

I'm not a robot



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The following are 10 points to remember about this guideline from the American College of Cardiology/American Heart Association on the management of patients with non-ST-elevation acute coronary syndromes (NSTEMI/ACS):

1. Patients with suspected ACS should be risk stratified based on the likelihood of ACS and adverse outcome(s) to decide on the need for hospitalization and assist in the selection of treatment options.
2. In patients with chest pain or other symptoms suggestive of ACS, a 12-lead electrocardiogram (ECG) should be performed and evaluated for ischemic changes within 10 minutes of the patient's arrival at an emergency facility.
3. Cardiac-specific troponin (troponin I or T with a contemporary assay) levels should be measured at presentation and 3-6 hours after symptom onset in all patients who present with symptoms consistent with ACS to identify a rising and/or falling pattern.
4. Oral beta-blocker therapy should be initiated within the first 24 hours in patients who do not have any of the following: 1) signs of heart failure, 2) evidence of low-output state, 3) increased risk for cardiogenic shock, or 4) other contraindications to beta blockade (e.g., PR interval >0.24 second, second- or third-degree heart block without a cardiac pacemaker, active asthma, or reactive airway disease).
5. High-intensity statin therapy should be initiated or continued in all patients with NSTEMI/ACS and no contraindications to its use.
6. A P2Y12 inhibitor (either clopidogrel or ticagrelor) in addition to aspirin should be administered for up to 12 months to all patients with NSTEMI/ACS without contraindications who are treated with either an early invasive or ischemia-guided strategy.
7. P2Y12 inhibitor therapy (clopidogrel, prasugrel, or ticagrelor) continued for at least 12 months is indicated in post-percutaneous coronary intervention (PCI) patients treated with coronary stents. It is reasonable to use ticagrelor in preference to clopidogrel for P2Y12 treatment in patients with NSTEMI/ACS who undergo an early invasive or ischemia-guided strategy. It is also reasonable to choose prasugrel (initiated during PCI) over clopidogrel for P2Y12 treatment in patients with NSTEMI/ACS who undergo PCI who are not at high risk of bleeding complications.
8. In patients with NSTEMI/ACS, anticoagulation, in addition to antiplatelet therapy, is recommended for all patients irrespective of initial treatment strategy. In patients with NSTEMI/ACS, anticoagulant therapy should be discontinued after PCI unless there is a compelling reason to continue such therapy.
9. An urgent/immediate invasive strategy (diagnostic angiography with intent to perform revascularization if appropriate based on coronary anatomy) is indicated in patients with NSTEMI/ACS who have refractory angina or hemodynamic or electrical instability (without serious comorbidities or contraindications to such procedures). An early invasive strategy (diagnostic angiography with intent to perform revascularization if appropriate based on coronary anatomy) is indicated in initially stabilized patients with NSTEMI/ACS (without serious comorbidities or contraindications to such procedures) who have an elevated risk for clinical events. An early invasive strategy (i.e., diagnostic angiography with intent to perform revascularization) is not recommended in patients with extensive comorbidities (e.g., hepatic, renal, pulmonary failure, cancer), in whom the risks of revascularization and comorbid conditions are likely to outweigh the benefits of revascularization and those with acute chest pain and a low likelihood of ACS who are troponin-negative, especially women.
10. An evidence-based plan of care (e.g., guideline-directed medical treatment) that promotes medication adherence, timely follow-up with the healthcare team, appropriate dietary and physical activities, and compliance with interventions for secondary prevention should be provided to patients with NSTEMI/ACS. In addition to detailed instructions for daily exercise, patients should be given specific instruction on activities (e.g., lifting, climbing stairs, yard work, and household activities) that are permissible and those to avoid. Specific mention should be made of resumption of driving, return to work, and sexual activity.

< Back to Listings Jul 14, 2016 | Debabrata Mukherjee, MD, FACC Authors: Rodriguez F, Mahaffey KW. Citation: Management of Patients With NSTEMI/ACS: A Comparison of the Recent AHA/ACC and ESC Guidelines. J Am Coll Cardiol 2016;68:313-321. The following are key points to remember from this review article, which compares and contrasts the American and European guidelines on non-ST-segment elevation acute coronary syndromes (NSTEMI/ACS):

NSTEMI/ACS are the leading cause of morbidity and mortality from cardiovascular disease worldwide. The American Heart Association/American College of Cardiology (AHA/ACC) 2014 update and the European Society of Cardiology (ESC) 2015 NSTEMI/ACS recommendations both emphasize the importance of early evaluation by the emergency department, a clinical history, physical examination, and 12-lead electrocardiogram within 10 minutes of a patient's arrival. Both guidelines also stress the growing importance of biomarkers, namely high-sensitivity cardiac troponin (hs-cTn) assays, due to their high negative predictive value for ACS.

