

275 ST-Segment Elevation Myocardial Infarction

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Acute myocardial infarction (AMI) is a common diagnosis in hospitalized patients in industrialized countries. In the United States, ~605,000 patients experience a new AMI, and 200,000 experience a recurrent AMI each year. About half of AMI-related deaths occur before the stricken individual reaches the hospital. Of note, the in-hospital mortality rate after admission for AMI has declined from 10 to ~5%. The 1-year mortality rate after AMI is ~15%. Mortality is approximately fourfold higher in elderly patients (aged >75) as compared with younger patients.

When patients with prolonged ischemic discomfort at rest are first seen, the working clinical diagnosis is that they are suffering from an acute coronary syndrome ([Fig. 275-1](#)). The 12-lead electrocardiogram (ECG) is a pivotal diagnostic and triage tool because it is at the center of the decision pathway for management, permitting distinction of those patients presenting with ST-segment elevation from those presenting without ST-segment elevation. Serum cardiac biomarkers are obtained to distinguish unstable angina (UA) from non-ST-segment elevation myocardial infarction (NSTEMI) and to assess the magnitude of an ST-segment elevation myocardial infarction (STEMI). Epidemiologic studies indicate there has been a shift in the pattern of AMI over the past several decades with more patients with NSTEMI than STEMI. This chapter focuses on the evaluation and management of patients with STEMI, while [Chap. 274](#) discusses UA/NSTEMI.