A 61-year-old woman was referred for aortocoronary bypass surgery. At cardiac catheterization, calcifications of the ascending aorta were noted. To assess the exact extent of aortic calcification, we performed an ECG-gated electron-beam CT (EBCT) study of the thoracic aorta. Our image displays a 3-dimensional volume-rendering reconstruction of the EBCT data set, with thresholds set to display calcium-density voxels only. The aortic root is completely encased in calcifications, which extend to the aortic arch. The course of the three main coronary artery territories is outlined by calcific plaques. Bypass surgery was successfully completed after cannulation of the ascending aorta at a plaque-free spot in the aortic arch and occlusion of the aorta by a transventricular balloon technique for initiation of extracorporeal circulation. Complete myocardial revascularization was achieved by a left internal mammary artery bypass to the left anterior descending coronary artery and a venous Y-graft from the brachiocephalic artery trunk to the right coronary artery and the obtuse marginal branch.
Aortocoronary Bypass Surgery in a Patient With Aortic Calcification
Friedrich D. Knollmann and Joachim Knörig

Circulation. 1999;100:1131
doi: 10.1161/01.CIR.100.10.1131
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1999 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/100/10/1131

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org/subscriptions/