In particular, the ESC guidelines recommend utilizing a shortened algorithm for diagnosis of NSTEMI/ACS, with the use of a 0 hour/3 hour or 0 hour/1 hour algorithm measurement of hs-cTn. In patients with suspected NSTEMI/ACS without recurrence of chest pain and with normal levels of cardiac troponin, the ESC guidelines recommend a noninvasive stress test with imaging to look for inducible ischemia (Class of Recommendation [COR] I, Level of Evidence [LOE] A) before deciding on an invasive strategy. In contrast, the AHA/ACC guidelines provide a lower strength of recommendation (COR IIa) to proceeding with a treadmill electrocardiogram, stress myocardial perfusion imaging, or coronary computed tomography angiography for patients with symptoms concerning for ACS, but without objective signs. For those who undergo coronary revascularization, the ESC guidelines specifically recommend the radial approach for vascular access (COR I, LOE A), whereas the AHA/ACC guidelines do not provide any specific recommendations on the preferred vascular access site. Both the ESC and AHA/ACC guidelines recommend the "heart team" approach to revascularization decisions regarding percutaneous coronary intervention (PCI) versus coronary artery bypass grafting. The AHA/ACC guidelines recommend either clopidogrel or ticagrelor loading for either the invasive or ischemia-guided options, with a COR IIa, LOE B recommendation for ticagrelor over clopidogrel. The guidelines recommend prasugrel when a PCI is planned in those not at high risk of bleeding. The ESC guidelines make several recommendations regarding the specific choice of P2Y12 inhibitors. These preferences include ticagrelor for patients at moderate to high ischemic risk (COR I, LOE B), prasugrel for planned PCI after delineation of coronary anatomy (COR I, LOE B), and clopidogrel as second-line therapy if other drugs are contraindicated or are not options (COR I, LOE B). The ESC guidelines underscore the importance of treating both sexes presenting with NSTEMI/ACS in the same way (COR I, LOE B). The AHA/ACC guidelines state that women with low-risk features should not undergo early invasive treatment because of the potential for harm (COR III, LOE B) on the basis of the evidence that women had higher bleeding complications and contrast-induced nephropathy in analyses of recent trials. The ESC guidelines recommend international normalized ratios (INRs) of 2.0-2.5 when using warfarin during treatment with dual antiplatelet therapy, and avoidance of prasugrel or ticagrelor as part of triple therapy. In contrast, the AHA/ACC guidelines state that there is insufficient evidence to target this lower INR range. Clinical guidelines are systematic statements to help guide clinical practices and are updated periodically, typically every 2-5 years. New approaches are necessary to rapidly integrate new information more quickly and efficiently. Mini-updates, specific modifications, or clarifications of individual recommendations may need to be considered as ongoing results from clinical trials are reported. Clinical Topics: Acute Coronary Syndromes, Anticoagulation Management, Cardiac Surgery, Cardiovascular Care Team, Invasive Cardiovascular Angiography and Intervention, Noninvasive Imaging, ACS and Cardiac Biomarkers, Anticoagulation Management and ACS, Aortic Surgery, Interventions and ACS, Interventions and Imaging, Angiography, Nuclear Imaging

Keywords: Acute Coronary Syndrome, Angiography, Biomarkers, Chest Pain, Coronary Artery Bypass, Electrocardiography, Emergency Service, Hospital, Exercise Test, International Normalized Ratio, Ischemia, Myocardial Perfusion Imaging, Myocardial Revascularization, Percutaneous Coronary Intervention, Platelet Aggregation Inhibitors, Practice Guideline, Tomography, Troponin, Warfarin

