**COMPUTED TOMOGAPHY: HISTORY, AND ROLE IN EXAMINATION OF PATIENTS WITH CARDIOVASCULAR PATHOLOGY**

Orpin Philip Ternder, A. Demydenko

Computed tomography was originally known as the "EMI scan" as it was developed in the early 1970s at a research branch of [EMI](http://en.wikipedia.org/wiki/EMI)( Electric and Musical Industries Ltd ), a company best known today for its music and recording business. It was later known as computed axial tomography (CAT or CT scan) and body section röntgenography.

In the early 1970s, Sir [Godfrey Hounsfield](http://en.wikipedia.org/wiki/Godfrey_Hounsfield) developed the first [CAT scanner](http://en.wikipedia.org/wiki/CAT_scanner), a device which revolutionised [medical imaging](http://en.wikipedia.org/wiki/Medical_imaging). The first EMI-Scanner was installed in [Atkinson Morley Hospital](http://en.wikipedia.org/wiki/Atkinson_Morley_Hospital) in [Wimbledon](http://en.wikipedia.org/wiki/Wimbledon,_London), England, and the first patient brain-scan was done on 1 October 1971. Many options are available to clinicians for the noninvasive evaluation of the cardiovascular system and patient concerns about chest discomfort. Cardiac computed tomography (CT) is a rapidly advancing field of noninvasive imaging. Computed tomography incorporates coronary artery calcium scoring, coronary angiography, ventricular functional analysis, and information about noncardiac thoracic anatomy. Cardiac CT provides diagnostic information comparable to echocardiography, nuclear myocardial perfusion imaging, positron emission tomography, and magnetic resonance imaging. A cardiac CT study can be completed in minutes. In patients with a nondiagnostic stress test result, cardiac CT can preclude the need for invasive angiography. Prognostic information portends excellent outcomes in patients with normal study results. Use of cardiac CT can reduce health care costs and length of emergency department stays for patients with chest pain. Cardiac CT examination provides clinically relevant information at a radiation dose similar to well-established technologies, such as nuclear myocardial perfusion imaging. Advances in technique can reduce radiation dose by 90%. With appropriate patient selection, cardiac CT can accurately diagnose heart disease, markedly decrease health care costs, and reliably predict clinical outcomes.