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(54) **ASSESSING THE RISK OF A MAJOR ADVERSE CARDIAC EVENT IN PATIENTS WITH CHEST PAIN**

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(52) **U.S. Cl.** **435/28; 426/63**

(58) **Field of Classification Search** None
See application file for complete search history.

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(57) **ABSTRACT**

Methods for characterizing the near term risk of experiencing a major adverse cardiac event in a patient presenting with chest pain are provided. In one embodiment the method comprises determining the level of myeloperoxidase (MPO) activity in a bodily sample obtained from the patient. In another embodiment, the method comprises determining the level of MPO mass in a bodily sample obtained from the patient. In another embodiment, the method comprises determining the level of one or more select MPO-generated oxidation products in a bodily sample obtained from the patient. The select MPO-generated oxidation products are dityrosine, nitrotyrosine, chlorotyrosine, methionine sulphoxide or an MPO-generated lipid peroxidation product. Levels of MPO activity, MPO mass, or the select MPO-generated oxidation product in bodily samples from the test subject are then compared to a control value that is derived from measurements of MPO activity, MPO mass, or the select MPO-generated oxidation product in comparable bodily samples obtained from control population. Such comparison can also be used to determine treatment of the patient immediately at presentation in the emergency room.