< Back to Listings The American Heart Association (AHA) and the American College of Cardiology (ACC) have recently updated their joint guidelines for the management of patients with non-ST-elevation acute coronary syndromes (NSTEMI/ACS, including unstable angina [UA] and non-ST-elevation myocardial infarction [NSTEMI]). These guidelines replace the 2007 guidelines and the focused updates from 2011 and 2012 and now combine UA and NSTEMI into a new classification, NSTEMI/ACS, and updating the terminology around noninvasive management to ischemia-guided strategy. The latest guidelines include updated recommendations for the use of the oral antiplatelet agents (P2Y12 inhibitors) prasugrel and ticagrelor as part of dual-antiplatelet therapy—the cornerstone of treatment for these patients. This report provides a comprehensive overview of the new and modified recommendations for the management of patients with NSTEMI/ACS and the evidence supporting them. Also, where appropriate, similarities and differences between the current recommendations of the AHA/ACC and those of the European Society of Cardiology (ESC) are highlighted. For example, the AHA/ACC recommends the P2Y12 inhibitor ticagrelor over clopidogrel in all patients with NSTEMI/ACS and clopidogrel, prasugrel, or ticagrelor for patients in whom percutaneous coronary intervention is planned, whereas the ESC guidelines specifically recommend individual P2Y12 inhibitors for particular patient subgroups. Skip to main content Renew your Professional Membership before the June 30, 2025 deadline. Renew Today! 25 Aug 2023 The present guideline has been developed to support healthcare professionals in the diagnosis and management of patients presenting with acute coronary syndrome (ACS). The conditions of ST-elevation myocardial infarction (STEMI) and non-ST-elevation ACS (NSTEMI/ACS) have been covered separately in previous European Guidelines. For the first time, the present guideline presents recommendations for management of patients across the entire spectrum of ACS in one document. The previous guidelines on STEMI were published in 2017 and the previous guidelines on NSTEMI/ACS were published in 2020. There have been numerous developments in the diagnosis and treatment of patients with ACS in the intervening years, which are reflected in this up-to-date guideline. The current guideline provides a comprehensive overview of the management of patients presenting with ACS, from the point of diagnosis and risk stratification at initial presentation, through to longterm management after the initial hospitalisation period. Particular focus is given to the importance of anti-thrombotic therapy, invasive assessment and revascularisation. This guideline also highlights the importance of providing patient-centred care throughout the patient's ACS journey. Topic(s): Pathophysiology and Mechanisms Epidemiology, Prognosis, Outcome The essentials of the Guidelines in just a few minutes. Watch Insights from the Chairs of the Guidelines Task Force. Read Download ESC Pocket Guidelines App Have the ESC Pocket Guidelines with you all the time. Download for free Back to ESC Guidelines list Contact: Rachel Cagan, rcagan@acc.org, 2023756395 WASHINGTON (Sept. 23, 2014)—An updated guideline on the management of patients with non-ST-elevation acute coronary syndromes (NSTEMI/ACS) has a new name and new terminology that reflect current ways of thinking about this frequent and serious cardiac condition. Released today by the American College of Cardiology and the American Heart Association, the 2014 Guideline for the Management of Patients With Non-ST-Elevation Acute Coronary Syndromes, is the first full revision since the 2007 ACC/AHA Guideline or the Management of Patients with Unstable Angina and Non-ST-Elevation Myocardial Infarction (NSTEMI) and focused updates published in 2013. The new title emphasizes the pathophysiologic continuum of unstable angina and NSTEMI and their frequently indistinguishable clinical presentations. "It's therefore reasonable that they be considered together in the guideline," said writing committee chair Ezra A. Amsterdam, MD, FACC. He emphasized that the guideline represents the cooperative efforts of experts from a variety of clinical and basic science fields dedicated to enhancing care of patients with NSTEMI/ACS, including cardiology, cardiac surgery, internal medicine, emergency medicine, pharmacology, clinical chemistry, and others. Another significant change in the guideline is replacing the term "initial conservative management" with "ischemia-guided strategy" to more clearly convey the physiologic rationale of this approach, said Amsterdam, who is Distinguished Professor, Internal Medicine, Associate Chief of Cardiology for Academic Affairs, and Master Clinician Educator at the University of California (Davis) School of Medicine in Sacramento. Regarding treatment, the guideline states that while an early invasive strategy for patients with NSTEMI/ACS with significant coronary artery disease is generally accepted, low-risk patients can substantially benefit from guideline-directed medical therapy. "Guideline-directed medical therapy has not always been optimally utilized and advances in noninvasive testing have the potential to identify patients with NSTEMI/ACS at low-intermediate risk to distinguish candidates for invasive versus medical therapy," Amsterdam said. In addition, the guideline recognizes important, developing clinical areas requiring further research such as the utility of combined, potent antithrombotic and anticoagulant therapy in certain patient groups, appropriate