-arm, open-label, phase 3 study. *Lancet.* 2013;381(9860):40-6.