application of new, high-sensitivity troponins, and the proper selection of high-risk elderly patients and women for interventional therapy. "This is an important area of current research—as it is often more challenging to treat elderly patients because they frequently have multiple comorbidities," Amsterdam said. According to Nanette K. Wenger, MD, MACC, MACP, FAHA, vice chair of the writing committee, the guideline contains expanded recommendations regarding discharge, such as education about symptoms, risk modification, routine medication with dual antiplatelet therapy, cholesterol management, referral to cardiac rehabilitation, and other guideline-directed medical therapy. "The hospitalization period involves crisis management of ACS, which is pivotal to successful patient outcomes during the acute phase of disease. However, discharge planning in addition to patient and family education guide the long-term ambulatory care of the patient who has sustained a NSTEMI/ACS," said Dr. Wenger, a Professor of Medicine (Cardiology) Emeritus, Emory University School of Medicine Consultant, Emory Heart and Vascular Center, Atlanta. The document—a contemporary clinical practice approach for the optimal management of patients with NSTEMI/ACS—incorporates both established and new evidence from published clinical trials (presented in evidence summary tables), as well as information from basic science and comprehensive review articles. According to Dr. Amsterdam, "There have been tremendous advances in the diagnosis and management of NSTEMI/ACS since the last guideline. We attempted to improve the utility of the guidelines with a focused method that eliminated repetition of ancillary information." Although still an extensive and comprehensive document, it is now more direct and succinct. While the document aims to guide clinicians, it is not intended to replace their individual judgment in treating their patients. "The science of medicine is founded on evidence; the art of medicine is based on optimal application of that evidence to the individual patient," Dr. Amsterdam said. A goal of the writing committee was to make the document user friendly. "Readers are aided by tables and algorithms which present diagnostic and management approaches in a concise manner," Dr. Amsterdam said. The Guideline for the Management of Patients With Non-ST-Elevation Acute Coronary Syndromes will be published online today on the websites of the American College of Cardiology (www.cardiosource.org) and the American Heart Association (www.heart.org). The work of the writing committee was supported exclusively by the ACC and AHA, without commercial support. About the American College of Cardiology The mission of the American College of Cardiology is to transform cardiovascular care and improve heart health. The College is a 47,000-member medical society comprised of physicians, surgeons, nurses, physician assistants, pharmacists and practice managers. The College is a leader in the formulation of health policy, standards and guidelines. The ACC provides professional education, operates national registries to measure and improve quality of care, disseminates cardiovascular research, and bestows credentials upon cardiovascular specialists who meet stringent qualifications. For more information, visit www.cardiosource.org. About the American Heart Association The American Heart Association is devoted to saving people from heart disease and stroke - America's No. 1 and No. 4 killers. We team with millions of volunteers to fund innovative research, fight for stronger public health policies, and provide lifesaving tools and information to prevent and treat these diseases. The Dallas-based association is the nation's oldest and largest voluntary organization dedicated to fighting heart disease and stroke. To learn more or to get involved, call 1-800-AHA-USA1, visit heart.org or call any of our offices around the country. Follow us on Facebook and Twitter. Introduction: The American College of Cardiology (ACC), the American Heart Association (AHA), and the European Society of Cardiology (ESC) have been developing guidelines to assist clinicians in making evidence-based decisions. Materials and methods: The current ACC/AHA and ESC guidelines for non-ST-segment elevation acute coronary syndromes (NSTEMI/ACS) that were updated in 2014 and 2015, respectively, were compared to assess the number of recommendations on the basis of class of recommendation and level of evidence (LOE), the sources cited, and the content. Results: The total number of recommendations in the ACC/AHA and ESC guidelines was 182 and 147, respectively. The recommendation class distribution of the ACC/AHA guidelines was 61.0% class I (compared with 61.9% in the ESC guidelines, P=0.865), 29.7% class II (compared with 32.0% in the ESC guidelines, P=0.653), and 9.3% class III (compared with 6.1% in the ESC guidelines, P=0.282). The LOE distribution among ACC/AHA guidelines was 15.9% LOE A (compared with 27.9% in the ESC guidelines, P=0.008), 50.0% LOE B (compared with 33.3% in the ESC guidelines, P=0.002), and 34.1% LOE C (compared with 38.8% in the ESC guidelines, P=0.377). The ACC/AHA guidelines cited 827 publications and the ESC guidelines cited 551 publications, 124 of which were shared by both sets of guidelines. The guidelines' approaches to NSTEMI/ACS were consistent, with minor differences in diagnostic and medical therapy recommendations. Conclusion: Overall, the ACC/AHA and ESC guidelines contain a comparable number of recommendations and provide similar guidance for the management of patients with NSTEMI/ACS.